



VANTAGEO Server

Redfish Interface Description (BMC V4)

Version: R1.3

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About This Manual

Purpose

This manual describes the [iBMC](#) Redfish interfaces of the VANTAGEO server and the related management operations on various resources.

Intended Audience

This manual is intended for:

- Data configuration engineers
- Maintenance engineers

What Is in This Manual

This manual contains the following chapters.

Chapter 1, Redfish Overview	Describes the basic concept of the Redfish interfaces.
Chapter 2, Redfish Resource Tree	Describes the Redfish interface resource paths and the operations allowed for various resources.
Chapter 3, Operations on Public Fixed Resources	Describes the operations on public fixed resources through Redfish interfaces.
Chapter 4, Operations on Manager Resources	Describes the operations on Manager resources through Redfish interfaces.
Chapter 5, Operations on System Resources	Describes the operations on System resources through Redfish interfaces.
Chapter 6, Operations on Chassis Resources	Describes the operations on Chassis resources through Redfish interfaces.
Chapter 7, Operations on SessionService Resources	Describes the operations on SessionService resources through Redfish interfaces.
Chapter 8, Operations on EventService Resources	Describes the operations on EventService resources through Redfish interfaces.
Chapter 9, Operations on UpdateService Resources	Describes the operations on UpdateService resources through Redfish interfaces.
Chapter 10, Operations on AccountService Resources	Describes the operations on AccountService resources through Redfish interfaces.
Chapter 11, Operations on Fabric Resources	Describes the operations on Fabric resources through Redfish interfaces.

Chapter 12, Operations on Registry Resources	Describes the operations on Registry resources through Redfish interfaces.
Chapter 13, Redfish Installation and Use	Describes how to install the environment and use a Redfish interface.

Conventions

This manual uses the following conventions.



Note: provides additional information about a topic.

Chapter 1

Redfish Overview

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1.1 Basic Concepts

Redfish is an [HTTPS](#)-based management standard. Each HTTPS operation submits or returns a resource in [JSON](#) format encoded in UTF-8 through a RESTful interface to implement device management.

The Redfish's goal of addressing all the components in the data center with a consistent [API](#) adapts to the development trend towards universal software interfaces in the Internet industry. Redfish provides advantages, such as reduced development complexity, easy to implement and use, and high scalability, and is called the next-generation data center management standard.

1.2 General Descriptions

This section describes the Redfish interfaces from the following five aspects: resource operations, resource functions, request headers, response headers, and returned status codes.

Resource Operations

A resource operation supported by a Redfish interface includes two parts: method and [URI](#). For a description of the resource operations supported by a Redfish interface, refer to [Table 1-1](#).

Table 1-1 Resource Operation Descriptions

Operation	Description
GET resource URI	Returns the requested resource.
POST resource URI	Creates a resource or performs a specified action for a resource.
PATCH resource URI	Modifies the properties of a resource.
DELETE resource URI	Deletes a specified resource.

The URI described in this manual is in the following format: `https://device_ip/redfish/v1/path`, which is divided into three parts:

- The first part indicates the URI address, that is, `https://device_ip`, where `device_ip` indicates the [HDM IP](#) address of the server to be accessed.
- The second part indicates the service and version, that is, `/redfish/v1/`. The Redfish interface of the current device is developed based on Redfish v1.
- The third part indicates the unique resource path, that is, `/path/`.



Note

Some resource operations also need request parameters, including request headers and request bodies, which are described in the command format of each resource operation.

Resource Functions

For a description of the resources and their main operations supported by a Redfish interface, refer to [Table 1-2](#).

Table 1-2 Resource Function Descriptions

Resource	Function
Managers	Used for managing BMC resources, including network resources (such as NTP , SNMP , SMTP , LLDP , and SYSLOG), security resources (such as certificates and services), operation logs, and virtual media.
Systems	Used for device management such as host CPU , memory, RAID card, volume, and GPU management, and resource management such as BIOS option, KVM , and event log management.
Chassis	Used for managing physical disks, power supplies, fans, UID , PCIe , NICs, and other devices in the chassis.
SessionService	Used for managing BMC sessions.
EventService	Used for reporting and managing BMC SEL events.
UpdateService	Used for managing updateable BMC firmware resources.

Request Headers

For a description of the request headers of the Redfish interface, refer to [Table 1-3](#).

Table 1-3 Request Header Descriptions

Request Header	Description
Content-Type	Request message format, which is used for operations with a request body. Services shall accept the Content-Type header set to application/json or application/json; charset=utf-8 . It is recommended that clients use either of the above values in requests because other values may cause errors.

Request Header	Description
Odata-Version	<p>OData version.</p> <ul style="list-style-type: none"> ● If a request contains an unsupported OData version, a service shall reject the request. ● If a service receives a request that contains an unsupported OData version, the service shall reject the request by using the HTTP 412 status code.
Origin	<p>Enables a Web application to use a Redfish service while preventing CSRF attacks.</p>
If-None-Match	<ul style="list-style-type: none"> ● If the ETag of a resource does not match the ETag sent in the request header, the service returns the latest resource and its ETag and the client replaces the cached version with the latest version. ● If the ETag in the request header matches the ETag of the resource, the GET operation returns the HTTP 304 status code.
If-Match	<p>To ensure that clients update the resource from a known status, PATCH requests for resources for which a service returns ETags must support If-Match.</p>
X-Auth-Token	<p>Authenticates the identity of a user in a session. The token value is indistinguishable from the random value. If a service supports this request header, a client can access unsecured resources without establishing a session.</p>
Accept	<p>Communicates to the server the media type or types that the client is prepared to accept. Services shall support the following media types:</p> <ul style="list-style-type: none"> ● Resource requests whose Accept message header is set to application/json or application/json; charset=utf-8 (that is, requests in JSON format). ● Metadata requests whose Accept message header is set to application/xml or application/ xml; charset=utf-8(that is, requests in XML format).
Authorization	<p>Used for basic authentication. In a system that supports basic authentication, a client can access unsecured resources without this request header.</p>

Response Headers

For a description of the response headers of the Redfish interface, refer to [Table 1-4](#).

Table 1-4 Response Header Descriptions

Response Header	Description
OData-Version	<p>Describes the version number of the OData protocol that the payload complies with in the response message.</p>
Content-Type	<p>Describes the media type used in the message body.</p> <ul style="list-style-type: none"> ● Services shall set Content-Type to application/json when returning resources as JSON.

Response Header	Description
	<ul style="list-style-type: none"> Services shall set Content-Type to application/xml when returning metadata as XML. ;charset=utf-8 shall be appended to the Content-Type if Content-Type is specified in the selected media type in the Accept header for the request.
Content-Length	<p>Describes the size of the message body.</p> <p>To indicate the size of the body, a client preferentially uses the Transfer-Encoding: chunked header instead of the Content Length header, because the Transfer-Encoding: chunked header allows the length of the currently transmitted message to be repeatedly sent.</p> <p>If a service does not support Transfer-Encoding and needs to use Content-Length, the service shall return status code 411.</p>
ETag	<p>Identifier for a specified version of a resource, which is usually a message digest.</p> <p>The ETag header shall be included in responses to GET requests for Manager-Account resources.</p>
Link	Link headers shall be returned as described in the Link headers clause.
Cache-Control	Shall be supported and indicates whether a response can or cannot be cached.
Allow	<p>Description requests supported by services.</p> <p>If a service receives an unsupported request, the service returns a 405 status code together with all supported requests.</p>

Status Codes

For a description of the returned status codes of the Redfish interface, refer to [Table 1-5](#).

Table 1-5 Status Code Descriptions

Status Code	Description
200	The request is successful.
201	The resource is created successfully.
202	The task is created successfully.
204	The request is successful, but no content is returned in the response message body.
301	The requested resource resides under a different URI.
302	The requested resource resides temporarily under a different URI.
304	The service has performed a conditional GET request where access is allowed, but the resource content is not changed.
400	The request is illegal. An error occurs on the client and an error message is returned.

Status Code	Description
401	Invalid user request.
403	The server rejects the request.
404	The requested resource does not exist.
405	The operation is not supported.
406	The Accept header is specified in the request. The resource identified in the request cannot generate a resource representation corresponding to a media type contained in the Accept header.
409	The request causes a conflict in the current state of the resources.
410	The requested resource is unavailable to the service, and no forwarding address is known. This condition is considered permanent. Clients with hyperlink editing capabilities shall delete references to the URI in the client request after user approval. If the service does not know, or has no facility to determine, whether or not the condition is permanent, the status code 404 (Not Found) is used instead. Unless otherwise specified, this response can be cached.
411	The request does not specify the length of its content using the Content-Length header (perhaps Transfer- Encoding: chunked was used instead). The addressed resource requires the Content-Length header.
412	The precondition (such as OData-Version or If-Match) check fails.
415	The request specifies a Content-Type for an unsupported message body.
500	An internal error occurs on the server.
501	The requested function is not available.
503	The service is temporarily overloaded or in maintenance, so it cannot process requests. <ul style="list-style-type: none"> ● A service may use this response to indicate that the request URI is valid but the service is performing initialization or other maintenance on the resource. ● The service can also use this response to indicate that the service itself is in maintenance. For example, the service is being initialized after reboot.

Others

N/A: indicates that the field value cannot be obtained or the result cannot be confirmed.

NULL: Indicates that the field value is not supported and the obtained value is null.

Chapter 2

Redfish Resource Tree

For a description of the operations allowed for various resources through the Redfish interface, refer to [Table 2-1](#).

Table 2-1 Redfish Resource Tree

URL	Operation
Public fixed resources	
/redfish	GET
/redfish/v1	GET
Managers resources	
/redfish/v1/Managers	GET
/redfish/v1/Managers/manager_id	GET/PATCH
/redfish/v1/Managers/manager_id/SyslogService	GET/PATCH
/redfish/v1/Managers/manager_id/SyslogService/Actions/SyslogService.SubmitTestEvent	POST
/redfish/v1/Managers/manager_id/NtpService	GET/PATCH
/redfish/v1/Managers/manager_id/NetworkProtocol	GET/PATCH
/redfish/v1/Managers/manager_id/EthernetInterfaces	GET
/redfish/v1/Managers/manager_id/EthernetInterfaces/id	GET/PATCH
/redfish/v1/Managers/manager_id/Actions/Manager.Reset	POST
/redfish/v1/Managers/manager_id/LldpService	GET/PATCH
/redfish/v1/Managers/manager_id/SnmpService	GET/PATCH
/redfish/v1/Managers/manager_id/SnmpService/Actions/SnmpService.SubmitTestEvent	POST
/redfish/v1/Managers/manager_id/VirtualMediae	GET
/redfish/v1/Managers/manager_id/VirtualMedia/Media_type	GET

URL	Operation
/redfish/v1/Managers/manager_id/VirtualMedia/media_type/Actions/VirtualMedia.VmmControl	POST
/redfish/v1/Managers/manager_id/LogServices/Actions/LogServices.Dump	POST
/redfish/v1/Managers/manager_id/LogServices/Actions/LogServices.Dump/Progress	GET
/redfish/v1/Managers/manager_id/LogServices/Actions/LogServices.ExportLogs	POST
/redfish/v1/Managers/manager_id/KvmService	GET/PATCH
/redfish/v1/Managers/manager_id/LogServices/SEL/Entries/entries_id	GET
/redfish/v1/Managers/manager_id/ISDTService	GET/PATCH
/redfish/v1/Managers/manager_id/ISDTService/Actions/ISDTService.VmmControl	POST
Systems resources	
/redfish/v1/Systems	GET
/redfish/v1/Systems/system_id	GET/PATCH
/redfish/v1/Systems/system_id/Actions/ComputerSystem.Reset	POST
/redfish/v1/Systems/system_id/Processors	GET
/redfish/v1/Systems/system_id/Processors/cpu_id	GET
/redfish/v1/Systems/system_id/Processors?\$expand=.	GET
/redfish/v1/Systems/system_id/Memory	GET
/redfish/v1/Systems/system_id/Memory/memory_id	GET
/redfish/v1/Systems/system_id/Memory?\$expand=.	GET
/redfish/v1/Systems/system_id/Storages	GET
/redfish/v1/Systems/system_id/Storages/storage_id	GET
/redfish/v1/Systems/system_id/Storages?\$expand=.	GET
/redfish/v1/Systems/system_id/Storages/storage_id/Volumes	GET/POST
/redfish/v1/Systems/system_id/Storages/storage_id/Volumes/volume_id	GET/DELETE
/redfish/v1/Systems/system_id/Bios	GET
/redfish/v1/Systems/system_id/Bios/SD	GET/PATCH
/redfish/v1/Systems/system_id/Bios/Actions/Bios.ChangePassword	POST
/redfish/v1/Systems/system_id/Bios/Actions/Bios.ResetBios	POST
Chassis resources	

URL	Operation
/redfish/v1/redfish/v1/Chassis	GET
/redfish/v1/redfish/v1/Chassis/chassis_id	GET/PATCH
/redfish/v1/Chassis/chassis_id/NetworkAdapters	GET
/redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id	GET
/redfish/v1/Chassis/chassis_id/NetworkAdapters?\$expand=.	GET
/redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id/NetworkPorts	GET
/redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id/NetworkPorts/networkports_id	GET/PATCH
/redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id/NetworkPorts/networkports_id/OpticalModule	GET
/redfish/v1/Chassis/chassis_id/PCIeDevices	GET
/redfish/v1/Chassis/chassis_id/PCIeDevices/pciedevices_id	GET
/redfish/v1/Chassis/chassis_id/PCIeDevices/pciedevices_id/Functions/functions_id	GET
/redfish/v1/Chassis/chassis_id/PCIeDevices?\$expand=.	GET
/redfish/v1/Chassis/chassis_id/Drives	GET
/redfish/v1/Chassis/chassis_id/Drives/drives_id	GET
/redfish/v1/Chassis/chassis_id/Drives?\$expand=.	GET
/redfish/v1/Chassis/chassis_id/Power	GET/PATCH
/redfish/v1/Chassis/chassis_id/Power/Actions/Power.CollectHistoryData	POST
/redfish/v1/Chassis/chassis_id/Thermal	GET/PATCH
/redfish/v1/Chassis/chassis_id/Boards	GET
/redfish/v1/Chassis/chassis_id/Boards/DiskBackplanes	GET
/redfish/v1/Chassis/chassis_id/Boards/DiskBackplanes/DiskBackplaneId	GET
/redfish/v1/Chassis/chassis_id/Boards/Risercard	GET
/redfish/v1/Chassis/chassis_id/Boards/Risercard/RisercardId	GET
/redfish/v1/Chassis/chassis_id/PCIeDevices/pciedevices_id/Functions/functions_	GET
SessionService resources	
/redfish/v1/SessionService	GET/PATCH
/redfish/v1/SessionService/Sessions	GET/POST
/redfish/v1/SessionService/Sessions/Session_id	GET/DELETE

URL	Operation
EventService resources	
/redfish/v1/EventService	GET/PATCH
/redfish/v1/EventService/Subscriptions	GET/POST
/redfish/v1/EventService/Subscriptions/id	GET/PATCH/ DELETE
/redfish/v1/EventService/Alarms?\$skip=skip_value&\$top=top_value	GET
/redfish/v1/EventService/DeleteAlarmsAll	DELETE
redfish/v1/EventService/CurrentAlarms	GET
/redfish/v1/EventService/CurrentAlarms/alarm_id	GET/DELETE
/redfish/v1/EventService/DeleteCurrentAlarmsAll	DELETE
/redfish/v1/EventService/CurrentAlertEvents	GET
UpdateService resources	
/redfish/v1/UpdateService	GET
/redfish/v1/UpdateService/FirmwareInventory	GET
/redfish/v1/UpdateService/FirmwareInventory/softid	GET
/redfish/v1/UpdateService/upload	POST
/redfish/v1/UpdateService/InsideFirmwareInventory	GET
/redfish/v1/UpdateService/InsideFirmwareInventory/softid	GET
/redfish/v1/UpdateService/Actions/UpdateService.SimpleUpdat	POST
AccountService resources	
/redfish/v1/AccountService	GET/PATCH
/redfish/v1/AccountService/Accounts	GET/POST
/redfish/v1/AccountService/Accounts/account_id	GET/DELETE/ PATCH
/redfish/v1/AccountService/Roles	GET
/redfish/v1/AccountService/Roles/role_id	GET
/redfish/v1/AccountService/LdapService	GET
/redfish/v1/AccountService/LdapService/LdapControllers	GET
/redfish/v1/AccountService/LdapService/LdapControllers/Activedirectory	GET/PATCH

Chapter 3

Operations on Public Fixed Resources

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[Figure 3-1](#) shows the path requirements for the public fixed resources supported by VANTAGEO servers.

[Figure 3-1 Public Fixed Resources Path Requirements](#)



For a description of the properties of public fixed resources and the operations supported by the properties, refer to [Table 3-1](#).

[Table 3-1 Descriptions for Properties of Public Fixed Resources](#)

URL	Property	Description	Operation
/redfish	v1	Redfish version information.	GET
/redfish/v1	Description	Root service description.	GET
	Id	ID of the root server.	GET
	Name	Name of the root service resource.	GET
	Product	Products.	GET
	Redfish Version	Detailed Redfish version information.	GET
	UUID	UUID of the device.	GET
	AccountService	AccountService resources.	GET
	CertificateService	Certificate service resources.	GET
	Systems	System resources.	GET
	Chassis	Chassis resources.	GET

URL	Property	Description	Operation
	EventService	EventService resources.	GET
	JsonSchemas	JSON schema file resources in array format.	GET
	Links	Links.	GET
	Sessions	Session service resources.	GET
	Managers	Manager resources.	GET
	RtpVersion	RTP version information.	GET
	ProtocolFeaturesSupported	Information about protocol features supported by related services.	GET
	ProtocolFeaturesSupported/DeepOperations	Deep operations.	GET
	DeepOperations/DeepPATCH	(AMI native)	GET
	DeepOperations/DeepPOST	(AMI native)	GET
	DeepOperations/MaxLevels	(AMI native)	GET
	ProtocolFeaturesSupported/ExpandQuery	Support for the "expand" query parameter.	GET
	ExpandQuery/ExpandAll	Whether to expand all entries.	GET
	ExpandQuery/Levels	Whether to support the "Levels" qualifier.	GET
	ExpandQuery/Links	Whether to expand hyperlinks inside the Links property.	GET
	ExpandQuery/MaxLevels	Maximum depth to which resources are expanded.	GET
	ExpandQuery/No-Links	Whether to expand hyperlinks outside the Links property.	GET
	ProtocolFeaturesSupported/SelectQuery	Whether to support the use of the "select" query parameter for the query operation.	GET

URL	Property	Description	Operation
	ProtocolFeaturesSupported/ExcerptQuery	Whether to support the use of the "excerpt" query parameter.	GET
	ProtocolFeaturesSupported/FilterQuery	Whether to support the use of the "filter" query parameter.	GET
	ProtocolFeaturesSupported/OnlyMemberQuery	(AMI native)	GET
	Registries	Message registry resources.	GET
	SessionService	SessionService resources.	GET
	Systems	System resources.	GET
	Tasks	TaskService resources.	GET
	TelemetryService	Network telemetry service resources.	GET
	SessionService	SessionService resources.	GET

2.1 Querying the Redfish Version Information

Function

Query the current version of the Redfish protocol.

Permission Required

Query.

Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish`
- Request Header: None
- Request Message Body: None

Parameters

For a description of the parameters for querying the Redfish version information, refer to [Table 3-2](#).

Table 3-2 Parameter Description for Querying Redfish Version Information

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.

Usage Guidelines

None

Example

- Request Example:

```
GET https://device_ip/redfish
```

- Request Header: None
- Request Message Body: None
- Response Example:

```
{
  "v1": "/redfish/v1/"
}
```

- Status Code: 200

Output Description

For a description of the output returned when you query the Redfish version information, refer to [Table 3-3](#).

Table 3-3 Output Descriptions for Querying the Redfish Version Information

Field	Type	Description
v1	String	Redfish version information.

2.2 Querying the Current Root Service Resources

Function

Query the current root service resources of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
- URL: https://device_ip/redfish/v1

- Request Header: None
- Request Message Body: None

Parameters

For a description of the parameters for querying the current root service resources, refer to [Table 3-4](#).

Table 3-4 Parameter Descriptions for Querying the Current Root Service Resources

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.

Usage Guidelines

None

Example

- Request Example:

```
GET https://device_ip/redfish/v1
```

- Request Header: None
- Request Message Body: None
- Response Example:

```
{
    "@odata.context": "/redfish/v1/$metadata#ServiceRoot.ServiceRoot",
    "@odata.etag": "\"1717400038\"",
    "@odata.id": "/redfish/v1",
    "@odata.type": "#ServiceRoot.v1_7_0.ServiceRoot",
    "AccountService": {
        "@odata.id": "/redfish/v1/AccountService"
    },
    "CertificateService": {
        "@odata.id": "/redfish/v1/CertificateService"
    },
    "Chassis": {
        "@odata.id": "/redfish/v1/Chassis"
    },
    "Description": "The service root for all Redfish requests on this host",
    "EventService": {
        "@odata.id": "/redfish/v1/EventService"
    },
    "Fabrics": {
```

```
        "@odata.id": "/redfish/v1/Fabrics"
    },
    "Id": "RootService",
    "JsonSchemas": {
        "@odata.id": "/redfish/v1/Jsonschemas"
    },
    "Links": {
        "Sessions": {
            "@odata.id": "/redfish/v1/SessionService/Sessions"
        }
    },
    "Managers": {
        "@odata.id": "/redfish/v1/Managers"
    },
    "Name": "Root Service", "Product":
    "vantageo Redfish Server",
    "ProtocolFeaturesSupported": {
        "DeepOperations": {
            "DeepPATCH": true,
            "DeepPOST": false,
            "MaxLevels": 6
        },
        "ExcerptQuery": true,
        "ExpandQuery": {
            "ExpandAll": true,
            "Levels": true,
            "Links": true,
            "MaxLevels": 5,
            "NoLinks": true
        },
        "FilterQuery": true,
        "OnlyMemberQuery": true,
        "SelectQuery": true
    },
    "RedfishVersion": "1.15.1",
    "Registries": {
        "@odata.id": "/redfish/v1/Registries"
    },
    "SessionService": {
        "@odata.id": "/redfish/v1/SessionService"
    },
    "Systems": {
        "@odata.id": "/redfish/v1/Systems"
    },

```

```

    "Tasks": {
        "@odata.id": "/redfish/v1/TaskService"
    },
    "TelemetryService": {
        "@odata.id": "/redfish/v1/TelemetryService"
    },
    "UUID": "30e72400-0000-1000-0000-000000000000",
    "UpdateService": {
        "@odata.id": "/redfish/v1/updateService"
    }
}

```

- Status Code: 200

Output Description

For a description of the output returned when you query the current root service resources, refer to [Table 3-5](#).

Table 3-5 Output Descriptions for Querying the Current Root Service Resources

Field	Type	Description
@odata.context	String	OData description of the root service resource model.
@odata.id	String	Access path of the root service resource node.
@odata.type	String	Type of root service resource.
Description	String	Root service description.
Id	String	ID of the root service.
Name	String	Name of the root service resource.
Product	String	Products.
RedfishVersion	String	Detailed Redfish version information.
UUID	String	UUID of the device.
AccountService	Object	AccountService resources.
CertificateService	Object	Certificate service resources.
Chassis	Object	Chassis resources.
EventService	Object	EventService resources.
JsonSchemas	Object	JSON schema file resources in array format.
Links	Object	Links.
Sessions	Object	SessionService resources.
Managers	Object	Manager resources.

Field	Type	Description
RtpVersion	String	RTP version information.
ProtocolFeaturesSupported	Object	Information about protocol features supported by related services.
ProtocolFeaturesSupported/DeepOperations	Object	Deep operations.
DeepOperations/DeepPATCH	Boolean	(AMI native)
DeepOperations/DeepPOST	Boolean	(AMI native)
DeepOperations/MaxLevels	Number	(AMI native)
ProtocolFeaturesSupported/ExpandQuery	Object	Support for the "expand" query parameter.
ExpandQuery/ExpandAll	Boolean	Whether to expand all entries.
ExpandQuery/Levels	Boolean	Whether to support the "Levels" qualifier.
ExpandQuery/Links	Boolean	Whether to expand hyperlinks inside the Links property.
ExpandQuery/MaxLevels	Number	Maximum depth to which resources are expanded.
ExpandQuery/NoLinks	Boolean	Whether to expand hyperlinks outside the Links property.
ProtocolFeaturesSupported/SelectQuery	Boolean	Whether to support the use of the "select" query parameter for the query operation.
ProtocolFeaturesSupported/ExcerptQuery	Boolean	Whether to support the use of the "excerpt" query parameter.
ProtocolFeaturesSupported/FilterQuery	Boolean	Whether to support the use of the "filter" query parameter.
ProtocolFeaturesSupported/OnlyMemberQuery	Boolean	(AMI native)
Registries	Object	Message registry resources.
SessionService	Object	SessionService resources.
Systems	Object	System resources.
Tasks	Object	TaskService resources.
TelemetryService	Object	Network telemetry service resources.
UpdateService	Object	UpdateService resources.

Chapter 4

Operations on Manager Resources

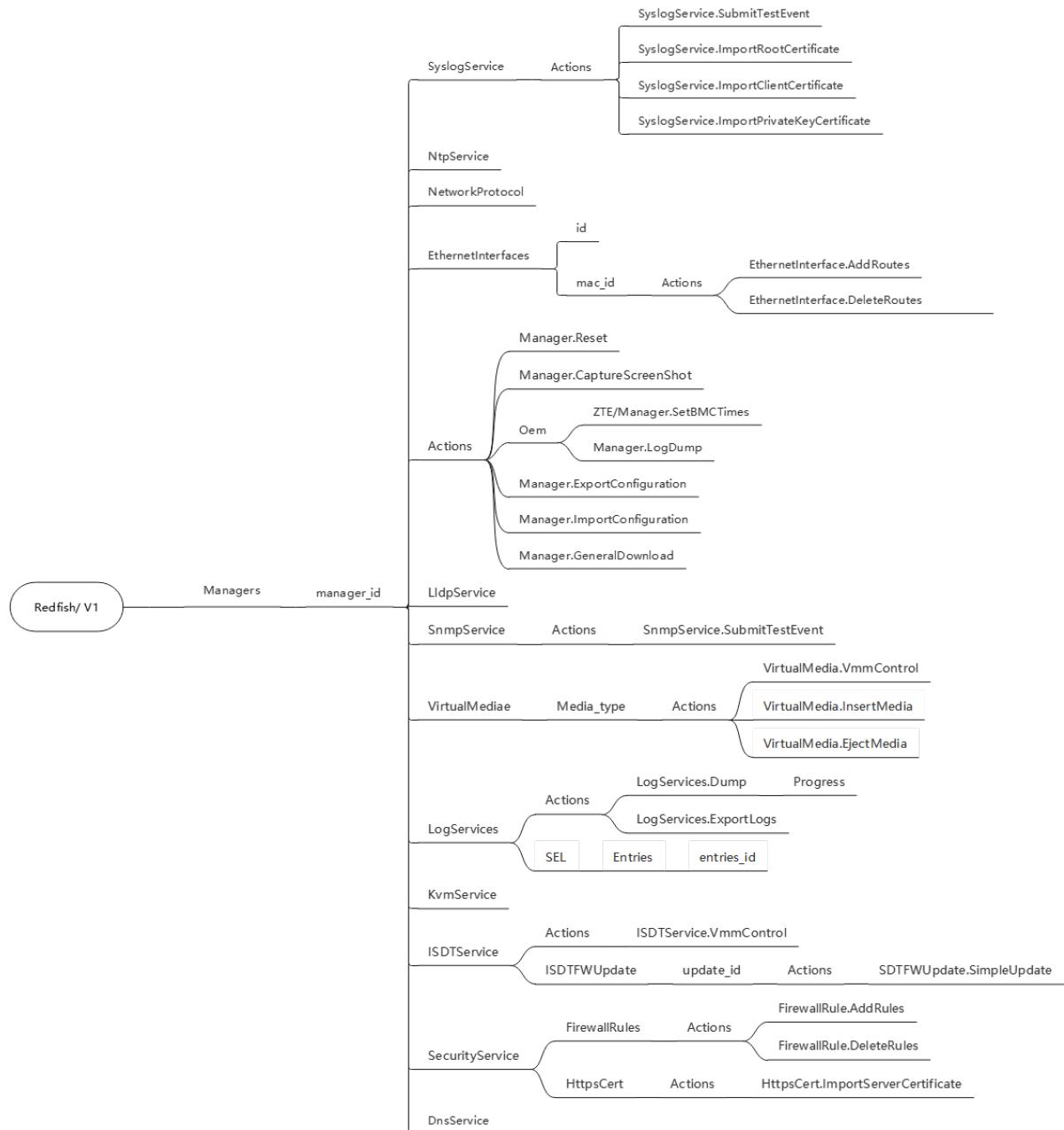
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[Figure 4-1](#) shows the path requirements for the Managers resources supported by VANTAGEO servers.

Figure 4-1 Managers Resource Path Requirements



For a description of the properties of Manager resources and the operations supported by the properties, refer to [Table 4-1](#).

Table 4-1 Description for Properties of Manager Resources

URL	Property	Description	Operation
/redfish/v1/Managers	Name	Name of the Manager resource collection.	GET

URL	Property	Description	Operation
	Members@odata.count	Number of Manager resource members.	GET
	Members	Manager resource list.	GET
/redfish/v1/Managers/manager_id	Id	ID of the Manager resource.	GET
	Name	Name of the Manager resource.	GET
	ManagerType	Type of Manager resource.	GET
	FirmwareVersion	Firmware version of the Manager resource.	GET
	FirmwareVersionDate	BMC version date.	GET
	Model	Model of the Manager resource.	GET
	UUID	UUID of the Manager resource.	GET
	DateTime	System time of the Manager resource.	GET
	DateTimeLocalOffset	Time zone of the Manager resource.	GET/PATCH
	NetworkProtocol	Access path of the network protocol supported by the specified Manager resource.	GET
	EthernetInterfaces	Access path of the Ethernet interface information about the specified Manager resource.	GET
	NtpService	Access path of the NTP service of the specified Manager resource.	GET
	SyslogService	Access path of the Syslog service of the specified Manager resource.	GET
	KvmService	Access path of the KVM service the specified Manager resource.	GET
	SnmpService	Access path of the KVM service the specified Manager resource.	GET
	SmtpService	Access path of the KVM service the specified Manager resource.	GET
	LldpService	Access path of the KVM service the specified Manager resource.	GET

URL	Property	Description	Operation
	VirtualMedia	Access path of the virtual media service of the specified Manager resource.	GET
	Links	Links to the related resources.	GET
	Actions	Available actions for the specified Manager resource.	GET
	Oem	Customized properties.	GET
	#Manager.RollBack	OS operation.	GET
	RollBackType@Redfish.AllowableValues	OS operations allowed through the Redfish interface, including: RollBack	GET
	target	Operation path.	GET
	Manager.RollBack	Switches BMC versions.	GET
	Manager.ImportConfiguration	Imports the configuration.	GET
	Manager.ExportConfiguration	Exports the configuration.	GET
	Manager.FactoryReset	Resets factory settings.	GET
	Oem.Public	Customized field.	GET
	USB0InterfaceEnabled	Whether the virtual network interface named usb0 is enabled: <ul style="list-style-type: none"> ● true: yes. ● false: no. 	GET
	IfMatchEnabled	Whether the match operation is enabled: <ul style="list-style-type: none"> ● true: yes. ● false: no. 	GET
	ISDTService	Access path of the ISDT service the specified Manager resource.	GET
	FirewallService	Access path of the firewall service the specified Manager resource.	GET
	NAT	Access path of the NAT resource.	GET
	Manufacturer	BMC chip manufacturer.	GET
/redfish/v1/Managers/manager_id/SyslogService	Id	ID of the Syslog resource.	GET
	Name	Name of the Syslog resource.	GET
	ServiceEnabled	Syslog service enabled.	GET/PATCH

URL	Property	Description	Operation
/redfish/v1/Managers/manager_id	ServerIdentitySource	<ul style="list-style-type: none"> ● Board serial number: BoardSN ● Asset tag: ProductAssetTag ● Host name: HostName 	GET/PATCH
	TransmissionProtocol	<p>Transmission protocol:</p> <ul style="list-style-type: none"> ● UDP ● TCP 	GET/PATCH
	AuthenticateMode	<p>Authentication mode:</p> <ul style="list-style-type: none"> ● OneWay: unidirectional authentication. ● TwoWay: bidirectional authentication. 	GET
	SyslogServers	Syslog servers.	GET/PATCH
	MemberId	<ul style="list-style-type: none"> ● 0 ● 1 ● 2 ● 3 	GET
	Enabled	Channel enabled.	GET/PATCH
	Address	Server address.	GET/PATCH
	Port	Server port number.	GET/PATCH
	LogType	Log type.	GET/PATCH
	AlternateNtpServer	Address of the alternate NTP server.	GET
/redfish/v1/Managers/manager_id/NtpService	CurrentPollingInterval	Current polling interval.	GET
	Description	Description of the NTP resource.	GET
	ExtraNtpServer	Address of the extra NTP server.	GET
	MaxPollingInterval	Maximum polling interval.	GET
	MinPollingInterval	Minimum polling interval.	GET
	PreferredNtpServer	Address of the preferred NTP server.	GET
	ServerAuthenticationEnabled	Whether server security authentication is enabled.	GET
	ServiceEnabled	Whether the NTP service is enabled:	GET
	<ul style="list-style-type: none"> ● true ● false 		
/redfish/v1/Managers/manager_id	Description	BMC resource description.	GET/PATCH
	Id	BMC network protocol resource ID.	GET/PATCH

URL	Property	Description	Operation
/redfish/v1/Chassis/{ChassisId}/NetworkProtocol/{Protocol}/{ProtocolType}	Name	BMC network protocol resource name.	GET/PATCH
	HostName	BMC management host name.	GET/PATCH
	HTTPS/KVMIP/SNMP/SSH/VirtualMedia/IPMI	Service information supported by BMC.	GET/PATCH
	ProtocolEnabled	Whether the protocol is enabled: ● true ● false	GET/PATCH
	Port	Service port number.	GET/PATCH
	Oem.Public	-	GET/PATCH
	VirtualMedia-CD/VirtualMedia-HD	-	GET/PATCH
	Timeout	Service timeout period, unit: minutes.	GET/PATCH
	ProtocolEnabled	Whether the protocol is enabled: ● true ● false	GET/PATCH
	Port	Service port number.	GET/PATCH
	Instance	Number of instances.	GET/PATCH
	NotifyMulticastIntervalSeconds	Time interval between transmissions of the multicast SSDP NOTIFY message.	GET/PATCH
	NotifyIPv6Scope	IPv6 scope for multicast SSDP NOTIFY messages. ● Link: SSDP Notify messages are sent to addresses in the IPv6 local link scope. ● Site: SSDP Notify messages are sent to addresses in the IPv6 local site scope. ● Organization: SSDP Notify messages are sent to addresses in the IPv6 local organization scope.	GET/PATCH
	NotifyEnabled	Whether SSDP NOTIFY messages are multicast.	GET/PATCH
	VNC	VNC service.	GET/PATCH
	SecurePort	Secure port.	GET/PATCH

URL	Property	Description	Operation
/redfish/v1/Managers/manager_id/EthernetInterfaces	Description	Description of the BMC management interface resource collection.	GET
	Name	Name of the BMC management interface resource collection.	GET
	Members@odata.count	Number of resources in the management interface resource collection.	GET
	Members	List of resources in the management interface resource collection.	GET
/redfish/v1/Managers/manager_id/EthernetInterfaces/id	Id	ID of the specified BMC management interface resource.	GET
	Name	Name of the specified BMC management interface resource.	GET
	PermanentMACAddress	Permanent MAC address of the specified BMC management interface resource.	GET
	InterfaceEnabled	Whether the interface is enabled.	GET
	MTUSize	MTU configured on the current interface (in bytes).	GET
	AutoNeg	Whether the rate and multiplexing are automatically negotiated:	GET
		<ul style="list-style-type: none"> ● true ● false 	
	FullDuplex	Whether full duplex mode is used:	GET
		<ul style="list-style-type: none"> ● true ● false 	
	SpeedMbps	Current rate (in Mbps).	GET
	Description	Description of the specified BMC management interface resource.	GET
	HostName	DNS hostname, which does not contain any domain information.	GET
	IPv4Addresses	IPv4 information object.	GET
	Address	IPv4 address.	GET
	AddressOrigin	Source of the IPv4 address:	GET
		<ul style="list-style-type: none"> ● Static ● DHCP 	

URL	Property	Description	Operation
	Gateway	Gateway of the IPv4 address.	GET
	SubnetMask	IPv4 subnet mask.	GET
	IPv6DefaultGateway	Default IPv6 gateway.	GET
	IPv6Addresses	IPv6 information object.	GET
	Address	IPv6 address.	GET
	AddressOrigin	Source of the IPv6 address: <ul style="list-style-type: none"> ● Static ● DHCPv6 ● LinkLocal 	GET
	PrefixLength	Prefix length of the IPv6 address.	GET
	IPv6StaticAddresses	Static IPv6 information object.	GET
	Address	Static IPv6 address.	GET
	PrefixLength	Prefix length of the static IPv6 address.	GET
	Oem.Public	OEM object.	GET
	IPStacks	Whether IPv4 and IPv6 are enabled: <ul style="list-style-type: none"> ● null: interface not enabled ● IPv4: IPv4 enabled only ● IPv6: IPv6 enabled only ● IPv4AndIPv6: IPv4 and IPv6 both enabled 	GET
	DNSServiceEnabled	Whether the DNS service is enabled.	GET
	DNSDhcpEnabled	Whether DNS DHCP is enabled: <ul style="list-style-type: none"> ● true: automatic ● false: manual 	GET
	PatchInProgress	Configuration validity flag: <ul style="list-style-type: none"> ● true: being configured ● false: applied successfully 	GET
	DoMain	Domain name.	GET
	VLANPriority	VLAN priority, range: 0–7.	GET
	NetworkPortMode	Network port mode: <ul style="list-style-type: none"> ● Automatic ● Fixed: fixed mode ● Standalone: standalone mode 	GET

URL	Property	Description	Operation
	NCSIModeSelect	NCSI mode: <ul style="list-style-type: none">● Automatic● Manual● null: default for non-standalone mode and automatic mode	GET
	ManagementNetworkPort	In fixed mode of the specified management network interface, there is only one group of BMC management network interface data. In automatic mode and standalone mode, there are dedicated interface data and shared interface data.	GET
	Type	<ul style="list-style-type: none">● Dedicated: dedicated network interface.● ShareLink: shared network interface.	GET
	CardNumber	The default value for a dedicated network interface is null, and the default value for a shared network interface is: <ul style="list-style-type: none">● 1: NIC 1● 2: NIC 2	GET
	PortNumber	For a dedicated network port, the default serial number is set to 0. For a shared network port, this parameter indicates the silkscreen number of the network interface, ranging from 1 through 4.	GET
	ActualPortNumber	Actual silk screen number of the network interface, range: 1–4. This field is displayed only when the network interface mode is set to standalone or automatic (the selected network interface is not a dedicated interface), and the NCSI mode is set to automatic.	GET
	ManagementNetworkPort @Redfish.AllowableValues	All available network interfaces of the BMC.	GET
	NameServers	Domain name server list.	GET

URL	Property	Description	Operation
/redfish/v1/Managers/manager_id/Actions/Manager.Reset	Status	<p>Status information about the specified BMC management interface resource.</p> <ul style="list-style-type: none"> ● State: enabling status of the BMC management interface. ● Health: health status of the BMC management interface. 	GET
	VLAN	VLAN information object.	GET
	VLANEnable	Whether VLAN is enabled:	GET
	VLANId	Configured VLAN ID, range: 2–4094.	GET
	IPv4Routes	IPv4 route information about the NIC.	GET
	IPv6Routes	IPv6 route information about the NIC.	GET
	Actions	Operations that can be performed on the resource.	GET
	EthernetInterface.AddRoutes	Adds a route.	GET
	EthernetInterface.DeleteRoutes	Deletes a route.	GET
/redfish/v1/Managers/manager_id/Actions/Manager.Reset	target	Access path of the route operation.	GET
	code	String indicating the specified message ID in the message registry.	POST
	message	Readable message for the code in the message registry.	POST
	MessageId	Message ID.	POST
	RelatedProperties	Message-related properties.	POST
	Message	Details.	POST
	MessageArgs	Message arguments.	POST
	Severity	Severity level. Options:	POST
		<ul style="list-style-type: none"> ● OK ● Warning ● Critical 	
	Resolution	Recommended solution.	POST

URL	Property	Description	Operation
/redfish/v1/Managers/manager_id/LldpService	Description	Description of the LLDP resource.	GET
	Id	ID of the LLDP resource.	GET
	Name	Name of the LLDP resource.	GET
	LldpEnabled	LLDP enabled.	GET/PATCH
	WorkMode	LLDP operation mode.	GET/PATCH
/redfish/v1/Managers/manager_id/SnmpService	Actions	Operations that can be performed on the SNMP resource.	GET
	SnmpService.SubmitTestEvent	Submits an SNMP trap test event.	GET
	target	Access path for sending the SNMP trap test event.	GET
	Description	Description of the LLDP resource.	GET
	Id	ID of the LLDP resource.	GET
	Name	Name of the LLDP resource.	GET
	ComplexPwdEnable	Complex password switch: <ul style="list-style-type: none">● true: turns on the switch.● false: turns off the switch.	GET
	ReadOnlyCommunity	SNMP read-only community. Note: This property contains sensitive information and is displayed as null. The PATCH operation is available.	GET
	ReadWriteCommunity	SNMP readwrite community. Note: This property contains sensitive information and is displayed as null. The PATCH operation is available.	GET
	SnmpServiceEnable	Whether SNMP is enabled: <ul style="list-style-type: none">● true: yes.● false: no.	GET
	SnmpServicePort	SNMP port number.	GET
	SnmpTrapNotification	SNMP Trap properties.	GET
	TrapServer	SNMP Trap server information.	GET
	MemberId	SNMP Trap group member number.	GET
	TrapServerAddress	SNMP Trap server address.	GET
	TrapServerEnable	Current Trap Server status:	GET

URL	Property	Description	Operation
		<ul style="list-style-type: none"> ● true: enabled ● false: disabled 	
	TrapServerPort	Trap server port number.	GET
	AlarmSeverity	Event severity: <ul style="list-style-type: none"> ● Critical ● Major ● Minor ● Normal 	GET
	TrapHostIdentify	Trap host ID: <ul style="list-style-type: none"> ● BoardSN: board SN. ● ProductAssetTag: product asset tag. ● HostName: host name. 	GET
	TrapV3User	SNMPv3 username.	GET
	TrapVersion	SNMP trap version number: <ul style="list-style-type: none"> ● V1 ● V2C ● V3 	GET
	TrapServer@odata.count	Number of SNMP trap servers.	GET
	snmpTrapCommunity	SNMP trap community name.	GET
	snmpTrapEnable	Whether to enable the SNMP trap function. <ul style="list-style-type: none"> ● true: yes. ● False: no. 	GET
	SnmpV3AuthUser	This array lists all users with the SNMP permission.	GET
	snmpV3AuthProtocol	SNMPv3 user authentication algorithm: <ul style="list-style-type: none"> ● SHA ● MD5 ● SHA256 ● SHA384 ● SHA512 	GET
	snmpV3PrivProtocol	NMPv3 user encryption algorithm: <ul style="list-style-type: none"> ● DES ● AES ● AES256 	GET

URL	Property	Description	Operation
	UserName	Username with the SNMP permission.	GET
	SnmpV3AuthUser@odata.count	Number of users with the SNMP permission.	GET
	SnmpV3EngineID	SNMPv3 Engine ID.	GET
/redfish/v1/Managers/manager_id/VirtualMediae	Description	Description.	GET
	Members	virtual media resource list, where the CD1 and USBStick1 resources can be queried and used only after the number of entities is set to two.	GET
	Members@odata.count	Number of virtual media resource members that can be connected currently.	GET
	Name	Name of the virtual media resource collection.	GET
/redfish/v1/Managers/manager_id/VirtualMedia/Media_type	Description	Description.	GET
	ConnectedVia	Connection method.	GET
	Id	ID of the virtual media resource.	GET
	Name	Name of the virtual media resource.	GET
	MediaTypes	Media plane type: ● CD ● USBStick	GET
	TransferProtocolType	Transfer protocol: ● NFS ● CIFS ● HTTPS	GET
	TransferMethod	Transfer method: stream.	GET
	Image	Image path.	GET
	ImageName	Image name.	GET
	ConnectedVia	Connection method.	GET
	Inserted	Connection status: ● true: mounting (inserted) ● false: removed	GET

URL	Property	Description	Operation
	Oem	Customized properties of a specified session.	GET
/redfish/v1/Managers/manag-er_id/VirtualMe-dia/media_type/Ac-tions/VirtualMedi-a.VmmControl	Information	-	POST
	target	Access path of the current virtual media resource.	POST
/redfish/v1/Man-agers/manag-er_id/LogSer-vices/Ac-tions/LogSer-vices.Dump	MessageId	Message ID.	POST
	RelatedProperties	Message-related properties.	POST
	Message	Details.	POST
	MessageArgs	Message arguments.	POST
	Severity	Severity level. Options: ● OK ● Warning ● Critical	POST
	Resolution	Recommended solution.	POST
/redfish/v1/Man-agers/manager-s_id/LogSer-vices/Ac-tions/LogSer-vices.Dump/Progress	Percentage	Task progress percentage.	GET
	State	State.	GET
	Type	Type.	GET
	Message	Task progress status.	GET
	TarName	File name of the compressed package, in which UnknownProductSN is replaced with the actual SN number. If it is not obtained, it is UnknownProductSN .	GET
	TarPath	Storage path of the local compressed package.	GET
/redfish/v1/Man-agers/manag-er_id/LogSer-vices/Ac-tions/LogSer-vices.ExportLogs	code	ID of the specified message in the message registry.	POST
	message	Readable message for the code in the message registry.	POST
	MessageId	Message ID.	POST
	RelatedProperties	Message-related properties.	POST

URL	Property	Description	Operation
<code>/redfish/v1/Managers/manager_id/KvmService</code>	Message	Details.	POST
	MessageArgs	Message arguments.	POST
	Severity	Severity. Options: <ul style="list-style-type: none">● OK● Warning● Critical	POST
	Resolution	Recommended solution.	POST
<code>/redfish/v1/Managers/manager_id/LogServices/SEL/Entries/entries_id</code>	MaximumNumberOfSessions	Maximum number of KVM sessions.	POST/PATCH
	KvmUrl	URL for logging in to the KVM. When you log in through this URL, the Web session is automatically logged out.	POST
	NumberOfActivatedSessions	Number of current KVM sessions.	POST/PATCH
	ActivatedSessionsType	Type of KVM session: <ul style="list-style-type: none">● Shared: shared● Private: exclusive	POST/PATCH
	EncryptionEnabled	Whether KVM encryption is enabled: <ul style="list-style-type: none">● true: yes.● false: no.	POST/PATCH
	SessionTimeoutMinutes	Session timeout period. Range: 1–60, unit: minutes.	POST/PATCH
<code>/redfish/v1/Managers/manager_id/LogServices/SEL/Entries/entries_id</code>	Created	Time when the SEL log instance is created.	GET
	Description	Log resource description information.	GET
	EntryCode	Type of SEL log instance.	GET
	EntryType	Type of SEL log instance.	GET
	EventTimestamp	Timestamp of the SEL log instance information.	GET
	Id	ID of the SEL log instance.	GET
	Message	Message content of the SEL log instance information.	GET
	Name	Name of the SEL log instance.	GET
	SensorNumber	ID of the sensor that creates the SEL log instance.	GET

URL	Property	Description	Operation
/redfish/v1/Managers/manager_id/ISDTService	SensorType	Type of the sensor that creates the SEL log instance.	GET
	Message	Details.	GET
	Severity	Log severity level of the SEL log instance information.	GET
	Oem.Public	Customized properties.	GET
	OwnerLUN	SensorNumber extension.	GET
/redfish/v1/Managers/manager_id/ISDTService	ImageInstalled	Whether there is a navigation disk image.	GET
	Actions	Available actions for the ISDT resource.	GET
	#ISDTService.VmmControl	Control operation on the navigation disk.	GET
	target	Path of the control operation on the navigation disk.	GET
	ServiceEnabled	Whether service is enabled.	PATCH
/redfish/v1/Managers/manager_id/ISDTService/Actions/ISDTService.VmmControl	Information	-	POST
	target	Access path of the current ISDT resource.	POST
/redfish/v1/Managers/manager_id/ISDTService/ISDTFWUpdate	Name	Name of the ISDT FWUpdate collection.	GET
	Members@odata.count	Number of ISDT FWUpdate tasks, which is fixed to one.	GET
	Members.@odata.id	ISDT FWUpdate task.	GET
/redfish/v1/Managers/manager_id/ISDTService/ISDTFWUpdate/updateid	Id	Updateable resource, which is fixed to 1.	GET
	Name	Interface description.	GET
	TransferState	File transfer status. Value: Initiating.	GET
	TransferFileName	Name of the file being transferred. Value: ImageUrl carried in the request during upgrade.	GET

URL	Property	Description	Operation
	UpgradeProgress	Task completion progress, range: 0–100.	GET
	Messages	Task progress description, which is not fixed. A completion time string is available when the task is completed.	GET
	Actions	Operations that can be performed on the resource.	GET
/redfish/v1/Managers/manager_id/ISDTService/ISDTFWUpdate/update_id/Actions/SDTFWUpdate.SimpleUpdate	code	Response code description.	POST
	message	Prompt message that is returned.	POST
/redfish/v1/Managers/manager_id/SecurityService	Id	Unique identifier.	GET
	Name	Resource name.	GET
	FirewallRules	Lower-level firewall rule URI.	GET
/redfish/v1/Managers/manager_id/SecurityService/FirewallRules	Id	Unique identifier.	GET
	Name	Resource name.	GET
	ActiveStrategy	Currently valid policy: <ul style="list-style-type: none"> ● Accept: enables rules that accept data, that is, the allowlist takes effect. ● Drop: enables rules that drop data, that is, the blocklist takes effect. 	GET
	Rules	Rule list.	GET
	Actions	Operations that can be performed on the resource.	GET
	RuleType	Mode type of this rule.	GET
	StartTime	Time when the rule takes effect.	GET
	EndTime	Time when the rule becomes invalid.	GET
	StartIPAddress	Start IP address corresponding to the rule.	GET

URL	Property	Description	Operation
/redfish/v1/Managers/manager_id/Actions/Oem/VANTAGEO/Manager.SetBMCTimes	EndIPAddress	End IP address corresponding to the rule.	GET
	StartMacAddress	Start MAC address corresponding to the rule.	GET
	EndMacAddress	End MAC address corresponding to the rule.	GET
	WorkdayOnly	Whether the rule is effective on work-days only.	GET
/redfish/v1/Managers/manager_id/Actions/Oem/VANTAGEO/Manager.SetBMCTimes	Message	Details.	POST
	MessageId	Message ID.	POST
	Resolution	Recommended solution.	POST
	Severity	Severity level. Options: ● OK ● Warning ● Critical	POST
/redfish/v1/Managers/manager_id/SecurityService/HttpsCert	Id	Resource ID.	GET
	Name	Resource name.	GET
	Version	Version.	GET
	IssuerAddress	Issuer's email address.	GET
	KeyUsage	Certificate usage.	GET
	PublicKey	Public key.	GET
	PublicKeyLengthBits	Public key length.	GET
	SerialNumber	Serial number.	GET
	SignatureAlgorithm	Signature algorithm.	GET
	Issuer	Certificate issuer.	GET
	Subject	Certificate receiver.	GET
	City	City or area.	GET
	CommonName	Common name.	GET
	Country	Country.	GET
	Organization	Organization.	GET
	OrganizationalUnit	Organizational unit.	GET

URL	Property	Description	Operation
<code>/redfish/v1/Managers/manager_id/SecurityService/HttpsCert/Actions/HttpsCert.ImportServerCertificate</code>	State	Province (state).	GET
	SubjectAddress	Recipient's email address.	GET
	ValidNotAfter	End time of the validity period of the certificate.	GET
	ValidNotBefore	Start time of the validity period of the certificate.	GET
<code>/redfish/v1/Managers/manager_id/Actions/Manager.ExportConfiguration</code>	Message	Details.	POST
	MessageId	Message ID.	POST
	MessageArgs	Message arguments.	POST
	Resolution	Recommended solution.	POST
	Severity	Severity level. Options: ● OK ● Warning ● Critical	POST
<code>/redfish/v1/Managers/manager_id/DnsService</code>	Messages	Message list.	POST
	Message	Details.	POST
	MessageId	Message ID.	POST
	Resolution	Recommended solution.	POST
	Severity	Severity level. Options: ● OK ● Warning ● Critical	POST
<code>/redfish/v1/Managers/manager_id/DnsService</code>	DnsIpConfig	DnsIpConfig resource list.	GET
	DnsDhcpEnable	Whether the DNS service is enabled.	GET
	DnsEnable	Whether DNS is enabled.	GET
	NameServers	The first value indicates the primary server, the second value indicates standby server 1, and the third value indicates standby server 2.	GET
	DomainConfig	Domain name configuration.	GET
	DomainName	Domain name.	GET
	HostNameConfig	Hostname object.	GET
	HostSetting	Hostname configuration mode.	GET

URL	Property	Description	Operation
	PatchInProgress	Configuration validity flag.	GET
	RegisterBMC	Registration mode.	GET

4.1 Querying Information About the Manager Resource Collection

Function

Query information about the Manager resource collection of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
- URL: *https://device_ip/redfish/v1/Managers*
- Request Header:

x-auth-token:auth_value

- Request Message Body: None

Parameters

For a description of the parameters for querying information about the Manager resource collection, refer to [Table 4-2](#).

Table 4-2 Parameter Descriptions for Querying Information About the Manager Resource Collection

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <i>/redfish/v1/SessionService/Sessions</i> .

Usage Guidelines

None

Example

- Request Example:

GET *https://device_ip/redfish/v1/Managers*

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example:

```
{
    "@odata.context": "/redfish/v1/$metadata#ManagerCollection.ManagerCollection",
    "@odata.id": "/redfish/v1/Managers",
    "@odata.type": "#ManagerCollection.ManagerCollection",
    "Description": "The collection for Managers",
    "Members": [
        {
            "@odata.id": "/redfish/v1/Managers/1"
        }
    ],
    "Members@odata.count": 1,
    "Name": "Manager Collection"
}
```

- Status Code: 200

Output Description

For a description of the output returned when you query information about the Manager resource collection, refer to [Table 4-3](#).

Table 4-3 Output Descriptions for Querying Information About the Manager Resource Collection

Field	Type	Description
@odata.context	String	OData description of the Manager resource collection model.
@odata.id	String	Access path of the Manager resource collection node.
@odata.type	String	Type of Manager resource collection.
Description	String	Description of the Manager resource collection.
Name	String	Name of the Manager resource collection.
Members@odata.count	Number	Number of Manager resource members.
Members	Object	Manager resource list.
@odata.id	String	Access path of a single Manager resource node.

4.2 Querying Information About a Specified Manager Resource

Function

Query information about a specified Manager resource of a server.



Note

Only the [BMC](#) resource information about the server itself can be queried.

Permission Required

Query.

Syntax

- Operation Type: GET
- [URL](#): `https://device_ip/redfish/v1/Managers/manager_id`
- Request Header:

`x-auth-token:auth_value`

- Request Message Body: None

Parameters

For a description of the parameters for querying information about the specified Manager resource, refer to [Table 4-4](#).

Table 4-4 Parameter Descriptions for Querying Information About the Specified Manager Resource

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
manager_id	ID of the Manager resource.	For a rack server, the value is 1 or Self .
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .

Usage Guidelines

None

Example

- Request Example:

`GET https://device_ip/redfish/v1/Managers/1`

- Request Header:

```
x-auth-token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example:

```
{
    "@odata.context": "/redfish/v1/$metadata#Manager.Manager",
    "@odata.id": "/redfish/v1/Managers/1",
    "@odata.type": "#Manager.v1_13_0.Manager",
    "Manufacturer": "ASPEED",
    "Actions": {
        "Oem": {
            "#Manager.FactoryReset": {
                "target": "/redfish/v1/Managers/1/Actions/Manager.FactoryReset",
                "FactoryResetType@Redfish.Allowablevalues": [
                    "ResetAll"
                ]
            },
            "#Manager.Rollback": {
                "target": "/redfish/v1/Managers/1/Actions/Manager.Rollback",
                "RollBackType@Redfish.Allowablevalues": [
                    "RollBack"
                ]
            }
        },
        "#Manager.Reset": {
            "target": "/redfish/v1/Managers/1/Actions/Manager.Reset",
            "ResetType@Redfish.Allowablevalues": [
                "ForceRestart"
            ]
        },
        "#Manager.CaptureScreenShot": {
            "target": "/redfish/v1/Managers/1/Actions/Manager.CaptureScreenShot"
        },
        "#Manager.DownloadScreenShot": {
            "target": "/redfish/v1/Managers/1/Actions/Manager.DownloadScreenShot"
        },
        "#Manager.ImportConfiguration": {
            "target": "/redfish/v1/Managers/1/Actions/Manager.ImportConfiguration"
        },
        "#Manager.ExportConfiguration": {
            "target": "/redfish/v1/Managers/1/Actions/Manager.ExportConfiguration"
        }
    }
}
```

```
        "#Manager.GeneralDownload": {
            "target": "/redfish/v1/Managers/1/Actions/Manager.GeneralDownload"
        }
    },
    "CommandShell": {
        "MaxConcurrentSessions": 36,
        "ServiceEnabled": true
    },
    "DateTime": "2010-03-24T12:34:27+08:00",
    "DateTimeLocalOffset": "+08:00",
    "Description": "BMC",
    "EthernetInterfaces": {
        "@odata.id": "/redfish/v1/Managers/1/EthernetInterfaces"
    },
    "GraphicalConsole": {
        "MaxConcurrentSessions": 4,
        "ServiceEnabled": true
    },
    "Id": "1",
    "ManagerType": "BMC",
    "Model": "43707000",
    "Name": "Manager",
    "NetworkProtocol": {
        "@odata.id": "/redfish/v1/Managers/1/NetworkProtocol"
    },
    "SerialConsole": {
        "MaxConcurrentSessions": 3,
        "ServiceEnabled": true
    },
    "Status": {
        "Health": "OK",
        "State": "Enabled"
    },
    "VirtualMedia": {
        "@odata.id": "/redfish/v1/Managers/1/VirtualMedia"
    },
    "Links": {
        "ManagerForChassis": [
            {
                "@odata.id": "/redfish/v1/chassis/1"
            }
        ],
        "ManagerForServers": [
            {
                "@odata.id": "/redfish/v1/servers/1"
            }
        ]
    }
}
```

```
        "@odata.id": "/redfish/v1/Systems/1"
    }
],
"ManagerInChassis": [
{
    "@odata.id": "/redfish/v1/chassis/1"
}
]
},
"NtpService": {
    "@odata.id": "/redfish/v1/managers/1/NtpService"
},
"LogServices": {
    "@odata.id": "/redfish/v1/managers/1/LogServices"
},
"LLdpService": {
    "@odata.id": "/redfish/v1/managers/1/LLdpService"
},
"SyslogService": {
    "@odata.id": "/redfish/v1/managers/1/SyslogService"
},
"KvmService": {
    "@odata.id": "/redfish/v1/managers/1/KvmService"
},
"SnmpService": {
    "@odata.id": "/redfish/v1/managers/1/SnmpService"
},
"firmwareVersion": "04.22.01.01",
"UUID": "30e72400-0000-1000-0000-000000000000",
"ServiceEntryPointUUID": "30e72400-0000-1000-0000-000000000000",
"Oem": {
    "NAT": {
        "@odata.id": "/redfish/v1/managers/1/NAT"
    },
    "Public": {
        "FirmwareVersionDate": "May 09 2024",
        "IfMatchEnabled": false,
        "USB0InterfaceEnabled": false,
        "ISDTService": {
            "@odata.id": "/redfish/v1/managers/1/ISDTService"
        },
        "DnsService": {
            "@odata.id": "/redfish/v1/managers/1/DnsService"
        },
    }
},
```

```
        "FirewallService":{  
            "@odata.id": "/redfish/v1/Managers/1/SecurityService"  
        }  
    }  
}
```

- Status Code: 200

Output Description

For a description of the output returned when you query information about the specified Manager resource, refer to [Table 4-5](#).

Table 4-5 Output Descriptions for Querying Information About the Specified Manager Resource

Field	Type	Description
@odata.context	String	OData description of the specified Manager resource collection model.
@odata.id	String	Access path of the specified Manager resource node.
@odata.type	String	Type of the specified Manager resource.
Id	String	ID of the Manager resource.
Name	String	Name of the Manager resource.
ManagerType	String	Type of Manager resource.
FirmwareVersion	String	Firmware version of the Manager resource.
UUID	String	UUID of the Manager resource.
ServiceEntryPointUUID	String	UUID of the service entry point of the Manager resource.
Model	String	Model of the Manager resource.
DateTime	String	System time of the Manager resource.
DateTimeLocalOffset	String	Time zone of the Manager resource, in time zone format, for example, +08:00, or time zone/region format, for example, Asia/Shanghai or America/New_York.
Description	String	Description of the Manager resource.
NetworkProtocol	Object	Access path of the network protocol supported by the specified Manager resource.
EthernetInterfaces	Object	Access path of the Ethernet interface information about the specified Manager resource.

Field	Type	Description
NtpService	Object	Access path of the NTP service of the specified Manager resource.
SyslogService	Object	Access path of the Syslog service of the specified Manager resource.
KvmService	Object	Access path of the KVM service of the specified Manager resource.
SnmpService	Object	Access path of the SNMP service of the specified Manager resource.
LldpService	Object	Access path of the LIDP service of the specified Manager resource.
LogServices	Object	Log service access path of the specified Manager resource.
VirtualMedia	Object	Access path of the virtual media service of the specified Manager resource.
Links	Object	Links to the related resources.
Actions	Object	Available actions for the specified Manager resource.
RollBackType@Redfish.AllowableValues	Array	OS operations allowed through the Redfish interface, including: RollBack
#Manager.FactoryReset.target	String	Resets factory settings.
#Manager.RollBack.target	Object	Switches BMC versions.
#Manager.Reset.target	String	Access path of BMC restart.
ResetType@Redfish.AllowableValues	Array	BMC restart operations allowed by the Redfish, including: ForceRestart.
#Manager.CaptureScreenShot.target	String	Access path for manual screenshot resources.
#Manager.Download-ScreenShot.target	String	Access path for downloading screenshots.
#Manager.ImportConfiguration.target	String	Imports configurations.
#Manager.ExportConfiguration.target	String	Exports configurations.
#Manager.GeneralDownload.target	String	Access path for the general download interface.
CommandShell	Object	Command shell properties.

Field	Type	Description
GraphicalConsole	Object	GUI console properties.
Manufacturer	String	BMC chip manufacturer.
MaxConcurrentSessions	Number	Maximum number of concurrent sessions.
ServiceEnabled	Boolean	Whether the service is enabled.
SerialConsole	Object	Serial console properties.
Links.ManagerForChassis	Array	Array of references to the chassis that this manager has control over.
Links.ManagerForServers	Array	Links to servers.
Links.ManagerInChassis	Array	Reference to the chassis that this manager is located in.
Oem.Public.FirmwareVersion-Date	String	BMC firmware version date.
Oem.Public.IfMatchEnabled	Boolean	Whether the match operation is enabled: <ul style="list-style-type: none"> ● true: yes. ● false: no.
Oem.Public.USB0InterfaceEnabled	Boolean	Whether the virtual network interface named usb0 is enabled: <ul style="list-style-type: none"> ● true: yes. ● false: no.
Oem.Public.ISDTService	Object	Access path of the ISDT service of the specified Manager resource.
Oem.Public.DnsService	Object	Access path of the specified DNS service.
Oem.Public.FirewallService	Object	Access path of the firewall service of the specified Manager resource.
Oem.NAT	Object	Access path of the NAT resource.

4.3 Modifying Information About a Specified Manager Resource

Function

Modify information about a specified Manager resource of a server.

Permission Required

Basic management.

Syntax

- Operation Type: PATCH
 - URL: https://device_ip/redfish/v1/Managers/manager_id
 - Request Header:
- ```
x-auth-token:auth_value
Content-Type:header_type
```
- Request Message Body:
- ```
{
    "DateTimeLocalOffset": datetimelocaloffset_value
}
```

Parameters

For a description of the parameters for querying information about the Syslog configuration, refer to [Table 4-6](#).

Table 4-6 Parameter Descriptions for Querying Information About the Syslog Configuration

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
manager_id	ID of the Manager resource.	For a rack server, the value is 1 or Self .
auth_value	X-Auth-Token value contained in Request Header in the PATCH request for authentication.	It can be obtained by creating a session through /redfish/v1/SessionService/Sessions .
header_type	Format of the request message.	application/json
datetimelocaloffset_value	Time zone of the Manager resource.	Format: <ul style="list-style-type: none"> • GMT+ time zone, for example, GMT +09 :00. • Time zone string, for example, Asia/Shanghai.

Usage Guidelines

None

Example

- Request Example:
- ```
PATCH https://device_ip/redfish/v1/Managers/1
```
- Request Header:

```
X-Auth-Token:LXIrqPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
 "DateTimeLocalOffset": "Asia/Shanghai"
}
```

- Response Example: None
- Response Code: 204

### Output Description

None

## 4.4 Querying Information About the Syslog Configuration

### Function

Query information about the Syslog configuration.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL**: [https://device\\_ip/redfish/v1/Managers/manager\\_id/SyslogService](https://device_ip/redfish/v1/Managers/manager_id/SyslogService)
- Request Header:

```
x-auth-token:auth_value
```

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the Syslog configuration, refer to [Table 4-7](#).

**Table 4-7 Parameter Descriptions for Querying Information About the Syslog Configuration**

| Parameter  | Description                                                                           | Value                                                                                                                                    |
|------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                                                    |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value <b>1</b> or <b>Self</b> .                                                                                   |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |

## Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/SyslogService
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#SyslogService.SyslogService",
 "@odata.id": "/redfish/v1/Managers/Self/SyslogService",
 "@odata.type": "#SyslogService.v1_2_0.SyslogService",
 "Actions": {
 "#syslogservice.SubmitTestEvent": {
 "target":
 "/redfish/v1/Managers/Self/syslogService/Actions/
 SyslogService.SubmitTestEvent"
 }
 },
 "Id": "SyslogService",
 "Name": "SyslogService",
 "ServerIdentitySource": "BoardSN",
 "ServiceEnabled": true,
 "TransmissionProtocol": "TLS",
 "AuthenticateMode": "TwoWay",
 "SyslogServers": [
 {
 "Address": "192.168.1.6",
 "Enabled": false,
 "LogType": [
 "SecurityLog",
 "OperationLog",
 "EventLog"
],
 "MemberId": "0",
 "Port": 111
 }
]
}
```

```

 "Address": "192.168.1.5",
 "Enabled": false,
 "LogType": [
 "EventLog"
],
 "MemberId": "1",
 "Port": 222
 },
 {
 "Address": "",
 "Enabled": false,
 "LogType": [],
 "MemberId": "2",
 "Port": 514
 },
 {
 "Address": "",
 "Enabled": false,
 "LogType": [],
 "MemberId": "3",
 "Port": 514
 }
]
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the Syslog configuration, refer to [Table 4-8](#).

**Table 4-8 Output Descriptions for Querying Information About the Syslog Configuration**

| Field                | Type    | Description                                                                               |
|----------------------|---------|-------------------------------------------------------------------------------------------|
| @odata.context       | String  | OData description of the Syslog resource model.                                           |
| @odata.id            | String  | Access path of the Syslog resource.                                                       |
| @odata.type          | String  | Type of Syslog resource.                                                                  |
| Id                   | String  | ID of the Syslog resource.                                                                |
| Name                 | String  | Name of the Syslog resource.                                                              |
| ServiceEnabled       | Boolean | Syslog service enabled.                                                                   |
| ServerIdentitySource | String  | Host ID: <ul style="list-style-type: none"> <li>• Board serial number: BoardSN</li> </ul> |

| Field                                 | Type             | Description                                                                                                                                                         |
|---------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                       |                  | <ul style="list-style-type: none"> <li>Asset tag: ProductAssetTag</li> <li>Host name: HostName</li> </ul>                                                           |
| TransmissionProtocol                  | String           | <p>Transmission protocol.</p> <ul style="list-style-type: none"> <li><a href="#">UDP</a></li> <li><a href="#">TCP</a></li> <li><a href="#">TLS</a></li> </ul>       |
| AuthenticateMode                      | Character string | <p>Authentication mode:</p> <ul style="list-style-type: none"> <li>OneWay: unidirectional authentication.</li> <li>TwoWay: bidirectional authentication.</li> </ul> |
| SyslogServers                         | Object           | Syslog servers.                                                                                                                                                     |
| MemberId                              | String           | <p>Member ID:</p> <ul style="list-style-type: none"> <li>"0"</li> <li>"1"</li> <li>"2"</li> <li>"3"</li> </ul>                                                      |
| Enabled                               | Boolean          | <p>Channel enabled:</p> <ul style="list-style-type: none"> <li>true</li> <li>false</li> </ul>                                                                       |
| Address                               | String           | Server address.                                                                                                                                                     |
| Port                                  | Number           | Server port number.                                                                                                                                                 |
| LogType                               | Array.           | <p>Log type:</p> <ul style="list-style-type: none"> <li>OperationLog</li> <li>SecurityLog</li> <li>EventLog</li> </ul>                                              |
| #SyslogService.SubmitTestEvent.target | Character string | Access path for submitting test event resources.                                                                                                                    |

## 4.5 Configuring Information About the Syslog Server

### Function

Configure information about the Syslog server.

### Permission Required

Query.

### Syntax

- Operation Type: PATCH

- **URL:** `https://device_ip/redfish/v1/Managers/manager_id/SyslogService`
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "ServerIdentitySource": ServerIdentitySource,
 "TransmissionProtocol": TransmissionProtocol,
 "AuthenticateMode": AuthenticateMode_value,
 "ServiceEnabled": ServiceEnabled_value,
 "syslogServers": [
 {
 "Address": add_value,
 "Enabled": enabled_value,
 "LogType": logtype_value,
 "Port": port_value,
 "MemberId": memberid_value
 },
 {
 "Address": add_value,
 "Enabled": enabled_value,
 "LogType": logtype_value,
 "Port": port_value,
 "MemberId": memberid_value
 }
]
}
```

## Parameters

For parameter description of configuring the Syslog server information, refer to [Table 4-9](#).

**Table 4-9 Parameter Description of Configuring the Syslog Server Information**

| Parameter   | Description                                                                             | Value                                                                                               |
|-------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                                | IPv4 or IPv6 address.                                                                               |
| manager_id  | ID of the Manager resource.                                                             | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value  | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| header_type | Format of the request message.                                                          | application/json                                                                                    |

| Parameter            | Description                            | Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ServerIdentitySource | Host ID.                               | <p>Host ID:</p> <ul style="list-style-type: none"> <li>● Board serial number: BoardSN</li> <li>● Asset tag: ProductAssetTag</li> <li>● Host name: HostName</li> </ul> <p>Value descriptions:</p> <ul style="list-style-type: none"> <li>● When ServiceEnabled is set to true, there must be a value.</li> <li>● When ServiceEnabled is set to false, no verification is performed.</li> <li>● ServerIdentitySource must be set together with ServiceEnabled and TransmissionProtocol.</li> </ul>        |
| TransmissionProtocol | Transmission protocol.                 | <p>Transmission protocol:</p> <ul style="list-style-type: none"> <li>● <a href="#">UDP</a></li> <li>● <a href="#">TCP</a></li> <li>● <a href="#">TLS</a></li> </ul> <p>Value descriptions:</p> <ul style="list-style-type: none"> <li>● When ServiceEnabled is set to true, there must be a value.</li> <li>● When ServiceEnabled is set to false, no verification is performed.</li> <li>● ServerIdentitySource must be set together with ServiceEnabled and TransmissionProtocol.</li> </ul>          |
| AuthenticateMode     | Authentication mode                    | <p>Authentication mode:</p> <ul style="list-style-type: none"> <li>● OneWay: unidirectional authentication.</li> <li>● TwoWay: bidirectional authentication.</li> </ul> <p>This parameter is required only when <b>TransmissionProtocol</b> is set to <b>TLS</b>.</p>                                                                                                                                                                                                                                   |
| ServiceEnabled       | Whether the Syslog service is enabled. | <p>Whether the Syslog service is enabled:</p> <ul style="list-style-type: none"> <li>● true: enabled</li> <li>● false: disabled</li> </ul> <p>Value descriptions:</p> <ul style="list-style-type: none"> <li>● If ServiceEnabled is set to true, ServerIdentitySource and TransmissionProtocol must also be set.</li> <li>● If ServiceEnabled is set to false, this parameter can be set independently. The original settings of ServerIdentitySource and TransmissionProtocol are retained.</li> </ul> |

| Parameter      | Description                     | Value                                                                                                                                                                                                                                            |
|----------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| enabled_value  | Whether the channel is enabled. | Whether the channel is enabled:<br><ul style="list-style-type: none"> <li>● true</li> <li>● false</li> </ul>                                                                                                                                     |
| add_value      | Server address format.          | Server address format:<br><ul style="list-style-type: none"> <li>● IP address.</li> <li>● FQDN format.</li> </ul> <p>When enabled_value of a channel is set to true in SyslogServers, add_value of the corresponding channel must be unique.</p> |
| port_value     | Server port number.             | Server port number, range: 1–65535.                                                                                                                                                                                                              |
| logtype_value  | Log type.                       | Log type:<br><ul style="list-style-type: none"> <li>● OperationLog</li> <li>● SecurityLog</li> <li>● EventLog</li> </ul>                                                                                                                         |
| memberid_value | Serial number of the server.    | Serial number of the server, optional, string type. This parameter is required for all servers.<br>Range: 0–3.                                                                                                                                   |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Managers/1/SyslogService
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

Configuration without MemberId:

```
{
 "ServerIdentitySource": "ProductAssetTag",
 "TransmissionProtocol": "UDP",
 "ServiceEnabled": true,
 "SyslogServers": [
 {
 "Address": "ABCD:9A8C:39A0:FE80:02D0:BCFF:FEA6:6C01",
 "Port": 514
 }
]
}
```

```

 "Enabled": false,
 "LogType": ["EventLog", "OperationLog", "SecurityLog"],
 "Port": 1
 },
 {
 "Address": "2020::12a",
 "Enabled": false,
 "LogType": ["EventLog", "SecurityLog", "OperationLog"],
 "Port": 65535
 },
 {
 "Address": "ABCD:9A8C:39A0::FE80:02D0",
 "Enabled": false,
 "LogType": ["EventLog", "OperationLog", "SecurityLog"],
 "Port": 1
 },
 {
 "Address": "192.168.1.5",
 "Enabled": true,
 "LogType": ["SecurityLog"],
 "Port": 444
 }
]
}

```

Configuration with MemberId:

```

{
 "ServerIdentitySource": "HostName",
 "TransmissionProtocol": "TCP",
 "ServiceEnabled": true,
 "syslogServers": [
 {
 "Address": "ABCD:9A8C:39A0:FE80:02D0:BCFF:FEA6:6C01",
 "Enabled": true,
 "LogType": ["EventLog", "OperationLog", "SecurityLog"],
 "Port": 1,
 "MemberId": "2"
 },
 {
 "Address": "2020::12a",
 "Enabled": false,
 "LogType": ["EventLog", "SecurityLog", "OperationLog"],
 "Port": 65535,
 "MemberId": "3"
 },
 {

```

```

 "Address": "test.test.test.test",
 "Enabled": false,
 "LogType": ["EventLog", "OperationLog", "SecurityLog"],
 "Port": 698,
 "MemberId": "1"
 }, {
 "Address": "192.168.1.5",
 "Enabled": true,
 "LogType": ["SecurityLog"],
 "Port": 444,
 "MemberId": "0"
 }
]
}

```

Configure the Syslog function separately:

```
{
 "ServerIdentitySource": "ProductAssetTag",
 "TransmissionProtocol": "UDP",
 "ServiceEnabled": true
}
```

Configure the Syslog Server separately:

```
{
 "SyslogServers": [
 {
 "Address": "ABCD:9A8C:39A0:FE80:02D0:BCFF:FEA6:6C01",
 "Enabled": false,
 "LogType": ["EventLog", "OperationLog", "SecurityLog"],
 "Port": 1
 }, {
 "Address": "2020::12a",
 "Enabled": false,
 "LogType": ["EventLog", "SecurityLog", "OperationLog"],
 "Port": 65535
 }, {
 "Address": "ABCD:9A8C:39A0::FE80:02D0",
 "Enabled": false,
 "LogType": ["EventLog", "OperationLog", "SecurityLog"],
 "Port": 1
 }, {
 "Address": "10.228.34.156",
 "Enabled": true,
 }
]
}
```

```

 "LogType": ["SecurityLog"],
 "Port": 444
 }
]
}

```

Configure the Syslog server separately, with MemberId:

```

{
 "syslogServers": [
 {
 "Address": "ABCD:9A8C:39A0:FE80:02D0:BCFF:FEA6:6C01",
 "Enabled": true,
 "LogType": ["EventLog", "OperationLog", "SecurityLog"],
 "Port": 1,
 "MemberId": "2"
 },
 {
 "Address": "2020::12a",
 "Enabled": false,
 "LogType": ["EventLog", "SecurityLog", "OperationLog"],
 "Port": 65535,
 "MemberId": "3"
 },
 {
 "Address": "test.test.test.test",
 "Enabled": false,
 "LogType": ["EventLog", "OperationLog", "SecurityLog"],
 "Port": 698,
 "MemberId": "1"
 },
 {
 "Address": "192.168.1.5",
 "Enabled": true,
 "LogType": ["SecurityLog"],
 "Port": 444,
 "MemberId": "0"
 }
]
}

```

Use MemberId to configure a separate server (for example, the second server).

```

{
 "syslogServers": [
 {
 "Address": "test.test.test.test",
 "Enabled": false,
 }
]
}

```

```

 "LogType":["EventLog","OperationLog","SecurityLog"],
 "Port":698,
 "MemberId":"1"
 }
]
}

```

- Response Example: None
- Status Code: 200

### Output Description

None

## 4.6 Submitting a Syslog Test Log

### Function

Submit a Syslog test log.

### Permission Required

Diagnosis.

### Syntax

- Operation Type: POST
- **URL:** `https://device_ip/redfish/v1/Managers/manager_id/SyslogService/Actions/SyslogService.SubmitTestEvent`
- Request Header:

```

x-auth-token:auth_value
Content-Type:header_type

```

- Request Message Body:

```
{
}
```

### Parameters

None

### Usage Guidelines

None

### Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/SyslogService/Actions/SyslogService.SubmitTestEvent
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
}
```

- Response Example: None

- Status Code: 204

### Output Description

None

## 4.7 Querying Information About the NtpService Configuration Resource

### Function

Query information about the NtpService configuration resource.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** *https://device\_ip/redfish/v1/Managers/manager\_id/NtpService*
- Request Header:

```
x-auth-token:auth_value
```

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the NtpService configuration resource, refer to [Table 4-10](#).

**Table 4-10 Parameter Descriptions for Querying Information About the NtpService Configuration Resource**

| Parameter  | Description                                                                           | Value                                                                                 |
|------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                 |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is 1 or Self.                                            |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions. |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/NtpService
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUD45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#NtpService.NtpService",
 "@odata.id": "/redfish/v1/Managers/Self/NtpService",
 "@odata.type": "#NtpService.v1_2_0.NtpService",
 "AlternateNtpServer": "",
 "CurrentPollingInterval": 65,
 "Description": "NtpService",
 "ExtraNtpServer": "time.nist.gov",
 "MaxPollingInterval": 65535,
 "MinPollingInterval": 60,
 "PreferredNtpServer": "pool.ntp.org",
 "ServerAuthenticationEnabled": false,
 "ServiceEnabled": false,
 "NtpSynResult": "successful"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the NtpService resource, refer to [Table 4-11](#).

**Table 4-11 Output Descriptions for Querying Information About the NtpService Configuration Resource**

| Field                       | Type             | Description                                                                                                                                                                                                                                                               |
|-----------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context              | String           | OData description of the <a href="#">NTP</a> resource model.                                                                                                                                                                                                              |
| @odata.id                   | String           | Access path of the NTP resource.                                                                                                                                                                                                                                          |
| @odata.type                 | String           | Type of NTP resource.                                                                                                                                                                                                                                                     |
| ServiceEnabled              | Boolean          | NTP enabled.                                                                                                                                                                                                                                                              |
| AlternateNtpServer          | String           | Alternate NTP server address.                                                                                                                                                                                                                                             |
| CurrentPollingInterval      | Number           | Current synchronization interval. Range: <b>MinPollingInterval</b> through <b>MaxPollingInterval</b> .                                                                                                                                                                    |
| Description                 | String           | Description of the NTP resource.                                                                                                                                                                                                                                          |
| ExtraNtpServer              | String           | Address of the extra NTP server.                                                                                                                                                                                                                                          |
| MaxPollingInterval          | Number           | Maximum synchronization interval.                                                                                                                                                                                                                                         |
| MinPollingInterval          | Number           | Minimum synchronization interval.                                                                                                                                                                                                                                         |
| PreferredNtpServer          | String           | Address of the preferred NTP server.                                                                                                                                                                                                                                      |
| ServerAuthenticationEnabled | Boolean          | Whether server authentication is enabled.                                                                                                                                                                                                                                 |
| ServiceEnabled              | Boolean          | Whether the NTP service is enabled: <ul style="list-style-type: none"> <li>● true</li> <li>● false</li> </ul>                                                                                                                                                             |
| NtpSynResult                | Character string | NTP synchronization result: <ul style="list-style-type: none"> <li>● successful</li> <li>● fail</li> <li>● NULL: The configuration file is null.</li> <li>● mode is not NTP: non-NTP mode.</li> <li>● get NTP result fail: configuration file reading failure.</li> </ul> |

## 4.8 Modifying Properties of the NTP Resource

### Function

Modify properties of the [NTP](#) resource.

## Permission Required

Basic management.

## Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/NtpService](https://device_ip/redfish/v1/Managers/manager_id/NtpService)
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "ServiceEnabled": ServiceEnabled,
 "AlternateNtpServer": AlternateNtpServer,
 "PreferredNtpServer": PreferredNtpServer,
 "ExtraNtpServer": ExtraNtpServer,
 "CurrentPollingInterval": CurrentValue,
 "NtpAddressOrigin": "static"
}
```

## Parameters

For a description of the parameters for modifying properties of the NTP resource, refer to [Table 4-12](#).

**Table 4-12 Parameter Descriptions for Modifying Properties of the NTP Resource**

| Parameter      | Description                                                                             | Value                                                                                                                                                                                                                                                                      |
|----------------|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip      | IP address for logging in to the device.                                                | IPv4 or IPv6 address.                                                                                                                                                                                                                                                      |
| manager_id     | ID of the Manager resource.                                                             | For a rack server, the value is <b>1</b> or <b>Self</b> .                                                                                                                                                                                                                  |
| auth_value     | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                                                                                                                        |
| header_type    | Format of the request message.                                                          | application/json                                                                                                                                                                                                                                                           |
| ServiceEnabled | Boolean                                                                                 | Whether the NTP service is enabled: <ul style="list-style-type: none"> <li>• true</li> <li>• false: If this parameter is set to <b>false</b>, the request body cannot carry other parameters. If another parameter is carried, an error is reported, indicating</li> </ul> |

| Parameter              | Description   | Value                                                                                                                                                       |
|------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |               | that the ServiceEnabled value is incorrect.                                                                                                                 |
| AlternateNtpServer     | String        | Alternate NTP server address.                                                                                                                               |
| PreferredNtpServer     | String        | Preferred NTP server address.                                                                                                                               |
| ExtraNtpServer         | String        | Address of the extra NTP server.                                                                                                                            |
| CurrentPollingInterval | Number        | Current polling interval. Range: MinPollingInterval through MaxPollingInterval.                                                                             |
| NtpAddressOrigin       | Address mode. | Address mode: <ul style="list-style-type: none"><li>• static</li><li>• IPv4: not supported in this version. IPv6 : not supported in this version.</li></ul> |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Managers/1/NtpService
```

- Request Header:

```
x-auth-token:LXIrqPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
 "ServiceEnabled": true,
 "NtpAddressOrigin": "static",
 "PreferredNtpServer": "pool.ntp.org",
 "ExtraNtpServer": "time.nist.gov",
 "CurrentPollingInterval": 65
}
```

- Response Example: None
- Status Code: 204

## Output Description

None

## 4.9 Querying Information About the BMC Service

### Function

Query the status and port information supported by the current **BMC** of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Managers/manager_id/NetworkProtocol`
- Request Header:
 

`x-auth-token:auth_value`
- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the BMC service, refer to [Table 4-13](#).

**Table 4-13 Parameter Descriptions for Querying Information About the BMC Service**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:
 

`GET https://device_ip/redfish/v1/Managers/1/NetworkProtocol`

- Request Header:
 

`x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=`

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#ManagerNetworkProtocol.ManagerNetworkProtocol",
 "@odata.id": "/redfish/v1/Managers/1/NetworkProtocol",
 "@odata.type": "#ManagerNetworkProtocol.v1_6_0.ManagerNetworkProtocol",
 "Description": "Network Protocol Details",
 "HTTPS": {
 "ProtocolEnabled": true,
 "Port": 443
 },
 "HostName": "iSAC26C4F96B1676",
 "IPMI": {
 "Port": 623,
 "ProtocolEnabled": true
 },
 "Id": "NetworkProtocol",
 "KVMIP": {
 "ProtocolEnabled": true,
 "Port": 7578
 },
 "Name": "Manager Network Protocol",
 "Oem": {
 "Public": {
 "HTTPS": {
 "Timeout": 30
 },
 "KVMIP": {
 "Timeout": 30
 },
 "VirtualMedia-CD": {
 "ProtocolEnabled": true,
 "Port": 5124,
 "Instance": 1
 },
 "VirtualMedia-HD": {
 "ProtocolEnabled": false,
 "Port": 5127,
 "Instance": 0
 }
 },
 "VNC": {
 "Port": 5900,
 "ProtocolEnabled": true,
 "Timeout": 30
 }
 }
}
```

```

 "SecurePort": 5901
 },
 "SSDP": {
 "NotifyEnabled": true
 }
}
},
"SNMP": {
 "ProtocolEnabled": true,
 "Port": 161
},
"SSH": {
 "ProtocolEnabled": true,
 "Port": 22
},
"VirtualMedia": {
 "ProtocolEnabled": true
},
"SSDP": {
 "ProtocolEnabled": true,
 "Port": 1900,
 "NotifyMulticastIntervalSeconds": 600,
 "NotifyIPv6Scope": "site"
}
}
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the BMC service, refer to [Table 4-14](#).

**Table 4-14 Output Descriptions for Querying Information About the BMC Service**

| Field          | Type   | Description                                                     |
|----------------|--------|-----------------------------------------------------------------|
| @odata.context | String | OData description of the BMC service resource collection model. |
| @odata.id      | String | Access path of the BMC service resource collection.             |
| @odata.type    | String | Type of BMC service resource collection.                        |
| Description    | String | Description of the BMC resource.                                |

| Field                                      | Type    | Description                                                        |
|--------------------------------------------|---------|--------------------------------------------------------------------|
| HTTPS.Port                                 | Number  | HTTPS service port number (secure port number of the Web service). |
| HTTPS.ProtocolEnabled                      | Boolean | Whether the HTTPS service is enabled.                              |
| HostName                                   | String  | BMC host name.                                                     |
| IPMI.Port                                  | Number  | IPMI service port number.                                          |
| IPMI.ProtocolEnabled                       | Boolean | Whether the IPMI service is enabled.                               |
| Id                                         | String  | ID of the network protocol resource.                               |
| KVMIP.Port                                 | Number  | KVMIP service port number.                                         |
| KVMIP.ProtocolEnabled                      | Boolean | KVMIP service enabling status: true/false                          |
| Name                                       | String  | Name of the service resource collection.                           |
| Oem.Public.HTTPS.Timeout                   | Number  | HTTPS service timeout period. Unit: seconds.                       |
| Oem.Public.KVMIP.Timeout                   | Number  | KVMIP service timeout period. Unit: seconds.                       |
| Oem.Public.VirtualMedia-CD.ProtocolEnabled | Boolean | Whether the virtual media CD service is enabled.                   |
| Oem.Public.VirtualMedia-CD.Port            | Number  | Port number of the virtual media CD service.                       |
| Oem.Public.VirtualMedia-CD.Instance        | Number  | Number of virtual media CD instances.                              |
| Oem.Public.VirtualMedia-HD.ProtocolEnabled | Boolean | Whether the virtual media HD service is enabled.                   |
| Oem.Public.VirtualMedia-HD.Port            | Number  | Port number of the virtual media HD service.                       |
| Oem.Public.VirtualMedia-HD.Instance        | Number  | Number of virtual media HD instances.                              |
| Oem.Public.SSDP.NotifyEnabled              | Boolean | Whether SSDP NOTIFY messages are multicast.                        |

| Field                               | Type    | Description                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oem.Public.VNC.ProtocolEnabled      | Boolean | Whether the VNC service is enabled.                                                                                                                                                                                                                                                                                                                                                   |
| Oem.Public.VNC.Port                 | Number  | Port number of the VNC service.                                                                                                                                                                                                                                                                                                                                                       |
| Oem.Public.VNC.SecurePort           | Number  | Secure port of the VNC service.                                                                                                                                                                                                                                                                                                                                                       |
| SNMP.Port                           | Number  | Port number of the SNMP service.                                                                                                                                                                                                                                                                                                                                                      |
| SNMP.ProtocolEnabled                | Boolean | Whether the SNMP service is enabled.                                                                                                                                                                                                                                                                                                                                                  |
| SSH.Port                            | Number  | Port number of the SSH service.                                                                                                                                                                                                                                                                                                                                                       |
| SSH.ProtocolEnabled                 | Boolean | Whether the DNS service is enabled.                                                                                                                                                                                                                                                                                                                                                   |
| VirtualMedia.ProtocolEnabled        | Boolean | Whether the virtual media service is enabled.                                                                                                                                                                                                                                                                                                                                         |
| SSDP.Port                           | Number  | Port number of the SSDP service.                                                                                                                                                                                                                                                                                                                                                      |
| SSDP.ProtocolEnabled                | Boolean | Whether the SSDP service is enabled.                                                                                                                                                                                                                                                                                                                                                  |
| SSDP.NotifyMulticastIntervalSeconds | Number  | Time interval between transmissions of the multicast SSDP NOTIFY message.                                                                                                                                                                                                                                                                                                             |
| SSDP.NotifyIPv6Scope                | String  | IPv6 scope for multicast SSDP NOTIFY messages. <ul style="list-style-type: none"> <li>● Link: SSDP Notify messages are sent to addresses in the IPv6 local link scope.</li> <li>● Site: SSDP Notify messages are sent to addresses in the IPv6 local site scope.</li> <li>● Organization: SSDP Notify messages are sent to addresses in the IPv6 local organization scope.</li> </ul> |

## 4.10 Modifying Information About a Specified BMC Service

### Function

Modify the information about a specified **BMC** service of a server.

### Permission Required

Security management

### Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/NetworkProtocol](https://device_ip/redfish/v1/Managers/manager_id/NetworkProtocol)
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "Service_type": {
 "ProtocolEnabled": protocolenabled_value,
 "Port": port_value,
 "NotifyMulticastIntervalSeconds": time_value,
 "NotifyIPv6Scope": scope_value
 },
 "Oem": {
 "Public": {
 "OEMServerType": {
 "Port": oem_port_value,
 "ProtocolEnabled": oem_protocolEnabled_value,
 "Timeout": oem_timeout_value,
 "NotifyEnabled": oem_notify_enabled_value,
 "SecurePort": oem_secure_port_value,
 "Password": oem_password_value
 }
 }
 }
}
```

## Parameters

For a description of the parameters for modifying information about the specified BMC service, refer to [Table 4-15](#).

**Table 4-15 Parameter Descriptions for Modifying Information About the Specified BMC Service**

| Parameter                          | Description                                                                               | Value                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip                          | IP address for logging in to the device.                                                  | IPv4 or IPv6 address.                                                                                                                                                                                                                                                                                                                                                           |
| manager_id                         | ID of the Manager resource.                                                               | For a rack server, the value is <b>1</b> or <b>Self</b> .                                                                                                                                                                                                                                                                                                                       |
| auth_value                         | X-Auth-Token value contained in Request Header in the GET request for authentication.     | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                                                                                                                                                                                                                             |
| header_type                        | Format of the request message.                                                            | application/json                                                                                                                                                                                                                                                                                                                                                                |
| Service_type                       | Specified BMC services of the server.                                                     | <ul style="list-style-type: none"> <li>● <a href="#">HTTPS</a></li> <li>● KVMIP</li> <li>● VirtualMedia</li> <li>● SSH</li> <li>● SNMP</li> <li>● SSDP</li> </ul>                                                                                                                                                                                                               |
| Service_type.protocolenabled_value | Whether the service is enabled.                                                           | <p>Boolean:</p> <ul style="list-style-type: none"> <li>● true</li> <li>● false</li> </ul> <p>The service cannot be enabled when <b>Service_type</b> is set to <b>HTTPS</b>.<br/>When <b>Service_type</b> is set to <b>VirtualMedia</b>, the enabling status can be modified, and the modification affects the <b>VirtualMedia-CD</b> and <b>VirtualMedia-HD</b> parameters.</p> |
| Service_type.port_value            | Modifies the server port number.                                                          | <p>Integer type: 1–65535.<br/>This parameter is not supported when <b>Service_type</b> is set to <b>VirtualMedia</b>.</p>                                                                                                                                                                                                                                                       |
| Service_type.time_value            | Time interval between transmissions of the multicast SSDP NOTIFY message (for SSDP only). | Integer type, unit: seconds, range: 0–1800.                                                                                                                                                                                                                                                                                                                                     |
| Service_type.scope_value           | IPv6 scope for multicast SSDP NOTIFY messages (for SSDP only).                            | <ul style="list-style-type: none"> <li>● Link: SSDP Notify messages are sent to addresses in the IPv6 local link scope.</li> </ul>                                                                                                                                                                                                                                              |

| Parameter                                            | Description                                                                                   | Value                                                                                                                                                                                                                                    |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                      |                                                                                               | <ul style="list-style-type: none"> <li>Site: SSDP Notify messages are sent to addresses in the IPv6 local site scope.</li> <li>Organization: SSDP Notify messages are sent to addresses in the IPv6 local organization scope.</li> </ul> |
| Oem.Pub-lic.OEMServerType                            | OEM service type to be set.                                                                   | Modifiable service type: <ul style="list-style-type: none"> <li>VirtualMedia-CD</li> <li>VirtualMedia-HD</li> <li>HTTPS</li> <li>KVMIP</li> <li>VNC</li> </ul>                                                                           |
| Oem.Pub-lic.OEMServer-Type.oem_port_value            | OEM service port.                                                                             | Number, range: 1–65535.                                                                                                                                                                                                                  |
| Oem.Pub-lic.OEMServer-Type.oem_protocolEnabled_value | Whether to enable the OEM service.                                                            | Boolean type: <ul style="list-style-type: none"> <li>true</li> <li>false</li> </ul>                                                                                                                                                      |
| Oem.Pub-lic.OEMServer-Type.oem_timeout_value         | Service timeout period. Only the HTTPS and KVMIP services support this parameter.             | Number type, unit: minutes, range: 1–60.                                                                                                                                                                                                 |
| Oem.Pub-lic.OEMServer-Type.oem_notify_enabled_value  | Whether SSDP NOTIFY messages are multicast. (Only the SSDP function supports this parameter.) | Boolean type: <ul style="list-style-type: none"> <li>true</li> <li>false</li> </ul>                                                                                                                                                      |
| Oem.Pub-lic.OEMServer-Type.oem_secure_port_value     | Secure port, which is supported by the VNC service only.                                      | Number, range: 1–65535.                                                                                                                                                                                                                  |
| Oem.Pub-lic.OEMServer-Type.oem_password_value        | VNC password, which is supported by the VNC service only.                                     | Type: string.                                                                                                                                                                                                                            |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Managers/1/NetworkProtocol
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
 "HTTPS": {
 "Port": 443
 },
 "KVMIP": {
 "ProtocolEnabled": true,
 "Port": 7578
 },
 "SSDP": {
 "ProtocolEnabled": true,
 "Port": 1900,
 "NotifyMulticastIntervalSeconds": 600,
 "NotifyIPv6Scope": "Site"
 },
 "Oem": {
 "Public": {
 "HTTPS": {
 "Timeout": 30
 },
 "KVMIP": {
 "Timeout": 30
 },
 "VirtualMedia-CD": {
 "Port": 5123,
 "ProtocolEnabled": true
 },
 "VNC": {
 "Port": 5900,
 "ProtocolEnabled": true,
 "SecurePort": 5901,
 "Password": "123456"
 },
 "SSDP": {

```

```

 "NotifyEnabled": true
 }
}
}
}
```

- Response Example:

```
{
 "@odata.context":
 "/redfish/v1/$metadata#ManagerNetworkProtocol.ManagerNetworkProtocol",
 "@odata.id": "/redfish/v1/Managers/1/NetworkProtocol",
 "@odata.type": "#ManagerNetworkProtocol.v1_6_0.ManagerNetworkProtocol",
 "Description": "Network Protocol Details",
 "Id": "NetworkProtocol",
 "Name": "Manager Network Protocol",
 "HostName": "iSAC26C4F96B1676",
 "HTTPS": {
 "ProtocolEnabled": true,
 "Port": 443
 },
 "KVMIP": {
 "ProtocolEnabled": true,
 "Port": 7578
 },
 "Oem": {
 "Public": {
 "HTTPS": {
 "Timeout": 30
 },
 "KVMIP": {
 "Timeout": 30
 },
 "VirtualMedia-CD": {
 "ProtocolEnabled": true,
 "Port": 5120,
 "Instance": 1
 },
 "VirtualMedia-HD": {
 "ProtocolEnabled": false,
 "Port": 5123,
 "Instance": 0
 },
 "VNC": {
 "Port": 5900,
 }
 }
 }
}
```

```

 "ProtocolEnabled": true,
 "SecurePort": 5901
 },
 "SSDP": {
 "NotifyEnabled": true
 }
}
},
"SSH": {
 "ProtocolEnabled": true,
 "Port": 22
},
"SNMP": {
 "ProtocolEnabled": true,
 "Port": 161
},
"IPMI": {
 "Port": 623,
 "ProtocolEnabled": true
},
"VirtualMedia": {
 "ProtocolEnabled": true
},
"SSDP": {
 "ProtocolEnabled": true,
 "Port": 1900,
 "NotifyMulticastIntervalSeconds": 600,
 "NotifyIPv6Scope": "Site"
}
}
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you modify information about the specified BMC service, refer to [Table 4-16](#).

**Table 4-16 Output Descriptions for Modifying Information About the Specified BMC Service**

| Field          | Type   | Description                                                     |
|----------------|--------|-----------------------------------------------------------------|
| @odata.context | String | OData description of the BMC service resource collection model. |
| @odata.id      | String | Access path of the BMC service resource collection.             |

| Field                                      | Type    | Description                                          |
|--------------------------------------------|---------|------------------------------------------------------|
| @odata.type                                | String  | Type of BMC service resource collection.             |
| Description                                | String  | Description of the BMC resource.                     |
| HTTPS.Port                                 | Number  | HTTPS service port (secure port of the Web service). |
| HTTPS.ProtocolEnabled                      | Boolean | Whether the HTTPS service is enabled.                |
| HostName                                   | String  | BMC hostname.                                        |
| IPMI.Port                                  | Number  | Port number of the IPMI service.                     |
| IPMI.ProtocolEnabled                       | Boolean | Whether the IPMI service is enabled.                 |
| Id                                         | String  | BMC network protocol resource ID.                    |
| KVMIP.Port                                 | Number  | Port number of the KVMIP service.                    |
| KVMIP.ProtocolEnabled                      | Boolean | Whether the KVMIP service is enabled.                |
| Name                                       | String  | BMC network protocol resource name.                  |
| Oem.Public.HTTPS.Timeout                   | Number  | Timeout period of the HTTPS service, unit: minutes.  |
| Oem.Public.KVMIP.Timeout                   | Number  | Timeout period of the KVMIP service, unit: minutes.  |
| Oem.Public.VirtualMedia-CD.ProtocolEnabled | Boolean | Whether the virtual media CD service is enabled.     |
| Oem.Public.VirtualMedia-CD.Port            | Number  | Port number of the virtual media CD service.         |
| Oem.Public.VirtualMedia-CD.Instance        | Number  | Number of virtual media CD instances.                |
| Oem.Public.VirtualMedia-HD.ProtocolEnabled | Boolean | Whether the virtual media HD service is enabled.     |
| Oem.Public.VirtualMedia-HD.Port            | Number  | Port number of the virtual media HD service.         |

| Field                               | Type    | Description                                                                                                                                                                                                                                                                 |
|-------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oem.Public.VirtualMedia-HD.Instance | Number  | Number of virtual media HD instances.                                                                                                                                                                                                                                       |
| Oem.Public.SSDP.NotifyEnabled       | Boolean | Whether SSDP NOTIFY messages are multicast.                                                                                                                                                                                                                                 |
| Oem.Public.VNC.ProtocolEnabled      | Boolean | Whether the VNC service is enabled.                                                                                                                                                                                                                                         |
| Oem.Public.VNC.Port                 | Number  | Port number of the VNC service.                                                                                                                                                                                                                                             |
| Oem.Public.VNC.SecurePort           | Number  | Secure port of the VNC service.                                                                                                                                                                                                                                             |
| SNMP.Port                           | Number  | Port number of the SNMP service.                                                                                                                                                                                                                                            |
| SNMP.ProtocolEnabled                | Boolean | Whether the SNMP service is enabled.                                                                                                                                                                                                                                        |
| SSH.Port                            | Number  | Port number of the SSH service.                                                                                                                                                                                                                                             |
| SSH.ProtocolEnabled                 | Boolean | Whether the SSH service is enabled.                                                                                                                                                                                                                                         |
| VirtualMedia.ProtocolEnabled        | Boolean | Whether the virtual media service is enabled.                                                                                                                                                                                                                               |
| SSDP.Port                           | Number  | Port number of the SSDP service.                                                                                                                                                                                                                                            |
| SSDP.ProtocolEnabled                | Boolean | Whether the SSDP service is enabled.                                                                                                                                                                                                                                        |
| SSDP.NotifyMulticastIntervalSeconds | Number  | Time interval between transmissions of the multicast SSDP NOTIFY message.                                                                                                                                                                                                   |
| SSDP.NotifyIPv6Scope                | String  | IPv6 scope for multicast SSDP NOTIFY messages. <ul style="list-style-type: none"> <li>● Link: SSDP Notify messages are sent to addresses in the IPv6 local link scope.</li> <li>● Site: SSDP Notify messages are sent to addresses in the IPv6 local site scope.</li> </ul> |

| Field | Type | Description                                                                                                                                      |
|-------|------|--------------------------------------------------------------------------------------------------------------------------------------------------|
|       |      | <ul style="list-style-type: none"> <li>Organization: SSDP Notify messages are sent to addresses in the IPv6 local organization scope.</li> </ul> |

## 4.11 Querying the BMC Management Interface Resource Collection

### Function

Query the management port resource collection supported by the current **BMC** of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Managers/manager_id/EthernetInterfaces`
- Request Header:

`x-auth-token:auth_value`

- Request Message Body: None

### Parameters

For a description of the parameters for querying the BMC management interface resource collection, refer to [Table 4-17](#).

**Table 4-17 Parameter Descriptions for Querying the BMC Management Interface Resource Collection**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/EthernetInterfaces
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#EthernetInterfaceCollection.EthernetInterfaceCollection",
 "@odata.id": "/redfish/v1/Managers/1/EthernetInterfaces",
 "@odata.type": "#EthernetInterfaceCollection.EthernetInterfaceCollection",
 "Description": "Collection of Ethernet Interfaces for this Manager",
 "Name": "Ethernet Network Interface Collection",
 "Members@odata.count": 1,
 "Members": [
 {
 "@odata.id": "/redfish/v1/Managers/1/EthernetInterfaces/D64FE89CE17C"
 }
]
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query the BMC management interface resource collection, refer to [Table 4-18](#).

**Table 4-18 Output Descriptions for Querying the BMC Management Interface Resource Collection**

| Field          | Type   | Description                                                                  |
|----------------|--------|------------------------------------------------------------------------------|
| @odata.context | String | OData description of the BMC management interface resource collection model. |
| @odata.id      | String | Type of BMC management interface resource collection.                        |
| @odata.type    | String | Access path of the BMC management interface resource collection.             |

| Field               | Type   | Description                                                            |
|---------------------|--------|------------------------------------------------------------------------|
| Description         | String | Description of the BMC management interface resource collection.       |
| Name                | String | Name of the BMC management interface resource collection.              |
| Members@odata.count | Number | Number of members in the BMC management interface resource collection. |
| Members             | Object | List of members in the BMC management interface resource collection.   |
| @odata.id           | String | Access path of a single BMC management interface resource node.        |

## 4.12 Querying Information About a Specified BMC Management Interface Resource

### Function

Query information about a specified [BMC](#) management interface resource.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- [URL](#): `https://device_ip/redfish/v1/Managers/manager_id/EthernetInterfaces/id`
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the specified BMC management interface resource, refer to [Table 4-19](#).

**Table 4-19 Parameter Descriptions for Querying Information About the Specified BMC Management Interface Resource**

| Parameter | Description                              | Value                                                 |
|-----------|------------------------------------------|-------------------------------------------------------|
| device_ip | IP address for logging in to the device. | <a href="#">IPv4</a> or <a href="#">IPv6</a> address. |

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| id         | ID of the BMC management interface resource.                                          | -                                                                                                   |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/EthernetInterfaces/D64FE89CE17C
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#EthernetInterface.EthernetInterface",
 "@odata.id": "/redfish/v1/Managers/1/EthernetInterfaces/D64FE89CE17C",
 "@odata.type": "#EthernetInterface.v1_6_2.EthernetInterface",
 "Id": "D64FE89CE17C",
 "Name": "D64FE89CE17C",
 "MACAddress": "D6:4F:E8:9C:E1:7C",
 "PermanentMACAddress": "BE:0B:64:49:40:C0",
 "InterfaceEnabled": true,
 "MTUSize": 1500,
 "AutoNeg": true,
 "FullDuplex": true,
 "SpeedMbps": 1000,
 "Description": "Ethernet Interface D64FE89CE17C",
 "HostName": "iSACD64FE89CE17C",
 "IPv4Addresses": [
 {
 "Address": "192.168.5.7",
 "Gateway": "0.0.0.0",
 "SubnetMask": "255.255.255.0",
 "Primary": true
 }
]
}
```

```

 "AddressOrigin": "Static"
 },
],
"IPv6DefaultGateway": "::",
"IPv6Addresses": [
{
 "Address": "fe80::4e09:b4ff:fe07:622",
 "AddressOrigin": "LinkLocal",
 "PrefixLength": 64
},
{
 "Address": "::",
 "PrefixLength": 80,
 "AddressOrigin": "DHCPv6"
}
],
"IPv6StaticAddresses": [
{
 "Address": "::",
 "PrefixLength": 0
}
],
"Oem": {
 "Public": {
 "IPStacks": "IPv4AndIPv6",
 "DNSServiceEnabled": true,
 "DNSDhcpEnabled": true,
 "PatchInProgress": false,
 "DoDomain": "",
 "VLANPriority": 0,
 "NetworkPortMode": "Automatic",
 "NCSCModeSelect": null,
 "ManagementNetworkPort": [
{
 "Type": "Dedicated",
 "CardNumber": null,
 "PortNumber": 0
}
],
"ManagementNetworkPort@Redfish.AllowableValues": [
{
 "Type": "Dedicated",
 "CardNumber": null,
 "PortNumber": 0
}
]
 }
}
]
```

```
 },
 {
 "Type": "ShareLink",
 "CardNumber":1,
 "PortNumber":1
 },
 {
 "Type": "ShareLink",
 "CardNumber":1,
 "PortNumber":2
 },
 {
 "Type": "ShareLink",
 "CardNumber":2,
 "PortNumber":1
 },
 {
 "Type": "ShareLink",
 "CardNumber":2,
 "PortNumber":2
 }
]
}
},
"NameServers": [
 "::",
 "0.0.0.0",
 "::"
],
"status": {
 "Health": "OK",
 "State": "Enabled"
},
"VLAN": {
 "VLANEnable": false,
 "VLANId": 0
},
"IPv4Routes": [
 {
 "Address": "192.168.1.5",
 "Netmask": "255.255.255.192"
 }
],
"IPv6Routes": [
```

```
{
 "Address": "ff00::",
 "PrefixLength": 8
},
{
 "Actions": {
 "#EthernetInterfaces.AddRoute": {
 "target": "/redfish/v1/Managers/1/EthernetInterfaces/D64FE89CE17C/
Actions/EthernetInterface.AddRoutes"
 },
 "#EthernetInterfaces.DeleteRoute": {
 "target": "/redfish/v1/Managers/1/EthernetInterfaces/D64FE89CE17C/
Actions/EthernetInterface.DeleteRoutes"
 }
 }
}
```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the specified BMC management interface resource, refer to [Table 4-20](#).

**Table 4-20 Output Descriptions for Querying Information About the Specified BMC Management Interface Resource**

| Field               | Type             | Description                                                                 |
|---------------------|------------------|-----------------------------------------------------------------------------|
| @odata.context      | String           | OData description of the specified BMC management interface resource model. |
| @odata.id           | String           | Access path of the specified BMC management interface resource node.        |
| @odata.type         | String           | Type of the specified BMC management interface resource.                    |
| Id                  | String           | ID of the specified BMC management interface resource.                      |
| Name                | String           | Name of the specified BMC management interface resource.                    |
| MACAddress          | Character string | MAC address of the specified BMC network interface.                         |
| PermanentMACAddress | String           | Permanent <a href="#">MAC</a> address allocated to the interface.           |
| InterfaceEnabled    | Boolean          | Whether the interface is enabled.                                           |
| MTUSize             | Number           | <a href="#">MTU</a> configured on the current interface (in bytes).         |

| Field                            | Type    | Description                                                                                                                                                                  |
|----------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AutoNeg                          | Boolean | Whether auto-negotiation is enabled. including: <ul style="list-style-type: none"><li>● true</li><li>● false</li></ul>                                                       |
| FullDuplex                       | Boolean | Whether full-duplex mode is used. including: <ul style="list-style-type: none"><li>● true</li><li>● false</li></ul>                                                          |
| SpeedMbps                        | Number  | Current rate (in Mbps).                                                                                                                                                      |
| Description                      | String  | Description of the specified BMC management interface resource.                                                                                                              |
| HostName                         | String  | <a href="#">DNS</a> hostname, which does not contain any domain information.                                                                                                 |
| IPv4Addresses                    | Array   | <a href="#">IPv4</a> information object.                                                                                                                                     |
| IPv4Addresses.Address            | String  | IPv4 address.                                                                                                                                                                |
| IPv4Addresses.AddressOrigin      | String  | Origin of the IPv4 address. including: <ul style="list-style-type: none"><li>● Static</li><li>● <a href="#">DHCP</a></li></ul>                                               |
| IPv4Addresses.Gateway            | String  | IPv4 gateway address.                                                                                                                                                        |
| IPv4Addresses.SubnetMask         | String  | IPv4 subnet mask.                                                                                                                                                            |
| IPv6DefaultGateway               | String  | Default <a href="#">IPv6</a> gateway.                                                                                                                                        |
| IPv6Addresses                    | Array   | <a href="#">IPv6</a> information object.                                                                                                                                     |
| IPv6Addresses.Addresses          | String  | IPv6 address.                                                                                                                                                                |
| IPv6Addresses.AddressOrigin      | String  | Origin of the IPv6 address. including: <ul style="list-style-type: none"><li>● Static</li><li>● <a href="#">DHCP</a></li></ul>                                               |
| IPv6Addresses.PrefixLength       | Number  | Prefix length of the IPv6 address.                                                                                                                                           |
| IPv6StaticAddresses              | Array   | Static IPv6 information object.                                                                                                                                              |
| IPv6StaticAddresses.Address      | String  | Static IPv6 address.                                                                                                                                                         |
| IPv6StaticAddresses.PrefixLength | Number  | Prefix length of the static IPv6 address.                                                                                                                                    |
| Oem.Public                       | Object  | OEM object.                                                                                                                                                                  |
| IPStacks                         | String  | IPv4/IPv6 enabling switch: <ul style="list-style-type: none"><li>● null: interface not enabled</li><li>● IPv4: IPv4 enabled only</li><li>● IPv6: IPv6 enabled only</li></ul> |

| Field                 | Type    | Description                                                                                                                                                                                                                    |
|-----------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       |         | <ul style="list-style-type: none"> <li>● IPv4AndIPv6: IPv4 and IPv6 both enabled</li> </ul>                                                                                                                                    |
| DNSServiceEnabled     | Boolean | Whether the DNS service is enabled.                                                                                                                                                                                            |
| DNSDhcpEnabled        | Boolean | Manual or automatic DNS switch: <ul style="list-style-type: none"> <li>● true: automatic</li> <li>● false: manual</li> </ul>                                                                                                   |
| PatchInProgress       | Boolean | Configuration validity flag: <ul style="list-style-type: none"> <li>● true: being configured</li> <li>● false: applied successfully</li> </ul>                                                                                 |
| DoDomain              | String  | Domain name.                                                                                                                                                                                                                   |
| VLANPriority          | Number  | VLAN priority, range: 0–7.                                                                                                                                                                                                     |
| NetworkPortMode       | String  | Network port mode: <ul style="list-style-type: none"> <li>● Automatic</li> <li>● Fixed</li> <li>● Standalone</li> </ul>                                                                                                        |
| NCSIModeSelect        | String  | NCSI mode: <ul style="list-style-type: none"> <li>● Automatic</li> <li>● Manual</li> <li>● null: default setting when NetworkPortMode is set to Fixed.</li> </ul>                                                              |
| ManagementNetworkPort | Array   | In fixed mode of the specified management network port, there is only one group of BMC management network port data. In automatic mode and standalone mode, the data is dedicated port data and shared port data respectively. |
| Type                  | String  | <ul style="list-style-type: none"> <li>● Dedicated: dedicated network port</li> <li>● ShareLink: shared network port</li> </ul>                                                                                                |
| CardNumber            | Number  | The default value of the dedicated network port is null, and the default value of the shared network port is: <ul style="list-style-type: none"> <li>● 1: NIC 1</li> <li>● 2: NIC 2</li> </ul>                                 |
| PortNumber            | Number  | For a dedicated network port, the default serial number is set to 0. For a shared network port, the silkscreen number of the network port is set to 1 through 4.                                                               |
| ActualPortNumber      | Number  | Actual silk screen number of the network interface, range: 1–4. This field is displayed only when the net-                                                                                                                     |

| Field                                             | Type             | Description                                                                                                                                                                                                                                             |
|---------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                   |                  | work port mode is set to standalone or automatic (the selected network port is not a dedicated port) and the NCSI mode is set to automatic.                                                                                                             |
| ManagementNetworkPort<br>@Redfish.AllowableValues | Array            | All available network ports of the BMC.                                                                                                                                                                                                                 |
| NameServers                                       | Array            | Domain name server list.                                                                                                                                                                                                                                |
| Status                                            | Object           | Status information about the specified BMC management interface resource. <ul style="list-style-type: none"> <li>• State: whether the BMC management interface is enabled.</li> <li>• Health: health status of the BMC management interface.</li> </ul> |
| VLAN                                              | Object           | VLAN information object.                                                                                                                                                                                                                                |
| VLANEnable                                        | Boolean          | Whether VLAN is enabled: <ul style="list-style-type: none"> <li>• true: enabled</li> <li>• false: disabled</li> </ul>                                                                                                                                   |
| VLANId                                            | Number           | Configured VLAN ID, range: 2–4094.                                                                                                                                                                                                                      |
| IPv4Routes                                        | Object           | IPv4 route information about the NIC.                                                                                                                                                                                                                   |
| IPv4Routes.Address                                | Character string | Address information about the IPv4 route of the NIC.                                                                                                                                                                                                    |
| IPv4Routes.Netmask                                | Character string | Mask information about the IPv4 route of the NIC.                                                                                                                                                                                                       |
| IPv6Routes.Address                                | Character string | Address information about the IPv6 route of the NIC.                                                                                                                                                                                                    |
| IPv6Routes.PrefixLength                           | Digit            | Prefix length information about the IPv6 route of the NIC.                                                                                                                                                                                              |
| Actions                                           | Object           | Operations that can be performed on the resource.                                                                                                                                                                                                       |
| #EthernetInterface.AddRoutes.target               | Character string | Access path for adding route information.                                                                                                                                                                                                               |
| #EthernetInterface.DeleteRoutes.target            | Character string | Access path for deleting route information.                                                                                                                                                                                                             |

## 4.13 Modifying a Specified BMC Management Interface Resource

### Function

Modify information about a specified [BMC](#) management interface resource.

## Permission Required

Basic management.

## Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/EthernetInterfaces/id](https://device_ip/redfish/v1/Managers/manager_id/EthernetInterfaces/id)
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

→ IPv4 configuration:

```
{
 "IPv4Addresses": [
 {
 "Address": ipv4_address,
 "AddressOrigin": ipv4_address_origin,
 "Gateway": ipv4_gateway,
 "SubnetMask": ipv4_subnet_mask
 }
],
 "Oem": {
 "Public": {
 "IPStacks": ip_stack
 }
 }
}
```

→ IPv6 configuration:

```
{
 "IPv6Addresses": [
 {
 "Address": ipv6_address,
 "AddressOrigin": ipv6_address_origin,
 "PrefixLength": ipv6_prefix
 }
],
 "IPv6DefaultGateway": Gw_value,
 "Oem": {
 "Public": {
 }}
```

```

 "IPStacks": ip_stack
 }
}
}
```

→ [VLAN](#) configuration:

```
{
 "VLAN": {
 "VLANEnable": vlan_enable,
 "VLANId": vlan_id
 },
 "Oem": {
 "Public": {
 "VLANPriority": priority
 }
 }
}
```

→ HostName configuration:

```
{
 "HostName": hostname
}
```

→ NameServers configuration:

```
{
 "NameServers": [nameserver, nameserver, nameserver],
 "Oem": {
 "Public": {
 "Domain": "domain"
 }
 }
}
```

→ Network port mode configuration:

```
{
 "Oem": {
 "Public": {
 "NetworkPortMode": network_port_mode,
 "NCSIModeSelect": ncsi_mode,
 "ManagementNetworkPort": {
 "Type": type,
 "CardNumber": card_number,
 "PortNumber": port_number
 }
 }
 }
}
```

```

 }
}
}
```

## Parameters

For a description of the parameters for modifying the specified BMC management interface resource, refer to [Table 4-21](#).

**Table 4-21 Parameter Descriptions for Modifying the Specified BMC Management Interface Resource**

| Parameter           | Description                                                                             | Value                                                                                                                                                                                                        |
|---------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip           | IP address for logging in to the device.                                                | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                                                                                                                        |
| manager_id          | <a href="#">ID</a> of the Manager resource.                                             | For a rack server, the value is <b>1</b> or <b>Self</b> .                                                                                                                                                    |
| id                  | ID of the BMC management interface resource.                                            | -                                                                                                                                                                                                            |
| auth_value          | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <a href="#">/redfish/v1/SessionService/Sessions</a> .                                                                                                       |
| hostname            | Hostname.                                                                               | Customized hostname: <ul style="list-style-type: none"> <li>● Cannot exceed 64 characters.</li> <li>● Consists of digits, letters, and hyphens (-).</li> <li>● Cannot begin or end with a hyphen.</li> </ul> |
| ipv4_address        | <a href="#">IPv4</a> IP address                                                         | String, valid IPv4 address.                                                                                                                                                                                  |
| ipv4_address_origin | Origin of the IPv4 address.                                                             | <ul style="list-style-type: none"> <li>● "Static": configures a static IPv4 address.</li> <li>● "DHCP": assigns the address through <a href="#">DHCP</a>.</li> </ul>                                         |
| ipv4_subnet_mask    | IPv4 subnet mask.                                                                       | String, valid IPv4 address.                                                                                                                                                                                  |
| ipv4_gateway        | IPv4 gateway.                                                                           | String, valid IPv4 gateway.                                                                                                                                                                                  |
| ipv6_address        | <a href="#">IPv6</a> address.                                                           | String, valid IPv6 address.                                                                                                                                                                                  |
| ipv6_address_origin | Origin of the IPv4 address.                                                             | <ul style="list-style-type: none"> <li>● "Static": configures a static IPv6 address.</li> <li>● "DHCPv6": assigns the address through DHCP.</li> </ul>                                                       |
| ipv6_prefix         | Prefix length of the IPv6 address.                                                      | Integer type, range: 1–128.                                                                                                                                                                                  |
| Gw_value            | Default IPv6 gateway.                                                                   | In IPv6 format.                                                                                                                                                                                              |

| Parameter         | Description                  | Value                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| nameserver        | Domain name server.          | One primary server and two secondary servers are included. Valid IPv4 or IPv6 addresses are used.                                                                                                                                                                                                                                                                                                                     |
| ip_stack          | Whether to enable IPv4/IPv6. | <ul style="list-style-type: none"> <li>"IPv4": Only IPv4 is enabled. The parameters related to IPv4 cannot be null.</li> <li>"IPv6": Only IPv6 is enabled. The parameters related to IPv6 cannot be null.</li> <li>"IPv4AndIPv6": IPv4 and IPv6 are both enabled. The parameters related to IPv4 and IPv6 cannot be null.</li> </ul>                                                                                  |
| domain            | String                       | Domain name.                                                                                                                                                                                                                                                                                                                                                                                                          |
| priority          | VLAN priority.               | Range: 0–7.                                                                                                                                                                                                                                                                                                                                                                                                           |
| vlan_enable       | Whether to enable the VLAN.  | <ul style="list-style-type: none"> <li>true: enables the VLAN. Values of vlan_id and priority must be set together.</li> <li>false: disables the VLAN. Values of vlan_id and priority are not verified.</li> </ul>                                                                                                                                                                                                    |
| vlan_id           | VLAN ID.                     | Range: 2–4094.                                                                                                                                                                                                                                                                                                                                                                                                        |
| network_port_mode | String                       | <p>Network port mode:</p> <ul style="list-style-type: none"> <li>Automatic</li> <li>Fixed</li> <li>Standalone</li> </ul> <p>Description of ManagementNetworkPort data reporting: In automatic mode, standalone mode, and fixed mode, only one group of data needs to be reported. In automatic mode and standalone mode, dedicated port data does not need to be reported, and only shared port data is reported.</p> |
| ncsi_mode         | String                       | <p>NCSI mode:</p> <ul style="list-style-type: none"> <li>Automatic</li> <li>Manual</li> </ul> <p>In fixed mode, you do not need to set this parameter. In automatic mode or standalone mode, you can set this parameter.</p>                                                                                                                                                                                          |
| type              | String                       | <ul style="list-style-type: none"> <li>Dedicated: dedicated network port</li> <li>ShareLink: shared network port</li> </ul>                                                                                                                                                                                                                                                                                           |

| Parameter   | Description | Value                                                                                                                                                                                                   |
|-------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |             | This parameter cannot be set to <b>Dedicated</b> and shared link information must be provided if <b>network_port_mode</b> is set to <b>Automatic</b> or <b>Standalone</b> .                             |
| card_number | Number      | The value of the dedicated network port does not need to be reported. The value of the shared network port is as follows: <ul style="list-style-type: none"><li>● 1: NIC 1</li><li>● 2: NIC 2</li></ul> |
| port_number | Number      | For a dedicated network port, the default value is 0. For a shared network port, the silkscreen number of the network port is used. Range: 1–4.                                                         |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Managers/1/EthernetInterfaces/D64FE89CE17C
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

```
Content-Type:application/json
```

- Request Message Body:

→ [IPv4](#) configuration:

```
{
 "IPv4Addresses": [
 {
 "Address": "192.168.5.7",
 "AddressOrigin": "Static",
 "Gateway": "192.168.5.1",
 "SubnetMask": "255.255.255.0"
 }
],
 "oem": {
 "Public": {
 "IPStacks": "IPv4"
 }
 }
}
```

```

 }
}
```

→ [IPv6](#) configuration:

```
{
 "IPv6Addresses": [
 {
 "Address": "2020::211",
 "Addressorigin": "Static",
 "PrefixLength": 64
 }
],
 "IPv6DefaultGateway": "2020::1",
 "Oem": {
 "Public": {
 "IPStacks": "IPv6"
 }
 }
}
```

→ [VLAN](#) configuration:

```
{
 "VLAN": {
 "VLANEnable": true,
 "VLANId": 3
 },
 "Oem": {
 "Public": {
 "VLANPriority": 1
 }
 }
}
```

→ HostName configuration:

```
{
 "HostName": "BMC-012"
}
```

→ NameServers configuration:

```
{
 "NameServers": ["1.2.3.4", "2.3.4.5", ""],
 "Oem": {
 "Public": {
 "Domain": "test.vantageo.com.cn"
 }
 }
}
```

```

 }
 }
}
```

→ Network port mode configuration:

```
{
 "Oem": {
 "Public": {
 "NetworkPortMode": "Fixed",
 "NCSIModeSelect": null,
 "ManagementNetworkPort": {
 "Type": "ShareLink",
 "CardNumber": 2,
 "PortNumber": 1
 }
 }
 }
}
```

- Response Example: None
- Status Code: 204

### Output Description

None

## 4.14 Restarting the BMC

### Function

Restart the [BMC](#) of the server.

### Permission Required

Power control.

### Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/Actions/Manager.Reset](https://device_ip/redfish/v1/Managers/manager_id/Actions/Manager.Reset)
- Request Header:

```

Content-Type:header_type
X-Auth-Token: auth_value
```

- Request Message Body:

```
{
 "ResetType": value
}
```

## Parameters

For a description of the parameters for restarting the BMC, refer to [Table 4-22](#).

**Table 4-22 Parameter Descriptions for Restarting the BMC**

| Parameter   | Description                                                                            | Value                                                                                                  |
|-------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                               | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                  |
| manager_id  | ID of the Manager resource.                                                            | For a rack server, the value is <b>1</b> or <b>Self</b> .                                              |
| auth_value  | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <a href="#">/redfish/v1/SessionService/Sessions</a> . |
| header_type | Format of the request message.                                                         | application/json                                                                                       |
| value       | Operation type.                                                                        | <b>ForceRestart</b> : forcibly reboots the BMC.                                                        |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/Actions/Manager.Reset
```

- Request Header:

```
Content-Type:application/json
```

- Request Message Body:

```
{
 "ResetType": "ForceRestart"
}
```

- Response Example:

```
{
 "error": {
 "@Message.ExtendedInfo": [
 {
 "MessageId": "DRIVER_ERROR"
 }
]
 }
}
```

```

 "@odata.type": "#Message.v1_0_5.Message",
 "Message": "Successfully Completed Request",
 "MessageArgs": [],
 "MessageId": "Base.1.0.Success",
 "RelatedProperties": [],
 "Resolution": "None",
 "Severity": "OK"
}
],
"code": "Base.1.0.Success",
"message": "Successfully Completed Request"
}
}

```

- Response Code: 200

## Output Description

For a description of the output returned when you restart the BMC, refer to [Table 4-23](#).

**Table 4-23 Output Descriptions for Restarting the BMC**

| Field             | Type   | Description                                                                                                            |
|-------------------|--------|------------------------------------------------------------------------------------------------------------------------|
| code              | String | String indicating the specified message ID in the message registry.                                                    |
| message           | String | Readable message for the code in the message registry.                                                                 |
| @odata.type       | String | OData description of the message resource.                                                                             |
| MessageId         | String | Message ID.                                                                                                            |
| RelatedProperties | Array  | Message-related properties.                                                                                            |
| Message           | String | Message details.                                                                                                       |
| MessageArgs       | Array  | Message arguments.                                                                                                     |
| Severity          | String | Severity level. Options: <ul style="list-style-type: none"> <li>• OK</li> <li>• Warning</li> <li>• Critical</li> </ul> |
| Resolution        | String | Solution.                                                                                                              |

## 4.15 Querying Information About the LLDP Service Configuration Resource

### Function

Query information about the [LLDP](#) service configuration resource.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- [URL](https://device_ip/redfish/v1/Managers/manager_id/LldpService): `https://device_ip/redfish/v1/Managers/manager_id/LldpService`
- Request Header:

`x-auth-token:auth_value`

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the LLDP service configuration resource, refer to [Table 4-24](#).

**Table 4-24 Parameter Descriptions for Querying Information About the LLDP Service Configuration Resource**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is 1 or <b>Self</b> .                                                  |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/LldpService
```

- Request Header:

`x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=`

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#L1dpService.L1dpService",
 "@odata.etag": "\"1596405264\"",
 "@odata.id": "/redfish/v1/Managers/1/L1dpService",
 "@odata.type": "#L1dpService.v1_0_0.L1dpService",
 "Description": "LLDP Service",
 "Id": "L1dpService",
 "L1dpEnabled": true,
 "Name": "L1dpService",
 "WorkMode": "TxRx"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the LLDP service configuration resource, refer to [Table 4-25](#).

**Table 4-25 Output Descriptions for Querying Information About the LLDP Service Configuration Resource**

| Field          | Type    | Description                                                                                                                                                                                                                                                                                                                                             |
|----------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context | String  | OData description of the LLDP resource model.                                                                                                                                                                                                                                                                                                           |
| @odata.id      | String  | Access path of the LLDP resource.                                                                                                                                                                                                                                                                                                                       |
| @odata.type    | String  | Type of LLDP resource.                                                                                                                                                                                                                                                                                                                                  |
| Description    | String  | Description of the LLDP resource.                                                                                                                                                                                                                                                                                                                       |
| Id             | String  | ID of the LLDP resource.                                                                                                                                                                                                                                                                                                                                |
| Name           | String  | Name of the LLDP resource.                                                                                                                                                                                                                                                                                                                              |
| L1dpEnabled    | Boolean | Whether LLDP is enabled: <ul style="list-style-type: none"> <li>● true: enabled</li> <li>● false: disabled</li> </ul>                                                                                                                                                                                                                                   |
| WorkMode       | String  | LLDP operation mode: <ul style="list-style-type: none"> <li>● TxRx: enables LLDP packet transmission and reception.</li> <li>● Rx: enables LLDP packet reception only.</li> <li>● Disabled: disables LLDP packet transmission and reception.</li> </ul> If this parameter is set to <b>Disabled</b> , <b>L1dpEnabled</b> cannot be set to <b>true</b> . |

## 4.16 Modifying Properties of the LLDP Service Resource

### Function

Modify properties of the [LLDP](#) service resource.

### Permission Required

Security Configuration

### Syntax

- Operation Type: PATCH
- [URL](#): `https://device_ip/redfish/v1/Managers/manager_id/LldpService`
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "LldpEnabled":enable_value,
 "workMode" : workmode_value
}
```

### Parameters

For a description of the parameters for modifying properties of the LLDP service resource, refer to [Table 4-26](#).

**Table 4-26 Parameter Descriptions for Modifying Properties of the LLDP Service Resource**

| Parameter      | Description                                 | Value                                                                                                                                                                                                                                                             |
|----------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip      | IP address for logging in to the device.    | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                                                                                                                                                                             |
| manager_id     | <a href="#">ID</a> of the Manager resource. | For a rack server, the value is <b>1</b> or <b>Self</b> .                                                                                                                                                                                                         |
| enable_value   | Whether LLDP is enabled.                    | <ul style="list-style-type: none"> <li>• true: enabled</li> <li>• false: disabled</li> </ul> Required.                                                                                                                                                            |
| workmode_value | String                                      | LLDP operation mode: <ul style="list-style-type: none"> <li>• TxRx: enables LLDP packet transmission and reception.</li> <li>• Rx: enables LLDP packet reception only.</li> <li>• Disabled: disables LLDP packet transmission and reception on a port.</li> </ul> |

| Parameter | Description | Value                                                                                                         |
|-----------|-------------|---------------------------------------------------------------------------------------------------------------|
|           |             | When LLDP is enabled, the default setting is TxRx. If LLDP is disabled, <b>workmode_value</b> is unavailable. |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Managers/manager_id/LldpService
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
 "LldpEnabled":true,
 "workMode" : "Rx"
}
```

- Response Example:

```
{
 "@odata.context":"/redfish/v1/$metadata#LldpService.LldpService",
 "@odata.id": "/redfish/v1/Managers/1/LldpService",
 "@odata.type": "#LldpService.v1_0_0.LldpService",
 "Description": "LLDP Service",
 "Id": "LldpService",
 "LldpEnabled": true,
 "Name": "LldpService",
 "workMode": "TxRx"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you modify properties of the LLDP service resource, refer to [Table 4-27](#).

**Table 4-27 Output Descriptions for Modifying Properties of the LLDP Service Resource**

| Field          | Type    | Description                                                                                                                                                                                                                                         |
|----------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context | String  | OData description of the LLDP resource model.                                                                                                                                                                                                       |
| @odata.id      | String  | Access path of the LLDP resource.                                                                                                                                                                                                                   |
| @odata.type    | String  | Type of LLDP resource.                                                                                                                                                                                                                              |
| Description    | String  | Description of the LLDP resource.                                                                                                                                                                                                                   |
| Id             | String  | ID of the LLDP resource.                                                                                                                                                                                                                            |
| Name           | String  | Name of the LLDP resource.                                                                                                                                                                                                                          |
| LldpEnabled    | Boolean | Whether LLDP is enabled: <ul style="list-style-type: none"><li>● true: enabled</li><li>● false: disabled</li></ul>                                                                                                                                  |
| WorkMode       | String  | LLDP operation mode: <ul style="list-style-type: none"><li>● TxRx: enables LLDP packet transmission and reception.</li><li>● Rx: enables LLDP packet reception only.</li><li>● Disabled: disables LLDP packet transmission and reception.</li></ul> |

## 4.17 Querying Information About the SNMP Resource

### Function

Query information about the [SNMP](#) resource of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- [URL](#): `https://device_ip/redfish/v1/Managers/manager_id/SnmpService`
- Request Header:  

`x-auth-token:auth_value`
- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the SNMP resource, refer to [Table 4-28](#).

**Table 4-28 Parameter Descriptions for Querying Information About the SNMP Resource**

| Parameter  | Description                                                                           | Value                                                                                                  |
|------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                  |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is <b>1</b> or <b>Self</b> .                                              |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <a href="#">/redfish/v1/SessionService/Sessions</a> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/SnmpService
```

- Request Header:

```
x-auth-token:LXIrlQPHHOPTz6k4rrPB/UfABUD45p9PFIC8QG2lp2F0=
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#SnmpService.SnmpService",
 "@odata.id": "/redfish/v1/Managers/1/SnmpService",
 "@odata.type": "#SnmpService.v1_2_0.SnmpService",
 "Actions": {
 "#SnmpService.SubmitTestEvent": {
 "target":
 "/redfish/v1/Managers/1/SnmpService/Actions/SnmpService.SubmitTestEvent"
 }
 },
 "Id": "SnmpService",
 "Name": "SnmpService",
 "ComplexPwdEnable": true,
 "ReadOnlyCommunity": null,
 "ReadWriteCommunity": null,
 "SnmpServiceEnable": true,
 "SnmpServicePort": 161,
 "SnmpTrapNotification": {
 "TrapServer": [
 {
 "MemberId": "0",

```

```

 "TrapServerAddress": "1.2.3.4",
 "TrapServerEnable": true,
 "TrapServerPort": 110
 }, {
 "MemberId": "1",
 "TrapServerAddress": "1.2.3.4",
 "TrapServerEnable": false,
 "TrapServerPort": 111
 }, {
 "MemberId": "2",
 "TrapServerAddress": "2.3.4.5",
 "TrapServerEnable": false,
 "TrapServerPort": 111
 }
],
"AlarmSeverity": "Normal",
"TrapHostIdentify": "BoardSN",
"TrapV3User": "",
"TrapVersion": "V2C",
"TrapServer@odata.count": 3,
"snmpTrapCommunity": "public",
"snmpTrapEnable": true
},
"Snmpv3AuthUser": [
{
 "snmpv3AuthProtocol": "SHA",
 "snmpv3PrivProtocol": "AES",
 "userName": "Administrator"
}
],
"Snmpv3AuthUser@odata.count": 1,
"Snmpv3EngineID": "0x80000f3e035ed7580e2ddd"
}
]
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the SNMP resource, refer to [Table 4-29](#).

**Table 4-29 Output Descriptions for Querying Information About the SNMP Resource**

| Field          | Type   | Description                              |
|----------------|--------|------------------------------------------|
| @odata.context | String | OData description of the resource model. |
| @odata.id      | String | Access path of the SNMP resource.        |

| Field                               | Type    | Description                                                                                                                                      |
|-------------------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.type                         | String  | Type of SNMP resource.                                                                                                                           |
| Actions                             | Object  | Operations that can be performed on the SNMP resource.                                                                                           |
| #SnmpService.SubmitTestEvent.target | Object  | Access path for sending the SNMP trap test event.                                                                                                |
| Id                                  | String  | ID of the SNMP resource.                                                                                                                         |
| Name                                | String  | Name of the SNMP resource.                                                                                                                       |
| ComplexPwdEnable                    | Boolean | Complex password switch: <ul style="list-style-type: none"><li>● true: on.</li><li>● false: off.</li></ul>                                       |
| ReadOnlyCommunity                   | String  | Name of the SNMP read-only community. This attribute contains sensitive information and is displayed as null. The PATCH operation is supported.  |
| ReadWriteCommunity                  | String  | Name of the SNMP read/write community. This attribute contains sensitive information and is displayed as null. The PATCH operation is supported. |
| SnmpServiceEnable                   | Boolean | SNMP switch: <ul style="list-style-type: none"><li>● true: on.</li><li>● false: off.</li></ul>                                                   |
| SnmpServicePort                     | Number  | SNMP service port.                                                                                                                               |
| SnmpTrapNotification                | Object  | SNMP Trap properties.                                                                                                                            |
| TrapServer                          | Array   | SNMP Trap server information.                                                                                                                    |
| MemberId                            | String  | SNMP Trap group member ID.                                                                                                                       |
| TrapServerAddress                   | String  | SNMP Trap server address.                                                                                                                        |
| TrapServerEnable                    | Boolean | Current Trap Server status: <ul style="list-style-type: none"><li>● true: enabled</li><li>● false: disabled</li></ul>                            |
| TrapServerPort                      | Number  | SNMP Trap server port number.                                                                                                                    |
| AlarmSeverity                       | String  | Event severity: <ul style="list-style-type: none"><li>● Critical</li><li>● Major</li><li>● Minor</li><li>● Normal</li></ul>                      |
| TrapHostIdentify                    | String  | Trap host ID: <ul style="list-style-type: none"><li>● BoardSN: board serial number.</li></ul>                                                    |

| Field                      | Type    | Description                                                                                                                                                        |
|----------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            |         | <ul style="list-style-type: none"> <li>● ProductAssetTag: product asset tag.</li> <li>● HostName: hostname.</li> </ul>                                             |
| TrapV3User                 | String  | SNMPv3 username.                                                                                                                                                   |
| TrapVersion                | String  | SNMP Trap version number.: <ul style="list-style-type: none"> <li>● V1</li> <li>● V2C</li> <li>● V3</li> </ul>                                                     |
| TrapServer@odata.count     | Number  | Number of SNMP Trap servers.                                                                                                                                       |
| snmpTrapCommunity          | String  | SNMP Trap community name.                                                                                                                                          |
| snmpTrapEnable             | Boolean | SNMP Trap switch: <ul style="list-style-type: none"> <li>● true: on.</li> <li>● false: off.</li> </ul>                                                             |
| SnmpV3AuthUser             | Array   | This array lists the information about all users with the SNMP permission.                                                                                         |
| snmpV3AuthProtocol         | String  | SNMPv3 user authentication algorithm: <ul style="list-style-type: none"> <li>● SHA</li> <li>● MD5</li> <li>● SHA256</li> <li>● SHA384</li> <li>● SHA512</li> </ul> |
| snmpV3PrivProtocol         | String  | SNMPv3 user encryption algorithm: <ul style="list-style-type: none"> <li>● DES</li> <li>● AES</li> <li>● AES256</li> </ul>                                         |
| UserName                   | String  | Username of the account with the SNMP permission.                                                                                                                  |
| SnmpV3AuthUser@odata.count | Number  | Number of users with the SNMP permission.                                                                                                                          |
| SnmpV3EngineID             | String  | SNMPv3 engine ID.                                                                                                                                                  |

## 4.18 Modifying Properties of the SNMP Resource

### Function

Modify the [SNMP](#) resource information about a server.

### Permission Required

Basic management.

## Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/SnmpService](https://device_ip/redfish/v1/Managers/manager_id/SnmpService)
- Request Header:
 

x-auth-token:auth\_value  
 Content-Type:header\_type
- Request Message Body:

```
{
 "ComplexPwdEnable": ComplexPwdEnable,
 "ReadWriteCommunity": ReadWriteCommunity,
 "ReadOnlyCommunity": ReadOnlyCommunity,
 "SnmpServiceEnable": SnmpServiceEnable,
 "SnmpServicePort": SnmpServicePort,
 "SnmpTrapNotification": {
 "snmpTrapCommunity": snmpTrapCommunity,
 "snmpTrapEnable": snmpTrapEnable,
 "AlarmSeverity": AlarmSeverity,
 "TrapHostIdentify": TrapHostIdentify,
 "TrapVersion": TrapVersion,
 "TrapV3User": TrapV3User,
 "TrapServer": [
 {
 "MemberId": MemberId,
 "TrapServerAddress": TrapServerAddress,
 "TrapServerEnable": TrapServerEnable,
 "TrapServerPort": TrapServerPort
 },
 {
 "MemberId": MemberId,
 "TrapServerAddress": TrapServerAddress,
 "TrapServerEnable": TrapServerEnable,
 "TrapServerPort": TrapServerPort
 }
]
 }
}
```

## Parameters

For a description of the parameters for modifying the SNMP resource information, refer to [Table 4-30](#).

**Table 4-30 Parameter Descriptions for Modifying the SNMP Resource**

| Field              | Type                                                                                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip          | IP address for logging in to the device.                                                | IPv4 or IPv6 address.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| manager_id         | ID of the Manager resource.                                                             | For a rack server, the value is <b>1</b> or <b>Self</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| auth_value         | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| header_type        | Format of the request message.                                                          | application/json                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| ComplexPwdEnable   | String                                                                                  | <p>Complex password switch:</p> <ul style="list-style-type: none"> <li>● true: on.</li> <li>● false: off.</li> </ul> <p>If <b>SnmpServiceEnable</b> is set to true, this parameter must be set.</p> <p>If <b>SnmpServiceEnable</b> is set to false, no verification is performed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ReadWriteCommunity | String                                                                                  | <p>This parameter can be configured when <b>SnmpServiceEnable</b> is set to true.</p> <p>SNMP read-write community name. The naming rule for this parameter is as follows:</p> <ul style="list-style-type: none"> <li>● Community name rule when the complex password switch is on: The name supports 8–32 characters, including at least letters, Numbers, and one special character, which can be any visible characters except for a space (" "), single quotation mark ("'"), or backslash("\"). The name cannot begin with a pound sign ("#").</li> <li>● Community name rule when the complex password switch is off: The name supports 1–32 characters including Numbers, letters, and special characters. Allowed special characters: visible characters except for a space (" "), single quotation mark ("'"), or backslash("\"). The name cannot begin with a pound sign ("#").</li> </ul> |

| Field             | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   |         | <b>ReadWriteCommunity</b> is not required. If it is set, verification is performed. If it is not set, no verification is performed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| ReadOnlyCommunity | String  | <p>This parameter can be configured when <b>SnmpServiceEnable</b> is set to true.</p> <p>SNMP read-only community name. The naming rule for this parameter is as follows:</p> <ul style="list-style-type: none"> <li>Community name rule when the complex password switch is on: The name supports 8–32 characters, including at least letters, Numbers, and one special character, which can be any visible characters except for a space (" "), single quotation mark ("'"), or backslash("\"). The name cannot begin with a pound sign ("#").</li> <li>Community name rule when the complex password switch is off: The name supports 1–32 characters including Numbers, letters, and special characters. Allowed special characters: visible characters except for a space (" "), single quotation mark ("'"), or backslash("\"). The name cannot begin with a pound sign ("#").</li> </ul> <p><b>ReadOnlyCommunity</b> is not required, and will be checked only if there is a value.</p> |
| SnmpServiceEnable | Boolean | <p>SNMP switch:</p> <ul style="list-style-type: none"> <li>true: on.</li> <li>false: off.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| SnmpServicePort   | Number  | <p>SNMP port number, range: 1–65535, which cannot be null.</p> <p>If <b>SnmpServiceEnable</b> is set to true, this parameter must be set.</p> <p>If <b>SnmpServiceEnable</b> is set to false, no verification is performed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| snmpTrapCommunity | String  | <p>SNMP Trap community name, which is a string of 1–18 characters including Numbers, letters, and special characters. Allowed special characters: visible characters except for a space (" "), single quotation mark ("'"), or backslash("\"). The name cannot begin with a pound sign ("#").</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| Field            | Type    | Description                                                                                                                                                                                                                                                                                                               |
|------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  |         | If <b>TrapVersion</b> is set to V1 or V2C, this parameter must be set.<br>If <b>TrapVersion</b> is set to V3, no verification is performed.                                                                                                                                                                               |
| snmpTrapEnable   | Boolean | SNMP Trap switch: <ul style="list-style-type: none"><li>● true: on.</li><li>● false: off.</li></ul>                                                                                                                                                                                                                       |
| AlarmSeverity    | String  | Event severity: <ul style="list-style-type: none"><li>● Critical</li><li>● Major</li><li>● Minor</li><li>● Normal</li></ul> If <b>snmpTrapEnable</b> is set to true, this parameter must be set.<br>If <b>snmpTrapEnable</b> is set to false, no verification is performed.                                               |
| TrapHostIdentify | String  | Trap host ID: <ul style="list-style-type: none"><li>● BoardSN: board serial number.</li><li>● ProductAssetTag: product asset tag.</li><li>● HostName: hostname.</li></ul> If <b>snmpTrapEnable</b> is set to true, this parameter must be set.<br>If <b>snmpTrapEnable</b> is set to false, no verification is performed. |
| TrapVersion      | String  | SNMP Trap version number: <ul style="list-style-type: none"><li>● V1</li><li>● V2C</li><li>● V3</li></ul> If <b>snmpTrapEnable</b> is set to true, this parameter must be set.<br>If <b>snmpTrapEnable</b> is set to false, no verification is performed.                                                                 |
| TrapV3User       | String  | SNMPv3 username. Select a user from those with SNMP permissions as the SNMPv3 Trap user (it is valid when TrapVersion V3 is adopted).<br>If <b>TrapVersion</b> is set to V1 and v2c, no verification is performed.<br>If <b>TrapVersion</b> is set to V2, this parameter must be set.                                     |
| MemberId         | String  | SNMP Trap member ID, range: 1–4.                                                                                                                                                                                                                                                                                          |

| Field             | Type    | Description                                                                                                                                                                                    |
|-------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   |         | If <b>Trap Server</b> is set, <b>MemberId</b> must be set.                                                                                                                                     |
| TrapServerAddress | String  | SNMP Trap server address, which can be an IPv4 or IPv6 address.<br>If <b>Trap Server</b> is set, <b>TrapServerAddress</b> must be set.                                                         |
| TrapServerEnable  | Boolean | Current Trap server status:<br><ul style="list-style-type: none"> <li>● true: enabled</li> <li>● false: disabled</li> </ul> If <b>Trap Server</b> is set, <b>TrapServerEnable</b> must be set. |
| TrapServerPort    | Number  | Port number of the SNMP Trap server. Range: 1 – 65535, which cannot be null.<br>If <b>Trap Server</b> is set, <b>TrapServerPort</b> must be set.                                               |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Managers/1/SnmpService
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
 "ComplexPwdEnable": true,
 "SnmpServiceEnable": true,
 "SnmpServicePort": 161,
 "ReadWriteCommunity": "7654321b&",
 "ReadOnlyCommunity": "1234567a$",
 "SnmpTrapNotification": {
 "snmpTrapEnable": true,
 "snmpTrapCommunity": "public",
 "AlarmSeverity": "Normal",
 "TrapHostIdentify": "BoardSN",
 "TrapVersion": "v2C", "TrapServer": [
 {
 "MemberId": 1,
 "TrapServerAddress": "192.168.1.100"
 }
]
 }
}
```

```

 "MemberId": "0",
 "TrapServerAddress": "1.2.3.4",
 "TrapServerEnable": false,
 "TrapServerPort": 110
 },
 {
 "MemberId": "1",
 "TrapServerAddress": "1.2.3.4",
 "TrapServerEnable": false,
 "TrapServerPort": 111
 },
 {
 "MemberId": "2",
 "TrapServerAddress": "2.3.4.5",
 "TrapServerEnable": false,
 "TrapServerPort": 111
 }
]
}

```

Separate SNMP instance configuration:

```
{
 "ComplexPwdEnable": true,
 "SnmpServiceEnable": true,
 "SnmpServicePort": 161,
 "ReadWriteCommunity": "7654321b&",
 "ReadOnlyCommunity": "1234567a$"
}
```

Separate SNMP Trap instance configuration:

```
{
 "SnmpTrapNotification": {
 "snmpTrapEnable": true,
 "snmpTrapCommunity": "public",
 "AlarmSeverity": "Normal",
 "TrapHostIdentify": "BoardsN",
 "TrapVersion": "V2C"
 }
}
```

Separate SNMP Trap Server instance configuration:

```
{
```

```

 "SnmpTrapNotification": {
 "TrapServer": [
 {
 "MemberId": "0",
 "TrapServerAddress": "1.2.3.4",
 "TrapServerEnable": false,
 "TrapServerPort": 110
 },
 {
 "MemberId": "1",
 "TrapServerAddress": "1.2.3.4",
 "TrapServerEnable": false,
 "TrapServerPort": 111
 },
 {
 "MemberId": "2",
 "TrapServerAddress": "2.3.4.5",
 "TrapServerEnable": false,
 "TrapServerPort": 111
 }
]
 }
}

```

- Response Example: None
- Response Code: 204

#### Output Description

None

## 4.19 Submitting an SNMP Trap Test Event

#### Function

Submit an [SNMP](#) Trap test event.

#### Permission Required

Diagnosis.

#### Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/SnmpService/Actions/SnmpService.SubmitTestEvent](https://device_ip/redfish/v1/Managers/manager_id/SnmpService/Actions/SnmpService.SubmitTestEvent)

- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "MemberId": MemberId
}
```

## Parameters

For a description of the parameters for submitting an SNMP Trap test event, refer to [Table 4-31](#)

**Table 4-31 Parameter Descriptions for Submitting an SNMP Trap Test Event**

| Parameter   | Description                                                                            | Value                                                                                               |
|-------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                               |
| manager_id  | ID of the Manager resource.                                                            | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value  | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| header_type | Format of the request message.                                                         | application/json                                                                                    |
| MemberId    | Trap group member ID.                                                                  | Range: 1–4.                                                                                         |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/SnmpService/Actions/SnmpService.SubmitTestEvent
```

- Request Header:

```
x-auth-token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
 "MemberId": 1
}
```

- Response Example: None

- Response Code: 204

### Output Description

None

## 4.20 Querying the Virtual Media Resource Collection

### Function

Query the virtual media resource collection.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Managers/manager_id/VirtualMedia`
- Request Header:
 

`x-auth-token:auth_value`
- Request Message Body: None

### Parameters

For a description of the parameters for querying the virtual media resource collection, refer to [Table 4-32](#).

**Table 4-32 Parameter Descriptions for Querying the Virtual Media Resource Collection**

| Parameter  | Description                                                                                                 | Value                                                                                               |
|------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                               |
| manager_id | ID of the Manager resource.                                                                                 | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:

`GET https://device_ip/redfish/v1/Managers/1/VirtualMedia`

- Request Header:

```
x-auth-token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#VirtualMediaCollection.VirtualMediaCollection",
 "@odata.id": "/redfish/v1/Managers/1/virtualMedia",
 "@odata.type": "#VirtualMediaCollection.VirtualMediaCollection",
 "Description": "Virtual Media Services Settings",
 "Members": [
 {
 "@odata.id": "/redfish/v1/Managers/1/virtualMedia/CD"
 },
 {
 "@odata.id": "/redfish/v1/Managers/1/virtualMedia/CD1"
 },
 {
 "@odata.id": "/redfish/v1/Managers/1/virtualMedia/USBstick"
 },
 {
 "@odata.id": "/redfish/v1/Managers/1/virtualMedia/USBstick1"
 }
],
 "Members@odata.count": 4,
 "Name": "Virtual Media Services"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query the virtual media resource collection, refer to [Table 4-33](#).

**Table 4-33 Output Descriptions for Querying the Virtual Media Resource Collection**

| Field          | Type   | Description                                                       |
|----------------|--------|-------------------------------------------------------------------|
| @odata.context | String | OData description of the virtual media resource collection model. |
| @odata.id      | String | Access path of the virtual media resource collection.             |
| @odata.type    | String | Type of virtual media resource collection.                        |
| Description    | String | Description                                                       |

| Field               | Type   | Description                                                                                                                          |
|---------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------|
| Members             | Array  | Virtual media resource list. The CD1 and USBStick1 resources can be queried and used only when the number of entities is set to two. |
| @odata.id           | String | Access path of the virtual media resource collection.                                                                                |
| Members@odata.count | Number | Number of virtual media resource members that can be connected currently.                                                            |
| Name                | String | Name of the virtual media resource collection.                                                                                       |

## 4.21 Querying a Virtual Media Resource

### Function

Query a virtual media resource.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Managers/manager_id/VirtualMedia/Media_type`
- Request Header:
 

`x-auth-token:auth_value`
- Request Message Body: None

### Parameters

For a description of the parameters for querying the virtual media resource, refer to [Table 4-34](#).

**Table 4-34 Parameter Descriptions for Querying the Virtual Media Resource**

| Parameter  | Description                                                                                                 | Value                                                                                               |
|------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                               |
| manager_id | ID of the Manager resource.                                                                                 | For a rack server, the value is 1 or Self.                                                          |
| auth_value | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| Media_type | Virtual Media Type                                                                                          | Supports CD/CD1/USBStick/USBStick1.                                                                 |

## Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/VirtualMedia/CD
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#VirtualMedia.VirtualMedia",
 "@odata.id": "/redfish/v1/Managers/1/virtualMedia/CD",
 "@odata.type": "#VirtualMedia.v1_2_0.VirtualMedia",
 "Description": "CD VirtualMedia",
 "ConnectedVia": "NotConnected",
 "Id": "CD",
 "Name": "VirtualMedia",
 "Image": null,
 "ImageName": null,
 "Inserted": false,
 "MediaTypes": [
 "CD"
],
 "TransferMethod": null,
 "TransferProtocolType": null,
 "Actions": {
 "#VirtualMedia.InsertMedia": {
 "target": "/redfish/v1/Managers/1/virtualMedia/CD/Actions/
 virtualMedia.InsertMedia"
 }
 },
 "#VirtualMedia.EjectMedia": {
 "target": "/redfish/v1/Managers/1/virtualMedia/CD/Actions/
 virtualMedia.EjectMedia"
 },
 "Oem": {
 "Public": {
 "#VirtualMedia.VmmControl": {
 "@Redfish.ActionInfo":
 "/redfish/v1/Managers/1/virtualMedia/CD/VmmControlActionInfo",
 ...
 }
 }
 }
}
```

```
 "target":
 "/redfish/v1/Managers/1/virtualMedia/CD/Actions/
 VirtualMedia.VmmControl"
 }
}
}
}
}
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query the virtual media resource, refer to Table 4-35.

**Table 4-35 Output Descriptions for Querying the Virtual Media Resource**

| Field                | Type    | Description                                                                                                                                                                                     |
|----------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context       | String  | OData description of the virtual media resource model.                                                                                                                                          |
| @odata.id            | String  | Access path of the virtual media resource.                                                                                                                                                      |
| @odata.type          | String  | Type of virtual media resource.                                                                                                                                                                 |
| Description          | String  | Description.                                                                                                                                                                                    |
| ConnectedVia         | String  | Connection method.                                                                                                                                                                              |
| Id                   | String  | ID of the virtual media resource.                                                                                                                                                               |
| Name                 | String  | Name of the virtual media resource.                                                                                                                                                             |
| MediaTypes           | Array   | Media plane type: <ul style="list-style-type: none"><li>● CD</li><li>● USBStick</li></ul>                                                                                                       |
| TransferProtocolType | String  | Transmission protocol type: <ul style="list-style-type: none"><li>● <a href="#">NFS</a></li><li>● <a href="#">CIFS</a></li><li>● <a href="#">HTTPS</a></li><li>● <a href="#">HTTP</a></li></ul> |
| TransferMethod       | String  | Transfer method: stream                                                                                                                                                                         |
| Image                | String  | Image path.                                                                                                                                                                                     |
| ImageName            | String  | Image name.                                                                                                                                                                                     |
| ConnectedVia         | String  | Connection method.                                                                                                                                                                              |
| Inserted             | Boolean | Connection status:                                                                                                                                                                              |

| Field                     | Type   | Description                                                                                                           |
|---------------------------|--------|-----------------------------------------------------------------------------------------------------------------------|
|                           |        | <ul style="list-style-type: none"> <li>• true: mounting (inserted)</li> <li>• false: Uninstalled (removed)</li> </ul> |
| Oem                       | Object | Customized properties of a specified session.                                                                         |
| Actions                   | Object | Available actions for the virtual media resource.                                                                     |
| #VirtualMedia.InsertMedia | String | Access path for attaching the remote media to the virtual media device.                                               |
| #VirtualMedia.EjectMedia  | String | Access path for detaching the remote media from the virtual media device.                                             |
| #VirtualMedia.VmmControl  | String | Access path for connecting to the virtual media.                                                                      |

## 4.22 Connecting to the Virtual Media

### Function

Connect to the virtual media.

### Permission Required

Remote media

### Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/VirtualMedia/media\\_type/Actions/VirtualMedia.VmmControl](https://device_ip/redfish/v1/Managers/manager_id/VirtualMedia/media_type/Actions/VirtualMedia.VmmControl)
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "Image": Image_value,
 "Username": username_value,
 "Password": password_value,
 "VmmControlType": value
}
```

## Parameters

For a description of the parameters for connecting to the virtual media, refer to [Table 4-36](#).

**Table 4-36 Parameter Descriptions for Connecting to the Virtual Media**

| Parameter      | Description                                                                                                                                                                            | Value                                                                                                                     |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| device_ip      | IP address for logging in to the device.                                                                                                                                               | IPv4 or IPv6 address.                                                                                                     |
| manager_id     | ID of the Manager resource.                                                                                                                                                            | For a rack server, the value is <b>1</b> or <b>Self</b> .                                                                 |
| Media_type     | Virtual Media Type                                                                                                                                                                     | CD, CD1, USBStick, and USBStick1 are supported.                                                                           |
| auth_value     | When executing this POST request, the "x-auth-token" value must be carried in "Headers" for authentication.                                                                            | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                       |
| header_type    | Format of the request message.                                                                                                                                                         | application/json                                                                                                          |
| Image_value    | Type: string, shared path, determined by the shared server.                                                                                                                            | The maximum length is 256 characters.<br>The format is as follows:<br>"Image": "protocol://server_ip/file_path/file_name" |
| username_value | Type: string. This field needs to be provided when the CIFS protocol and the HTTPS protocol are used. The maximum length is 32 characters.                                             | This field is not required when the NFS protocol is used.                                                                 |
| password_value | Type: string. This field needs to be provided when the CIFS protocol is used.<br>This field needs to be provided when the HTTPS protocol is used. The maximum length is 32 characters. | This field is not required when the NFS protocol is used.                                                                 |
| value          | Virtual media operation type                                                                                                                                                           | <b>Connect:</b> connects to virtual media.                                                                                |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/VirtualMedia/CD/Actions/VirtualMedia.VmmControl
```

- Request Header:

```
x-auth-token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
 "Image": "cifs://device_ip/home/mount_test/isocfg-tool-v1.iso",
 "Username": "test",
 "Password": "123",
 "VmmControlType": "Connect"
}
```

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#virtualMedia.virtualMedia",
 "@odata.id": "/redfish/v1/Managers/1/virtualMedia/CD/Actions/
 virtualMedia.VmmControl",
 "@odata.type": "#VirtualMedia.v1_2_0.VirtualMedia",
 "Information": {
 "target": "/redfish/v1/Managers/1/virtualMedia/CD"
 }
}
```

- Status Code: 200

## Output Description

For a description of the output returned when the virtual media is accessed, refer to [Table 4-37](#).

**Table 4-37 Output Descriptions for Connecting to the Virtual Media**

| Field          | Type   | Description                                        |
|----------------|--------|----------------------------------------------------|
| @odata.context | String | OData description of the virtual media resource.   |
| @odata.id      | String | Path to connect the virtual media resource.        |
| @odata.type    | String | Type of virtual media resource.                    |
| Information    | Object | -                                                  |
| target         | String | Access path of the current virtual media resource. |

## 4.23 Disconnecting the Virtual Media

### Function

Disconnect the virtual media.

### Permission Required

Remote media

## Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/Managers/manager_id/VirtualMedia/media_type/Actions/VirtualMedia.VmmControl`
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "VmmControlType":value
}
```

## Parameters

For the parameter descriptions for disconnecting the virtual media, refer to [Table 4-38](#).

**Table 4-38 Parameter Descriptions for Disconnecting the Virtual Media**

| Parameter   | Description                                                                                                 | Value                                                                                 |
|-------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                 |
| manager_id  | ID of the Manager resource.                                                                                 | For a rack server, the value is 1 or Self.                                            |
| Media_type  | Virtual Media Type                                                                                          | CD, CD1, USBStick, and USBStick1 are supported.                                       |
| auth_value  | When executing this POST request, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions. |
| header_type | Format of the request message.                                                                              | application/json                                                                      |
| value       | Virtual media operation type                                                                                | <b>Disconnect</b> : disconnects the virtual media.                                    |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/VirtualMedia/CD/Actions/VirtualMedia.VmmControl
```

- Request Header:

```
x-auth-token:LXIrlQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
 "VmmControlType": "Disconnect"
}
```

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#VirtualMedia.VirtualMedia",
 "@odata.id": "/redfish/v1/Managers/1/virtualMedia/CD/oem/VANTAGEO/Actions/
 virtualMedia.VmmControl",
 "@odata.type": "#VirtualMedia.v1_2_0.VirtualMedia",
 "Information": {
 "target": "/redfish/v1/Managers/1/virtualMedia/CD"
 }
}
```

- Status Code: 200

### Output Description

For a description of the output returned when the virtual media is disconnected, refer to [Table 4-39](#).

**Table 4-39 Output Descriptions for Disconnecting the Virtual Media**

| Field          | Type   | Description                                             |
|----------------|--------|---------------------------------------------------------|
| @odata.context | String | OData description of the virtual media resource.        |
| @odata.id      | String | Access path of the disconnected virtual media resource. |
| @odata.type    | String | Type of virtual media resource.                         |
| Information    | Object | -                                                       |
| target         | String | Access path of the current virtual media resource.      |

## 4.24 Sending a One-Click Collection Request

### Function

Send a one-click collection request.

### Permission Required

Diagnosis.

## Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/Managers/manager_id/LogServices/Actions/LogServices.Dump`
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "Type":type_value
}
```

## Parameters

For a description of the parameters for sending a one-click collection request, refer to [Table 4-40](#).

**Table 4-40 One-Click Collection Request Parameter Descriptions**

| Parameter   | Description                                                                                                 | Value                                                                                               |
|-------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                               |
| manager_id  | ID of the Manager resource.                                                                                 | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value  | When executing this POST request, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| header_type | Format of the request message.                                                                              | application/json                                                                                    |
| type_value  | Operation Type                                                                                              | Type: Logs                                                                                          |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/LogServices/Actions/LogServices.Dump
```

- Request Header:

```
x-auth-token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
 "Type": "Logs"
}
```

- Response Example:

```
{
 "error": {
 "code": "Base.1.8.1.Success",
 "message": "Successfully completed Request",
 "@Message.ExtendedInfo": [
 {
 "@odata.type": "#Message.v1_1_1.Message",
 "MessageId": "Base.1.8.1.Success",
 "Message": "Successfully completed Request",
 "Severity": "OK",
 "Resolution": "None."
 }
]
 }
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you send a one-click collection request, refer to [Table 4-41](#)

**Table 4-41 Output Descriptions for One-Click Collection Requests**

| Field       | Type   | Description                                                                                                            |
|-------------|--------|------------------------------------------------------------------------------------------------------------------------|
| code        | String | ID of the specified message in the message registry.                                                                   |
| message     | String | Readable message for the code in the message registry.                                                                 |
| @odata.type | String | OData description of the message resource.                                                                             |
| MessageId   | String | Message ID.                                                                                                            |
| Message     | String | Details.                                                                                                               |
| Severity    | String | Severity level. Options: <ul style="list-style-type: none"> <li>● OK</li> <li>● Warning</li> <li>● Critical</li> </ul> |

| Field      | Type   | Description |
|------------|--------|-------------|
| Resolution | String | Solution.   |

## 4.25 Querying the One-Click Collection Progress

### Function

Query the one-click collection progress.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Managers/managers_id/LogServices/Actions/LogServices.Dump/Progress`
- Request Header:
 

x-auth-token:auth\_value
- Request Message Body: None

### Parameters

For a description of the parameters for querying the one-click collection progress, refer to [Table 4-42](#).

**Table 4-42 Parameter Descriptions for Querying the One-Click Collection Progress**

| Parameter  | Description                                                                                                 | Value                                                                                 |
|------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                 |
| manager_id | ID of the Manager resource.                                                                                 | For a rack server, the value is 1 or Self.                                            |
| auth_value | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions. |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/LogServices/Actions/LogServices.Dump/Progress
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.content": "/redfish/v1/$metadata",
 "@odata.id": "/redfish/v1/Managers/Self/LogServices/Actions/
LogServices.Dump/Progress",
 "@odata.type": "#Message.v1_1_1.Message",
 "Message": "SUCCESSIONED",
 "Percentage": "100",
 "State": "STATE_SUCCESSIONED",
 "TarName": "bmcinfo_UnknownProductSN.tar.gz",
 "TarPath": "/var/bmcdata/bmcinfo_UnknownProductSN.tar.gz",
 "Type": "Logs"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query the one-click collection progress, refer to [Table 4-43](#).

**Table 4-43 Output Descriptions for Querying the One-Click Collection Progress**

| Field          | Type   | Description                                                                                                                                                      |
|----------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context | String | OData description for the query of the one-click log collection progress.                                                                                        |
| @odata.id      | String | Access path for the query of the one-click log collection progress.                                                                                              |
| @odata.type    | String | Type of query of the one-click log collection progress.                                                                                                          |
| Percentage     | String | Task progress percentage.                                                                                                                                        |
| State          | String | Status, options: <ul style="list-style-type: none"> <li>• STATE_FAILED</li> <li>• STATE_SUCCESSIONED</li> <li>• STATE_RUNNING</li> <li>• STATE_SILENT</li> </ul> |
| Type           | String | Type. Only the Logs type is available in this version.                                                                                                           |
| Message        | String | Task progress status, including: <ul style="list-style-type: none"> <li>• SILENT: indicates that collection is triggered.</li> </ul>                             |

| Field   | Type   | Description                                                                                                                                                                                                                                               |
|---------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |        | <ul style="list-style-type: none"> <li>● RUNNING: indicates that collection is in progress.</li> <li>● SUCCESSSED: indicates that collection is completed and successful.</li> <li>● FAILED: indicates that an error occurs during collection.</li> </ul> |
| TarName | String | File name of the compressed package, in which <b>UnknownProductSN</b> varies with the actual <b>SN</b> . If the actual SN is not obtained, <b>UnknownProductSN</b> is used.                                                                               |
| TarPath | String | Storage path of the local compressed package.                                                                                                                                                                                                             |

## 4.26 Exporting Logs

### Function

Export the log information about a server.

### Permission Required

Diagnosis.

### Syntax

- Operation Type: POST
- **URL:** `https://device_ip/redfish/v1/Managers/manager_id/LogServices/Actions/LogServices.ExportLogs`
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "Type":type_value,
 "Content":content_value
}
```

### Parameters

For a description of the parameters for exporting logs, refer to [Table 4-44](#).

**Table 4-44 Log Export Parameter Descriptions**

| Parameter     | Description                                                                            | Value                                                                                                                                                                                                                                                            |
|---------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip     | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                                                                                                                                                                                            |
| manager_id    | ID of the Manager resource.                                                            | For a rack server, the value is 1 or Self.                                                                                                                                                                                                                       |
| auth_value    | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions.                                                                                                                                                                            |
| header_type   | Format of the request message.                                                         | Supported message formats: application and json                                                                                                                                                                                                                  |
| type_value    | Operation type.                                                                        | Type: Logs                                                                                                                                                                                                                                                       |
| content_value | File path.                                                                             | Path for exporting log files:<br><ul style="list-style-type: none"> <li>● Remote download. TFTP is supported. Value: remote service address.</li> <li>● Local download. Value: TarPath in the response returned through the progress query interface.</li> </ul> |

**Usage Guidelines**

None

**Example**

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/LogServices/Actions/LogServices.ExportLogs
```

- Request Header:

```
Content-Type: application/json
```

- Request Message Body:

```
{
 "Type": "Logs",

 "Content": "tftp://10.10.10.191/ID_config.tar.gz"
}
```

- Response Example:

```
{
 "error": {
 "code": "Base.1.8.1.Success",
 "message": "Successfully completed Request",
 }
}
```

```

"@Message.ExtendedInfo": [
 {
 "@odata.type": "#Message.v1_1.Message",
 "MessageId": "Base.1.8.1.Success",
 "Message": "Successfully completed Request",
 "Severity": "OK",
 "Resolution": "None."
 }
]
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you export the logs, refer to [Table 4-45](#).

**Table 4-45 Log Export Descriptions**

| Field       | Type   | Description                                                                                                                                                 |
|-------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code        | String | ID of the specified message in the message registry.                                                                                                        |
| message     | String | Readable message for the code in the message registry.                                                                                                      |
| @odata.type | String | OData description of the message resource.                                                                                                                  |
| MessageId   | String | Message ID.                                                                                                                                                 |
| Message     | String | Details.                                                                                                                                                    |
| Severity    | String | Severity. The Redfish supports the following severity levels: <ul style="list-style-type: none"> <li>● OK</li> <li>● Warning</li> <li>● Critical</li> </ul> |
| Resolution  | String | Solution.                                                                                                                                                   |

## 4.27 Querying the KVM Service Resource

### Function

Query [KVM](#) resource information.

### Permission Required

Query.

## Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/KvmService](https://device_ip/redfish/v1/Managers/manager_id/KvmService)
- Request Header:
 

x-auth-token:auth\_value
- Request Message Body: None

## Parameters

For a description of the parameters for querying the KVM service resource, refer to [Table 4-46](#).

**Table 4-46 Parameter Descriptions for Querying the KVM Service Resource**

| Parameter  | Description                                                                           | Value                                                                                 |
|------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                 |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is 1 or Self.                                            |
| auth_value | X-Auth-Token value contained in Request Header in the Get request for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions. |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/KvmService
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#KvmService.KvmService",
 "@odata.id": "/redfish/v1/Managers/Self/KvmService",
 "@odata.type": "#KvmService.v1_0_0.KvmService",
 "ActivatedSessionsType": "Private",
 "EncryptionEnabled": true,
 "Description": "KvmService",
 "KvmUrl": "https://192.168.5.7/viewer.html?&token=IyWH3U7qkckzw8akb",
```

```

 "MaximumNumberOfSessions": 4,
 "NumberOfActivatedSessions": 0,
 "SessionTimeoutMinutes": 30
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query the KVM service resource, refer to [Table 4-47](#).

**Table 4-47 Output Descriptions for Querying the KVM service Resource**

| Field                     | Type    | Description                                                                                                                                 |
|---------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context            | String  | OData description of the KVM service resource model.                                                                                        |
| @odata.id                 | String  | Access path of the KVM resource.                                                                                                            |
| @odata.type               | String  | Type of KVM service resource.                                                                                                               |
| Description               | String  | Description of the KVM resource.                                                                                                            |
| MaximumNumberOfSessions   | Number  | Maximum number of KVM sessions.                                                                                                             |
| KvmUrl                    | String  | URL for accessing the KVM resource. When the URL is used for access, the Web session is automatically logged out.                           |
| NumberOfActivatedSessions | Number  | Number of current KVM sessions.                                                                                                             |
| ActivatedSessionsType     | String  | KVM session type. Options: <ul style="list-style-type: none"> <li>• Shared: Shared</li> <li>• Private: Exclusive</li> </ul>                 |
| EncryptionEnabled         | Boolean | Enables or disables KVM encryption. Options: <ul style="list-style-type: none"> <li>• true: enabled.</li> <li>• false: disabled.</li> </ul> |
| SessionTimeoutMinutes     | Number  | Session timeout time, range: 1–60, unit: minutes.                                                                                           |

## 4.28 Modifying Information About the KVM Resource

### Function

Modify information about the [KVM](#) resource.

### Permission Required

Remote control

## Syntax

- Operation Type: PATCH
  - URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/KvmService](https://device_ip/redfish/v1/Managers/manager_id/KvmService)
  - Request Header:
- ```
x-auth-token:auth_value
Content-Type:header_type
```
- Request Message Body:
- ```
{
 "EncryptionEnabled": EncryptionEnabled_value,
 "SessionTimeoutMinutes": SessionTimeoutMinutes_value
}
```

## Parameters

For a description of the parameters for modifying the KVM resource, refer to [Table 4-48](#).

**Table 4-48 Parameter Descriptions for Modifying Information About the KVM Resource**

| Parameter                    | Description                                                                             | Value                                                                                                  |
|------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| device_ip                    | IP address for logging in to the device.                                                | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                  |
| manager_id                   | ID of the Manager resource.                                                             | For a rack server, the value is 1 or <b>Self</b> .                                                     |
| auth_value                   | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <a href="#">/redfish/v1/SessionService/Sessions</a> . |
| header_type                  | Format of the request message.                                                          | Supported formats: application and json.                                                               |
| EncryptionEnabled_value      | Whether KVM encryption is enabled.                                                      | <ul style="list-style-type: none"> <li>• true: enabled</li> <li>• false: disabled</li> </ul>           |
| SessionTimeout-Minutes_value | Session timeout period.                                                                 | Range: 1–60, unit: minutes.                                                                            |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Managers/1/KvmService
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

```
Content-Type:application/json
```

- Request Message Body:

```
{
 "EncryptionEnabled": true,
 "SessionTimeoutMinutes": 10
}
```

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#KvmService.KvmService",
 "@odata.id": "/redfish/v1/Managers/Self/KvmService",
 "@odata.type": "#KvmService.v1_0_0.KvmService",
 "ActivatedSessionsType": "Private",
 "EncryptionEnabled": true,
 "Description": "KvmService",
 "MaximumNumberOfSessions": 4,
 "NumberOfActivatedSessions": 0,
 "SessionTimeoutMinutes": 10
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you modify information about the KVM resource, refer to [Table 4-49](#).

**Table 4-49 Output Descriptions for Modifying Information About the KVM Resource**

| Field                     | Type    | Description                                                                                                                  |
|---------------------------|---------|------------------------------------------------------------------------------------------------------------------------------|
| @odata.context            | String  | OData description of the KVM service resource model.                                                                         |
| @odata.id                 | String  | Access path of the KVM resource.                                                                                             |
| @odata.type               | String  | Type of KVM service resource.                                                                                                |
| Description               | String  | Description of the KVM resource.                                                                                             |
| MaximumNumberOfSessions   | Number  | Maximum number of KVM sessions.                                                                                              |
| NumberOfActivatedSessions | Number  | Number of current KVM sessions.                                                                                              |
| ActivatedSessionsType     | String  | KVM session type. Options:<br><ul style="list-style-type: none"> <li>Shared: shared.</li> <li>Private: exclusive.</li> </ul> |
| EncryptionEnabled         | Boolean | Enables or disables KVM encryption. Options:<br><ul style="list-style-type: none"> <li>true: enabled.</li> </ul>             |

| Field                 | Type   | Description                                                          |
|-----------------------|--------|----------------------------------------------------------------------|
|                       |        | <ul style="list-style-type: none"> <li>• False: disabled.</li> </ul> |
| SessionTimeoutMinutes | Number | Session timeout time, range: 1–60.                                   |

## 4.29 Querying Information About a Specified SEL Log Service Resource

### Function

Query information about the specified SEL log service resource of a server.

### Permission Required

Security management.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Managers/manager_id/LogServices/SEL/Entries/entries_id`
- Request Header:

X-Auth-Token:auth\_value

- Request Message Body: None

### Description

For a description of the parameters for querying information about the specified SEL log service resource, refer to [Table 4-50](#).

**Table 4-50 Parameter Descriptions for Querying Information About the Specified SEL Log Service Resource**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| entries_id | Log resource ID.                                                                      | It can be obtained from the log resource collection.                                                |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/LogServices/SEL/Entries/1
```

- Request Header:

```
x-auth-token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#LogEntry.LogEntry",
 "@odata.id": "/redfish/v1/Managers/Self/LogServices/SEL/Entries/631",
 "@odata.type": "#LogEntry.v1_4_3.LogEntry",
 "Created": "2010-03-04T14:56:23+08:00",
 "Description": "SEL LOG info",
 "EntryCode": "Assert",
 "EntryType": "SEL",
 "EventTimestamp": "2010-03-04T14:56:23+08:00",
 "Id": "631",
 "Message": "Initiated By Warm Reset",
 "MessageId": "0x02FFFF",
 "Name": "SEL 1221",
 "SensorNumber": 128,
 "Oem": {
 "Public": {
 "OwnerLUN": 0
 }
 },
 "SensorType": "SystemBoot/Restart",
 "Severity": "OK"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the specified SEL log service resource, refer to [Table 4-51](#).

**Table 4-51 Output Descriptions for Querying Information About the Specified SEL Log Service Resource**

| Field          | Type   | Description                                                                                                                                                                      |
|----------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context | String | OData description of the specified SEL log service resource model.                                                                                                               |
| @odata.id      | String | Access path of the specified SEL log service resource node.                                                                                                                      |
| @odata.type    | String | Type of the specified SEL log service resource.                                                                                                                                  |
| Created        | String | Time when the SEL log instance is created.                                                                                                                                       |
| Description    | String | Log resource description information.                                                                                                                                            |
| EntryCode      | String | Type of SEL log instance.                                                                                                                                                        |
| EntryType      | String | Type of SEL log instance. <ul style="list-style-type: none"> <li>● SEL</li> <li>● Oem</li> </ul>                                                                                 |
| EventTimestamp | String | Timestamp of the SEL log instance information.                                                                                                                                   |
| Id             | String | ID of the SEL log instance.                                                                                                                                                      |
| Message        | String | Message content of the SEL log instance information.                                                                                                                             |
| MessageId      | String | Message ID of the SEL log instance information.                                                                                                                                  |
| Name           | String | Name of the SEL log instance.                                                                                                                                                    |
| SensorNumber   | Number | ID of the sensor that creates the SEL log instance.                                                                                                                              |
| SensorType     | String | Type of the sensor that creates the SEL log instance.                                                                                                                            |
| Message        | String | Details.                                                                                                                                                                         |
| Severity       | String | Log severity level of the SEL log instance information. <ul style="list-style-type: none"> <li>● OK</li> <li>● Warning</li> <li>● Critical</li> <li>● Non-recoverable</li> </ul> |
| Oem.Public     | Object | Customized properties.                                                                                                                                                           |
| OwnerLUN       | Number | <b>SensorNumber</b> extension.                                                                                                                                                   |

## 4.30 Capturing the Screen Manually

### Function

Capture the screen manually.

## Permission Required

Diagnosis.

## Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/Managers/manager_id/Actions/Manager.CaptureScreenShot`
- Request Header:

X-Auth-Token:auth\_value

- Request Message Body: None

## Description

For a description of the parameters for capturing the screen manually as the query condition, refer to [Table 4-52](#).

**Table 4-52 Parameter Descriptions for Capturing the Screen Manually**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/Actions/Manager.CaptureScreenShot
```

- Request Header:

X-Auth-Token:LXIrlQPHHOPTz6k4rrPB/UfABUD45p9PFIC8QG2lp2F0=

- Request Message Body: None
- Response Example: None
- Status Code: 204

### Output Description

None

## 4.31 Downloading the Manually Captured Screen Image

### Function

Download the manually captured screen image.

### Permission Required

Diagnosis.

### Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/Actions/Manager.DownloadScreenShot](https://device_ip/redfish/v1/Managers/manager_id/Actions/Manager.DownloadScreenShot)
- Request Header:

x-auth-token:auth\_value

- Request Message Body: None

### Description

For a description of the parameters for downloading the manually captured screen image, refer to [Table 4-53](#).

**Table 4-53 Parameter Descriptions for Downloading the Manually Captured Screen Image**

| Parameter  | Description                                                                           | Value                                                                                 |
|------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                 |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is 1 or Self.                                            |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions. |

### Usage Guidelines

None

### Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/Actions/Manager.DownloadScreenShot
```

- Request Header:

```
x-auth-token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example: None
- Status Code: 200

### Output Description

Return the image data of the manually captured screen image.

## 4.32 Querying Information About the ISDT Resource

### Function

Query the information about the ISDT resource of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Managers/manager_id/ISDTService`
- Request Header: None

```
X-Auth-Token:auth_value
```

- Request Message Body: None

### Description

For a description of the parameters for querying information about the ISDT resource, refer to [Table 4-54](#).

**Table 4-54 Parameter Descriptions for Querying Information About the ISDT Resource**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/ISDTService
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None

- Response Example:

- Status Code: 200

```
{
 "@odata.context": "/redfish/v1/$metadata#ISDTService.ISDTService",
 "@odata.id": "/redfish/v1/Managers/1/ISDTService",
 "@odata.type": "#ISDTService.v1_0_0.ISDTService",
 "ImageInstalled": true,
 "ImageMounted": true,
 "ISDTStartEnabled": true,
 "Version": {
 "ISDTVersion": "v01.24.04.00",
 "ISDTBuildDate": "2024-08-12
23:47:19",
 "ISDTPPlatform": "x86_64"
 },
 "Actions": {
 "#ISDTService.VmmControl": {
 "target": "/redfish/v1/Managers/1/ISDTService/Actions/ISDTService.VmmControl"
 }
 }
}
```

## Output Description

For a description of the output returned when you query information about the ISDT resource, refer to [Table 4-55](#).

**Table 4-55 Output Descriptions for Querying Information About the ISDT Resource**

| Field          | Type   | Description                                   |
|----------------|--------|-----------------------------------------------|
| @odata.context | String | OData description of the ISDT resource model. |

| Field                          | Type    | Description                                           |
|--------------------------------|---------|-------------------------------------------------------|
| @odata.id                      | String  | Access path of the ISDT resource node.                |
| @odata.type                    | String  | Type of the ISDT resource.                            |
| ImageInstalled                 | Boolean | Whether there is a navigation disk image.             |
| ImageMounted                   | Boolean | Whether the ISDT image is mounted.                    |
| ISDTStartEnabled               | Boolean | Whether one-click ISDT startup is enabled.            |
| Version                        | Object  | Version number object                                 |
| Version.ISDTVersion            | String  | ISDT version number.                                  |
| Version.ISDTBuildDate          | String  | ISDT generation date.                                 |
| Version.ISDTPlatform           | String  | Platform that supports ISDT.                          |
| Actions                        | Object  | Available actions for the ISDT resource.              |
| #ISDTSERVICE.VmmControl.target | String  | Path of the control operation on the navigation disk. |

## 4.33 Modifying Properties of the ISDT Service Resource

### Function

Modify properties of the ISDT Service resource.

### Permission Required

VMM.

### Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/ISDTSERVICE](https://device_ip/redfish/v1/Managers/manager_id/ISDTSERVICE)
- Request Header:

```
x-auth-token:auth_value
Content-Type: header_type
```

- Request Message Body:

```
{
 "ServiceEnabled": ServiceEnabled_value,
 "ISDTStartEnabled": ISDTStartEnabled_value
}
```

## Description

For a description of the parameters for modifying properties of the ISDT Service resource, refer to [Table 4-56](#).

**Table 4-56 Parameter Descriptions for Modifying Properties of the ISDT Service Resource**

| Parameter              | Description                                                                                                            | Value                                                                                                   |
|------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| device_ip              | IP address for logging in to the device.                                                                               | IPv4 or IPv6 address.                                                                                   |
| manager_id             | ID of the Manager resource.                                                                                            | For a rack server, the value is <b>1</b> or <b>Self</b> .                                               |
| auth_value             | During the execution of the PATCH request, the "Headers" field must carry the "X-Auth-Token" value for authentication. | It can be obtained when a session is created through <code>/redfish/v1/SessionService/Sessions</code> . |
| header_type            | Format of the request message.                                                                                         | application/json                                                                                        |
| ServiceEnabled         | Whether service is enabled.                                                                                            | <ul style="list-style-type: none"> <li>• true: enabled</li> <li>• false: disabled</li> </ul>            |
| ISDTStartEnabled_value | Whether one-click ISDT startup is enabled.                                                                             | <ul style="list-style-type: none"> <li>• true: yes.</li> <li>• false: no.</li> </ul>                    |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Managers/1/ISDTService
```

- Request Header:

```
x-auth-token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type: application/json
```

- Request Message Body:

```
{
 "ServiceEnabled": true,
 "ISDTStartEnabled": true
}
```

- Response Example: None

- Status Code: 204

### Output Description

None

## 4.34 Mounting and Dismounting Navigation Disks

### Function

Mount and dismount navigation disks.

### Permission Required

VMM.

### Syntax

- Operation Type: POST
- URL:** `https://device_ip/redfish/v1/Managers/manager_id/ISDTService/Actions/ISDTService.VmmControl`
- Request Header:

```
x-auth-token:auth_value
Content-Type: header_type
```

- Request Message Body:

```
{
 "VmmControlType": vmm_control_type_value
}
```

### Description

For a description of the parameters for mounting and dismounting navigation disks, refer to [Table 4-57](#).

**Table 4-57 Parameter Descriptions for Mounting and Dismounting Navigation Disks**

| Parameter              | Description                                                                                                            | Value                                                                                                  |
|------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| device_ip              | IP address for logging in to the device.                                                                               | IPv4 or IPv6 address.                                                                                  |
| manager_id             | ID of the Manager resource.                                                                                            | For a rack server, the value is 1 or Self.                                                             |
| auth_value             | During the execution of the PATCH request, the "Headers" field must carry the "X-Auth-Token" value for authentication. | It can be obtained when a session is created through /redfish/v1/SessionService/Sessions.              |
| vmm_control_type_value | Type of Vmm control.                                                                                                   | <ul style="list-style-type: none"> <li>Connect: connected</li> <li>Disconnect: disconnected</li> </ul> |

## Usage Guidelines

None

### Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/ISDTService/Actions/ISDTService.VmmControl
```

- Request Header:

```
x-auth-token:LXIrlQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type: application/json
```

- Request Message Body:

```
{
 "VmmControlType": "Connect"
}
```

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#ISDTService.ISDTService",
 "@odata.id": "/redfish/v1/Managers/1/ISDTService/Actions/ISDTService.VmmControl",
 "@odata.type": "#ISDTService.v1_0_0.ISDTService",
 "Information": {
 "target": "/redfish/v1/Managers/1/ISDTService"
 }
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you mount and dismount navigation disks, refer to [Table 4-58](#).

**Table 4-58 Output Descriptions for Mounting and Dismounting Navigation Disks**

| Field          | Type   | Description                                   |
|----------------|--------|-----------------------------------------------|
| @odata.context | String | OData description of the ISDT resource model. |
| @odata.id      | String | Access path of the ISDT resource node.        |
| @odata.type    | String | Type of ISDT resource.                        |
| Information    | Object | -                                             |
| target         | String | Access path of the current ISDT resource.     |

## 4.35 Querying Information About the ISDT FWUpdate Collection

### Function

Query information about the ISDT FWUpdate collection.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Managers/manager_id/ISDTSer-vice/ISDTFWUpdate`
- Request Header:
 

X-Auth-Token:auth\_value
- Request Message Body: None

### Description

For a description of the parameters for querying information about the ISDT FWUpdate collection, refer to [Table 4-59](#).

**Table 4-59 Parameter Descriptions for Querying Information About the ISDT FWUpdate Collection**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is 1 or <b>Self</b> .                                                  |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/ISDTSer-vice/ISDTFWUpdate
```

- Request Header:

```
X-Auth-Token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#ISDTFWUpdateCollection.ISDTFWUpdateCollection",
 "@odata.id": "/redfish/v1/Managers/manager_id/ISDTService/ISDTFWUpdate",
 "@odata.type": "#ISDTFWUpdateCollection.ISDTFWUpdateCollection",
 "Name": "ISDT Framework Update Collection",
 "Members@odata.count": 1,
 "Members": [
 {
 "@odata.id": "/redfish/v1/Managers/manager_id/ISDTService/ISDTFWUpdate/1"
 }
]
}
```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the ISDT FWUpdate collection, refer to [Table 4-60](#).

**Table 4-60 Output Descriptions for Querying Information About the ISDT FWUpdate Collection**

| Field               | Type   | Description                                              |
|---------------------|--------|----------------------------------------------------------|
| @odata.context      | String | OData description of the ISDT resource collection model. |
| @odata.id           | String | Access path of the ISDT resource collection node.        |
| @odata.type         | String | Type of ISDT resource collection.                        |
| Name                | String | Name of the ISDT resource collection.                    |
| Members@odata.count | Number | Number of ISDT FWUpdate tasks, which is fixed to one.    |
| Members.@odata.id   | String | ISDT FWUpdate task.                                      |

## 4.36 Querying Information About an ISDT FWUpdate Task

### Function

Query information about an ISDT FWUpdate task.

## Permission Required

Query.

## Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/ISDTService/ISDTFWUpdate/updateid](https://device_ip/redfish/v1/Managers/manager_id/ISDTService/ISDTFWUpdate/updateid)
- Request Header:

X-Auth-Token:auth\_value

- Request Message Body: None

## Description

For a description of the parameters for querying information about an ISDT FWUpdate task, refer to [Table 4-61](#).

**Table 4-61 Parameter Descriptions for Querying Information About an ISDT FWUpdate Task**

| Parameter  | Setting                                                                               | Value                                                                                                                                    |
|------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                                                                    |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is <b>1</b> or <b>Self</b> .                                                                                |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |
| updateid   | ID of the available ISDT FWUpdate task.                                               | Fixed to 1.                                                                                                                              |

## Usage Guidelines

None

## Example

- Request Example:

GET https://device\_ip/redfish/v1/Managers/1/ISDTService/ISDTFWUpdate/12

- Request Header:

X-Auth-Token:LXIrqPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=

- Request Message Body: None
- Response Example:

{

```

"@odata.context": "/redfish/v1/$metadata#ISDTFWUpdate.ISDTFWUpdate",
"@odata.id": "/redfish/v1/Managers/manager_id/ISDTService/ISDTFWUpdate/1",
"@odata.type": "#ISDTFWUpdate.v1_0_0.ISDTFWUpdate",
"Id": "1",
"Name": "ISDT Framework Update",
"TransferState": null,
"TransferFileName": null,
"UpgradeProgress": 0,
"Messages": [],
"Actions": {
 "#ISDTFWUpdate.Simpleupdate": {
 "target":
 "/redfish/v1/Managers/manager_id/ISDTService/ISDTFWUpdate/1/Actions/
 ISDTFWUpdate.SimpleUpdate"
 }
}
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about an ISDT FWUpdate task, refer to [Table 4-62](#).

**Table 4-62 Output Descriptions for Querying Information About an ISDT FWUpdate Task**

| Field            | Type    | Description                                                                                                                                                                                                  |
|------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context   | String  | OData description of the ISDT FWUpdate resource model.                                                                                                                                                       |
| @odata.id        | String  | Access path of the ISDT FWUpdate resource.                                                                                                                                                                   |
| @odata.type      | String  | Type of ISDT FWUpdate resource.                                                                                                                                                                              |
| Id               | Integer | ID of the available ISDT FWUpdate resource, which is fixed to 1.                                                                                                                                             |
| Name             | String  | Description of the interface.                                                                                                                                                                                |
| TransferState    | String  | File transfer status. Options: <ul style="list-style-type: none"> <li>● Initiating</li> <li>● Ongoing</li> <li>● Completed</li> </ul>                                                                        |
| TransferFileName | String  | Name of the file that is transferred. Options: <ul style="list-style-type: none"> <li>● ImageUrl carried in the request during update.</li> <li>● SignalUrl carried in the request during update.</li> </ul> |
| UpgradeProgress  | Integer | Task progress, range: 0–100.                                                                                                                                                                                 |

| Field                             | Type   | Description                                                                                                      |
|-----------------------------------|--------|------------------------------------------------------------------------------------------------------------------|
| Messages                          | Array  | Task progress description, which is not fixed. A completion time string is available when the task is completed. |
| Actions                           | String | Operations that can be performed on the resource.                                                                |
| #ISDTFWUpdate.SimpleUpdate.target | String | Operation Path for the SimpleUpdate resource.                                                                    |

## 4.37 Burning an ISDT Image

### Function

Burn an ISDT image.

### Permission Required

VMM.

### Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/ISDTSERVICE/ISDTFWUpdate/update\\_id/Actions/SDTFWUpdate.SimpleUpdate](https://device_ip/redfish/v1/Managers/manager_id/ISDTSERVICE/ISDTFWUpdate/update_id/Actions/SDTFWUpdate.SimpleUpdate)
- Request Header:

```
X-Auth-Token:auth_value
Content-Type: header_type
```

- Request Message Body:

```
{
 "ImageURI": "image_URI_value",
 "SignalURI": "signal_URI_value"
}
```

### Description

For a description of the parameters for burning an ISDT image, refer to [Table 4-63](#).

**Table 4-63 Parameter Descriptions for Burning an ISDT Image**

| Parameter  | Setting                                  | Value                                                     |
|------------|------------------------------------------|-----------------------------------------------------------|
| device_ip  | IP address for logging in to the device. | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.     |
| manager_id | ID of the Manager resource.              | For a rack server, the value is <b>1</b> or <b>Self</b> . |
| update_id  | Update task ID.                          | -                                                         |

| Parameter        | Setting                                                                                | Value                                                                                                |
|------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| auth_value       | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .  |
| header_type      | Format of the request message.                                                         | application/json                                                                                     |
| image_URI_value  | Remote path of the ISO image.                                                          | URL for the remote file path, for example, <code>https://192.168.1.5/abc/xxx.iso</code>              |
| signal_URI_value | Remote path for the authentication file corresponding to the update file.              | URL for the authentication file path, for example, <code>https://192.168.1.5/abc/yyy.checksum</code> |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/ISDTService/ISDTFWUpdate/12/Actions/SDTFWUpdate.SimpleUpdate
```

- Request Header:

```
X-Auth-Token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type: application/json
```

- Request Message Body:

```
{
 "ImageURI": "https://serverip:port/ISDT.iso",
 "SignalURI": "https://serverip:port/checksum.txt"
}
```

- Response Example:

```
{
 "error": {
 "code": "Base.1.0.GeneralError",
 "message": "A general error has occurred. See ExtendedInfo for more information.",
 "@Message.ExtendedInfo": [
 {
 "@odata.type": "#Message.v1_0_0.Message",
 "MessageId": "Base.1.0.Success",
 "RelatedProperties": [],
 "Message": "Successfully Completed Request",
 }
]
 }
}
```

```

 "MessageArgs": [],
 "Severity": "OK",
 "Resolution": "None"
 }
]
}
}

```

- Response code: 202

### Output Description

For a description of the output returned when you burn an ISDT image, refer to [Table 4-64](#).

**Table 4-64 Output Descriptions for Burning an ISDT Image**

| Field                 | Type   | Description                                                                                                            |
|-----------------------|--------|------------------------------------------------------------------------------------------------------------------------|
| code                  | String | Response code description.                                                                                             |
| message               | String | Prompt message that is returned.                                                                                       |
| @Message.ExtendedInfo | Array  | Extended information about the message.                                                                                |
| @odata.type           | String | OData description of the message resource.                                                                             |
| MessageId             | String | Message ID.                                                                                                            |
| RelatedProperties     | Array  | Message-related properties.                                                                                            |
| Message               | String | Details.                                                                                                               |
| MessageArgs           | Array  | Message arguments.                                                                                                     |
| Severity              | String | Severity level. Options: <ul style="list-style-type: none"> <li>• OK</li> <li>• Warning</li> <li>• Critical</li> </ul> |
| Resolution            | String | Recommended solution.                                                                                                  |

## 4.38 Adding Routes

### Function

Add routes.

### Permission Required

Basic management.

### Syntax

- Operation Type: POST

- **URL:** `https://device_ip/redfish/v1/Managers/manager_id/EthernetInterfaces/id/Actions/EthernetInterface.AddRoutes`
- Request Header:

```
X-Auth-Token:auth_value
Content-Type: header_type
```

- Request Message Body:

```
{
 "IPv4Route": {
 "Address": ipv4_address_value,
 "Netmask": ipv4_netmask_value
 },
 "IPv6Route": {
 "Address": ipv6_address_value,
 "PrefixLength": ipv6_prefixLen_value
 }
}
```

## Description

For a description of the parameters for adding routes, refer to [Table 4-65](#).

**Table 4-65 Parameter Descriptions for Adding Routes**

| Parameter          | Setting                                                                                | Value                                                                                               |
|--------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip          | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                               |
| manager_id         | ID of the Manager resource.                                                            | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| id                 | ID of the BMC management interface resource.                                           | It can be obtained by querying the collection of BMC management interface resources.                |
| auth_value         | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| header_type        | Format of the request message.                                                         | application/json                                                                                    |
| ipv4_address_value | String                                                                                 | IP address( IPv4 and IPv6 addresses are set separately)                                             |
| ipv4_netmask_value | String                                                                                 | Mask.                                                                                               |
| ipv6_address_value | String                                                                                 | IP address.                                                                                         |

| Parameter            | Setting | Value          |
|----------------------|---------|----------------|
| ipv6_prefixLen_value | Number  | Prefix length. |

### Usage Guidelines

None

### Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/EthernetInterfaces/D64FE89CE17C/Actions/EthernetInterface.AddRoutes
```

- Request Header:

```
X-Auth-Token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type: application/json
```

- Request Message Body:

```
{
 "IPv4Route": {
 "Address": "192.168.1.5",
 "Netmask": "255.255.255.192"
 },
 "IPv6Route": {
 "Address": "ff00::",
 "PrefixLength": 8
 }
}
```

- Response Example: None
- Response code: 204

### Output Description

None

## 4.39 Deleting Routes

### Function

Delete routes.

### Permission Required

Basic management.

## Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/EthernetInterfaces/id/Actions/EthernetInterface.DeleteRoutes](https://device_ip/redfish/v1/Managers/manager_id/EthernetInterfaces/id/Actions/EthernetInterface.DeleteRoutes)
- Request Header:

```
X-Auth-Token:auth_value
Content-Type: header_type
```

- Request Message Body:

```
{
 "IPv4Route": {
 "Address": "ipv4_address_value",
 "Netmask": "ipv4_netmask_value"
 },
 "IPv6Route": {
 "Address": "ipv6_address_value",
 "PrefixLength": ipv6_prefixLen_value
 }
}
```

## Description

For a description of the parameters for deleting routes, refer to [Table 4-66](#).

**Table 4-66 Parameter Descriptions for Deleting Routes**

| Parameter          | Setting                                                                                | Value                                                                                                                                    |
|--------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip          | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                                                                    |
| manager_id         | ID of the Manager resource.                                                            | For a rack server, the value is <b>1</b> or <b>Self</b> .                                                                                |
| id                 | ID of a BMC management interface resource.                                             | It can be obtained by querying the collection of BMC management interface resources.                                                     |
| auth_value         | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |
| header_type        | Format of the request message.                                                         | application/json                                                                                                                         |
| ipv4_address_value | String                                                                                 | IPv4 address.                                                                                                                            |
| ipv4_netmask_value | String                                                                                 | IPv4 mask.                                                                                                                               |
| ipv6_address_value | String                                                                                 | IPv6 address.                                                                                                                            |

| Parameter            | Setting | Value               |
|----------------------|---------|---------------------|
| ipv6_prefixLen_value | Number  | IPv6 prefix length. |

### Usage Guidelines

None

### Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/EthernetInterfaces/D64FE89CE17C/Actions/EthernetInterface.DeleteRoutes
```

- Request Header:

```
X-Auth-Token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type: application/json
```

- Request Message Body:

```
{
 "IPv4Route": {
 "Address": "192.168.1.5",
 "Netmask": "255.255.255.192"
 },
 "IPv6Route": {
 "Address": "ff00::",
 "PrefixLength": 8
 }
}
```

- Response Example: None
- Response code: 204

### Output Description

None

## 4.40 Querying Information About the SecurityService Resource

### Function

Query information about the SecurityService resource of a server.

### Permission Required

Query.

## Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Managers/manager_id/SecurityService`
- Request Header:
 

X-Auth-Token:auth\_value
- Request Message Body: None

## Description

For a description of the parameters for querying information about the SecurityService resource, refer to [Table 4-67](#).

**Table 4-67 Parameter Descriptions for Querying Information About the SecurityService Resource**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

GET https://device\_ip/redfish/v1/Managers/1/SecurityService

- Request Header:

X-Auth-Token:LXIrlQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#SecurityService.SecurityService",
 "@odata.id": "/redfish/v1/Managers/1/SecurityService",
 "@odata.type": "#FirewallService.v1_0_0.SecurityService",
 "Id": "SecurityService",
```

```

 "Name": "Security Service",
 "FirewallRules": {
 "@odata.id": "/redfish/v1/Managers/1/SecurityService/FirewallRules"
 },
 "HttpsCert": {
 "@odata.id": "/redfish/v1/Managers/1/SecurityService/HttpsCert"
 }
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the SecurityService resource, refer to [Table 4-68](#).

**Table 4-68 Output Descriptions for Querying Information About the SecurityService Resource**

| Field          | Type   | Description                                                |
|----------------|--------|------------------------------------------------------------|
| @odata.context | String | OData description of the SecurityService resource model.   |
| @odata.id      | String | Access path of the SecurityService resource.               |
| @odata.type    | String | Type of SecurityService resource.                          |
| Id             | String | Unique identifier.                                         |
| Name           | String | Resource name.                                             |
| FirewallRules  | String | Lower-level firewall rule URI.                             |
| HttpsCert      | String | URI for <a href="#">SSL</a> certificate information query. |

## 4.41 Querying Information About SecurityService Rules

### Function

Query information about SecurityService rules of a server.

### Permission Required

Query.

### Syntax

- Operation type: GET
- **URL:** `https://device_ip/redfish/v1/Managers/manager_id/SecurityService/FirewallRules`
- Request Header:

X-Auth-Token:auth\_value

- Request Message Body: None

## Description

For a description of the parameters for querying information about SecurityService rules, refer to [Table 4-69](#).

**Table 4-69 Parameter Descriptions for Querying Information About SecurityService Rules**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

GET https://device\_ip/redfish/v1/Managers/1/SecurityService/FirewallRules

- Request Header:

X-Auth-Token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#FirewallRule.FirewallRule",
 "@odata.id": "/redfish/v1/Managers/1/SecurityService/FirewallRules",
 "@odata.type": "#FirewallRule.v1_0_0.FirewallRule",
 "Id": "FirewallRules",
 "Name": "Firewall Rules",
 "Actions": {
 "#FirewallRule.AddRules": {
 "target":
 "/redfish/v1/Managers/1/securityService/FirewallRules/Actions/
 FirewallRule.AddRules"
 },
 "#FirewallRule.DeleteRules": {

```

```

 "target": "
/redfish/v1/Managers/1/SecurityService/FirewallRules/Actions/
FirewallRule.DeleteRules"
}

},
"ActiveStrategy": "Drop",
"Rules": [
{
 "RuleType": "Drop",
 "@odata.id":
 "/redfish/v1/Managers/1/SecurityService/FirewallRules#/Rules/BlackList_1",
 "StartTime": null,
 "EndTime": null,
 "StartIPAddress": "192.168.1.1",
 "EndIPAddress": null,
 "StartMacAddress": null,
 "EndMacAddress": null,
 "workdayonly": false
}
]
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about SecurityService rules, refer to [Table 4-70](#).

**Table 4-70 Output Descriptions for Querying Information About SecurityService Rules**

| Field          | Type   | Description                                                                                                                                                                                                                                        |
|----------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context | String | OData description of the firewall rule resource model.                                                                                                                                                                                             |
| @odata.id      | String | Access path of the firewall rule resource.                                                                                                                                                                                                         |
| @odata.type    | String | Type of firewall rule resource.                                                                                                                                                                                                                    |
| Id             | String | Unique identifier.                                                                                                                                                                                                                                 |
| Name           | String | Resource name.                                                                                                                                                                                                                                     |
| ActiveStrategy | String | Currently valid rule policy: <ul style="list-style-type: none"> <li>Accept: enables rules for accepting data, that is, the allowlist takes effect.</li> <li>Drop: enables rules for dropping data, that is, the blocklist takes effect.</li> </ul> |
| Rules          | Array  | Rule list.                                                                                                                                                                                                                                         |

| Field                            | Type    | Description                                                                                                                                                                                                        |
|----------------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Actions                          | Object  | Operations that can be performed on the resource.                                                                                                                                                                  |
| #FirewallRule.AddRules.target    | String  | Operation path for adding a firewall rule.                                                                                                                                                                         |
| #FirewallRule.DeleteRules.target | String  | Operation path for deleting a firewall rule.                                                                                                                                                                       |
| @odata.id                        | String  | Uniquely identifies the rule in IPRules.                                                                                                                                                                           |
| RuleType                         | String  | Type of rule.                                                                                                                                                                                                      |
| StartDateTime                    | String  | Time when the rule takes effect.                                                                                                                                                                                   |
| EndDateTime                      | String  | Time when the rule becomes invalid.                                                                                                                                                                                |
| StartIPAddress                   | String  | Start IP address corresponding to the rule.                                                                                                                                                                        |
| EndIPAddress                     | String  | End IP address corresponding to the rule.                                                                                                                                                                          |
| StartMacAddress                  | String  | Start MAC address corresponding to the rule.                                                                                                                                                                       |
| EndMacAddress                    | String  | End MAC address corresponding to the rule.                                                                                                                                                                         |
| WorkdayOnly                      | Boolean | Whether the rule is effective on workdays only. <ul style="list-style-type: none"> <li>• true: takes effect on workdays only.</li> <li>• false: takes effect every day within the specified time range.</li> </ul> |

## 4.42 Adding a Firewall Rule

### Function

Add a firewall rule.

### Permission Required

Security management.

### Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/SecurityService/FirewallRules/Actions/FirewallRule.AddRules](https://device_ip/redfish/v1/Managers/manager_id/SecurityService/FirewallRules/Actions/FirewallRule.AddRules)
- Request Header:

```
X-Auth-Token:auth_value
Content-Type: header_type
```

- Request Message Body:

```
{
```

```

 "Rules": [
 {
 "RuleType": rule_type_value,
 "StartTime": start_data_time_value,
 "EndTime": end_data_time_value,
 "StartIPAddress": start_ip_address_value,
 "EndIPAddress": end_ip_address_value,
 "StartMacAddress": start_mac_address_value,
 "EndMacAddress": end_mac_address_value,
 "workdayOnly": workday_only_value
 }
]
}

```

## Description

For a description of the parameters for adding a firewall rule, refer to [Table 4-71](#).

**Table 4-71 Parameter Descriptions for Adding a Firewall Rule**

| Parameter              | Setting                                                                                | Value                                                                                                                                |
|------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| device_ip              | IP address for logging in to the device.                                               | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                                                |
| manager_id             | ID of the Manager resource.                                                            | For a rack server, the value is <b>1</b> or <b>Self</b> .                                                                            |
| auth_value             | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <a href="#">/redfish/v1/SessionService/Sessions</a> .                               |
| header_type            | Format of the request message.                                                         | application/json                                                                                                                     |
| rule_type_value        | Type of rule.                                                                          | <ul style="list-style-type: none"> <li>● Accept</li> <li>● Drop</li> </ul>                                                           |
| start_data_time_value  | Time when the rule takes effect.                                                       | Optional.<br>Format example: 2029-01-11 00:00<br>If this parameter is configured, <b>EndDate-Time</b> also needs to be configured.   |
| end_data_time_value    | Time when the rule becomes invalid.                                                    | Optional.<br>Format example: 2029-01-11 00:00<br>If this parameter is configured, <b>StartDate-Time</b> also needs to be configured. |
| start_ip_address_value | Start IP address corresponding to the rule.                                            | One of <b>StartMacAddress</b> and <b>StartIPAddress</b> must be configured.                                                          |
| end_ip_address_value   | End IP address corresponding to the rule.                                              | Optional.                                                                                                                            |

| Parameter               | Setting                                         | Value                                                                                                                                                                                                                    |
|-------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_mac_address_value | Start MAC address corresponding to the rule.    | One of <b>StartMacAddress</b> and <b>StartIPAddress</b> must be configured.                                                                                                                                              |
| end_mac_address_value   | End MAC address corresponding to the rule.      | Optional.<br>A MAC address segment can contain a maximum of 64 MAC addresses.                                                                                                                                            |
| workday_only_value      | Whether the rule is effective on workdays only. | Optional. <ul style="list-style-type: none"> <li>• true: takes effective on workdays only.<br/>If this option is selected, the date and time must be configured.</li> <li>• false: takes effective every day.</li> </ul> |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/SecurityService/FirewallRules/Actions/FirewallRule.AddRules
```

- Request Header:

```
X-Auth-Token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type: application/json
```

- Request Message Body:

```
{
 "Rules": [
 {
 "RuleType": "Drop",
 "StartTime": "2024-02-20 00:00",
 "EndTime": "2024-02-22 00:00",
 "StartIPAddress": "128.6.0.100",
 "EndIPAddress": "128.6.1.100",
 "StartMacAddress": "11:22:33:44:55:66",
 "EndMacAddress": "11:22:33:44:55:76",
 "workdayOnly": false
 }
]
}
```

- Response Example: None
- Response code: 204

### Output Description

None

## 4.43 Deleting a Firewall Rule

### Function

Delete a firewall rule.

### Permission Required

Security management.

### Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/Managers/manager_id/SecurityService/FirewallRules/Actions/FirewallRule.DeleteRules`
- Request Header:

X-Auth-Token:auth\_value  
Content-Type: header\_type

- Request Message Body:

```
{
 "IPRules": [
 {
 "@odata.id":
 "/redfish/v1/Managers/1/SecurityService/FirewallRules#/Rules/BlackList_1"
 }
]
}
```

### Description

For a description of the parameters for deleting a firewall rule, refer to [Table 4-72](#).

**Table 4-72 Parameter Descriptions for Deleting a Firewall Rule**

| Parameter  | Setting                                                                                | Value                                                                                 |
|------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                 |
| manager_id | ID of the Manager resource.                                                            | For a rack server, the value is 1 or Self.                                            |
| auth_value | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions. |

| Parameter   | Setting                             | Value                                                                                         |
|-------------|-------------------------------------|-----------------------------------------------------------------------------------------------|
| header_type | Format of the request message.      | application/json                                                                              |
| IPRules     | Rule array.                         | There is at least one element in the array.                                                   |
| @odata.id   | Odata.id of the rule to be deleted. | Obtained through "GET https://device_ip/redfish/v1/Managers/1/SecurityService/FirewallRules." |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/SecurityService/FirewallRules/Actions/Firewall-
Rule.DeleteRules
```

- Request Header:

```
X-Auth-Token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type: application/json
```

- Request Message Body:

```
{
 "IPRules": [
 {
 "@odata.id":
 "/redfish/v1/Managers/1/SecurityService/FirewallRules#/Rules/BlackList_1"
 }
]
}
```

- Response Example: None
- Response code: 204

## Output Description

None

## 4.44 Attaching Remote Media to the Virtual Media Device

### Function

Attach remote media to the virtual media device.

## Permission Required

VMM.

## Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/Managers/manager_id/VirtualMedia/media_type/Actions/VirtualMedia.InsertMedia`
- Request Header:

```
X-Auth-Token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "Image":ImageURI,
 "Username":username_value,
 "Password":password_value,
 "TransferProtocolType":TransferProtocolType
}
```

## Description

For a description of the parameters for attaching remote media to the virtual media device, refer to [Table 4-73](#).

**Table 4-73 Parameter Descriptions for Attaching Remote Media to the Virtual Media Device**

| Parameter            | Setting                                                                                | Value                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| device_ip            | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                                    |
| manager_id           | ID of the Manager resource.                                                            | For a rack server, the value is 1 or Self.                                                               |
| auth_value           | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .      |
| header_type          | Format of the request message.                                                         | application/json                                                                                         |
| ImageURI             | Image address.                                                                         | Remote image address. The remote server needs to support the corresponding service.                      |
| TransferProtocolType | Transfer protocol type.                                                                | <ul style="list-style-type: none"> <li>• CIFS</li> <li>• HTTPS</li> <li>• NFS</li> <li>• HTTP</li> </ul> |

| Parameter      | Setting                                                                                 | Value                                                  |
|----------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------|
| username_value | Username.<br>Whether this parameter is set or not depends on the service configuration. | String type. A maximum of 32 characters are supported. |
| password_value | Password<br>Whether this parameter is set or not depends on the service configuration.  | String type. A maximum of 32 characters are supported. |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/VirtualMedia/CD/Actions/VirtualMedia.InsertMedia
```

- Request Header:

```
X-Auth-Token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
 "Image": "cifs://device_ip/home/mount_test/isocfg-tool-v1.iso",
 "Username": "test",
 "Password": "123",
 "TransferProtocolType": "CIFS"
}
```

- Response Example:

```
{
}
```

- Status Code: 200

## Output Description

None

## 4.45 Detaching Remote Media from the Virtual Media Device

### Function

Detach remote media from the virtual media device.

## Permission Required

VMM.

## Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/Managers/manager_id/VirtualMedia/media_type/Actions/VirtualMedia.EjectMedia`
- Request Header:

```
X-Auth-Token:auth_value
Content-Type: header_type
```

- Request Message Body:

```
{
}
```

## Description

For a description of the parameters for detaching remote media from the virtual media device, refer to [Table 4-74](#).

**Table 4-74 Parameter Descriptions for Detaching Remote Media from the Virtual Media Device**

| Parameter   | Setting                                                                                | Value                                                                                                                                             |
|-------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                                                                             |
| manager_id  | ID of the Manager resource.                                                            | For a rack server, the value is 1 or Self.                                                                                                        |
| auth_value  | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                               |
| header_type | Format of the request message.                                                         | application/json                                                                                                                                  |
| media_type  | Virtual media type.                                                                    | The following types are supported: <ul style="list-style-type: none"> <li>• CD</li> <li>• CD1</li> <li>• USBStick</li> <li>• USBStick1</li> </ul> |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/VirtualMedia/CD/Actions/VirtualMedia.EjectMedia
```

- Request Header:

```
X-Auth-Token:LXIrlQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

```
Content-Type: application/json
```

- Request Message Body:

```
{
}
```

- Response Example:

```
{
}
```

- Status Code: 200

### Output Description

None

## 4.46 Setting the BMC Time

### Function

Set the [BMC](#) time.

### Permission Required

Basic management.

### Syntax

- Operation Type: POST

- [URL](https://device_ip/redfish/v1/Managers/manager_id/Actions/Oem/VANTAGEO/Manager.SetBMCTimes): `https://device_ip/redfish/v1/Managers/manager_id/Actions/Oem/VANTAGEO/Manager.SetBMCTimes`

- Request Header:

```
X-Auth-Token:auth_value
```

```
Content-Type:header_type
```

- Request Message Body:

```
{
 "Times":times_value
}
```

## Description

For a description of the parameters for setting the BMC time, refer to [Table 4-75](#).

**Table 4-75 Parameter Descriptions for Setting the BMC Time**

| Parameter   | Setting                                                                                | Value                                                                                               |
|-------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                               |
| manager_id  | ID of the Manager resource.                                                            | For a rack server, the value is 1 or Self.                                                          |
| auth_value  | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| header_type | Format of the request message.                                                         | application/json                                                                                    |
| times_value | Date and time.                                                                         | Format: yyyy-mm-dd HH:mm:ss. For example, 2024-05-09 19:56:10.                                      |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/Actions/Oem/VANTAGEO/Manager.SetBMCTimes
```

- Request Header:

```
X-Auth-Token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
 "Times": "2024-05-09 19:56:10"
}
```

- Response Example:

```
{
 "error": {
 "code": "Base.1.8.1.Success",
 "message": "Successfully completed Request",
 "@Message.ExtendedInfo": [
 {
 "@odata.type": "#Message.v1_1_1.Message",
 "MessageId": "Base.1.8.1.Success",
 "Message": "Successfully completed Request",
 }
]
 }
}
```

```

 "Severity": "OK",
 "Resolution": "None."
 }
]
}
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you set the BMC time, refer to [Table 4-76](#).

**Table 4-76 Output Descriptions for Setting the BMC Time**

| Field                 | Type   | Description                                                                                                            |
|-----------------------|--------|------------------------------------------------------------------------------------------------------------------------|
| code                  | String | ID of the specified message in the message registry.                                                                   |
| message               | String | Readable message for the code in the message registry.                                                                 |
| @Message.ExtendedInfo | Array  | Extended information about the message.                                                                                |
| @odata.type           | String | OData description of the message resource.                                                                             |
| MessageId             | String | Message ID.                                                                                                            |
| Message               | String | Details.                                                                                                               |
| Severity              | String | Severity level. Options: <ul style="list-style-type: none"> <li>● OK</li> <li>● Warning</li> <li>● Critical</li> </ul> |
| Resolution            | String | Recommended solution.                                                                                                  |

## 4.47 Importing the Syslog Root Certificate

### Function

Import the Syslog root certificate into the system.

### Permission Required

Basic management.

### Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/Managers/manager\\_id/SyslogService/Actions/SyslogService.ImportRootCertificate](https://device_ip/redfish/v1/Managers/manager_id/SyslogService/Actions/SyslogService.ImportRootCertificate)

- Request Header:

```
X-Auth-Token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "Type":type,
 "Content":value
}
```

## Description

For a description of the parameters for importing the Syslog root certificate, refer to [Table 4-77](#).

**Table 4-77 Parameter Descriptions for Importing the Syslog Root Certificate**

| Parameter   | Setting                                                                                | Value                                                                                                                                                                                                  |
|-------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                               | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                                                                                                                  |
| manager_id  | ID of the Manager resource.                                                            | For a rack server, the value is <b>1</b> or <b>Self</b> .                                                                                                                                              |
| auth_value  | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <a href="#">/redfish/v1/SessionService/Sessions</a> .                                                                                                 |
| header_type | Format of the request message.                                                         | application/json                                                                                                                                                                                       |
| type        | Method of importing a Syslog certificate.                                              | <ul style="list-style-type: none"> <li>text: indicates that the value is the content of the certificate.</li> <li><a href="#">URI</a>: indicates that the value is the local or remote URI.</li> </ul> |
| value       | Content or path of the certificate                                                     | For remote protocols, only HTTPS is supported.<br>The value varies with the type.                                                                                                                      |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/SyslogService/Actions/SyslogService.ImportRootCertificate
```

- Request Header:

```
X-Auth-Token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

Local address:

```
{
 "Type": "URI",
 "Content": "/data/rootCA.pem"
}
```

Remote address:

```
{
 "Type": "URI",
 "Content": "https://10.226.197.41:28000/rootCA.pem"
}
```

Text:

```
{
 "Type": "text",
 "Content": "-----BEGIN CERTIFICATE-----
MIIDNzCCAh8CFBibt0cg4JvSVTy1432ZNXDu9qSGMA0GCSqGSIB3DQEBCwUAMFgx
CzAJBgNVBAYTAKNOMRIWEAYDVQQIDA1hdWFuZ2RvbmcxCzAJBgNVBAcMA1NaMQww
CgYDVQQKDAnAeUExDDAKBgNVBASMA0JNQZEMMAoGA1UEAwDVNBMB4XDTI0MDUY
MTA4NDcyN1oXDTI0MDYYMDA4NDcyN1owWDELMakGA1UEBhMCQ04xEjAQBgNVBAGM
CUD1YW5nZG9uZZELMAkGA1UEBwwCU1oxDDAKBgNVBAoMA1pURTEMMaoGA1UECwwD
Qk1DMQwwCgYDVQQDDANVU0EwgxEiMA0GCSqGSIB3DQEBAQUAA4IBDwAwggEKAoIB
AQComcioID1bTmmnhhrDJoQAzNS3au022SKwcV0CuQIN03b4YdyJS+x/fFsks6r+
2o1kmob8knt9+/CuneE7jvgaoM1Rp51hTY/mec3x2caPpZVDUra1kmVLSBkpCCxf
R6LtzQz/ggnocC3on3Mg6Rxyqqh9u1/52GOZ50/Rsx11cyvOnvffgp9aszawx8qp
nF4SnojQFIJwwXwi5Gv/b71ugy8k/zM4rf0E10LS6dR5v9u3/7x1evm//6z30XgF
JD7znVAcV5zfVLppiZAjsbhrRvKstU3Nu0cEmWCX1Ab0XCjzh73WnGmRh10b8mQ
5ZYvcECLQz/dx01x501a8CXzAgMBAAEwDQYJKoZIhvcNAQELBQADggEBABOYceg9
FpG0LnzTa9T6mAkmPIbk4FvyojoF1e+RJi8rxqfqPJFdg5QQygs4VsJEEdLno8e
bL7FWLkwQ5CH01PKc1Mkafbnvj5xgc78WzmsIOjv4UY9rmkLyhoKwqhQ1ZwxMJv
2RTOMA13DT51qbTCGSQt5QuBvpnyN3Bj5y0kg5d7jTtk6iQeDwy0xLwYpgSv6wJ
kxixsU6YgGJeRCR70kiAT3eA6LoosOGHeTgP70PAzrjPYLRwExDnJ6ypd0+SATuX
Z1x7RUF3DoV9irLLEnkveS8Lqe/QWEedWEZIObjhvkcjUOGDy6ppse3ty+dJK2Yp
A/tLBdvTgmrxg14=
-----END CERTIFICATE-----"
}
```

- Response Example:

```
{
 "error": {
 "code": "Base.1.0.GeneralError",
```

```

"message":
 "A general error has occurred. See ExtendedInfo for more information.",
 "@Message.ExtendedInfo": [
 {
 "@odata.type":
 "/redfish/v1/$metadata#MessageRegistry.1.0.0.MessageRegistry",
 "MessageId": "Base.1.8.1.Success",
 "RelatedProperties": [],
 "Message": "The certificate has been imported successfully.",
 "MessageArgs": [],
 "Severity": "OK",
 "Resolution": "None"
 }
]
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you import a Syslog root certificate, refer to [Table 4-78](#).

**Table 4-78 Output Descriptions for Importing the Syslog Root Certificate**

| Field                 | Type   | Description                                                                                                            |
|-----------------------|--------|------------------------------------------------------------------------------------------------------------------------|
| code                  | String | ID of the specified message in the message registry.                                                                   |
| message               | String | Readable message for the code in the message registry.                                                                 |
| @Message.ExtendedInfo | Array  | Extended information about the message.                                                                                |
| @odata.type           | String | OData description of the message resource.                                                                             |
| MessageId             | String | Message ID.                                                                                                            |
| RelatedProperties     | Array  | Message-related properties.                                                                                            |
| Message               | String | Details.                                                                                                               |
| MessageArgs           | Array  | Message arguments.                                                                                                     |
| Severity              | String | Severity level. Options: <ul style="list-style-type: none"> <li>● OK</li> <li>● Warning</li> <li>● Critical</li> </ul> |
| Resolution            | String | Recommended solution.                                                                                                  |

## 4.48 Importing a Local Syslog Certificate

### Function

Import a local Syslog certificate into the system.

### Permission Required

Basic management.

### Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/Managers/manager_id/SyslogService/Actions/SyslogService.ImportClientCertificate`
- Request Header:

```
X-Auth-Token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "Type":type,
 "Content":value
}
```

### Description

For a description of the parameters for importing a local Syslog certificate, refer to [Table 4-79](#).

**Table 4-79 Parameter Descriptions for Importing a Local Syslog Certificate**

| Parameter   | Setting                                                                                | Value                                                                                                                                                                                      |
|-------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                                                                                                                      |
| manager_id  | ID of the Manager resource.                                                            | For a rack server, the value is 1 or Self.                                                                                                                                                 |
| auth_value  | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                                        |
| header_type | Format of the request message.                                                         | application/json                                                                                                                                                                           |
| type        | Method of importing a Syslog certificate.                                              | <ul style="list-style-type: none"> <li>• text: indicates that the value is the content of the certificate.</li> <li>• URI: indicates that the value is the local or remote URI.</li> </ul> |
| value       | Content or path of the certificate                                                     | For remote protocols, only HTTPS is supported.                                                                                                                                             |

| Parameter | Setting | Value                           |
|-----------|---------|---------------------------------|
|           |         | The value varies with the type. |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/SyslogService/Actions/SyslogService.ImportClientCertificate
```

- Request Header:

```
X-Auth-Token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

Local address:

```
{
 "Type": "URI",
 "Content": "/data/client.pem"
}
```

Remote address:

```
{
 "Type": "URI",
 "Content": "https://10.226.197.41:28000/client.pem"
}
```

Text:

```
{
 "Type": "text",
 "Content": "-----BEGIN CERTIFICATE-----
MIIDODCCAjACFB4C1cZ84cto99USIMDZJ5GPMJYMA0GCSqGSIb3DQEBCwUAMFgx
CzAJBgNVBAYTAKNOMRIwEAYDVQQIDA1HdWFuz2RvbmcxCzAJBgNVBACMA1NaMQww
CgYDVQQKDANaVEUxDDAKBgNVBAgMAMQJNQZEMMAoGA1UEAwDVNBMB4XDTI0MDUy
MTA4NDcyN1oXDTI1MDUyMTA4NDcyN1owWTELMAkGA1UEBhMCQ04xEjAQBgNVBAgM
Cud1Yw5nZG9uZZELMAkGA1UEBwwCU1oxDDAKBgNVBAoMA1pURTEMMAoGA1UECwwD
Qk1DMQ0wCwYDVQQDARKYXAUUMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKC
AQEApibFUUST85810Fu0Qj5Kcj+972dr1zbN30x4IPGLy7asdjx5z41N2Qdfy7f
tw29xxPVRq1Ilmc4dTRYHB1Tc/C01WTZEtQyE5lyngr4tGfsDypwsjgUn2t+0T
5cFsd7RXEkLkjpxvh0q8gr+7NoAJ52PrSS/Q1S55BpnPxs4VbtoEYRUQxfCP07
-----END CERTIFICATE-----"
```

```

WktTx66u/Lf3pihw5UpX18i9mqwxNj7omwywp1TdnL41TMK8FaJ97LJF9in+Emzh
Hzuj8c1iQCrh9xUjgj9RN22YKRIficzb0j2vyHkciwHGbhuI0i11PxRJq92r71hn
05g1TIG6GHALPf0/wkz41vp72wIDAQABMA0GCSqGSIB3DQEBCwUA4IBAQCQi0jX
vJzpteI8Tp14zSkz2+ajofhusTquZaLF8BS0AJ2+bjaNswgqy63X6BqYS1vIbone
AyS6SCjvjbPvNtPKddgM4asj+uLW+GCWYDOL7Cti8muI7fsjyTJo/SR9pgbmUpNn
Rbd0XkbayErbclTtVPSIhhBa/JFz96nPuj8bBBPBET/hFdV2iI1KhVPgwyj4Njkj
hb9iIAA5SMTsiJ2vE/PUsHyoiL0V78/uwL8NLPppItoACy0HWTJbo16hQQELn56V
z4rt6z118ncqtvkYsv9FzArICcpZ7UxsDzd229H6ZYeoVsBKj14v5Trp3S4xfzc/
Oe7oFwMuYx+jVgq+
-----END CERTIFICATE-----
}

```

- Response Example:

```
{
 "error": {
 "code": "Base.1.0.GeneralError",
 "message": "A general error has occurred. See ExtendedInfo for more information.",
 "@Message.ExtendedInfo": [
 {
 "@odata.type": "/redfish/v1/$metadata#MessageRegistry.1.0.0.MessageRegistry",
 "MessageId": "Base.1.8.1.Success",
 "RelatedProperties": [],
 "Message": "The certificate has been imported successfully.",
 "MessageArgs": [],
 "Severity": "OK",
 "Resolution": "None"
 }
]
 }
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you import a local Syslog certificate, refer to [Table 4-80](#).

**Table 4-80 Output Descriptions for Importing a Local Syslog Certificate**

| Field   | Type   | Description                                            |
|---------|--------|--------------------------------------------------------|
| code    | String | ID of the specified message in the message registry.   |
| message | String | Readable message for the code in the message registry. |

| Field                 | Type   | Description                                                                                           |
|-----------------------|--------|-------------------------------------------------------------------------------------------------------|
| @Message.ExtendedInfo | Array  | Extended information about the message.                                                               |
| @odata.type           | String | OData description of the message resource.                                                            |
| MessageId             | String | Message ID.                                                                                           |
| RelatedProperties     | Array  | Message-related properties.                                                                           |
| Message               | String | Details.                                                                                              |
| MessageArgs           | Array  | Message arguments.                                                                                    |
| Severity              | String | Severity level. Options: <ul style="list-style-type: none"><li>● Warning</li><li>● Critical</li></ul> |
| Resolution            | String | Recommended solution.                                                                                 |

## 4.49 Importing a Private Key Certificate

### Function

Import the private key certificate into the system.

### Permission Required

Basic management.

### Syntax

- Operation Type: POST
- URL: *https://device\_ip/redfish/v1/Managers/manager\_id/SyslogService/Actions/SyslogService.ImportPrivateKeyCertificate*
- Request Header:

```
X-Auth-Token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "Type":type,
 "Content":value
}
```

### Description

For a description of the parameters for importing a private key certificate, refer to [Table 4-81](#).

**Table 4-81 Parameter Descriptions for Importing a Private Key Certificate**

| Parameter   | Setting                                                                                | Value                                                                                                                                                                                      |
|-------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                                                                                                                      |
| manager_id  | ID of the Manager resource.                                                            | For a rack server, the value is 1 or Self.                                                                                                                                                 |
| auth_value  | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions.                                                                                                      |
| header_type | Format of the request message.                                                         | application/json                                                                                                                                                                           |
| type        | Method of importing a Syslog certificate.                                              | <ul style="list-style-type: none"> <li>● text: indicates that the value is the content of the certificate.</li> <li>● URI: indicates that the value is the local or remote URI.</li> </ul> |
| value       | Content or path of the certificate                                                     | For remote protocols, only HTTPS is supported.<br>The value varies with the type.                                                                                                          |

**Usage Guidelines**

None

**Example**

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/SyslogService/Actions/SyslogService.ImportPrivateKeyCertificate
```

- Request Header:

```
X-Auth-Token:LXIrlQPHHOPTz6k4rrPB/UfABUD45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

Local address:

```
{
 "Type": "URI",
 "Content": "/data/client.key"
}
```

Remote address:

```
{
 "Type": "URI",
 "Content": "https://10.226.197.41:28000/client.key"
```

```
{
}
```

Text:

```
{
 "Type": "text",
 "Content": "-----BEGIN RSA PRIVATE KEY-----
MIIEowIBAAKCAQEApibFUuST85810Fu0Qj5KCJt+972Dr1zbN30X4IPGLy7asdjx
5z41N2Qdfy7ftw29xxPVRq1I1mC4dTRYHB1Tc/C01WTZEtQyE51ynygDr4tGfsDy
pwsjguN2t+0T5cFsd7RxEkLkjPXvh0q8gr+7NoAJ52PRRSS/Q1S55BpnPxS4vb
oEYRUQxfCP07WkTx66u/Lf3pih5UpX18i9mqwxNj7oMwywp1TdnL41TMK8FaJ9
7LJF9in+EMzhHZUj8c1iQCrh9xUjgj9RN22YKRIficzb0j2VyHkciwHGbHUI0i11
PxRJq92r71hn05g1TIG6GHALPF0/wkz41vp72wIDAQABoIBAHqzOxnCL/jD2NSM
PgyFj9e1Hzi63doQPNU3h8CHz/3clikuu2A4MnibeKUJ6rB2dxkvnuZVvemqdH0
o/VURqrjYckNVr1u9yQ+N8WNeVtUEVVeDFSMB0ZdZtPhQsZzhaFewfnoVXMVqbqp
f56LVEMRoveehcadZ+F0y3qyzSvegem3ckFIIN9EL6CVH8gddfX4xnBMTC1SVgNR
hg4/akhuMd1FSzpu//zm11f6PWr8I6mmN/mqI8jTyETi2LdbMFPPFZMCzQVFTDY2
4XkcS3dhgDm5gzC+UMmXwIndFVT7zoYTuh1uEkSwu41nqIy21hpD193z1LFJgk2C
zceJ4UECgYEAE24Eo+6Nwiqg2z24m9acc/psDgtLF3oBVjwcwwfapTlsbY1GCib7D
d2egPWQ1zNsbdFU0Pkb1514Iwi9eI+5juw8GNS1ga0yPrF+n6BNyC1BXzrpV0L9v
8+csxQ1KGpPeAqgxZ4YQZXD8+GZ92MUBnVgDKsQyQE7q5gUGmHSSC3ECgYEAwca6
DZNprvJ/Bsc183i+txM47aL3CT0whjo4PZUACJWrwsu1Hnp6SGFlimoqAoqBd7p0
RSDPS853MVG7mOBW8Guv/zfb0swY5VP6kaBReTC1O11RyAr134jgSAToa0Un3xkp
rKAjYg0dDgGLy/vjyeiICftgXJS2dnswqfI3gsCgYAvubi0BpfMTFcEgIqFiQpP
GLu5CBb/0Eqherw90p9k83hLyaka0VYCE7S7Tdr4hAZFAUFj8mHz92zfukcfFeN
IEAGVdujTG3sivj3zTnAX3GObzzws1Q/ECbmk+bVw55DxjBgUNZYB/OA2RdoE5A1
izoje63Tkv1KkAxvtY1AQKBgQCYS38Yhatjt0UM1VD93ZAE+zvoYHzmJfcgP67k
MI/XNALUFcYVL5U/hqkzrn9CA13l0OS50RLCFVGaA86eMdqlKKdr8QmCLoxtg0G
R10M8KpQvshcq057GgUMG/n/1n6GFtHo/DCq/KXPRfrxoofYuvxs9isyVqId1NMz
zj7HYwKBgF67RMm/F0Bdn5M1Um0s6IPvrgzkOTokotIq8hoiaUDBHZYw/S1vdv2/
ezkFAUzrf0dPNJxjgI/UuYhkAlZoiPcR3GwkjbcRzq5zSFDbQuCznGobm2i1hkiQ
gsBXo2A/NXDDozaItMQTms1pKtx3T2084M/vf8ad43+oJcxCWzZM
-----END RSA PRIVATE KEY-----"
}
```

- Response Example:

```
{
 "error": {
 "code": "Base.1.0.GeneralError",
 "message": "A general error has occurred. See ExtendedInfo for more information.",
 "@Message.ExtendedInfo": [
 {
 "@odata.type": "/redfish/v1/$metadata#MessageRegistry.1.0.0.MessageRegistry",
```

```

 "MessageId": "Base.1.8.1.Success",
 "RelatedProperties": [],
 "Message": "The certificate has been imported successfully.",
 "MessageArgs": [],
 "Severity": "OK",
 "Resolution": "None"
 }
]
}
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you import the private key certificate, refer to [Table 4-82](#).

**Table 4-82 Output Descriptions for Importing a Private Key Certificate**

| Field                 | Type   | Description                                                                                                            |
|-----------------------|--------|------------------------------------------------------------------------------------------------------------------------|
| code                  | String | ID of the specified message in the message registry.                                                                   |
| message               | String | Readable message for the code in the message registry.                                                                 |
| @Message.ExtendedInfo | Array  | Extended information about the message.                                                                                |
| @odata.type           | String | OData description of the message resource.                                                                             |
| MessageId             | String | Message ID.                                                                                                            |
| RelatedProperties     | Array  | Message-related properties.                                                                                            |
| Message               | String | Details.                                                                                                               |
| MessageArgs           | Array  | Message arguments.                                                                                                     |
| Severity              | String | Severity level. Options: <ul style="list-style-type: none"> <li>• OK</li> <li>• Warning</li> <li>• Critical</li> </ul> |
| Resolution            | String | Recommended solution.                                                                                                  |

## 4.50 Querying SSL Certificate Information

### Function

Query [SSL](#) certificate information.

## Permission Required

Query.

## Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Managers/manager_id/SecurityService/HttpsCert`
- Request Header:
 

X-Auth-Token:auth\_value
- Request Message Body: None

## Description

For a description of the parameters for querying SSL certificate information, refer to [Table 4-83](#).

**Table 4-83 Parameter Descriptions for Querying SSL Certificate Information**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| manager_id | ID of the Manager resource.                                                           | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/SyslogService/Actions/SecurityService/HttpsCert
```

- Request Header:

```
X-Auth-Token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#SecurityService.HttpsCert",
 "@odata.id": "/redfish/v1/Managers/1/SecurityService/HttpsCert",
 "@odata.type": "#HttpsCert.v1_0_0.HttpsCert",
```

```
 "Actions": {
 "#HttpsCert.ImportServerCertif
 icate": { "target":
 "/redfish/v1/Managers/1/SecurityService/HttpsCert/Actions/
 HttpsCert.ImportServerCertificate"
 }
 },
 "Id": "HttpsCert",
 "Name": "Https cert
 info", "Oem": {
 "Public": {
 "CompletionCode"
 : 0,
 "Description":
 "Success"
 }
 },
 "Version": "3",
 "X509CertificateInform
 ation": {
 "ServerCert": {
 "CertificateString":
 null,
 "CertificateType":
 null, "Issuer": {
 "City": "Hangzhou",
 "CommonName": "H3C",
 "Country": "CN",
 "Organization": "New H3C Technologies Co.,Ltd",
 "OrganizationalUnit": "Compute and Storage Product
 Line", "State": "Zhejiang"
 },
 "IssuerAddress": "service@h3c.com",
 "KeyUsage": "Digital Signature, Non Repudiation, Key Encipherment",
 "PublicKey": "",
 "PublicKeyLengthBits": "2048",
 "SerialNumber": "4FF5D2D1B5A683DE8616801FAE92BA0D888DA5F9",
 "SignatureAlgorithm":
 "sha256WithRSAEncryption", "Subject": {
 "City": "Hangzhou",
 "CommonName": "H3C",
 "Country": "CN",
 "Organization": "New H3C Technologies Co.,Ltd",
 "OrganizationalUnit": "Compute and Storage Product
 Line", "State": "Zhejiang"
 },
 "SubjectAddress": "service@h3c.com",
 "ValidNotAfter": "2036-04-26T09:49:41+08:00",
 }
 }
 }
 }
}
```

```

 "validNotBefore": "2021-04-30T09:49:41+08:00"
 }
}
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query SSL certificate information, refer to [Table 4-84](#).

**Table 4-84 Output Descriptions for Querying SSL Certificate Information**

| Field                                                   | Type   | Description                                                        |
|---------------------------------------------------------|--------|--------------------------------------------------------------------|
| @odata.context                                          | String | OData description of the SecurityService.HttpsCert resource model. |
| @odata.id                                               | String | Access path of the SecurityService.HttpsCert resource.             |
| @odata.type                                             | String | Type of SecurityService.HttpsCert resource.                        |
| Actions.#HttpsCert.ImportServerCertificate.target       | String | Operation path for SSL certificate import.                         |
| Id                                                      | String | Resource ID.                                                       |
| Name                                                    | String | Resource name.                                                     |
| Oem.Public.CompletionCode                               | Number | Success percentage.                                                |
| Oem.Public.Description                                  | String | Description.                                                       |
| Version                                                 | String | Version.                                                           |
| X509CertificateInformation.ServerCert.CertificateString | String | Certificate string.                                                |
| X509CertificateInformation.ServerCert.CertificateType   | String | Certificate format.                                                |
| X509CertificateInformation.ServerCert.IssuerAddress     | String | Issuer's email address.                                            |
| X509CertificateInformation.ServerCert.KeyUsage          | String | Key usage<br>.                                                     |
| X509CertificateInformation.ServerCert.PublicKey         | String | Public key.                                                        |

| Field                                                           | Type   | Description                                           |
|-----------------------------------------------------------------|--------|-------------------------------------------------------|
| X509CertificateInformation.ServerCert.PublicKeyLengthBits       | String | Public key length.                                    |
| X509CertificateInformation.ServerCert.SerialNumber              | String | Serial number.                                        |
| X509CertificateInformation.ServerCert.SignatureAlgorithm        | String | Signature algorithm.                                  |
| X509CertificateInformation.ServerCert.SubjectAddress            | String | Recipient's email address.                            |
| X509CertificateInformation.ServerCert.ValidNotAfter             | String | End time of the validity period of the certificate.   |
| X509CertificateInformation.ServerCert.ValidNotBefore            | String | Start time of the validity period of the certificate. |
| X509CertificateInformation.ServerCert.Issuer                    | String | Same as <b>Subject</b> .                              |
| X509CertificateInformation.ServerCert.Subject                   | String | Same as <b>Issuer</b> .                               |
| X509CertificateInformation.ServerCert.Issuer.City               | String | City or area.                                         |
| X509CertificateInformation.ServerCert.Issuer.CommonName         | String | Common name.                                          |
| X509CertificateInformation.ServerCert.Issuer.Country            | String | Country.                                              |
| X509CertificateInformation.ServerCert.Issuer.Organization       | String | Organization.                                         |
| X509CertificateInformation.ServerCert.Issuer.OrganizationalUnit | String | Organizational unit.                                  |
| X509CertificateInformation.ServerCert.Issuer.State              | String | Province (state).                                     |

## 4.51 Importing an SSL Certificate

### Function

Import an [SSL](#) certificate into the system.

### Permission Required

Security management.

### Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/Managers/manager_id/SecurityService/HttpsCert/Actions/HttpsCert.ImportServerCertificate`
- Request Header:

```
X-Auth-Token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "Certificate": Certificate,
 "Privatekey": Privatekey
}
```

### Description

For a description of the parameters for importing an SSL certificate, refer to [Table 4-85](#).

**Table 4-85 Parameter Descriptions for Importing an SSL Certificate**

| Parameter   | Setting                                                                                | Value                                                                                                                                  |
|-------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                               | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                                                  |
| manager_id  | ID of the Manager resource.                                                            | For a rack server, the value is <b>1</b> or <b>Self</b> .                                                                              |
| auth_value  | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                    |
| header_type | Format of the request message.                                                         | application/json                                                                                                                       |
| Certificate | SSL certificate.                                                                       | Can be a temporary <a href="#">BMC</a> directory of the certificate file, a remote HTTPS file, or the content of the certificate file. |
| Privatekey  | SSL private key.                                                                       | Can be a temporary <a href="#">BMC</a> directory of the private key file, a remote HTTPS file, or the content of the private key file. |

## Usage Guidelines

None

### Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/SecurityService/HttpsCert/Actions/HttpsCert.ImportServerCertificate
```

- Request Header:

```
X-Auth-Token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

Local import: Upload the files to the `/tmp/sslcert/` directory, and then invoke the Redfish interface.

```
{
 "Certificate": "/tmp/sslcert/server.pem",
 "Privatekey": "/tmp/sslcert/privkey.pem"
}
```

Remote import: In this version, only the HTTPS protocol is supported.

```
{
 "Certificate": "https://192.168.170.57/server.pem",
 "Privatekey": "https://192.168.170.57/privkey.pem"
}
```

Upload the text directly:

```
{
 "Certificate": "-----BEGIN CERTIFICATE-----
MIIDODCCAiACFH4C1cZ84cto99USIMDZJ5GPMJaMA0GCSqGSIB3DQEBCwUAMFgx
CzAJBgNVBAYTAKNOMRIwEAYDVQQIDA1hdWFuZ2RvbmcxCzAJBgNVBACMAlNaMQww
CgYDVQQKDANaVEUXDDAKBgNVBASMA0JNQZEMMAoGA1UEAwDVNBMB4XDTI0MDUY
NzAyNTQzN1oxDTI1MDUyNzAyNTQzN1owWTELMAkGA1UEBhMCQ04xEjAQBgNVBAgM
CUD1YW5nZG9uzzELMAkGA1UEBwwCU1oxDDAKBgNVBAoMA1pURTEMMAoGA1UECwwD
Qk1DMQ0wCwYDVQQDARKYXauMIIBijANBgkqhkg9w0BAQEAAOCQ8AMIIBCgK
AQEA20Ik2Y4nY1fNgvTqj1HYfDwCR3+71MilpfQUOKRQgy1s+t1tMiKd2cIhnFQT
1ozOP53oECznbn8XzTsrxuwUpEXOU6Oj6FTN1T7Qciuq/b3W2Bz9wM1K6Wq70k72
ZX+0VXDMM4FPoQZrb9dI1MrzHOCWgEOLZgqHuxOur51L+xKrpVqMh8fx+lBGFrhG
pB9Z2jcnZkUTLC126Fu/L3jLofQ7vv7kruzi8omOLqLzk0xYneOSHj+3+AwyO2u4
LWI4k/xWWVAnFsSHkBU3EVqtHT2Q0x5PXRBCeKFg/o8DSMgrEehAdbSP00xUpHUo
45gHG+j291ELtnMGzTTVVp6WSwIDAQABMA0GCSqGSIB3DQEBCwUAA4IBAQATZ7IR
-----END CERTIFICATE-----"
```

```

maUAYLs3f69+tFREYtr4yyoCmu46QMAN5eFO079jLXwvQnQU7fNZmxwo0yo65m2x
Hs6EgegfHrEFF5ecjPoTV5GfgfKyw76aYSvxfoYx2dp4Tr1Bqm7LTdC+pKqikMqz
u5ri3kxz+7k5fsFsSo+FeeMwnMPHiobYDb4F8MsPpwTNfPAev1zvAVjNzXLLob+3
gzsRGt2/98BY1Rd8PhMKVaHofXeM/Xkkd/6infjsPbzQgaU4IrQAvXfp1vQ697Q+
AVwj/prIVOI7p8XGyoJI1v5mTq8w3JkdK3zs+T4uxdsrlacu/g0EcBPL/bmQ4KuW
P6pshnQq2/0TmbuN
-----END CERTIFICATE-----",
"Privatekey": "-----BEGIN RSA PRIVATE KEY-----
MIIEpQIBAAKCAQEA20Ik2Y4nY1fNgvTqilHYfdwCR3+71M1pfQUOKRQgy1s+t1t
MiKd2cIhnFQTlozOP53oECznbn8XzTs xuWUpEXOU6oj6FTN1T7QCiUq/b3w2Bz9
wM1K6wq7ok72zx+0VXDMT4FPoQZrb9dI1MrzHOCWge0LzgqHuxour51L+xKrpVqm
h8fx+1BGFrhGpB9Z2jcnzkUTLC126Fu/L3jLofQ7vv7kruzi8omOLqLzk0xYneOS
Hj+3+AWYO2u4LWI4k/xWWVAnFssHkbU3EVqTHT2Q0x5PxRBCEkFg/o8DSMgEEhA
DbSP00xUpHUo45gHG+j291ELtNMGzTTVvP6wsIDAQABoIBAQDSfw/tphW/J95v
at56intzgKoNon3rbK5LQqbffmjDxnvnZ08EvrrgoxQ2LjdQ4zvnjbw/Lh7CufwfU
yo+M1f/8LeCpmBLWDASIQ4NrGf/KFyVZ003reav/p64T7pbzHSu8ecxMT/LovsCK
wn7be/Qmtx8GEFfth5KDCgP1Kwg2oxEov2a9pv0Qs0o4pbb6P4I9zOGfQwa31vp+
hc/fc78PnbgrtcUY/J0mRJM6xV8xZLc9p1HE34r5u808Piqo2MXuQx1uoEssCHNM
ZruBhaqsY8HTnSH08fj5e6Er6hnqT49cvaQkj/mYABz7beTPdcSry1CqHwmhv4Af
JyFvy2XXAOGBA05oiGwgjaqvZow3CorNuuXzLS4Txy0ydcuu9fSmA0dRPzUXrL/
y4KP8Pph8SnxNxVH1L1/e3NPMxdLMOUNZ9gZFX5Wxg6verzzpAtdUCMRmoLaLATi
KoJi8xuYyAgFHY34pbIiyHZ8EbitAfYjEhyu03z01UcghGUwS80hjGfAoGBA0tv
36nAzBk9n+8dBfpifH5h/jplrtxsota89ng/UM4D9zzxvTwabcfp+/6YcGcaqp4v
vhskfI99M62jwlZABZ5Dqeezp3G4xw53xt1f1zck9IsbREmaKP3uc3y3t6zn6tx0
5KS1JF6j84Ha4Bo6x3DVA0es1MLuSbxxjXpozMptAoGBANVVYDLtMHKBBLhentxh
s91XHUK/NpRMhia3uTOopfGXsptmxSEbP+azVtm6bn10jji3DI5aAvtIfETuw+e0
CLO+QS/JwosDLqjxt5s0/v1mWR2s1KHCUJJKYkz0ksAc9EivWkGoQi9RA8yb1q/0
1dI3aaSzE/2JbvnIMus/6q0hAoGAQpmcEj4cxkuDczWoxJSYLYQ08XK051jLuyST
qEJo7k5kbxrN6frud1A7/bJLoaebnCqT7c5ym/iT5Nuf1Trwm+uSJZTBUL8r1w1E
ek1its8i6jlz1i3ndwvT8N8runQE1rxzu10u11xpfvujdvTYcywJ9dpPFdb/LGk
Lw1h+yUCgYEAE0RNvBTLTu8dzwtaeUFUan93r5o/vHvw90jktIVVTIMTvDSF6cedJ
KUJPZLVfcVa8Mhm4nYU5GzrDyvh333juo3JaBhfZadFFS8w+xqdZvHRY0IBmLAD
ebvNBeuXgkf6vj1Y1m519dvza3/FV///8dhef0VLxqg6/hej1XWL2ji=
-----END RSA PRIVATE KEY-----"
}

```

- Response Example:

```
{
 "error": {
 "code": "Base.1.0.GeneralError",
 "message": "A general error has occurred. See ExtendedInfo for more information.",
 "@Message.ExtendedInfo": [
 {
 "MessageId": "10000000-0000-0000-0000-000000000000",
 "Message": "The operation failed due to an internal error. Please try again later."
 }
]
 }
}
```

```

 "@odata.type":

 "/redfish/v1/$metadata#MessageRegistry.1.0.0.MessageRegistry",

 "MessageId": "Base.1.8.1.Success",

 "RelatedProperties": [],

 "Message":

 "The certificate has been imported successfully, wait for service

 reboot.",

 "MessageArgs": [],

 "Severity": "OK",

 "Resolution": "None"

}

]

}
}
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you import an SSL certificate, refer to [Table 4-86](#).

**Table 4-86 Output Descriptions for Importing an SSL Certificate**

| Field                 | Type   | Description                                                                                                            |
|-----------------------|--------|------------------------------------------------------------------------------------------------------------------------|
| code                  | String | ID of the specified message in the message registry.                                                                   |
| message               | String | Readable message for to the code in the message registry.                                                              |
| @Message.ExtendedInfo | Array  | Extended information about the message.                                                                                |
| @odata.type           | String | OData description of the message resource.                                                                             |
| Message               | String | Details.                                                                                                               |
| MessageId             | String | Message ID.                                                                                                            |
| RelatedProperties     | String | Message-related properties.                                                                                            |
| MessageArgs           | Array  | Message arguments.                                                                                                     |
| Resolution            | String | Recommended solution.                                                                                                  |
| Severity              | String | Severity level. Options: <ul style="list-style-type: none"> <li>● OK</li> <li>● Warning</li> <li>● Critical</li> </ul> |

## 4.52 Exporting BIOS or BMC Configurations

### Function

Export BIOS or BMC configurations.

### Permission Required

User management.

### Syntax

- Operation Type: POST
  - URL: `https://device_ip/redfish/v1/Managers/manager_id/Actions/Manager.ExportConfiguration`
  - Request Header:
- X-Auth-Token:auth\_value  
Content-Type:header\_type
- Request Message Body:
- ```
{
  "Type": type_value
}
```

Description

For a description of the parameters for exporting BIOS and BMC configurations, refer to [Table 4-87](#).

Table 4-87 Parameter Descriptions for Exporting BIOS and BMC Configurations

Parameter	Setting	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
manager_id	ID of the Manager resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the POST request for authentication.	It can be obtained by creating a session through /redfish/v1/SessionService/Sessions.
header_type	Format of the request message.	application/json
type_value	String	Type of configuration that is exported. Options: <ul style="list-style-type: none"> • BIOS • BMC

Usage Guidelines

None

Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/Actions/Manager.ExportConfiguration
```

- Request Header:

```
X-Auth-Token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
  "Type": "BMC"
}
```

- Response Example:

```
{
  "@odata.type": "#Manager.v1_13_0.Manager",
  "Messages": [
    {
      "@odata.type": "#Message.v1_0_8.Message",
      "Message": "A new task /redfish/v1/TaskService/Tasks/1 was created.",
      "MessageArgs": [
        "/redfish/v1/TaskService/Tasks/1"
      ],
      "MessageId": "Task.1.0.New",
      "Resolution": "None",
      "Severity": "OK"
    },
    {
      "@odata.type": "#Message.v1_0_8.Message",
      "Message": "Device is preparing BMC/BIOS config export for action Manager.ExportConfiguration.",
      "MessageArgs": [
        "Manager.ExportConfiguration"
      ],
      "MessageId": "Manager.1.0.ExportConfiguration",
      "Resolution": "None",
      "Severity": "OK"
    }
}
```

- Response code: 202

Output Description

For a description of the output returned when you export BIOS and BMC configurations, refer to [Table 4-88](#).

Table 4-88 Output Descriptions for Exporting BIOS and BMC Configurations

Field	Type	Description
@odata.type	String	OData description of the message resource.
Messages	Array	Message list.
Message	String	Details.
MessageId	String	Message ID.
MessageArgs	Array	Message arguments.
Resolution	String	Recommended solution.
Severity	String	Severity level. Options: <ul style="list-style-type: none"> • OK • Warning • Critical

4.53 Importing BIOS and BMC Configurations

Function

Import BIOS and BMC configurations.

Permission Required

User management.

Syntax

- Operation Type: POST
- URL: https://device_ip/redfish/v1/Managers/manager_id/Actions/Manager.ImportConfiguration
- Request Header:

X-Auth-Token:auth_value
 Content-Type:header_type
- Request Message Body:

```
File: file_value,
Type: type_value
```

Description

For a description of the parameters for importing BIOS and BMC configurations, refer to [Table 4-89](#).

Table 4-89 Parameter Descriptions for Importing BIOS and BMC Configurations

Parameter	Setting	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
manager_id	ID of the Manager resource.	For a rack server, the value is 1 or Self .
auth_value	X-Auth-Token value contained in Request Header in the POST request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .
header_type	Format of the request message.	application/json
file_value	Configuration file that is uploaded.	<ul style="list-style-type: none"> ● The BIOS configuration file is a JSON file. ● The BMC configuration file is a TAR.GZ file.
type_value	Configuration type.	Configuration type. Options: <ul style="list-style-type: none"> ● BIOS ● BMC

Usage Guidelines

None

Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/Actions/Manager.ImportConfiguration
```

- Request Header:

```
X-Auth-Token:LXIrqPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

In the **VALUE** column for the **File** parameter, select the configuration file to be uploaded. In the **VALUE** column, enter the configuration type.

```
File: biosconfig.json,
Type: BIOS
```

- Response Example:

```
{
}
```

- Status Code: 200

Output Description

None

4.54 Downloading a Redfish File

Function

Download a Redfish file to the local PC.

Permission Required

User management.

Syntax

- Operation Type: POST
- URL: https://device_ip/redfish/v1/Managers/manager_id/Actions/Manager.GeneralDownload
- Request Header:

```
X-Auth-Token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
    "TransferProtocol":transfer_protocol_value,
    "Path": path_value
}
```

Description

For a description of the parameters for downloading the Redfish file, refer to [Table 4-90](#).

Table 4-90 Parameter Descriptions for Downloading the Redfish File

Parameter	Setting	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
manager_id	ID of the Manager resource.	For a rack server, the value is 1 or Self .

Parameter	Setting	Value
auth_value	X-Auth-Token value contained in Request Header in the POST request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .
header_type	Format of the request message.	application/json
transfer_protocol_value	Protocol type.	Supported protocols: HTTPS .
path_value	Path from which files are to be downloaded.	Path from which a file is downloaded.

Usage Guidelines

None

Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/1/Actions/Manager.GeneralDownload
```

- Request Header:

```
X-Auth-Token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
    "TransferProtocol": "HTTPS",
    "Path": "/bmccconfig_20240328111244.tar.gz"
}
```

- Response Example: File streams are returned.
- Status Code: 200

Output Description

None

4.55 Enabling the GPU Module to Start Collecting Logs

Function

Enable the GPU module to start collecting logs.

Permission Required

Diagnosis.

Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/Managers/manager_id/Actions/Oem/Manager.LogDump`
- Request Header:

X-Auth-Token:auth_value
 Content-Type:header_type
- Request message body: defined based on the module.

Description

For a description of the parameters for the module to start collecting logs, refer to [Table 4-91](#).

Table 4-91 Parameter Descriptions for the Module to Start Collecting Logs

Parameter	Setting	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
manager_id	ID of the Manager resource.	For a rack server, the value is 1 or Self .
auth_value	X-Auth-Token value contained in Request Header in the POST request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .
header_type	Format of the request message.	application/json

Usage Guidelines

Only servers with [GPUs](#) support this function.

Example

- Request Example:

```
POST https://device_ip/redfish/v1/Managers/ubb/Actions/Oem/Manager.LogDump
```

- Request Header:

```
X-Auth-Token:LXIrqPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{  
}
```

- Response Example: None
- Response code: 202

Output Description

None

4.56 Enabling the GPU Module to Obtain Log Files

Function

Obtain the TXT log files collected with one click.

Permission Required

Diagnosis.

Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Managers/manager_id/Actions/Oem/Manager.LogDump`
- Request Header:

X-Auth-Token:auth_value
- Request Message Body: None

Description

For a description of the parameters for the module to obtain log files, refer to [Table 4-92](#).

Table 4-92 Module Parameter Descriptions for the Module to Obtain Log Files

Parameter	Setting	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
manager_id	ID of the Manager resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .

Usage Guidelines

Only servers with [GPUs](#) support this function.

Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/Ubb/Actions/Oem/Manager.LogDump
```

- Request Header:

X-Auth-Token:LXIrlQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=

- Request Message Body: None
- Response Example: Log files are returned.
- Response code:
 - 200 OK: The log is obtained successfully, and the contents of the log file are returned.
 - 204 No Content: Log collection is not completed.
 - 500 Internal Server Error: An error occurs during log collection.

Output Description

None

4.57 Querying Information About the DNS Service

Function

Query information about the DNS service.

Permission Required

Query.

Syntax

- Operation Type: GET
- **URL:** *https://device_ip/redfish/v1/Managers/manager_id/DnsService*
- Request Header:

X-Auth-Token:auth_value

- Request Message Body: None

Description

For a description of the parameters for querying information about the DNS service, refer to [Table 4-93](#).

Table 4-93 Parameter Descriptions for Querying Information About the DNS Service

Parameter	Setting	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
manager_id	ID of the Manager resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through /redfish/v1/SessionService/Sessions.

Usage Guidelines

None

Example

- Request Example:

```
GET https://device_ip/redfish/v1/Managers/1/DnsService
```

- Request Header:

```
X-Auth-Token:LXIrlQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example:

```
{
    "@odata.context": "/redfish/v1/$metadata#DnsService.DnsService",
    "@odata.type": "#DnsService.v1_0_0.DnsService",
    "@odata.id": "/redfish/v1/Managers/1/DnsService",
    "HostNameConfig": {
        "HostName": "BMC123",
        "HostSetting": "manu"
    },
    "PatchInProgress": false,
    "DnsIpConfig": {
        "DnsEnable": true,
        "DnsDhcpEnable": "manu",
        "NameServers": [
            "192.168.1.1",
            "192.168.1.2",
            "2001:db8::1"
        ]
    },
    "DomainConfig": {
        "DomainName": "DomainName.com.cn"
    },
    "RegisterBMC": "hostname"
}
```

- Status Code: 200

Output Description

For a description of the output returned when you query information about the DNS service, refer to [Table 4-94](#).

Table 4-94 Output Descriptions for Querying Information About the DNS Service

Field	Type	Description
@odata.context	String	OData description of the DNS resource collection.
@odata.id	String	Access path of the DNS service resource collection.
@odata.type	String	Type of DNS resource collection.
DnsIpConfig	Object	List of DNS IP Configurations.
DnsDhcpEnable	String	Whether the DNS service is enabled: <ul style="list-style-type: none"> ● manu: manual ● ipv4: automatically obtains an IPv4 DNS address. ● ipv6: Automatically obtains an IPv6 DNS address.
DnsEnable	Boolean	Whether the DNS client on the BMC is enabled: <ul style="list-style-type: none"> ● true: yes. ● false: no. If this parameter is disabled, the DnsDhcpEnable and NameServers parameters do not need to be set.
NameServers	Array	The first value indicates the primary server, the second value indicates standby server 1, and the third value indicates standby server 2.
DomainConfig	Object	Domain name configuration.
DomainName	String	Domain name.
HostNameConfig	Object	Hostname object.
HostName	String	Hostname.
HostSetting	String	Hostname setting mode. <ul style="list-style-type: none"> ● Auto: ● Manual
PatchInProgress	Boolean	Configuration validity flag: <ul style="list-style-type: none"> ● true: being configured ● false: configured completely
RegisterBMC	String	Registration mode: <ul style="list-style-type: none"> ● hostname: hostname ● fqdn: DHCP Client FQDN

4.58 Modifying Information About the DNS Service

Function

Modify information about the DNS service.

Permission Required

Basic management.

Syntax

- Operation Type: PATCH
- URL: https://device_ip/redfish/v1/Managers/manager_id/DnsService
- Request Header:

```
X-Auth-Token: auth_value  
Content-Type: header_type
```

- Request Message Body:
 - Configure the hostname information:

```
{  
    "HostNameConfig": {  
        "HostName": host_name_value,  
        "HostSetting": host_setting_value  
    }  
}
```

- Configure the DNS IP information:

```
{  
    "DnsIpConfig": {  
        "DnsDhcpEnable": dns_dhcp_enable_value,  
        "DnsEnable": dns_enable_value,  
        "NameServers": name_servers_value  
    }  
}
```

- Configure the domain name information:

```
{  
    "DomainConfig": {  
        "DomainName": domain_name_value  
    }  
}
```

- Register the BMC:

```
{  
    "RegisterBMC": register_bmc_value  
}
```

Description

For a description of the parameters for modifying information about the DNS service, refer to [Table 4-95](#).

Table 4-95 Parameter Descriptions for Modifying Information About the DNS Service

Parameter	Setting	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
manager_id	ID of the Manager resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .
header_type	Format of the request message.	application/json
dns_dhcp_enable_value	String	Whether the DNS service is enabled: <ul style="list-style-type: none"> ● manu: manual ● ipv4: automatically obtains an IPv4 DNS address. ● ipv6: Automatically obtains an IPv6 DNS address.
dns_enable_value	Boolean	Whether the DNS client on the BMC is enabled: <ul style="list-style-type: none"> ● true: enabled ● false: no. If this parameter is disabled, the Dns-DhcpEnable and NameServers parameters do not need to be set.
name_servers_value	Array	The first value indicates the primary server, the second value indicates standby server 1, and the third value indicates standby server 2.
domain_name_value	String	Domain name.
host_name_value	String	Hostname, range: 1–64 characters.
host_setting_value	String	Hostname setting mode. <ul style="list-style-type: none"> ● auto ● manual
register_bmc_value	String	Registration mode: <ul style="list-style-type: none"> ● hostname: hostname ● fqdn: DHCP Client FQDN

Usage Guidelines

None

Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Managers/1/DnsService
```

- Request Header:

```
X-Auth-Token: LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type: application/json
```

- Request Message Body:

→ Configure the hostname information:

```
{
  "HostNameConfig": {
    "HostName": "iSACAA621D33E326",
    "HostSetting": "manu"
  }
}
```

→ Configure the DNS IP information:

```
{
  "DnsIpConfig": {
    "DnsDhcpEnable": "manu",
    "DnsEnable": true,
    "NameServers": ["192.168.1.1", "192.168.1.2", "2001:db8::1"]
  }
}
```

→ Configure the domain name information:

```
{
  "DomainConfig": {
    "DomainName": "DomainName.com.cn"
  }
}
```

→ Register the BMC:

```
{
  "RegisterBMC": "hostname"
}
```

- Response Example: None

- Response code: 204

Output Description

None

Chapter 5

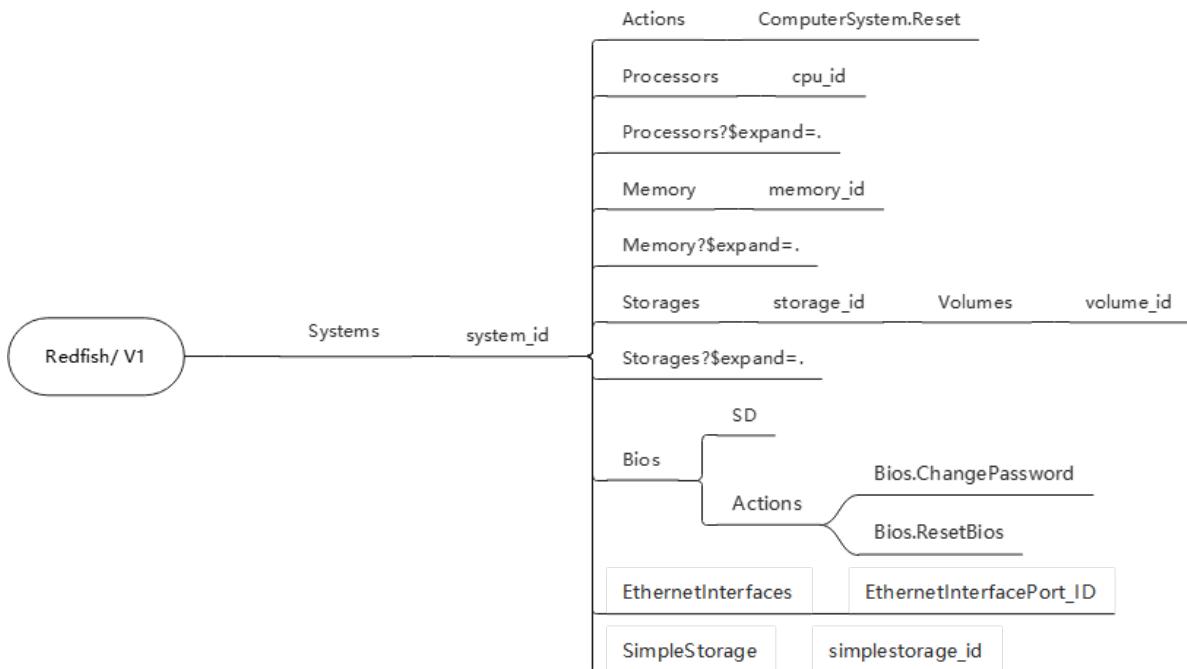
Operations on System Resources

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[Figure 5-1](#) shows the path requirements for the Systems resources supported by VANTAGEO servers.

Figure 5-1 Systems Resource Path Requirements



For a description of the properties of System resources and the operations supported by the properties, refer to [Table 5-1](#).

Table 5-1 Descriptions of System Resource Properties

URL	Property	Description	Operation
/redfish/v1/Systems	Name	Name of the System resource collection.	GET
	Members@odata.count	Number of System resource members.	GET
	Members	System resource list, which provides references for all System resource URLs.	GET
/redfish/v1/Systems/system_id	Actions	Operations that can be performed for the specified system resource through the Redfish interface.	GET
	#ComputerSystem.Reset	OS operation.	GET
	target	Access path of the restart operation attribute.	GET
	ResetType@Redfish.AllowableValues	OS operations allowed through the Redfish interface.	GET

URL	Property	Description	Operation
	AssetTag	Asset tag of the specified System resource.	GET
	BiosVersion	BIOS versions of the specified System resource.	GET
	Boot	Boot parameters of the specified System resource.	GET
	BootSourceOverrideEnabled	State of the boot source override feature of the system.	GET
	BootSourceOverrideMode	Boot mode to use when the system boots from the BootSourceOverrideTarget` boot source.	GET
	BootSourceOverrideTarget	Current boot source used by the system at the next boot instead of the normal boot device, if `BootSourceOverrideEnabled` does not contain `Disabled`.	GET
	BootSourceOverrideEnabled@Redfish.AllowableValues	Allowable states of the boot source override feature of the system.	GET
	BootSourceOverrideMode@Redfish.AllowableValues	Allowable boot modes of the system.	GET
	BootSourceOverrideTarget@Redfish.AllowableValues	Allowable boot sources defined by Redfish.	GET
	Description	Description of the specified system resource.	GET
	EthernetInterfaces	Access path of the Ethernet interfaces of the host.	GET
	HostName	Name of the specified System resource.	GET
	Id	ID of a specified System resource.	GET
	IndicatorLED	Position indicator status of the specified drive.	GET
	Links	Resources link.	GET
	Chassis	Access path of the chassis resource node.	GET

URL	Property	Description	Operation
	CooledBy	Access path of the fan resource node.	GET
	ManagedBy	Access path of the Manager resource node.	GET
	PoweredBy	Access path of the power resource.	GET
	LogServices	Access path of the log service resource node.	GET
	Manufacturer	Manufacturer of the specified System resource.	GET
	Memory	Memory properties of the specified System resource.	GET
	MemoryDomains	V3 field.	GET
	Model	Model of the specified System resource.	GET
	Name	Name of the specified System resource.	GET
	NetworkInterfaces	Access path of the network interfaces.	GET
	Oem.Public	Customized properties of the System resource.	GET
	CPUUsagePercent	Dynamic CPU usage detected by CUPS.	GET
	IOUsagePercent	Dynamic I/O usage detected by CUPS.	GET
	MemoryUsagePercent	Dynamic memory usage detected by CUPS.	GET
	PowerOnDelayEnabled	Whether power-on delay is enabled.	GET
	PowerOnDelayMode	Power-on delay mode.	GET
	PowerOnDelaySeconds	Power-on delay.	GET
	PowerOnStrategy	Power-on policy.	GET
	ConfigurationModel	Year + typical configuration model. The configuration value must be in dictionary format.	GET
	ProductSpecificIdentity	Internally defined product name.	GET

URL	Property	Description	Operation
	BiosVersionDate	BIOS version date.	GET
	ProductVersion	Product version.	GET
	ProductName	Product name.	GET
	ProductExtra	Additional product information.	GET
	PartNumber	Part number of the specified system resource.	GET
	PowerState	Power-on status of the specified System resource.	GET
	Processors	CPU properties of the specified System resource.	GET
	SerialNumber	Serial number of the specified System resource.	GET
	Status	Status of the specified System resource.	GET
	Storage	Access path of the storage resource node.	GET
	Storages	Access path of the storage resource node.	GET
	UUID	UID of the specified System resource.	GET
	Bios	Access path of the BIOS function resource node.	GET
	DiskIndex	Disk partition number.	GET
	PartitionName	Disk partition name.	GET
	TotalCapacityGB	Total capacity of a disk partition.	GET
	UsagePercent	Usage of a disk partition in percentage.	GET
	CmccVersion	China Mobile version number.	GET
	code	ID of the specified message in the message registry.	PATCH
	message	Readable message for the code in the message registry.	PATCH
	Messageld	Message ID.	PATCH

URL	Property	Description	Operation
	Message	Details.	PATCH
	Severity	Severity level.	PATCH
	Resolution	Recommended solution.	PATCH
/redfish/v1/Sys-tems/system_id/Actions/ComputerSystem.Reset	code	ID of the specified message in the message registry.	POST
	message	Readable message for the code in the message registry.	POST
	MessageId	Message ID.	POST
	Message	Details.	POST
	Severity	Severity level.	POST
	Resolution	Recommended solution.	POST
/redfish/v1/Systems/sys-tem_id/Processors	Name	Name of the CPU resource collection.	GET
	Members@odata.count	Number of CPU resource members.	GET
	Members	CPU resource list, which provides references for all CPU resource URL s.	GET
/redfish/v1/Systems/sys-tem_id/Proces-sors/cpu_id	Name	CPU name.	GET
	Id	UID of CPU in the iBMC system.	GET
	InstructionSet	Instruction set of the specified CPU resource.	GET
	ProcessorArchitecture	CPU architecture.	GET
	Manufacturer	CPU manufacturer.	GET
	Model	CPU type.	GET
	MaxSpeedMHz	Maximum CPU speed.	GET
	TotalCores	Total number of CPU cores.	GET
	TotalThreads	Total number of CPU threads.	GET
	Socket	CPU socket ID.	GET
	Status	CPU status.	GET
	Oem.Public	Customized properties of the CPU resource.	GET

URL	Property	Description	Operation
/redfish/v1/Systems/system_id/Processors?\$expand=.	L1CacheKiB	Level I cache of the specified CPU resource.	GET
	L2CacheKiB	Level II cache of the specified CPU resource.	GET
	L3CacheKiB	Level III cache of the specified CPU resource.	GET
	FrequencyMHz	Frequency of the specified CPU resource.	GET
	SerialNumber	Serial number of the specified CPU resource.	GET
	OperatingSpeedMHz	Current rate of the specified CPU resource.	GET
	TDPWatts	TDP (W) of the specified CPU resource.	GET
	Voltage	Voltage of the specified CPU resource.	GET
/redfish/v1/Systems/system_id/Memory	Name	Name of the CPU resource collection.	GET
	Members@odata.count	Number of CPU resource members.	GET
	Members	Information about all CPU resources.	GET
/redfish/v1/Systems/system_id/Memory/memory_id	Name	Name of the memory resource collection.	GET
	Members@odata.count	Number of memory resource members.	GET
	Members	Memory resource list, which provides references for all memory resource URLs.	GET
	Id	ID of the specified memory resource.	GET
	Name	Name of the specified memory resource.	GET
	AllowedSpeedsMHz	Maximum frequency of the specified memory resource, unit: MHz.	GET
	CapacityMiB	Capacity of the specified memory resource.	GET

URL	Property	Description	Operation
	Manufacturer	Manufacturer of the specified memory resource.	GET
	OperatingSpeedMhz	Speed of the specified memory resource.	GET
	SerialNumber	Serial number of the specified memory resource.	GET
	MemoryDeviceType	Type of the specified memory resource.	GET
	DataWidthBits	Data bandwidth of the specified memory resource.	GET
	RankCount	Number of ranks of the specified memory resource.	GET
	PartNumber	Part number of the specified memory resource.	GET
	DeviceLocator	Screen printing of the specified memory resource.	GET
	BaseModuleType	Basic module type of the specified memory resource.	GET
	MemoryLocation	Location of the specified memory resource.	GET
	Socket	Slot ID of the CPU of the specified memory resource.	GET
	Controller	Controller ID of the specified memory resource.	GET
	Channel	Channel ID of the specified memory resource.	GET
	Slot	Slot ID of the specified memory resource.	GET
	Status	Status of the specified memory resource.	GET
	Oem.Public	-	GET
	VoltageVolt	Voltage of the specified memory resource, unit: Volt.	GET
/redfish/v1/ Systems/sys-	Name	Name of the memory resource collection.	GET

URL	Property	Description	Operation
/mem_id/Memory?\$expand=.	Members@odata.count	Number of current memory resources.	GET
	Members	Information about all memory resources.	GET
/redfish/v1/Systems/system_id/Storages	Name	Name of the storage resource collection.	GET
	Members@odata.count	Number of storage resource members.	GET
	Members	Storage resource list, which provides references for all storage resource URLs.	GET
/redfish/v1/Systems/system_id/Storages/storage_id	Drives	Drive list managed by the specified storage controller.	GET
	Drives@odata.count	Number of drives managed by the storage controller.	GET
	Name	Name of the specified storage resource.	GET
	StorageControllers	Information about the storage controllers.	GET
	Name	Name of a storage controller.	GET
	MemberId	ID of the specified storage controller.	
	SpeedGbps	Interface speed of the storage controller.	GET
	FirmwareVersion	Firmware version of the storage controller.	GET
	Model	Model of the storage controller.	GET
	SupportedDeviceProtocols	Protocol type supported by the storage controller.	GET
	Manufacturer	Manufacturer of the storage controller.	GET
	CardManufacturer	Manufacturer of the specified storage controller.	GET
	CardModel	Model of the specified storage controller.	GET

URL	Property	Description	Operation
/redfish/v1/Systems/system_id/Storages?\$expand=.	Oem.Public	Manufacturer-customized properties.	GET
	MemorySizeMiB	Memory size of the specified storage controller.	GET
	CapacitanceStatus	BBU status of the specified storage controller. ● Health: BBU health status ● State: BBU presence status	GET
	Drives@odata.count	Number of drives managed by the storage controller.	GET
	Drives	Drive list.	GET
	Status	Status of the storage controller.	GET
	Description	Information about the specified storage controller.	GET
/redfish/v1/Systems/system_id/Storages/stor-age_id/Volumes	Name	Name of the storage resource collection.	GET
	Members@odata.count	Number of current storage resources.	GET
	Members	Storage resource list. The information about all storage controller resources is displayed.	GET
/redfish/v1/Systems/system_id/Storages/stor-age_id/Volumes	Name	Name of the logical volume resource collection.	GET
	Members@odata.count	Number of logical volume resource members.	GET
	Members	Logical volume resource list.	GET
	code	ID of the specified message in the message registry.	POST
	message	Readable message for the code in the message registry.	POST
	MessageId	Message ID.	POST
	RelatedProperties	Message-related properties.	POST
	Message	Details.	POST
	MessageArgs	Message arguments.	POST
	Severity	Severity level.	POST

URL	Property	Description	Operation
	Resolution	Recommended solution.	POST
/redfish/v1/ Systems/sys- tem_id/Stor- ages/stor- age_id/Volumes/vol- ume_id	Name	Name of a logical volume.	GET
	Id	ID of the specified logical volume ID.	GET
	VolumeType	Redundancy type of the logical vol- ume.	GET
	CapacityBytes	Capacity of the logical volume.	GET
	OptimumIOSizeBytes	Stripe size of the logical volume.	GET
	Links	Member logical volume list.	GET
	Drives	Drive list managed by the specified storage controller.	GET
	Drives@odata.count	Number of member physical disks in- cluded in the RAID .	GET
	Status	Status of the specified logical volume resource.	GET
	Oem.Public	Customized logical volume informa- tion.	GET
	RaidControllerID	Controller ID of the logical volume.	GET
	VolumeRaidLevel	RAID level of the logical volume.	GET
	DriveCachePolicy	Hard disk cache policy.	GET
	NumDrive	Number of physical disk members.	GET
	ReadPolicy	Read policy of the logical volume.	GET
	WritePolicy	Write policy of the logical volume.	GET
	AccessPolicy	Access policy of the logical volume.	GET
	IoPolicy	IO policy of the logical volume.	GET
	VolumeName	Name of the logical volume.	GET
	State	Status of the logical volume.	GET
	NumDriveperspan	Number of drive members in a span.	GET
	SpanNumber	Number of spans of a volume.	GET
	@Redfish.OperationApply- TimeSupport	Application time of the resource cre- ation, deletion, or operation request- ed by the logical disk through the OperationApplyTime item.	GET

URL	Property	Description	Operation
/redfish/v1/Systems/system_id/MessageRegistry	RAIDType	RAID level of the logical volume.	GET
	code	ID of the specified message in the message registry.	DELETE
	message	Readable message for the code in the message registry.	DELETE
	MessageId	Message ID.	DELETE
	RelatedProperties	Message-related properties.	DELETE
	MessageArgs	Message arguments.	DELETE
	Message	Details.	GET
	Severity	Severity level.	DELETE
	Resolution	Recommended solution.	DELETE
/redfish/v1/Systems/system_id/Bios	Id	ID of the BIOS resource.	GET
	Name	Name of the BIOS resource.	GET
	AttributeRegistry	Registry resource ID for BIOS properties.	GET
	Attributes	BIOS property list.	GET
	@Redfish.Settings	Information about the BIOS setting resource.	GET
/redfish/v1/Systems/system_id/Bios/SD	Id	ID of the BIOS setting resource.	GET
	Name	Name of the BIOS setting resource.	GET
	AttributeRegistry	Registry resource ID for BIOS properties.	GET
	Attributes	Property list of the current BIOS setting resource.	GET/PATCH
	@Redfish.Settings	Information about BIOS settings.	GET
/redfish/v1/Systems/system_id/EthernetInterfaces	Description	Description of the Ethernet interface resource collection.	GET
	Name	Name of the Ethernet interface resource collection.	GET
	Members@odata.count	Number of Ethernet interface resources.	GET
	Members	Ethernet interface resource list.	GET

URL	Property	Description	Operation
/redfish/v1/Sys-tems/system_id/EthernetInterfaces/EthernetInterface-Port_ID	AutoNeg	Whether auto-negotiation is used.	GET
	Description	Position information about an Ethernet interface.	GET
	FullDuplex	Whether full duplex mode is used.	GET
	Id	Name of the Ethernet interface resource.	GET
	LinkStatus	Link status.	GET
	MACAddress	MAC address of the Ethernet interface.	GET
	PermanentMACAddress	Fixed MAC address of the Ethernet interface.	GET
	SpeedMbps	Current speed.	GET
	Health	Link quality.	GET
/redfish/v1/Systems/sys-tem_id/Memo-rySummary	Description	System memory information description.	GET
	Name	System memory resource name.	GET
	TotalSystemMemoryGiB	Total accessible memory (RAM) of the operating system, unit: GiB.	GET
/redfish/v1/Systems/sys-tem_id/Proces-sorSummary	Name	Name of the CPU resource collection.	GET
	Description	Name of the CPU resource collection.	GET
	Count	Number of CPUs.	GET
	CoreCount	Total number of CPU cores.	GET
	Model	CPU model of the system.	GET
/redfish/v1/Systems/sys-tem_id/IndicatorLED	Name	System indicator name.	GET
	Description	System indicator description.	GET
	IndicatorLED	System indicator status.	GET
/redfish/v1/Systems/sys-	Name	Name of the SimpleStorage resource collection.	GET

URL	Property	Description	Operation
tem_id/SimpleStorage	Members@odata.count	Number of SimpleStorage resources.	GET
	Members	SimpleStorage resource list.	GET
/redfish/v1/Systems/sys-tem_id/SimpleStorage/simplestor-age_id	Name	Name of the specified SimpleStorage resource.	GET
	Devices	Hard disk resource list.	GET
	CapacityBytes	Capacity of a hard disk.	GET
	Manufacturer	Manufacturer of a hard disk.	GET
	Model	Model of a hard disk.	GET
	Name	Name of a hard disk.	GET
	Status	Status of a hard disk.	GET

5.1 Querying Information About the System Resource Collection

Function

Query information about the current System resource collection of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
- URL: https://device_ip/redfish/v1/Systems
- Request Header:

X-Auth-Token: auth_value

- Request Message Body: None

Parameters

For a description of the parameters for querying information about the System resource collection, refer to [Table 5-2](#).

Table 5-2 Parameter Descriptions for Querying Information About the System Resource Collection

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.

Parameter	Description	Value
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .

Usage Guidelines

None

Example

- Request Example:

```
GET https://device_ip/redfish/v1/Systems
```

- Request Header:

```
x-auth-token:QnaWfqvKOY0ZGc2LK5Ay6+CaSYWjEYcxE6GcWKNFyjU=
```

- Request Message Body: None
- Response Example:

```
{
    "@odata.context": 
        "/redfish/v1/$metadata#ComputerSystemCollection.ComputerSystemCollection",
    "@odata.id": "/redfish/v1/systems",
    "@odata.type": "#ComputerSystemCollection.ComputerSystemCollection",
    "Description": "Collection of Computer Systems",
    "Members": [
        {
            "@odata.id": "/redfish/v1/systems/1"
        }
    ],
    "Members@odata.count": 1,
    "Name": "Systems Collection"
}
```

- Status Code: 200

Output Description

For a description of the output returned when you query information about the System resource collection, refer to [Table 5-3](#).

Table 5-3 Output Descriptions for Querying Information About the System resource Collection

Field	Type	Description
@odata.context	String	OData description of the System resource collection model.
@odata.id	String	Access path of the System resource collection.
@odata.type	String	Type of System resource collection.
Description	Character string	Description of the system resource collection.
Name	String	Name of the System resource collection.
Members@odata.count	Number	Number of System resource members.
Members	Object	System resource list.
@odata.id	String	Access path of a single System resource node.

5.2 Querying Information About a Specified System Resource

Function

Query information about a specified System resource of a server.



Only the System resource information about the server itself can be queried.

Permission Required

Query.

Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Systems/system_id`
- Request Header:

X-Auth-Token: auth_value

- Request Message Body: None

Parameters

For a description of the parameters for querying information about the specified System resource, refer to [Table 5-4](#).

Table 5-4 Parameter Descriptions for Querying Information About the Specified System Resource

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .

Usage Guidelines

None

Example

- Request Example:

GET https://device_ip/redfish/v1/Systems/1

- Request Header:

x-auth-token:QnaWfqvKOY0ZGc2LK5Ay6+CaSYWjEYcxE6GcWKNFyjU=

- Request Message Body: None

- Response Example:

```
"Boot": {
    "BootSourceOverrideEnabled": "Continuous",
    "BootSourceOverrideMode": "UEFI",
    "BootSourceOverrideTarget": "Hdd",
    "BootSourceOverrideEnabled@Redfish.AllowableValues": [
        "Once",
        "Continuous"
    ],
    "BootSourceOverrideMode@Redfish.AllowableValues": [
        "No Override",
        "Legacy",
        "UEFI"
    ],
    "BootSourceOverrideTarget@Redfish.AllowableValues": [
        "None",
        "Pxe",
        "Cd",
        "Floppy",
        "Hdd",
        "BiosSetup"
    ]
},
"Description": "System 1",
"EthernetInterfaces": {
    "@odata.id": "/redfish/v1/systems/1/EthernetInterfaces"
},
"HostName": "iSACE2814D77795F",
"Id": "1",
"IndicatorLED": "Blinking",
"Links": {
    "Chassis": [
        {
            "@odata.id": "/redfish/v1/Chassis/1"
        }
    ],
    "CooledBy": [
        {
            "@odata.id": "/redfish/v1/Chassis/1/Thermal"
        }
    ],
    "ManagedBy": [
        {
            "@odata.id": "/redfish/v1/Managers/1"
        }
    ]
}
```

```
        ],
        "PoweredBy": [
            {
                "@odata.id": "/redfish/v1/Chassis/1/Power"
            }
        ]
    },
    "Manufacturer": "VANTAGEO",
    "Memory": {
        "@odata.id": "/redfish/v1/Systems/1/Memory"
    },
    "MemorySummary": {
        "TotalSystemMemoryGiB" : 120
    },
    "Model": "",
    "Name": "System",
    "NetworkInterfaces": {
        "@odata.id": "/redfish/v1/Systems/1/NetworkInterfaces"
    },
    "Oem": {
        "Public": {
            "CPUUsagePercent": 0,
            "CmccVersion": "2023v1",
            "IOUsagePercent": 0,
            "MemoryUsagePercent": 0,
            "PowerOnDelayEnabled": true,
            "PowerOnDelayMode": "RandomDelay",
            "PowerOnDelaySeconds": 120,
            "PowerOnStrategy": "RestorePreviousState",
            "ConfigurationModel": "20220905",
            "ProductSpecificIdentity": "2240-RE,Intel", "BiosVersionDate": "Dec 12
2012",
            "ProductVersion": "?/",
            "ProductName": "a6",
            "ProductExtra": "q6n dtHigUcl2TK6npw6HSjKEijiuQE
5H791PvoffbKxe2f6f8j5qjxmy2Pe6J4fzaFbmwMojynG
5nocSqPD bnYEV76KGxa2bmqFJOBW8XY7joa0MJOK
PeDtEokxqq7R3law1S68nToF1hGey9fcX03hH9532Rjv
uuu8tYn7p 5QwE9s48wL3gVCP3yw6mCv7lHXoM2VQ
N201GWAvx9f2c2MHCWk7DxBdH2qbcFyhqpipiWFH7
8MNvow15hu5go29vKrpLk",
            "PartitionLists": [
                {
                    "DiskIndex": 1,
```

```
        "PartitionName": "/",
        "UsagePercent": 13,
        "TotalCapacityGB": 50
    },
    {
        "DiskIndex": 2,
        "PartitionName": "/boot",
        "UsagePercent": 17,
        "TotalCapacityGB": 1
    },
    {
        "DiskIndex": 3,
        "PartitionName": "/boot/efi",
        "UsagePercent": 5,
        "TotalCapacityGB": 0.2
    },
    {
        "DiskIndex": 4,
        "PartitionName": "/home",
        "UsagePercent": 0,
        "TotalCapacityGB": 2896.9
    }
]
},
{
    "PartNumber": "",
    "PowerState": "On",
    "Processors": {
        "@odata.id": "/redfish/v1/Systems/1/Processors"
    },
    "SerialNumber": "",
    "SimpleStorage": {
        "@odata.id": "/redfish/v1/Systems/1/simplestorage"
    },
    "Status": {
        "Health": "OK",
        "State": "Enabled"
    },
    "Storage": {
        "@odata.id": "/redfish/v1/Systems/1/Storage"
    },
    "Storages": {
        "@odata.id": "/redfish/v1/Systems/1/Storages"
    },
}
```

```

    "SystemType": "Physical",
    "UUID": "30e72400-0000-1000-0000-000000000000",
    "ProcessorSummary": {
        "Count": 0,
        "CoreCount": 0,
        "Model": null
    },
    "Bios": {
        "@odata.id": "/redfish/v1/systems/1/Bios"
    }
}

```

- Status Code: 200

Output Description

For a description of the output returned when you query information about the specified Manager resource, refer to [Table 5-5](#).

Table 5-5 Output Descriptions for Querying Information About the Specified Manager Resource

Field	Type	Description
@odata.context	String	OData description of the specified System resource model.
@odata.id	String	Access path of the specified System resource.
@odata.type	String	Type of System resource.
Actions	Object	Operations that can be performed for the specified System resource through the Redfish interface.
#ComputerSystem.Reset.target	String	Access path of the restart operation properties.
ResetType@Redfish.AllowableValues	Array	OS operations allowed through the Redfish interface, including: <ul style="list-style-type: none"> ● On ● ForceOff ● GracefulShutdown ● ForceRestart ● ForcePowerCycle ● Nmi
AssetTag	String	Asset tag of the specified System resource.

Field	Type	Description
BiosVersion	String	BIOS version of the specified System resource.
Boot	Object	Boot parameters of the specified System resource.
BootSourceOverrideEnabled	String	Mode for applying the current boot settings of the System.
BootSourceOverrideMode	String	System boot mode.
BootSourceOverrideTarget	String	Current boot source of the system.
BootSourceOverrideEnabled@Redfish.AllowableValues	Array	Options of the mode for applying the current boot settings of the System, including: <ul style="list-style-type: none">● Once: effective only once● Continuous: effective permanently
BootSourceOverrideMode@Redfish.AllowableValues	Array	Allowable boot modes of the system. Options: <ul style="list-style-type: none">● Legacy● UEFI
BootSourceOverrideTarget@Redfish.AllowableValues	Array	Range of the boot devices defined by Redfish, including: <ul style="list-style-type: none">● None● PXE● Floppy● CD● HDD● BiosSetup
Description	String	Description of the specified System resource.
EthernetInterfaces	Object	Access path of the Ethernet interfaces of the host.
HostName	String	Hostname of the specified System resource.
Id	String	ID of the specified System resource.
IndicatorLED	String	Position indicator status of the specified Chassis resource, including:
Links	Object	System resource links.
Chassis	Array	Access path of the Chassis resource node.

Field	Type	Description
CooledBy	Array	Access path of the fan resource node.
ManagedBy	Array	Access path of the Manager resource node.
PoweredBy	Array	Access path of the power resource.
Manufacturer	String	Manufacturer of the specified System resource.
Memory	Object	Access path of the memory resource node.
MemoryDomains	Object	V3 field.
Model	String	Model of the specified System resource.
Name	String	Name of the specified System resource.
NetworkInterfaces	Object	Access path of the network interfaces.
Oem.Public	Object	Customized properties.
CPUUsagePercent	Number	Dynamic CPU usage detected by CUPS.
IOUsagePercent	Number	Dynamic I/O usage detected by CUPS.
MemoryUsagePercent	Number	Dynamic memory usage detected by CUPS.
PowerOnDelayEnabled	Boolean	Whether to enable power-on delay: <ul style="list-style-type: none"> • true • false
PowerOnDelayMode	String	Power-on delay mode: <ul style="list-style-type: none"> • CustomDelay: custom delay mode. • RandomDelay: random delay mode.
PowerOnDelaySeconds	Number	Power-on delay.
PowerOnStrategy	String	Power-on policy upon power loss. <ul style="list-style-type: none"> • TurnOn: stays on. • StayOff: stays off. • RestorePreviousState: same as before.
ConfigurationModel	String	Year + typical configuration model. The configuration value must be in dictionary format.
ProductSpecificIdentity	String	Internally defined product name.
BiosVersionDate	String	BIOS version date.

Field	Type	Description
ProductVersion	String	Product version.
ProductName	String	Product name.
ProductExtra	String	Additional product information.
PartNumber	String	Part number of the specified System resource.
PowerState	String	Power-on status of the specified System resource: <ul style="list-style-type: none">● On● Off
Processors	Object	Access path of the processor resource node.
SerialNumber	String	Serial number of the specified System resource.
SimpleStorage	String	Access path of the SimpleStorage resource node.
Status	Object	Status of the specified System resource: <ul style="list-style-type: none">● Health: The System resource is healthy.● Status: The System resource is enabled.
Storage	Object	Access path of the storage resource node.
Storages	Object	Access path of the storage resource node.
SystemType	String	System type of the specified system resource.
UUID	String	Globally unique ID of the specified System resource.
Bios	Object	Access path of the BIOS resource node.
PartitionLists.DiskIndex	Number	Disk partition number.
PartitionLists.PartitionName	String	Disk partition name.
PartitionLists.UsagePercent	Number	Disk partition usage.
PartitionLists.TotalCapacityGB	Number	Total disk partition capacity.
ProcessorSummary	Object	Processor summary.
Count	Number	Number of CPUs.

Field	Type	Description
CoreCount	Number	Total number of CPU cores.
Model	String	CPU model.

5.3 Remotely Powering On, Powering Off, and Resetting a System Resource

Function

Remotely power on, power off, and reset a System resource.

Permission Required

Power control

Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/Systems/system_id/Actions/ComputerSystem.Reset`
- Request Header:

```
Content-Type: header_type
X-Auth-Token: auth_value
```

- Request Message Body:

```
{
  "ResetType": value
}
```

Parameters

For a description of the parameters for remote operations, refer to [Table 5-6](#).

Table 5-6 Parameter Descriptions for Remote Operations

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the POST request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .
header_type	Format of the request message.	application/json
value	Operation type.	<ul style="list-style-type: none"> On: power-on

Parameter	Description	Value
		<ul style="list-style-type: none"> ● ForceOff: forcible power-off ● GracefulShutdown: normal power-off ● ForceRestart: forcible reboot ● ForcePowerCycle: forcible power-off and power-on

Usage Guidelines

When the setting is completed, you can query the "PowerState" field in the specified System resource to view the [OS](#) power-on or power-off status.

Example

- Request Example:

```
POST https://device_ip/redfish/v1/Systems/1/Actions/ComputerSystem.Reset
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234e
Content-Type: application/json
```

- Request Message Body:

```
{
    "ResetType": "On"
}
```

- Response Example:

```
{
    "error": {
        "code": "Base.1.8.1.Success",
        "message": "Successfully Completed Request",
        "@Message.ExtendedInfo": [
            {
                "@odata.type": "#Message.v1_1_1.Message",
                "MessageId": "Base.1.8.1.Success",
                "Message": "Successfully Completed Request",
                "Severity": "OK",
                "Resolution": "None."
            }
        ]
    }
}
```

- Status Code: 200

Output Description

For a description of the output returned when you perform a remote operation, refer to [Table 5-7](#).

Table 5-7 Output Descriptions for Remote Operations

Field	Type	Description
code	String	ID of the specified message in the message registry.
message	String	Readable message for the code in the message registry.
@odata.type	String	OData description of the message resource.
MessageId	String	Message ID.
Message	String	Message details.
Severity	String	Severity level supported by the Redfish interface. Options: <ul style="list-style-type: none">● OK● Warning● Critical
Resolution	String	Solution.

5.4 Modifying Properties of a Specified System Resource

Function

Modify properties of a specified System resource, including the asset number, host name, and typical configuration model.

Permission Required

Basic management.

Syntax

- Operation Type: PATCH
- **URL:** `https://device_ip/redfish/v1/Systems/system_id`
- Request Header:

Content-Type: header_type
X-Auth-Token: auth_value

- Request Message Body:

{

```

    "AssetTag": tag,
    "HostName": name,
    "Oem": {
        "Public": {
            "ConfigurationModel": model,
            "PowerOnDelayEnabled": powerondealy_enable,
            "PowerOnDelayMode": powerondelay_mode,
            "PowerOnDelaySeconds": powerondealy_seconds,
            "CmccVersion": cmcc_version,
            "PowerOnStrategy": poweron_strategy
        }
    },
    "Boot": {
        "BootSourceOverrideMode": bootsourceoverride_mode,
        "BootSourceOverrideEnabled": bootsourceoverride_state,
        "BootSourceOverrideTarget": bootsourceoverride_target
    }
}

```

Parameters

For a description of the parameters for properties of the specified System resource, refer to [Table 5-8](#).

Table 5-8 Parameter Descriptions for Properties of the Specified System Resource

Parameter	Description	Value
tag	Customized asset tags.	<ul style="list-style-type: none"> Length: 2–63 characters. Consists of digits or letters, case-sensitive. Allowed special characters: hyphen, underscore, space, and at (@). The tag cannot start or end with a hyphen, an underscore, or a space.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the PATCH request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .
header_type	Format of the request message.	application/json
tag	Customized asset tag.	<ul style="list-style-type: none"> Length: 2–63 characters. Consists of digits or letters, case-sensitive. Allowed special characters: hyphen, underscore, space, and at (@). The tag

Parameter	Description	Value
		cannot start or end with a hyphen, an underscore, or a space.
name	Customized host name.	<ul style="list-style-type: none"> The length cannot exceed 63 characters. The name can only contain letters, digits, and the minus signs. No blank or space is allowed. The name is not case-sensitive. The first character must be a letter, and the last character cannot be a minus sign.
model	Customized typical configuration model.	Year + typical configuration model. The configuration value must be in dictionary format, for example 2019C1, and the string length is 1–63.
powerondealy_enable	Whether to enable power-on delay:	<ul style="list-style-type: none"> true false
powerondeelay_mode	Power-on delay mode:	<ul style="list-style-type: none"> RandomDelay: random delay mode. CustomDelay: custom delay mode.
powerondealy_seconds	Delay duration.	Delay duration, range: 1–120 s.
bootsourceoverride_mode	Boot mode.	<ul style="list-style-type: none"> No Override Legacy UEFI <p>The server configured with the ARM processor does not support legacy mode.</p>
bootsourceoverride_state	Mode for applying the boot settings.	<ul style="list-style-type: none"> Once: effective only once Continuous: effective permanently
bootsourceoverride_target	Type of boot mode.	Boot devices defined by Redfish: <ul style="list-style-type: none"> None: no override Pxe: network Cd: CD-ROM Floppy: Usb Hdd: hard disk BiosSetup: BIOS RemotelyHdd: volume.
poweron_strategy	Power-on policy.	<ul style="list-style-type: none"> TurnOn: stays on. StayOff: stays off. RestorePreviousState: same as before.

Usage Guidelines

In the setting results, the "AssetTag," "HostName", and "ConfigurationModel" fields in the specified system resource information can be queried to verify the setting results.

Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Systems/1
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234e
```

```
Content-Type: application/json
```

- Request Message Body:

```
{
    "AssetTag": "zichanbiaoqian-001",
    "HostName": "isAC-20221022",
    "Oem": {
        "Public": {
            "ConfigurationModel": "2022C2",
            "PowerOnDelayEnabled": true,
            "PowerOnDelayMode": "CustomDelay",
            "PowerOnDelaySeconds": 100,
            "CmccVersion": "2023V1",
            "PoweronStrategy": "RestorePreviousState"
        }
    },
    "Boot": {
        "BootSourceOverrideMode": "Legacy",
        "BootSourceOverrideEnabled": "Continuous",
        "BootSourceOverrideTarget": "Pxe"
    }
}
```

→ Separate asset tag configuration:

```
{
    "AssetTag": "zichanbiaoqian-001"
}
```

→ Separate hostname configuration:

```
{
    "HostName": "isAC-20221022"
}
```

```
}
```

- Separate typical configuration model configuration:

```
{
    "Oem": {
        "Public": {
            "ConfigurationModel": "2022C2"
        }
    }
}
```

- Separate typical configuration model configuration:

```
{
    "Oem": {
        "Public": {
            "PowerOnDelayEnabled": true,
            "PowerOnDelayMode": "CustomDelay",
            "PowerOnDelaySeconds": 100
        }
    }
}
```

- Separate power-on delay configuration:

```
{
    "Boot": {
        "BootSourceOverrideMode": "Legacy",
        "BootSourceOverrideEnabled": "Continuous",
        "BootSourceOverrideTarget": "Pxe"
    }
}
```

- Response Example: response of the **GET redfish/v1/Systems/system_id** interface. For details, refer to [5.2 Querying Information About a Specified System Resource](#).
- Status Code: 200

Output Description

None

5.5 Querying Information About the CPU Resource Collection

Function

Query information about the **CPU** resource collection of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
 - URL: *https://device_ip/redfish/v1/Systems/system_id/Processors*
 - Request Header:
- X-Auth-Token: auth_value
- Request Message Body: None

Parameters

For a description of the parameters for querying information about the CPU resource collection, refer to [Table 5-9](#).

Table 5-9 Parameter Descriptions for Querying Information About the CPU Resource Collection

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <i>/redfish/v1/SessionService/Sessions</i> .

Usage Guidelines

None

Example

- Request Example:

GET https://device_ip/redfish/v1/Systems/1/Processors

- Request Header:

X-Auth-Token: 8574621d21b84756218c7456821c234

- Request Message Body: None
- Response Example:

```
{
  "@odata.context": "/redfish/v1/$metadata#ProcessorCollection.ProcessorCollection",
  "Name": "ProcessorCollection"
}
```

```

"@odata.id": "/redfish/v1/Systems/1/Processors",
"@odata.type": "#ProcessorCollection.ProcessorCollection",
"Description": "Collection of processors for this system",
"Name": "Processors Collection",
"Members@odata.count": 2,
"Members": [
    {
        "@odata.id": "/redfish/v1/Systems/1/Processors/0"
    },
    {
        "@odata.id": "/redfish/v1/Systems/1/Processors/1"
    }
]
}

```

- Status Code: 200

Output Description

For a description of the output returned when you query information about the CPU resource collection, refer to [Table 5-10](#).

Table 5-10 Output Descriptions for Querying Information About the CPU Resource Collection

Field	Type	Description
@odata.context	String	OData description of the CPU resource collection model.
@odata.id	String	Access path of the CPU resource collection.
@odata.type	String	Type of CPU resource collection.
Description	Character string	Description of the CPU resource collection.
Name	String	Name of the CPU resource collection.
Members@odata.count	Number	Number of CPU resource members.
Members	Array	CPU resource list.
@odata.id	String	Access path of a single CPU resource node.

5.6 Querying Information About a Specified CPU Resource

Function

Query information about a specified [CPU](#) resource of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Systems/system_id/Processors/cpu_id`
- Request Header:

X-Auth-Token: auth_value
- Request Message Body: None

Parameters

For a description of the parameters for querying information about the specified CPU resources, refer to [Table 5-11](#).

Table 5-11 Parameter Descriptions for Querying Information About the Specified CPU Resource

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resources.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .
cpu_id	ID of the CPU resource.	It can be obtained from the CPU resource collection.

Usage Guidelines

None

Example

- Request Example:

GET : `https://device_ip/redfish/v1/Systems/1/Processors/0`

- Request Header:

X-Auth-Token: 8574621d21b84756218c7456821c234

- Request Message Body: None
- Response Example:

```
{
  "@odata.context": "/redfish/v1/$metadata#Processor.Processor",
```

```

"@odata.id": "/redfish/v1/Systems/1/Processors/0",
"@odata.type": "#Processor.v1_10_0.Processor",
"Name": "Intel Processor 1",
"Id": "1",
"InstructionSet": "x86,x86-64",
"Manufacturer": "Intel(R) Corporation",
"MaxSpeedMHz": 3600,
"Model": "Genuine Intel(R) CPU 0000%@",
"Oem": {
    "Public": {
        "FrequencyMHz": 1700,
        "L1CacheKib": 4480,
        "L2CacheKib": 114688,
        "L3CacheKib": 107520,
        "SerialNumber": "2F8A6BEB959A73D6",
        "Voltage": "1.6"
    }
},
"OperatingSpeedMHz": 2000,
"ProcessorArchitecture": "x86",
"ProcessorId": {
    "IdentificationRegisters": "f2-06-08-00-ff-fb-eb-bf"
},
"ProcessorType": "CentralProcessor",
"Socket": 1,
"Status": {
    "State": "Enabled",
    "Health": "OK"
},
"TDPWatts": 350,
"TotalCores": 56,
"TotalThreads": 112
}

```

- Status Code: 200

Output Description

For a description of the output returned when you query information about the specified CPU resource, refer to [Table 5-12](#).

Table 5-12 Output Descriptions for Querying Information About the Specified CPU Resource

Field	Type	Description
@odata.context	String	OData description of the specified CPU resource model.

Field	Type	Description
@odata.id	String	Access path of the specified CPU resource.
@odata.type	String	Type of the specified CPU resource.
Name	String	Name of the specified CPU resource.
Id	String	UID of the specified CPU resource in the iBMC system.
InstructionSet	String	Instruction set of the specified CPU resource: <ul style="list-style-type: none"> ● x86 ● x86-64 ● IA-64 ● ARM-A32 ● ARM-A64 ● MIPS32 ● MIPS64 ● OEM
ProcessorArchitecture	String	Architecture of the specified CPU resource: <ul style="list-style-type: none"> ● x86 ● IA-64 ● ARM ● MIPS ● OEM
ProcessorId.IdentificationRegisters	String	Processor ID register.
ProcessorType	String	Type of the specified CPU resource.
Manufacturer	String	Manufacturer of the specified CPU resource.
Model	String	Model of the specified CPU resource.
MaxSpeedMHz	Number	Maximum frequency of the specified CPU resource.
TotalCores	Number	Total number of cores of the specified CPU resource.
TotalThreads	Number	Total number of threads of the specified CPU resource.
Socket	Number	Slot ID of the specified CPU resource.
Status	Object	Status of the specified CPU resource, including: <ul style="list-style-type: none"> ● State: whether the CPU is isolated ● Health: CPU resource health status
Oem.Public	Object	Customized vendor properties.
L1CacheKiB	Number	Level I cache of the specified CPU resource.

Field	Type	Description
L2CacheKiB	Number	Level II cache of the specified CPU resource.
L3CacheKiB	Number	Level III cache of the specified CPU resource.
FrequencyMHz	Number	Frequency of the specified CPU resource.
SerialNumber	String	Serial number of the specified CPU resource.
Voltage	String	Voltage of the specified CPU resource.
OperatingSpeedMHz	Number	Current speed of the specified CPU resource.
TDPWatts	Number	TDP(W) of the specified CPU resource.

5.7 Querying Information About All CPU Resources

Function

Query information about all [CPU](#) resources of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
- [URL](#): `https://device_ip/redfish/v1/Systems/system_id/Processors?$expand=.`
- Request Header:

X-Auth-Token: auth_value

- Request Message Body: None

Parameters

For a description of the parameters for querying information about all CPU resources, refer to [Table 5-13](#).

Table 5-13 Parameter Descriptions for Querying Information About All CPU Resources

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .

Usage Guidelines

None

Example

- Request Example:

```
GET : https://10.43.211.250/redfish/v1/Systems/1/Processors?$expand=.
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
    "@odata.context": "/redfish/v1/$metadata#ProcessorCollection.ProcessorCollection",
    "@odata.id": "/redfish/v1/Systems/1/Processors",
    "@odata.type": "#ProcessorCollection.ProcessorCollection",
    "Description": "Collection of processors for this system",
    "Name": "Processors Collection",
    "Members@odata.count": 2,
    "Members": [
        {
            "@odata.id": "/redfish/v1/Systems/1/Processors/0",
            "@odata.type": "#Processor.v1_10_0.Processor",
            "Name": "Intel Processor 1",
            "Id": "1",
            "InstructionSet": "x86,x86-64",
            "Manufacturer": "Intel(R) Corporation",
            "MaxSpeedMHz": 3300,
            "Model": "Genuine Intel(R) CPU 0000%@",
            "Oem": {
                "Public": {
                    "FrequencyMHz": 1500,
                    "L1CacheKiB": 3840,
                    "L2CacheKiB": 98304,
                    "L3CacheKiB": 92160,
                    "SerialNumber": "B65FD4F4B77D6755",
                    "Voltage": "1.6"
                }
            },
            "OperatingSpeedMHz": 2000,
            "ProcessorArchitecture": "x86",
            "ProcessorId": {
                "Value": "00000000000000000000000000000000"
            }
        }
    ]
}
```

```
        "IdentificationRegisters": "f3-06-08-00-ff-fb-eb-bf"
    },
    "ProcessorType": "CentralProcessor",
    "Socket": 1,
    "Status": {
        "State": "Enabled",
        "Health": "OK"
    },
    "TDPWatts": 350,
    "TotalCores": 48,
    "TotalThreads": 96
},
{
    "@odata.id": "/redfish/v1/Systems/1/Processors/1",
    "@odata.type": "#Processor.v1_10_0.Processor",
    "Name": "Intel Processor 2",
    "Id": "2",
    "InstructionSet": "x86,x86-64",
    "Manufacturer": "Intel(R) Corporation",
    "MaxSpeedMHz": 3300,
    "Model": "Genuine Intel(R) CPU 0000%@",
    "Oem": {
        "Public": {
            "FrequencyMHz": 1500,
            "L1CacheKiB": 3840,
            "L2CacheKiB": 98304,
            "L3CacheKiB": 92160,
            "SerialNumber": "B65FA8F41D9829E7",
            "Voltage": "1.6"
        }
    },
    "OperatingSpeedMHz": 2000,
    "ProcessorArchitecture": "x86",
    "ProcessorId": {
        "IdentificationRegisters": "f3-06-08-00-ff-fb-eb-bf"
    },
    "ProcessorType": "CentralProcessor",
    "Socket": 2,
    "Status": {
        "State": "Enabled",
        "Health": "OK"
    },
    "TDPWatts": 350,
    "TotalCores": 48,
```

```

        "TotalThreads": 96
    }
]
}

```

- Status Code: 200

Output Description

For a description of the output returned when you query information about all CPU resources, refer to [Table 5-14](#).

Table 5-14 Output Descriptions for Querying Information About All CPU Resources

Field	Type	Description
@odata.context	String	OData description of the CPU resource collection model.
@odata.id	String	Access path of the CPU resource collection.
@odata.type	String	Type of CPU resource collection.
Description	String	Description of the CPU resource collection.
Name	String	Name of the CPU resource collection.
Members@odata.count	Number	Number of CPU resource members.
Members	Array	Information about all CPU resources.

For a description of the parameters of the CPU resource information, refer to [Table 5-12](#).

5.8 Querying Information About the Memory Resource Collection

Function

Query information about the current memory resource collection of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Systems/system_id/Memory`
- Request Header:

```
X-Auth-Token: auth_value
```

- Request Message Body: None

Parameters

For a description of the parameters for querying information about the memory resource collection, refer to [Table 5-15](#).

Table 5-15 Parameter Descriptions for Querying Information About the Memory Resource Collection

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .

Usage Guidelines

None

Example

- Request Example:

```
GET https://device_ip/redfish/v1/Systems/1/Memory
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
    "@odata.context": "/redfish/v1/$metadata#MemoryCollection.MemoryCollection",
    "@odata.id": "/redfish/v1/systems/1/Memory",
    "@odata.type": "#MemoryCollection.MemoryCollection",
    "Description": "Collection of Memories for this system",
    "Name": "Memory Collection",
    "Members@odata.count": 2,
    "Members": [
        {
            "@odata.id": "/redfish/v1/systems/1/Memory/CPU0_E0"
        },
        {
            "@odata.id": "/redfish/v1/systems/1/Memory/CPU1_E0"
        }
    ]
}
```

- Status Code: 200

Output Description

For a description of the output returned when you query information about the memory resource collection, refer to [Table 5-16](#).

Table 5-16 Output Descriptions for Querying Information About the Memory Resource Collection

Field	Type	Description
@odata.context	String	OData description of the memory resource collection model.
@odata.id	String	Access path of the memory resource collection.
@odata.type	String	Type of memory resource collection.
Description	Character string	Description of the memory resource collection.
Name	String	Name of the memory resource collection.
Members@odata.count	Number	Number of memory resource members.
Members	Array	Memory resource list.
@odata.id	String	Access path of a single memory resource node.

5.9 Querying Information About a Specified Memory Resource

Function

Query information about a specified memory resource of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Systems/system_id/Memory/memory_id`
- Request Header:
 - X-Auth-Token: auth_value
- Request Message Body: None

Parameters

For a description of the parameters for querying information about the specified memory resource, refer to [Table 5-17](#).

Table 5-17 Parameter Descriptions for Querying Information About the Specified Memory Resource

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .
memory_id	Memory resource ID.	It can be obtained from the memory resource collection.

Usage Guidelines

None

Example

- Request Example:

```
GET https://device_ip/redfish/v1/Systems/1/Memory/DIMM1
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
  "@odata.context": "/redfish/v1/$metadata#Memory.Memory",
  "@odata.id": "/redfish/v1/Systems/1/Memory/CPU1_A0",
  "@odata.type": "#Memory.v1_11_0.Memory",
  "AllowedSpeedsMHz": 4800,
  "BaseModuleType": "RDIMM",
  "CapacityMiB": 65536,
  "DatawidthBits": 64,
  "DeviceLocator": "CPU1_A0",
  "ECCType": "Multi-bit ECC",
  "Id": "CPU1_A0",
  "Manufacturer": "Samsung",
  "MemoryDeviceType": "DDR5",
```

```
"MemoryLocation": {  
    "Channel": 0,  
    "Controller": 0,  
    "Slot": 0,  
    "Socket": 1  
},  
"Name": "CPU1_A0",  
"OperatingSpeedMHz": 4800,  
"PartNumber": "M321R8GA0BB0-CQKEG",  
"RankCount": 2,  
"SerialNumber": "01E2FC6C",  
"Status": {  
    "State": "Enabled",  
    "Health": "OK"  
}  
}  
"Oem": {  
    "Public": {  
        "VoltageVolt": 1.1,  
        "Temperature": null  
    }  
}  
}
```

- Status Code: 200

Output Description

For a description of the output returned when you query information about the specified memory resource, refer to [Table 5-18](#).

Table 5-18 Output Descriptions for Querying Information About the Specified Memory Resource

Field	Type	Description
@odata.context	String	OData description of the specified memory resource model.
@odata.id	String	Access path of the specified memory resource.
@odata.type	String	Type of the specified memory resource.
Name	String	Name of the specified memory resource.
Id	String	ID of the specified memory resource.
AllowedSpeedsMHz	Number	Maximum frequency of the specified memory resource, unit: MHz.
CapacityMiB	Number	Capacity of the specified memory resource, in MB.

Field	Type	Description
ECCType	String	ECC type of the specified memory.
Manufacturer	String	Manufacturer of the specified memory device.
OperatingSpeedMhz	Number	Operating speed of the specified memory resource.
SerialNumber	String	Serial number of the specified memory resource.
MemoryDeviceType	String	Type of the specified memory resource. The value should be in dictionary type, such as DDR4 and DDR3 .
DataWidthBits	Number	Data bandwidth of the specified memory resource.
RankCount	Number	Number of ranks of the specified memory resource.
PartNumber	String	Part number of the specified memory resource.
DeviceLocator	String	Screen printing of the specified memory resource.
BaseModuleType	String	Basic module type of the specified memory resource, including: <ul style="list-style-type: none">● RDIMM● UDIMM● SO_DIMM● LRDIMM● Mini_RDIMM● Mini_UDIMM● SO_RDIMM_72b● SO_UDIMM_72b● SO_DIMM_16b● SO_DIMM_32b
MemoryLocation	Object	Location of the specified memory device.
Socket	Number	Slot ID of the CPU of the specified memory resource.
Controller	Number	Controller ID of the specified memory resource.
Channel	Number	Channel ID of the specified memory resource.
Slot	Number	Slot ID of the specified memory resource.
Status	Object	Status of the specified memory resource, including: <ul style="list-style-type: none">● Health: health status of the specified memory resource● State: whether the specified memory resource is enabled
Oem.Public	Object	Customized field.
VoltageVolt	Number	Voltage of the specified memory resource, unit: Volt.

Field	Type	Description
Temperature	Number	Temperature of the specified memory resource, unit: °C.

5.10 Querying Information About All Memory Resources

Function

Query information about the current memory resource collection of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
 - URL: https://device_ip/redfish/v1/Systems/system_id/Memory?expand=..
 - Request Header:
- X-Auth-Token: auth_value
- Request Message Body: None

Parameters

For a description of the parameters for querying information about all memory resources, refer to [Table 5-19](#).

Table 5-19 Parameter Descriptions for Querying Information About All Memory Resources

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through /redfish/v1/SessionService/Sessions .

Usage Guidelines

None

Example

- Request Example:

```
GET https://device_ip/redfish/v1/Systems/1/Memory?expand=..
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
    "@odata.id": "/redfish/v1/systems/Self/Memory",
    "@odata.type": "#MemoryCollection.MemoryCollection",
    "Description": "Collection of Memories for this system",
    "Name": "Memory Collection",
    "Members@odata.count": 2,
    "Members": [
        {
            "@odata.id": "/redfish/v1/Systems/Self/Memory/DIMM9",
            "@odata.type": "#Memory.v1_11_0.Memory",
            "BaseModuleType": "RDIMM",
            "CapacityMiB": 16384,
            "DatawidthBits": 64,
            "DeviceLocator": "DIMM9",
            "ECCType": "Multi-bit ECC",
            "Id": "9",
            "Manufacturer": "Hynix",
            "MemoryDeviceType": "DDR5",
            "MemoryLocation": {
                "Channel": 0,
                "Controller": 0,
                "Slot": 0,
                "Socket": 1
            },
            "Name": "DIMM9",
            "OperatingSpeedMhz": 4800,
            "PartNumber": "HMCG78MEBRA115N",
            "RankCount": 1,
            "SerialNumber": "137A8358",
            "Status": {
                "State": "Enabled",
                "Health": "OK"
            }
        },
        {
            "@odata.id": "/redfish/v1/Systems/Self/Memory/DIMM25",
            "@odata.type": "#Memory.v1_11_0.Memory",
            "BaseModuleType": "RDIMM",
```

```

        "CapacityMiB": 16384,
        "DatawidthBits": 64,
        "DeviceLocator": "DIMM25",
        "ECCType": "Multi-bit ECC",
        "Id": "25",
        "Manufacturer": "Hynix",
        "MemoryDeviceType": "DDR5",
        "MemoryLocation": {
            "Channel": 0,
            "Controller": 0,
            "Slot": 0,
            "Socket": 2
        },
        "Name": "DIMM25",
        "OperatingSpeedMhz": 4800,
        "PartNumber": "HMCG78MEBRA115N",
        "RankCount": 1,
        "SerialNumber": "138B9C40",
        "Status": {
            "State": "Enabled",
            "Health": "OK"
        }
    }
]
}

```

- Status Code: 200

Output Description

For a description of the output returned when you query information about all memory resource, refer to [Table 5-20](#).

Table 5-20 Output Descriptions for Querying Information About All Memory Resources

Field	Type	Description
@odata.context	String	OData description of the memory resource collection model.
@odata.id	String	Access path of the memory resource collection.
@odata.type	String	Type of memory resource collection.
Description	String	Description of the memory resource collection.
Name	String	Name of the memory resource collection.
Members@odata.count	Number	Number of memory resource members.

Field	Type	Description
Members	Array	Information about all memory resources.

For a description of the parameters of the memory resource information, refer to [Table 5-18](#).

5.11 Querying Information About the Storage Resource Collection

Function

Query information about the current storage resource collection of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
- URL 1:** `https://device_ip/redfish/v1/Systems/system_id/Storage`
- URL 2:** `https://device_ip/redfish/v1/Systems/system_id/Storages`
- Request Header:

X-Auth-Token: auth_value

- Request Message Body: None

Parameters

For a description of the parameters for querying information about the storage resource collection, refer to [Table 5-21](#).

Table 5-21 Parameter Descriptions for Querying Information About the Storage Resource Collection

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .

Usage Guidelines

None

Example

- Request Example 1:

```
GET https://device_ip/redfish/v1/Systems/1/Storage
```

- Request Example 2:

```
GET https://device_ip/redfish/v1/Systems/1/Storages
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
  "@odata.context": "/redfish/v1/$metadata#StorageCollection.StorageCollection",
  "@odata.id": "/redfish/v1/Systems/1/Storages",
  "@odata.type": "#StorageCollection.StorageCollection",
  "Name": "Storage collection",
  "Members@odata.count": 2,
  "Members": [
    {
      "@odata.id": "/redfish/v1/Systems/1/Storages/RAIDStorage19"
    },
    {
      "@odata.id": "/redfish/v1/Systems/1/Storages/RAIDStorage5"
    }
  ]
}
```

- Status Code: 200

Output Description

For a description of the output returned when you query information about the storage resource collection, refer to [Table 5-22](#).

Table 5-22 Output Descriptions for Querying Information About the Storage Resource Collection

Field	Type	Description
@odata.context	String	OData description of the storage resource collection model.
@odata.id	String	Access path of the storage resource collection.

Field	Type	Description
@odata.type	String	Type of storage resource collection.
Name	String	Name of the storage resource collection.
Members@odata.count	Number	Number of storage resource members.
Members	Array	Storage resource list.
@odata.id	String	Access path of a single storage resource node.

5.12 Querying Information About a Specified Storage Controller Resource

Function

Query information about the specified storage controller resource of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Systems/system_id/Storage/storage_id`
- URL2: `https://device_ip/redfish/v1/Systems/system_id/Storages/storage_id`
- Request Header:

X-Auth-Token: auth_value
- Request Message Body: None

Parameters

For a description of the parameters for querying information about a specified storage controller resource, refer to [Table 5-23](#).

Table 5-23 Parameter Descriptions for Querying Information About the Specified Storage Controller Resource

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.

Parameter	Description	Value
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .
storage_id	ID of the specified storage resource.	It can be obtained by querying the information about the storage resource collection.

Usage Guidelines

None

Example

- Request Example 1:

```
GET https://device_ip/redfish/v1/Systems/1/Storage/RAIDStorage5
```

- Request Example 2:

```
GET https://device_ip/redfish/v1/Systems/1/Storages/RAIDStorage5
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
    "@odata.context": "/redfish/v1/$metadata#Storage.Storage",
    "@odata.id": "/redfish/v1/Systems/1/Storages/RAIDStorage5",
    "@odata.type": "#Storage.v1_9_0.Storage",
    "Drives": [
        {
            "@odata.id": "/redfish/v1/chassis/1/Drives/HDDPlaneDisk16",
            "CapacityBytes": 666
        },
        {
            "@odata.id": "/redfish/v1/chassis/1/Drives/HDDPlaneDisk18",
            "CapacityBytes": 666
        },
        {
            "@odata.id": "/redfish/v1/chassis/1/Drives/HDDPlaneDisk20",
            "CapacityBytes": 777
        }
    ]
}
```

```
        "@odata.id": "/redfish/v1/chassis/1 Drives/HDDPlaneDisk22",
        "CapacityBytes": 888
    }
],
"Drives@odata.count": 4,
"Name": "RAIDStorage5",
"StorageControllers": [
{
    "@odata.id":
        "/redfish/v1/Systems/1/Storages/RAIDStorage5#/StorageControllers/
        RAIDStorage5",
    "CapacitanceStatus": null,
    "CapacitanceModel": null,
    "Description": "RAID Controller",
    "FirmwareVersion": "3.22",
    "Manufacturer": "Microchip",
    "MemberId": "RAIDStorage5",
    "Model": "PM8236",
    "CardManufacturer": "VT",
    "CardModel": "RS241-18i 2G",
    "Name": "RS241-18i 2G(RAIDStorage5)",
    "Oem": {
        "Public": {
            "CapacitanceName": null,
            "CapacitanceStatus": {
                "Health": null,
                "State": "Absent"
            },
            "MemorySizeMiB": 2048,
            "OOBSupport": true,
            "SASAddress": null,
            "SupportedRAIDLevels": [
                "RAID0",
                "RAID1",
                "RAID5",
                "RAID6",
                "RAID10",
                "RAID50",
                "RAID60"
            ]
        }
    },
    "SerialNumber": "743551500214",
    "PartNumber": "ASM1026R",
}
```

```

        "SpeedGbps": 12,
        "status": {
            "Health": "OK",
            "State": "Enabled"
        },
        "SupportedDeviceProtocols": [
            "SAS",
            "SATA"
        ],
        "TotalCacheSizeMiB": null
    }
],
"StorageControllers@odata.count": 1,
"volumes": {
    "@odata.id": "/redfish/v1/Systems/1/Storages/RAIDStorage5/volumes"
}
}

```

- Status Code: 200

Output Description

For a description of the output returned when you query the information about a specified storage controller resource, refer to [Table 5-24](#).

Table 5-24 Output Descriptions for Querying Information About the Specified Storage Controller Resource

Field	Type	Description
@odata.context	String	OData description of the specified storage controller model.
@odata.id	String	Access path of the specified storage controller.
@odata.type	String	Type of the specified storage controller.
Drives	Array	Drive list managed by the specified storage controller.
Drives.CapacityBytes	Number	Capacity of the drives managed by the specified storage controller.
Drives.@odata.id	String	Access path of the drives managed by the specified storage controller.
Drives@odata.count	Number	Number of drives managed by the specified storage controller.
Name	String	Name of the specified storage controller.
StorageControllers	Array	Information about the storage controller.

Field	Type	Description
StorageControllers.@odata.id	String	Access path of the specified storage controller.
StorageControllers.CapacitanceStatus	String	Capacitance (BBU) status of the specified storage controller.
StorageControllers.CapacitanceModel	String	Capacitance (BBU) name of the specified storage controller.
StorageControllers.Description	String	Description of the specified storage controller.
StorageControllers.Firmware-Version	String	Firmware version of the specified storage controller.
StorageControllers.MemberId	String	ID of the specified storage controller. <ul style="list-style-type: none"> ● PCIe: RAIDStorage + slot number ● Onboard: RAIDStorage0
StorageControllers.Model	String	Chip model of the specified storage controller.
StorageControllers.Manufacturer	String	Chip manufacturer of the specified storage controller.
StorageControllers.CardManufacturer	String	Manufacturer of the specified storage controller.
StorageControllers.CardModel	String	Model of the specified storage controller.
StorageControllers.Name	String	Name of the specified storage controller. (storage controller name + MemberId)
StorageControllers.Oem.Public	Object	Manufacturer-customized properties.
StorageControllers.Oem.Public.CapacitanceName	String	Capacitance (BBU) name of the specified storage controller.
StorageControllers.Oem.Public.CapacitanceStatus	Object	BBU status of the specified storage controller. <ul style="list-style-type: none"> ● Health: BBU health status ● State: BBU presence status
StorageControllers.Oem.Public.MemorySizeMiB	Number	Memory size of the specified storage controller.
StorageControllers.Oem.Public.OOBSupport	Boolean	Whether the specified storage controller supports out-of-band management.
StorageControllers.Oem.Public.SASAddress	String	Address of the specified storage controller.
StorageControllers.Oem.Public.SupportedRAIDLevels	Array	RAID level supported by the specified storage controller.

Field	Type	Description
StorageControllers.SerialNumber	String	Serial number of the specified storage controller.
StorageControllers.PartNumber	String	Part number of the specified storage controller.
StorageControllers.SpeedGbps	Number	Interface speed of the specified storage controller.
StorageControllers.Status	Object	Status of the specified storage controller. <ul style="list-style-type: none"> ● State: whether the specified storage controller is enabled. ● Health: health status of the specified storage controller.
StorageControllers.SupportedDeviceProtocols	Array	Protocol supported by the specified storage controller: <ul style="list-style-type: none"> ● SPI ● PCIe ● AHCI ● UHCI ● SAS ● SATA ● USB ● NVMe ● FC ● iSCSI ● FCoE ● NVMeOverFabrics ● SMB ● NFSv3 ● NFSv4 ● HTTP ● HTTPS ● FTP ● SFTP
StorageControllers.TotalCacheSizeMiB	Number	Total cache size of the specified storage controller, unit: MiB.
StorageControllers@odata.count	Number	Number of storage controllers.
Volumes	Object	Links to operations on logical volumes.

5.13 Querying Information About All Storage Controller Resources

Function

Query information about all current storage controller resources of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
- URL1: [https://device_ip/redfish/v1/Systems/system_id/Storages?\\$expand=...](https://device_ip/redfish/v1/Systems/system_id/Storages?$expand=...)
- URL2: [https://device_ip/redfish/v1/Systems/system_id/Storage?\\$expand=...](https://device_ip/redfish/v1/Systems/system_id/Storage?$expand=...)
- Request Header:

X-Auth-Token: auth_value
- Request Message Body: None

Parameters

For a description of the parameters for querying information about all storage controller resources, refer to [Table 5-25](#).

Table 5-25 Parameter Descriptions for Querying Information About All Storage Controller Resources

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through /redfish/v1/SessionService/Sessions .

Usage Guidelines

None

Example

- Request Example 1:

```
GET https://device_ip/redfish/v1/Systems/s1/Storages?$expand=.
```

- Request Example 2:

```
GET https://device_ip/redfish/v1/Systems/1/Storage?$expand=.
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
  "@odata.context": "/redfish/v1/$metadata#StorageCollection.StorageCollection",
  "@odata.id": "/redfish/v1/Systems/1/Storages",
  "@odata.type": "#StorageCollection.StorageCollection",
  "Name": "Storage Collection",
  "Members@odata.count": 2,
  "Members": [
    {
      "@odata.id": "/redfish/v1/Systems/1/Storages/RAIDStorage19",
      "@odata.type": "#Storage.v1_9_0.Storage",
      "Drives": [],
      "Drives@odata.count": 0,
      "Name": "RAIDStorage19",
      "StorageControllers": [
        {
          "@odata.id": "/redfish/v1/systems/1/storages/RAIDStorage19#/StorageControllers/RAIDStorage19",
          "Description": "RAID Controller",
          "Firmwareversion": "3.22",
          "Manufacturer": "Microchip",
          "MemberId": "RAIDStorage19",
          "Model": "PM8236",
          "CardManufacturer": "VT",
          "CardModel": "RS241-18i 2G",
          "Name": "RS241-18i 2G(RAIDStorage19)",
          "Oem": {
            "Public": {
              "CapacitanceName": null,
              "CapacitanceStatus": {
                "Health": null,
                "State": "Absent"
              }
            }
          }
        }
      ]
    }
  ]
}
```

```
        "MemorySizeMiB": 2048,
        "OOBSupport": true,
        "SASAddress": null,
        "SupportedRAIDLevels": [
            "RAID0",
            "RAID1",
            "RAID5",
            "RAID6",
            "RAID10",
            "RAID50",
            "RAID60"
        ],
    },
},
"SerialNumber": "743551500696",
"SpeedGbps": 12,
"status": {
    "Health": "OK",
    "State": "Enabled"
},
"SupportedDeviceProtocols": [
    "SAS",
    "SATA"
]
},
],
"StorageControllers@odata.count": 1,
"volumes": {
    "@odata.id":
    "/redfish/v1/Systems/1/Storages/RAIDStorage19/volumes"
}
},
{
"@odata.id": "/redfish/v1/Systems/1/Storages/RAIDStorage5",
"@odata.type": "#Storage.v1_9_0.Storage",
"Drives": [
    {
        "@odata.id": "/redfish/v1/Chassis/1/Drives/HDDPlaneDisk16"
    },
    {
        "@odata.id": "/redfish/v1/Chassis/1/Drives/HDDPlaneDisk18"
    },
    {
        "@odata.id": "/redfish/v1/Chassis/1/Drives/HDDPlaneDisk20"
    }
]
```

```
        },
        {
            "@odata.id": "/redfish/v1/Chassis/1/Drives/HDDPlaneDisk22"
        }
    ],
    "Drives@odata.count": 4,
    "Name": "RAIDStorage5",
    "StorageControllers": [
        {
            "@odata.id":
                "/redfish/v1/Systems/1/Storages/RAIDStorage5#/StorageControllers/RAIDStorage5",
            "Description": "RAID Controller",
            "FirmwareVersion": "3.22",
            "Manufacturer": "Microchip",
            "MemberId": "RAIDStorage5",
            "Model": "PM8236",
            "CardManufacturer": "VT",
            "CardModel": "RS241-18i 2G",
            "Name": "RS241-18i 2G(RAIDStorage5)",
            "Oem": {
                "Public": {
                    "CapacitanceName": null,
                    "CapacitanceStatus": {
                        "Health": null,
                        "State": "Absent"
                    },
                    "MemorySizeMiB": 2048,
                    "OOBSupport": true,
                    "SASAddress": null,
                    "SupportedRAIDLevels": [
                        "RAID0",
                        "RAID1",
                        "RAID5",
                        "RAID6",
                        "RAID10",
                        "RAID50",
                        "RAID60"
                    ]
                }
            },
            "SerialNumber": "743551500214",
            "SpeedGbps": 12,
            "Status": {

```

```

        "Health": "OK",
        "State": "Enabled"
    },
    "SupportedDeviceProtocols": [
        "SAS",
        "SATA"
    ]
}
],
"StorageControllers@odata.count": 1,
"Volumes": {
    "@odata.id":
        "/redfish/v1/Systems/1/Storages/RAIDStorage5/Volumes"
}
}
]
}
}

```

- Status Code: 200

Output Description

For a description of the output returned when you query information about all storage controller resources, refer to [Table 5-26](#).

Table 5-26 Output Descriptions for Querying Information About All Storage Controller Resources

Field	Type	Description
@odata.context	String	OData description of the storage controller resource collection model.
@odata.id	String	Access path of the storage controller resource collection.
@odata.type	String	Type of storage controller resource collection.
Name	String	Name of the storage controller resource collection.
Members@odata.count	Number	Number of storage controller resource members.
Members	Array	Storage resource list.

For a description of the parameters of the storage controller resource information, refer to [Table 5-24](#).

5.14 Querying Information About the Logical Volume Resource Collection

Function

Query information about the current logical volume resource collection of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Systems/system_id/Storage/storage_id/Volumes`
- URL2: `https://device_ip/redfish/v1/Systems/system_id/Storages/storage_id/Volumes`
- Request Header:

X-Auth-Token: auth_value

- Request Message Body: None

Parameters

For a description of the parameters for querying information about the logical volume resource collection, refer to [Table 5-27](#).

Table 5-27 Parameter Descriptions for Querying Information About the Logical Volume Resource Collection

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.
storage_id	ID of the specified storage resource.	It can be obtained by querying the information about the storage resource collection.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .

Usage Guidelines

None

Example

- Request Example1:

```
GET https://device_ip/redfish/v1/Systems/1/Storage/RAIDStorage5/Volumes
```

- Request Example2:

```
GET https://device_ip/redfish/v1/Systems/1/Storages/RAIDStorage5/Volumes
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
    "@odata.context": "/redfish/v1/$metadata#VolumeCollection.VolumeCollection",
    "@odata.id": "/redfish/v1/Systems/1/Storages/RAIDStorage5/Volumes",
    "@odata.type": "#VolumeCollection.VolumeCollection",
    "Members": [
        {
            "@odata.id": "/redfish/v1/Systems/1/Storages/RAIDStorage5/Volumes/
LogicalDrive0"
        },
        {
            "@odata.id": "/redfish/v1/Systems/1/Storages/RAIDStorage5/Volumes/
LogicalDrive1"
        },
        {
            "@odata.id": "/redfish/v1/Systems/1/Storages/RAIDStorage5/Volumes/
LogicalDrive2"
        }
    ],
    "Members@odata.count": 3,
    "Name": "Volume Collection"
}
```

- Status Code: 200

Output Description

For a description of the output returned when you query the information about the logical volume resource collection, refer to [Table 5-28](#).

Table 5-28 Output Descriptions for Querying the Information About the Logical Volume Resource Collection

Field	Type	Description
@odata.context	String	OData description of the logical volume resource collection model.
@odata.id	String	Access path of the logical volume resource collection.
@odata.type	String	Type of logical volume resource collection.
Name	String	Name of the logical volume resource collection.
Members@odata.count	Number	Number of logical volume resource members.
Members	Array	Logical volume resource list.
@odata.id	String	Access path of a single logical volume resource node.

5.15 Querying Information About a Specified Logical Volume Resource

Function

Query information about a specified logical volume resource of a server.

Permission Required

Query.

Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Systems/system_id/Storage/storage_id/Volumes/volume_id`
- URL2: `https://device_ip/redfish/v1/Systems/system_id/Storages/storage_id/Volumes/volume_id`
- Request Header: None

X-Auth-Token: auth_value

- Request Message Body: None

Parameters

For a description of the parameters for querying information about the specified logical volume resource, refer to [Table 5-29](#).

Table 5-29 Parameter Descriptions for Querying Information About the Specified Logical Volume Resource

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.
auth_value	X-Auth-Token value contained in Request Header in the GET request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .
storage_id	ID of the specified storage resource.	It can be obtained from the storage resource collection.
volume_id	ID of the specified logical volume.	It can be obtained from the logical volume resource collection.

Usage Guidelines

None

Example

- Request Example1:

```
GET https://device_ip/redfish/v1/Systems/1/Storages/RAIDStorage5/Volumes/LogicalDrive2
```

- Request Example2:

```
GET https://device_ip/redfish/v1/Systems/1/Storages/RAIDStorage5/Volumes/LogicalDrive2
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
  "@odata.context": "/redfish/v1/$metadata#volume.volume",
  "@odata.id": "/redfish/v1/Systems/1/Storages/RAIDStorage5/Volumes/LogicalDrive0",
  "@odata.type": "#Volume.v1_0_3.Volume",
  "@Redfish.OperationApplyTimeSupport": {
    "Supportedvalues": ["Immediate"]
  },
  "RAIDType": "RAID10",
  "Links": {
    "Drives": [
      {
        "Volume": {
          "VolumeId": "LogicalDrive0"
        }
      }
    ]
  }
}
```

```

        "@odata.id": "/redfish/v1/chassis/1/Drives/HDDPlaneDisk19"
    }
],
"drives@odata.count": 1
},
"Id": "Logicaldrive0",
"Name": "2223",
"Oem": {
    "Public": {
        "AccessPolicy": null,
        "IoPolicy": null,
        "ReadPolicy": null,
        "WritePolicy": null,
        "DriveCachePolicy": null,
        "NumDrive": 1,
        "RaidControllerID": 5,
        "State": "Optimal",
        "volumeName": "2223",
        "volumeRaidLevel": "RAID0"
    }
},
"optimumIosizeBytes": 1048576,
"CapacityBytes": 1919850381312,
"Status": {
    "Health": "OK",
    "State": "Enabled"
},
"volumeType": "NonRedundant",
"NumDriveperspan": null,
"SpanNumber": null
}
}

```

- Status Code: 200

Output Description

For a description of the output returned when you query information about the specified logical volume resource, refer to [Table 5-30](#).

Table 5-30 Output Descriptions for Querying Information About the Specified Logical Volume Resource

Field	Type	Description
@odata.context	String	OData description of the specified logical volume resource model.

Field	Type	Description
@odata.id	String	Access path of the specified logical volume resource.
@odata.type	String	Type of the specified logical volume.
Name	String	Name of the specified logic volume resource.
Id	String	ID of the specified logical volume ID.
VolumeType	String	Redundancy type of the specified logical volume: <ul style="list-style-type: none">● RawDevice● NonRedundant● Mirrored● StripedWithParity● SpannedMirrors● SpannedStripesWithParity
CapacityBytes	Number	Capacity of the logical volume.
OptimumIOSizeBytes	Number	Stripe size of the logical volume.
Links	Object	Member logical volume list.
Drives	Array	Drive list managed by the current specified controller.
@odata.id	String	Access path of the specified drive.
Drives@odata.count	Number	Number of member physical disks included in the RAID .
Status	Object	Status of the specified logical volume resource, including: <ul style="list-style-type: none">● State: Status of the logical disk resource.● Health: health status of the logical volume.
Oem.Public	Object	Customized logical volume information.
RaidControllerID	Number	Controller ID of the logical volume.
VolumeRaidLevel	String	RAID level of the logical volume. The value must be in dictionary format, including: <ul style="list-style-type: none">● RAID0● RAID1● RAID5● RAID6● RAID00● RAID10● RAID50● RAID60
DriveCachePolicy	String	Hard disk Cache policy: <ul style="list-style-type: none">● Unchanged

Field	Type	Description
		<ul style="list-style-type: none"> ● Enabled ● Disabled
NumDrive	Number	Number of physical disk members.
ReadPolicy	String	Read policy of the logical volume: <ul style="list-style-type: none"> ● NoReadAhead ● ReadAhead
WritePolicy	String	Write policy of the logical volume: <ul style="list-style-type: none"> ● WriteThrough ● WriteBack ● AlwaysWriteBack
AccessPolicy	String	Access policy of the logical volume: <ul style="list-style-type: none"> ● ReadWrite ● ReadOnly ● Blocked
IoPolicy	String	IO policy of the logical volume: <ul style="list-style-type: none"> ● DirectIO ● CachedIO
VolumeName	String	Name of the logical volume.
State	String	Status of the logical volume: <ul style="list-style-type: none"> ● Offline ● Partially ● Degraded ● Optimal ● Initializing
NumDriveperspan	Number	Number of drive members in a span.
SpanNumber	Number	Number of spans of a volume.
@Redfish.OperationApply-TimeSupport	Object	Application time of the resource creation, deletion, or operation requested by the logical disk through the OperationApplyTime item.
@Redfish.OperationApply-TimeSupport.SupportedValues	Array	Supported Value
RAIDType	String	RAID level of the logical volume.

5.16 Creating a Logical Volume

Function

Create a logical volume.

Permission Required

Basic management.

Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/Systems/system_id/Storage/storage_id/Volumes`
- URL2: `https://device_ip/redfish/v1/Systems/system_id/Storages/storage_id/Volumes`
- Request Header:

Content-Type: header_type
X-Auth-Token: auth_value

- Request Message Body:

```
{
    "OptimumIosizeBytes": optsize,
    "Oem": {
        "Public": {
            "VolumeName": name,
            "VolumeRaidLevel": raidlevel,
            "ReadPolicy": read_policy,
            "WritePolicy": write_policy,
            "AccessPolicy": access_policy,
            "IoPolicy": io_policy,
            "DriveCachePolicy": disk_cache_policy,
            "InitializationMode": initmode,
            "SpanNumber": spannum,
            "Drives": [drives]
        }
    }
}
```

Parameters

For a description of the parameters for creating the logical volume, refer to [Table 5-31](#).

Table 5-31 Parameter Descriptions for Creating the Logical Volume

Parameter	Description	Value
device_ip	IP address for logging in to the device.	IPv4 or IPv6 address.
system_id	ID of the System resource.	For a rack server, the value is 1 or Self.

Parameter	Description	Value
storage_id	ID of the specified storage resource.	It can be obtained by querying the information about the storage resource collection.
auth_value	X-Auth-Token value contained in Request Header in the POST request for authentication.	It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .
header_type	Format of the request message.	application/json
optsizes	Number	Stripe size of the logical volume, optional, in bytes. Options: <ul style="list-style-type: none">● 65536● 131072● 262144● 524288● 1048576
name	String	Name of the logical volume, required, consisting of 1–31 characters, including letters, digits, minus, and underscores, and cannot be the same as the original logical volume name.
raidlevel	String	RAID level of the logical volume, required, including: <ul style="list-style-type: none">● RAID0● RAID1● RAID5● RAID6
read_policy	String	Read policy of the logical volume, optional, including: <ul style="list-style-type: none">● NoReadAhead● ReadAhead
write_policy	String	Write policy of the logical volume, optional, including: <ul style="list-style-type: none">● WriteThrough● WriteBack● AlwaysWriteBack <p>Note: Assume that there is no BBU on the controller. If "WriteThrough" or "WriteBack" is configured, "WriteThrough" is displayed in the query result. If "AlwaysWriteBack"</p>

Parameter	Description	Value
		is configured, "AlwaysWriteBack" is displayed in the query result.
access_policy	String	Access policy of the logical volume, optional, including: <ul style="list-style-type: none">● ReadWrite● ReadOnly● Blocked
io_policy	String	IO policy of the logical volume, optional, including: <ul style="list-style-type: none">● DirectIO● CachedIO
disk_cache_policy	String	Caching policy of the logical volume, optional, including: <ul style="list-style-type: none">● Unchanged● Enabled● Disabled
initmode	String	Initiation mode of the logical volume, optional, including: <ul style="list-style-type: none">● UnInit: no initialization● QuickInit: quick initialization● FullInit: full initialization
spannum	Number	Number of logical volume subgroups, optional, default:1. The value can be set to 1 only. For Broadcom cards RAID00, RAID10, RAID50, and RAID60, this parameter must be a divisor of the number of disks.
drives	Array	Member volume list, required. The format of the drives field is: [HDDPlaneDiskid1,HD-DPlaneDiskid2,...,HDDPlaneDiskid3]

Usage Guidelines

The creation completion time of the logical volume is related to parameters. Therefore, after the configuration, you need to periodically refresh the configuration to determine whether the creation process is completed.

Example

- Request Example1:

```
POST https://device_ip/redfish/v1/Systems/1/Storage/RAIDStorage5/Volumes
```

- Request Example2:

```
POST https://device_ip/redfish/v1/Systems/1/Storages/RAIDStorage5/Volumes
```

- Request Header:

```
Content-Type: application/json  
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body:

```
{
    "OptimumIOSizeBytes": 1048576,
    "Oem": {
        "Public": {
            "volumeName": "2222",
            "volumeRaidLevel": "RAID0",
            "ReadPolicy": "ReadAhead",
            "writePolicy": "WriteThrough",
            "AccessPolicy": "ReadWrite",
            "IoPolicy": "CachedIO",
            "DriveCachePolicy": "Enabled",
            "InitializationMode": "UnInit",
            "SpanNumber": 2,
            "Drives": ["HDDPlaneDisk19"]
        }
    }
}
```

- Response Example:

```
{
    "error": {
        "@Message.ExtendedInfo": [
            {
                "@odata.type": "#Message.v1_1_1.Message",
                "Message": "Successfully Completed Request",
                "MessageArgs": [],
                "MessageId": "Base.1.0.Success",
                "RelatedProperties": [],
                "Resolution": "None",
                "Severity": "OK"
            }
        ]
    },
    "code": "Base.1.0.Success",
```

- ```

 "message": "Successfully completed request"
 }

```
- Status Code: 202

### Output Description

For a description of the output returned when you create the logical volume, refer to [Table 5-32](#).

**Table 5-32 Output Descriptions for Creating the Logical Volume**

| Field             | Type   | Description                                                                                                                                               |
|-------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| code              | String | ID of the specified message in the message registry.                                                                                                      |
| message           | String | Readable message for the code in the message registry.                                                                                                    |
| @odata.type       | String | OData description of the message resource.                                                                                                                |
| MessageId         | String | Message ID.                                                                                                                                               |
| RelatedProperties | Array  | Message-related properties.                                                                                                                               |
| Message           | String | Message details.                                                                                                                                          |
| MessageArgs       | Array  | Message arguments.                                                                                                                                        |
| Severity          | String | Severity level supported by the Redfish interface. Options: <ul style="list-style-type: none"> <li>• OK</li> <li>• Warning</li> <li>• Critical</li> </ul> |
| Resolution        | String | Solution.                                                                                                                                                 |

## 5.17 Deleting a Logical Volume

### Function

Delete the logical volume.

### Permission Required

Basic management.

### Syntax

- Operation Type: DELETE
- URL: [https://device\\_ip/redfish/v1/Systems/system\\_id/Storage/storage\\_id/Volumes/volume\\_id](https://device_ip/redfish/v1/Systems/system_id/Storage/storage_id/Volumes/volume_id)

- URL2: `https://device_ip/redfish/v1/Systems/system_id/Storages/storage_id/Volumes/volume_id`
- Request Header:
 

Content-Type: header\_type
- Request Message Body: None

## Parameters

For a description of the parameters for deleting the logical volume, refer to [Table 5-33](#).

**Table 5-33 Parameter Descriptions for Deleting the Logical Volume**

| Parameter  | Description                                                                              | Value                                                                                               |
|------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                 | IPv4 or IPv6 address.                                                                               |
| system_id  | ID of the System resource.                                                               | For a rack server, the value is 1 or Self.                                                          |
| storage_id | ID of the specified storage resource.                                                    | It can be obtained from the storage resource collection.                                            |
| volume_id  | ID of the specified logical volume.                                                      | It can be obtained from the logical volume resource collection.                                     |
| auth_value | X-Auth-Token value contained in Request Header in the DELETE request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example1:

```
DELETE https://device_ip/redfish/v1/Systems/1/Storage/RAIDStorage5/Volumes/LogicalDrive0
```

- Request Example2:

```
DELETE https://device_ip/redfish/v1/Systems/1/Storages/RAIDStorage5/Volumes/LogicalDrive0
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "error": {
```

```

"@Message.ExtendedInfo": [
 {
 "@odata.type": "#Message.v1_1.Message",
 "Message": "Successfully completed Request",
 "MessageArgs": [],
 "MessageId": "Base.1.0.Success",
 "RelatedProperties": [],
 "Resolution": "None",
 "Severity": "OK"
 }
],
"code": "Base.1.0.Success",
"message": "Successfully completed Request"
}
]
}

```

- Status Code: 202

## Output Description

For a description of the output returned when you delete the logical volume, refer to [Table 5-34](#).

**Table 5-34 Output Descriptions for Deleting the Logical Volume**

| Field             | Type   | Description                                                                                                                                               |
|-------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| code              | String | ID of the specified message in the message registry.                                                                                                      |
| message           | String | Readable message for the code in the message registry.                                                                                                    |
| @odata.type       | String | OData description of the message resource.                                                                                                                |
| MessageId         | String | Message ID.                                                                                                                                               |
| RelatedProperties | Array  | Message-related properties.                                                                                                                               |
| Message           | String | Message details.                                                                                                                                          |
| MessageArgs       | Array  | Message arguments.                                                                                                                                        |
| Severity          | String | Severity level supported by the Redfish interface. Options: <ul style="list-style-type: none"> <li>● OK</li> <li>● Warning</li> <li>● Critical</li> </ul> |
| Resolution        | String | Solution.                                                                                                                                                 |

## 5.18 Querying Properties of the BIOS Resource

### Function

Query information about the current **BIOS** resource of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Systems/system_id/Bios`
- Request Header:

`X-Auth-Token: auth_value`

- Request Message Body: None

### Parameters

For a description of the parameters for querying properties of the BIOS resource, refer to [Table 5-35](#).

**Table 5-35 Parameter Descriptions for Querying Properties of the BIOS Resource**

| Parameter               | Description                                                                           | Value                                                                                               |
|-------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <code>device_ip</code>  | IP address for logging in to the device.                                              | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                               |
| <code>system_id</code>  | <a href="#">ID</a> of the System resource.                                            | For a rack server, the value is 1 or Self.                                                          |
| <code>auth_value</code> | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:

`GET https://device_ip/redfish/v1/Systems/1/Bios`

- Request Header:

`X-Auth-Token: 8574621d21b84756218c7456821c234`

- Request Message Body: None

- Response Example:

```
{
 "@Redfish.Settings": {
 "@odata.type": "#Settings.v1_2_2.Settings",
 "SupportedApplyTimes": ["OnReset"],
 "Oem": {
 "@odata.id": "/redfish/v1/Systems/1/Bios/SD"
 },
 "SettingsObject": {
 "@odata.id": "/redfish/v1/Systems/1/Bios/SD"
 }
 },
 "@odata.context": "/redfish/v1/$metadata#Bios.Bios",
 "@odata.id": "/redfish/v1/Systems/1/Bios",
 "@odata.type": "#Bios.v1_1_0.Bios",
 "Actions": {
 "#Bios.ChangePassword": {
 "@Redfish.ActionInfo":
 "/redfish/v1/Systems/1/Bios/ChangePasswordActionInfo",
 "target": "/redfish/v1/Systems/1/Bios/Actions/Bios.ChangePassword"
 },
 "#Bios.ResetBios": {
 "target": "/redfish/v1/Systems/1/Bios/Actions/Bios.ResetBios"
 }
 },
 "Attributes": {
 "BootMode": "UEFI Only",
 "C1E": "Enabled",
 "EIST": "Disabled",
 "EnergyPerformanceBIAS": "Balanced Performance",
 "HardwarePStates": "Native Mode",
 "HyperThreading": "Enabled",
 "MonitorMWAIT": "Enabled",
 "NUMA": "Enabled",
 "PackageCState": "C0/C1 state",
 "PowerPerformanceTuning": "OS controls EPB",
 "PowerPolicySelect": "Custom",
 "TurboMode": "Enabled"
 },
 "Description": "Current BIOS Settings",
 "Id": "Bios",
 "Name": "Current BIOS Settings"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query properties of the BIOS resource, refer to [Table 5-36](#).

**Table 5-36 Output Descriptions for Querying Properties of the BIOS Resource**

| Field                                      | Type   | Description                                            |
|--------------------------------------------|--------|--------------------------------------------------------|
| @odata.context                             | String | OData description of the BIOS resource model.          |
| @odata.id                                  | String | Access path of the BIOS resource.                      |
| @odata.type                                | String | Type of BIOS resource.                                 |
| Description                                | String | Description of the BIOS resource.                      |
| Id                                         | String | ID of the BIOS resource.                               |
| Name                                       | String | Name of the BIOS resource.                             |
| Attributes                                 | Object | BIOS attribute.                                        |
| Actions                                    | Object | Operations that can be performed on the BIOS resource. |
| #Bios.ChangePassword.target                | String | Operation path for BIOS password modification.         |
| #Bios.ResetBios.target                     | String | Operation path for BIOS reset.                         |
| @Redfish.Settings.@odata.type              | String | Type of the BIOS setting resource.                     |
| @Redfish.Settings.SupportedApplyTimes      | Array  | Effective time of settings.                            |
| @Redfish.Settings.Oem.@odata.id            | String | User-defined operation path for BIOS settings.         |
| @Redfish.Settings.SettingsObject.@odata.id | String | Operation path for BIOS settings.                      |

## 5.19 Querying Information About the BIOS Settings

### Function

Query information about the current [BIOS](#) settings of a server.

### Permission Required

Query.

## Syntax

- Operation Type: GET
- URL: [`https://device\_ip/redfish/v1/Systems/system\_id/Bios/\(SD|Settings\)`](https://device_ip/redfish/v1/Systems/system_id/Bios/(SD|Settings))
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

## Parameters

For a description of the parameters for querying information about the BIOS settings, refer to [Table 5-37](#).

**Table 5-37 Parameter Descriptions for Querying Information About the BIOS Settings**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| system_id  | ID of the System resource.                                                            | For a rack server, the value is 1 or Self.                                                          |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Systems/1/Bios/SD
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Bios.Bios",
 "@odata.id": "/redfish/v1/Systems/1/Bios/SD",
 "@odata.type": "#Bios.v1_1_0.Bios",
 "Attributes": {
 "BootMode": "UEFI Only",
 "Firmware": "UEFI"
 }
}
```

```

 "C1E": "Disabled",
 "EIST": "Enabled",
 "EnergyPerformanceBIAS": "Balanced Performance",
 "HardwarePStates": "Native Mode",
 "HyperThreading": "Disabled",
 "MonitorMWAIT": "Enabled",
 "NUMA": "Enabled",
 "PackageCState": "C0/C1 state",
 "PowerPerformanceTuning": "OS controls EPB",
 "PowerPolicySelect": "Custom",
 "TurboMode": "Enabled"
},
"Description": "Future BIOS Settings",
"Id": "SD",
"Name": "Future BIOS Settings"
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the BIOS settings, refer to [Table 5-38](#).

**Table 5-38 Output Descriptions for Querying Information About the BIOS Settings**

| Field          | Type   | Description                                           |
|----------------|--------|-------------------------------------------------------|
| @odata.context | String | OData description of the BIOS setting resource model. |
| @odata.id      | String | Access path of the BIOS setting resource.             |
| @odata.type    | String | Type of BIOS setting resource.                        |
| Description    | String | Description of the BIOS setting resource.             |
| Id             | String | ID of the BIOS setting resource.                      |
| Name           | String | Name of the BIOS setting resource.                    |
| Attributes     | Object | BIOS attribute.                                       |

## 5.20 Modifying the BIOS Settings

### Function

Modify the [BIOS](#) settings.

## Permission Required

User management.

## Syntax

- Operation Type: PATCH
- URL: [`https://device\_ip/redfish/v1/Systems/system\_id/Bios/\(SD|Settings\)`](https://device_ip/redfish/v1/Systems/system_id/Bios/(SD|Settings))
- Request Header:

```
X-Auth-Token: auth_value
Content-Type: header_type
```
- Request Message Body:

```
{
 "Attributes": {
 "EIST": set_value,
 "C1E": set_value,
 ...
 }
}
```

## Parameters

For details, refer to the BIOS configuration specifications.

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Systems/1/Bios/SD
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: application/json
```

- Request Message Body:

```
{
 "Attributes": {
 "EIST": "Disabled",
 }
}
```

```

 "C1E": "Enabled"
 }
}

```

- Response Example: None
- Status Code: 204

### Output Description

None

## 5.21 Setting the BIOS Password

### Function

Set the [BIOS](#) password.

### Permission Required

User management.

### Syntax

- Operation Type: POST
- **URL:** `https://device_ip/redfish/v1/Systems/system_id/Bios/Actions/Bios.ChangePassword`
- Request Header:

```

X-Auth-Token: auth_value
Content-Type: header_type

```

- Request Message Body:

```

{
 "PasswordName":password_name_value,
 "oldPassword":old_password_value,
 "NewPassword":new_password_value
}

```

### Parameters

For a description of the parameters for setting the BIOS password, refer to [Table 5-39](#).

**Table 5-39 Parameter Descriptions for Setting the BIOS Password**

| Parameter | Description                              | Value                                                 |
|-----------|------------------------------------------|-------------------------------------------------------|
| device_ip | IP address for logging in to the device. | <a href="#">IPv4</a> or <a href="#">IPv6</a> address. |
| system_id | ID of the System resource.               | For a rack server, the value is 1 or Self.            |

| Parameter            | Description                                                                            | Value                                                                                               |
|----------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| auth_value           | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| header_type          | Format of the request message.                                                         | application/json                                                                                    |
| pass-word_name_value | BIOS password type.                                                                    | <ul style="list-style-type: none"> <li>● AdministratorPassword</li> <li>● UserPassword</li> </ul>   |
| old_password_value   | Current password.                                                                      | Character string. If this parameter is set to "", it indicates that there is no password.           |
| new_password_value   | New password.                                                                          | Character string. If this parameter is set to "", it indicates that the password is to be cleared.  |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Systems/1/Bios/Actions/Bios.ChangePassword
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: application/json
```

- Request Message Body:

```
{
 "PasswordName": "AdministratorPassword",
 "oldPassword": "test",
 "NewPassword": ""
}
```

- Response Example: None
- Response Code: 204

## Output Description

None

## 5.22 Restoring the Default BIOS Settings

### Function

Restore the default BIOS settings.

### Permission Required

User management.

### Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/Systems/system\\_id/Bios/Actions/Bios.ResetBios](https://device_ip/redfish/v1/Systems/system_id/Bios/Actions/Bios.ResetBios)
- Request Header:
 

X-Auth-Token: auth\_value  
 Content-Type: header\_type
- Request Message Body:
 

```
{
 "ResetType":value
}
```

### Parameters

For a description of the parameters for restoring the default BIOS settings, refer to [Table 5-40](#).

**Table 5-40 Descriptions of BIOS Default Settings**

| Parameter   | Description                                                                            | Value                                                                                                  |
|-------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                               | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                  |
| system_id   | ID of the System resource.                                                             | For a rack server, the value is 1 or Self.                                                             |
| auth_value  | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <a href="#">/redfish/v1/SessionService/Sessions</a> . |
| header_type | Format of the request message.                                                         | application/json                                                                                       |
| value       | Operation type.                                                                        | Character string: ResetBios                                                                            |

### Usage Guidelines

None

### Example

- Request Example:

```
POST https://device_ip/redfish/v1/Systems/1/Bios/Actions/Bios.ResetBios
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: application/json
```

- Request Message Body:

```
{
 "ResetType": "ResetBios"
}
```

- Response Example: None

- Response Code: 204

### Output Description

None

## 5.23 Querying Information About the Ethernet Interface Resource Collection

### Function

Query information about the Ethernet interface resource collection of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Systems/system_id/EthernetInterfaces`
- Request Header:

```
X-Auth-Token: auth_value
```

- Request Message Body: None

### Description

For a description of the parameters for querying information about the Ethernet interface resource collection, refer to [Table 5-41](#).

**Table 5-41 Parameter Descriptions for Querying Information About the Ethernet Interface Resource Collection**

| Parameter  | Setting                                                                               | Value                                                                                 |
|------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                 |
| system_id  | ID of the System resource.                                                            | For a rack server, the value is 1 or Self.                                            |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions. |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Systems/1/EthernetInterfaces
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#EthernetInterfaceCollection.EthernetInterfaceCollection",
 "@odata.id": "/redfish/v1/Systems/1/EthernetInterfaces",
 "@odata.type": "#EthernetInterfaceCollection.EthernetInterfaceCollection",
 "Description": "Collection of Ethernet Interfaces for this System",
 "Name": "System Ethernet Interface Collection",
 "Members@odata.count": 2,
 "Members": [
 {
 "@odata.id": "/redfish/v1/Systems/1/EthernetInterfaces/mainboardOCPCard1Port1"
 },
 {
 "@odata.id": "/redfish/v1/Systems/1/EthernetInterfaces/mainboardOCPCard1Port2"
 }
]
}
```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the Ethernet interface resource collection, refer to [Table 5-42](#).

**Table 5-42 Output Descriptions for Querying Information About the Ethernet Interface Resource Collection**

| Field               | Type   | Description                                                            |
|---------------------|--------|------------------------------------------------------------------------|
| @odata.context      | String | OData description of the Ethernet interface resource collection model. |
| @odata.id           | String | Access path of the Ethernet interface resource collection.             |
| @odata.type         | String | Type of ISDT resource collection.                                      |
| Description         | String | Description of the Ethernet interface resource collection.             |
| Name                | String | Name of the Ethernet interface resource collection.                    |
| Members@odata.count | Number | Number of Ethernet interface resources.                                |
| Members             | Array  | List of Ethernet interface resources.                                  |
| @odata.id           | String | Access to a single Ethernet interface resource node.                   |

## 5.24 Querying Information About a Specified Ethernet Interface Resource

### Function

Query information about a specified Ethernet interface resource of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Systems/system_id/EthernetInterfaces/id`
- Request Header:
  - X-Auth-Token: auth\_value
- Request Message Body: None

## Description

For a description of the parameters for querying information about the specified Ethernet interface resource, refer to [Table 5-43](#).

**Table 5-43 Parameter Descriptions for Querying Information About the Specified Ethernet Interface Resource**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| system_id  | ID of the System resource.                                                            | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| id         | Network interface ID.                                                                 | It can be obtained by querying information about the Ethernet interface resource collection.        |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Systems/1/EthernetInterfaces/mainboardPCIeCard1Port1
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#EthernetInterface.EthernetInterface",
 "@odata.id": "/redfish/v1/Systems/1/EthernetInterfaces/mainboardOCPCard1Port2",
 "@odata.type": "#EthernetInterface.v1_5_1.EthernetInterface",
 "AutoNeg": false,
 "Description": "NIC in Slot 1 Port 2",
 "FQDN": null,
 "FullDuplex": true,
 "HostName": null,
 "IPv4Addresses": [],
 "IPv4Addresses@odata.count": 0,
 "IPv6AddressPolicyTable": []
}
```

```

 "IPv6AddressPolicyTable@odata.count": 0,
 "IPv6Addresses": [],
 "IPv6Addresses@odata.count": 0,
 "IPv6DefaultGateway": null,
 "IPv6StaticAddresses": [],
 "IPv6StaticAddresses@odata.count": 0,
 "Id": "mainboardOCPCard1Port2",
 "InterfaceEnabled": true,
 "LinkStatus": "Linkup",
 "Links": {
 "Chassis": {
 "@odata.id": "/redfish/v1/Chassis/1"
 }
 },
 "MACAddress": "40:A6:B7:39:0B:50",
 "MTUSize": null,
 "MaxIPv6StaticAddresses": null,
 "Name": "System Ethernet Interface",
 "NameServers": [],
 "NameServers@odata.count": 0,
 "PermanentMACAddress": "40:A6:B7:39:0B:50",
 "SpeedMbps": 25000,
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "VLAN": {}
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the specified Ethernet interface resource, refer to [Table 5-44](#).

**Table 5-44 Output Descriptions for Querying Information About the Specified Ethernet Interface Resource**

| Field          | Type   | Description                                                           |
|----------------|--------|-----------------------------------------------------------------------|
| @odata.context | String | OData description of the specified Ethernet interface resource model. |
| @odata.id      | String | Access path of the specified Ethernet interface resource.             |
| @odata.type    | String | Type of the specified Ethernet interface resource.                    |

| Field                              | Type    | Description                                                                                                |
|------------------------------------|---------|------------------------------------------------------------------------------------------------------------|
| AutoNeg                            | Boolean | Whether auto-negotiation is used.                                                                          |
| Description                        | String  | Position information about the Ethernet interface.                                                         |
| FQDN                               | String  | FQDN of the <a href="#">BMC</a> .                                                                          |
| FullDuplex                         | Boolean | Whether full duplex mode is used.                                                                          |
| HostName                           | String  | Hostname.                                                                                                  |
| IPv4Addresses                      | Array   | IPv4 address.                                                                                              |
| IPv4Addresses@odata.count          | Number  | Number of IPv4 addresses.                                                                                  |
| IPv6AddressPolicyTable             | Array   | Table of policies for IPv6 address selection.                                                              |
| IPv6AddressPolicyTable@odata.count | Number  | Number of ipv6 address selection policies in the table.                                                    |
| IPv6Addresses                      | Array   | IPv6 address.                                                                                              |
| IPv6Addresses@odata.count          | Number  | Number of IPv6 addresses.                                                                                  |
| IPv6StaticAddresses                | Array   | Array of objects that represents the IPv6 static connection characteristics for this interface.            |
| IPv6StaticAddresses@odata.count    | Number  | Number of arrays of objects that represents the IPv6 static connection characteristics for this interface. |
| IPv6DefaultGateway                 | String  | Default IPv6 gateway address.                                                                              |
| Id                                 | String  | Name of the Ethernet interface resource.                                                                   |
| InterfaceEnabled                   | Boolean | Whether the network interface is enabled.                                                                  |
| LinkStatus                         | String  | Link status:<br><ul style="list-style-type: none"> <li>● Up</li> <li>● Down</li> </ul>                     |
| Links.Chassis.@odata.id            | String  | Access path referenced by the Chassis resource.                                                            |
| MACAddress                         | String  | <a href="#">MAC</a> address of the Ethernet interface.                                                     |
| MTUSize                            | String  | MTU size of the network interface.                                                                         |
| MaxIPv6StaticAddresses             | Number  | Maximum number of static IPv6 addresses that can be configured on this interface.                          |
| Name                               | String  | Resource name.                                                                                             |
| NameServers                        | Array   | DNS name server of the interface.                                                                          |
| NameServers@odata.count            | Number  | Number of DNS name servers of the interface.                                                               |
| PermanentMACAddress                | String  | Permanent MAC address assigned to this interface.                                                          |

| Field         | Type   | Description                                                                                             |
|---------------|--------|---------------------------------------------------------------------------------------------------------|
| SpeedMbps     | Number | Current speed.                                                                                          |
| Status.Health | String | Link quality. <ul style="list-style-type: none"><li>● OK</li><li>● Critical</li><li>● Warning</li></ul> |
| Status.State  | String | Whether the Ethernet interface is enabled.                                                              |
| VLAN          | Object | VLAN of the network interface.                                                                          |

## 5.25 Querying Information About the SimpleStorage Resource Collection

### Function

Query information about the SimpleStorage resource collection of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Systems/system_id/SimpleStorage`
- Request Header:

X-Auth-Token: auth\_valueX-auth-token:auth\_value

- Request Message Body: None

### Description

For a description of the parameters for querying information about the SimpleStorage resource collection, refer to [Table 5-45](#).

**Table 5-45 Parameter Descriptions for Querying Information About the SimpleStorage Resource Collection**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| system_id  | ID of the System resource.                                                            | For a rack server, the value is 1 or Self.                                                          |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Systems/1/SimpleStorage
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#SimpleStorageCollection.SimpleStorageCollection",
 "@odata.id": "/redfish/v1/systems/1/SimpleStorage",
 "@odata.type": "#SimpleStorageCollection.SimpleStorageCollection",
 "Name": "Simple Storage Collection",
 "Members@odata.count": 2,
 "Members": [
 {
 "@odata.id": "redfish/v1/systems/1/simplestorage/RAIDStorage1"
 },
 {
 "@odata.id": "redfish/v1/systems/1/simplestorage/RAIDStorage2"
 }
]
}
```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the SimpleStorage resource collection, refer to [Table 5-46](#).

**Table 5-46 Output Descriptions for Querying Information About the SimpleStorage Resource Collection**

| Field          | Type   | Description                                                       |
|----------------|--------|-------------------------------------------------------------------|
| @odata.context | String | OData description of the SimpleStorage resource collection model. |

| Field               | Type   | Description                                                |
|---------------------|--------|------------------------------------------------------------|
| @odata.id           | String | Access path of the SimpleStorage resource collection node. |
| @odata.type         | String | Type of SimpleStorage resource collection.                 |
| Name                | String | Name of the SimpleStorage resource collection.             |
| Members@odata.count | Number | Number of SimpleStorage resources.                         |
| Members             | Array  | SimpleStorage resource list.                               |
| @odata.id           | String | Access path of a single SimpleStorage resource node.       |

## 5.26 Querying Information About a Specified SimpleStorage Resource

### Function

Query information about a specified SimpleStorage resource.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/Systems/system\\_id/SimpleStorage/simplestorage\\_id](https://device_ip/redfish/v1/Systems/system_id/SimpleStorage/simplestorage_id)
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

### Description

For a description of the parameters for querying information about the specified SimpleStorage resource, refer to [Table 5-47](#).

**Table 5-47 Parameter Descriptions for Querying Information About the Specified SimpleStorage Resource**

| Parameter | Setting                                  | Value                                                     |
|-----------|------------------------------------------|-----------------------------------------------------------|
| device_ip | IP address for logging in to the device. | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.     |
| system_id | ID of the System resource.               | For a rack server, the value is <b>1</b> or <b>Self</b> . |

| Parameter        | Setting                                                                               | Value                                                                                               |
|------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| auth_value       | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| simplestorage_id | ID of the SimpleStorage resource.                                                     | It can be obtained by querying information about the SimpleStorage resource collection.             |

## Usage Guideline

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Systems/1/SimpleStorage/RAIDStorage10
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#SimpleStorage.SimpleStorage",
 "@odata.id": "/redfish/v1/Systems/1/SimpleStorage/RAIDStorage10",
 "@odata.type": "#SimpleStorage.v1_3_1.SimpleStorage",
 "Name": "Simple Storage",
 "Id": "RAIDStorage10",
 "Devices": [
 {
 "CapacityBytes": 1920383410176,
 "Manufacturer": "xxx",
 "Model": "xxx",
 "Name": "Disk52",
 "Status": {
 "State": "Enabled",
 "Health": "OK"
 }
 },
 {
 "CapacityBytes": 1919850381312,
 "Manufacturer": "xxx",
 "Model": "xxx",
 "Status": {
 "State": "Enabled",
 "Health": "OK"
 }
 }
]
}
```

```

 "Name": "Disk53",
 "Status": {
 "State": "Enabled",
 "Health": "OK"
 }
]
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the specified SimpleStorage resource, refer to [Table 5-48](#).

**Table 5-48 Output Descriptions for Querying Information About the Specified SimpleStorage Resource**

| Field          | Type   | Description                                                                                                                                                  |
|----------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context | String | OData description of the SimpleStorage resource model.                                                                                                       |
| @odata.id      | String | Access path of the SimpleStorage resource node.                                                                                                              |
| @odata.type    | String | Type of the specified SimpleStorage resource.                                                                                                                |
| Id             | String | ID of the specified SimpleStorage resource.                                                                                                                  |
| Name           | String | Name of the specified SimpleStorage resource.                                                                                                                |
| Devices        | Array  | Hard disk resource list.                                                                                                                                     |
| CapacityBytes  | Number | Capacity of a hard disk.                                                                                                                                     |
| Manufacturer   | String | Manufacturer of a hard disk.                                                                                                                                 |
| Model          | String | Model of a hard disk.                                                                                                                                        |
| Name           | String | Name of a hard disk.                                                                                                                                         |
| Status         | Object | Hard disk status, including: <ul style="list-style-type: none"> <li>● State: Hard disk enabling status</li> <li>● Health: Hard disk health status</li> </ul> |

# Chapter 6

## Operations on Chassis Resources

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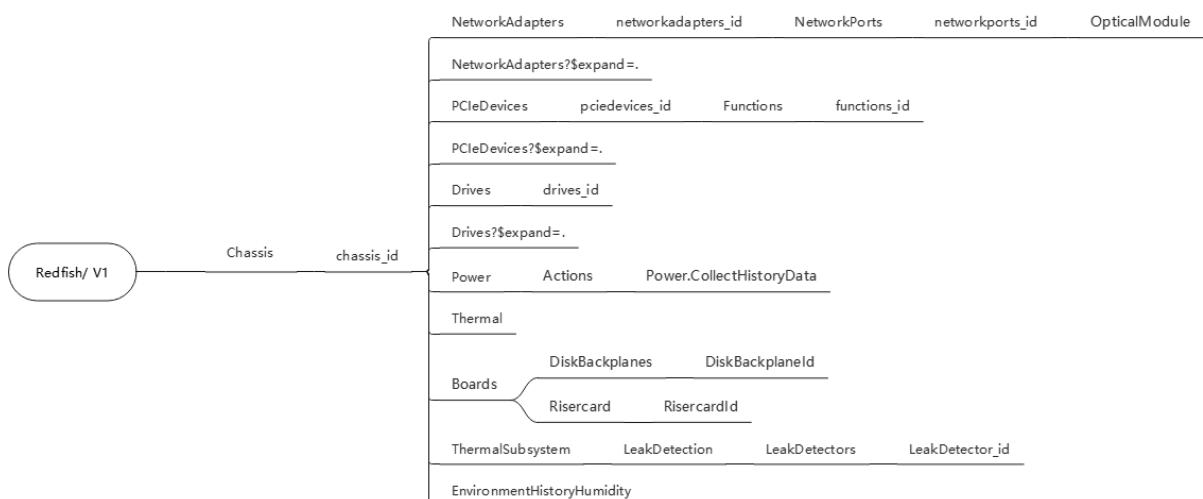
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**Figure 6-1** shows the path requirements for the Chassis resources supported by VANTAGEO servers.

**Figure 6-1 Chassis Resource Path Requirements**



For a description of properties of Chassis resources and operations supported by the properties, refer to [Table 6-1](#).

**Table 6-1 Descriptions of Chassis Resources Properties**

| URL                            | Property            | Description                                                                                                     | Operation |
|--------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------|-----------|
| /redfish/v1/Chassis            | Description         | Description of the Chassis resource collection.                                                                 | GET       |
|                                | Name                | Name of the Chassis resource collection.                                                                        | GET       |
|                                | Members@odata.count | Number of Chassis resource members.                                                                             | GET       |
|                                | Members             | Access path of the specified Chassis resource node.                                                             | GET       |
| /redfish/v1/Chassis/chassis_id | Id                  | ID of the specified Chassis resource. The ID is the unique identifier of the chassis in the chassis collection. | GET       |
|                                | Name                | Name of the specified Chassis resource.                                                                         | GET       |

| URL | Property                             | Description                                                       | Operation |
|-----|--------------------------------------|-------------------------------------------------------------------|-----------|
|     | Manufacturer                         | Manufacturer information about the Chassis.                       | GET       |
|     | PartNumber                           | Part number of the Chassis.                                       | GET       |
|     | Model                                | Model of the Chassis.                                             | GET       |
|     | AssetTag                             | Asset tag of the Chassis.                                         | GET       |
|     | IndicatorLED                         | Position indicator status of the Chassis resource.                | GET/PATCH |
|     | IndicatorLED@Redfish.AllowableValues | Position indicator state range of the specified chassis resource. | GET       |
|     | Status                               | Status of the specified System resource.                          | GET       |
|     | PowerState                           | Power-on status of the specified system resource.                 | GET       |
|     | Oem.Public                           | Vendor-defined attribute.                                         | GET       |
|     | DeviceMaxNum                         | Maximum number of board parts.                                    | GET       |
|     | CPUNum                               | Maximum number of CPUs.                                           | GET       |
|     | DiskNum                              | Maximum number of hard disks.                                     | GET       |
|     | FanNum                               | Maximum number of fans.                                           | GET       |
|     | MemoryNum                            | Maximum number of memory modules.                                 | GET       |
|     | PCIeNum                              | Maximum number of PCIe cards.                                     | GET       |
|     | PowerSupplyNum                       | Maximum number of power supplies.                                 | GET       |
|     | Mainboard                            | Mainboard information.                                            | GET       |
|     | BoardName                            | Mainboard name.                                                   | GET       |
|     | SerialNumber                         | Serial number of the mainboard.                                   | GET       |
|     | PartNumbe                            | Part number of the board.                                         | GET       |
|     | BoardDate                            | Manufacturing date of the board.                                  | GET       |
|     | ProductSpecificIdentity              | Internally defined product name.                                  | GET       |
|     | Links                                | Links related to the chassis resource.                            | GET       |
|     | ComputerSystems                      | Link to system resources.                                         | GET       |
|     | ManagedBy                            | Link to Manager resources.                                        | GET       |

| URL                                                               | Property            | Description                                          | Operation |
|-------------------------------------------------------------------|---------------------|------------------------------------------------------|-----------|
|                                                                   | PCIeDevices         | Navigation of the PCIe device resources.             | GET       |
|                                                                   | Drives              | Navigation of the drive resources.                   | GET       |
|                                                                   | NetworkAdapters     | Information about the related network adapters.      | GET       |
|                                                                   | Power               | Information about the related power supplies.        | GET       |
|                                                                   | Thermal             | Chassis cooling resource information.                | GET       |
|                                                                   | Boards              | Board-level resource links.                          | GET       |
|                                                                   | SerialNumber        | Serial number of the chassis.                        | GET       |
|                                                                   | ProductName         | Product name.                                        | GET       |
|                                                                   | BoardProductVer     | Board product version number.                        | GET       |
|                                                                   | PartNumber          | Material code.                                       | GET       |
| /redfish/v1/Chassis/chassis_id/NetworkAdapters                    | ChassisHeight       | Chassis size.                                        | GET       |
|                                                                   | Description         | Description the network adapter resource collection. | GET       |
|                                                                   | Name                | Name of the network adapter resource.                | GET       |
|                                                                   | Members@odata.count | Number of network adapter resource members.          | GET       |
| /redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id | Members             | List of network adapter resources.                   | GET       |
|                                                                   | Id                  | ID of the specified network adapter resource.        | GET       |
|                                                                   | Name                | Name of the specified network adapter resource.      | GET       |
|                                                                   | NetworkPorts        | List of network port resources.                      | GET       |
|                                                                   | Manufacturer        | Manufacturer of the specified network adapter.       | GET       |
|                                                                   | Model               | Model the specified network adapter.                 | GET       |
|                                                                   | Controllers         | Controllers of the specified network adapter.        | GET       |

| URL | Property                 | Description                                                                                          | Operation |
|-----|--------------------------|------------------------------------------------------------------------------------------------------|-----------|
|     | FirmwarePackageVersion   | Firmware version of the specified network adapter.                                                   | GET       |
|     | Links                    | Links to the related resources.                                                                      | GET       |
|     | NetworkPorts             | Network port resource description.                                                                   | GET       |
|     | @odata.id                | Access path of the network port resource collection.                                                 | GET       |
|     | NetworkPorts@odata.count | Number of network port resources.                                                                    | GET       |
|     | Oem.Public               | Vendor-defined attribute.                                                                            | GET       |
|     | CardManufacturer         | Manufacturer of the specified network adapter.                                                       | GET       |
|     | Name                     | Name of the specified network adapter.                                                               | GET       |
|     | CardModel                | Interface mode of the specified network adapter.                                                     | GET       |
|     | CardType                 | Type of the specified network adapter.                                                               | GET       |
|     | NicCardType              | NIC interface type of the specified network adapter. Common cards and smart cards are distinguished. | GET       |
|     | CurrentPower             | NIC power of the specified network adapter.                                                          | GET       |
|     | CardCelsius              | NIC temperature of the specified network adapter.                                                    | GET       |
|     | DriverVersion            | Driver version of the specified network adapter.                                                     | GET       |
|     | NetworkTechnology        | Network protocol of the specified network adapter.                                                   | GET       |
|     | DeviceLocator            | Silk screen of the specified network adapter.                                                        | GET       |
|     | SlotNumber               | Slot number of the specified network adapter.                                                        | GET       |
|     | RootBDF                  | Root port <b>BDF</b> of the specified network adapter.                                               | GET       |

| URL                                            | Property      | Description                                                                                                                                                     | Operation |
|------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|                                                | AlarmTmp      | Alarm temperature of the specified network adapter. The setting cannot be queried. By default, null is displayed.                                               | GET       |
|                                                | CurrentTmp    | Temperature of the main chip of the specified network adapter. The setting cannot be queried. By default, null is displayed.                                    | GET       |
|                                                | FpgaStatus    | <a href="#">FPGA</a> status of the specified network adapter. This field is displayed only for an FPGA card.                                                    | GET       |
|                                                | HistoryMaxTmp | Maximum historical temperature of the specified network adapter in the historical process. This field is displayed only for an FPGA card.                       | GET       |
|                                                | NicMemory     | Memory information about the specified network adapter. This field is displayed only for an FPGA card.                                                          | GET       |
|                                                | CapacityGb    | Memory capacity of the specified network adapter. This field is displayed only for an FPGA card.                                                                | GET       |
|                                                | Model         | Memory model of the specified network adapter. The default value is DDR4_2400MHz. This field is displayed only for an FPGA card.                                | GET       |
|                                                | Status        | Memory status of the specified network adapter. This field is displayed only for an FPGA card.                                                                  | GET       |
|                                                | Status        | Status of the specified network adapter, including: <ul style="list-style-type: none"> <li>● Health: health status</li> <li>● State: enabling status</li> </ul> | GET       |
|                                                | SerialNumber  | Serial number of the specified network adapter.                                                                                                                 | GET       |
| redfish/v1/Chassis/chassis_id/NetworkAdapters? | Name          | Name of the network adapter resource collection.                                                                                                                | GET       |

| URL                                                                                                         | Property                   | Description                                                         | Operation |
|-------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------|-----------|
|                                                                                                             | Members@odata.count        | Number of network adapter resources.                                | GET       |
|                                                                                                             | Members                    | Network adapter resource information.                               | GET       |
| <code>/redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id/NetworkPorts/networkports_id</code> | Id                         | UID of the specified network port resource in the iBMC system.      | GET/PATCH |
|                                                                                                             | Name                       | Name of the specified network port resource.                        | GET/PATCH |
|                                                                                                             | AutoNeg                    | Negotiation Mode                                                    | GET/PATCH |
|                                                                                                             | LinkStatus                 | Status of the specified network port.                               | GET/PATCH |
|                                                                                                             | AssociatedNetworkAddresses | Network address of the specified network port.                      | GET/PATCH |
|                                                                                                             | Oem.Public                 | Vendor-defined attribute.                                           | GET/PATCH |
|                                                                                                             | PortMaxSpeed               | Network port rate of the specified network port, unit: Mb/s.        | GET/PATCH |
|                                                                                                             | PortType                   | Type of the specified network port.                                 | GET/PATCH |
|                                                                                                             | BDF                        | Root port <b>BDF</b> of the specified network port.                 | GET/PATCH |
|                                                                                                             | CurrentSpeed               | Current speed.                                                      | GET/PATCH |
|                                                                                                             | DriverVersion              | Driver version of the specified network port.                       | GET/PATCH |
|                                                                                                             | FirmwarePackageVersion     | Firmware version of the specified network port.                     | GET/PATCH |
|                                                                                                             | LldpService                | <b>LLDP</b> -related properties.                                    | GET/PATCH |
|                                                                                                             | LldpEnable                 | Whether LLDP is enabled for the specified network port.             | GET/PATCH |
|                                                                                                             | ServiceEnabled             | Whether the specified network port supports LLDP information query. | GET       |
|                                                                                                             | WorkMode                   | Operational mode of LLDP.                                           | GET/PATCH |
|                                                                                                             | SupportSpeed               | Supported speed of the specified network port.                      | GET/PATCH |
|                                                                                                             | OpticalModule              | Optical module resource connected to the specified network port.    | GET       |

| URL                                                                                                                       | Property               | Description                                                                                                                                 | Operation |
|---------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|                                                                                                                           | PhysicalPortNumber     | Physical silk screen of the specified network port.                                                                                         | GET/PATCH |
| <code>/redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id/NetworkPorts/networkports_id/OpticalModule</code> | Id                     | ID of the optical module resource.                                                                                                          | GET       |
|                                                                                                                           | Name                   | Name of the optical module resource.                                                                                                        | GET       |
|                                                                                                                           | Status                 | Status of the optical module resource.<br><ul style="list-style-type: none"> <li>● State: whether the optical module is enabled.</li> </ul> | GET       |
|                                                                                                                           | Manufacturer           | Optical module manufacturer name.                                                                                                           | GET       |
|                                                                                                                           | PartNumber             | Part number of the optical module.                                                                                                          | GET       |
|                                                                                                                           | SerialNumber           | Serial number of the optical module.                                                                                                        | GET       |
|                                                                                                                           | ProductionDate         | Production date of the optical module.                                                                                                      | GET       |
|                                                                                                                           | WaveLengthNanometer    | Wavelength of the optical module.                                                                                                           | GET       |
|                                                                                                                           | BR_Nominal             | Nominal bit rate of the optical module.                                                                                                     | GET       |
|                                                                                                                           | Voltage                | Voltage of the optical module.                                                                                                              | GET       |
|                                                                                                                           | ReadingVolts           | Current voltage reading of the optical module.                                                                                              | GET       |
|                                                                                                                           | LowerThresholdCritical | Critical alarm threshold for undervoltage.                                                                                                  | GET       |
|                                                                                                                           | UpperThresholdCritical | Critical alarm threshold for overvoltage.                                                                                                   | GET       |
|                                                                                                                           | RXPower                | Receive power of the optical module.                                                                                                        | GET       |
|                                                                                                                           | ReadingMilliWatts      | Current receive power reading of the optical module.                                                                                        | GET       |
|                                                                                                                           | LowerThresholdCritical | Critical alarm threshold for too low receive power.                                                                                         | GET       |
|                                                                                                                           | UpperThresholdCritical | Critical alarm threshold for too high receive power.                                                                                        | GET       |
|                                                                                                                           | TXPower                | Transmit power information about the optical module.                                                                                        | GET       |

| URL                                                        | Property               | Description                                                                                                  | Operation |
|------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------|-----------|
| /redfish/v1/Chassis/chassis_id/PowerSupplies/powerSupplyId | ReadingMilliWatts      | Current transmit power reading of the optical module.                                                        | GET       |
|                                                            | LowerThresholdCritical | Critical alarm threshold for too low transmit power.                                                         | GET       |
|                                                            | UpperThresholdCritical | Critical alarm threshold for too high transmit power.                                                        | GET       |
|                                                            | TXBiasCurrent          | Transmit bias current of the optical module.                                                                 | GET       |
|                                                            | ReadingMilliAmperes    | Current bias current reading of the optical module.                                                          | GET       |
|                                                            | LowerThresholdCritical | Critical alarm threshold for too low bias current.                                                           | GET       |
|                                                            | UpperThresholdCritical | Critical alarm threshold for too high bias current.                                                          | GET       |
|                                                            | Temperature            | Temperature of the optical module.                                                                           | GET       |
|                                                            | ReadingCelsius         | Current temperature reading of the optical module.                                                           | GET       |
|                                                            | LowerThresholdCritical | Critical alarm threshold for too low temperature.                                                            | GET       |
|                                                            | UpperThresholdCritical | Critical alarm threshold for too high temperature.                                                           | GET       |
| /redfish/v1/Chassis/chassis_id/PCIeDevices                 | Description            | Description of the PCIe device resource collection.                                                          | GET       |
|                                                            | Name                   | Name of the PCIe device resource collection.                                                                 | GET       |
|                                                            | Members@odata.count    | Number of PCIe device resource members.                                                                      | GET       |
|                                                            | Members                | Access path of the specified PCIe device resource node.                                                      | GET       |
| /redfish/v1/Chassis/chassis_id/PCIeDevices/pciedevices_id  | CardManufacturer       | PCIe device manufacturer, which is the same as the CardManufacturer value of the storage controller and NIC. | GET       |
|                                                            | CardModel              | PCIe device model, which is the same as the CardModel of the stor-                                           | GET       |

| URL | Property        | Description                                                             | Operation |
|-----|-----------------|-------------------------------------------------------------------------|-----------|
|     |                 | age controller and the Oem.Pub-lic.Name of the NIC.                     |           |
|     | Name            | Name of the specified PCIe device resource.                             | GET       |
|     | Id              | ID of the specified PCIe device re-source.                              | GET       |
|     | Description     | Description of the specified PCIe de-vice resource.                     | GET       |
|     | Manufacturer    | Manufacturer of the specified PCIe device resource.                     | GET       |
|     | Model           | Model of the specified PCIe device resource.                            | GET       |
|     | Links           | Resources links.                                                        | GET       |
|     | FirmwareVersion | Version number of the specified PCIe device.                            | GET       |
|     | SerialNumber    | Serial number of the specified PCIe device.                             | GET       |
|     | Status          | Status of the specified PCIe device resource.                           | GET       |
|     | PCIeInterface   | Interface information about the speci-fied PCIe device.                 | GET       |
|     | LanesInUse      | Number of currently negotiated PCIe lanes of the specified PCIe device. | GET       |
|     | MaxLanes        | Maximum number of PCIe lanes sup-ported by the specified PCIe device.   | GET       |
|     | Oem.Public      | -                                                                       | GET       |
|     | LinkSpeed       | Current link speed of the specified PCIe device, unit: GT/s.            | GET       |
|     | MaxLinkSpeed    | Maximum link speed supported by the specified PCIe device, unit: GT/s.  | GET       |
|     | DeviceBDF       | Device <b>BDF</b> of the specified PCIe device.                         | GET       |
|     | DeviceLocator   | Silk screen of the specified PCIe de-vice.                              | GET       |

| URL | Property           | Description                                                                                                   | Operation |
|-----|--------------------|---------------------------------------------------------------------------------------------------------------|-----------|
|     | MemorySizeMiB      | Total memory capacity of the specified PCIe device.                                                           | GET       |
|     | MemoryBandWidth    | Bandwidth of the display memory data of the specified GPU or NPU when PCIeCardType is GPU or NPU, unit: GB/s. | GET       |
|     | PowerCapacityWatts | Maximum Thermal Design Power (TDP) of the specified GPU.                                                      | GET       |
|     | PowerConsumedWatts | Actual power consumed by the specified GPU.                                                                   | GET       |
|     | ReadingCelsius     | Actual temperature of the specified GPU.                                                                      | GET       |
|     | PCIeCardType       | Type of the specified PCIe device.                                                                            | GET       |
|     | PowerWatts         | Power of the specified PCIe device.                                                                           | GET       |
|     | RootPortBDF        | Root port BDF of the specified PCIe device.                                                                   | GET       |
|     | SlotNumber         | Slot number of the specified PCIe device.                                                                     | GET       |
|     | Oem.Public.GpuCore | -                                                                                                             | GET       |
|     | BuildTime          | Production date of memory of the specified PCIe device.                                                       | GET       |
|     | CapacityGB         | Memory capacity of the specified PCIe device.                                                                 | GET       |
|     | MemberId           | Index of memory of the specified PCIe device.                                                                 | GET       |
|     | PartNum            | Part number of memory of the specified PCIe device.                                                           | GET       |
|     | Power              | Power of the specified PCIe device.                                                                           | GET       |
|     | Temperature        | Temperature of the specified PCIe device.                                                                     | GET       |
|     | Oem.Public.NVMeAIC | -                                                                                                             | GET       |
|     | CapacityGB         | Storage capacity of the specified PCIe device.                                                                | GET       |

| URL                                                   | Property                      | Description                                         | Operation |
|-------------------------------------------------------|-------------------------------|-----------------------------------------------------|-----------|
| /redfish/v1/Chassis/chassis_id/PCIeDevices?\$expand=. | iskTemperatureCelsius         | Temperature of the specified PCIe device.           | GET       |
|                                                       | MediaType                     | Media type of the specified PCIe device.            | GET       |
|                                                       | PredictedMediaLifeLeftPercent | Remaining lifetime of the specified PCIe device.    | GET       |
|                                                       | Interface                     | Interface type of the specified PCIe device.        | GET       |
|                                                       | CapacityBytes                 | Capacity of the specified PCIe device, unit: bytes. | GET       |
|                                                       | HealthStatus                  | Health status of the specified PCIe device.         | GET       |
|                                                       | Model                         | Model of the specified PCIe device.                 | GET       |
|                                                       | Vendor                        | Manufacturer of specified PCIe device.              | GET       |
|                                                       | SerialNumber                  | Serial number of the specified PCIe device.         | GET       |
| /redfish/v1/Chassis/chassis_id/PCIeDevices            | Description                   | Description of the PCIe device resource collection. | GET       |
|                                                       | Name                          | Name of the PCIe device resource collection.        | GET       |
|                                                       | Members@odata.count           | Number of PCI e device resources.                   | GET       |
|                                                       | Members                       | PCIe device resources.                              | GET       |
| /redfish/v1/Chassis/chassis_id/Drives                 | Name                          | Name of the drive resource collection.              | GET       |
|                                                       | Members@odata.count           | Number of drive resource members.                   | GET       |
|                                                       | Members                       | Access path of the specified drive resource node.   | GET       |
| /redfish/v1/Chassis/chassis_id/Drives/drives_id       | Id                            | ID of the specified drive resource.                 | GET       |
|                                                       | Name                          | Name of the specified drive resource.               | GET       |
|                                                       | Model                         | Model of the specified drive.                       | GET       |
|                                                       | Revision                      | Version information about the specified drive.      | GET       |

| URL | Property                      | Description                                                      | Operation |
|-----|-------------------------------|------------------------------------------------------------------|-----------|
|     | Status                        | Status of the specified drive.                                   | GET       |
|     | CapableSpeedGbs               | Maximum speed of the interface of the specified drive.           | GET       |
|     | NegotiatedSpeedGbs            | Negotiated speed of the interface of the specified drive.        | GET       |
|     | Oem.Public                    | -                                                                | GET       |
|     | TemperatureCelsius            | Temperature unit (Celsius) of the specified drive.               | GET       |
|     | BackpanelId                   | Backplane ID of the specified drive.                             | GET       |
|     | BackPanelLocation             | Backplane position of the specified drive.                       | GET       |
|     | SASAddress                    | -                                                                | GET       |
|     | CapacityBytes                 | Capacity of the specified drive, in bytes.                       | GET       |
|     | FailurePredicted              | Whether a failure is predicted by the specified drive.           | GET       |
|     | HotspareType                  | Hotspare status of the specified drive.                          | GET       |
|     | Protocol                      | Compliant protocol of the specified drive.                       | GET       |
|     | MediaType                     | Media type of the specified drive.                               | GET       |
|     | Manufacturer                  | Manufacturer of the specified drive.                             | GET       |
|     | PredictedMediaLifeLeftPercent | Percentage of the remaining service life of the specified drive. | GET       |
|     | SerialNumber                  | Serial number of the specified drive.                            | GET       |
|     | PartNumber                    | Part number of the specified drive.                              | GET       |
|     | SlotNumber                    | Slot number of the hard disk.                                    | GET       |
|     | IndicatorLED                  | Position indicator status of the specified drive.                | GET       |
|     | Location                      | Screen printing of the specified drive.                          | GET       |
|     | Info                          | Silk screen of the specified drive.                              | GET       |
|     | InfoFormat                    | Silk screen format of the specified drive.                       | GET       |

| URL                                              | Property                | Description                                                                                              | Operation |
|--------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------|-----------|
| /redfish/v1/Chassis/chassis_id Drives?\$expand=. | RotationSpeedRPM        | Rotation speed of the specified drive, unit: RPM.                                                        | GET       |
|                                                  | BelongCPU               | Controller CPU of the specified drive.                                                                   | GET       |
|                                                  | ControllerBDF           | Controller BDF of the specified drive.                                                                   | GET       |
|                                                  | ControllerPortNum       | Controller port number of the specified drive.                                                           | GET       |
| /redfish/v1/Chassis/chassis_id/Drives?\$expand=. | Name                    | Name of the drive resource collection.                                                                   | GET       |
|                                                  | Members@odata.count     | Number of drive resources.                                                                               | GET       |
|                                                  | Members                 | All drive resources.                                                                                     | GET       |
| /redfish/v1/Chassis/Chassis_id/Power             | Description             | Description.                                                                                             | GET       |
|                                                  | Id                      | ID of the power resource.                                                                                | GET/PATCH |
|                                                  | Name                    | Name of the power resource.                                                                              | GET       |
|                                                  | PowerControl            | Power control list.                                                                                      | GET       |
|                                                  | Name                    | Name of the specified power control.                                                                     | GET/PATCH |
|                                                  | MemberId                | ID of the power control. The ID is the unique identifier of the power control in the power control list. | GET/PATCH |
|                                                  | PowerLimit              | Power capping setting.                                                                                   | GET/PATCH |
|                                                  | LimitInWatts            | Server power limit.                                                                                      | GET/PATCH |
|                                                  | PowerLimitEnable        | Whether power capping is enabled.                                                                        | GET/PATCH |
|                                                  | LimitException          | Action to be taken when the power capping becomes invalid.                                               | GET/PATCH |
|                                                  | PowerConsumedWatts      | Current power of the device.                                                                             | GET/PATCH |
|                                                  | Oem.Public              | Customized properties.                                                                                   | GET/PATCH |
|                                                  | ExpectedActivePSU       | Expected active PSU list.                                                                                | GET/PATCH |
|                                                  | CurrentCPUPowerWatts    | Current power consumption of the CPUs.                                                                   | GET/PATCH |
|                                                  | CurrentFanPowerWatts    | Current power consumption of the fans.                                                                   | GET/PATCH |
|                                                  | CurrentMemoryPowerWatts | Current power consumption of the memory.                                                                 | GET/PATCH |

| URL                                    | Property             | Description                                                                                                                                                                             | Operation |
|----------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| /redfish/v1/PowerSupplies/{SlotNumber} | CurrentHDDPowerWatts | Current power consumption of the hard disks.                                                                                                                                            | GET/PATCH |
|                                        | PowerSupplies        | Power module list.<br>The power modules in the list are displayed no matter whether they are present or not. <b>Status</b> is used for indicating the current status of a power module. | GET/PATCH |
|                                        | FirmwareVersion      | Firmware version of the specified power supply.                                                                                                                                         | GET/PATCH |
|                                        | LineInputVoltage     | Input voltage of the specified power supply.                                                                                                                                            | GET/PATCH |
|                                        | Manufacturer         | Manufacturer of the specified power supply.                                                                                                                                             | GET/PATCH |
|                                        | Model                | Model of the specified power supply.                                                                                                                                                    | GET/PATCH |
|                                        | Name                 | Name of the specified power control.                                                                                                                                                    | GET/PATCH |
|                                        | PowerCapacityWatts   | Rated power of the specified power supply.                                                                                                                                              | GET/PATCH |
|                                        | PowerInputWatts      | Input power of the specified power supply.                                                                                                                                              | GET/PATCH |
|                                        | PowerOutputWatts     | Output power of the specified power supply.                                                                                                                                             | GET/PATCH |
|                                        | PowerSupplyType      | Type of the specified power supply.                                                                                                                                                     | GET/PATCH |
|                                        | ProductionDate       | Production date of the specified power module.                                                                                                                                          | GET       |
|                                        | SerialNumber         | Serial number of the specified power supply.                                                                                                                                            | GET/PATCH |
|                                        | Status               | Power supply status.                                                                                                                                                                    | GET/PATCH |
|                                        | Oem.Public           | Customized properties.                                                                                                                                                                  | GET/PATCH |
|                                        | ActiveStandby        | Active or standby power supply mode.                                                                                                                                                    | GET/PATCH |
|                                        | SlotNumber           | Slot number of the specified power supply.                                                                                                                                              | GET/PATCH |

| URL                                                      | Property                  | Description                                                                                                     | Operation |
|----------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------|-----------|
| /redfish/v1/PowerSupplies/{Id}/VoltageSensors/{SensorId} | MemberId                  | ID of the specified power supply. The ID is the unique identifier of the power supply in the power supply list. | GET/PATCH |
|                                                          | PowerSupplies@odata.count | Number of power supplies.                                                                                       | GET/PATCH |
|                                                          | Voltages                  | Voltage sensor list.                                                                                            | GET/PATCH |
|                                                          | LowerThresholdCritical    | Critical warning threshold for low voltage of the specified voltage sensor.                                     | GET/PATCH |
|                                                          | LowerThresholdFatal       | Fatal warning threshold for low voltage of the specified voltage sensor.                                        | GET/PATCH |
|                                                          | LowerThresholdNonCritical | Noncritical warning threshold for low voltage of the specified voltage sensor.                                  | GET/PATCH |
|                                                          | MaxReadingRange           | Maximum voltage reading for the specified voltage sensor.                                                       | GET/PATCH |
|                                                          | MinReadingRange           | Minimum voltage reading for the specified voltage sensor.                                                       | GET/PATCH |
|                                                          | Name                      | Name of the specified voltage sensor.                                                                           | GET/PATCH |
|                                                          | SensorNumber              | Serial number of the specified voltage sensor.                                                                  | GET/PATCH |
|                                                          | Status                    | Status of the specified voltage sensor.                                                                         | GET/PATCH |
|                                                          | ReadingVolts              | Current reading of the specified voltage sensor.                                                                | GET/PATCH |
|                                                          | UpperThresholdCritical    | Critical warning threshold for high voltage of the specified voltage sensor.                                    | GET/PATCH |
|                                                          | UpperThresholdFatal       | Fatal warning threshold for high voltage of the specified voltage sensor.                                       | GET/PATCH |
|                                                          | LowerThresholdNonCritical | Noncritical warning threshold for high voltage of the specified voltage sensor.                                 | GET       |
|                                                          | Redundancy                | Power redundancy group list.                                                                                    | GET/PATCH |

| URL                                                    | Property                  | Description                                                                       | Operation |
|--------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------|-----------|
| <a href="#">/redfish/v1/Chassis/Chassis_id/Thermal</a> | Name                      | Name of the specified power redundancy group.                                     | GET/PATCH |
|                                                        | Mode                      | Redundancy mode of the specified power redundancy group.                          | GET/PATCH |
|                                                        | Actions                   | Available actions for power supplies.                                             | GET       |
|                                                        | #Power.CollectHistoryData | Collects historical power statistics.                                             | GET       |
| <a href="#">/redfish/v1/Chassis/Chassis_id/Thermal</a> | Description               | Description of the cooling resource.                                              | GET       |
|                                                        | Id                        | ID of the cooling resource.                                                       | GET       |
|                                                        | Name                      | Name of the cooling resource.                                                     | GET       |
|                                                        | Oem.Public                | Customized information about the cooling resource.                                | GET/PATCH |
|                                                        | FanSpeedAdjustmentMode    | Fan speed adjustment mode.                                                        | GET/PATCH |
|                                                        | FanSmartCoolingMode       | Fan speed smart adjustment mode.                                                  | GET/PATCH |
|                                                        | SpeedRatio                | Fan rotation speed ratio.                                                         | GET/PATCH |
|                                                        | Temperatures              | Temperature sensor list.                                                          | GET/PATCH |
|                                                        | LowerThresholdCritical    | Critical warning threshold for low speed rotation of the specified fan sensor.    | GET/PATCH |
|                                                        | LowerThresholdFatal       | Fatal warning threshold for low speed rotation of the specified fan sensor.       | GET/PATCH |
|                                                        | LowerThresholdNonCritical | Noncritical warning threshold for low speed rotation of the specified fan sensor. | GET/PATCH |
|                                                        | MemberId                  | ID of the specified temperature sensor.                                           | GET/PATCH |
|                                                        | Name                      | Name of the specified temperature sensor.                                         | GET/PATCH |
|                                                        | PhysicalContext           | Area or device used for temperature measurement.                                  | GET/PATCH |
|                                                        | ReadingCelsius            | Current reading of the specified temperature sensor.                              | GET/PATCH |
|                                                        | SensorNumber              | Serial number of the specified temperature sensor.                                | GET/PATCH |

| URL | Property                  | Description                                                                                            | Operation |
|-----|---------------------------|--------------------------------------------------------------------------------------------------------|-----------|
|     | Status                    | Status of the specified fan sensor.                                                                    | GET/PATCH |
|     | UpperThresholdCritical    | Critical warning threshold for high temperature of the specified temperature sensor.                   | GET/PATCH |
|     | UpperThresholdFatal       | Fatal warning threshold for high temperature of the specified temperature sensor.                      | GET/PATCH |
|     | UpperThresholdNonCritical | Noncritical warning threshold for high temperature of the specified temperature sensor.                | GET/PATCH |
|     | MinReadingRangeTemp       | Minimum temperature reading for the specified temperature sensor.                                      | GET/PATCH |
|     | MaxReadingRangeTemp       | Maximum temperature reading for the specified temperature sensor.                                      | GET/PATCH |
|     | FanSummary                | Information about the specified fan sensors.                                                           | GET/PATCH |
|     | Count                     | Number of fan sensors.                                                                                 | GET/PATCH |
|     | Fans                      | Fan sensor list.                                                                                       | GET/PATCH |
|     | Name                      | Name of the specified fan sensor.                                                                      | GET       |
|     | Status                    | Status of the specified fan sensor.                                                                    | GET/PATCH |
|     | MemberId                  | ID of the specified fan sensor.                                                                        | GET/PATCH |
|     | ReadingUnits              | Unit of the fan rotation speed reading for the fan sensor, including: <a href="#">RPM</a> and Percent. | GET/PATCH |
|     | Oem.Public                | Customized information about the cooling resource.                                                     | GET       |
|     | SlotNumber                | Slot number of the specified fan sensor.                                                               | GET       |
|     | FanName                   | Name of the fan that the specified fan sensor belongs to.                                              | GET/PATCH |
|     | MinReadingRange           | Minimum rotation speed reading for the specified fan sensor.                                           | GET/PATCH |
|     | MaxReadingRange           | Maximum rotation speed reading for the specified fan sensor.                                           | GET/PATCH |

| URL                                                                                    | Property              | Description                                                                           | Operation |
|----------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|-----------|
|                                                                                        | Reading               | Current reading of the specified fan sensor.                                          | GET/PATCH |
|                                                                                        | Model                 | Model of the specified fan sensor.                                                    | GET       |
| /redfish/v1/<br>Chassis/chassis_id/Boards                                              | Description           | Description of the expansion board resource collection.                               | GET       |
|                                                                                        | DiskBackplanes        | Information about hard disk back-planes.                                              | GET       |
|                                                                                        | Risercard             | Information about riser cards.                                                        | GET       |
|                                                                                        | Id                    | ID of the expansion board resource collection.                                        | GET       |
|                                                                                        | Name                  | Name of the expansion board re-source collection.                                     | GET       |
| /redfish/v1/<br>Chassis/Chassis_id/Boards/<br>DiskBackplanes                           | Name                  | Name of the hard disk backplane re-source collection.                                 | GET       |
|                                                                                        | Members@odata.count   | Number of hard disk backplane re-sources.                                             | GET       |
| /redfish/v1/<br>Chassis/Chassis_id/Boards/<br>DiskBack-<br>planes/DiskBack-<br>planeld | Name                  | Name of the hard disk backplane re-source collection.                                 | GET       |
|                                                                                        | CPLDVersion           | CPLD version of the specified hard disk backplane.                                    | GET       |
|                                                                                        | MaxDiskCountSupported | Maximum number of hard disks sup-pored by the specified hard disk backplane resource. | GET       |
|                                                                                        | PartNumber            | Part number of the specified hard disk backplane resource.                            | GET       |
|                                                                                        | Location              | Location of the specified hard disk backplane.                                        | GET       |
|                                                                                        | Manufacturer          | Manufacturer of the specified hard disk backplane resource.                           | GET       |
|                                                                                        | OnlineDiskCount       | Number of present hard disks sup-pored by the specified hard disk backplane resource. | GET       |
|                                                                                        | ID                    | Serial number of the specified hard disk backplane resource.                          | GET       |

| URL                                                                            | Property           | Description                                                            | Operation |
|--------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------|-----------|
|                                                                                | PcbID              | PCB ID of the specified hard disk backplane.                           | GET       |
| /redfish/v1/Chassis/Chassis_id/Boards/Riser-card                               | Description        | Description of the riser card resource collection.                     | GET       |
|                                                                                | Name               | Name of the riser card resource collection.                            | GET       |
|                                                                                | Members            | List of riser card resources.                                          | GET       |
| /redfish/v1/Chassis/Chassis_id/Boards/Riser-card/RisercardId                   | Manufacturer       | Manufacturer of the specified riser card resource.                     | GET       |
|                                                                                | Name               | Name of the specified riser card resource.                             | GET       |
|                                                                                | PartNumber         | Part number of the specified riser card resource.                      | GET       |
|                                                                                | SerialNumber       | Serial number of the specified riser card resource.                    | GET       |
| /redfish/v1/Chassis/chassis_id/PCIeDevices/pciedevices_id/Functions/functions_ | DeviceClass        | Class of the specified PCIe device function resource.                  | GET       |
|                                                                                | DeviceId           | DID of the specified PCIe device.                                      | GET       |
|                                                                                | Id                 | UID of the specified PCIe device function resource in the iBMC system. | GET       |
|                                                                                | Links              | Links to the related resources.                                        | GET       |
|                                                                                | PCIeDevice         | PCIe device resource list.                                             | GET       |
|                                                                                | Name               | Name of the specified PCIe device function resource.                   | GET       |
|                                                                                | Oem                | Customized properties.                                                 | GET       |
|                                                                                | Public             | Customized properties.                                                 | GET       |
|                                                                                | AssociatedResource | Associated resource of the specified PCIe device function resource.    | GET       |
|                                                                                | BusNumber          | Bus number of the specified PCIe device root port.                     | GET       |
|                                                                                | DeviceNumber       | Device number of the specified PCIe device root port.                  | GET       |

| URL                                                                            | Property            | Description                                                                                   | Operation |
|--------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------|-----------|
|                                                                                | FunctionNumber      | Function number of the specified PCIe device root port.                                       | GET       |
|                                                                                | SubsystemId         | SDID of the specified PCIe device root port.                                                  | GET       |
|                                                                                | SubsystemVendorId   | SVID of the specified PCIe device root port.                                                  | GET       |
|                                                                                | VendorId            | VID of the specified PCIe device root port.                                                   | GET       |
| /redfish/v1/Chassis/chassis_id/ThermalSubsystem/LeakDetection                  | Id                  | ID of the collection of leak detection device resources.                                      | GET       |
|                                                                                | Name                | Name of the collection of leak detection device resources.                                    | GET       |
|                                                                                | LeakDetectors       | Collection of leak detectors.                                                                 | GET       |
| redfish/v1/Chassis/chassis_id/ThermalSubsystem/LeakDetection/LeakDetectors     | Name                | Name of the leak detector resource collection.                                                | GET       |
|                                                                                | Members@odata.count | Number of leak detector resources.                                                            | GET       |
|                                                                                | Members             | List of leak detector resources.                                                              | GET       |
| /redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id/NetworkPorts | Name                | Name of the network port resource collection of the specified network adapter.                | GET       |
|                                                                                | Description         | Description of the network port resource collection of the specified network adapter.         | GET       |
|                                                                                | Members             | Members of the network port resource collection.                                              | GET       |
|                                                                                | Members@odata.count | Number of network port resources.                                                             | GET       |
| /redfish/v1/Chassis/chassis_id/EnvironmentHistoryHumidity                      | Id                  | ID of the historical environmental humidity information about the specified chassis.          | GET       |
|                                                                                | Name                | Name of the historical environmental humidity information about the specified chassis.        | GET       |
|                                                                                | Description         | Description of the historical environmental humidity information about the specified chassis. | GET       |

| URL | Property        | Description                                                                                  | Operation |
|-----|-----------------|----------------------------------------------------------------------------------------------|-----------|
|     | Data            | Data array of the historical environmental humidity information about the specified chassis. | GET       |
|     | Time            | Humidity information collection time.                                                        | GET       |
|     | HumidityPercent | Humidity value.                                                                              | GET       |

## 6.1 Querying Information About the Chassis Resource Collection

### Function

Query information about the current Chassis resource collection of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
  - URL: [https://device\\_ip/redfish/v1/Chassis](https://device_ip/redfish/v1/Chassis)
  - Request Header:
- X-Auth-Token: auth\_value
- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the Chassis resource collection, refer to [Table 6-2](#).

**Table 6-2 Parameter Descriptions for Querying Information About the Chassis Resource Collection**

| Parameter  | Description                                                                           | Value                                                                                                                                    |
|------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                                                    |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |

### Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis
```

- Request Header:

```
x-auth-token:QnaWfqvKOY0ZGc2LK5Ay6+CaSYWjEYcxE6GcWKNFyjU=
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#ChassisCollection.ChassisCollection",
 "@odata.id": "/redfish/v1/chassis",
 "@odata.type": "#ChassisCollection.ChassisCollection",
 "Description": "The Collection for Chassis",
 "Members": [
 {
 "@odata.id": "/redfish/v1/chassis/1"
 }
],
 "Members@odata.count": 1,
 "Name": "Chassis Collection"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the Chassis resource collection, refer to [Table 6-3](#).

**Table 6-3 Output Descriptions for Querying Information About the Chassis Resource Collection**

| Field               | Type   | Description                                                 |
|---------------------|--------|-------------------------------------------------------------|
| @odata.context      | String | OData description of the chassis resource collection model. |
| @odata.id           | String | Access path of the Chassis resource collection.             |
| @odata.type         | String | Type of Chassis resource collection.                        |
| Description         | String | Description of the Chassis resource collection.             |
| Name                | String | Name of the Chassis resource collection.                    |
| Members@odata.count | Number | Number of Chassis resource members.                         |

| Field     | Type   | Description                                    |
|-----------|--------|------------------------------------------------|
| Members   | Array  | Chassis resource list.                         |
| @odata.id | String | Access path of a single Chassis resource node. |

## 6.2 Querying Information About a Specified Chassis Resource

### Function

Query information about the specified Chassis resource of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Chassis/chassis_id`
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the specified Chassis resource, refer to [Table 6-4](#).

**Table 6-4 Parameter Descriptions for Querying Information About the Specified Chassis Resource**

| Parameter  | Description                                                                           | Value                                                                                                                                                                                                                                                                                                                                                |
|------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                                                                                                                                                                                                                                                                                |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                                                                                                                                                                                                  |
| chassis_id | ID of the Chassis resource.                                                           | <ul style="list-style-type: none"> <li>For a rack server, the value is 1 or Self.</li> <li>For a high-density server, the value is BladeN (where N indicates slot number of the node), for example, "Blade1".</li> <li>For a blade server, the value is BladeN (where N indicates the slot number of the computing node) or SwiN (where N</li> </ul> |

| Parameter | Description | Value                                                                    |
|-----------|-------------|--------------------------------------------------------------------------|
|           |             | indicates the slot number of the switching module), for example, "Swi1". |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1
```

- Request Header:

```
x-auth-token:QnaWfqvKOY0ZGc2LK5Ay6+CaSYWjEYcxE6GcWKNFyjU=
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Chassis.Chassis",
 "@odata.id": "/redfish/v1/Chassis/1",
 "@odata.type": "#Chassis.v1_14_0.Chassis",
 "AssetTag": "1234",
 "ChassisType": "RackMount",
 "Description": "Chassis Self",
 "Drives": {
 "@odata.id": "/redfish/v1/Chassis/1/Drives"
 },
 "Id": "1",
 "IndicatorLED": "Blinking",
 "IndicatorLED@Redfish.Allowablevalues": [
 "Lit",
 "Blinking",
 "Off"
],
 "Links": {
 "ComputerSystems": [
 {
 "@odata.id": "/redfish/v1/Systems/1"
 }
],
 "ManagedBy": [
 {
 "@odata.id": "/redfish/v1/Managers/1"
 }
]
 }
}
```

```
 }
],
},
"Manufacturer": "VANTAGEO",
"Model": "2240-RE",
"Name": "Computer System Chassis",
"NetworkAdapters": {
 "@odata.id": "/redfish/v1/Chassis/1/NetworkAdapters"
},
"Oem": {
 "Public": {
 "DeviceMaxNum": {
 "CPUNum": 2,
 "DiskNum": 25,
 "FanNum": 12,
 "MemoryNum": 32,
 "PCIeNum": 32,
 "PowerSupplyNum": 4
 },
 "ProductName": "a6",
 "BoardProductVer": null,
 "PartNumber": null,
 "Mainboard": {
 "Manufacturer": "VANTAGEO",
 "BoardName": "VANTAGEO",
 "SerialNumber": "749973700038",
 "PartNumber": "21080102",
 "BoardDate": "Tue Jan 10 09:00:00 2023"
 },
 "ProductSpecificIdentity": "4440-RE,Intel",
 "ChassisHeight": "4U",
 "OverallHealthStatus": "Major",
 "Boards": {
 "@odata.id": "/redfish/v1/Chassis/1/Boards"
 }
 }
},
"PCIeDevices": {
 "@odata.id": "/redfish/v1/Chassis/1/PCIeDevices"
},
"PartNumber": "NULL",
"PhysicalSecurity": {
 "IntrusionSensor": "HardwareIntrusion"
},
```

```

 "Power": {
 "@odata.id": "/redfish/v1/Chassis/1/Power"
 },
 "PowerState": "On",
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "Thermal": {
 "@odata.id": "/redfish/v1/Chassis/1/Thermal"
 },
 "SerialNumber": null
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the specified Chassis resource, refer to [Table 6-5](#).

**Table 6-5 Output Descriptions for Querying Information About the Specified Chassis Resource**

| Field          | Type   | Description                                                                                                                                         |
|----------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context | String | OData description of the specified Chassis resource model.                                                                                          |
| @odata.id      | String | Access path of the specified Chassis resource.                                                                                                      |
| @odata.type    | String | Type of the specified Chassis resource.                                                                                                             |
| Id             | String | ID of the specified Chassis resource.                                                                                                               |
| Name           | String | Name of the specified Chassis resource.                                                                                                             |
| Manufacturer   | String | Manufacturer information about the Chassis.                                                                                                         |
| PartNumber     | String | Part number of the Chassis.                                                                                                                         |
| Model          | String | Model of the Chassis.                                                                                                                               |
| AssetTag       | String | Asset tag of the Chassis.                                                                                                                           |
| ChassisType    | String | Chassis type.                                                                                                                                       |
| Description    | String | Description of the specified chassis resource.                                                                                                      |
| IndicatorLED   | String | Position indicator status of the specified Chassis resource, including: <ul style="list-style-type: none"> <li>● Lit</li> <li>● Blinking</li> </ul> |

| Field                                   | Type   | Description                                                                                                                                                                                |
|-----------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         |        | <ul style="list-style-type: none"> <li>Off</li> </ul>                                                                                                                                      |
| IndicatorLED@Redfish.AllowableValues    | Array  | Position indicator status range of the specified Chassis resource.                                                                                                                         |
| Status                                  | Object | Status of the specified Chassis resource, including: <ul style="list-style-type: none"> <li>State: whether the Chassis is enabled</li> <li>Health: health status of the Chassis</li> </ul> |
| PowerState                              | String | The power-on status of the specified System resource, including <ul style="list-style-type: none"> <li>On</li> <li>Off</li> </ul>                                                          |
| Oem.Public                              | Object | Manufacturer-customized properties.                                                                                                                                                        |
| Oem.Public.DeviceMaxNum                 | Object | Maximum number of board parts.                                                                                                                                                             |
| Oem.Public.Device-MaxNum.CPUNum         | Number | Maximum number of CPUs.                                                                                                                                                                    |
| Oem.Public.Device-MaxNum.DiskNum        | Number | Maximum number of hard disks.                                                                                                                                                              |
| Oem.Public.Device-MaxNum.FanNum         | Number | Maximum number of fans.                                                                                                                                                                    |
| Oem.Public.Device-MaxNum.MemoryNum      | Number | Maximum number of memory modules.                                                                                                                                                          |
| Oem.Public.Device-MaxNum.PCleNum        | Number | Maximum number of PCIe cards.                                                                                                                                                              |
| Oem.Public.Device-MaxNum.PowerSupplyNum | Number | Maximum number of power supplies.                                                                                                                                                          |
| Oem.Public.Mainboard                    | Object | Mainboard information.                                                                                                                                                                     |
| Oem.Public.BoardName                    | String | Mainboard name.                                                                                                                                                                            |
| Oem.Public.SerialNumber                 | String | Serial number of the mainboard.                                                                                                                                                            |
| Oem.Public.PartNumber                   | String | Part number of the board.                                                                                                                                                                  |
| Oem.Public.BoardDate                    | String | Manufacturing date of the board.                                                                                                                                                           |
| ProductSpecificIdentity                 | String | Internally defined product name.                                                                                                                                                           |
| Links                                   | Object | Links related to the Chassis resource.                                                                                                                                                     |
| Links.ComputerSystems                   | Array  | Link to System resources.                                                                                                                                                                  |
| Links.ManagedBy                         | Array  | Link to Manager resources.                                                                                                                                                                 |

| Field                              | Type   | Description                                                                                                                        |
|------------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| PCIeDevices                        | Object | Navigation of the PCIe device resources.                                                                                           |
| Drives                             | Object | Navigation of the drive resources.                                                                                                 |
| NetworkAdapters                    | Object | Information about the related network adapters.                                                                                    |
| Power                              | Object | Information about the related power supplies.                                                                                      |
| Thermal                            | Object | Chassis cooling resource information.                                                                                              |
| Oem.Public.Bards                   | Object | Board-level resource links.                                                                                                        |
| Oem.Public.ProductName             | String | Product name.                                                                                                                      |
| Oem.Public.BoardProductVer         | String | Product version of the board.                                                                                                      |
| Oem.Public.PartNumber              | String | Material code.                                                                                                                     |
| Oem.Public.ProductSpecificIdentity | String | Internally defined product name.                                                                                                   |
| Oem.Public.ChassisHeight           | String | Chassis size.                                                                                                                      |
| Oem.Public.OverallHealthStatus     | String | Overall health status.                                                                                                             |
| SerialNumber                       | String | Serial number of the chassis.                                                                                                      |
| PhysicalSecurity.IntrusionSensor   | String | Chassis intrusion status, including:<br>• Normal<br>• HardwareIntrusion:<br>Null is displayed if it is not supported by the board. |

## 6.3 Modifying the Position Indicator Status of a Chassis

### Function

Turn on or off the position indicator of a chassis.

### Permission Required

Basic management.

### Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/Chassis/chassis\\_id](https://device_ip/redfish/v1/Chassis/chassis_id)
- Request Header:

|                           |
|---------------------------|
| Content-Type: header_type |
| X-Auth-Token: auth_value  |

- Request Message Body:

```
{
 "IndicatorLED": state
}
```

## Parameters

For a description of the parameters for modifying the position indicator status of the Chassis, refer to [Table 6-6](#).

**Table 6-6 Parameter Descriptions for Modifying the Position Indicator Status of the Chassis**

| Parameter   | Description                                                                             | Value                                                                                                 |
|-------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                                | IPv4 or IPv6 address.                                                                                 |
| chassis_id  | ID of the Chassis resource.                                                             | For a rack server, the value is 1 or Self.                                                            |
| auth_value  | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .   |
| header_type | Format of the request message.                                                          | application/json                                                                                      |
| state       | Position indicator status of the Chassis resource.                                      | Including: <ul style="list-style-type: none"> <li>● Lit</li> <li>● Blinking</li> <li>● Off</li> </ul> |

## Usage Guidelines

After configuration, you can view the result through `GET https://device_ip/redfish/v1/Chassis/1`.

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Chassis/1
```

- Request Header:

```
Content-Type: application/json
```

- Request Message Body:

```
{
 "IndicatorLED": "Lit"
}
```

- Response Example: None

- Status Code: 204

### Output Description

None

## 6.4 Querying Information About the Network Adapter Resource Collection

### Function

Query information about the network adapter resource collection of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Chassis/chassis_id/NetworkAdapters`
- Request Header:
  - X-Auth-Token: auth\_value
- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the network adapter resource collection, refer to [Table 6-7](#).

**Table 6-7 Parameter Information of Querying Information About the Network Adapter Resource Collection**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| chassis_id | ID of the Chassis resource.                                                           | For a rack server, the value is 1 or Self.                                                          |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/NetworkAdapters
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context":
 "/redfish/v1/$metadata#NetworkAdaptersCollection.NetworkAdaptersCollection",
 "@odata.id": "/redfish/v1/Chassis/1/NetworkAdapters",
 "@odata.type": "#NetworkAdapterCollection.NetworkAdapterCollection",
 "Description": "Collection of Network Adapters for this Manager",
 "Name": "Network Adapters Collection",
 "Members@odata.count": 4,
 "Members": [
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard7"
 },
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard8"
 },
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardOCPCard1"
 },
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardOCPCard2"
 }
]
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the network adapter resource collection, refer to [Table 6-8](#).

**Table 6-8 Output Descriptions for Querying Information About the Network Adapter Resource Collection**

| Field               | Type   | Description                                                         |
|---------------------|--------|---------------------------------------------------------------------|
| @odata.context      | String | OData description of the network adapter resource collection model. |
| @odata.id           | String | Access path of the network adapter resource collection.             |
| @odata.type         | String | Type of network adapter resource collection.                        |
| Name                | String | Name of the network adapter resource collection.                    |
| Name                | String | Name of the network adapter resource collection.                    |
| Members@odata.count | Number | Number of network adapter resource members.                         |
| Members             | Array  | Network adapter resource list.                                      |
| @odata.id           | String | Access path of a single network adapter resource node.              |

## 6.5 Querying Information About a Specified Network Adapter Resource

### Function

Query information about a specified network adapter resource.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id`
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the specified network adapter resource, refer to [Table 6-9](#).

**Table 6-9 Parameter Descriptions for Querying Information About the Specified Network Adapter Resource**

| Parameter          | Description                                                                           | Value                                                                                               |
|--------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip          | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| chassis_id         | ID of the Chassis resource.                                                           | For a rack server, the value is 1 or Self.                                                          |
| auth_value         | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| networkadapters_id | ID of the specified network adapter resource.                                         | It can be obtained by querying information about the network adapter resource collection.           |

**Usage Guidelines**

None

**Example**

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/NetworkAdapters/mainboardLOM1
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#NetworkAdapter.NetworkAdapter",
 "@odata.id": "/redfish/v1/chassis/1/NetworkAdapters/mainboardOCPCard5",
 "@odata.type": "#NetworkAdapter.v1_4_0.NetworkAdapter",
 "Id": "mainboardPCIeCard5",
 "Name": "mainboardPCIeCard5",
 "NetworkPorts": {
 "@odata.id":
 "/redfish/v1/chassis/1/NetworkAdapters/mainboardOCPCard2/NetworkPorts"
 },
 "Manufacturer": "Xilinx",
 "Model": "FPGA-Xi7p",
 "Controllers": [
 {
 "ControllerCapabilities": {
 "NetworkPortCount": 4
 }
 }
]
}
```

```
 },
 "FirmwarePackageversion": "0101",
 "Links": {
 "NetworkPorts": [
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard5/
 NetworkPorts/1"
 },
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard5/
 NetworkPorts/2"
 },
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard5/
 NetworkPorts/3"
 },
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard5/
 NetworkPorts/4"
 }
],
 "NetworkPorts@odata.count": 4
 }
 }
],
{
 "Oem": {
 "Public": {
 "CardManufacturer": "VT",
 "Name": "XI410",
 "CardModel": "4*25GE",
 "CardType": "fiber",
 "CurrentPower": null,
 "CardCelsius": null,
 "NicCardType": "NIC",
 "DriverVersion": null,
 "NetworkTechnology": [
 "Ethernet"
],
 "DeviceLocator": "mainboardPCIeCard5",
 "SlotNumber": 5,
 }
 }
}
```

```

 "RootBDF": "0000:98:00.0",
 "AlarmTmp": 100,
 "CurrentTmp": 46,
 "FpgaStatus": 0,
 "HistoryMaxTmp": 51,
 "NicMemory": [
 {
 "CapacityGb": 80,
 "Model": "DDR4_2400MHz",
 "Status": 0
 },
 {
 "CapacityGb": 32,
 "Model": "DDR4_2400MHz",
 "Status": 0
 },
 {
 "CapacityGb": 16,
 "Model": "DDR4_2400MHz",
 "Status": 0
 }
],
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "SerialNumber": "202308244444"
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the specified network adapter resource, refer to [Table 6-10](#).

**Table 6-10 Output Descriptions for Querying Information About the Specified Network Adapter Resource**

| Field          | Type   | Description                                                        |
|----------------|--------|--------------------------------------------------------------------|
| @odata.context | String | OData description of the specified network adapter resource model. |

| Field                                    | Type             | Description                                                                                                                                |
|------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.id                                | String           | Access path of the specified network adapter resource.                                                                                     |
| @odata.type                              | String           | Type of the specified network adapter resource.                                                                                            |
| Id                                       | String           | Unique ID of the network adapter resource in the iBMC system.                                                                              |
| Name                                     | String           | Name of the specified network adapter resource.                                                                                            |
| NetworkPorts                             | Array            | Network port resource list.                                                                                                                |
| @odata.id                                | String           | Access path of a single network port resource.                                                                                             |
| Manufacturer                             | String           | Manufacturer of the specified network adapter.                                                                                             |
| Model                                    | String           | Model of the specified network adapter.                                                                                                    |
| Controllers                              | Array            | Information about adapter controllers.                                                                                                     |
| FirmwarePackageVersion                   | String           | Firmware version of the specified network adapter.                                                                                         |
| ControllerCapabilities.Network-PortCount | Number           | Number of network ports of the specified network adapter.                                                                                  |
| Links                                    | Object           | Links to the related resources.                                                                                                            |
| NetworkPorts                             | Array            | Network port resource information.                                                                                                         |
| @odata.id                                | String           | Access path of the network port resource collection.                                                                                       |
| NetworkPorts@odata.count                 | Number           | Number of network port resources.                                                                                                          |
| Oem.Public                               | Object           | Manufacturer-customized properties.                                                                                                        |
| CardManufacturer                         | String           | Manufacturer of the specified network adapter.                                                                                             |
| Name                                     | String           | Name of the specified network adapter.                                                                                                     |
| CardModel                                | String           | Interface mode of the specified network adapter.                                                                                           |
| CardType                                 | String           | Type of the specified network adapter.                                                                                                     |
| NicCardType                              | Character string | NIC type of the specified network adapter. Common cards and smart cards are distinguished.                                                 |
| CurrentPower                             | Number           | NIC power of the specified network adapter.                                                                                                |
| CardCelsius                              | Number           | NIC temperature of the specified network adapter.                                                                                          |
| DriverVersion                            | String           | Driver version of the specified network adapter.                                                                                           |
| NetworkTechnology                        | Array            | Network protocol of the specified network adapter: <ul style="list-style-type: none"><li>● Ethernet</li><li>● FC</li><li>● iSCSI</li></ul> |

| Field         | Type   | Description                                                                                                                                                                                                                                                                                 |
|---------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               |        | <ul style="list-style-type: none"> <li>● FCoE</li> <li>● OPA</li> <li>● IB</li> </ul>                                                                                                                                                                                                       |
| DeviceLocator | String | Screen printing of the specified network adapter.                                                                                                                                                                                                                                           |
| SlotNumber    | Number | Slot number of the specified network adapter.                                                                                                                                                                                                                                               |
| RootBDF       | String | Root, port, and <a href="#">BDF</a> of the specified network adapter.                                                                                                                                                                                                                       |
| AlarmTmp      | Number | Alarm temperature of the network adapter. Query is not supported. By default, null is displayed.                                                                                                                                                                                            |
| CurrentTmp    | Number | Main chip temperature of the network adapter. Query is not supported. By default, null is displayed.                                                                                                                                                                                        |
| FpgaStatus    | Number | <p><a href="#">FPGA</a> status of the network adapter:</p> <ul style="list-style-type: none"> <li>● 0: The FPGA status of the network adapter is normal.</li> <li>● 1: The FPGA status of the network adapter is abnormal.</li> </ul> <p>This field is displayed only for an FPGA card.</p> |
| HistoryMaxTmp | Number | Maximum historical temperature of the network adapter. This field is displayed only for an FPGA card.                                                                                                                                                                                       |
| NicMemory     | Array  | Memory information of the network adapter. This field is displayed only for an FPGA card.                                                                                                                                                                                                   |
| CapacityGb    | Number | Memory capacity of the network adapter. This field is displayed only for an FPGA card.                                                                                                                                                                                                      |
| Model         | String | Memory model of the network adapter. Default: DDR4_2400MHz. This field is displayed only for an FPGA card.                                                                                                                                                                                  |
| Status        | Number | Memory status of the specified network adapter, options: <ul style="list-style-type: none"> <li>● 0: normal memory status of the network adapter</li> <li>● 1: abnormal memory status of the network adapter</li> </ul>                                                                     |
| Status        | Object | Status of the network adapter, including: <ul style="list-style-type: none"> <li>● Health: health status of the network adapter</li> <li>● State: enabling status of the network adapter</li> </ul>                                                                                         |
| SerialNumber  | String | Serial number of the specified network adapter.                                                                                                                                                                                                                                             |

## 6.6 Querying Information About All Network Adapter Resources

### Function

Query information about all network adapter resources of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Chassis/chassis_id/NetworkAdapters?$expand=.`
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about all network adapter resources, refer to [Table 6-11](#).

**Table 6-11 Parameter Descriptions for Querying Information About All Network Adapter Resources**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| chassis_id | ID of the Chassis resource.                                                           | For a rack server, the value is 1 or Self.                                                          |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/NetworkAdapters?$expand=.
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#NetworkAdaptersCollection.NetworkAdaptersCollection",
 "@odata.id": "/redfish/v1/Chassis/1/NetworkAdapters?$expand=.",
 "@odata.type": "#NetworkAdapterCollection.NetworkAdapterCollection",
 "Description": "Collection of Network Adapters for this Manager",
 "Name": "Network Adapters Collection",
 "Members@odata.count": 4,
 "Members": [
 {
 "@odata.id": "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard7",
 "@odata.type": "#NetworkAdapter.v1_4_0.NetworkAdapter",
 "Id": "mainboardPCIeCard7",
 "Name": "mainboardPCIeCard7",
 "NetworkPorts": {
 "@odata.id": "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard7/
 NetworkPorts"
 },
 "Manufacturer": "Mellanox",
 "Model": "CX4",
 "Controllers": [
 {
 "ControllerCapabilities": {
 "NetworkPortCount": 2
 },
 "FirmwarePackageVersion": null,
 "Links": {
 "NetworkPorts": [
 {
 "@odata.id": "/redfish/v1/Chassis/1/NetworkAdapters/
 mainboardPCIeCard7/NetworkPorts/1"
 },
 {
 "@odata.id": "/redfish/v1/Chassis/1/NetworkAdapters/
 mainboardPCIeCard7/NetworkPorts/2"
 }
]
 }
],
]
 }
]
}
```

```
 "NetworkPorts@odata.count": 2
 }
}
],
{
 "Oem": {
 "Public": {
 "CardManufacturer": "VT",
 "Name": "NS212",
 "CardModel": "2*10GE",
 "CardType": "fiber",
 "DriverVersion": null,
 "NetworkTechnology": [
 "Ethernet"
],
 "DeviceLocator": "mainboardPCIeCard7",
 "SlotNumber": 7,
 "RootBDF": "0000:27:00.0"
 }
 },
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "SerialNumber": "733320500068"
},
{
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard8",
 "@odata.type": "#NetworkAdapter.v1_4_0.NetworkAdapter",
 "Id": "mainboardPCIeCard8",
 "Name": "mainboardPCIeCard8",
 "NetworkPorts": {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard8/NetworkPorts"
 },
 "Manufacturer": "Intel",
 "Model": "x710",
 "Controllers": [
 {
 "ControllerCapabilities": {
 "NetworkPortCount": 2
 },
 "FirmwarePackageVersion": "8.40",
 "Links": {

```

```
 "NetworkPorts": [
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/
 mainboardPCIeCard8/NetworkPorts/1"
 },
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/
 mainboardPCIeCard8/NetworkPorts/2"
 }
],
 "NetworkPorts@odata.count": 2
 }
},
],
"Oem": {
 "Public": {
 "CardManufacturer": "Intel",
 "Name": "X710T2L",
 "CardModel": "2*10GE",
 "CardType": "copper",
 "DriverVersion": null,
 "NetworkTechnology": [
 "Ethernet"
],
 "DeviceLocator": "mainboardPCIeCard8",
 "SlotNumber": 8,
 "RootBDF": "0000:38:00.0"
 }
},
{
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "SerialNumber": "~MAC -----~"
},
{
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardOCPCard1",
 "@odata.type": "#NetworkAdapter.v1_4_0.NetworkAdapter",
 "Id": "mainboardOCPCard1",
 "Name": "mainboardOCPCard1",
 "NetworkPorts": {
```

```
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardOCPCard1/NetworkPorts"
 },
 "Manufacturer": "Mellanox",
 "Model": "CX5",
 "Controllers": [
 {
 "ControllerCapabilities": {
 "NetworkPortCount": 2
 },
 "FirmwarePackageVersion": "16.31.1014",
 "Links": {
 "NetworkPorts": [
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/
 mainboardOCPCard1/NetworkPorts/1"
 },
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/
 mainboardOCPCard1/NetworkPorts/2"
 }
],
 "NetworkPorts@odata.count": 2
 }
 }
],
 "Oem": {
 "Public": {
 "CardManufacturer": "Mellanox",
 "Name": "MCX562A-ACAB",
 "CardModel": "2*25GE",
 "CardType": "fiber",
 "DriverVersion": null,
 "NetworkTechnology": [
 "Ethernet"
],
 "DeviceLocator": "mainboardOCPCard1",
 "SlotNumber": 1,
 "RootBDF": "0000:ba:00.0"
 }
 },
 "Status": {
```

```
 "Health": "OK",
 "State": "Enabled"
 },
 "SerialNumber": "MT2144J28308"
},
{
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardOCPCard2",
 "@odata.type": "#NetworkAdapter.v1_4_0.NetworkAdapter",
 "Id": "mainboardOCPCard2",
 "Name": "mainboardOCPCard2",
 "NetworkPorts": {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardOCPCard2/NetworkPorts"
 },
 "Manufacturer": "Mellanox",
 "Model": "CX5",
 "Controllers": [
 {
 "ControllerCapabilities": {
 "NetworkPortCount": 2
 },
 "FirmwarePackageVersion": "16.30.1004",
 "Links": {
 "NetworkPorts": [
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/
mainboardOCPCard2/NetworkPorts/1"
 },
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/
mainboardOCPCard2/NetworkPorts/2"
 }
],
 "NetworkPorts@odata.count": 2
 }
 }
],
 "Oem": {
 "Public": {
 "CardManufacturer": "Mellanox",
 "Name": "MCX562A-ACAB",
 }
 }
},
```

```

 "CardModel": "2*25GE",
 "CardType": "fiber",
 "DriverVersion": null,
 "NetworkTechnology": [
 "Ethernet"
],
 "DeviceLocator": "mainboardOCPCard2",
 "SlotNumber": 2,
 "RootBDF": "0000:18:00.0"
 }
},
"status": {
 "Health": "OK",
 "State": "Enabled"
},
"SerialNumber": "MT2030X11548"
}
]
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about all network adapter resources, refer to [Table 6-12](#).

**Table 6-12 Output Descriptions for Querying Information About All Network Adapter Resources**

| Field               | Type   | Description                                                         |
|---------------------|--------|---------------------------------------------------------------------|
| @odata.context      | String | OData description of the network adapter resource collection model. |
| @odata.id           | String | Access path of the network adapter resource collection.             |
| @odata.type         | String | Type of network adapter resource collection.                        |
| Name                | String | Name of the network adapter resource collection.                    |
| Members@odata.count | Number | Number of network adapter resource members.                         |
| Members             | Array  | Network adapter resource information.                               |

For a description of the parameters of the network adapter resource information, refer to [Table 6-10](#).

## 6.7 Querying Information About a Specified Network Port Resource

### Function

Query the information about a single network port resource of a specified Chassis of a server. The information includes the network port name, status, [MAC](#) address, network port type, and network port [BDF](#) information.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- [URL](#): `https://device_ip/redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id/NetworkPorts/networkports_id`
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the specified network port resource, refer to [Table 6-13](#).

**Table 6-13 Parameter Descriptions for Querying Information About the Specified Network Port Resource**

| Parameter          | Description                                                                           | Value                                                                                               |
|--------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip          | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| chassis_id         | ID of the Chassis resource.                                                           | For a rack server, the value is 1 or Self.                                                          |
| auth_value         | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| networkadapters_id | ID of the specified network adapter resource.                                         | It can be obtained by querying the information about the network adapter resource collection.       |
| networkports_id    | ID of the network port resource.                                                      | It can be obtained by querying the information about the network port resource collection.          |

## Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard8/NetworkPorts/2
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#EthernetInterface.EthernetInterface",
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardOCPCard1/NetworkPorts/1",
 "@odata.type": "#NetworkPort.v1_4_0.NetworkPort",
 "AssociatedNetworkAddresses": [
 "08:c0:eb:84:cb:d3"
],
 "AutoNeg": true,
 "Id": "1",
 "LinkStatus": "Up",
 "Name": "1",
 "Oem": {
 "Public": {
 "BDF": "0000:ba:00.1",
 "CurrentSpeed": "1000Mb/s",
 "DriverVersion": null,
 "FirmwarePackageversion": "16.31.1014",
 "PortMaxSpeed": "25000Mb/s",
 "PortType": "OpticalPort",
 "LldpService": {
 "ServiceEnabled": false,
 "LldpEnabled": false,
 "WorkMode": null
 },
 "SupportSpeed": [
 "10Mb/s",
 "100Mb/s",
 "1000Mb/s",
 "10000Mb/s",
 "100000Mb/s"
]
 }
 }
}
```

```

 "40000Mb/s",
 "25000Mb/s"
]
}
},
"OpticalModule": {
 "@odata.id":
 "/redfish/v1/chassis/1/NetworkAdapters/mainboardPCIeCard8/
 NetworkPorts/0/OpticalModule"
},
"PhysicalPortNumber": "1"
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the specified network port resource, refer to [Table 6-14](#).

**Table 6-14 Output Descriptions for Querying Information About the Specified Network Port Resource**

| Field                      | Type    | Description                                                                                                                                      |
|----------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context             | String  | OData description of the specified network port resource model.                                                                                  |
| @odata.id                  | String  | Access path of the specified network port resource.                                                                                              |
| @odata.type                | String  | Type of the specified network port resource.                                                                                                     |
| Id                         | String  | UID of the specified network port resource in the iBMC system.                                                                                   |
| Name                       | String  | Name of the specified network port resource.                                                                                                     |
| AutoNeg                    | Boolean | Negotiation mode: <ul style="list-style-type: none"> <li>● true: automatic</li> <li>● false: forced</li> </ul>                                   |
| LinkStatus                 | String  | Status of the specified network port, including: <ul style="list-style-type: none"> <li>● Up: connected</li> <li>● Down: disconnected</li> </ul> |
| AssociatedNetworkAddresses | Array   | Network address of the specified network port.                                                                                                   |

| Field                  | Type    | Description                                                                                                                                                                                                                                                                                                                                     |
|------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oem.Public             | Object  | Manufacturer-customized properties.                                                                                                                                                                                                                                                                                                             |
| PortMaxSpeed           | String  | Port speed of the specified network port, unit: Mb/s.                                                                                                                                                                                                                                                                                           |
| PortType               | String  | Type of the specified network port, including: <ul style="list-style-type: none"><li>● Optical port: OpticalPort</li><li>● Electrical port: ElectricalPort</li><li>● Location: N/A</li></ul>                                                                                                                                                    |
| BDF                    | String  | BDF of the specified network port.                                                                                                                                                                                                                                                                                                              |
| CurrentSpeed           | Number  | Current speed.                                                                                                                                                                                                                                                                                                                                  |
| FirmwarePackageVersion | String  | Firmware version of the specified network port.                                                                                                                                                                                                                                                                                                 |
| DriverVersion          | String  | Driver version of the specified network port.                                                                                                                                                                                                                                                                                                   |
| LldpService            | Object  | <a href="#">LLDP</a> -related properties.                                                                                                                                                                                                                                                                                                       |
| LldpEnable             | Boolean | Whether LLDP is enabled for the specified network port: <ul style="list-style-type: none"><li>● true: enabled</li><li>● false: disabled</li></ul>                                                                                                                                                                                               |
| ServiceEnabled         | Boolean | Whether the specified network port supports LLDP information query. <ul style="list-style-type: none"><li>● true: LLDP query is supported.</li><li>● false: LLDP query is not supported.</li></ul> If this parameter is set to <b>false</b> , only the default values of <b>LldpEnabled</b> and <b>WorkMode</b> are displayed, making no sense. |
| WorkMode               | String  | LLDP operation mode.                                                                                                                                                                                                                                                                                                                            |
| SupportSpeed           | Array   | Supported speed of the specified network port.                                                                                                                                                                                                                                                                                                  |
| OpticalModule          | Object  | Indicates the optical module resources connected to the network port.                                                                                                                                                                                                                                                                           |
| PhysicalPortNumber     | String  | Physical screen printing of the specified network port.                                                                                                                                                                                                                                                                                         |

## 6.8 Querying Information About the Optical Module Resource Connected to a Network Port

### Function

Query the information about the optical module resource connected to a network port of a specified server chassis.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id/NetworkPorts/networkports_id/OpticalModule`
- Request Header:
 

`x-auth-token:auth_value`
- Request Message Body: None

### Parameters

For a description of the parameters for querying the information about the optical module resource connected to a network port, refer to [Table 6-15](#).

**Table 6-15 Parameter Descriptions for Querying Information About the Optical Module Resource Connected to the Network Port**

| Parameter          | Description                                                                                                 | Value                                                                                               |
|--------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip          | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                               |
| chassis_id         | ID of the Chassis resource.                                                                                 | For a rack server, the value is 1 or Self.                                                          |
| auth_value         | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| networkadapters_id | ID of the network adapter resource.                                                                         | It can be obtained by querying the information about the network adapter resource collection.       |
| networkports_id    | ID of the network port resource.                                                                            | It can be obtained by querying the information about the network port resource collection.          |

## Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard8/NetworkPorts/2/OpticalModule
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#OpticalModule.OpticalModule",
 "@odata.id": "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard4/
 NetworkPorts/1/OpticalModule",
 "@odata.type": "#OpticalModule.v1_0_0.OpticalModule",
 "Id": "OpticalModule",
 "Manufacturer": "Hisense",
 "Name": "OpticalModule",
 "PartNumber": "LTF8502-BC+",
 "ProductionDate": "2020-11-09",
 "RXPower": [
 {
 "LowerThresholdcritical": -9.9,
 "ReadingMilliwatts": [
 -40
],
 "UpperThresholdcritical": 0.49
 }
],
 "SerialNumber": "UHYABJ09852",
 "Status": {
 "State": "Enabled"
 },
 "BR_Nominal": 10300,
 "TXBiasCurrent": [
 {
 "LowerThresholdcritical": 0,
 "ReadingMilliwatts": [
 6.24
]
 }
]
}
```

```

],
 "UpperThresholdCritical": 12
 }
],
"TXPower": [
{
 "LowerThresholdCritical": -5.5,
 "ReadingMilliwatts": [
 -2.53
],
 "UpperThresholdCritical": -1
}
],
"Temperature": {
 "LowerThresholdCritical": -10,
 "ReadingCelsius": 30.32,
 "UpperThresholdCritical": 75
},
"Voltage": {
 "LowerThresholdCritical": 3.1,
 "ReadingVolts": 3.29,
 "UpperThresholdCritical": 3.5
},
"WaveLengthNanometer": 850
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query the information about the optical module resource connected to the network port, refer to [Table 6-16](#).

**Table 6-16 Output Descriptions for Querying Information About the Optical Module Resource Connected to the Network Port**

| Field          | Type             | Description                                                     |
|----------------|------------------|-----------------------------------------------------------------|
| @odata.context | Character string | OData description of the specified network port resource model. |
| @odata.id      | Character string | Access path of the specified network port resource model.       |
| @odata.type    | Character string | Resource type of the specified network port resource model.     |
| Id             | Character string | ID of the optical module resource.                              |

| Field                                | Type             | Description                                                                                                        |
|--------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------|
| Name                                 | Character string | Name of the optical module resource.                                                                               |
| Status                               | Object           | Status of the optical module, including: <ul style="list-style-type: none"><li>● Enabled: enabled state.</li></ul> |
| Manufacturer                         | Character string | Name of the manufacturer of the optical module.                                                                    |
| PartNumber                           | Character string | Part number of the optical module.                                                                                 |
| ProductionDate                       | String           | Production date of the optical module.                                                                             |
| RXPower.LowerThresholdCritical       | Number           | Critical alarm threshold for too low receive power.                                                                |
| RXPower.ReadingMilliWatts            | Array            | Current receive power reading of the optical module.                                                               |
| RXPower.UpperThresholdCritical       | Number           | Critical alarm threshold for too high receive power.                                                               |
| SerialNumber                         | Character string | Serial number of the optical module.                                                                               |
| Status.State                         | String           | Whether the optical module is enabled.                                                                             |
| BR_Nominal                           | Number           | Rate supported by the optical module.                                                                              |
| TXBiasCurrent.LowerThresholdCritical | Number           | Critical alarm threshold for too low transmit bias current of the optical module.                                  |
| TXBiasCurrent.ReadingMilliAmperes    | Array            | Current transmit bias current reading of the optical module.                                                       |
| TXBiasCurrent.UpperThresholdCritical | Number           | Critical alarm threshold for too high transmit bias current of the optical module.                                 |
| TXPower.ReadingMilliWatts            | Array            | Current reading of the transmission power of the optical module.                                                   |
| TXPower.LowerThresholdCritical       | Number           | Critical alarm threshold for low transmission power.                                                               |
| TXPower.UpperThresholdCritical       | Number           | Critical alarm threshold for high transmission power.                                                              |
| Temperature.ReadingCelsius           | Number           | Current temperature reading of the optical module.                                                                 |
| Temperature.LowerThresholdCritical   | Number           | Critical alarm threshold for low temperature.                                                                      |
| Temperature.UpperThresholdCritical   | Number           | Critical alarm threshold for high temperature.                                                                     |
| Voltage.ReadingVolts                 | Number           | Current voltage reading of the optical module.                                                                     |
| Voltage.LowerThresholdCritical       | Number           | Critical alarm threshold for low voltage.                                                                          |

| Field                          | Type   | Description                                |
|--------------------------------|--------|--------------------------------------------|
| Voltage.UpperThresholdCritical | Number | Critical alarm threshold for high voltage. |
| WaveLengthNanometer            | Number | Wavelength of the optical module.          |

## 6.9 Modifying the LLDP Switch of a Specified Network Port

### Function

Modify the [LLDP](#) switch of a specified network port.

### Permission Required

Security management

### Syntax

- Operation Type: PATCH
- [URL](#): `https://device_ip/redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id/NetworkPorts/networkports_id`
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "Oem": {
 "Public": {
 "LldpService": {
 "LldpEnabled": enable_value,
 "WorkMode": workmode_value
 }
 }
 }
}
```

### Parameters

For a description of the parameters for modifying the LLDP switch of a network port, refer to [Table 6-17](#).

**Table 6-17 Parameter Descriptions for Modifying the LLDP Switch of the Network Port**

| Parameter | Description                              | Value                 |
|-----------|------------------------------------------|-----------------------|
| device_ip | IP address for logging in to the device. | IPv4 or IPv6 address. |

| Parameter          | Description                                                                             | Value                                                                                                                                                                                                                                                              |
|--------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| chassis_id         | ID of the chassis resource.                                                             | For a rack server, the value is 1 or Self.                                                                                                                                                                                                                         |
| auth_value         | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                                                                                                                |
| header_type        | Format of the request message.                                                          | application/json                                                                                                                                                                                                                                                   |
| networkadapters_id | ID of the specified network adapter resource.                                           | It can be obtained by querying the information about the network adapter resource collection.                                                                                                                                                                      |
| networkports_id    | ID of the network port resource.                                                        | -                                                                                                                                                                                                                                                                  |
| enable_value       | Whether LLDP is enabled.                                                                | <ul style="list-style-type: none"> <li>● true: enabled</li> <li>● false: disabled</li> </ul>                                                                                                                                                                       |
| workmode_value     | LLDP operation mode.                                                                    | <ul style="list-style-type: none"> <li>● TxRx (default): enables LLDP packet transmission and reception. If LLDP is disabled, <b>workmode_value</b> is unavailable.</li> <li>● Rx: enables LLDP packet reception only.</li> <li>● Tx: transmitting mode</li> </ul> |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard7/NetworkPorts/1
```

- Request Header:

```
x-auth-token:LXIrqPHHOPTz6k4rrPB/UfABUD45p9PFIC8QG2lp2F0=
Content-Type:application/json
```

- Request Message Body:

```
{
 "Oem": {
 "Public": {
 "LldpService": {
 "LldpEnabled": true,
 "WorkMode": "TxRx"
 }
 }
 }
}
```

```

 }
 }
}
```

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#EthernetInterface.EthernetInterface",
 "@odata.id":
 "/redfish/v1/chassis/1/NetworkAdapters/mainboardOCPCard1/NetworkPorts/1",
 "@odata.type": "#NetworkPort.v1_4_0.NetworkPort",
 "AssociatedNetworkAddresses": [
 "08:c0:eb:84:cb:d3"
],
 "AutoNeg": true,
 "Id": "1",
 "LinkStatus": "Up",
 "Name": "1",
 "Oem": {
 "Public": {
 "BDF": "0000:ba:00.1",
 "CurrentSpeed": "1000Mb/s",
 "DriverVersion": null,
 "FirmwarePackageversion": "16.31.1014",
 "PortMaxSpeed": "25000Mb/s",
 "PortType": "OpticalPort",
 "LldpService": {
 "ServiceEnabled":true,
 "LldpEnabled": false,
 "WorkMode": null
 },
 "SupportSpeed": [
 "10Mb/s",
 "100Mb/s",
 "1000Mb/s",
 "10000Mb/s",
 "40000Mb/s",
 "25000Mb/s"
]
 }
 },
 "PhysicalPortNumber": "1"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you modify the LLDP switch of the network port, refer to [Table 6-18](#).

**Table 6-18 Output Descriptions for Modifying the LLDP Switch of the Network Port**

| Field                      | Type    | Description                                                                                                                                                                                      |
|----------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context             | String  | OData description of the specified network port resource model.                                                                                                                                  |
| @odata.id                  | String  | Access path of the specified network port resource.                                                                                                                                              |
| @odata.type                | String  | Type of the specified network port resource.                                                                                                                                                     |
| Id                         | String  | UID of the specified network port resource in the iBMC system.                                                                                                                                   |
| Name                       | String  | Name of the specified network port resource.                                                                                                                                                     |
| AutoNeg                    | Boolean | Negotiation mode: <ul style="list-style-type: none"> <li>• true: automatic</li> <li>• false: forced</li> </ul>                                                                                   |
| LinkStatus                 | String  | Status of the specified network port, including: <ul style="list-style-type: none"> <li>• Up</li> <li>• Down</li> </ul>                                                                          |
| AssociatedNetworkAddresses | Array   | Network address of the specified network port.                                                                                                                                                   |
| Oem.Public                 | Object  | Manufacturer-customized properties.                                                                                                                                                              |
| PortMaxSpeed               | String  | Port speed of the specified network port, unit: Mb/s.                                                                                                                                            |
| PortType                   | String  | Type of the specified network port, including: <ul style="list-style-type: none"> <li>• Optical port: OpticalPort</li> <li>• Electrical port: ElectricalPort</li> <li>• Location: N/A</li> </ul> |
| BDF                        | String  | BDF of the specified network port.                                                                                                                                                               |
| CurrentSpeed               | Number  | Current speed.                                                                                                                                                                                   |
| FirmwarePackageVersion     | String  | Firmware version of the specified network port.                                                                                                                                                  |

| Field              | Type    | Description                                                                                                                                                                                                                                                                                |
|--------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DriverVersion      | String  | Driver version of the specified network port.                                                                                                                                                                                                                                              |
| LldpService        | Object  | <a href="#">LLDP</a> -related properties.                                                                                                                                                                                                                                                  |
| LldpEnable         | Boolean | Whether LLDP is enabled for the specified network port: <ul style="list-style-type: none"><li>● true: enabled</li><li>● false: disabled</li></ul>                                                                                                                                          |
| ServiceEnabled     | Boolean | Whether LLDP information query is supported by the specified network port. <ul style="list-style-type: none"><li>● true: yes.</li><li>● false: no.</li></ul> If this parameter is set to <b>false</b> , only the default values are displayed for <b>LldpEnabled</b> and <b>WorkMode</b> . |
| WorkMode           | String  | LLDP operation mode.                                                                                                                                                                                                                                                                       |
| SupportSpeed       | Array   | Supported speed of the specified network port.                                                                                                                                                                                                                                             |
| PhysicalPortNumber | String  | Physical screen printing of the specified network port.                                                                                                                                                                                                                                    |

## 6.10 Querying Information About the PCIe Device Resource Collection

### Function

Query information about the [PCIe](#) device resources of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Chassis/chassis_id/PCIeDevices`
- Request Header:

|                          |
|--------------------------|
| X-Auth-Token: auth_value |
|--------------------------|

- Request Message Body: None

## Parameters

For a description of the parameters for querying information about the PCIe device resource collection, refer to [Table 6-19](#).

**Table 6-19 Parameter Descriptions for Querying Information About the PCIe Device Resource Collection**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| chassis_id | ID of the Chassis resource.                                                           | For a rack server, the value is 1 or Self.                                                          |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/PCIeDevices
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#PCIeDevicesCollection.PCIeDevicesCollection",
 "@odata.id": "/redfish/v1/chassis/Self/PCIeDevices",
 "@odata.type": "#PCIeDeviceCollection.PCIeDeviceCollection",
 "Description": "PCIe Device Collection",
 "Members": [
 {
 "@odata.id": "/redfish/v1/chassis/Self/PCIeDevices/PCIeCard22"
 },
 {
 "@odata.id": "/redfish/v1/chassis/Self/PCIeDevices/PCIeCard5"
 },
 {
 "@odata.id": "/redfish/v1/chassis/Self/PCIeDevices/PCIeCard19"
 }
]
}
```

```

 },
 {
 "@odata.id": "/redfish/v1/chassis/self/PCIeDevices/PCIeCard8"
 }
],
 "Members@odata.count": 4,
 "Name": "PCIe Device Collection"
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the PCIe device resource collection, refer to [Table 6-20](#).

**Table 6-20 Output Descriptions for Querying Information About the PCIe Device Resource Collection**

| Field               | Type   | Description                                                     |
|---------------------|--------|-----------------------------------------------------------------|
| @odata.context      | String | OData description of the PCIe device resource collection model. |
| @odata.id           | String | Access path of the PCIe device resource collection.             |
| @odata.type         | String | Type of PCIe device resource collection.                        |
| Description         | String | Description of the PCIe device resource collection.             |
| Name                | String | Name of the PCIe device resource collection.                    |
| Members@odata.count | Number | Number of PCIe device resource members.                         |
| Members             | Array  | PCIe device resource list.                                      |

## 6.11 Querying Information About a Specified PCIe Device Resource

### Function

Query information about a specified [PCIe](#) device resource of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET

- URL: `https://device_ip/redfish/v1/Chassis/chassis_id/PCIeDevices/pciedevices_id`
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

## Parameters

For a description of the parameters for querying information about the specified PCIe device resource, refer to [Table 6-21](#).

**Table 6-21 Parameter Descriptions for Querying Information About the Specified PCIe Device Resource**

| Parameter      | Description                                                                           | Value                                                                                               |
|----------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip      | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| chassis_id     | ID of the Chassis resource.                                                           | For a rack server, the value is 1 or Self.                                                          |
| auth_value     | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| pciedevices_id | ID of specified PCIe device resource.                                                 | It can be obtained by querying the information about the specified resource collection.             |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/PCIeDevices/PCIeCard5
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example1:

```
{
 "@odata.context": "/redfish/v1/$metadata#PCIeDevices.PCIeDevices",
 "@odata.id": "/redfish/v1/chassis/Self/PCIeDevices/PCIeCard5",
 "@odata.type": "#PCIeDevice.v1_4_0.PCIeDevice",
```

```
"CardManufacturer": "VT",
"CardModel": null,
"Description": "RS241-18i 2G",
"FirmwareVersion": "3.22",
"Id": "mainboardPCIeCard5",
"Links": [
 "PCIeFunctions": [
 {
 "@odata.id": "/redfish/v1/Chassis/self/PCIeDevices/PCIeCard5/Functions/1"
 }
]
},
"Oem": {
 "Public": {
 "DeviceBDF": "0000:27:00.0",
 "DeviceLocator": "PCIeCard5",
 "MemorySizeMiB": 2097152,
 "LinkSpeed": "3GT/s",
 "MaxLinkSpeed": "3GT/s",
 "Linkwidth": 8,
 "MaxLinkwidth": 8,
 "PCIeCardType": "Storage Card",
 "PowerCapacityWatts": null,
 "PowerWatts": null,
 "PowerConsumedWatts": null,
 "RootPortBDF": "0000:26:01.0",
 "SlotNumber": 5
 }
},
"Manufacturer": null,
"Model": "RAID_SAS8236",
"Name": "Storage Card5",
"PCIeInterface": {
 "LanesInUse": 8,
 "MaxLanes": 8
},
"SerialNumber": "743551500214",
"Status": {
 "Health": "OK",
 "State": "Enabled"
}
}
```

- Response Example2:

```
{
 "@odata.id": "/redfish/v1/Chassis/Self/PCIeDevices/PCIeCard5",
 "@odata.type": "#PCIeDevice.v1_4_0.PCIeDevice",
 "CardManufacturer": "Nvidia",
 "CardModel": "NVIDIA A10",
 "Description": "NVIDIA A10",
 "FirmwareVersion": "94.02.5C.00.04",
 "Id": "mainboardPCIeCard5",
 "Links": {
 "PCIeFunctions": [
 {
 "@odata.id": "/redfish/v1/Chassis/Self/PCIeDevices/PCIeCard5/Functions/1"
 }
]
 },
 "Oem": {
 "Public": {
 "DeviceLocator": "mainboardPCIeCard5",
 "GpuCore": [
 {
 "BuildTime": "2021/06/26",
 "CapacityGB": 24,
 "MemberId": 1,
 "PartNum": null,
 "Power": null,
 "Temperature": 40
 }
],
 "GpuPerformanceParameters": {
 "EncoderUsagePercent": 20,
 "DecoderUsagePercent": 10,
 "GPUUsagePercent": 30,
 "ReservedCapacityMiB": 1560,
 "ReservedCapacityPercent": 50,
 "TemperatureCelsius": 55,
 "PowerWatts": 120
 },
 "SFP": [
 {
 "MemberId": "0",
 "TemperatureCelsius": 20
 }
],
 "Linkspeed": "16.0GT/s",
 "Links": {
 "PCIeFunctions": [
 {
 "@odata.id": "/redfish/v1/Chassis/Self/PCIeDevices/PCIeCard5/Functions/1"
 }
]
 }
 }
 }
}
```

```

 "MaxLinkSpeed": "16.0GT/s",
 "MemoryBandwidth": "600GB/s",
 "MemorySizeMiB": 24576,
 "PCIeCardType": "GPU",
 "PowerCapacityWatts": 150,
 "PowerWatts": null,
 "PowerConsumedWatts": null,
 "ReadingCelsius": 40,
 "SlotNumber": 5,
 "Linkwidth": 8,
 "MaxLinkwidth": 8
 },
},
"Manufacturer": "Nvidia",
"Model": "NVIDIA A10",
"Name": "GPU5",
"PCIeInterface": {
 "LanesInUse": 16,
 "MaxLanes": 16
},
"SerialNumber": "1322521044226",
"Status": {
 "Health": "OK",
 "State": "Enabled"
}
}
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the specified PCIe device resource, refer to [Table 6-22](#).

**Table 6-22 Output Descriptions for Querying Information About the Specified PCIe Device Resource**

| Field          | Type   | Description                                                    |
|----------------|--------|----------------------------------------------------------------|
| @odata.context | String | OData description of the specified PCIe device resource model. |
| @odata.id      | String | Access path of the specified PCIe device resource.             |
| @odata.type    | String | Type of the specified PCIe device resource.                    |

| Field                         | Type   | Description                                                                                                                                                                                                        |
|-------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CardManufacturer              | String | PCIe device manufacturer, which is the same as the CardManufacturer value of the storage controller and NIC.                                                                                                       |
| CardModel                     | String | PCIe device model, which is the same as the Card-Model of the storage controller and the Oem.Pub-lic.Name of the NIC.                                                                                              |
| Name                          | String | Name of the specified PCIe device resource.                                                                                                                                                                        |
| Id                            | String | <a href="#">UID</a> of the specified PCIe device resource in the iBMC system.                                                                                                                                      |
| Description                   | String | Description of the specified PCIe device resource.                                                                                                                                                                 |
| Manufacturer                  | String | Manufacturer of the specified PCIe device.                                                                                                                                                                         |
| Model                         | String | Model of the specified PCIe device resource.                                                                                                                                                                       |
| Links.PCIeFunctions.@odata.id | String | Access path of the PCIeFunctions resource.                                                                                                                                                                         |
| FirmwareVersion               | String | Version number of the specified PCIe device.                                                                                                                                                                       |
| SerialNumber                  | String | Serial number of the specified PCIe device.                                                                                                                                                                        |
| Status                        | Object | Status of the specified PCIe device, including: <ul style="list-style-type: none"><li>● Health: health status of the specified PCIe device</li><li>● State: whether the specified PCIe device is enabled</li></ul> |
| PCIeInterface                 | Object | Interface information about the specified PCIe device.                                                                                                                                                             |
| LanesInUse                    | Number | Number of currently negotiated PCIe lanes of the specified PCIe device.                                                                                                                                            |
| MaxLanes                      | Number | Maximum number of PCIe lanes supported by the specified PCIe device.                                                                                                                                               |
| Oem.Public                    | Object | -                                                                                                                                                                                                                  |
| LinkSpeed                     | Number | Current link speed of the specified PCIe device, unit: GT/s.                                                                                                                                                       |
| MaxLinkSpeed                  | Number | Maximum link speed supported by the specified PCIe device, unit: GT/s.                                                                                                                                             |
| LinkWidth                     | Number | Link bandwidth of the specified PCIe device.                                                                                                                                                                       |
| DeviceBDF                     | String | Device <a href="#">BDF</a> of the specified PCIe device.                                                                                                                                                           |
| DeviceLocator                 | String | Screen printing of the specified PCIe device.                                                                                                                                                                      |
| MemorySizeMiB                 | String | Total memory capacity of the specified PCIe device.                                                                                                                                                                |

| Field                                                   | Type   | Description                                                                                                   |
|---------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------|
| MemoryBandWidth                                         | String | Bandwidth of the display memory data of the specified GPU or NPU when PCIeCardType is GPU or NPU, unit: GB/s. |
| PowerCapacityWatts                                      | Number | Maximum Thermal Design Power (TDP) of the specified GPU, unit: W.                                             |
| PowerConsumedWatts                                      | Number | Actual power consumed by the specified GPU, unit: W.                                                          |
| ReadingCelsius                                          | Number | Actual temperature of the specified GPU, unit: centigrade.                                                    |
| PCIeCardType                                            | String | Type of the specified PCIe device.                                                                            |
| PowerWatts                                              | Number | Power of the specified PCIe device, unit: W.                                                                  |
| RootPortBDF                                             | String | Root port BDF of the specified PCIe device.                                                                   |
| SlotNumber                                              | Number | Slot number of the specified PCIe device.                                                                     |
| Oem.Public.GpuCore                                      | Array  | Memory resource list of the specified PCIe device.                                                            |
| BuildTime                                               | String | Production date of the memory of the specified PCIe device.                                                   |
| CapacityGB                                              | Number | Memory capacity of the specified PCIe device, unit: GB.                                                       |
| MemberId                                                | Number | Memory index of the specified PCIe device.                                                                    |
| PartNum                                                 | String | Memory part number of the specified PCIe device.                                                              |
| Power                                                   | String | Power of the specified PCIe device, unit: W.                                                                  |
| Temperature                                             | Number | Temperature of the specified PCIe device, unit: centigrade.                                                   |
| Oem.Public.GpuPerformanceParameters.EncoderUsagePercent | Number | Encoder usage.                                                                                                |
| Oem.Public.GpuPerformanceParameters.DecoderUsagePercent | Number | Decoder Usage.                                                                                                |
| Oem.Public.GpuPerformanceParameters.GPUUsagePercent     | Number | GPU usage.                                                                                                    |

| Field                                                       | Type   | Description                                         |
|-------------------------------------------------------------|--------|-----------------------------------------------------|
| Oem.Public.GpuPerformanceParameters.ReservedCapacityMiB     | Number | Display memory capacity in MiB.                     |
| Oem.Public.GpuPerformanceParameters.ReservedCapacityPercent | Number | Display memory capacity in percentage.              |
| Oem.Public.GpuPerformanceParameters.TemperatureCelsius      | Number | GPU temperature.                                    |
| Oem.Public.GpuPerformanceParameters.PowerWatts              | Number | GPU power.                                          |
| Oem.Public.SFP.MemberId                                     | String | Optical module ID.                                  |
| Oem.Public.SFP.TemperatureCelsius                           | Number | Optical module temperature.                         |
| Oem.Public.NVMeAIC                                          | Object | -                                                   |
| CapacityGB                                                  | Number | Storage capacity of the specified PCIe device.      |
| DiskTemperatureCelsius                                      | Number | Temperature of the specified PCIe device.           |
| MediaType                                                   | String | Media type of the specified PCIe device.            |
| PredictedMediaLifeLeftPercent                               | Number | Remaining lifetime of the specified PCIe device.    |
| Interface                                                   | String | Interface type of the specified PCIe device.        |
| CapacityBytes                                               | Number | Capacity of the specified PCIe device, unit: bytes. |
| HealthStatus                                                | String | Health status of the specified PCIe device.         |
| Model                                                       | String | Model of the specified PCIe device.                 |
| Vendor                                                      | String | Manufacturer of specified PCIe device.              |
| SerialNumber                                                | String | Serial number of the specified PCIe device.         |

## 6.12 Querying Information About All PCIe Device Resources

### Function

Query information about all [PCIe](#) device resources of a server.

### Permission Required

Query.

## Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/Chassis/chassis\\_id/PCIeDevices?expand=1](https://device_ip/redfish/v1/Chassis/chassis_id/PCIeDevices?expand=1).
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

## Parameters

For the parameter descriptions for querying information about all PCIe device resources, refer to [Table 6-23](#).

**Table 6-23 Parameter Descriptions for Querying Information About All PCIe Device Resources**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| chassis_id | ID of the Chassis resource.                                                           | For a rack server, the value is 1 or Self.                                                          |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/PCIeDevices?expand=1
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#PCIeDevicesCollection.PCIeDevicesCollection",
 "@odata.id": "/redfish/v1/chassis/Self/PCIeDevices",
 "@odata.type": "#PCIeDeviceCollection.PCIeDeviceCollection",
```

```
"Description": "PCIe Device Collection",
"Members": [
 {
 "@odata.id": "/redfish/v1/Chassis/Self/PCIeDevices/PCIeCard5",
 "@odata.type": "#PCIeDevice.v1_4_0.PCIeDevice",
 "CardManufacturer": "Nvidia",
 "CardModel": "NVIDIA A10",
 "Description": "NVIDIA A10",
 "FirmwareVersion": "94.02.5C.00.04",
 "Id": "mainboardPCIeCard5",
 "Links": {
 "PCIeFunctions": [
 {
 "@odata.id":
 "/redfish/v1/Chassis/Self/PCIeDevices/PCIeCard5/Functions/1"
 }
]
 },
 "Oem": {
 "public": {
 "DeviceLocator": "mainboardPCIeCard5",
 "GpuCore": [
 {
 "BuildTime": "2021/06/26",
 "CapacityGB": 24,
 "MemberId": 1,
 "PartNum": null,
 "Power": null,
 "Temperature": 40
 }
],
 "LinkSpeed": "16.0GT/s",
 "MaxLinkspeed": "16.0GT/s",
 "MemoryBandwidth": "600GB/s",
 "MemorySizeMiB": 24576,
 "PCIeCardType": "GPU",
 "PowerCapacityWatts": 150,
 "PowerWatts": null,
 "PowerConsumedWatts": null,
 "ReadingCelsius": 40,
 "SlotNumber": 5
 }
 },
 "Manufacturer": "Nvidia",
```

```
"Model": "NVIDIA A10",
"Name": "GPU5",
"PCIeInterface": {
 "LanesInUse": 16,
 "MaxLanes": 16
},
"SerialNumber": "1322521044226",
"Status": {
 "Health": "OK",
 "State": "Enabled"
},
{
 "@odata.id": "/redfish/v1/Chassis/1/PCIeDevices/PCIeCard6",
 "@odata.type": "#PCIeDevice.v1_4_0.PCIeDevice",
 "CardManufacturer": "Memblaze",
 "CardModel": "P5516CH0160T00",
 "Description": "AIC",
 "FirmwareVersion": "22400560",
 "Id": "mainboardPCIeCard6",
 "Links": {
 "PCIeFunctions": [
 {
 "@odata.id": "/redfish/v1/Chassis/1/PCIeDevices/PCIeCard6/
Functions/1"
 }
]
 },
 "Oem": {
 "Public": {
 "DeviceBDF": "0000:e1:00.0",
 "DeviceLocator": "mainboardPCIeCard6",
 "NVMeAIC": {
 "CapacityGB": 1600,
 "CapacityBytes": 16000000000000,
 "DiskTemperatureCelsius": 52,
 "MediaType": "SSD",
 "PredictedMediaLifeLeftPercent": 100,
 "Interface": "PCIe",
 "HealthStatus": "OK",
 "Model": "P5516CH0160T00",
 "Vendor": "Memblaze",
 "SerialNumber": "SH203401337"
 }
 }
 }
},
```

```

 "LinkSpeed": "8.0GT/s",
 "MaxLinkSpeed": "8.0GT/s",
 "MemorySizeMiB": null,
 "PCIeCardType": "NVMe AIC",
 "PowerCapacityWatts": null,
 "PowerWatts": null,
 "PowerConsumedWatts": null,
 "RootPortBDF": "0000:e0:01.1",
 "SlotNumber": 6
 }
},
"Manufacturer": "Memblaze",
"Model": "P5516CH0160T00",
"Name": "NVMe AIC6",
"PCIeInterface": {
 "LanesInUse": 4,
 "MaxLanes": 4
},
"SerialNumber": "SH203401337",
"Status": {
 "Health": "OK",
 "State": "Enabled"
}
},
{
"@odata.id": "/redfish/v1/chassis/self/PCIeDevices/PCIeCard7",
"@odata.type": "#PCIeDevice.v1_4_0.PCIeDevice",
"CardManufacturer": "Memblaze",
"CardModel": "P5916CH0320M00",
"Description": "AIC",
"FirmwareVersion": "21300BA0",
"Id": "mainboardPCIeCard7",
"Links": {
 "PCIeFunctions": [
 {
 "@odata.id":
 "/redfish/v1/chassis/self/PCIeDevices/PCIeCard19/Functions/1"
 }
]
},
"Oem": {
 "Public": {
 "DeviceBDF": "0000:a8:00.0",
 "DeviceLocator": "mainboardPCIeCard7",

```

```

 "Linkspeed": "8.0GT/s",
 "MaxLinkspeed": "8.0GT/s",
 "MemorySizeMiB": 3200,
 "PCIeCardType": "NVMe AIC",
 "PowerCapacityWatts": null,
 "PowerWatts": null,
 "PowerConsumedWatts": null,
 "RootPortBDF": "0000:a7:01.0",
 "SlotNumber": 7
 },
},
"Manufacturer": "Memblaze",
"Model": "P5916CH0320M00",
"Name": "NVMe AIC7",
"PCIeInterface": {
 "LanesInUse": 4,
 "MaxLanes": 8
},
"SerialNumber": "SH193800164",
>Status": {
 "Health": "OK",
 "State": "Enabled"
}
}
],
"Members@odata.count": 2,
"Name": "PCIe Device Collection"
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about all PCIe device resources, refer to [Table 6-24](#).

**Table 6-24 Output Descriptions for Querying Information About All PCIe Device Resources**

| Field          | Type   | Description                                                     |
|----------------|--------|-----------------------------------------------------------------|
| @odata.context | String | OData description of the PCIe device resource collection model. |
| @odata.id      | String | Access path of the PCIe device resource collection.             |
| @odata.type    | String | Type of PCIe device resource collection.                        |
| Description    | String | Description of the PCIe device resource collection.             |

| Field               | Type   | Description                                  |
|---------------------|--------|----------------------------------------------|
| Name                | String | Name of the PCIe device resource collection. |
| Members@odata.count | Number | Number of PCIe device resource members.      |
| Members             | Array  | PCIe device resources.                       |

For a description of the parameters of the PCIe device resource information, refer to [Table 6-22](#).

## 6.13 Querying Information About the Drive Resource Collection

### Function

Query information about the drive resource collection of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
  - URL: `https://device_ip/redfish/v1/Chassis/chassis_id/Drives`
  - Request Header:
- X-Auth-Token: auth\_value
- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the drive resource collection, refer to [Table 6-25](#).

**Table 6-25 Parameter Descriptions for Querying Information About the Drive Resource Collection**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| chassis_id | ID of the Chassis resource.                                                           | For a rack server, the value is 1 or Self.                                                          |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/Drives
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#DrivesCollection.DrivesCollection",
 "@odata.id": "/redfish/v1/Chassis/1/Drives",
 "@odata.type": "#DriverCollection.DriverCollection",
 "Description": "Drivers Collection",
 "Name": "Drivers Collection",
 "Members@odata.count": 4,
 "Members": [
 {
 "@odata.id": "/redfish/v1/Chassis/1/Drives/HDDPlaneDisk16"
 },
 {
 "@odata.id": "/redfish/v1/Chassis/1/Drives/HDDPlaneDisk17"
 },
 {
 "@odata.id": "/redfish/v1/Chassis/1/Drives/HDDPlaneDisk19"
 },
 {
 "@odata.id": "/redfish/v1/Chassis/1/Drives/HDDPlaneDisk21"
 }
]
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the drive resource collection, refer to [Table 6-26](#).

**Table 6-26 Output Descriptions for Querying Information About the Drive Resource Collection**

| Field               | Type   | Description                                               |
|---------------------|--------|-----------------------------------------------------------|
| @odata.context      | String | OData description of the drive resource collection model. |
| @odata.id           | String | Access path of the drive resource collection.             |
| @odata.type         | String | Type of drive resource collection.                        |
| Description         | String | Description of the drive resource collection.             |
| Name                | String | Name of the drive resource collection.                    |
| Members@odata.count | Number | Number of drive resource members.                         |
| Members             | Array  | Drive resource list.                                      |
| @odata.id           | String | Access path of the drive resource node.                   |

## 6.14 Querying Information About a Specified Drive Resource

### Function

Query information about a specified drive resource of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** *https://device\_ip/redfish/v1/Chassis/chassis\_id/Drives/drive\_id*
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the specified drive resource, refer to [Table 6-27](#).

**Table 6-27 Parameter Descriptions for Querying Information About the Specified Drive Resource**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| chassis_id | ID of the Chassis resource.                                                           | For a rack server, the value is 1 or Self.                                                          |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| drives_id  | ID of the specified disk.                                                             | It can be obtained from the drive list managed by the current specified controllers                 |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/Drives/HDDPlaneDisk17
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Drives.Drives",
 "@odata.id": "/redfish/v1/Chassis/1/Drives/HDDPlaneDisk17",
 "@odata.type": "#Drive.v1_1_0.drive",
 "CapableSpeedGbs": 12,
 "CapacityBytes": 644245094400,
 "FailurePredicted": null,
 "HotspareType": null,
 "Id": "HDDPlaneDisk17",
 "IndicatorLED": "Off",
 "Location": [
 {
 "Info": "Disk17",
 "InfoFormat": "DeviceName"
 }
],
 "Manufacturer": "TOSHIBA",
```

```

 "MediaType": "HDD",
 "Model": "AL14SEB060N",
 "Name": "Disk17",
 "NegotiatedSpeedGbs": 12,
 "Oem": {
 "Public": {
 "SASAddress": "30015EBE04B2B93F",
 "RotationSpeedRPM": null,
 "SATAPort": {
 "BelongCPU": null,
 "ControllerBDF": null,
 "ControllerPortNum": null
 },
 "TemperatureCelsius": 30
 }
 },
 "PartNumber": null,
 "PredictedMediaLifeLeftPercent": null,
 "Protocol": "SAS",
 "Revision": "0103",
 "SerialNumber": "38Q0A03LFV7B",
 "SlotNumber": 17,
 "status": {
 "Health": "OK",
 "State": "Enabled"
 }
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the specified drive resource, refer to [Table 6-28](#).

**Table 6-28 Output Descriptions for Querying Information About the Specified Drive Resource**

| Field          | Type   | Description                                              |
|----------------|--------|----------------------------------------------------------|
| @odata.context | String | OData description of the specified drive resource model. |
| @odata.id      | String | Access path of the specified drive resource.             |
| @odata.type    | String | Type of the specified drive resource.                    |
| Id             | String | ID of the specified drive resource.                      |

| Field              | Type    | Description                                                                                                                                                                                                                                                                                                                |
|--------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name               | String  | Name of the specified drive resource.                                                                                                                                                                                                                                                                                      |
| Model              | String  | Model of the specified drive.                                                                                                                                                                                                                                                                                              |
| Revision           | String  | Version information about the specified drive.                                                                                                                                                                                                                                                                             |
| Status             | Object  | Status of the specified drive, including: <ul style="list-style-type: none"> <li>● State: whether drives are enabled</li> <li>● Health: health status of the drives</li> </ul>                                                                                                                                             |
| CapableSpeedGbs    | Number  | Maximum interface speed of the specified drive.                                                                                                                                                                                                                                                                            |
| NegotiatedSpeedGbs | Number  | Negotiated rate of the specified drive. The value for NVMe is null.                                                                                                                                                                                                                                                        |
| Oem.Public         | Object  | -                                                                                                                                                                                                                                                                                                                          |
| TemperatureCelsius | Number  | Temperature unit (Celsius) of the specified drive.                                                                                                                                                                                                                                                                         |
| BackpanelId        | Number  | Backplane ID of the specified drive.                                                                                                                                                                                                                                                                                       |
| BackPanelLocation  | String  | Backplane position of the specified drive.                                                                                                                                                                                                                                                                                 |
| SASAddress         | String  | -                                                                                                                                                                                                                                                                                                                          |
| CapacityBytes      | Number  | Capacity of the specified drive, in bytes.                                                                                                                                                                                                                                                                                 |
| FailurePredicted   | Boolean | Pre-failure status of the specified drive, including: <ul style="list-style-type: none"> <li>● true</li> <li>● false</li> </ul>                                                                                                                                                                                            |
| Protocol           | String  | Compliant protocol of the specified drive: <ul style="list-style-type: none"> <li>● SPI</li> <li>● PCIe</li> <li>● AHCI</li> <li>● UHCI</li> <li>● SAS</li> <li>● SATA</li> <li>● USB</li> <li>● NVMe</li> <li>● FC</li> <li>● iSCSI</li> <li>● FCoE</li> <li>● NVMeOverFabrics</li> <li>● SMB</li> <li>● NFSv3</li> </ul> |

| Field                         | Type   | Description                                                                                                                                                                               |
|-------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               |        | <ul style="list-style-type: none"> <li>● NFSv4</li> <li>● <a href="#">HTTP</a></li> <li>● <a href="#">HTTPS</a></li> <li>● <a href="#">FTP</a></li> <li>● <a href="#">SFTP</a></li> </ul> |
| MediaType                     | String | Media type of the specified drive: <ul style="list-style-type: none"> <li>● <a href="#">HDD</a></li> <li>● <a href="#">SSD</a></li> <li>● <a href="#">SMR</a></li> </ul>                  |
| Manufacturer                  | String | Manufacturer of the specified drive.                                                                                                                                                      |
| PredictedMediaLifeLeftPercent | Number | Percentage of the remaining service life of the specified drive.                                                                                                                          |
| SerialNumber                  | String | Serial number of the specified drive.                                                                                                                                                     |
| PartNumber                    | String | Part number of the specified drive.                                                                                                                                                       |
| SlotNumber                    | Number | Slot number of the specified drive.                                                                                                                                                       |
| IndicatorLED                  | String | Positioning indicator status of the specified drive: <ul style="list-style-type: none"> <li>● Lit</li> <li>● Off</li> <li>● UnKnown</li> </ul>                                            |
| Location                      | Array  | Screen printing of the specified drive.                                                                                                                                                   |
| Info                          | String | Screen printing information about the specified drive.                                                                                                                                    |
| InfoFormat                    | String | Screen printing format of the specified drive.                                                                                                                                            |
| RotationSpeedRPM              | Number | Rotation speed of the specified drive, unit: RPM.                                                                                                                                         |
| BelongCPU                     | String | <a href="#">CPU</a> of the controller of the specified drive.                                                                                                                             |
| ControllerBDF                 | String | Controller <a href="#">BDF</a> of the specified drive.                                                                                                                                    |
| ControllerPortNum             | Number | Controller port number of the specified drive.                                                                                                                                            |

## 6.15 Querying Information About All Drive Resources

### Function

Query information about the drive resource collection of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Chassis/chassis_id/Drives?$expand=.`
- Request Header: None
 

X-Auth-Token: auth\_value
- Request Message Body: None

### Parameters

For a description of the parameters for querying information about all drive resources, refer to [Table 6-29](#).

**Table 6-29 Parameter Descriptions for Querying Information About All Drive Resources**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| chassis_id | ID of the Chassis resource.                                                           | For a rack server, the value is 1 or Self.                                                          |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/Drives?$expand=.
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#DrivesCollection.DrivesCollection",
 "@odata.id": "/redfish/v1/chassis/Self/Drives",
 "@odata.type": "#DriverCollection.DriverCollection",
 "Description": "Drivers Collection",
 "Name": "Drivers Collection",
 "Members": [
 {
 "@odata.id": "/redfish/v1/Chassis/Self/Drives/HDDPlaneDisk30",
 "@odata.type": "#Drive.v1_1_0.Drive",
 "CapableSpeedGbs": 3,
 "CapacityBytes": 2000000000000,
 "FailurePredicted": null,
 "HotspareType": null,
 "Id": "HDDPlaneDisk30",
 "IndicatorLED": null,
 "Location": [
 {
 "Info": "",
 "InfoFormat": "DeviceName"
 }
],
 "Manufacturer": "ATA",
 "MediaType": "HDD",
 "Model": "WDC WD2000FYYZ-01UL1B0",
 "Name": "Disk30",
 "NegotiatedSpeedGbs": 3,
 "Oem": {
 "Public": {
 "SASAddress": null,
 "SATAPort": {
 "BelongCPU": "CPU0",
 "ControllerBDF": "0000:00:17.0",
 "ControllerPortNum": 2
 },
 "RotationSpeedRPM": 7200,
 "TemperatureCelsius": 30
 }
 },
 "PartNumber": null,
 "PredictedMediaLifeLeftPercent": null,
 "Protocol": "SATA",
 }
]
}
```

```
 "Revision": "01.x1Kx2",
 "SerialNumber": "WD-WCC1P0458212",
 "SlotNumber": 30,
 "Status": {
 "Health": null,
 "State": null
 }
 },
 {
 "@odata.id": "/redfish/v1/Chassis/Self/Drives/HDDPlaneDisk9",
 "@odata.type": "#Drive.v1_1_0.Drive",
 "CapableSpeedGbs": 8,
 "CapacityBytes": 3840755982336,
 "FailurePredicted": false,
 "HotspareType": null,
 "Id": "HDDPlaneDisk9",
 "IndicatorLED": "Off",
 "Location": [
 {
 "Info": "Disk9",
 "InfoFormat": "DeviceName"
 }
],
 "Manufacturer": "Intel",
 "MediaType": "SSD",
 "Model": "INTEL SSDPF2KX038T1",
 "Name": "Disk9",
 "NegotiatedSpeedGbs": null,
 "Oem": {
 "Public": {
 "BackpanelId": 10,
 "BackPanelLocation": "Front",
 "TemperatureCelsius": 30
 }
 },
 "PartNumber": null,
 "PredictedMediaLifeLeftPercent": 100,
 "Protocol": "NVMe",
 "Revision": "9CV10200",
 "SerialNumber": "PHAX2170001D3P8CGN",
 "SlotNumber": 9,
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 }
 }
]
```

```

 }
],
 "Members@odata.count": 2
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about all drive resources, refer to [Table 6-30](#).

**Table 6-30 Output Descriptions for Querying Information About All Drive Resources**

| Field               | Type   | Description                                               |
|---------------------|--------|-----------------------------------------------------------|
| @odata.context      | String | OData description of the drive resource collection model. |
| @odata.id           | String | Access path of the drive resource collection.             |
| @odata.type         | String | Type of drive resource collection.                        |
| Description         | String | Description of the drive resource collection.             |
| Name                | String | Name of the drive resource collection.                    |
| Members@odata.count | Number | Number of drive resource members.                         |
| Members             | Array  | All drive resources.                                      |

For a description of the parameters of the drive resource information, refer to [Table 6-28](#).

## 6.16 Querying the Power Supply Information About a Specified Chassis

### Function

Query power supply information about a specified Chassis.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** *https://device\_ip/redfish/v1/Chassis/Chassis\_id/Power*
- Request Header:

```
x-auth-token:auth_value
```

- Request Message Body: None

## Parameters

For a description of the parameters for querying the power supply information about the specified Chassis, refer to [Table 6-31](#).

**Table 6-31 Parameter Descriptions for Querying Information About the Specified Chassis Power Supply**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| chassis_id | ID of the Chassis resource.                                                           | For a rack server, the value is 1 or Self.                                                          |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/Power
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUD45p9PFIC8QG2lp2F0=
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Power.Power",
 "@odata.id": "/redfish/v1/Chassis/1/Power",
 "@odata.type": "#Power.v1_5_4.Power",
 "Description": "Power sensor readings",
 "Id": "Power",
 "Name": "Power",
 "PowerControl": [
 {
 "@odata.id": "/redfish/v1/Chassis/1/Power#/PowerControl/1",
 "MemberId": "1",
 "Name": "Chassis Power Control",
 "PowerLimit": {
```

```
 "LimitInWatts": null,
 "PowerLimitEnable": false,
 "LimitException": "NoAction"
 },
 "PowerMetrics": {
 "AverageConsumedWatts": 0,
 "IntervalInMin": 0,
 "MaxConsumedWatts": 0,
 "MinConsumedWatts": 0
 },
 "PowerConsumedWatts": 29,
 "Oem": {
 "Public": {
 "ExpectedActivePSU": [
 {
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerSupplies/1"
 },
 {
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerSupplies/4"
 }
],
 "CurrentCPUPowerWatts": 0,
 "CurrentFanPowerWatts": 0,
 "CurrentMemoryPowerWatts": 0,
 "CurrentHDDPowerWatts": 0
 }
 }
},
],
"PowerControl@odata.count": 1,
"PowerSupplies": [
{
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerSupplies/1",
 "FirmwareVersion": "DC:1.01 PFC:1.00",
 "LineInputVoltage": 217,
 "Manufacturer": "Great wall",
 "Model": "CRPS1200D",
 "Name": "PSU1",
 "PowerCapacityWatts": 1200,
 "PowerInputWatts": 26,
 "PowerOutputWatts": 5,
 "PowerSupplyType": "AC",
 "ProductionDate": "190123",
 "SerialNumber": "22M010020400",
}
```

```
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "Oem": {
 "Public": {
 "SlotNumber": 1,
 "ActiveStandby": "Active"
 }
 },
 "MemberId": "1"
 },
 {
 "@odata.id": "/redfish/v1/Chassis/1/Power#/PowerSupplies/2",
 "FirmwareVersion": null,
 "LineInputVoltage": 0,
 "Manufacturer": null,
 "Model": null,
 "Name": "PSU2",
 "PowerCapacityWatts": null,
 "PowerInputWatts": null,
 "PowerOutputWatts": null,
 "PowerSupplyType": null,
 "ProductionDate": "190123",
 "SerialNumber": null,
 "status": {
 "Health": "Warning",
 "State": "Disabled"
 },
 "Oem": {
 "Public": {
 "SlotNumber": 2,
 "ActiveStandby": "Standby"
 }
 },
 "MemberId": "2"
 }
],
"Powersupplies@odata.count": 2,
"Actions": {
 "#Power.CollectHistoryData": {
 "target": "/redfish/v1/Chassis/1/Power/Actions/Power.CollectHistoryData"
 }
},
```

```
"voltages": [
 {
 "@odata.id": "/redfish/v1/chassis/1/Power#/voltages/1",
 "LowerThresholdCritical": 2.643,
 "LowerThresholdFatal": 0,
 "LowerThresholdNonCritical": 0,
 "MaxReadingRange": 4.463,
 "MemberId": "1",
 "MinReadingRange": 0,
 "Name": "RGM_VCC3.3V",
 "PhysicalContext": "VoltageRegulator",
 "SensorNumber": 1,
 "Status": {
 "State": "Absent"
 },
 "UpperThresholdCritical": 3.955,
 "UpperThresholdFatal": 0,
 "UpperThresholdNonCritical": 0
 },
 {
 "@odata.id": "/redfish/v1/chassis/1/Power#/voltages/2",
 "LowerThresholdCritical": 0.802,
 "LowerThresholdFatal": 0,
 "LowerThresholdNonCritical": 0,
 "MaxReadingRange": 1.811,
 "MemberId": "2",
 "MinReadingRange": 0,
 "Name": "CPU1_PVNN_MAIN",
 "PhysicalContext": "VoltageRegulator",
 "ReadingVolts": 0.014,
 "SensorNumber": 2,
 "Status": {
 "Health": "Critical",
 "State": "Enabled"
 },
 "UpperThresholdCritical": 1.2,
 "UpperThresholdFatal": 0,
 "UpperThresholdNonCritical": 0
 },
 {
 "@odata.id": "/redfish/v1/chassis/1/Power#/voltages/3",
 "LowerThresholdCritical": 0.802,
 "LowerThresholdFatal": 0,
 "LowerThresholdNonCritical": 0,
```

```
 "MaxReadingRange": 1.811,
 "MemberId": "3",
 "MinReadingRange": 0,
 "Name": "CPU0_PVNN_MAIN",
 "PhysicalContext": "VoltageRegulator",
 "SensorNumber": 3,
 "Status": {
 "State": "Absent"
 },
 "UpperThresholdCritical": 1.2,
 "UpperThresholdFatal": 0,
 "UpperThresholdNonCritical": 0
 },
 {
 "@odata.id": "/redfish/v1/chassis/1/Power#/voltages/4",
 "LowerThresholdCritical": 2.3,
 "LowerThresholdFatal": 0,
 "LowerThresholdNonCritical": 0,
 "MaxReadingRange": 3.621,
 "MemberId": "4",
 "MinReadingRange": 0,
 "Name": "CPU1_PVPP_HBM",
 "PhysicalContext": "VoltageRegulator",
 "SensorNumber": 4,
 "Status": {
 "State": "Absent"
 },
 "UpperThresholdCritical": 2.797,
 "UpperThresholdFatal": 0,
 "UpperThresholdNonCritical": 0
 }
],
"Redundancy": [
 {
 "@odata.id": "/redfish/v1/chassis/1/Power#/Redundancy/1",
 "Mode": "Sharing",
 "Name": "PowerSupply Redundancy Group 1"
 }
]
```

- Status Code: 200

## Output Description

For a description of the output returned when you query the power supply information about the specified Chassis, refer to [Table 6-32](#).

**Table 6-32 Output Descriptions for Querying the Power Supply Information About the Specified Chassis**

| Field                                          | Type    | Description                                                                                                                                                                                                          |
|------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context                                 | String  | OData description of the power supply resource model.                                                                                                                                                                |
| @odata.id                                      | String  | Access path of the power resource.                                                                                                                                                                                   |
| @odata.type                                    | String  | Type of power supply resource.                                                                                                                                                                                       |
| Description                                    | String  | Description.                                                                                                                                                                                                         |
| Id                                             | String  | ID of the power supply resource.                                                                                                                                                                                     |
| Name                                           | String  | Name of the power supply resource.                                                                                                                                                                                   |
| PowerControl                                   | Array   | Power control list.                                                                                                                                                                                                  |
| PowerControl.@odata.id                         | String  | Access path of the specified power control.                                                                                                                                                                          |
| PowerControl.MemberId                          | String  | ID of the specified power control. The ID is the unique identifier of the power control in the power control list.                                                                                                   |
| PowerControl.Name                              | String  | Name of the specified power control.                                                                                                                                                                                 |
| PowerLimit                                     | Object  | Power capping information.                                                                                                                                                                                           |
| PowerControl.PowerLimit.PowerLimitEnable       | Boolean | Whether power capping is enabled.                                                                                                                                                                                    |
| PowerControl.PowerLimit.LimitInWatts           | Number  | Server power limit:<br><ul style="list-style-type: none"> <li>● Value: Power capping is enabled. The value indicates the currently valid configuration value.</li> <li>● null: Power capping is disabled.</li> </ul> |
| PowerControl.PowerLimit.LimitException         | String  | Action to be taken when power capping becomes invalid.<br><br>Value: NoAction (no action).                                                                                                                           |
| PowerControl.PowerMetrics.AverageConsumedWatts | Number  | Average power in the latest measurement interval.                                                                                                                                                                    |
| PowerControl.PowerMetrics.IntervalInMin        | Number  | Measurement interval.                                                                                                                                                                                                |
| PowerControl.PowerMetrics.MaxConsumedWatts     | Number  | Highest power consumption level.                                                                                                                                                                                     |

| Field                                       | Type   | Description                                                                                                    |
|---------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------|
| PowerControl.PowerMetric.s.MinConsumedWatts | Number | Lowest power consumption level.                                                                                |
| PowerControl.PowerLimit.PowerConsumedWatts  | Number | Current power of the device.                                                                                   |
| PowerControl.PowerLimit.Oem.Public          | Object | Customized properties.                                                                                         |
| PowerControl.ExpectedActivePSU.@odata.id    | String | Access path of a specified power supply.                                                                       |
| PowerControl.CurrentCPUPowerWatts           | Number | Current CPU power consumption.                                                                                 |
| PowerControl.CurrentFanPowerWatts           | Number | Current fan power consumption.                                                                                 |
| PowerControl.CurrentMemoryPowerWatts        | Number | Current memory power consumption.                                                                              |
| CurrentHDDPowerWatts                        | Number | Current hard disk power consumption.                                                                           |
| PowerControl@odata.count                    | Number | Array size of the power control list.                                                                          |
| PowerSupplies                               | Array  | Power supply list. The <b>Status</b> field indicates whether or not the corresponding power module is present. |
| PowerSupplies.FirmwareVersion               | String | Firmware version of the specified power supply.                                                                |
| PowerSupplies.LineInputVoltage              | Number | Input voltage of the specified power supply.                                                                   |
| PowerSupplies.Manufacturer                  | String | Manufacturer of the specified power supply.                                                                    |
| PowerSupplies.Model                         | String | Model of the specified power supply.                                                                           |
| PowerSupplies.Name                          | String | Name of the specified power supply.                                                                            |
| PowerSupplies.PowerCapacityWatts            | Number | Rated power of the specified power supply.                                                                     |
| PowerSupplies.PowerInputWatts               | Number | Input power of the specified power supply.                                                                     |
| PowerSupplies.PowerOutputWatts              | Number | Output power of the specified power supply.                                                                    |
| PowerSupplies.PowerSupplyType               | String | Type of the specified power supply.                                                                            |
| PowerSupplies.ProductionDate                | String | Production date of the specified power module.                                                                 |

| Field                                  | Type   | Description                                                                                                                                                                        |
|----------------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PowerSupplies.SerialNumber             | String | Serial number of the specified power supply.                                                                                                                                       |
| PowerSupplies.Status                   | Object | Power supply status, including: <ul style="list-style-type: none"><li>● State: whether the power supply is enabled.</li><li>● Health: health status of the power supply.</li></ul> |
| Oem.Public                             | Object | Customized properties.                                                                                                                                                             |
| PowerSupplies.Oem.Public.SlotNumber    | Number | Slot number of the specified power supply.                                                                                                                                         |
| PowerSupplies.Oem.Public.ActiveStandby | String | Active or standby power supply mode.<br>Active: active mode.<br>Standby: standby mode.                                                                                             |
| PowerSupplies.MemberId                 | String | ID of the specified power supply. The ID is the unique identifier of the power supply in the power supply list.                                                                    |
| PowerSupplies@odata.count              | Number | Number of power supplies.                                                                                                                                                          |
| Voltages.LowerThresholdCritical        | Number | Critical warning threshold for low voltage of the specified voltage sensor.                                                                                                        |
| Voltages.LowerThresholdFatal           | Number | Fatal warning threshold for low voltage of the specified voltage sensor.                                                                                                           |
| Voltages.LowerThresholdNon-Critical    | Number | Noncritical warning threshold for low voltage of the specified voltage sensor.                                                                                                     |
| Voltages.MaxReadingRange               | Number | Maximum voltage reading for the specified voltage sensor.                                                                                                                          |
| Voltages.MemberId                      | String | ID of the specified voltage sensor.                                                                                                                                                |
| Voltages.MinReadingRange               | Number | Minimum voltage reading for the specified voltage sensor.                                                                                                                          |
| Voltages.Name                          | String | Name of the specified voltage sensor.                                                                                                                                              |
| Voltages.ReadingVolts                  | Number | Current reading of the specified voltage sensor. If no voltage value is obtained from the current voltage sensor, this field will be not displayed.                                |
| Voltages.SensorNumber                  | Number | Serial number of the specified voltage sensor.                                                                                                                                     |
| Voltages.Status.State                  | String | Status of the specified voltage sensor.                                                                                                                                            |
| Voltages.Status.Health                 | String | Health status of the specified voltage sensor.                                                                                                                                     |
| Voltages.UpperThresholdCritical        | Number | Critical warning threshold for high voltage of the specified voltage sensor.                                                                                                       |

| Field                               | Type   | Description                                                                                                                                                                       |
|-------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Voltages.UpperThresholdFatal        | Number | Fatal warning threshold for high voltage of the specified voltage sensor.                                                                                                         |
| Voltages.LowerThresholdNon-Critical | Number | Noncritical warning threshold for low voltage of the specified voltage sensor.                                                                                                    |
| Voltages.@odata.id                  | String | Access path of the specified voltage sensor.                                                                                                                                      |
| Redundancy.@odata.id                | String | Access path of a specified power redundancy group.                                                                                                                                |
| Redundancy.Name                     | String | Name of the specified power redundancy group.                                                                                                                                     |
| Redundancy.Mode                     | String | Redundancy mode of the specified power redundancy group: <ul style="list-style-type: none"><li>● Sharing: load balancing mode.</li><li>● Failover: active-standby mode.</li></ul> |
| Actions                             | Object | Power operations.                                                                                                                                                                 |
| #Power.CollectHistoryData.target    | String | Operation path for collecting historical power statistics.                                                                                                                        |

## 6.17 Collecting Information About Power Statistics

### Function

Collect the information about the power statistics of the last 24 hours.

### Permission Required

Query.

### Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/Chassis/Chassis\\_id/Power/Actions/Power.CollectHistoryData](https://device_ip/redfish/v1/Chassis/Chassis_id/Power/Actions/Power.CollectHistoryData)
- Request Header: None

X-Auth-Token: auth\_value  
Content-Type: header\_type

- Request Message Body:

```
{
 "Range": range_value,
 "cycle": cycle_value
}
```

## Parameters

For a description of the parameters for collecting the information about the power statistics of the last 24 hours, refer to [Table 6-33](#).

**Table 6-33 Parameter Descriptions for Querying Information About Power Statistics**

| Parameter   | Description                                                                                                  | Value                                                                                                                                                                                                                    |
|-------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                                                     | IPv4 or IPv6 address.                                                                                                                                                                                                    |
| chassis_id  | ID of the Chassis resource.                                                                                  | For a rack server, the value is 1 or Self.                                                                                                                                                                               |
| auth_value  | When the post request is executed, the "X-Auth-Token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions.                                                                                                                                    |
| header_type | Format of the request message.                                                                               | application/json                                                                                                                                                                                                         |
| range_value | Power statistics collection range.                                                                           | <ul style="list-style-type: none"> <li>● Day: daily statistics.</li> <li>● Week: weekly statistics.</li> </ul>                                                                                                           |
| cycle_value | Power statistics collection period.                                                                          | <ul style="list-style-type: none"> <li>● Hour: Statistics are collected once an hour (applicable to daily statistics).</li> <li>● Day: Statistics are collected once a day (applicable to weekly statistics).</li> </ul> |

## Usage Guidelines

When the TFTP protocol is used for transmission, the TFTP server needs to be enabled on the server end, for example, through the 3CD software.

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/Chassis/1/Power/Actions/Power.CollectHistoryData
```

- Request Header:

```
x-auth-token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type: application/json
```

- Request message body:

```
{
 "Range": "Day",
 "Cycle": "Hour"
}
```

- Response Example 1: Refer to the CSV file.

Perform the following steps to get the CSV file:

Click **Send and Download** on the Postman. Select a path to save the CSV file.

- Response code: 200

#### Output Description

None.

## 6.18 Modifying Properties of a Specified Power Supply

#### Function

Modify properties of a specified power supply of a server.

#### Permission Required

Power control

#### Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/Chassis/Chassis\\_id/Power](https://device_ip/redfish/v1/Chassis/Chassis_id/Power)
- Request Header:

```
x-auth-token:auth_value
Content-Type: header_type
```

- Request message body:
  - Power capping parameter configuration:

```
{
 "PowerControl": [
 {
 "PowerLimit": {
 "LimitInWatts": limit_value
 }
 }
]
}
```

→ Active power supply configuration:

```
{
 "Redundancy": [
 {
 "Mode": redundancy_type
 }
],
 "PowerControl": [
 {
 "PowerLimit": {
 "LimitInWatts": limit_value
 }
 }
]
}
```

```
{
 "Oem": {
 "Public": {
 "ExpectedActivePSU": [
 {
 "@odata.id": "/redfish/v1/Chassis/1/Power#/PowerSupplies/power_id"
 }
],
 "ExpectedRedundancy": [
 {
 "@odata.id": "/redfish/v1/Chassis/1/Power#/Redundancy/redundancy_id"
 }
]
 }
 }
}
```

## Parameters

For a description of the parameters for modifying properties of the specified power supply, refer to [Table 6-34](#).

**Table 6-34 Parameter Descriptions for Modifying Properties of the Specified Power Supply**

| Parameter   | Description                                                                             | Value                                                                                                                                                                           |
|-------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                                | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                                                                                           |
| chassis_id  | ID of the Chassis resource.                                                             | For a rack server, the value is 1 or Self.                                                                                                                                      |
| auth_value  | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                             |
| header_type | Format of the request message.                                                          | application/json                                                                                                                                                                |
| limit_value | Server power capping value                                                              | <ul style="list-style-type: none"> <li>● Integer: Power capping is enabled and the capping values are set. Range: 1–32767</li> <li>● null: Power capping is disabled</li> </ul> |
| power_id    | Slot number of the power supply.                                                        | Set it in accordance with the number of power supplies of different models. Range: 1–4.                                                                                         |

| Parameter       | Description            | Value                                                                                                                                                                                                 |
|-----------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| redundancy_id   | Power group ID.        | Set it as required.                                                                                                                                                                                   |
| redundancy_type | Power redundancy type. | Power redundancy type. Options: <ul style="list-style-type: none"><li>● Sharing: If <b>redundancy_type</b> is set to <b>Sharing</b>, Oem does not need to be configured.</li><li>● Failover</li></ul> |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Chassis/1/Power
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type: application/json
```

- Request Message Body1:

```
{
 "PowerControl": [
 {
 "PowerLimit": {
 "LimitInWatts": 700
 }
 }
]
}
```

- Request Message Body2:

```
{
 "Redundancy": [
 {
 "Mode": "Failover"
 }
],
 "PowerControl": [
 {
 "Oem": {
 "Public": {
 "ExpectedActivePSU": [

```

```
{
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerSupplies/1"
}
],
"ExpectedRedundancy": [
{
 "@odata.id": "/redfish/v1/chassis/1/Power#/Redundancy/1"
}
]
}
}
]
```

- Response Example:

```
{
"@odata.context": "/redfish/v1/$metadata#Power.Power",
"@odata.id": "/redfish/v1/chassis/1/Power",
"@odata.type": "#Power.v1_5_4.Power",
"Description": "Power sensor readings",
"Id": "Power",
"Name": "Power",
"PowerControl": [
{
 "Name": "Chassis Power Control",
 "PowerLimit": {
 "LimitInWatts": 550,
 "PowerLimitEnable": true,
 "LimitException": "NoAction"
 },
 "PowerMetrics": {
 "AverageConsumedWatts": 0,
 "IntervalInMin": 0,
 "MaxConsumedWatts": 0,
 "MinConsumedWatts": 0
 },
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerControl/1",
 "MemberId": "1",
 "PowerConsumedWatts": 29,
 "Oem": {
 "Public": {
 "ExpectedActivePSU": [
{

```

```
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerSupplies/1"
 },
 {
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerSupplies/4"
 }
],
"CurrentCPUPowerWatts": 0,
"CurrentFanPowerWatts": 0,
"CurrentMemoryPowerWatts": 0,
"CurrentHDDPowerWatts": 0
}
}
},
],
"PowerControl@odata.count": 1,
"PowerSupplies": [
{
 "FirmwareVersion": "DC:1.01 PFC:1.00",
 "LineInputVoltage": 217,
 "Manufacturer": "Great Wall",
 "Model": "CRPS1200D",
 "Name": "PSU1",
 "PowerCapacityWatts": 1200,
 "PowerInputWatts": 26,
 "PowerOutputWatts": 5,
 "PowerSupplyType": "AC",
 "SerialNumber": "22M010020400",
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerSupplies/1",
 "Oem": {
 "Public": {
 "SlotNumber": 1,
 "ActiveStandby": "Active"
 }
 },
 "MemberId": "1"
},
{
 "FirmwareVersion": "N/A",
 "LineInputVoltage": 0,
 "Manufacturer": "N/A",
}
```

```
 "Model": "N/A",
 "Name": "PSU2",
 "PowerCapacityWatts": 65535,
 "PowerInputWatts": 65535,
 "PowerOutputWatts": 65535,
 "PowerSupplyType": "N/A",
 "SerialNumber": "N/A",
 "Status": {
 "Health": "warning",
 "State": "Disabled"
 },
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerSupplies/2",
 "Oem": {
 "Public": {
 "SlotNumber": 2,
 "ActiveStandby": "Standby"
 }
 },
 "MemberId": "2"
 },
 {
 "FirmwareVersion": "N/A",
 "LineInputVoltage": 0,
 "Manufacturer": "N/A",
 "Model": "N/A",
 "Name": "PSU3",
 "PowerCapacityWatts": 65535,
 "PowerInputWatts": 65535,
 "PowerOutputWatts": 65535,
 "PowerSupplyType": "N/A",
 "SerialNumber": "N/A",
 "Status": {
 "Health": "warning",
 "State": "Disabled"
 },
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerSupplies/3",
 "Oem": {
 "Public": {
 "SlotNumber": 3,
 "ActiveStandby": "Standby"
 }
 },
 "MemberId": "3"
 },

```

```
{
 "FirmwareVersion": "DC:1.01 PFC:1.00",
 "LineInputVoltage": 0,
 "Manufacturer": "Great Wall",
 "Model": "CRPS1200D",
 "Name": "PSU4",
 "PowerCapacityWatts": 1200,
 "PowerInputWatts": 0,
 "PowerOutputWatts": 0,
 "PowerSupplyType": "AC",
 "SerialNumber": "22M010020399",
 "status": {
 "Health": "Warning",
 "State": "Enabled"
 },
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerSupplies/4",
 "Oem": {
 "Public": {
 "SlotNumber": 4,
 "ActiveStandby": "Active"
 }
 },
 "MemberId": "4"
}
,
"PowerSupplies@odata.count": 4,
"Actions": {
 "#Power.CollectHistoryData": {
 "target": "/redfish/v1/Chassis/1/Power/Actions/Power.CollectHistoryData"
 }
},
"voltages": [
{
 "@odata.id": "/redfish/v1/chassis/1/Power#/voltages/1",
 "LowerThresholdCritical": 2.643,
 "LowerThresholdFatal": 0,
 "LowerThresholdNonCritical": 0,
 "MaxReadingRange": 4.463,
 "MemberId": "1",
 "MinReadingRange": 0,
 "Name": "RGM_VCC3.3V",
 "PhysicalContext": "VoltageRegulator",
 "SensorNumber": 1,
 "Status": {
 "Health": "Warning",
 "State": "Enabled"
 }
}
]
```

```
 "State": "Absent"
 },
 "UpperThresholdCritical": 3.955,
 "UpperThresholdFatal": 0,
 "UpperThresholdNonCritical": 0
},
{
 "@odata.id": "/redfish/v1/chassis/1/Power#/voltages/2",
 "LowerThresholdCritical": 0.802,
 "LowerThresholdFatal": 0,
 "LowerThresholdNonCritical": 0,
 "MaxReadingRange": 1.811,
 "MemberId": "2",
 "MinReadingRange": 0,
 "Name": "CPU1_PVNN_MAIN",
 "PhysicalContext": "VoltageRegulator",
 "ReadingVolts": 0.014,
 "SensorNumber": 2,
 "Status": {
 "Health": "Critical",
 "State": "Enabled"
 },
 "UpperThresholdCritical": 1.2,
 "UpperThresholdFatal": 0,
 "UpperThresholdNonCritical": 0
},
{
 "@odata.id": "/redfish/v1/chassis/1/Power#/voltages/3",
 "LowerThresholdCritical": 0.802,
 "LowerThresholdFatal": 0,
 "LowerThresholdNonCritical": 0,
 "MaxReadingRange": 1.811,
 "MemberId": "3",
 "MinReadingRange": 0,
 "Name": "CPU0_PVNN_MAIN",
 "PhysicalContext": "VoltageRegulator",
 "SensorNumber": 3,
 "Status": {
 "State": "Absent"
 },
 "UpperThresholdCritical": 1.2,
 "UpperThresholdFatal": 0,
 "UpperThresholdNonCritical": 0
},
```

```
{
 "@odata.id": "/redfish/v1/chassis/1/Power#/voltages/4",
 "LowerThresholdCritical": 2.3,
 "LowerThresholdFatal": 0,
 "LowerThresholdNonCritical": 0,
 "MaxReadingRange": 3.621,
 "MemberId": "4",
 "MinReadingRange": 0,
 "Name": "CPU1_PVPP_HBM",
 "PhysicalContext": "VoltageRegulator",
 "SensorNumber": 4,
 "status": {
 "State": "Absent"
 },
 "UpperThresholdCritical": 2.797,
 "UpperThresholdFatal": 0,
 "UpperThresholdNonCritical": 0
},
"Redundancy": [
{
 "@odata.id": "/redfish/v1/chassis/1/Power#/Redundancy/1",
 "Mode": "Sharing",
 "Name": "PowerSupply Redundancy Group 1"
}
]
}
```

- Status Code: 200

### Output Description

For a description of the output returned when you modify properties of the specified power supply, refer to [Table 6-35](#).

**Table 6-35 Output Descriptions for Modifying Properties of the Specified Power Supply**

| Field          | Type   | Description                                           |
|----------------|--------|-------------------------------------------------------|
| @odata.context | String | OData description of the power supply resource model. |
| @odata.id      | String | Access path of the power resource.                    |
| @odata.type    | String | Type of power supply resource.                        |
| Description    | String | Description.                                          |
| Id             | String | ID of the power supply resource.                      |

| Field                                          | Type    | Description                                                                                                                                                                                                          |
|------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                           | String  | Name of the power supply resource.                                                                                                                                                                                   |
| PowerControl                                   | Array   | Power control list.                                                                                                                                                                                                  |
| PowerControl.@odata.id                         | String  | Access path of the specified power control.                                                                                                                                                                          |
| PowerControl.MemberId                          | String  | ID of the specified power control. The ID is the unique identifier of the power control in the power control list.                                                                                                   |
| PowerControl.Name                              | String  | Name of the specified power control.                                                                                                                                                                                 |
| PowerLimit                                     | Object  | Power capping information.                                                                                                                                                                                           |
| PowerControl.PowerLimit.PowerLimitEnable       | Boolean | Whether power capping is enabled.                                                                                                                                                                                    |
| PowerControl.PowerLimit.LimitInWatts           | Number  | <p>Server power limit:</p> <ul style="list-style-type: none"> <li>Value: Power capping is enabled. The value indicates the currently valid configuration value.</li> <li>null: Power capping is disabled.</li> </ul> |
| PowerControl.PowerLimit.LimitException         | String  | Action to be taken when power capping becomes invalid.<br>Value: NoAction (no action).                                                                                                                               |
| PowerControl.PowerMetrics.AverageConsumedWatts | Number  | Average power in the latest measurement interval.                                                                                                                                                                    |
| PowerControl.PowerMetrics.IntervalInMin        | Number  | Measurement interval.                                                                                                                                                                                                |
| PowerControl.PowerMetrics.MaxConsumedWatts     | Number  | Highest power consumption level.                                                                                                                                                                                     |
| PowerControl.PowerMetrics.MinConsumedWatts     | Number  | Lowest power consumption level.                                                                                                                                                                                      |
| PowerControl.PowerLimit.PowerConsumedWatts     | Number  | Current power of the device.                                                                                                                                                                                         |
| PowerControl.PowerLimit.Oem.Public             | Object  | Customized properties.                                                                                                                                                                                               |
| PowerControl.ExpectedActivePSU.@odata.id       | String  | Access path of a specified power supply.                                                                                                                                                                             |
| PowerControl.CurrentCPUPowerWatts              | Number  | Current CPU power consumption.                                                                                                                                                                                       |
| PowerControl.CurrentFanPowerWatts              | Number  | Current fan power consumption.                                                                                                                                                                                       |

| Field                                  | Type   | Description                                                                                                                                                                        |
|----------------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PowerControl.CurrentMemory-PowerWatts  | Number | Current memory power consumption.                                                                                                                                                  |
| CurrentHDDPowerWatts                   | Number | Current hard disk power consumption.                                                                                                                                               |
| PowerControl@odata.count               | Number | Array size of the power control list.                                                                                                                                              |
| PowerSupplies                          | Array  | Power supply list. The <b>Status</b> field indicates whether or not the corresponding power module is present.                                                                     |
| PowerSupplies.FirmwareVersion          | String | Firmware version of the specified power supply.                                                                                                                                    |
| PowerSupplies.LineInputVoltage         | Number | Input voltage of the specified power supply.                                                                                                                                       |
| PowerSupplies.Manufacturer             | String | Manufacturer of the specified power supply.                                                                                                                                        |
| PowerSupplies.Model                    | String | Model of the specified power supply.                                                                                                                                               |
| PowerSupplies.Name                     | String | Name of the specified power supply.                                                                                                                                                |
| PowerSupplies.PowerCapacity-Watts      | Number | Rated power of the specified power supply.                                                                                                                                         |
| PowerSupplies.PowerInput-Watts         | Number | Input power of the specified power supply.                                                                                                                                         |
| PowerSupplies.PowerOutput-Watts        | Number | Output power of the specified power supply.                                                                                                                                        |
| PowerSupplies.PowerSupply-Type         | String | Type of the specified power supply.                                                                                                                                                |
| PowerSupplies.ProductionDate           | String | Production date of the specified power module.                                                                                                                                     |
| PowerSupplies.SerialNumber             | String | Serial number of the specified power supply.                                                                                                                                       |
| PowerSupplies.Status                   | Object | Power supply status, including: <ul style="list-style-type: none"><li>● State: whether the power supply is enabled.</li><li>● Health: health status of the power supply.</li></ul> |
| Oem.Public                             | Object | Customized properties.                                                                                                                                                             |
| PowerSupplies.Oem.Public.SlotNumber    | Number | Slot number of the specified power supply.                                                                                                                                         |
| PowerSupplies.Oem.Public.ActiveStandby | String | Active or standby power supply mode.<br>Active: active mode.<br>Standby: standby mode.                                                                                             |
| PowerSupplies.MemberId                 | String | ID of the specified power supply. The ID is the unique identifier of the power supply in the power supply list.                                                                    |

| Field                               | Type   | Description                                                                                                                                                                          |
|-------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PowerSupplies@odata.count           | Number | Number of power supplies.                                                                                                                                                            |
| Voltages.LowerThresholdCritical     | Number | Critical warning threshold for low voltage of the specified voltage sensor.                                                                                                          |
| Voltages.LowerThresholdFatal        | Number | Fatal warning threshold for low voltage of the specified voltage sensor.                                                                                                             |
| Voltages.LowerThresholdNon-Critical | Number | Noncritical warning threshold for low voltage of the specified voltage sensor.                                                                                                       |
| Voltages.MaxReadingRange            | Number | Maximum voltage reading for the specified voltage sensor.                                                                                                                            |
| Voltages.MemberId                   | String | ID of the specified voltage sensor.                                                                                                                                                  |
| Voltages.MinReadingRange            | Number | Minimum voltage reading for the specified voltage sensor.                                                                                                                            |
| Voltages.Name                       | String | Name of the specified voltage sensor.                                                                                                                                                |
| Voltages.ReadingVolts               | Number | Current reading of the specified voltage sensor. If no voltage value is obtained from the current voltage sensor, this field will be not displayed.                                  |
| Voltages.SensorNumber               | Number | Serial number of the specified voltage sensor.                                                                                                                                       |
| Voltages.Status.State               | String | Status of the specified voltage sensor.                                                                                                                                              |
| Voltages.Status.Health              | String | Health status of the specified voltage sensor.                                                                                                                                       |
| Voltages.UpperThresholdCritical     | Number | Critical warning threshold for high voltage of the specified voltage sensor.                                                                                                         |
| Voltages.UpperThresholdFatal        | Number | Fatal warning threshold for high voltage of the specified voltage sensor.                                                                                                            |
| Voltages.LowerThresholdNon-Critical | Number | Noncritical warning threshold for low voltage of the specified voltage sensor.                                                                                                       |
| Voltages.@odata.id                  | String | Access path of the specified voltage sensor.                                                                                                                                         |
| Redundancy.@odata.id                | String | Access path of a specified power redundancy group.                                                                                                                                   |
| Redundancy.Name                     | String | Name of the specified power redundancy group.                                                                                                                                        |
| Redundancy.Mode                     | String | Redundancy mode of the specified power redundancy group: <ul style="list-style-type: none"> <li>● Sharing: load balancing mode.</li> <li>● Failover: active-standby mode.</li> </ul> |
| Actions                             | Object | Power operations.                                                                                                                                                                    |

| Field                            | Type   | Description                                                |
|----------------------------------|--------|------------------------------------------------------------|
| #Power.CollectHistoryData.target | String | Operation path for collecting historical power statistics. |

## 6.19 Querying Cooling Resource Information About a Specified Chassis

### Function

Query the temperature and fan sensor information about a specified Chassis.

### Permission Required

Query.

### Syntax

- Operation Type: GET
  - URL: [https://device\\_ip/redfish/v1/Chassis/Chassis\\_id/Thermal](https://device_ip/redfish/v1/Chassis/Chassis_id/Thermal)
  - Request Header:
- x-auth-token:auth\_value
- Request Message Body: None

### Parameters

For a description of the parameters for querying the temperature and fan sensor information about a specified Chassis, refer to [Table 6-36](#).

**Table 6-36 Parameter Descriptions for Querying the Temperature and Fan Sensor Resource Information About the Specified Chassis**

| Parameter  | Description                                                                           | Value                                                                                                  |
|------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                  |
| chassis_id | <a href="#">ID</a> of the Chassis resource.                                           | For a rack server, the value is 1 or Self.                                                             |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <a href="#">/redfish/v1/SessionService/Sessions</a> . |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/Thermal
```

- Request Header:

```
x-auth-token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Thermal.Thermal",
 "@odata.id": "/redfish/v1/chassis/1/Thermal",
 "@odata.type": "#Thermal.v1_5_3.Thermal",
 "Description": "Thermal sensor readings",
 "Oem": {
 "Public": {
 "FanSpeedAdjustmentMode": "Manual",
 "SpeedRatio": 24
 }
 },
 "FanSummary": {
 "Count": 4
 },
 "Fans": [
 {
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Fans/0",
 "MemberId": "0",
 "Name": "FAN_SPEED_01",
 "LowerThresholdCritical": 1000,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "UpperThresholdCritical": 16500,
 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null,
 "SerialNumber": "20150305",
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "Oem": {
 "Public": {
 "SlotNumber": 1,
 "FanName": "FAN1",
 "SpeedRatio": 24
 }
 }
 }
]
}
```

```
 "Reading": 3600,
 "ReadingUnits": "RPM",
 "MinReadingRange": 1000,
 "MaxReadingRange": 16500,
 "Model": "8038"
 },
 {
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Fans/1",
 "MemberId": "1",
 "Name": "FAN_SPEED_02",
 "LowerThresholdCritical": 1000,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "UpperThresholdCritical": 16500,
 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null,
 "SerialNumber": "20150305",
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "Oem": {
 "Public": {
 "SlotNumber": 2,
 "FanName": "FAN2",
 "SpeedRatio": 24
 }
 },
 "Reading": 3600,
 "ReadingUnits": "RPM",
 "MinReadingRange": 1000,
 "MaxReadingRange": 16500,
 "Model": "8038"
 },
 {
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Fans/2",
 "MemberId": "2",
 "Name": "FAN_SPEED_03",
 "LowerThresholdCritical": 1000,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "UpperThresholdCritical": 16500,
 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null,
```

```
 "SerialNumber": "20150305",
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "Oem": {
 "Public": {
 "SlotNumber": 3,
 "FanName": "FAN3",
 "SpeedRatio": 24
 }
 },
 "Reading": 3600,
 "ReadingUnits": "RPM",
 "MinReadingRange": 1000,
 "MaxReadingRange": 16500,
 "Model": "8038"
 },
{
 "@odata.id": "/redfish/v1/Chassis/1/Thermal#/Fans/3",
 "MemberId": "3",
 "Name": "FAN_SPEED_04",
 "LowerThresholdCritical": 1000,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "UpperThresholdCritical": 16500,
 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null,
 "SerialNumber": "20150305",
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "Oem": {
 "Public": {
 "SlotNumber": 4,
 "FanName": "FAN4",
 "SpeedRatio": 24
 }
 },
 "Reading": 3600,
 "ReadingUnits": "RPM",
 "MinReadingRange": 1000,
 "MaxReadingRange": 16500,
```

```
 "Model": "8038"
 },
],
"Id": "Thermal",
"Name": "Thermal",
"Temperatures": [
{
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Temperatures/0",
 "LowerThresholdCritical": null,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "MinReadingRangeTemp": -128,
 "MaxReadingRangeTemp": 127,
 "MemberId": "0",
 "Name": "INPUT_TEMP",
 "PhysicalContext": "Intake",
 "ReadingCelsius": 30,
 "SensorNumber": 31,
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "UpperThresholdCritical": 50,
 "UpperThresholdFatal": 52,
 "UpperThresholdNonCritical": 45
},
{
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Temperatures/1",
 "LowerThresholdCritical": null,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "MinReadingRangeTemp": -128,
 "MaxReadingRangeTemp": 127,
 "MemberId": "1",
 "Name": "OUTPUT_TEMP",
 "PhysicalContext": "Intake",
 "ReadingCelsius": 39,
 "SensorNumber": 32,
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "UpperThresholdCritical": null,
 "UpperThresholdFatal": null,
```

```
 "UpperThresholdNonCritical": null
 },
 {
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Temperatures/2",
 "LowerThresholdCritical": null,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "MinReadingRangeTemp": -128,
 "MaxReadingRangeTemp": 127,
 "MemberId": "2",
 "Name": "CPU1_TEMP",
 "PhysicalContext": "Intake",
 "ReadingCelsius": 62,
 "SensorNumber": 40,
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "UpperThresholdCritical": 90,
 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null
 },
 {
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Temperatures/3",
 "LowerThresholdCritical": null,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "MinReadingRangeTemp": -128,
 "MaxReadingRangeTemp": 127,
 "MemberId": "3",
 "Name": "CPU2_TEMP",
 "PhysicalContext": "Intake",
 "ReadingCelsius": 59,
 "SensorNumber": 43,
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "UpperThresholdCritical": 90,
 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null
 }
]
```

- Status Code: 200

## Output Description

For a description of the output returned when you query the temperature and fan sensor resource information about the specified Chassis, refer to [Table 6-37](#).

**Table 6-37 Output Descriptions for Querying the Temperature and Fan Sensor Resource Information About the Specified Chassis**

| Field                                   | Type   | Description                                                                                                                                                                                                                        |
|-----------------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context                          | String | OData description of the cooling resource.                                                                                                                                                                                         |
| @odata.id                               | String | Access path of the cooling resource.                                                                                                                                                                                               |
| @odata.type                             | String | Type of cooling resource.                                                                                                                                                                                                          |
| Description                             | String | Description of the cooling resource.                                                                                                                                                                                               |
| Id                                      | String | ID of the cooling resource.                                                                                                                                                                                                        |
| Name                                    | String | Name of the cooling resource.                                                                                                                                                                                                      |
| Oem.Public.FanSpeedAdjustmentMode       | String | This field is displayed when <b>Oem.Public.FanSpeedAdjustmentMode</b> is set to <b>Automatic</b> . Fan speed adjustment mode, including: <ul style="list-style-type: none"> <li>● Automatic mode</li> <li>● Manual mode</li> </ul> |
| Oem.Public.FanSmartCooling-Mode         | String | Fan speed smart-adjustment mode, including: <ul style="list-style-type: none"> <li>● NormalMode: balance mode</li> <li>● LowNoiseMode: low noise mode</li> <li>● HighPerformanceMode: high-performance mode</li> </ul>             |
| Oem.Public.SpeedRatio                   | Number | Fan rotation speed ratio in percentage terms.                                                                                                                                                                                      |
| Temperatures.@odata.id                  | String | Access path of the specified temperature sensor.                                                                                                                                                                                   |
| Temperatures.LowerThreshold-Critical    | Number | Critical warning threshold for low speed rotation of the specified fan sensor.                                                                                                                                                     |
| Temperatures.LowerThreshold-Fatal       | Number | Fatal warning threshold for high speed rotation of the specified fan sensor.                                                                                                                                                       |
| Temperatures.LowerThreshold-NonCritical | Number | Noncritical warning threshold for low speed rotation of the specified fan sensor.                                                                                                                                                  |
| Temperatures.MemberId                   | String | ID of the specified temperature sensor.                                                                                                                                                                                            |
| Temperatures.Name                       | String | Name of the specified temperature sensor.                                                                                                                                                                                          |
| Temperatures.PhysicalContext            | String | Area or device to which the temperature measurement applies.                                                                                                                                                                       |

| <b>Field</b>                            | <b>Type</b> | <b>Description</b>                                                                |
|-----------------------------------------|-------------|-----------------------------------------------------------------------------------|
| Temperatures.ReadingCelsius             | Number      | Current reading of the specified temperature sensor.                              |
| Temperatures.SensorNumber               | String      | Serial number of the specified temperature sensor.                                |
| Temperatures.Status.State               | String      | Status of the specified temperature sensor.                                       |
| Temperatures.Status.Health              | String      | Health status of the specified temperature sensor.                                |
| Temperatures.UpperThreshold-Critical    | Number      | Critical warning threshold for high speed rotation of the specified fan sensor.   |
| Temperatures.UpperThreshold-Fatal       | Number      | Fatal warning threshold for high speed rotation of the specified fan sensor.      |
| Temperatures.UpperThreshold-NonCritical | Number      | Noncritical warning threshold for low speed rotation of the specified fan sensor. |
| Temperatures.MinReadingRange            | Number      | Minimum rotation speed reading for the specified fan sensor.                      |
| Temperatures.MaxReadingRange            | Number      | Maximum rotation speed reading for the specified fan sensor.                      |
| FanSummary.Count                        | Number      | Number of fan sensors.                                                            |
| Fans.Name                               | String      | Name of the specified fan sensor.                                                 |
| Fans.LowerThresholdCritical             | Number      | Critical alarm threshold for the low temperature of the specified fan sensor.     |
| Fans.LowerThresholdFatal                | Number      | Fatal alarm threshold for the low temperature of the specified fan sensor.        |
| Fans.LowerThresholdNonCritical          | Number      | Noncritical alarm threshold for the low temperature of the specified fan sensor.  |
| Fans.UpperThresholdCritical             | Number      | Critical alarm threshold for overtemperature of the specified fan sensor.         |
| Fans.UpperThresholdFatal                | Number      | Fatal alarm threshold for overtemperature of the specified fan sensor.            |
| Fans.UpperThresholdNonCritical          | Number      | Noncritical alarm threshold for overtemperature of the specified fan sensor.      |
| Fans.SerialNumber                       | Number      | Serial number of the specified fan sensor.                                        |
| Fans.Status.State                       | String      | Status of the specified fan sensor.                                               |
| Fans.Status.Health                      | String      | Health status of the specified fan sensor.                                        |
| Fans.Oem.Public.SlotNumber              | Number      | Slot number of the specified fan sensor.                                          |

| Field                      | Type   | Description                                                                                                                                                   |
|----------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fans.Oem.Public.FanName    | String | Name of the fan that the specified fan sensor belongs to.                                                                                                     |
| Fans.Oem.Public.SpeedRatio | Number | Current reading of the specified fan sensor, in percentage.                                                                                                   |
| Fans.Reading               | Number | Current reading of the specified fan sensor.                                                                                                                  |
| Fans.ReadingUnits          | String | Unit of the fan rotation speed reading for the fan sensor, including: <ul style="list-style-type: none"><li>● <a href="#">RPM</a></li><li>● Percent</li></ul> |
| Fans.MinReadingRange       | Number | Minimum rotation speed reading for the specified fan sensor.                                                                                                  |
| Fans.MaxReadingRange       | Number | Maximum rotation speed reading for the specified fan sensor.                                                                                                  |
| Fans.Model                 | String | Model of the specified fan sensor.                                                                                                                            |
| Fans.@odata.id             | String | Access path of the specified fan sensor.                                                                                                                      |

## 6.20 Querying Information About the Expansion Board Resource Collection

### Function

Query the information about the expansion board resource collection.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/Chassis/chassis_id/Boards`
- Request Header:

`x-auth-token:auth_value`

- Request Message Body: None

### Parameters

For a description of the parameters for querying the information about the expansion board resource collection, refer to [Table 6-38](#).

**Table 6-38 Parameter Descriptions for Querying Information About the Expansion Board Resource Collection**

| Parameter  | Description                                                                                                 | Value                                                                                 |
|------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                 |
| chassis_id | ID of the Chassis resource.                                                                                 | For a rack server, the value is 1 or Self.                                            |
| auth_value | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions. |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/Boards
```

- Request Header:

```
X-Auth-Token: 8574621db1284756218c7564821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#BoardInformation.BoardInformation",
 "@odata.id": "/redfish/v1/chassis/1/Boards",
 "@odata.type": "#BoardInformation.BoardInformation",
 "Description": "Board Information",
 "DiskBackplanes": {
 "@odata.id": "/redfish/v1/chassis/1/Boards/DiskBackplanes"
 },
 "RiserCard": {
 "@odata.id": "/redfish/v1/chassis/1/Boards/RiserCard"
 },
 "Id": "Boards",
 "Name": "Board Information"
}
```

- Status Code: 200

### Output Description

For a description of the output returned when you query the information about the expansion board resource collection, refer to [Table 6-39](#).

**Table 6-39 Output Descriptions for Querying Information About the Expansion Board Resource Collection**

| Field          | Type   | Description                                                          |
|----------------|--------|----------------------------------------------------------------------|
| @odata.context | String | OData description of the expansion board resource collection module. |
| @odata.id      | String | Access path of the expansion board resource collection.              |
| @odata.type    | String | Type of expansion board resource collection.                         |
| Description    | String | Description of the expansion board resource collection.              |
| DiskBackplanes | Object | Information about hard disk backplanes.                              |
| Risercard      | Object | Riser card collection information.                                   |
| Id             | String | ID of the expansion board resource collection.                       |
| @odata.id      | String | Access path of the riser card.                                       |
| Name           | String | Board name.                                                          |

## 6.21 Querying Information About the Hard Disk Backplane Resource Collection

### Function

Query the information about the hard disk backplane resource collection of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Chassis/Chassis_id/Boards/DiskBackplanes`
- Request Header:

`x-auth-token:auth_value`

- Request Message Body: None

### Parameters

For a description of the parameters for querying the information about the hard disk backplane resource collection, refer to [Table 6-40](#).

**Table 6-40 Parameter Descriptions for Querying Information About the Hard Disk Backplane Resource Collection**

| Parameter  | Description                                                                                                 | Value                                                                                 |
|------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                 |
| chassis_id | ID of the Chassis resource.                                                                                 | For a rack server, the value is 1 or Self.                                            |
| auth_value | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions. |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/Boards/DiskBackplanes
```

- Request Header:

```
x-auth-token:LXlrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#DiskBackplanesCollection.DiskBackplanesCollection",
 "@odata.id": "/redfish/v1/chassis/1/Boards/DiskBackplanes",
 "@odata.type": "#DiskBackplanesCollection.DiskBackplanesCollection",
 "Description": "DiskBackplanes Collection",
 "Name": "DiskBackplanes Collection",
 "Members": [
 {
 "@odata.id": "/redfish/v1/chassis/1/Boards/DiskBackplanes/DiskBackplanes10"
 },
 {
 "@odata.id": "/redfish/v1/chassis/1/Boards/DiskBackplanes/DiskBackplanes11"
 }
],
 "Members@odata.count": 2
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query the hard disk backplane resource collection, refer to [Table 6-41](#).

**Table 6-41 Output Descriptions for Querying Information About the Hard Disk Backplane Resource Collection**

| Field               | Type             | Description                                                             |
|---------------------|------------------|-------------------------------------------------------------------------|
| @odata.context      | Character string | OData description of the hard disk backplane resource collection model. |
| @odata.id           | Character string | Access path of the hard disk backplane resource collection.             |
| @odata.type         | Character string | Type of hard disk backplane resource collection.                        |
| Description         | String           | Description of the hard disk backplane resource collection.             |
| Name                | Character string | Name of the hard disk backplane resource collection.                    |
| Members@odata.count | Number           | Current number of hard disk backplane resources.                        |
| Members             | Array            | Hard disk backplane resources list.                                     |
| @odata.id           | Character string | Access path of a hard disk backplane resource node.                     |

## 6.22 Querying Information About a Specified Hard Disk Backplane Resource

### Function

Query information about a specified hard disk backplane resource of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Chassis/Chassis_id/Boards/DiskBackplanes/DiskBackplaneId`
- Request Header:
 

`x-auth-token:auth_value`
- Request Message Body: None

## Parameters

For a description of the parameters for querying the information about the specified hard disk backplane resource, refer to [Table 6-42](#).

**Table 6-42 Parameter Descriptions for Querying Information About the Specified Hard Disk Backplane Resource**

| Parameter       | Description                                                                                                 | Value                                                                                               |
|-----------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip       | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                               |
| chassis_id      | ID of the Chassis resource.                                                                                 | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value      | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| DiskBackplaneld | ID of the specified hard disk backplane.                                                                    | Obtained from the information about the slot of the hard disk backplane.                            |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/Boards/DiskBackplanes/DiskBackplane8
```

- Request Header:

```
x-auth-token:LXIrQPHHOPTz6k4rrPB/UfABUD45p9PFIC8QG2lp2F0=
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#DiskBackplane.DiskBackplane",
 "@odata.id": "/redfish/v1/Chassis/1/Boards/DiskBackplanes/DiskBackplane8",
 "@odata.type": "#DiskBackplane.v1_0_0.DiskBackplane",
 "Name": "SBF24MB",
 "CPLDVersion": null,
 "MaxDiskCountSupported": 24,
 "PartNumber": "19020100",
 "Location": "Front",
 "Manufacturer": "VANTAGEO",
 "PortCount": "SLIMSAS*2 + SLIMLINE*4",
 "SerialNumber": null,
 "Type": "3.5 SAS/SATA*24, U.2*8, Expander",
```

```

 "onlineDiskCount": 0,
 "ID": 10,
 "PcbID": 1
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query the information about the specified hard disk backplane resource, refer to [Table 6-43](#).

**Table 6-43 Output Descriptions for Querying Information About the Specified Hard Disk Backplane Resource**

| Field                 | Type   | Description                                                                  |
|-----------------------|--------|------------------------------------------------------------------------------|
| @odata.context        | String | OData description of the hard disk backplane resource collection model.      |
| @odata.id             | String | Access path of the hard disk backplane resource collection.                  |
| @odata.type           | String | Type of hard disk backplane resource collection.                             |
| Name                  | String | Name of the hard disk backplane resource collection.                         |
| CPLDVersion           | String | <a href="#">CPLD</a> version of the specified hard disk backplane.           |
| MaxDiskCountSupported | Number | Maximum number of hard disks supported by the specified hard disk backplane. |
| PartNumber            | String | Part number of the specified hard disk backplane.                            |
| Location              | String | Location of the specified hard disk backplane.                               |
| Manufacturer          | String | Manufacturer of the specified hard disk backplane.                           |
| PortCount             | String | Number of ports supported by the specified hard disk backplane.              |
| SerialNumber          | String | Serial number of the specified hard disk backplane.                          |
| Type                  | String | Type of the specified hard disk backplane.                                   |
| OnlineDiskCount       | Number | Number of present hard disks supported by the specified hard disk backplane. |
| ID                    | Number | Serial number of the specified hard disk backplane.                          |
| PcbID                 | Number | <a href="#">PCB</a> ID of the specified hard disk backplane.                 |

## 6.23 Querying Information About the Riser Card Resource Collection

### Function

Query information about the Riser card resource collection of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Chassis/Chassis_id/Boards/Riser-card`
- Request Header:
 

`x-auth-token:auth_value`
- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the Riser card resource collection, refer to [Table 6-44](#).

**Table 6-44 Parameter Descriptions for Querying Information About the Riser Card Resource Collection**

| Parameter  | Description                                                                                                 | Value                                                                                               |
|------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                               |
| chassis_id | ID of the Chassis resource.                                                                                 | For a rack server, the value is 1 or Self.                                                          |
| auth_value | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:

`GET https://device_ip/redfish/v1/Chassis/1/Boards/Risercard`

- Request Header:

```
x-auth-token:LXIrqPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#RisercardCollection.RisercardCollection",
 "@odata.id": "/redfish/v1/chassis/1/Boards/Risercard",
 "@odata.type": "#RisercardCollection.RisercardCollection",
 "Description": "Risercard Collection",
 "Name": "Risercard Collection",
 "Members": [
 {
 "@odata.id": "/redfish/v1/chassis/1/Boards/Risercard/Risercard6"
 }
],
 "Members@odata.count": 1
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the riser card resource collection, refer to [Table 6-45](#).

**Table 6-45 Output Descriptions for Querying Information About the Riser Card Resource Collection**

| Field               | Type             | Description                                                    |
|---------------------|------------------|----------------------------------------------------------------|
| @odata.context      | Character string | OData description of the riser card resource collection model. |
| @odata.id           | Character string | Access path of the riser card resource collection.             |
| @odata.type         | Character string | Type of riser card resource collection.                        |
| Description         | Character string | Description of the riser card resource collection.             |
| Name                | Character string | Name of the riser card resource collection.                    |
| Members@odata.count | Number           | Current number of riser card resources.                        |
| Members             | Object array     | Riser card resource list.                                      |
| @odata.id           | Character string | Access path of a riser card resource node.                     |

## 6.24 Querying Information About a Specified Riser Card Resource

### Function

Query the information about a specified riser card resource of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/Chassis/Chassis\\_id/Boards/Riser-card/RisercardId](https://device_ip/redfish/v1/Chassis/Chassis_id/Boards/Riser-card/RisercardId)
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body: None

### Parameters

For a description of the parameters for querying the information about the specified riser card resource, refer to [Table 6-46](#).

**Table 6-46 Parameter Descriptions for Querying Information About the Specified Riser Card Resource**

| Parameter   | Description                                                                                                 | Value                                                                                 |
|-------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                 |
| chassis_id  | ID of the Chassis resource.                                                                                 | For a rack server, the value is 1 or Self.                                            |
| auth_value  | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions. |
| RisercardId | ID of the specified riser card.                                                                             | Obtained from the information about the slot of the riser card.                       |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/Boards/Risercard/Risercard6
```

- Request Header:

```
x-auth-token:LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Risercard.Risercard",
 "@odata.id": "/redfish/v1/Chassis/1/Boards/Risercard/Risercard6",
 "@odata.type": "#Risercard.v1_0_0.Risercard",
 "Manufacturer": "VANTAGEO",
 "Name": "Risercard6",
 "PartNumber": "",
 "SerialNumber": "208540654320"
}
```

- Status Code: 200

### Output Description

For a description of the output returned when you query the information about the specified riser card resource, refer to [Table 6-47](#).

**Table 6-47 Output Descriptions for Querying Information About the Specified Riser Card Resource**

| Field          | Type   | Description                                             |
|----------------|--------|---------------------------------------------------------|
| @odata.context | String | OData description of the specified riser card resource. |
| @odata.id      | String | Access path of the specified riser card resource.       |
| @odata.type    | String | Type of the specified riser card resource.              |
| Manufacturer   | String | Manufacturer of the specified riser card.               |
| Name           | String | Name of the specified riser card resource.              |
| PartNumber     | String | Part number of the specified riser card resource.       |
| SerialNumber   | String | Serial number of the specified riser card resource.     |

## 6.25 Modifying the Cooling Resource Information About a Specified Chassis

### Function

Modify the cooling resource information about a specified chassis of a server.

## Permission Required

Basic management.

## Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/Chassis/Chassis\\_id/Thermal](https://device_ip/redfish/v1/Chassis/Chassis_id/Thermal)
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "Oem": {
 "Public": {
 "FanSpeedAdjustmentMode": fan_speed_adjustment_mode_value,
 "FanSmartCoolingMode": smart_cool_mode_value,
 "SpeedRatio": speed_ratio_value
 }
 }
}
```

## Parameters

For a description of the parameters for modifying the cooling information about the specified chassis, refer to [Table 6-48](#).

**Table 6-48 Parameter Descriptions for Modifying the Cooling Resource Information About a Specified Chassis**

| Parameter                       | Description                                                                             | Value                                                                                                                  |
|---------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| device_ip                       | IP address for logging in to the device.                                                | IPv4 or IPv6 address.                                                                                                  |
| chassis_id                      | ID of the chassis resource.                                                             | For a rack server, the value is 1 or Self.                                                                             |
| auth_value                      | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions.                                  |
| header_type                     | Format of the request message.                                                          | application/json                                                                                                       |
| fan_speed_adjustment_mode_value | Fan speed adjustment mode.                                                              | <ul style="list-style-type: none"> <li>• Automatic</li> <li>• Manual</li> </ul>                                        |
| smart_cool_mode_value           | Smart fan speed adjustment mode.                                                        | <ul style="list-style-type: none"> <li>• NormalMode: balance mode.</li> <li>• LowNoiseMode: low noise mode.</li> </ul> |

| Parameter         | Description                                                                                                | Value                                                                                           |
|-------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
|                   | This parameter is required when <b>mod-el_value</b> is set to <b>Automatic</b> .                           | <ul style="list-style-type: none"> <li>● HighPerformanceMode: high performance mode.</li> </ul> |
| speed_ratio_value | Fan rotation speed ratio.<br>This parameter is required when <b>mod-el_value</b> is set to <b>Manual</b> . | 10~100                                                                                          |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Chassis/1/Thermal
```

- Request Header:

```
X-Auth-Token: LXIrQPHHOPTz6k4rrPB/UfABUd45p9PFIC8QG2lp2F0=
Content-Type: application/json
```

- Request Message Body:

```
{
 "Oem": {
 "Public": {
 "FanSpeedAdjustmentMode": "Manual",
 "SpeedRatio": 50
 }
 }
}
```

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Thermal.Thermal",
 "@odata.id": "/redfish/v1/chassis/1/Thermal",
 "@odata.type": "#Thermal.v1_5_3.Thermal",
 "Description": "Thermal sensor readings",
 "Oem": {
 "Public": {
 "FanSpeedAdjustmentMode": "Manual",
 "SpeedRatio": 50
 }
 },
 "FanSummary": {
```

```
 "Count": 4
},
"Fans": [
{
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Fans/0",
 "MemberId": "0",
 "Name": "FAN_SPEED_01",
 "LowerThresholdCritical": 1000,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "UpperThresholdCritical": 16500,
 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null,
 "SerialNumber": "20150305",
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "Oem": {
 "public": {
 "SlotNumber": 1,
 "FanName": "FAN1",
 "SpeedRatio": 50
 }
 },
 "Reading": 7500,
 "ReadingUnits": "RPM",
 "MinReadingRange": 1000,
 "MaxReadingRange": 16500,
 "Model": "8038"
},
{
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Fans/1",
 "MemberId": "1",
 "Name": "FAN_SPEED_02",
 "LowerThresholdCritical": 1000,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "UpperThresholdCritical": 16500,
 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null,
 "SerialNumber": "20150305",
 "Status": {
 "Health": "OK",
 }
}
```

```
 "State": "Enabled"
 },
 "Oem": {
 "Public": {
 "SlotNumber": 2,
 "FanName": "FAN2",
 "SpeedRatio": 50
 }
 },
 "Reading": 7500,
 "ReadingUnits": "RPM",
 "MinReadingRange": 1000,
 "MaxReadingRange": 16500,
 "Model": "8038"
},
{
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Fans/2",
 "MemberId": "2",
 "Name": "FAN_SPEED_03",
 "LowerThresholdCritical": 1000,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "UpperThresholdCritical": 16500,
 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null,
 "serialNumber": "20150305",
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "Oem": {
 "Public": {
 "SlotNumber": 3,
 "FanName": "FAN3",
 "SpeedRatio": 50
 }
 },
 "Reading": 7500,
 "ReadingUnits": "RPM",
 "MinReadingRange": 1000,
 "MaxReadingRange": 16500,
 "Model": "8038"
},
{
```

```
 "@odata.id": "/redfish/v1/Chassis/1/Thermal#/Fans/3",
 "MemberId": "3",
 "Name": "FAN_SPEED_04",
 "LowerThresholdCritical": 1000,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "UpperThresholdCritical": 16500,
 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null,
 "SerialNumber": "20150305",
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "Oem": {
 "Public": {
 "SlotNumber": 4,
 "FanName": "FAN4",
 "SpeedRatio": 50
 }
 },
 "Reading": 7500,
 "ReadingUnits": "RPM",
 "MinReadingRange": 1000,
 "MaxReadingRange": 16500,
 "Model": "8038"
},
],
{
 "Id": "Thermal",
 "Name": "Thermal",
 "Temperatures": [
 {
 "@odata.id": "/redfish/v1/Chassis/1/Thermal#/Temperatures/0",
 "LowerThresholdCritical": null,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "MinReadingRangeTemp": -128,
 "MaxReadingRangeTemp": 127,
 "MemberId": "0",
 "Name": "INPUT_TEMP",
 "PhysicalContext": "Intake",
 "ReadingCelsius": 30,
 "SensorNumber": 31,
 "Status": {

```

```
 "Health": "OK",
 "State": "Enabled"
 },
 "UpperThresholdCritical": 50,
 "UpperThresholdFatal": 52,
 "UpperThresholdNonCritical": 45
},
{
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Temperatures/1",
 "LowerThresholdCritical": null,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "MinReadingRangeTemp": -128,
 "MaxReadingRangeTemp": 127,
 "MemberId": "1",
 "Name": "OUTPUT_TEMP",
 "PhysicalContext": "Intake",
 "ReadingCelsius": 39,
 "SensorNumber": 32,
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "UpperThresholdCritical": null,
 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null
},
{
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Temperatures/2",
 "LowerThresholdCritical": null,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "MinReadingRangeTemp": -128,
 "MaxReadingRangeTemp": 127,
 "MemberId": "2",
 "Name": "CPU1_TEMP",
 "PhysicalContext": "Intake",
 "ReadingCelsius": 66,
 "SensorNumber": 40,
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "UpperThresholdCritical": 90,
```

```

 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null
 },
 {
 "@odata.id": "/redfish/v1/chassis/1/Thermal#/Temperatures/3",
 "LowerThresholdCritical": null,
 "LowerThresholdFatal": null,
 "LowerThresholdNonCritical": null,
 "MinReadingRangeTemp": -128,
 "MaxReadingRangeTemp": 127,
 "MemberId": "3",
 "Name": "CPU2_TEMP",
 "PhysicalContext": "Intake",
 "ReadingCelsius": 64,
 "SensorNumber": 43,
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "UpperThresholdCritical": 90,
 "UpperThresholdFatal": null,
 "UpperThresholdNonCritical": null
 }
]
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you modify the cooling information about the specified chassis, refer to [Table 6-49](#).

**Table 6-49 Output Descriptions for Modifying the Cooling Information About the Specified Chassis**

| Field          | Type   | Description                                |
|----------------|--------|--------------------------------------------|
| @odata.context | String | OData description of the cooling resource. |
| @odata.id      | String | Access path of the cooling resource.       |
| @odata.type    | String | Type of cooling resource.                  |
| Description    | String | Description of the cooling resource.       |
| Id             | String | ID of the cooling resource.                |
| Name           | String | Name of the cooling resource.              |

| Field                                   | Type   | Description                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oem.Public.FanSpeedAdjustmentMode       | String | Fan speed adjustment mode, including: <ul style="list-style-type: none"><li>● Automatic</li><li>● Manual</li></ul>                                                                                                                                                                                                       |
| Oem.Public.FanSmartCoolingMode          | String | This field is displayed when <b>Oem.Public.FanSpeedAdjustmentMode</b> is set to <b>Automatic</b> .<br>Smart fan speed adjustment mode, including: <ul style="list-style-type: none"><li>● NormalMode: balance mode</li><li>● LowNoiseMode: low noise mode</li><li>● HighPerformanceMode: high-performance mode</li></ul> |
| Oem.Public.SpeedRatio                   | Number | Fan rotation speed ratio.                                                                                                                                                                                                                                                                                                |
| Temperatures.@odata.id                  | String | Access path of the specified temperature sensor.                                                                                                                                                                                                                                                                         |
| Temperatures.LowerThreshold-Critical    | Number | Critical alarm threshold for the low rotation speed of the specified fan sensor.                                                                                                                                                                                                                                         |
| Temperatures.LowerThreshold-Fatal       | Number | Fatal alarm threshold for the high rotation speed of the specified fan sensor.                                                                                                                                                                                                                                           |
| Temperatures.LowerThreshold-NonCritical | Number | Noncritical alarm threshold for the low rotation speed of the specified fan sensor.                                                                                                                                                                                                                                      |
| Temperatures.MemberId                   | String | ID of the specified temperature sensor.                                                                                                                                                                                                                                                                                  |
| Temperatures.Name                       | String | Name of the specified temperature sensor.                                                                                                                                                                                                                                                                                |
| Temperatures.PhysicalContext            | String | Area or device to which the temperature measurement applies.                                                                                                                                                                                                                                                             |
| Temperatures.ReadingCelsius             | Number | Current reading of the specified temperature sensor.                                                                                                                                                                                                                                                                     |
| Temperatures.SensorNumber               | String | Serial number of the specified temperature sensor.                                                                                                                                                                                                                                                                       |
| Temperatures.Status.State               | String | Status of the specified temperature sensor.                                                                                                                                                                                                                                                                              |
| Temperatures.Status.Health              | String | Health status of the specified temperature sensor.                                                                                                                                                                                                                                                                       |
| Temperatures.UpperThreshold-Critical    | Number | Critical alarm threshold for overtemperature of the specified temperature sensor.                                                                                                                                                                                                                                        |
| Temperatures.UpperThreshold-Fatal       | Number | Fatal alarm threshold for overtemperature of the specified temperature sensor.                                                                                                                                                                                                                                           |
| Temperatures.UpperThreshold-NonCritical | Number | Noncritical alarm threshold for overtemperature of the specified temperature sensor.                                                                                                                                                                                                                                     |
| Temperatures.MinReadingTemp             | Number | Minimum temperature reading for the specified temperature sensor.                                                                                                                                                                                                                                                        |

| Field                          | Type   | Description                                                                                                                               |
|--------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Temperatures.MaxReadingTemp    | Number | Maximum temperature reading for the specified temperature sensor.                                                                         |
| FanSummary.Count               | Number | Number of present fans.                                                                                                                   |
| Fans.MemberId                  | String | ID of the specified fan sensor.                                                                                                           |
| Fans.Name                      | String | Name of the specified fan sensor.                                                                                                         |
| Fans.LowerThresholdCritical    | Number | Critical alarm threshold for the low temperature of the specified fan sensor.                                                             |
| Fans.LowerThresholdFatal       | Number | Fatal alarm threshold for the low temperature of the specified fan sensor.                                                                |
| Fans.LowerThresholdNonCritical | Number | Noncritical alarm threshold for the low temperature of the specified fan sensor.                                                          |
| Fans.UpperThresholdCritical    | Number | Critical alarm threshold for overtemperature of the specified fan sensor.                                                                 |
| Fans.UpperThresholdFatal       | Number | Fatal alarm threshold for overtemperature of the specified fan sensor.                                                                    |
| Fans.UpperThresholdNonCritical | Number | Noncritical alarm threshold for overtemperature of the specified fan sensor.                                                              |
| Fans.SerialNumber              | Number | Serial number of the specified fan sensor.                                                                                                |
| Fans.Status.State              | String | Status of the specified fan sensor.                                                                                                       |
| Fans.Status.Health             | String | Health status of the specified fan sensor.                                                                                                |
| Fans.Oem.Public.SlotNumber     | Number | Slot number of the specified fan sensor.                                                                                                  |
| Fans.Oem.Public.FanName        | String | Name of the fan that the specified fan sensor belongs to.                                                                                 |
| Fans.Oem.Public.SpeedRatio     | Number | Current reading of the specified fan sensor, in percentage.                                                                               |
| Fans.Reading                   | Number | Current reading of the specified fan sensor.                                                                                              |
| Fans.ReadingUnits              | String | Unit of the fan rotation speed read by the fan sensor, including: <ul style="list-style-type: none"><li>● RPM</li><li>● Percent</li></ul> |
| Fans.MinReadingRange           | Number | Minimum rotation speed reading for the specified fan sensor.                                                                              |
| Fans.MaxReadingRange           | Number | Maximum rotation speed reading for the specified fan sensor.                                                                              |

| Field          | Type   | Description                              |
|----------------|--------|------------------------------------------|
| Fans.Model     | String | Model of the specified fan sensor.       |
| Fans.@odata.id | String | Access path of the specified fan sensor. |

## 6.26 Querying Information About a Specified PCIe Device Function Resource

### Function

Query information about a specified PCIe device function resource of a server.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Chassis/chassis_id/PCIeDevices/pciedevices_id/Functions/functions_id`
- Request Header:
 

`x-auth-token:auth_value`
- Request Message Body: None

### Parameters

For a description of the parameters for querying the information about the specified PCIe device function resource, refer to [Table 6-50](#).

**Table 6-50 Parameter Descriptions for Querying Information About the Specified PCIe Device Function Resource**

| Parameter      | Description                                                                                                 | Value                                                                                               |
|----------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip      | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                               |
| chassis_id     | ID of the Chassis resource.                                                                                 | For a rack server, the value is 1 or Self.                                                          |
| auth_value     | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| pciedevices_id | ID of the specified PCIe device resource.                                                                   | This parameter can be queried through the specified resource set.                                   |
| functions_id   | ID of the PCIe device function resource.                                                                    | This parameter can be queried through the specified resource set.                                   |

### Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/PCIeDevices/PCIeCard64/Functions/1
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#PCIeFunction.PCIeFunction",
 "@odata.id": "/redfish/v1/Chassis/1/PCIeDevices/PCIeCard64/Functions/1",
 "@odata.type": "##PCIeFunction.v1_2_3.PCIeFunction",
 "DeviceClass": "NetworkController",
 "DeviceId": "0x1017",
 "Id": "1",
 "Links": {
 "PCIeDevice": [
 {
 "@odata.id": "/redfish/v1/Chassis/1/PCIeDevices/PCIeCard64"
 }
]
 },
 "Name": "Function1",
 "Oem": {
 "Public": {
 "AssociatedResource": "CPU1",
 "BusNumber": "0xb8",
 "DeviceNumber": "0x00",
 "FunctionNumber": "0x00"
 }
 },
 "SubsystemId": "0x0052",
 "SubsystemVendorId": "0x15b3",
 "VendorId": "0x15b3",
 "@odata.etag": "W/\\"1ae394128c6b9056e8d6da3cde35c220\\\""
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query the information about the specified PCIe device function resource, refer to [Table 6-51](#).

**Table 6-51 Output Descriptions for Querying Information About the Specified PCIe Device Function Resource**

| Field          | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context | String | OData description of the specified PCIe device function resource.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| @odata.id      | String | Access path of the specified PCIe device function resource.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| @odata.type    | String | Type of the specified PCIe device function resource.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| DeviceClass    | String | Class of the specified PCIe device function resource, including: <ul style="list-style-type: none"><li>● UnclassifiedDevice</li><li>● MassStorageController</li><li>● NetworkController</li><li>● DisplayController</li><li>● MultimediaController</li><li>● MemoryController</li><li>● Bridge</li><li>● CommunicationController</li><li>● GenericSystemPeripheral</li><li>● InputDeviceController</li><li>● DockingStation</li><li>● Processor</li><li>● SerialBusController</li><li>● WirelessController</li><li>● IntelligentController</li><li>● SatelliteCommunicationsController</li><li>● EncryptionController</li><li>● SignalProcessingController</li><li>● ProcessingAccelerators</li><li>● NonEssentialInstrumentation</li><li>● Coprocessor</li><li>● UnassignedClass</li><li>● Other</li></ul> |
| DeviceId       | String | DID of the specified PCIe device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Id             | String | UID of the specified PCIe device function resource in the <a href="#">iBMC</a> system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| Field              | Type   | Description                                                         |
|--------------------|--------|---------------------------------------------------------------------|
| Links              | Object | Links to the related resources.                                     |
| PCIeDevice         | Array  | PCIe device resource list.                                          |
| Name               | String | Name of the specified PCIe device function resource.                |
| Oem                | Object | Customized properties.                                              |
| Public             | Object | Customized properties.                                              |
| AssociatedResource | String | Associated resource of the specified PCIe device function resource. |
| BusNumber          | String | Bus number of the specified PCIe device root port.                  |
| DeviceNumber       | String | Device number of the specified PCIe device root port.               |
| FunctionNumber     | String | Function number of the specified PCIe device root port.             |
| SubsystemId        | String | SDID of the specified PCIe device root port.                        |
| SubsystemVendorId  | String | SVID of the specified PCIe device root port.                        |
| VendorId           | String | <a href="#">VID</a> of the specified PCIe device root port.         |

## 6.27 Querying Information About the Collection of Leak Detection Device Resources

### Function

Query information about the collection of leak detection device resources of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL:** `https://device_ip/redfish/v1/Chassis/chassis_id/ThermalSubsystem/LeakDetection`
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

## Description

For a description of the parameters for querying information about the collection of leak detection device resources, refer to [Table 6-52](#).

**Table 6-52 Parameter Descriptions for Querying the Information About the Collection of Leak Detection Device Resources**

| Parameter  | Setting                                                                                | Value                                                                                               |
|------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                               |
| chassis_id | ID of the chassis resource.                                                            | For a rack server, the value is 1 or Self.                                                          |
| auth_value | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/ThermalSubsystem/LeakDetection
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Chassis/LeakDetection.LeakDetection",
 "@odata.id": "/redfish/v1/Chassis/1/ThermalSubsystem/LeakDetection",
 "@odata.type": "#LeakDetection.v1_0_0.LeakDetection",
 "Id": "LeakDetection",
 "Name": "LeakDetection",
 "LeakDetectors": {
 "@odata.id": "/redfish/v1/Chassis/1/ThermalSubsystem/LeakDetection/LeakDetectors"
 }
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the collection of leak detection device resources, refer to [Table 6-53](#).

**Table 6-53 Output Descriptions for Querying Information About Leak Detection Device Resources**

| Field          | Type   | Description                                                                          |
|----------------|--------|--------------------------------------------------------------------------------------|
| @odata.context | String | OData description of the model of the collection of leak detection device resources. |
| @odata.id      | String | Access path of the collection of leak detection device resources.                    |
| @odata.type    | String | Type of collection of leak detection device resources.                               |
| Id             | String | ID of the collection of leak detection device resources.                             |
| Name           | String | Name of the collection of leak detection device resources.                           |
| LeakDetectors  | Object | Collection of leak detectors.                                                        |
| @odata.id      | String | Access path of the leak detector resource node.                                      |

## 6.28 Querying Information About the Leak Detector Resource Collection

### Function

Query the information about the leak detector resource collection.

### Permission Required

This example shows how to query modules.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/Chassis/chassis_id/ThermalSubsystem/LeakDetection/LeakDetectors`
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

## Description

For a description of the parameters for querying information about the leak detector resource collection, refer to [Table 6-54](#).

**Table 6-54 Parameter Descriptions for Querying Information About the Leak Detector Resource Collection**

| Parameter  | Setting                                                                                | Value                                                                                 |
|------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                 |
| chassis_id | ID of the chassis resource.                                                            | For a rack server, the value is 1 or Self.                                            |
| auth_value | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions. |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/ThermalSubsystem/LeakDetection/LeakDetectors
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context":
 "/redfish/v1/$metadata#LeakDetectorCollection.LeakDetectorCollection",
 "@odata.id": "/redfish/v1/Chassis/1/ThermalSubsystem/LeakDetection/LeakDetectors",
 "@odata.type": "#LeakDetectorCollection.LeakDetectorCollection",
 "Name": "Leak Detector Collection",
 "Members@odata.count": 2,
 "Members": [
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/ThermalSubsystem/LeakDetection/LeakDetectors/1"
 },
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/ThermalSubsystem/LeakDetection/LeakDetectors/2"
 }
]
}
```

```

 }
]
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the leak detector resource collection, refer to [Table 6-55](#).

**Table 6-55 Output Descriptions for Querying Information About the Leak Detector Resource Collection**

| Field               | Type   | Description                                              |
|---------------------|--------|----------------------------------------------------------|
| @odata.context      | String | OData description of the leak detector collection model. |
| @odata.id           | String | Access path of the leak detector resource collection.    |
| @odata.type         | String | Type of leak detector resource collection.               |
| Name                | String | Name of the leak detector resource collection.           |
| Members@odata.count | Number | Number of leak detector resources.                       |
| Members             | Array  | List of leak detector resources.                         |
| @odata.count        | String | Access path of a specified leak detector resource node.  |

## 6.29 Querying Information About a Specified Leak Detector

### Function

Query information about a specified detector of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/Chassis/chassis\\_id/ThermalSubsystem/LeakDetection/LeakDetectors/LeakDetector\\_id](https://device_ip/redfish/v1/Chassis/chassis_id/ThermalSubsystem/LeakDetection/LeakDetectors/LeakDetector_id)
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

## Description

For a description of the parameters for querying information about the specified detector, refer to [Table 6-56](#).

**Table 6-56 Parameter Descriptions for Querying Information About the Specified Detector**

| Parameter       | Setting                                                                                | Value                                                                                               |
|-----------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip       | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                               |
| chassis_id      | ID of the chassis resource.                                                            | For a rack server, the value is 1 or Self.                                                          |
| LeakDetector_id | ID of the leak detector.                                                               | ID of the leak detector.                                                                            |
| auth_value      | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/ThermalSubsystem/LeakDetection/LeakDetectors/1
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#LeakDetector.LeakDetector",
 "@odata.id": "/redfish/v1/Chassis/1/ThermalSubsystem/LeakDetection/LeakDetectors/1",
 "@odata.type": "#LeakDetector.v1_0_0.LeakDetector",
 "Id": "1",
 "Name": "Moisture-type Leak Detector",
 "DetectorState": "OK",
 "Status": {
 "State": "Enabled",
 "Health": "OK"
 }
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the specified leak detector, refer to [Table 6-57](#).

**Table 6-57 Output Descriptions for Querying Information About the Specified Leak Detector**

| Field          | Type   | Description                                                                                                                                                                                                                                                                                                                                          |
|----------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context | String | OData description of the specified leak detector model.                                                                                                                                                                                                                                                                                              |
| @odata.id      | String | Access path of the specified leak detector resource.                                                                                                                                                                                                                                                                                                 |
| @odata.type    | String | Type of the specified leak detector resource.                                                                                                                                                                                                                                                                                                        |
| Id             | String | Unique ID of the specified leakage detector resource.                                                                                                                                                                                                                                                                                                |
| Name           | String | Name of the specified leak detector resource.                                                                                                                                                                                                                                                                                                        |
| DetectorState  | String | Liquid leakage status of the liquid cooling server: <ul style="list-style-type: none"><li>● OK: indicates that is no leak.</li><li>● Warning: indicates tat there is a warning-level leak alarm, which needs to be given attention.</li><li>● Critical: indicates that there is a critical-level leak alarm, which needs immediate action.</li></ul> |
| Status         | Object | Status of the specified leakage sensor, including: <ul style="list-style-type: none"><li>● State: whether the leakage sensor is enabled.</li><li>● Health: Health status of the leakage sensor:<ul style="list-style-type: none"><li>→ OK: indicates that is no leak.</li><li>→ Critical: indicates that there is a leak.</li></ul></li></ul>        |

## 6.30 Modifying Information About a Specified Drive Resource

### Function

Modify the indicator status of a specified drive resource.

### Permission Required

Basic management.

### Syntax

- Operation Type: PATCH
- **URL:** `https://device_ip/redfish/v1/Chassis/chassis_id/Drives/drive_id`
- Request Header:

|                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------|
| Content-Type: header_type<br>X-Auth-Token: auth_value                                                              |
| <ul style="list-style-type: none"> <li>● Request Message Body:</li> </ul> <pre>{     "IndicatorLED": state }</pre> |

## Description

For a description of the parameters for modifying information about the specified drive resource, refer to [Table 6-58](#).

**Table 6-58 Parameter Descriptions for Modifying Information About the Specified Drive Resource**

| Parameter   | Setting                                                                                 | Value                                                                                 |
|-------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                                | IPv4 or IPv6 address.                                                                 |
| chassis_id  | ID of the chassis resource.                                                             | For a rack server, the value is 1 or Self.                                            |
| auth_value  | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions. |
| header_type | Format of the request message.                                                          | application/json                                                                      |
| drives_id   | ID of the specified drive.                                                              | It can be obtained from the drive list managed by the current specified controller.   |
| state       | Indicator status of the specified drive resource.                                       | <ul style="list-style-type: none"> <li>Lit</li> <li>Blinking</li> <li>Off</li> </ul>  |

## Usage Guidelines

After configuration, you can view the result through *GET https://device\_ip/redfish/v1/Chassis/1/Drives/drives\_id*.

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/Chassis/1/Drives/drives_id
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: application/json
```

- Request Message Body:

```
{
 "IndicatorLED": "Lit"
}
```

- Response Example: None
- Status Code: 204

### Output Description

None

## 6.31 Querying Information About the Network Port Resource Collection of a Specified Network Adapter

### Function

Query information about the network port resource collection of a specified network adapter of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/Chassis/chassis\\_id/NetworkAdapters/networkadapters\\_id/NetworkPorts](https://device_ip/redfish/v1/Chassis/chassis_id/NetworkAdapters/networkadapters_id/NetworkPorts)
- Request Header:

```
X-Auth-Token: auth_value
```

- Request Message Body: None

### Description

For a description of the parameters for querying information about the network port resource collection of the specified network adapter, refer to [Table 6-59](#).

**Table 6-59 Parameter Descriptions for Querying Information About the Network Port Resource Collection of the Specified Network Adapter**

| Parameter  | Setting                                  | Value                                      |
|------------|------------------------------------------|--------------------------------------------|
| device_ip  | IP address for logging in to the device. | IPv4 or IPv6 address.                      |
| chassis_id | ID of the chassis resource.              | For a rack server, the value is 1 or Self. |

| Parameter          | Setting                                                                               | Value                                                                                               |
|--------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| auth_value         | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| networkadapters_id | ID of the specified network adapter resource.                                         | It can be obtained by querying the information about the network adapter resource collection.       |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/NetworkAdapters/mainboardOCPCard1/NetworkPorts
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#NetworkAdapter.NetworkAdapter",
 "@odata.id": "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard4/NetworkPorts",
 "@odata.type": "#NetworkPortCollection.NetworkPortCollection",
 "Description": "Collection of Ethernet Interfaces for this Manager",
 "Members": [
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard4/NetworkPorts/1"
 },
 {
 "@odata.id":
 "/redfish/v1/Chassis/1/NetworkAdapters/mainboardPCIeCard4/NetworkPorts/2"
 }
],
 "Members@odata.count": 2,
 "Name": "Ethernet Network Interface Collection"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the network port resource collection of the specified network adapter, refer to [Table 6-60](#).

**Table 6-60 Output Descriptions for Querying Information About the Network Port Resource Collection of the Specified Network Adapter**

| Field               | Type   | Description                                                                                 |
|---------------------|--------|---------------------------------------------------------------------------------------------|
| @odata.context      | String | OData description of the network port resource collection of the specified network adapter. |
| @odata.id           | String | Access path of the network port resource collection of the specified network adapter.       |
| @odata.type         | String | Type of the network port resource collection of the specified network adapter.              |
| Name                | String | Name of the network port resource collection of the specified network adapter.              |
| Description         | String | Description of the network port resource collection of the specified network adapter.       |
| Members             | Array  | Members of the network port resource collection of the specified network adapter.           |
| @odata.id           | String | Access path of a single network port resource.                                              |
| Members@odata.count | Number | Number of network port resources.                                                           |

## 6.32 Querying Historical Environmental Humidity Information About a Chassis

### Function

Query historical environmental humidity information about a specified chassis of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/Chassis/chassis\\_id/EnvironmentHistoryHumidity](https://device_ip/redfish/v1/Chassis/chassis_id/EnvironmentHistoryHumidity)
- Request Header:

- X-Auth-Token: auth\_value
- Request Message Body: None

## Description

For a description of the parameters for querying historical environmental humidity information about the specified chassis, refer to [Table 6-61](#).

**Table 6-61 Parameter Descriptions for Querying Historical Environmental Humidity Information About the Chassis**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| chassis_id | ID of the chassis resource.                                                           | For a rack server, the value is <b>1</b> or <b>Self</b> .                                           |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/Chassis/1/EnvironmentHistoryHumidity
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Chassis.Members/1/EnvironmentHistoryHumidity",
 "@odata.id": "/redfish/v1/Chassis/1/EnvironmentHistoryHumidity",
 "@odata.type": "#EnvironmentHistoryHumidity.v1_1_0.EnvironmentHistoryHumidity",
 "Id": "EnvironmentHistoryHumidity",
 "Name": "EnvironmentHistoryHumidity",
 "Description": "System History Humidity",
 "Data": [
 {
 "Time": "2024-08-09 15:38:33",
 "HumidityPercent": 75
 }
]
}
```

```

 },

{
 "Time": "2024-08-08 15:43:35",
 "HumidityPercent": 76
}
]
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query historical environmental humidity information about the chassis, refer to [Table 6-62](#).

**Table 6-62 Output Descriptions for Querying Historical Environmental Humidity Information About the Chassis**

| Field           | Type   | Description                                                                                   |
|-----------------|--------|-----------------------------------------------------------------------------------------------|
| @odata.context  | String | OData description of the environmental humidity information about the specified chassis.      |
| @odata.id       | String | Access path of the environmental humidity information about the specified chassis.            |
| @odata.type     | String | Type of historical environmental humidity information about the specified chassis.            |
| Id              | String | ID of the historical environmental humidity information about the specified chassis.          |
| Name            | String | Name of the historical environmental humidity information about the specified chassis.        |
| Description     | String | Description of the historical environmental humidity information about the specified chassis. |
| Data            | Array  | Data array of the historical environmental humidity information about the specified chassis.  |
| Time            | String | Humidity information collection time.                                                         |
| HumidityPercent | Number | Humidity value.                                                                               |

# Chapter 7

## Operations on SessionService Resources

---

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[Figure 7-1](#) shows the path requirements for the SessionService resources supported by VANTAGEO servers.

**Figure 7-1 SessionService Resource Path Requirements**



For a description of properties of SessionService resources and operations supported by the properties, refer to [Table 7-1](#).

**Table 7-1 Descriptions of SessionService Resources Properties**

| URL                        | Property       | Description                          | Operation |
|----------------------------|----------------|--------------------------------------|-----------|
| /redfish/v1/SessionService | Id             | ID of the SessionService resource.   | GET       |
|                            | Name           | Name of the SessionService resource. | GET       |
|                            | SessionTimeout | Session service timeout period.      | GET/PATCH |
|                            | Sessions       | Access path of the session list.     | GET       |

| URL                                            | Property            | Description                                                                     | Operation |
|------------------------------------------------|---------------------|---------------------------------------------------------------------------------|-----------|
| /redfish/v1/SessionService/Sessions            | Name                | Name of the session resource.                                                   | GET       |
|                                                | Members@odata.count | Number of session members.                                                      | GET       |
|                                                | Members             | Session resource list, which provides references for all session resource URLs. | GET       |
| /redfish/v1/SessionService/Sessions/session_id | -                   | Specified session resource.                                                     | DELETE    |
|                                                | Id                  | UID of the specified session resource.                                          | GET       |
|                                                | Name                | Name of the specified session.                                                  | GET       |
|                                                | UserName            | Account information about the specified session.                                | GET       |

## 6.33 Querying Information About the Session Service

### Function

Query information about the current session service of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: *https://device\_ip/redfish/v1/SessionService*
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the session service, refer to [Table 7-2](#).

**Table 7-2 Parameter Descriptions for Querying Information About the Session Service**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

**Usage Guidelines**

None

**Example**

- Request Example:

```
GET https://device_ip/redfish/v1/SessionService
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#SessionService.SessionService",
 "@odata.id": "/redfish/v1/SessionService",
 "@odata.type": "#SessionService.v1_1_3.SessionService",
 "Description": "Session Service",
 "Id": "SessionService",
 "Name": "Session Service",
 "ServiceEnabled": true,
 "SessionTimeout": 180,
 "Sessions": {
 "@odata.id": "/redfish/v1/SessionService/Sessions"
 },
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 }
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the session service, refer to [Table 7-3](#).

**Table 7-3 Output Descriptions for Querying Information About the Session Service**

| Field          | Type    | Description                                             |
|----------------|---------|---------------------------------------------------------|
| @odata.context | String  | OData description of the SessionService resource model. |
| @odata.id      | String  | Access path of the SessionService resource node.        |
| @odata.type    | String  | Type of SessionService resource.                        |
| Description    | String  | Description of the SessionService resource.             |
| Id             | String  | ID of the SessionService resource.                      |
| Name           | String  | Name of the SessionService resource.                    |
| ServiceEnabled | Boolean | Whether the SessionService resource is enabled.         |
| SessionTimeout | Number  | Redfish session timeout period.                         |
| Sessions       | Object  | Session list.                                           |
| @odata.id      | String  | Access path of the session list.                        |
| Status.Health  | String  | Health status of the SessionService resource.           |
| Status.State   | String  | Status of the SessionService resource.                  |

## 6.34 Modifying Information About the Session Service

### Function

Modify the timeout period of the current session service of a server.

### Permission Required

Basic management.

### Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/SessionService](https://device_ip/redfish/v1/SessionService)
- Request Header:
 

X-Auth-Token: auth\_value  
 Content-Type: header\_type
- Request Message Body:

```
{
 "SessionTimeout": time
}
```

## Parameters

For a description of the parameters for modifying information about the session service, refer to [Table 7-4](#).

**Table 7-4 Parameter Descriptions for Modifying Information About the Session Service**

| Parameter   | Description                                                                             | Value                                                                                               |
|-------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                                | IPv4 or IPv6 address.                                                                               |
| auth_value  | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| header_type | Format of the request message.                                                          | application/json                                                                                    |
| time        | Redfish session timeout period.                                                         | Integer, range: 30–86400, unit: seconds.                                                            |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/SessionService
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: application/json
```

- Request Message Body:

```
{
 "SessionTimeout": 300
}
```

- Response Example: None
- Status Code: 204

## Output Description

None

## 6.35Creating Information About a Session

### Function

Create a session.

### Permission Required

Basic management.

### Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/SessionService/Sessions`
- Request Header:

`Content-Type: header_type`

- Request Message Body:

```
{
 "UserName":name,
 "Password":password
}
```

### Parameters

For a description of the parameters for creating a session, refer to [Table 7-5](#).

**Table 7-5 Parameter Descriptions for Creating a Session**

| Parameter   | Description                              | Value                                                 |
|-------------|------------------------------------------|-------------------------------------------------------|
| device_ip   | IP address for logging in to the device. | <a href="#">IPv4</a> or <a href="#">IPv6</a> address. |
| header_type | Format of the request message.           | application/json                                      |
| name        | User for the new session.                | User of the <a href="#">BMC</a> system.               |
| password    | Password the user for the new session.   | Password of the user for the BMC system.              |

### Usage Guidelines

In the Redfish operations on the server, this POST operation is performed first. Because most follow-up operations need the "X-Auth-Token" value in "Headers" for authentication, the "X-Auth-Token" value can be obtained through this operation.

### Example

- Request Example:

`POST https://device_ip/redfish/v1/SessionService/Sessions`

- Request Header:

```
Content-Type: application/json
```

- Request Message Body:

```
{
 "UserName": "username",
 "Password": "password"
}
```

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#SessionService.Sessions",
 "@odata.id": "/redfish/v1/SessionService/Sessions/q1xUU91KqyADxiLlJcq9jdygxUZ",
 "@odata.type": "#Session.v1_1_0.Session",
 "Name": "User Session",
 "Id": "q1xUU91KqyADxiLlJcq9jdygxUZr0Hwe",
 "UserName": "Administrator"
}
```

- Response Header Example:

```
Location: /redfish/v1/SessionService/Sessions/1
X-Auth-Token: YzAhv2WCq5ZMDJUq7JJ3ELEpNF3eoOab
```

- Status Code: 201

## Output Description

For a description of the output returned when you create a session, refer to [Table 7-6](#).

**Table 7-6 Output Descriptions for Session Creation**

| Field          | Type   | Description                                                                                                    |
|----------------|--------|----------------------------------------------------------------------------------------------------------------|
| @odata.context | String | OData description of the newly created session resource model.                                                 |
| @odata.id      | String | Access path of the newly created session resource. The detailed information about the session can be obtained. |
| @odata.type    | String | Type of the newly created session resource.                                                                    |
| Id             | String | UID of the newly created session resource.                                                                     |
| Name           | String | Name of the newly created session.                                                                             |
| Description    | String | Description of the new session.                                                                                |
| UserName       | String | Account information about newly created session.                                                               |

## 6.36 Querying Information About the Session Resource Collection

### Function

Query information about the current session resource collection of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL:** `https://device_ip/redfish/v1/SessionService/Sessions`
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the session resource collection, refer to [Table 7-7](#).

**Table 7-7 Parameter Descriptions for Querying Information About the Session Resource Collection**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:

GET https://device\_ip/redfish/v1/SessionService/Sessions

- Request Header:

X-Auth-Token: 8574621d21b84756218c7456821c234

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#SessionCollection.SessionCollection",
 "@odata.id": "/redfish/v1/sessionService/sessions",
 "@odata.type": "#SessionCollection.SessionCollection",
 "Name": "Session Collection",
 "Members": [
 {
 "@odata.id":
 "/redfish/v1/sessionService/Sessions/izoEEcrx8c2u0zFefkA8pFD0XnSqDqaG"
 },
 {
 "@odata.id":
 "/redfish/v1/sessionService/Sessions/sf3I8CJsQrpwCumCR9niUTcpFVeaz2Wx"
 }
],
 "Members@odata.count": 2
}
```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the session resource collection, refer to [Table 7-8](#).

**Table 7-8 Output Descriptions for Querying Information About the Session Resource Collection**

| Field               | Type   | Description                                      |
|---------------------|--------|--------------------------------------------------|
| @odata.context      | String | OData description of the session resource model. |
| @odata.id           | String | Access path of the session resource node.        |
| @odata.type         | String | Type of session resource.                        |
| Name                | String | Name of the session resource.                    |
| Members@odata.count | Number | Number of session members.                       |
| Members             | Array  | Session list                                     |
| @odata.id           | String | Access path of a single session resource node.   |

## 6.37 Querying Information About a Specified Session Resource

### Function

Query information about a specified session resource.

## Permission Required

Query.

## Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/SessionService/Sessions/Session_id`
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

## Parameters

For a description of the parameters for querying information about the specified session resource, refer to [Table 7-9](#).

**Table 7-9 Parameter Descriptions for Querying Information About the Specified Session Resource**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| Session_id | ID of the specified session.                                                          | It can be obtained from the session resource collection.                                            |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

GET https://device\_ip/redfish/v1/SessionService/Sessions/57f5ff2105218ad2df694ab94cbeba90

- Request Header:

X-Auth-Token: 8574621d21b84756218c7456821c234

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Session.Session",
 "SessionId": "57f5ff2105218ad2df694ab94cbeba90",
 "SessionType": "User"
}
```

```

"@odata.id":

 "/redfish/v1/SessionService/Sessions/izoEEcrx8c2u0zFefkA8pFD0XnSqdqag",

 "@odata.type": "#Session.v1_1_0.Session",

 "Description": "Session for user Administrator",

 "UserName": "Administrator",

 "Name": "Session",

 "Id": "izoEEcrx8c2u0zFefkA8pFD0XnSqdqag"

}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query information about the specified session resource, refer to [Table 7-10](#).

**Table 7-10 Output Descriptions for Querying Information About the Specified Session Resource**

| Field          | Type   | Description                                                |
|----------------|--------|------------------------------------------------------------|
| @odata.context | String | OData description of the specified session resource model. |
| @odata.id      | String | Access path of the specified session resource node.        |
| @odata.type    | String | Type of the specified session resource.                    |
| Description    | String | Description of the specified session resource.             |
| Id             | String | <a href="#">UID</a> of the specified session resource.     |
| Name           | String | Name of the session resource.                              |
| UserName       | String | Username for the specified session.                        |

## 6.38 Deleting Information About a Specified Session Resource

### Function

Delete information about a specified session resource of a server.

### Permission Required

Basic management.

### Syntax

- Operation Type: DELETE
- [URL](#): `https://device_ip/redfish/v1/SessionService/Sessions/Session_id`
- Request Header:

- |                          |
|--------------------------|
| X-Auth-Token: auth_value |
|--------------------------|
- Request Message Body: None

## Parameters

For a description of the parameters for deleting information about the specified session resource, refer to [Table 7-11](#).

**Table 7-11 Parameter Descriptions for Deleting Information About the Specified Session Resource**

| Parameter  | Description                                                                              | Value                                                                                                                                                                         |
|------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                 | IPv4 or IPv6 address.                                                                                                                                                         |
| Session_id | Session ID to be deleted                                                                 | The session_id of each session is contained in the session list query result.<br>The ID can be used when the information about the corresponding session needs to be deleted. |
| auth_value | X-Auth-Token value contained in Request Header in the DELETE request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                           |

## Usage Guidelines

None

## Example

- Request Example:

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| DELETE https://device_ip/redfish/v1/SessionService/Sessions/57f5ff2105218ad2df694ab94cbeba90 |
|----------------------------------------------------------------------------------------------|

- Request Header:

|                                               |
|-----------------------------------------------|
| X-Auth-Token: 8574621d21b84756218c7456821c234 |
|-----------------------------------------------|

- Request Message Body: None
- Response Example: None
- Status Code: 204

## Output Description

None

# Chapter 8

## Operations on EventService Resources

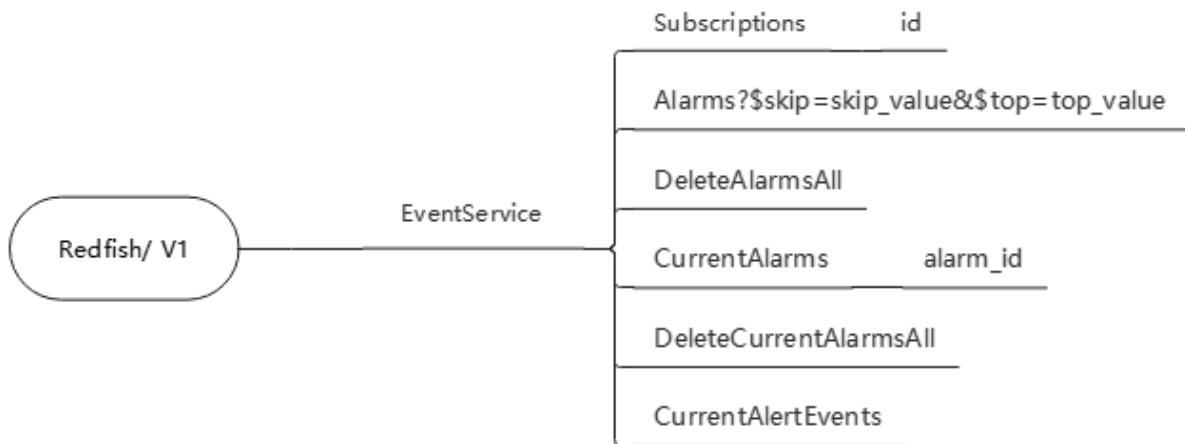
---

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[Figure 8-1](#) shows the path requirements for the EventService resources supported by VANTAGEO servers.

#### Figure 8-1 EventService Resource Path Requirements



For a description of properties of EventService resources and operations supported by the properties, refer to [Table 8-1](#).

**Table 8-1 Descriptions of EventService Resources Properties**

| URL                                    | Property                     | Description                                                       | Operation |
|----------------------------------------|------------------------------|-------------------------------------------------------------------|-----------|
| /redfish/v1/EventService               | Id                           | ID of an event resource.                                          | GET       |
|                                        | Name                         | Name of the event resource.                                       | GET       |
|                                        | Status                       | Whether the EventService resource is enabled.                     | GET       |
|                                        | ServiceEnabled               | Whether event reporting is enabled.                               | GET       |
|                                        | DeliveryRetryAttempts        | Maximum number of retries for delivering event subscriptions.     | GET       |
|                                        | DeliveryRetryIntervalSeconds | Interval (in seconds) at which an event is resent upon a failure. | GET       |
|                                        | EventTypesForSubscription    | Type of events that can be subscribed to.                         | GET       |
|                                        | Subscriptions                | Navigation resource of the event target resource collection.      | GET       |
| /redfish/v1/EventService/Subscriptions | Name                         | Name of the event subscription resource collection.               | GET       |
|                                        | Members@odata.count          | Number of event subscription resource members.                    | GET       |
|                                        | Members                      | Event subscription resource list.                                 | GET       |

| URL                                                      | Property                    | Description                                                                           | Opera-tion    |
|----------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|---------------|
| /redfish/v1/EventService/Subscriptions/subscription/{id} | Id                          | ID of the specified event subscription resource.                                      | PATCH         |
|                                                          | Destination                 | Valid HTTPS destination address.                                                      | PATCH         |
|                                                          | EventTypes                  | Types of monitored events.                                                            | PATCH         |
|                                                          | context                     | String                                                                                | PATCH         |
|                                                          | protocal                    | It must be Redfish.                                                                   | PATCH         |
|                                                          | Messagelds                  | Optional parameter. Combination of valid message IDs defined in the event registry.   | PATCH         |
|                                                          | OriginResources             | Combination of valid resource <a href="#">URIs</a> .                                  | PATCH         |
|                                                          | OriginResources@odata.count | Number of event sources.                                                              | PATCH         |
|                                                          | HttpHeaders                 | It is displayed as "null" in the query result.                                        | PATCH         |
| /redfish/v1/EventService/Subscriptions/subscription/{id} | Id                          | ID of the event subscription resource.                                                | GET/<br>PATCH |
|                                                          | Name                        | Name of the event subscription resource.                                              | GET/<br>PATCH |
|                                                          | Destination                 | Destination event service <a href="#">URI</a> .                                       | GET/<br>PATCH |
|                                                          | EventTypes                  | Type of event to be submitted.                                                        | GET/<br>PATCH |
|                                                          | Context                     | String provided by the client and stored together with the event target subscription. | GET/<br>PATCH |
|                                                          | Protocol                    | Protocol connected to the event.                                                      | GET/<br>PATCH |
|                                                          | Messagelds                  | Submitted message ID list.                                                            | GET/<br>PATCH |
|                                                          | OriginResources             | Submits the event-related resource list.                                              | GET/<br>PATCH |
|                                                          | OriginResources@odata.count | Number of event sources.                                                              | GET/<br>PATCH |

| URL                                                                   | Property                            | Description                                                                                                                                                                                                                                                                                                                                                                                                   | Operation |
|-----------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| /redfish/v1/EventService/Alarms?<br>\$skip=skip_value&\$top=top_value | HttpHeaders                         | HTTP Headers, for example, GET Object is empty for an authentication message.                                                                                                                                                                                                                                                                                                                                 | GET       |
|                                                                       | Status                              | Status of the specified vent subscription.<br><ul style="list-style-type: none"> <li>● Enabled</li> <li>● Disabled</li> <li>● StandbyOffline: suspended when the number of times that an event is reported exceeds the threshold.</li> </ul>                                                                                                                                                                  | GET       |
|                                                                       | DeliveryRetryPolicy                 | Event delivery retry policy. Options:<br><ul style="list-style-type: none"> <li>● SuspendRetries (required): suspends subscription information if the number of retries exceeds the threshold. Default.</li> <li>● TerminateAfterRetries (optional): deletes subscription information if the number of retries exceeds the threshold.</li> <li>● RetryForever (optional): always retries delivery.</li> </ul> | GET       |
|                                                                       | Actions                             | Actions.                                                                                                                                                                                                                                                                                                                                                                                                      | GET       |
|                                                                       | EventDestination.ResumeSubscription | Resumes event subscription.                                                                                                                                                                                                                                                                                                                                                                                   | GET       |
|                                                                       | target                              | Operation path for event subscription resumption.                                                                                                                                                                                                                                                                                                                                                             | GET       |
|                                                                       | Description                         | Description of the event resource collection.                                                                                                                                                                                                                                                                                                                                                                 | GET       |
| /redfish/v1/EventService/Alarms?<br>\$skip=skip_value&\$top=top_value | Id                                  | ID of the event resource collection.                                                                                                                                                                                                                                                                                                                                                                          | GET       |
|                                                                       | Name                                | Name of the event resource collection.                                                                                                                                                                                                                                                                                                                                                                        | GET       |
|                                                                       | Members@odata.count                 | Number of members in the event resource collection.                                                                                                                                                                                                                                                                                                                                                           | GET       |
|                                                                       | Members                             | List of members in the event resource collection.                                                                                                                                                                                                                                                                                                                                                             | GET       |

| URL                                             | Property                            | Description                                                                | Operation |
|-------------------------------------------------|-------------------------------------|----------------------------------------------------------------------------|-----------|
| /redfish/v1/EventService/CurrentAlarms          | AlarmCode                           | Event code.                                                                | GET       |
|                                                 | AlarmLevel                          | Event level.                                                               | GET       |
|                                                 | TimeStamp                           | Event generation time.                                                     | GET       |
|                                                 | Message                             | Event information.                                                         | GET       |
| /redfish/v1/EventService/CurrentAlarms          | Description                         | Description of the current alarm resource collection.                      | GET       |
|                                                 | Actions                             | Operations that can be performed on the current alarm resource collection. | GET       |
|                                                 | Oem                                 | Customized properties.                                                     | GET       |
|                                                 | EventService.DeleteCurrentAlarmsAll | Deletes all current alarms.                                                | GET       |
|                                                 | target                              | Operation path.                                                            | GET       |
|                                                 | Name                                | Name of the current alarm resource collection.                             | GET       |
|                                                 | Members@odata.count                 | Number of members in the current alarm resource collection.                | GET       |
|                                                 | Members                             | -                                                                          | GET       |
|                                                 | AlarmId                             | ID of the current alarm.                                                   | GET       |
|                                                 | AlarmCode                           | Code of the current alarm.                                                 | GET       |
|                                                 | AlarmLevel                          | Level of the current alarm.                                                | GET       |
|                                                 | TimeStamp                           | Alarm generation timestamp.                                                | GET       |
| /redfish/v1/EventService/CurrentAlarms/alarm_id | Message                             | Information about the current alarm.                                       | GET       |
|                                                 | Id                                  | ID of the current alarm resource.                                          | GET       |
|                                                 | Name                                | Name of the current alarm resource.                                        | GET       |
|                                                 | Description                         | Description of the current alarm resource.                                 | GET       |
|                                                 | AlarmCode                           | Code of the current alarm.                                                 | GET       |
|                                                 | AlarmLevel                          | Level of the current alarm.                                                | GET       |
|                                                 | TimeStamp                           | Alarm generation timestamp.                                                | GET       |
|                                                 | Message                             | Information about the current alarm.                                       | GET       |

| URL                                         | Property            | Description                                                       | Operation |
|---------------------------------------------|---------------------|-------------------------------------------------------------------|-----------|
| /redfish/v1/EventService/CurrentAlertEvents | Description         | Description of the current alarm event resource collection.       | GET       |
|                                             | Id                  | ID of the current alert alarm resource collection.                | GET       |
|                                             | Name                | Name of the current alarm event resource collection.              | GET       |
|                                             | Members@odata.count | Number of members in the current alarm event resource collection. | GET       |
|                                             | Members             | -                                                                 | GET       |
|                                             | EventId             | Alarm event ID.                                                   | GET       |
|                                             | EventType           | Alarm event type.                                                 | GET       |
|                                             | EventTimestamp      | Alarm event generation timestamp.                                 | GET       |
|                                             | Severity            | Alarm event severity level.                                       | GET       |
|                                             | Message             | Alarm event message.                                              | GET       |
|                                             | Oem.Public          | -                                                                 | GET       |
|                                             | alarmStatus         | Alarm status.                                                     | GET       |
|                                             | specificProblemID   | Alarm classification ID (alarm code).                             | GET       |
|                                             | specificProblem     | Alarm classification description (alarm name).                    | GET       |
|                                             | neUID               | Alarm server ID (serial number of the server).                    | GET       |
|                                             | neName              | Alarm server name (asset code of the server)                      | GET       |
|                                             | neType              | Type of device where the alarm is raised.                         | GET       |
|                                             | objectUID           | ID of the alarm part.                                             | GET       |
|                                             | objectName          | Name of the alarm part.                                           | GET       |
|                                             | objectType          | Type of alarm part.                                               | GET       |
|                                             | locationInfo        | Alarm positioning information.                                    | GET       |
|                                             | Addinfo             | Additional alarm information.                                     | GET       |

## 8.1 Querying Information About the EventService Resource

### Function

Query the information about the EventService resource of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/EventService](https://device_ip/redfish/v1/EventService)
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

### Parameters

For the parameter descriptions for querying the event service resource, refer to [Table 8-2](#).

**Table 8-2 Parameter Descriptions for Querying the Event Service Resource**

| Parameter  | Description                                                                           | Value                                                                                                                                    |
|------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                                                                    |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |

### Usage Guidelines

None

### Example

- Request Example:

GET https://device\_ip/redfish/v1/EventService

- Request Header:

X-Auth-Token: 8574621d21b84756218c7456821c234

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#EventService.EventService",
```

```
"@odata.id": "/redfish/v1/EventService",
"@odata.type": "#EventService.v1_5_0.EventService",
"Actions": {
 "#EventService.SubmitTestEvent": {
 "EventType@Redfish.AllowableValues": [
 "StatusChange",
 "ResourceUpdated",
 "ResourceAdded",
 "ResourceRemoved",
 "Alert"
],
 "target": "/redfish/v1/EventService/Actions/EventService.SubmitTestEvent"
 },
 "Oem": {
 "Public": {
 "#EventService.ClearHistoryAlarm": {
 "target":
 "/redfish/v1/EventService/Actions/EventService.ClearHistoryAlarm"
 }
 }
 }
},
"DeliveryRetryAttempts": 3,
"DeliveryRetryIntervalSeconds": 60,
"Description": "Event Service",
"EventTypesForSubscription": [
 "StatusChange",
 "ResourceUpdated",
 "ResourceAdded",
 "ResourceRemoved",
 "Alert"
],
"Id": "EventService",
"Name": "Event Service",
"Oem": {
 "Public": {
 "Alarms": {
 "@odata.id": "/redfish/v1/EventService/Alarms"
 },
 "CurrentAlarms": {
 "@odata.id": "/redfish/v1/EventService/CurrentAlarms"
 },
 "CurrentAlertEvents": {
 "@odata.id": "/redfish/v1/EventService/CurrentAlertEvents"
 }
 }
}
```

```

 }
 },
 "ServiceEnabled": true,
 "Status": {
 "State": "Enabled"
 },
 "Subscriptions": {
 "@odata.id": "/redfish/v1/EventService/Subscriptions"
 }
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query the event service resource, refer to [Table 8-3](#).

**Table 8-3 Output Descriptions for Querying the Event Service Resource**

| Field                                                                   | Type   | Description                                                                                              |
|-------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------|
| @odata.context                                                          | String | OData description of the EventService resource model.                                                    |
| @odata.id                                                               | String | Access path of the EventService resource node.                                                           |
| @odata.type                                                             | String | Type of EventService resource.                                                                           |
| Actions.#EventService.SubmitTestEvent.EventType@Redfish.AllowableValues | Array  | EventService resource ID.                                                                                |
| Actions.#EventService.SubmitTestEvent.target                            | String | URL for executing the operation.                                                                         |
| Actions.Oem.Public.#EventService.ClearHistoryAlarm.target               | String | URL for executing the operation.                                                                         |
| DeliveryRetryAttempts                                                   | Number | Maximum number of retries for delivering event subscriptions.                                            |
| DeliveryRetryIntervalSeconds                                            | Number | Interval (in seconds) at which an event is resent upon a failure.                                        |
| Description                                                             | String | Description of the EventService resource.                                                                |
| EventTypesForSubscription                                               | Array  | Type of events that can be subscribed to. The ranges are the combinations of the following valid values: |

| Field                                   | Type    | Description                                                                                                                                                                                                                                                                            |
|-----------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         |         | <ul style="list-style-type: none"> <li>● StatusChange: resource status change event</li> <li>● ResourceUpdated: resource update event</li> <li>● ResourceAdded: resource addition event</li> <li>● ResourceRemoved: resource removal event</li> <li>● Alert: alarming event</li> </ul> |
| Id                                      | String  | ID of the EventService resource.                                                                                                                                                                                                                                                       |
| Name                                    | String  | Name of the EventService resource.                                                                                                                                                                                                                                                     |
| Oem.Public.Alarms.@odata.id             | String  | Access path of the alarm resource collection.                                                                                                                                                                                                                                          |
| Oem.Public.CurrentAlarms.@odata.id      | String  | Access path of the current alarm resource collection.                                                                                                                                                                                                                                  |
| Oem.Public.CurrentAlertEvents.@odata.id | String  | Access path of the current alarm event resource collection.                                                                                                                                                                                                                            |
| ServiceEnabled                          | Boolean | Whether event reporting is enabled.                                                                                                                                                                                                                                                    |
| Status.State                            | String  | Whether the EventService resource is enabled.                                                                                                                                                                                                                                          |
| Subscriptions.@odata.id                 | String  | Access path of the specified event object resource.                                                                                                                                                                                                                                    |

## 8.2 Querying Information About the Event Subscription Resource Collection

### Function

Query the information about the event subscription resource collection.

### Syntax

- Operation Type: GET
- **URL:** *https://device\_ip/redfish/v1/EventService/Subscriptions*
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

## Parameters

For the parameter descriptions for querying the event subscription resource collection, refer to [Table 8-4](#).

**Table 8-4 Parameter Descriptions for Querying the Event Subscription Resource Collection**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| member_id  | User ID                                                                               | It can be obtained by querying the user list.                                                       |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/EventService/Subscriptions
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#EventDestinationCollection.EventDestinationCollection",
 "@odata.id": "/redfish/v1/EventService/Subscriptions",
 "@odata.type": "#EventDestinationCollection.EventDestinationCollection",
 "Members": [
 {
 "@odata.id": "/redfish/v1/EventService/Subscriptions/1"
 }
],
 "Members@odata.count": 1,
 "Name": "Event Subscriptions Collection"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query the event subscription resource collection, refer to [Table 8-5](#).

**Table 8-5 Output Descriptions for Querying the Event Subscription Resource Collection**

| Field               | Type   | Description                                                            |
|---------------------|--------|------------------------------------------------------------------------|
| @odata.context      | String | OData description of the event subscription resource collection model. |
| @odata.id           | String | Type of event subscription resource collection.                        |
| @odata.type         | String | Access path of the event subscription resource collection.             |
| Name                | String | Name of the event subscription resource collection.                    |
| Members@odata.count | Number | Number of event subscription resource members.                         |
| Members             | Array  | Event subscription resource list.                                      |
| @odata.id           | String | Access path of a single event subscription resource node.              |

## 8.3 Creating an Event Subscription Resource

### Function

Create an event subscription resource.

### Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/EventService/Subscriptions](https://device_ip/redfish/v1/EventService/Subscriptions)
- Request Header:

```
X-Auth-Token: auth_value
Content-Type: header_type
```

- Request Message Body:

```
{
 "Destination": event_destination,
 "EventTypes": event_types,
 "HttpHeaders": http_headers,
 "Context": context,
 "Protocol": protocol,
 "MessageIds": message_ids,
 "OriginResources": origin_resources,
```

```

 "DeliveryRetryPolicy":delivery_retry_policy
}

```

## Parameters

For the parameter descriptions for creating an event subscription resource, refer to [Table 8-6](#).

**Table 8-6 Parameter Descriptions for Creating the Event Subscription Resource**

| Parameter             | Description                                                                             | Value                                                                                                                                                                                                                                                                                                                         |
|-----------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip             | IP address for logging in to the device.                                                | IPv4 or IPv6 address.                                                                                                                                                                                                                                                                                                         |
| header_type           | Format of the request message.                                                          | application/json                                                                                                                                                                                                                                                                                                              |
| auth_value            | X-Auth-Token value contained in Request Header in the POST request for authentication.  | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                                                                                                                                                                           |
| event_destination     | Event subscription destination address.                                                 | Valid <a href="#">HTTPS</a> destination address.                                                                                                                                                                                                                                                                              |
| event_types           | Event type for event subscription monitoring.                                           | A combination of the following values: <ul style="list-style-type: none"> <li>● StatusChange: resource status change event</li> <li>● ResourceUpdated: resource update event</li> <li>● ResourceAdded: resource addition event</li> <li>● ResourceRemoved: resource removal event</li> <li>● Alert: alarming event</li> </ul> |
| http_headers          | Event subscription HTTP header parameters, which are carried when an event is reported. | Optional parameter. The value shall comply with the key:value format, and is displayed as null when being queried.                                                                                                                                                                                                            |
| context               | Event subscription context information.                                                 | String                                                                                                                                                                                                                                                                                                                        |
| protocol              | Protocol used by the event subscription.                                                | It must be Redfish.                                                                                                                                                                                                                                                                                                           |
| message_ids           | Message ID matching list of the event subscription.                                     | Optional parameter. Combination of valid message IDs defined in the event registry.                                                                                                                                                                                                                                           |
| origin_resources      | Event source list.                                                                      | Combination of valid resource <a href="#">URIs</a> .                                                                                                                                                                                                                                                                          |
| delivery_retry_policy | Event delivery retry policy.                                                            | Options: <ul style="list-style-type: none"> <li>● SuspendRetries (required): suspends subscription information if the number of retries exceeds the threshold. Default.</li> <li>● TerminateAfterRetries (optional): deletes subscription information if the</li> </ul>                                                       |

| Parameter | Description | Value                                                                                                                                                 |
|-----------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |             | <p>number of retries exceeds the threshold.</p> <ul style="list-style-type: none"> <li>● RetryForever (optional): always retries delivery.</li> </ul> |

## Usage Guidelines

The specified event destination address used for creating a subscription cannot be the same as any existing subscription destination address.

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/EventService/Subscriptions
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: application/json
```

- Request Message Body:

```
{
 "Destination": "https://10.228.34.200/redfish/test/",
 "EventTypes": ["Alert"],
 "HttpHeaders": {
 "Content-Type": "Application/JSON",
 "ODATA-Version": "4.0",
 "X-Auth-Token": "5ac44e4c36db20ee69f661f42239b6f5"
 },
 "Context": "event subscription context string",
 "Protocol": "Redfish",
 "MessageIds": [
 "ibmCEvents.2.0.PsPredictFailureInfo"
],
 "OriginResources": [
 {
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerSupplies/0"
 }
],
 "DeliveryRetryPolicy": "TerminateAfterRetries"
}
```

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#EventDestination.EventDestination",
 "@odata.id": "/redfish/v1/EventService/Subscriptions",
 "@odata.type": "#EventDestination.v1_7_0.EventDestination",
 "Context": "event subscription context string",
 "Destination": "https://10.228.34.200/redfish/test/",
 "EventTypes": [
 "Alert"
],
 "Id": 1,
 "MessageIds": [
 "iBMCEvents.2.0.PsPredicFailureInfo"
],
 "Name": "Subscription 1",
 "OriginResources": [
 "/redfish/v1/Chassis/1/Power#/PowerSupplies/0"
],
 "OriginResources@odata.count": 1,
 "Protocol": "Redfish",
 "HttpHeaders": null
}
```

- Status Code: 201

## Output Description

For a description of the output returned when you create the event subscription resource, refer to [Table 8-7](#).

**Table 8-7 Output Descriptions for Creating the Event Subscription Resource**

| Field          | Type   | Description                                                                         |
|----------------|--------|-------------------------------------------------------------------------------------|
| @odata.context | String | OData description of the event subscription resource model.                         |
| @odata.id      | String | Access path of the event subscription resource node.                                |
| @odata.type    | String | Type of event subscription resource.                                                |
| Id             | String | ID of the event subscription resource.                                              |
| Context        | String | Event subscription context information.                                             |
| Destination    | String | Event subscription destination address.                                             |
| EventTypes     | Array  | Event type for event subscription monitoring.A combination of the following values: |

| Field                       | Type   | Description                                                                                                                                                                                                                                                                            |
|-----------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             |        | <ul style="list-style-type: none"> <li>● StatusChange: resource status change event</li> <li>● ResourceUpdated: resource update event</li> <li>● ResourceAdded: resource addition event</li> <li>● ResourceRemoved: resource removal event</li> <li>● Alert: alarming event</li> </ul> |
| Id                          | String | ID of the event subscription resource.                                                                                                                                                                                                                                                 |
| MessageIds                  | String | Message ID matching list of the event subscription.                                                                                                                                                                                                                                    |
| Name                        | String | Name of the event subscription resource.                                                                                                                                                                                                                                               |
| Protocol                    | String | Protocol used by the event subscription.                                                                                                                                                                                                                                               |
| OriginResources             | Array  | Event source list.                                                                                                                                                                                                                                                                     |
| OriginResources@odata.count | Number | Number of event sources.                                                                                                                                                                                                                                                               |
| HttpHeaders                 | String | Event subscription HTTP header.                                                                                                                                                                                                                                                        |

## 8.4 Querying Information About an Event Subscription Resource

### Function

Query the information about an event subscription resource.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** *https://device\_ip/redfish/v1/EventService/Subscriptions/id*
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

### Parameters

For the parameter descriptions for querying an event subscription resource, refer to [Table 8-8](#).

**Table 8-8 Parameter Descriptions for Querying the Event Subscription Resource**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| id         | ID of the valid event subscription.                                                   | -                                                                                                   |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

**Usage Guidelines**

None

**Example**

- Request Example:

```
GET https://device_ip/redfish/v1/EventService/Subscriptions/1
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#EventDestination.EventDestination",
 "@odata.id": "/redfish/v1/Eventservice/Subscriptions/1",
 "@odata.type": "#EventDestination.v1_7_0.EventDestination",
 "Context": "event subscription context string",
 "Destination": "https://10.228.34.200/redfish/test/",
 "EventTypes": [
 "Alert"
],
 "Id": "1",
 "MessageIds": [
 "iBMCEvents.2.0.PsPredictFailureInfo"
],
 "Name": "Subscription 1",
 "OriginResources": [
 {
 "@odata.id": "/redfish/v1/Chassis/1/Power#/PowerSupplies/0"
 }
],
 "OriginResources@odata.count": 1,
 "Protocol": "Redfish",
}
```

```

 "SubscriptionType": "RedfishEvent",
 "HttpHeaders": null,
 "Status": "Enabled",
 "DeliveryRetryPolicy": "TerminateAfterRetries",
 "Actions": {
 "#EventDestination.ResumeSubscription": {
 "target":
 "/redfish/v1/EventService/Subscriptions/1/Actions/
 EventDestination.ResumeSubscription"
 }
 }
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query the event subscription resource, refer to [Table 8-9](#).

**Table 8-9 Output Descriptions for Querying the Event Subscription Resource**

| Field            | Type   | Description                                                                                                                                                                                                                                                                                                                             |
|------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context   | String | OData description of the event subscription resource model.                                                                                                                                                                                                                                                                             |
| @odata.id        | String | Access path of the event subscription resource node.                                                                                                                                                                                                                                                                                    |
| @odata.type      | String | Type of event subscription resource.                                                                                                                                                                                                                                                                                                    |
| Id               | String | ID of the specified event subscription resource.                                                                                                                                                                                                                                                                                        |
| Name             | String | Name of the event subscription resource.                                                                                                                                                                                                                                                                                                |
| Destination      | String | Valid <a href="#">HTTP/HTTPS</a> destination address.                                                                                                                                                                                                                                                                                   |
| EventTypes       | Array  | Types of events to which a client can subscribe. <ul style="list-style-type: none"> <li>● StatusChange: resource status change event</li> <li>● ResourceUpdated: resource update event</li> <li>● ResourceAdded: resource addition event</li> <li>● ResourceRemoved: resource removal event</li> <li>● Alert: alarming event</li> </ul> |
| Context          | String | Event subscription context information.                                                                                                                                                                                                                                                                                                 |
| Protocol         | String | Protocol used for event subscription.                                                                                                                                                                                                                                                                                                   |
| SubscriptionType | String | Event subscription type.                                                                                                                                                                                                                                                                                                                |
| MessageIds       | Array  | Message ID matching list of the event subscription.                                                                                                                                                                                                                                                                                     |
| OriginResources  | Array  | Event source list.                                                                                                                                                                                                                                                                                                                      |

| Field                                       | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OriginResources@odata.count                 | Number | Number of event sources.                                                                                                                                                                                                                                                                                                                                                                               |
| HttpHeaders                                 | Object | Event subscription HTTP header, which is displayed as "null" when being queried.                                                                                                                                                                                                                                                                                                                       |
| Status                                      | String | Status of the specified vent subscription. <ul style="list-style-type: none"><li>● Enabled</li><li>● Disabled</li><li>● StandbyOffline: suspended when the number of times that an event is reported exceeds the threshold.</li></ul>                                                                                                                                                                  |
| DeliveryRetryPolicy                         | String | Event delivery retry policy. Options: <ul style="list-style-type: none"><li>● SuspendRetries (required): suspends subscription information if the number of retries exceeds the threshold. Default.</li><li>● TerminateAfterRetries (optional): deletes subscription information if the number of retries exceeds the threshold.</li><li>● RetryForever (optional): always retries delivery.</li></ul> |
| Actions                                     | Object | Actions.                                                                                                                                                                                                                                                                                                                                                                                               |
| #EventDestination.ResumeSubscription.target | String | Operation path for event subscription resumption.                                                                                                                                                                                                                                                                                                                                                      |

## 8.5 Modifying Information About an Event Subscription Resource

### Function

Modify an event subscription resource.

### Permission Required

Basic management.

### Syntax

- Operation Type: PATCH
- **URL:** *https://device\_ip/redfish/v1/EventService/Subscriptions/id*
- Request Header:

X-Auth-Token: auth\_value  
Content-Type: header\_type

- Request Message Body:

{

```

 "HttpHeaders": http_headers,
 "Context": context,
 "DeliveryRetryPolicy":delivery_retry_policy
}

```

## Parameters

For the parameter descriptions for modifying an event subscription resource, refer to [Table 8-10](#).

**Table 8-10 Parameter Descriptions for Modifying the Event Subscription Resource**

| Parameter             | Description                                                                             | Value                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip             | IP address for logging in to the device.                                                | IPv4 or IPv6 address.                                                                                                                                                                                                                                                                                                                                                |
| id                    | ID of the valid event subscription.                                                     | -                                                                                                                                                                                                                                                                                                                                                                    |
| auth_value            | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                                                                                                                                                                                                                  |
| header_type           | Format of the request message.                                                          | application/json                                                                                                                                                                                                                                                                                                                                                     |
| http_headers          | Event subscription HTTP header parameters, which are carried when an event is reported. | The value shall comply with the <code>key:value</code> format.<br>During configuration, the previous information can be replaced directly.                                                                                                                                                                                                                           |
| context               | Event subscription context information.                                                 | String                                                                                                                                                                                                                                                                                                                                                               |
| delivery_retry_policy | Event delivery retry policy.                                                            | <ul style="list-style-type: none"> <li>● SuspendRetries (required): suspends subscription information if the number of retries exceeds the threshold. Default.</li> <li>● TerminateAfterRetries (optional): deletes subscription information if the number of retries exceeds the threshold.</li> <li>● RetryForever (optional): always retries delivery.</li> </ul> |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/EventService/Subscriptions/1
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: application/json
```

- Request Message Body:

```
{
 "HttpHeaders": {
 "Content-Type": "Application/JSON",
 "ODATA-Version": "4.0",
 "X-Auth-Token": "5ac44e4c36db20ee69f661f42239b6f5"
 },
 "Context": "event subscription context string",
 "DeliveryRetryPolicy": "TerminateAfterRetries"
}
```

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#EventDestination.EventDestination",
 "@odata.id": "/redfish/v1/EventService/Subscriptions/2",
 "@odata.type": "#EventDestination.v1_7_0.EventDestination",
 "Context": "Event_2",
 "Destination": "https://10.228.34.158:9002/redfish/test/",
 "EventTypes": [
 "Alert"
],
 "Id": "2",
 "MessageIds": [
 "ibMCEvents.2.0.PsPredicFailureInfo"
],
 "Name": "Subscription 2",
 "OriginResources": [
 {
 "@odata.id": "/redfish/v1/chassis/1/Power#/PowerSupplies/4"
 }
],
 "OriginResources@odata.count": 1,
 "Protocol": "Redfish",
 "SubscriptionType": "RedfishEvent",
 "HttpHeaders": null
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you modify an event subscription resource, refer to [Table 8-11](#).

**Table 8-11 Output Descriptions for Modifying the Event Subscription Resource**

| Field                       | Type   | Description                                                                                                                                                                                                                                                                                                                             |
|-----------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context              | String | OData description of the event subscription resource model.                                                                                                                                                                                                                                                                             |
| @odata.id                   | String | Access path of the event subscription resource node.                                                                                                                                                                                                                                                                                    |
| @odata.type                 | String | Type of event subscription resource.                                                                                                                                                                                                                                                                                                    |
| Id                          | String | ID of the specified event subscription resource.                                                                                                                                                                                                                                                                                        |
| Name                        | String | Name of the event subscription resource.                                                                                                                                                                                                                                                                                                |
| Destination                 | String | Valid <a href="#">HTTP/HTTPS</a> destination address.                                                                                                                                                                                                                                                                                   |
| EventTypes                  | Array  | Types of events to which a client can subscribe. <ul style="list-style-type: none"> <li>● StatusChange: resource status change event</li> <li>● ResourceUpdated: resource update event</li> <li>● ResourceAdded: resource addition event</li> <li>● ResourceRemoved: resource removal event</li> <li>● Alert: alarming event</li> </ul> |
| Context                     | String | Event subscription context information.                                                                                                                                                                                                                                                                                                 |
| Protocol                    | String | Protocol used for event subscription, It must be Redfish in this version.                                                                                                                                                                                                                                                               |
| SubscriptionType            | String | Event subscription type.                                                                                                                                                                                                                                                                                                                |
| MessageIds                  | Array  | (Optional) Message ID matching list of the event subscription. Combination of valid message IDs defined in the event registry.                                                                                                                                                                                                          |
| OriginResources             | Array  | Mapping between event subscriptions and event sources.                                                                                                                                                                                                                                                                                  |
| OriginResources@odata.count | Number | Number of event sources.                                                                                                                                                                                                                                                                                                                |
| HttpHeaders                 | Object | Event subscription HTTP header, which is displayed as "null" when being queried.                                                                                                                                                                                                                                                        |

## 8.6 Deleting an Event Subscription Resource

### Function

Delete an event subscription resource.

## Permission Required

Basic management.

## Syntax

- Operation Type: DELETE
  - URL: `https://device_ip/redfish/v1/EventService/Subscriptions/id`
  - Request Header:
- X-Auth-Token: auth\_value
- Request Message Body: None

## Parameters

For a description of the parameters for deleting an event subscription resource, refer to [Table 8-12](#).

**Table 8-12 Parameter Descriptions for Deleting the Event Subscription Resource**

| Parameter  | Description                                                                              | Value                                                                                               |
|------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                 | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                               |
| id         | User ID                                                                                  | -                                                                                                   |
| auth_value | X-Auth-Token value contained in Request Header in the DELETE request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:
- ```
DELETE https://device_ip/redfish/v1/EventService/Subscriptions/1
```
- Request Header:
- ```
X-Auth-Token: 8574621d21b84756218c7456821c234
```
- Request Message Body: None
  - Response Example: None
  - Status Code: 204

## Output Description

None

## 8.7 Resuming Event Subscription

### Function

Resumes event subscription.

### Permission Required

Basic management.

### Syntax

- Operation Type: POST
- URL: `https://device_ip/redfish/v1/EventService/Subscriptions/id/Actions/EventDestination.ResumeSubscription`
- Request Header:

```
X-Auth-Token: auth_value
Content-Type: header_type
```

- Request Message Body:

```
{
 "DeliverBufferedEventDuration":deliver_buffered_event_duration
}
```

### Description

For a description of the parameters for resuming event subscription, refer to [Table 8-13](#).

**Table 8-13 Parameter Descriptions for Resuming Event Subscription**

| Parameter                       | Setting                                                                                                                                                                                     | Value                                                                                                                                                                             |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip                       | IP address for logging in to the device.                                                                                                                                                    | IPv4 or IPv6 address.                                                                                                                                                             |
| id                              | ID of the valid event subscription.                                                                                                                                                         | -                                                                                                                                                                                 |
| auth_value                      | X-Auth-Token value contained in Request Header in the POST request for authentication.                                                                                                      | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                               |
| header_type                     | Format of the request message.                                                                                                                                                              | application/json                                                                                                                                                                  |
| deliver_buffered_event_duration | After the subscription is resumed, the server resends the unsent events buffered for the subscription. Only those that are within the time range specified by this parameter can be resent. | Time expression that complies with the ISO-8601 specifications.<br>For example, PT8H indicates that those that occurred with the last eight hours from the current time are sent. |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/EventService/Subscriptions/13/Actions/EventDestination.ResumeSubscription
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: application/json
```

- Request Message Body:

```
{
 "DeliverBufferedEventDuration": "PT8H"
}
```

- Response Example: None

- Response code: 204

## Output Description

None

## 8.8 Reporting an Event

### Function

Report an event.

### Permission Required

Basic management.

### Syntax

- Operation Type: POST
- URL: [https://event\\_destination](https://event_destination)

### Parameters

For the parameter descriptions for reporting an event, refer to [Table 8-14](#).

**Table 8-14 Parameter Descriptions for Reporting an Event Parameters**

| Field          | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context | String | OData description of the root service resource model.                                                                                                                                                                                                                                                                                                                                                             |
| @odata.id      | String | Access path of the root service resource node.                                                                                                                                                                                                                                                                                                                                                                    |
| @odata.type    | String | Type of root service resource.                                                                                                                                                                                                                                                                                                                                                                                    |
| Id             | String | ID of the root service resource. Set it to alert_id.                                                                                                                                                                                                                                                                                                                                                              |
| Name           | String | Root service resource name, which is fixed to Event Array.                                                                                                                                                                                                                                                                                                                                                        |
| Events         | Object | Set of events.                                                                                                                                                                                                                                                                                                                                                                                                    |
| EventType      | String | Event type. Options: <ul style="list-style-type: none"><li>● StatusChange: resource status change event</li><li>● ResourceUpdated: resource update event</li><li>● ResourceAdded: resource addition event</li><li>● ResourceRemoved: resource removal event</li><li>● Alert: alarm event</li></ul>                                                                                                                |
| EventId        | String | ID of this alarm event, that is, the serial number of the alarm event. The ID is incremented when a new alarm caused by the same fault is raised. The ID of the active alarm is the same as that of the cleared alarm.                                                                                                                                                                                            |
| EventTimestamp | String | Event occurrence time. <ul style="list-style-type: none"><li>● Active alarm: alarm occurrence time.</li><li>● Cleared alarm: time when the alarm is cleared.</li></ul>                                                                                                                                                                                                                                            |
| Severity       | String | Alarm severity level. <ul style="list-style-type: none"><li>● 1: Critical</li><li>● 2: Major</li><li>● 3: Minor</li><li>● 4: Warning. The <b>OrigSeverity</b> value of an active alarm is the same as that of the corresponding cleared alarm. This field does not need to be specified for notifications of event type, and needs to be set to <b>Inform</b> for notifications of internal alarm type.</li></ul> |
| Message        | Object | Manufacturer-customized alarm event or title.                                                                                                                                                                                                                                                                                                                                                                     |
| Oem            | Object | Customized properties.                                                                                                                                                                                                                                                                                                                                                                                            |
| alarmStatus    | String | Alarm status. <ul style="list-style-type: none"><li>● 1: active.</li><li>● 0: cleared.</li></ul>                                                                                                                                                                                                                                                                                                                  |

| Field             | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| specificProblemID | String | Alarm event code, which is displayed in decimal format.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| specificProblem   | String | Alarm classification description.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| specificProblemID | String | Alarm classification description.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| neUID             | String | Alarm server ID, which is set to the <b>SerialNumber</b> value of the server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| neName            | String | Alarm server name, which is set to the asset number of the server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| neType            | String | Type of alarm device, which is set to server.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| objectUID         | String | Alarm object ID, which is defined by the manufacturer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| objectName        | String | Alarm object name, which is defined by the manufacturer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| objectType        | String | Alarm object type, which corresponds to the manufacturer-customized tAlarmPublic.DeviceType. <ul style="list-style-type: none"> <li>● {ALARM_DEVICE_TYPE_MAINBOARD, "MainBoard"}</li> <li>● {ALARM_DEVICE_TYPE_PSU, "PSU"}</li> <li>● {ALARM_DEVICE_TYPE_FAN, "Fan"}</li> <li>● {ALARM_DEVICE_TYPE_CPU, "CPU"}</li> <li>● {ALARM_DEVICE_TYPE_DISK, "Disk"}</li> <li>● {ALARM_DEVICE_TYPE_MEMORY, "Memory"}</li> <li>● {ALARM_DEVICE_TYPE_IOMODULE, "IOModule"}</li> <li>● {ALARM_DEVICE_TYPE_GPU, "GPU"}</li> <li>● {ALARM_DEVICE_TYPE_NIC_CARD, "NIC_Card"}</li> </ul> |
| locationInfo      | String | Alarm positioning information, which is defined by the manufacturer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Addinfo           | String | Detailed information about the alarm, including multiple Key-Value pairs, which are defined by the manufacturer.<br><br>A key and its value are separated by a colon. Multiple Key-Value pairs are separated by semicolons. Keys and values cannot include colons or semicolons.                                                                                                                                                                                                                                                                                        |
| Name              | String | Name of the alarm event, format: Log entry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## 8.9 Querying Information About the Event Resource Collection

### Function

Query the information about the event resource collection.

### Permission Required

Query.

### Syntax

- Operation Type: GET
  - URL: `https://device_ip/redfish/v1/EventService/Alarms?`  
`$skip=skip_value&$top=top_value`
  - Request Header:
- `x-auth-token:auth_value`
- Request Message Body: None

### Parameters

For a description of the parameters for querying the event resource collection, refer to [Table 8-15](#).

**Table 8-15 Parameter Descriptions for Querying the Event Resource Collection**

| Parameter  | Description                                                                                                                   | Value                                                                                               |
|------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                                      | IPv4 or IPv6 address.                                                                               |
| auth_value | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication.                   | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| skip_value | Integer that indicates the number of members in the resource collection to be skipped before the first resource is retrieved. | 0 and positive integers                                                                             |
| top_value  | Integer that indicates the maximum number of members to be included in the response.                                          | 0-100                                                                                               |

### Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/EventService/Alarms?$skip=10&$top=3
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#AlarmsCollection.AlarmsCollection",
 "@odata.id": "/redfish/v1/EventService/Alarms",
 "@odata.type": "#AlarmsCollection.v1_0_0.AlarmsCollection",
 "Description": "Collection of Alarms",
 "Id": "Alarms",
 "Members": [
 {
 "AlarmCode": "0x1a000016",
 "AlarmLevel": "Major",
 "Message": "Disk22 is missing assert.",
 "TimeStamp": "2010-05-23 02:56:09"
 },
 {
 "AlarmCode": "0x1a000016",
 "AlarmLevel": "Major",
 "Message": "Disk20 is missing assert.",
 "TimeStamp": "2010-05-23 02:56:09"
 },
 {
 "AlarmCode": "0x1a000016",
 "AlarmLevel": "Major",
 "Message": "Disk18 is missing assert.",
 "TimeStamp": "2010-05-23 02:56:09"
 }
],
 "Members@odata.count": 131,
 "Name": "Alarms Collection"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the event resource collection, refer to [Table 8-16](#).

**Table 8-16 Output Descriptions for Querying the Event Resource Collection**

| Field               | Type   | Description                                         |
|---------------------|--------|-----------------------------------------------------|
| @odata.context      | String | OData description of the event resource collection. |
| @odata.id           | String | Access path of the event resource collection.       |
| @odata.type         | String | Type of event resource collection.                  |
| Description         | String | Description of the event resource collection.       |
| Id                  | String | ID of the event resource collection.                |
| Name                | String | Name of the event resource collection.              |
| Members@odata.count | Number | Number of event resources.                          |
| Members             | Array  | Event resource list.                                |
| AlarmCode           | String | Event Code                                          |
| AlarmLevel          | String | Event level.                                        |
| TimeStamp           | String | Event generation time.                              |
| Message             | String | Event information.                                  |

## 8.10 Deleting All Event Resources

### Function

Delete all event resources.

### Syntax

- Operation Type: DELETE
- **URL:** `https://device_ip/redfish/v1/EventService/DeleteAlarmsAll`
- Request Header:
 

`x-auth-token:auth_value`
- Request Message Body: None

### Parameters

For a description of the parameters for deleting all event resources, refer to [Table 8-17](#).

**Table 8-17 Parameter Descriptions for Deleting All Event Resources**

| Parameter  | Description                                                                                                    | Value                                                                                               |
|------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                       | IPv4 or IPv6 address.                                                                               |
| auth_value | When the DELETE request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

**Usage Guidelines**

None

**Example**

- Request Example:

```
DELETE https://device_ip/redfish/v1/EventService/DeleteAlarmsAll
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example: None
- Response Code: 204

**Output Description**

None

## 8.11 Querying Information About the Current Alarm Resource Collection

**Function**

Query the information about the current alarm resource collection.

**Permission Required**

Query.

**Syntax**

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/EventService/CurrentAlarms`
- Request Header:

```
X-Auth-Token: auth_value
```

- Request Message Body: None

### Parameters

For the parameter descriptions for querying the current alarm resource collection, refer to [Table 8-18](#).

**Table 8-18 Parameter Descriptions for Querying the Current Alarm Resource Collection**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/EventService/CurrentAlarms
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#CurrentAlarmsCollection.CurrentAlarmsCollection",
 "@odata.id": "/redfish/v1/EventService/CurrentAlarms",
 "@odata.type": "#CurrentAlarmsCollection.v1_0_0.CurrentAlarmsCollection",
 "Description": "Collection of CurrentAlarms",
 "Id": "CurrentAlarms",
 "Actions": {
 "Oem": {
 "#EventService.DeleteCurrentAlarmsAll": {
 "target": "/redfish/v1/EventService/DeleteCurrentAlarmsAll"
 }
 }
 },
 "Members": [
 ...
]
}
```

```
{
 "@odata.id": "/redfish/v1/EventService/CurrentAlarms/93",
 "AlarmCode": "0x03010109",
 "AlarmId": 93,
 "AlarmLevel": "Major",
 "Message": "CPU1_Temp CPU Temperature (86.000 degrees C) Upper Critical - Going High (86.000 degrees C) assert.",
 "TimeStamp": "2010-05-23 03:01:07"
}
],
"Members@odata.count": 2,
"Name": "CurrentAlarms Collection"
}
```

- Status Code: 200

## Output Description

a description of the output returned when you query the current alarm resource collection, refer to [Table 8-19](#).

**Table 8-19 Output Descriptions for Querying the Current Alarm Resource Collection**

| Field                                       | Type   | Description                                                                |
|---------------------------------------------|--------|----------------------------------------------------------------------------|
| @odata.context                              | String | OData description of the current alarm resource collection model.          |
| @odata.id                                   | String | Access path of the current alarm resource collection.                      |
| @odata.type                                 | String | Type of alarm resource collection.                                         |
| Description                                 | String | Description of the current alarm resource collection.                      |
| Id                                          | String | ID of the current alarm resource collection.                               |
| Actions                                     | Object | Operations that can be performed on the current alarm resource collection. |
| Oem                                         | Object | Customized properties.                                                     |
| #EventService.DeleteCurrentAlarmsAll.target | String | Operation path.                                                            |
| Name                                        | String | Name of the current alarm resource collection.                             |
| Members@odata.count                         | Number | Number of alarm resource members.                                          |
| Members                                     | Array  | Event subscription resource list.                                          |

| Field      | Type   | Description                                  |
|------------|--------|----------------------------------------------|
| @odata.id  | String | Access path of the specified alarm resource. |
| AlarmId    | Number | ID of the current alarm.                     |
| AlarmCode  | String | Code of the current alarm.                   |
| AlarmLevel | String | Level of the current alarm.                  |
| TimeStamp  | String | Alarm generation timestamp.                  |
| Message    | String | Information about the current alarm.         |

## 8.12 Querying Information About the Current Alarm Resource

### Function

Query the information about the current alarm resource.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/EventService/CurrentAlarms/alarm_id`
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

### Parameters

For the parameter descriptions for querying the current alarm resource, refer to [Table 8-20](#).

**Table 8-20 Parameter Descriptions for Querying the Current Alarm Resource**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| alarm_id   | alarm_id of the current alarm                                                         | Obtained through the upper-layer collection interface.                                              |

## Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/EventService/CurrentAlarms/2152
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#CurrentAlarm.CurrentAlarm",
 "@odata.id": "/redfish/v1/EventService/CurrentAlarms/2152",
 "@odata.type": "#CurrentAlarm.v1_0_0.CurrentAlarm",
 "AlarmCode": 30839,
 "AlarmLevel": "Major",
 "Description": "Current Alarm",
 "Id": "2152",
 "Message": "Abnormal reading of ambient temperature (location:INPUT_TEMP).",
 "Name": "CurrentAlarm",
 "TimeStamp": 1607004276
}
```

- Status Code: 200

### Output Description

a description of the output returned when you query the current alarm resource, refer to [Table 8-21](#).

**Table 8-21 Output Descriptions for Querying the Current Alarm Resource**

| Field          | Type   | Description                                            |
|----------------|--------|--------------------------------------------------------|
| @odata.context | String | OData description of the current alarm resource model. |
| @odata.id      | String | Access path of the current alarm resource.             |
| @odata.type    | String | Type of alarm resource.                                |
| Id             | Number | ID of the current alarm resource.                      |
| Name           | String | Name of the current alarm resource.                    |

| Field       | Type   | Description                                |
|-------------|--------|--------------------------------------------|
| Description | String | Description of the current alarm resource. |
| AlarmCode   | String | Code of the current alarm.                 |
| AlarmLevel  | String | Level of the current alarm.                |
| TimeStamp   | String | Alarm generation timestamp.                |
| Message     | String | Information about the current alarm.       |

## 8.13 Deleting the Current Alarm Resource

### Function

Delete the current alarm resource.

### Permission Required

Security management.

### Syntax

- Operation Type: DELETE
- URL: [https://device\\_ip/redfish/v1/EventService/CurrentAlarms/alarm\\_id](https://device_ip/redfish/v1/EventService/CurrentAlarms/alarm_id)
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

### Parameters

For the parameter descriptions for deleting the current alarm resource, refer to [Table 8-22](#).

**Table 8-22 Parameter Descriptions for Deleting an Active Alarm Resource**

| Parameter  | Description                                                                                                    | Value                                                                                                                                    |
|------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                       | IPv4 or IPv6 address.                                                                                                                    |
| alarm_id   | ID of the current alarms                                                                                       | -                                                                                                                                        |
| auth_value | When the DELETE request is executed, the "X-Auth-Token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |

### Usage Guidelines

None

### Example

- Request Example:

```
DELETE https://device_ip/redfish/v1/EventService/CurrentAlarms/2152
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example: None
- Response Code: 204

### Output Description

None

## 8.14 Deleting All Current Alarm Resource

### Function

Delete all current alarm resources.

### Permission Required

Security management.

### Syntax

- Operation Type: DELETE
- URL: [https://device\\_ip/redfish/v1/EventService/DeleteCurrentAlarm-all](https://device_ip/redfish/v1/EventService/DeleteCurrentAlarm-all)
- Request Header:

```
x-auth-token:auth_value
```

- Request Message Body: None

### Parameters

For the parameter descriptions for deleting all current alarm resources, refer to [Table 8-23](#).

**Table 8-23 Parameter Descriptions for Deleting All Current Alarm Resources**

| Parameter | Description                              | Value                                                 |
|-----------|------------------------------------------|-------------------------------------------------------|
| device_ip | IP address for logging in to the device. | <a href="#">IPv4</a> or <a href="#">IPv6</a> address. |

| Parameter  | Description                                                                                                    | Value                                                                                               |
|------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| auth_value | When the DELETE request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:

```
DELETE https://device_ip/redfish/v1/EventService/DeleteCurrentAlarmsAll
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example: None
- Response Code: 204

### Output Description

None

## 8.15 Querying Information About the Current Alarm Event Resource Collection

### Function

Query the information about the current alarm event resource collection.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/EventService/CurrentAlertEvents`
- Request Header:

```
X-Auth-Token: auth_value
```

- Request Message Body: None

## Parameters

For the parameter descriptions for querying the current alarm event resource collection, refer to [Table 8-24](#).

**Table 8-24 Parameter Descriptions for Querying the Current Alarm Event Resource Collection**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/EventService/CurrentAlertEvents
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#CurrentAlertsCollection.CurrentAlertEventsCollection",
 "@odata.id": "/redfish/v1/EventService/CurrentAlertEvents",
 "@odata.type": "#CurrentAlertEventsCollection.v1_0_0.CurrentAlertEventsCollection",
 "Description": "Collection of CurrentAlertEvents",
 "Id": "CurrentAlertEvents",
 "Members": [
 {
 "EventId": "1513",
 "EventTimestamp": "2024-05-07T19:37:36+0800",
 "EventType": "Alert",
 "Message": "Hard disk is missing",
 "Oem": {
 "Public": {
 "Addinfo": "Disk20 is missing assert.",
 "alarmStatus": 1,
 }
 }
 }
]
}
```

```

 "locationInfo": "Disk_20",
 "neName": "6666",
 "neType": "server",
 "neUID": null,
 "objectName": "Disk_20",
 "objectType": "Disk",
 "objectUID": "20",
 "specificProblem": "Hard disk is missing",
 "specificProblemID": "570623745"
 }
},
"severity": "Major"
},
{
"EventId": "1512",
"EventTimestamp": "2024-05-07T19:37:36+0800",
"EventType": "Alert",
"Message": "Hard disk is missing",
"Oem": {
 "Public": {
 "Addinfo": "Disk18 is missing assert.",
 "alarmStatus": 1,
 "locationInfo": "Disk_18",
 "neName": "6666",
 "neType": "server",
 "neUID": null,
 "objectName": "Disk_18",
 "objectType": "Disk",
 "objectUID": "18",
 "specificProblem": "Hard disk is missing",
 "specificProblemID": "570623745"
 }
},
"severity": "Major"
}
],
"Members@odata.count": 2,
"Name": "CurrentAlertEvents Collection"
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query the current alarm event resource collection, refer to [Table 8-25](#).

**Table 8-25 Output Descriptions for Querying the Current Alarm Event Resource Collection**

| Field               | Type   | Description                                                             |
|---------------------|--------|-------------------------------------------------------------------------|
| @odata.context      | String | OData description of the current alarm event resource collection model. |
| @odata.id           | String | Access path of the current alarm event resource collection.             |
| @odata.type         | String | Type of alarm event resource collection.                                |
| Description         | String | Description of the current alarm event resource collection.             |
| Id                  | String | ID of the current alarm event resource collection.                      |
| Name                | String | Name of the current alarm event resource collection.                    |
| Members@odata.count | Number | Number of alarm event resource members.                                 |
| Members             | Array  | Event subscription resource list                                        |
| EventId             | String | Alarm event ID.                                                         |
| EventType           | String | Alarm type.                                                             |
| EventTimestamp      | String | Event occurrence time.                                                  |
| Severity            | String | Alarm level.                                                            |
| Message             | String | Alert event message.                                                    |
| Oem.Public          | Object | -                                                                       |
| alarmStatus         | Number | Alarm status.                                                           |
| specificProblemID   | String | Alarm classification ID (alarm code).                                   |
| specificProblem     | String | Alarm classification description (alarm name).                          |
| neUID               | String | Alarm server ID (serial number of the server).                          |
| neName              | String | Alarm server name (asset number of the server).                         |

| Field        | Type   | Description                                   |
|--------------|--------|-----------------------------------------------|
| neType       | String | Type of the device where the alarm is raised. |
| objectUID    | Number | ID of the alarm part.                         |
| objectName   | String | Name of the alarm part.                       |
| objectType   | String | Type of alarm part.                           |
| locationInfo | String | Alarm positioning information.                |
| Addinfo      | String | Additional alarm information.                 |

## 8.16 Modifying Event Service Resource Information

### Function

Modify event service resource information.

### Permission Required

Basic management.

### Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/EventService](https://device_ip/redfish/v1/EventService)
- Request Header:

```
x-auth-token:auth_value
Content-Type:header_type
```

- Request Message Body:

```
{
 "DeliveryRetryAttempts" : retry_attempts,
 "DeliveryRetryIntervalSeconds" : retry_seconds
}
```

### Parameters

For a description of the parameters for modifying event service resource information, refer to [Table 8-26](#).

**Table 8-26 Parameter Descriptions for Modifying Event Service Resource Information**

| Parameter | Description                              | Value                                                 |
|-----------|------------------------------------------|-------------------------------------------------------|
| device_ip | IP address for logging in to the device. | <a href="#">IPv4</a> or <a href="#">IPv6</a> address. |

| Parameter      | Description                                                                             | Value                                                                                               |
|----------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| auth_value     | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| header_type    | Format of the request message.                                                          | application/json                                                                                    |
| retry_attempts | Maximum number of event subscription retries upon a failure.                            | Number, range: 3–1440.                                                                              |
| retry_seconds  | Interval (in seconds) at which an event is resent upon a failure.                       | Number, range: 60–3600.                                                                             |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/EventService
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body:

```
{
 "DeliveryRetryAttempts" : 40,
 "DeliveryRetryIntervalSeconds" : 60
}
```

- Response Example: None
- Response Code: 204

## Output Description

None

# Chapter 9

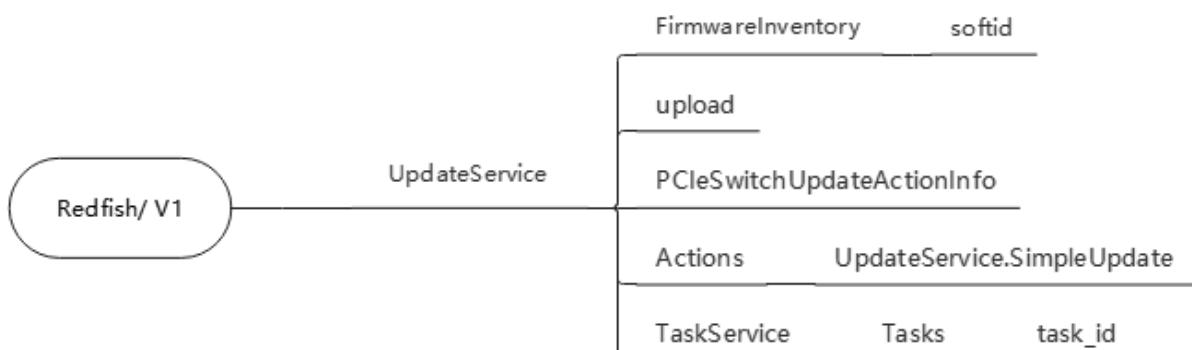
## Operations on Up- dateService Resources

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[Figure 9-1](#) shows the path requirements for the UpdateService resources supported by VANTAGEO servers.

**Figure 9-1 UpdateService Resource Path Requirements**



For a description of the properties of UpdateService resources and the operations supported by the properties, refer to [Table 9-1](#).

**Table 9-1 Descriptions of UpdateService Resources Properties**

| URL                       | Property | Description                      | Operation |
|---------------------------|----------|----------------------------------|-----------|
| /redfish/v1/UpdateService | Id       | ID of an UpdateService resource. | GET       |

| URL                                                | Property                    | Description                                                 | Operation |
|----------------------------------------------------|-----------------------------|-------------------------------------------------------------|-----------|
| /redfish/v1/UpdateService                          | Name                        | Name of the UpdateService resource.                         | GET       |
|                                                    | ServiceEnabled              | Whether the UpdateService resource is enabled.              | GET       |
|                                                    | Actions                     | Available actions for the UpdateService resource.           | GET/POST  |
|                                                    | #UpdateService.SimpleUpdate | Update operation.                                           | GET       |
|                                                    | @Redfish.ActionInfo         | Path to query the information about the update operation.   | GET       |
|                                                    | target                      | Update operation path.                                      | GET       |
|                                                    | FirmwareInventory           | Access path of the firmware information resource node.      | GET       |
| /redfish/v1/UpdateService/FirmwareInventory        | Description                 | Description of the updateable firmware resource collection. | GET       |
|                                                    | Name                        | Name of the updateable firmware resource collection.        | GET       |
|                                                    | Members@odata.count         | Number of updateable firmware resources.                    | GET       |
|                                                    | Members                     | List of updateable firmware resources.                      | GET       |
| /redfish/v1/UpdateService/FirmwareInventory/softid | Description                 | Description of the updateable firmware resource.            | GET       |
|                                                    | Id                          | ID of the specified updateable firmware resource.           | GET       |
|                                                    | Name                        | Name of the specified updateable firmware resource.         | GET       |
|                                                    | Status                      | Status of the specified updateable firmware resource.       | GET       |

| URL                                                          | Property      | Description                                                      | Operation |
|--------------------------------------------------------------|---------------|------------------------------------------------------------------|-----------|
|                                                              | Version       | Version of the specified updateable firmware resource.           | GET       |
|                                                              | Updateable    | Update status of the specified updateable firmware resource.     | GET       |
|                                                              | BuildTime     | Compilation time of the updateable firmware resource.            | GET       |
| /redfish/v1/UpdateService/Actions/UpdateService.SimpleUpdate | imageuri      | Update package path.                                             | POST      |
|                                                              | protocol      | Protocol used to download the update package.                    | POST      |
|                                                              | Oem           | Customized network services.                                     | POST      |
|                                                              | Public        | Vantageo-defined services.                                       | POST      |
|                                                              | FlashItem     | Update package type.                                             | POST      |
|                                                              | BMCFlash      | Location for saving updated <b>BMC</b> firmware.                 | POST      |
|                                                              | BiosFlash     | Location for saving updated BIOS firmware.                       | POST      |
|                                                              | PreserveConf  | Whether to BMC and <b>BIOS</b> settings are retained.            | POST      |
|                                                              | Id            | Unique ID of the specified update service resource.              | GET       |
| redfish/v1/UpdateService/PCIeSwitchUpdateActionInfo          | Name          | Name of the resource for PCIe switch firmware update.            | GET       |
|                                                              | SupportedMode | Modes supported by the resource for PCIe switch firmware update. | GET       |
|                                                              | Mode          | Mode of the resource for PCIe switch firmware update.            | GET       |

| URL                                                              | Property             | Description                                                        | Operation |
|------------------------------------------------------------------|----------------------|--------------------------------------------------------------------|-----------|
| /redfish/v1/UpdateService/Actions/UpdateService.ThirdPartyUpload | Messages             | Collection of descriptions for third-party module firmware update. | POST      |
|                                                                  | Messages.@odata.type | Type of message for third-party module firmware update.            | POST      |
|                                                                  | Messages.Message     | Information about third-party module firmware update.              | POST      |
|                                                                  | Messages.MessageArgs | Message arguments of third-party module firmware update.           | POST      |
|                                                                  | Messages.MessageId   | Message ID of third-party module firmware update.                  | POST      |
|                                                                  | Messages.Resolution  | Recommended solution.                                              | POST      |
|                                                                  | Messages.Severity    | Severity level.                                                    | POST      |
| /redfish/v1/UpdateService/Actions/UpdateService.SimpleUpdate     | Messages             | Collection of descriptions for server firmware update.             | POST      |
|                                                                  | Messages.@odata.type | Type of message for server firmware update.                        | POST      |
|                                                                  | Messages.Message     | Message for server firmware update.                                | POST      |
|                                                                  | Messages.MessageArgs | Message arguments for server firmware update.                      | POST      |
|                                                                  | Messages.MessageId   | Message ID for server firmware update.                             | POST      |
|                                                                  | Messages.Resolution  | Recommended solution.                                              | POST      |
|                                                                  | Messages.Severity    | Severity level.                                                    | POST      |
| /redfish/v1/TaskService/Tasks/task_id                            | Description          | Task description.                                                  | POST      |
|                                                                  | Id                   | Task ID.                                                           | POST      |
|                                                                  | Messages             | Collection of descriptions for task details.                       | POST      |
|                                                                  | Messages.@odata.type | Message type for the task.                                         | POST      |

| URL | Property             | Description                    | Operation |
|-----|----------------------|--------------------------------|-----------|
|     | Messages.Message     | Message for the task.          | POST      |
|     | Messages.MessageArgs | Message arguments of the task. | POST      |
|     | Messages.MessageId   | Message ID of the task.        | POST      |
|     | Messages.Resolution  | Recommended solution.          | POST      |
|     | Messages.Severity    | Severity level.                | POST      |
|     | Name                 | Task name.                     | POST      |
|     | PercentComplete      | Task progress in percentage.   | POST      |
|     | StartTime            | Task start time.               | POST      |
|     | TaskState            | Task execution status.         | POST      |
|     | TaskStatus           | Task execution result.         | POST      |

## 9.1 Querying Information About an UpdateService Resource

### Function

Query information about an UpdateService resource.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/UpdateService](https://device_ip/redfish/v1/UpdateService)
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the UpdateService resource, refer to [Table 9-2](#).

**Table 9-2 Parameter Descriptions for Querying Information About the UpdateService Resource**

| Parameter  | Parameter                                                                             | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/UpdateService
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#UpdateService.UpdateService",
 "@odata.id": "/redfish/v1/UpdateService",
 "@odata.type": "#UpdateService.v1_6_0.UpdateService",
 "Actions": {
 "#UpdateService.SimpleUpdate": {
 "@Redfish.ActionInfo": "/redfish/v1/UpdateService/UpdateService.SimpleUpdateActionInfo",
 "target": "/redfish/v1/UpdateService/Actions/Simpleupdate"
 }
 },
 "Description": "Redfish Update Service",
 "FirmwareInventory": {
 "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory"
 },
 "Id": "UpdateService",
 "Name": "Update Service",
 "ServiceEnabled": true,
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 }
}
```

```

 }
}

```

- Response Code: 200

### Output Description

For a description of the output returned when you query information about the UpdateService resource, refer to [Table 9-3](#).

**Table 9-3 Output Descriptions for Querying Information About the UpdateService Resource**

| Field                                           | Type    | Description                                                    |
|-------------------------------------------------|---------|----------------------------------------------------------------|
| @odata.context                                  | String  | OData description of a specified UpdateService resource model. |
| @odata.id                                       | String  | Access path of the specified UpdateService resource.           |
| @odata.type                                     | String  | Type of the specified UpdateService resource.                  |
| Description                                     | String  | Description of the specified update service resource.          |
| Id                                              | String  | ID of the specified UpdateService resource.                    |
| Name                                            | String  | Name of the specified UpdateService resource.                  |
| Status.Health                                   | String  | Status of the specified UpdateService resource.                |
| Status.State                                    | String  | Health of the specified UpdateService resource.                |
| ServiceEnabled                                  | Boolean | Whether the UpdateService is enabled.                          |
| Actions                                         | Object  | Available actions for the UpdateService resource.              |
| #UpdateService.SimpleUpdate.target              | String  | Update operation path.                                         |
| #UpdateService.SimpleUpdate.@Redfish.ActionInfo | String  | Path to query the information about the update operation.      |
| FirmwareInventory                               | Object  | Link to the updateable firmware resource list.                 |
| @odata.id                                       | String  | Access path of the updateable firmware resource list.          |

## 9.2 Querying Information About an Updateable Firmware Resource Collection

### Function

Query information about an updateable firmware resource collection of a server.

### Permission Required

Query.

## Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/UpdateService/FirmwareInventory](https://device_ip/redfish/v1/UpdateService/FirmwareInventory)
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

## Parameters

For a description of the parameters for querying information about the updateable firmware resource collection, refer to [Table 9-4](#).

**Table 9-4 Parameter Descriptions for Querying Information About the Updateable Firmware Resource Collection**

| Parameter  | Parameters                                                                            | Value                                                                                                                                    |
|------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                                                                    |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |

## Usage Guidelines

None

## Example

- Request Example:

GET https://device\_ip/redfish/v1/UpdateService/FirmwareInventory

- Request Header:

X-Auth-Token: 8574621d21b84756218c7456821c234

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#SoftwareInventoryCollection.SoftwareInventoryCollection",
 "@odata.id": "/redfish/v1/Updateservice/FirmwareInventory",
 "@odata.type": "#SoftwareInventoryCollection.SoftwareInventoryCollection",
 "Description": "Collection of Firmware Inventory resources available to the UpdateService",
 "Members": [
 ...
]
}
```

```
{
 "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/ActiveBMC"
},
{
 "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/ActiveBIOS"
},
{
 "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/EPLD"
},
{
 "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/MainBoardFRU"
},
{
 "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/SubCardFRU2"
}
],
"Members@odata.count": 5,
"Name": "Firmware Inventory Collection"
}
```

- Response Code: 200

## Output Description

For a description of the output returned when you query information about the updateable firmware resource collection, refer to [Table 9-5](#).

**Table 9-5 Output Descriptions for Querying Information About the Updateable Firmware Resource Collection**

| Field               | Type   | Description                                                             |
|---------------------|--------|-------------------------------------------------------------------------|
| @odata.context      | String | OData description of the updateable firmware resource collection model. |
| @odata.id           | String | Access path of the updateable firmware resource collection model.       |
| @odata.type         | String | Type of updateable firmware resource collection model.                  |
| Description         | String | Description of the updateable firmware resource collection.             |
| Name                | String | Name of the updateable firmware resource collection.                    |
| Members@odata.count | Number | Number of updateable firmware resources.                                |
| Members             | Array  | Session list.                                                           |
| @odata.id           | String | Access path of an updateable firmware resource.                         |

## 9.3 Querying Information About a Specified Updateable Firmware Resource

### Function

Query information about a specified updateable firmware resource of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** `https://device_ip/redfish/v1/UpdateService/FirmwareInventory/softid`
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

### Parameters

For a description of the parameters for querying information about a specified updateable firmware resource of a server, refer to [Table 9-6](#).

**Table 9-6 Parameter Descriptions for Querying Information About a Specified Updateable Firmware Resource**

| Parameter  | Parameters                                                                            | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| softid     | ID of the updateable firmware resource.                                               | It can be obtained from the updateable firmware resource collection.                                |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/UpdateService/FirmwareInventory/ActiveBMC
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#SoftwareInventory.SoftwareInventory",
 "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/ActiveBMC",
 "@odata.type": "#SoftwareInventory.v1_2_3.SoftwareInventory",
 "Description": "ActiveBMC",
 "Id": "ActiveBMC",
 "Name": "ActiveBMC",
 "Oem": {
 "Public": {
 "BuildTime": "Jun 28 2023"
 }
 },
 "SoftwareId": "ActiveBMC",
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 },
 "Updateable": true,
 "version": "04.22.01.93"
}
```

- Response Code: 200

## Output Description

For a description of the output returned when you query information about a specified updateable firmware resource of a server, refer to [Table 9-7](#).

**Table 9-7 Output Descriptions for Querying Information About a Specified Updateable Firmware Resource**

| Field          | Type   | Description                                            |
|----------------|--------|--------------------------------------------------------|
| @odata.context | String | OData description of the updateable firmware resource. |
| @odata.id      | String | Access path of the updateable firmware resource.       |
| @odata.type    | String | Type of updateable firmware resource.                  |
| Description    | String | Description of the updateable firmware resource.       |
| Id             | String | ID of the updateable firmware resource.                |

| Field         | Type    | Description                                                                                                                   |
|---------------|---------|-------------------------------------------------------------------------------------------------------------------------------|
| Name          | String  | Name of the updateable firmware resource.                                                                                     |
| SoftwareId    | String  | Firmware ID.                                                                                                                  |
| Status.Health | String  | Health status of the updateable firmware resource.                                                                            |
| Status.State  | String  | Status of the updateable firmware resource.                                                                                   |
| Version       | String  | Firmware version.                                                                                                             |
| Updateable    | Boolean | Whether the Update Service can update this software <ul style="list-style-type: none"> <li>• true</li> <li>• false</li> </ul> |
| BuildTime     | String  | Compilation time of the updateable firmware resource.                                                                         |

## 9.4 Updating Firmware

### Function

Update the firmware of a server.

### Permission Required

Query.

### Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/UpdateService/Actions/UpdateService/upload](https://device_ip/redfish/v1/UpdateService/Actions/UpdateService/upload)
- Request Header:

X-Auth-Token: auth\_value  
Content-Type: header\_type

- Request Message Body: In the **VALUE** column for the **UpdateFile** parameter, select the firmware update file to be uploaded. In the **VALUE** column for **OemParameters**, select the OEM parameter JSON file to be uploaded. In the **VALUE** column for **UpdateParameters**, select the update parameter JSON file to be uploaded.

### Parameters

For a description of the parameters for updating server firmware, refer to [Table 9-8](#).

**Table 9-8 Parameter Descriptions for Updating Server Firmware**

| Field            | Type                                                                                   | Description                                                                                                                                                                                                                                                                                                                                                                     |
|------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip        | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                                                                                                                                                                                                                                                                                                           |
| auth_value       | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                                                                                                                                                                                                                             |
| header_type      | Format of the request message.                                                         | application/json                                                                                                                                                                                                                                                                                                                                                                |
| UpdateFile       | File                                                                                   | Firmware update file.                                                                                                                                                                                                                                                                                                                                                           |
| OemParameters    | File                                                                                   | OEM parameter file in JSON format, including the following content: {"ImageType": "BMC", "Action": "3"}                                                                                                                                                                                                                                                                         |
| UpdateParameters | File                                                                                   | Content: <ul style="list-style-type: none"> <li>Update the active BMC: ["/redfish/v1/UpdateService/FirmwareInventory/BMC"] or {"Targets": ["/redfish/v1/UpdateService/FirmwareInventory/ActiveBMC"]}</li> <li>Update the standby BMC: {"Targets": ["/redfish/v1/UpdateService/FirmwareInventory/BackupBMC"]}</li> </ul>                                                         |
| ImageType        | String                                                                                 | Options: <ul style="list-style-type: none"> <li>BMC</li> <li>BIOS</li> <li>EPLD</li> <li>FRU</li> <li>BOOT</li> <li>EXPANDER</li> </ul> The file type is verified but not by file extension.                                                                                                                                                                                    |
| Action           | String                                                                                 | Range: When ImageType is set to BMC: <ul style="list-style-type: none"> <li>1: Only the BMC BOOT is retained.</li> <li>2: Only the BMC configuration is retained.</li> <li>3: Both BMC BOOT and configuration are retained.</li> <li>4: Neither BMC BOOT nor configuration is retained.</li> </ul> Actions supported by the BMC: 1, 2, 3, and 4. When ImageType is set to BIOS: |

| Field   | Type  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |       | <ul style="list-style-type: none"> <li>● 3: NVRAM is retained.</li> <li>● 4: NVRAM is not retained.</li> </ul> <p>Actions supported by the BIOS: 3 and 4.<br/>When <b>ImageType</b> is set to others, the Redfish interface does not parse the action setting.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Targets | Array | <p>Active and standby BMCs and BIOSs can be updated simultaneously or separately.</p> <ul style="list-style-type: none"> <li>● BMC update:           <ul style="list-style-type: none"> <li>→ Update the active BMC: {"Targets":["/redfish/v1/UpdateService/FirmwareInventory/ActiveBMC"]}</li> <li>→ Update the standby BMC: {"Targets":["/redfish/v1/UpdateService/FirmwareInventory/BackupBMC"]}</li> <li>→ Update both the active and standby BMCs: {"Targets":["/redfish/v1/UpdateService/FirmwareInventory/ActiveBMC","/redfish/v1/UpdateService/FirmwareInventory/BackupBMC"]}</li> </ul> </li> <li>● BIOS update:           <ul style="list-style-type: none"> <li>→ JSON parameters in the <i>UpdateParameters</i> file for updating a single-chip BIOS are as follows: {"Targets":["/redfish/v1/UpdateService/FirmwareInventory/BIOS"]}</li> <li>→ Update the active BIOS: {"Targets":["/redfish/v1/UpdateService/FirmwareInventory/ActiveBIOS"]}</li> <li>→ Update the standby BIOS: {"Targets":["/redfish/v1/UpdateService/FirmwareInventory/BackupBIOS"]}</li> <li>→ Update both the active and standby BIOSs: {"Targets":["/redfish/v1/UpdateService/FirmwareInventory/ActiveBIOS","/redfish/v1/UpdateService/FirmwareInventory/BackupBIOS"]}</li> </ul> </li> </ul> |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/UpdateService/Actions/UpdateService/upload
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

```
Content-Type: multipart/form-data
```

- Request Message Body: In the **VALUE** column for the **UpdateFile** parameter, select the firmware update file to be uploaded. In the **VALUE** column for **OemParameters**, select the OEM parameter JSON file to be uploaded. In the **VALUE** column for **UpdateParameters**, select the update parameter JSON file to be uploaded.

- Response Example:

```
{
 "@odata.type": "#UpdateService.v1_6_0.UpdateService",
 "Messages": [
 {
 "@odata.type": "#Message.v1_0_8.Message",
 "Message": "A new task /redfish/v1/TaskService/Tasks/1 was created.",
 "MessageArgs": [
 "/redfish/v1/TaskService/Tasks/1"
],
 "MessageId": "Task.1.0.New",
 "Resolution": "None",
 "Severity": "OK"
 },
 {
 "@odata.type": "#Message.v1_0_8.Message",
 "Message": "Device is preparing flash firmware for action
 UpdateService.MultipartPush.",
 "MessageArgs": [
 "UpdateService.MultipartPush"
],
 "MessageId": "UpdateService.1.0.PrepareUpdate",
 "Resolution": "None",
 "Severity": "OK"
 }
]
}
```

- Response Code: 202

### Output Description

None

## 9.5 Querying Information About PCIe Switch Firmware Update

### Function

Query information about PCIe switch firmware update.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/UpdateService/PCIeSwitchUpdateActionInfo`
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

### Description

For a description of the parameters for querying information about PCIe switch firmware update, refer to [Table 9-9](#).

**Table 9-9 Parameter Descriptions for Querying Information About PCIe Switch Firmware Update**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/UpdateService/PCIeSwitchUpdateActionInfo
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#UpdateService.PCIEswitchupdateActionInfo",
 "@odata.id": "/redfish/v1/UpdateService/PCIEswitchUpdateActionInfo",
 "@odata.type": "PCIeSwitchUpdateActionInfo.v1_0_0.PCIeSwitchUpdateActionInfo",
 "Id": "PCIeSwitchUpdateActionInfo",
 "Name": "Pcie Switch Update Service",
 "SupportedMode": ["Balance", "Cascade", "Normal"],
 "Mode": "Cascade"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query PCIe switch firmware update, refer to [Table 9-10](#).

**Table 9-10 Output Descriptions for Querying Information About PCIe Switch Firmware Update**

| Field          | Type   | Description                                                                                                                                                |
|----------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context | String | OData description of the PCIe-switch-firmware-update service model.                                                                                        |
| @odata.id      | String | Access path of the service for PCIe switch firmware update.                                                                                                |
| @odata.type    | String | Type of service for PCIe switch firmware update.                                                                                                           |
| Id             | String | Unique ID of the service for PCIe switch firmware update.                                                                                                  |
| Name           | String | Name of the service for PCIe switch firmware update.                                                                                                       |
| Mode           | String | Mode used by the service for PCIe switch firmware update. <ul style="list-style-type: none"> <li>• Cascade</li> <li>• Balance</li> <li>• Normal</li> </ul> |

## 9.6 Updating Third-Party Module Firmware

### Function

Update third-party module firmware.

### Permission Required

Query.

### Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/UpdateService/Actions/UpdateService.ThirdPartyUpload](https://device_ip/redfish/v1/UpdateService/Actions/UpdateService.ThirdPartyUpload)
- Request Header:

```
X-Auth-Token: auth_value
Content-Type: header_type
```

- Request Message Body:

```
updateFile: file_value,
UpdateParameters: update_parameters_file_value,
OemParameters: oem_parameters_file_value
```

### Description

For a description of the parameters for updating third-party module firmware, refer to [Table 9-11](#).

**Table 9-11 Parameter Descriptions for Updating Third-Party Module Firmware**

| Parameter   | Setting                                                                                | Value                                                                                                                                    |
|-------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                                                                    |
| auth_value  | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |
| header_type | Format of the request message.                                                         | application/json                                                                                                                         |
| file_value  | Firmware update file to be uploaded.                                                   | Only the firmware type is checked. No applicable model is checked.                                                                       |

| Parameter                     | Setting                                                  | Value                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| oem_parameter-s_file_value    | JSON file for the OEM parameters to be uploaded.         | Contents: {"ImageType":"UBB_E-PLD"}, {"ImageType":"UBB_RETIMER"}, {"ImageType":"UBB_OAM"}, {"ImageType":"UBB_BMC"}                                                                                                                                                                                                                                                                                 |
| update_parameter-s_file_value | JSON file for firmware update parameters to be uploaded. | Content: {"Targets":["/redfish/v1/UpdateService/FirmwareInventory/UBB_E-PLD"]}<br>{"Targets":["/redfish/v1/UpdateService/FirmwareInventory/UBB_RETIMER"]}<br>{"Targets":["/redfish/v1/UpdateService/FirmwareInventory/UBB_OAM"]}<br>{"Targets":["/redfish/v1/UpdateService/FirmwareInventory/UBB_BMC"]}                                                                                            |
| ImageType                     | String                                                   | Range: <ul style="list-style-type: none"><li>● UBB_EPLD</li><li>● UBB_RETIMER</li><li>● UBB_OAM</li><li>● UBB_BMC</li></ul>                                                                                                                                                                                                                                                                        |
| Targets                       | Array                                                    | EPLD of the third-party module to be updated.<br>{"Targets":["/redfish/v1/UpdateService/FirmwareInventory/UBB_EPLD"]}<br>Retimer of the third-party module to be updated.<br>{"Targets":["/redfish/v1/UpdateService/FirmwareInventory/UBB_RETIMER"]}<br>{"Targets":["/redfish/v1/UpdateService/FirmwareInventory/UBB_OAM"]}<br>{"Targets":["/redfish/v1/UpdateService/FirmwareInventory/UBB_BMC"]} |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/UpdateService/Actions/UpdateService.ThirdPartyUpload
```

- Request Header:

```
POST https://device_ip/redfish/v1/UpdateService/Actions/UpdateService.ThirdPartyUpload
```

- Request Message Body: In the **VALUE** column for the **UpdateFile** parameter, select the firmware update file to be uploaded. In the **VALUE** column for **OemParameters**, select the OEM parameter JSON file to be uploaded. In the **VALUE** column for **UpdateParameters**, select the update parameter JSON file to be uploaded.

```
UpdateFile: pt516_x16_reversed_usp_p8_dspp_p9_icc0-SDPP_FORCE_G5_P9_ACS-816_v2.json,
updateParameters: UpdateParameters2.json,
OemParameters: OemParameters2.json
```

- Response Example:

```
{
 "@odata.type": "#UpdateService.v1_6_0.UpdateService",
 "Messages": [
 {
 "@odata.type": "#Message.v1_0_8.Message",
 "Message": "A new task /redfish/v1/TaskService/Tasks/1 was created.",
 "MessageArgs": [
 "/redfish/v1/TaskService/Tasks/1"
],
 "MessageId": "Task.1.0.New",
 "Resolution": "None",
 "Severity": "OK"
 },
 {
 "@odata.type": "#Message.v1_0_8.Message",
 "Message": "Device is preparing flash firmware for action UpdateService.MultipartPush.",
 "MessageArgs": [
 "UpdateService.MultipartPush"
],
 "MessageId": "UpdateService.1.0.PrepareUpdate",
 "Resolution": "None",
 "Severity": "OK"
 }
]
}
```

- Response code: 202

## Output Description

For a description of the output returned when you update third-party module firmware, refer to [Table 9-12](#).

**Table 9-12 Output Descriptions for Updating Third-Party Module Firmware**

| Field                | Type   | Description                                                                                                        |
|----------------------|--------|--------------------------------------------------------------------------------------------------------------------|
| @odata.type          | String | Type of message for third-party module firmware update.                                                            |
| Messages             | Array  | Collection of descriptions for third-party module firmware update.                                                 |
| Messages.@odata.type | String | Type of message for third-party module firmware update.                                                            |
| Messages.Message     | String | Information about third-party module firmware update.                                                              |
| Messages.MessageArgs | Array  | Message arguments of third-party module firmware update.                                                           |
| Messages.MessageId   | String | Message ID of third-party module firmware update.                                                                  |
| Messages.Resolution  | String | Recommended solution.                                                                                              |
| Messages.Severity    | String | Severity level. Options: <ul style="list-style-type: none"><li>● OK</li><li>● Warning</li><li>● Critical</li></ul> |

## 9.7 Uploading a Firmware File to a Server

### Function

Upload a firmware file to a specified server.

### Permission Required

Basic management.

### Syntax

- Operation Type: POST
- **URL:** `https://device_ip/redfish/v1/UpdateService/FirmwareInventory`
- Request Header:

X-Auth-Token: auth\_value  
Content-Type: header\_type

- Request Message Body:

```
{
 "fwimage" : fwimage_file
}
```

## Parameters

For a description of the parameters for uploading a firmware file to the server, refer to [Table 9-13](#).

**Table 9-13 Parameter Descriptions for Uploading a Firmware File to the Server**

| Parameter    | Setting                                                                                | Value                                                                                               |
|--------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip    | IP address for logging in to the device.                                               | IPv4 or IPv6 address.                                                                               |
| auth_value   | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| header_type  | Format of the request message.                                                         | application/json                                                                                    |
| fwimage_file | Firmware update file to be uploaded.                                                   | Only the firmware type is checked. No applicable model is checked.                                  |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/UpdateService/FirmwareInventory
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: multipart/form-data
```

- Request Message Body: In the **VALUE** column for the **fwimage** parameter, select the firmware update file to be uploaded.
- Response Example: None
- Response code: 204

## Output Description

None

# 9.8 Updating the Firmware of a Server

## Function

Update the firmware of a server.

## Permission Required

Basic management.

## Syntax

- Operation Type: POST
- URL: [https://device\\_ip/redfish/v1/UpdateService/Actions/UpdateService.SimpleUpdate](https://device_ip/redfish/v1/UpdateService/Actions/UpdateService.SimpleUpdate)
- Request Header:

```
X-Auth-Token: auth_value
Content-Type: header_type
```

- Request Message Body:

```
{
 "TransferProtocol":TransferProtocol_value,
 "ImageURI":ImageURI_value,
 "Oem":{
 "Public":{
 "FlashItem":FlashItem_value,
 "BMCFlash":BMCFlash_value,
 "BiosFlash":BiosFlash_value,
 "PreserveConf":PreserveConf_value
 }
 }
}
```

## Parameters

For a description of the parameters for updating the firmware of the specified server, refer to [Table 9-14](#).

**Table 9-14 Parameter Descriptions for Updating the Firmware of the Specified Server**

| Parameter              | Setting                                                                                | Value                                                                                                                                    |
|------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip              | IP address for logging in to the device.                                               | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                                                    |
| auth_value             | X-Auth-Token value contained in Request Header in the POST request for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |
| header_type            | Format of the request message.                                                         | application/json                                                                                                                         |
| TransferProtocol_value | String                                                                                 | Protocol used to download the update package: <a href="#">HTTPS</a>                                                                      |

| Parameter          | Setting | Value                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |         | Note: For local update, this parameter does not need to be set.                                                                                                                                                                                                                                                                                                                                                                    |
| ImageURI_value     | String  | <a href="#">URI</a> for the firmware update file.<br>Note: This parameter is used for remote update. For local update, this parameter does not need to be set.                                                                                                                                                                                                                                                                     |
| FlashItem_value    | String  | Update package type, which is not required for the default user for <a href="#">PCIe</a> switch firmware update.<br>Range: <ul style="list-style-type: none"> <li>● <a href="#">BMC</a></li> <li>● <a href="#">BIOS</a></li> <li>● <a href="#">EPLD</a></li> <li>● <a href="#">FRU</a></li> <li>● <a href="#">BOOT</a></li> <li>● <a href="#">EXPANDER</a></li> <li>● <a href="#">VR</a></li> <li>● <a href="#">PSU</a></li> </ul> |
| BMCFetch_value     | String  | BMCFetch update option. <b>BMCFetch_value</b> and <b>BiosFetch_value</b> cannot be both configured. Options: <ul style="list-style-type: none"> <li>● Flash1: active BMC</li> <li>● Flash2: standby BMC</li> <li>● Both: active and standby BMCS</li> </ul>                                                                                                                                                                        |
| BiosFetch_value    | String  | BIOS fetch update option. <b>BMCFetch_value</b> and <b>BiosFetch_value</b> cannot be both configured. Options: <ul style="list-style-type: none"> <li>● Flash1: active BIOS</li> <li>● Flash2: standby BIOS</li> <li>● Both: active and standby BIOSs</li> </ul>                                                                                                                                                                   |
| PreserveConf_value | Boolean | Whether the original configuration is kept during the update process: <ul style="list-style-type: none"> <li>● true: yes</li> <li>● false: no</li> </ul>                                                                                                                                                                                                                                                                           |

### Usage Guidelines

None

### Example

- Request Example:

```
POST https://device_ip/redfish/v1/UpdateService/Actions/UpdateService.SimpleUpdate
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: application/json
```

- Request Message Body:

```
{
 "TransferProtocol": "HTTPS",
 "ImageURI": "https://192.168.1.5/bmcdata/BMC_2240-RE_A6_R_V04.23.01.01T1_20230516085914.UBF",
 "Oem": {
 "Public": {
 "FlashItem": "BMC",
 "BMCFlash": "Flash1",
 "PreserveConf": true
 }
 }
}
```

- Response Example:

```
{
 "@odata.type": "#UpdateService.v1_6_0.UpdateService",
 "Messages": [
 {
 "@odata.type": "#Message.v1_0_8.Message",
 "Message": "A new task /redfish/v1/TaskService/Tasks/1 was created.",
 "MessageArgs": [
 "/redfish/v1/TaskService/Tasks/1"
],
 "MessageId": "Task.1.0.New",
 "Resolution": "None",
 "Severity": "OK"
 },
 {
 "@odata.type": "#Message.v1_0_8.Message",
 "Message": "Device is preparing flash firmware for action updateService.simpleupdate.",
 "MessageArgs": [
 "updateService.SimpleUpdate"
],
 "MessageId": "UpdateService.1.0.PrepareUpdate",
 "Resolution": "None",
 "Severity": "OK"
 }
]
}
```

```

 "Severity": "OK"
 }
]
}

```

- Response code: 202

### Output Description

For a description of the output returned when you update the firmware of the server, refer to [Table 9-15](#).

**Table 9-15 Output Descriptions for Updating the Firmware of the Server**

| Field                | Type   | Description                                                                                                            |
|----------------------|--------|------------------------------------------------------------------------------------------------------------------------|
| @odata.type          | String | Type of the server firmware update resource.                                                                           |
| Messages             | Array  | Collection of descriptions for server firmware update.                                                                 |
| Messages.@odata.type | String | Type of message for server firmware update.                                                                            |
| Messages.Message     | String | Message for server firmware update.                                                                                    |
| Messages.MessageArgs | Array  | Message arguments for server firmware update.                                                                          |
| Messages.MessageId   | String | Message ID for server firmware update.                                                                                 |
| Messages.Resolution  | String | Recommended solution.                                                                                                  |
| Messages.Severity    | String | Severity level. Options: <ul style="list-style-type: none"> <li>• OK</li> <li>• Warning</li> <li>• Critical</li> </ul> |

## 9.9 Querying Information About a Specified Task

### Function

Query information about a specified task.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/TaskService/Tasks/task\\_id](https://device_ip/redfish/v1/TaskService/Tasks/task_id)
- Request Header:

```
X-Auth-Token: auth_value
```

- Request Message Body: None

### Description

For a description of the parameters for querying information about the specified task, refer to [Table 9-16](#).

**Table 9-16 Parameter Descriptions for Querying Information About the Specified Task**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| task_id    | Task ID.                                                                              | Included in the response message body returned when the task was created successfully.              |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1TaskService/Tasks/1
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Task.Task",
 "@odata.id": "/redfish/v1/TaskService/Tasks/1",
 "@odata.type": "#Task.v1_4_2.Task",
 "Description": "Task for update Service Task",
 "Id": "1",
 "Messages": [
 {
 "@odata.type": "#Message.v1_0_8.Message",
 "Message": "Task /redfish/v1/Updateservice/upload is running normally.",
 "MessageArgs": [
 "/redfish/v1/Updateservice/upload"
],
 },
],
}
```

```

 "MessageId": "Task.1.0.Running",
 "Resolution": "None",
 "Severity": "OK"
 },
 {
 "@odata.type": "#Message.v1_0_8.Message",
 "Message": "Device is flashing firmware for action /redfish/v1/
updateService/upload.",
 "MessageArgs": [
 "/redfish/v1/updateService/upload"
],
 "MessageId": "UpdateService.1.0.FlashFirmware",
 "Resolution": "None",
 "Severity": "OK"
 }
],
{
 "Name": "Update Service Task",
 "PercentComplete": 21,
 "StartTime": "2024-09-13T17:59:34+08:00",
 "TaskState": "Running",
 "TaskStatus": "OK"
}
]

```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the specified task, refer to [Table 9-17](#).

**Table 9-17 Output Descriptions for Querying Information About the Specified Task**

| Field                | Type   | Description                                   |
|----------------------|--------|-----------------------------------------------|
| @odata.context       | String | OData description of the task resource model. |
| @odata.id            | String | Access path of the task resource.             |
| @odata.type          | String | Type of task resource.                        |
| Description          | String | Description.                                  |
| Id                   | String | Task ID.                                      |
| Messages             | Array  | Collection of descriptions for task details.  |
| Messages.@odata.type | String | Message type for the task.                    |
| Messages.Message     | String | Message for the task.                         |
| Messages.MessageArgs | Array  | Message arguments of the task.                |

| Field               | Type   | Description                                                                                                        |
|---------------------|--------|--------------------------------------------------------------------------------------------------------------------|
| Messages.MessageId  | String | Message ID of the task.                                                                                            |
| Messages.Resolution | String | Recommended solution.                                                                                              |
| Messages.Severity   | String | Severity level. Options: <ul style="list-style-type: none"><li>● OK</li><li>● Warning</li><li>● Critical</li></ul> |
| Name                | String | Task name.                                                                                                         |
| PercentComplete     | Number | Task progress in percentage.                                                                                       |
| StartTime           | String | Task start time.                                                                                                   |
| TaskState           | String | Task execution status.                                                                                             |
| TaskStatus          | String | Task execution result.                                                                                             |

# Chapter 10

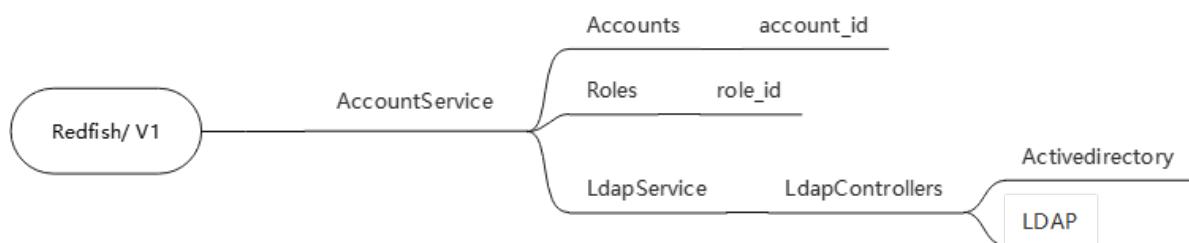
## Operations on AccountService Resources

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[Figure 10-1](#) shows the path requirements for the AccountService resources supported by VANTAGEO servers

**Figure 10-1 AccountServic Resource Path Requirements**



For a description of properties of AccountService resources and operations supported by the properties, refer to [Table 10-1](#).

**Table 10-1 Descriptions of AccountService Resources Properties**

| URL                                            | Property                         | Description                                                                                                                                            | Operation |
|------------------------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| /redfish/v1/AccountService                     | Id                               | ID of the AccountService resource.                                                                                                                     | GET       |
|                                                | Name                             | Name of the AccountService resource.                                                                                                                   | GET       |
|                                                | MinPasswordLength                | Minimum password length.                                                                                                                               | GET       |
|                                                | MaxPasswordLength                | Maximum password length.                                                                                                                               | GET       |
|                                                | AccountLockoutThreshold          | Maximum number of incorrect password attempts.                                                                                                         | GET       |
|                                                | AccountLockoutDuration           | Account lockout duration after a user login failure.                                                                                                   | GET       |
|                                                | AccountLockoutCounter-ResetAfter | Time after which account lockout counter is reset.                                                                                                     | GET       |
|                                                | Roles                            | Role resources.                                                                                                                                        | GET       |
|                                                | Accounts                         | User resources.                                                                                                                                        | GET       |
|                                                | Status                           | Status of the specified resource, including: <ul style="list-style-type: none"><li>● Status: enabling status</li><li>● Health: health status</li></ul> | GET       |
| /redfish/v1/AccountService/Accounts            | SSHAdministratorUserName         | Username of the <a href="#">SSH</a> administrator.                                                                                                     | GET       |
|                                                | OSUserManagementEnabled          | Whether permission to inband management is enabled.                                                                                                    | GET       |
|                                                | Name                             | Name of the account resource.                                                                                                                          | GET       |
|                                                | Members@odata.count              | Number of account members.                                                                                                                             | GET       |
| /redfish/v1/AccountService/Accounts/account_id | Members                          | User list, which provides references to all user URLs.                                                                                                 | GET       |
|                                                | Id                               | <a href="#">ID</a> of the specified user resource.                                                                                                     | POST      |
|                                                | Id                               | ID of the specified user resource.                                                                                                                     | GET       |
|                                                | Name                             | Name of the account resource.                                                                                                                          | GET       |
|                                                | UserName                         | Username of the account.                                                                                                                               | GET/PATCH |
|                                                | Password                         | User password.                                                                                                                                         | GET/PATCH |
|                                                | RoleId                           | Role resource ID in the account configuration.                                                                                                         | GET/PATCH |

| URL                                                         | Property            | Description                                           | Operation |
|-------------------------------------------------------------|---------------------|-------------------------------------------------------|-----------|
|                                                             | Locked              | Locked state of the account.                          | GET/PATCH |
|                                                             | Enabled             | Whether the account is enabled.                       | GET/PATCH |
|                                                             | Links               | Links to the user resource.                           | GET       |
|                                                             | Roles               | Links to the roles corresponding to the user.         | GET       |
| /redfish/v1/AccountService/Roles                            | Name                | Name of the role resource.                            | GET       |
|                                                             | Members@odata.count | Number of current roles.                              | GET       |
|                                                             | Members             | -                                                     | GET       |
| /redfish/v1/AccountService/Roles/role_id                    | Id                  | ID of the specified role resource.                    | GET       |
|                                                             | Name                | Name of the specified role resource.                  | GET       |
|                                                             | IsPredefined        | Whether the specified role is pre-defined.            | GET       |
|                                                             | AssignedPrivileges  | Privileges assigned to the specified role.            | GET       |
|                                                             | OemPrivileges       | Customized privileges assigned to the specified role. | GET       |
| /redfish/v1/AccountService/LdapService                      | Id                  | ID of the <a href="#">LDAP</a> service resource.      | GET       |
|                                                             | Name                | Name of the LDAP service resource.                    | GET       |
| redfish/v1/AccountService/LdapService/LdapControllers       | Name                | Name of the LDAP domain controller set.               | GET       |
|                                                             | Members             | LDAP controller member list.                          | GET       |
| /AccountService/LdapService/LdapControllers/Activedirectory | Id                  | ID of the Active Directory information resource.      | GET/PATCH |
|                                                             | Name                | Name of the Active Directory information resource.    | GET/PATCH |
|                                                             | GroupLoginInterface | Access permission.                                    | GET/PATCH |
|                                                             | GroupRole           | Role group permission.                                | GET/PATCH |
|                                                             | MemberId            | Role group ID: 0-4                                    | GET/PATCH |
|                                                             | GroupDomain         | Group domain                                          | GET/PATCH |
| /redfish/v1/AccountService/LdapService/LdapControllers/LDAP | BindDN              | Bound DN.                                             | GET/PATCH |
|                                                             | CommonNameType      | Common name types, including:<br>● IP                 | GET/PATCH |

| URL | Property                 | Description                                                                                                                                  | Operation |
|-----|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|     |                          | <ul style="list-style-type: none"> <li>● FQDN</li> </ul>                                                                                     |           |
|     | EncryptionType           | Encryption type. Options:<br><ul style="list-style-type: none"> <li>● NoEncryption</li> <li>● SSL</li> <li>● StartTLS</li> </ul>             | GET/PATCH |
|     | LDAPAuthenticationEnable | Whether LDAP authentication is enabled.                                                                                                      | GET/PATCH |
|     | LDAPRoleGroups           | LDAP role group.                                                                                                                             | GET/PATCH |
|     | GroupName                | Group name.                                                                                                                                  | GET/PATCH |
|     | GroupDomain              | Group domain.                                                                                                                                | GET/PATCH |
|     | GroupLoginInterface      | Access permission, options:<br><ul style="list-style-type: none"> <li>● KVM</li> <li>● VMedia</li> </ul>                                     | GET/PATCH |
|     | GroupRole                | Role group permission, options:<br><ul style="list-style-type: none"> <li>● Administrator</li> <li>● Operator</li> <li>● ReadOnly</li> </ul> | GET/PATCH |
|     | MemberId                 | Role group ID.                                                                                                                               | GET/PATCH |
|     | Name                     | Name of the LDAP information resource.                                                                                                       | GET/PATCH |
|     | Password                 | Password, which is displayed as null.                                                                                                        | GET/PATCH |
|     | Port                     | Port number.                                                                                                                                 | GET/PATCH |
|     | SearchBase               | Search base.                                                                                                                                 | GET/PATCH |
|     | ServerAddress            | Server address.                                                                                                                              | GET/PATCH |
|     | UserLoginAttribute       | User login attributes, options:<br><ul style="list-style-type: none"> <li>● uid</li> <li>● cn</li> </ul>                                     | GET/PATCH |

## 10.1 Querying User Service Information

### Function

Query the current user service information about a server, including the password length, the maximum number of incorrect password attempts, and the lockout duration.

## Permission Required

Query.

## Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/AccountService](https://device_ip/redfish/v1/AccountService)
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

## Parameter Descriptions

For a description of the parameters for querying the user service information, refer to [Table 10-2](#).

**Table 10-2 Parameter Descriptions for Querying User Service Information**

| Parameter  | Description                                                                           | Value                                                                                                                                    |
|------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                                                                    |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/AccountService
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#AccountService.AccountService",
 "@odata.id": "/redfish/v1/AccountService",
 "@odata.type": "#AccountService.v1_2_2.AccountService",
 "AccountLockoutDuration": 180,
```

```

 "AccountLockoutThreshold": 3,
 "Accounts": {
 "@odata.id": "/redfish/v1/AccountService/Accounts"
 },
 "Description": "BMC User Accounts",
 "Id": "AccountService",
 "MaxPasswordLength": 20,
 "MinPasswordLength": 5,
 "Name": "Account Service",
 "Roles": {
 "@odata.id": "/redfish/v1/AccountService/Roles"
 },
 "ServiceEnabled": true,
 "Status": {
 "Health": "OK",
 "State": "Enabled"
 }
}
{
 "Oem": {
 "Public": {
 "SSHAdministratorUserName": "sysadmin",
 "OSUserManagementEnabled": true
 }
 }
}
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you query user service information, refer to [Table 10-3](#).

**Table 10-3 Output Descriptions for Querying User Service Information**

| Field          | Type   | Description                                             |
|----------------|--------|---------------------------------------------------------|
| @odata.context | String | OData description of the AccountService resource model. |
| @odata.id      | String | Access path of the AccountService resource node.        |
| @odata.type    | String | Type of AccountService resource.                        |
| Description    | String | Description of the AccountService resource.             |
| Id             | String | ID of the AccountService resource.                      |
| Name           | String | Name of the AccountService resource.                    |

| Field                           | Type    | Description                                                                                       |
|---------------------------------|---------|---------------------------------------------------------------------------------------------------|
| MinPasswordLength               | Number  | Minimum password length.                                                                          |
| MaxPasswordLength               | Number  | Maximum password length.                                                                          |
| AccountLockoutThreshold         | Number  | Maximum number of incorrect password attempts, range: 1–10.                                       |
| AccountLockoutDuration          | Number  | Lockout duration after a login failure, range: 60-3600 (It must be a multiple of 60), in seconds. |
| AccountLockoutCounterResetAfter | Number  | Time after which account lockout counter is reset.                                                |
| Roles                           | Object  | Role resources.                                                                                   |
| @odata.id                       | String  | Access path of the role resource node.                                                            |
| ServiceEnabled                  | Boolean | Whether the AccountService resource is enabled.                                                   |
| Accounts                        | Object  | User resources.                                                                                   |
| @odata.id                       | String  | Access path of the Account resource node.                                                         |
| Status.Health                   | String  | Health status of the AccountService resource resource.                                            |
| Status.State                    | String  | Status of the AccountService resource.                                                            |
| SSHAdministratorUserName        | String  | Username of the <a href="#">SSH</a> administrator.                                                |
| OSUserManagementEnabled         | Boolean | Whether permission to inband management is enabled.                                               |

## 10.2 Modifying User Service Information

### Function

Modify the current user service information about a server, including the maximum number of incorrect password attempts, and the lockout duration.

### Permission Required

User Configuration

### Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/AccountService](https://device_ip/redfish/v1/AccountService)

- Request Header:

```
X-Auth-Token: auth_value
Content-Type: header_type
If-Match: ifmatch_value
```

- Request Message Body:

→ User information modification:

```
{
 "AccountLockoutThreshold":count,
 "AccountLockoutDuration":time
}
```

→ [SSH administrator password modification:](#)

```
{
 "Oem":{
 "Public":{
 "SSHAdministratorPassword": password
 }
 }
}
```

→ Modification of the inband management permission flag:

```
{
 "Oem":{
 "Public":{
 "OSUserManagementEnabled": flag
 }
 }
}
```

## Parameter Descriptions

For a description of the parameters for modifying user service information, refer to [Table 10-4](#).

**Table 10-4 Parameter Descriptions for Modifying User Service Information**

| Parameter   | Description                                       | Value                                                                                               |
|-------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.          | IPv4 or IPv6 address.                                                                               |
| auth_value  | Authentication parameters of the request message. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| header_type | Format of the request message.                    | application/json                                                                                    |

| Parameter     | Description                                               | Value                                                                                                                                 |
|---------------|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| ifmatch_value | Parameters matching the request message.                  | Perform the GET operation on the related resource and obtain the value from the ETag parameter in the header of the response message. |
| count         | Maximum number of incorrect password attempts.            | Integer, range: 0–10.                                                                                                                 |
| time          | Duration for which a user is locked upon a login failure. | Range: 60–3600 (It must be a multiple of 60), unit: seconds.                                                                          |
| password      | <a href="#">SSH</a> administrator password.               | 8–64 characters.                                                                                                                      |
| flag          | Whether permission to inband management is enabled.       | <ul style="list-style-type: none"> <li>• true</li> <li>• false</li> </ul>                                                             |

## Usage Guidelines

For a specified user, multiple properties in the request message body can be modified at the same time.

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/AccountService
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: application/json
```

- Request Message Body:

```
{
 "AccountLockoutThreshold":8,
 "AccountLockoutDuration": 3
}
```

→ SSH administrator password modification:

```
{
 "Oem":{
 "Public":{
 "SSHAdministratorPassword": "Superuser9!"
 }
 }
}
```

- Modification of the inband management permission flag:

```
{
 "Oem": {
 "Public": {
 "OSUserManagementEnabled": true
 }
 }
}
```

- Response Example: None
- Response Code: 204

#### Output Description

None

## 10.3 Querying Information About the User Resource Collection

#### Function

Query information about the user resource collection of a server.

#### Permission Required

Query.

#### Syntax

- Operation Type: GET
- **URL:** *https://device\_ip/redfish/v1/AccountService/Accounts*
- Request Header:

```
X-Auth-Token: auth_value
```

- Request Message Body: None

#### Parameters

For a description of the parameters for querying information about the user resource collection, refer to [Table 10-5](#).

**Table 10-5 Parameter Descriptions for Querying Information About the User Resource Collection**

| Parameter | Description                              | Value                                                 |
|-----------|------------------------------------------|-------------------------------------------------------|
| device_ip | IP address for logging in to the device. | <a href="#">IPv4</a> or <a href="#">IPv6</a> address. |

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/AccountService/Accounts
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#ManagerAccountCollection.ManagerAccountCollection",
 "@odata.id": "/redfish/v1/AccountService/Accounts",
 "@odata.type": "#ManagerAccountCollection.ManagerAccountCollection",
 "Members": [
 {
 "@odata.id": "/redfish/v1/AccountService/Accounts/2"
 },
 {
 "@odata.id": "/redfish/v1/AccountService/Accounts/3"
 }
],
 "Members@odata.count": 2,
 "Name": "Accounts Collection"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the user resource collection, refer to [Table 10-6](#).

**Table 10-6 Output Descriptions for Querying Information About the User Resource Collection**

| Field               | Type   | Description                                      |
|---------------------|--------|--------------------------------------------------|
| @odata.context      | String | OData description of the account resource model. |
| @odata.id           | String | Access path of the account resource node.        |
| @odata.type         | String | Type of account resource.                        |
| Name                | String | Name of the account resource.                    |
| Members@odata.count | Number | Number of account members.                       |
| Members             | Array  | User list.                                       |
| @odata.id           | String | Access path of a single account resource node.   |

## 10.4 Querying Information About a Specified Account Resource

### Function

Query information about a specified account resource of a server.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/AccountService/Accounts/account\\_id](https://device_ip/redfish/v1/AccountService/Accounts/account_id)
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the specified account resource, refer to [Table 10-7](#).

**Table 10-7 Parameter Descriptions for Querying Information About the Specified Account Resource**

| Parameter  | Description                                                                           | Value                                                                                                                                    |
|------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                                                                    |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |

| Parameter  | Description    | Value                                      |
|------------|----------------|--------------------------------------------|
| account_id | Subscriber ID. | It can obtained by querying the user list. |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/AccountService/Accounts/2
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#ManagerAccount.ManagerAccount",
 "@odata.id": "/redfish/v1/AccountService/Accounts/2",
 "@odata.type": "/redfish/v1/$metadata#ManagerAccount.ManagerAccount",
 "Name": "User Account",
 "Id": "2",
 "Enabled": true,
 "Links": {
 "Roles": {
 "@odata.id": "/redfish/v1/AccountService/Roles/Administrator"
 }
 },
 "RoleId": "Administrator",
 "UserName": "Administrator",
 "Locked": false
}
```

- Status Code: 200

## Output Description

a description of the output returned when you query information about the specified account resource, refer to [Table 10-8](#).

**Table 10-8 Output Descriptions for Querying Information About the Specified Account Resource**

| Field          | Type    | Description                                                    |
|----------------|---------|----------------------------------------------------------------|
| @odata.context | String  | OData description of the specified account resource model.     |
| @odata.id      | String  | Access path of the specified account resource node.            |
| @odata.type    | String  | Type of the specified account resource.                        |
| Id             | String  | ID of the specified account resource.                          |
| Name           | String  | Name of the account resource.                                  |
| Enabled        | Boolean | Whether the account is enabled resource.                       |
| Links          | Object  | Links to the account resource.                                 |
| Roles          | Object  | Links to the roles corresponding to the account resource.      |
| Locked         | Boolean | Locked state of the account resource.                          |
| RoleId         | String  | Role resource ID in the account configuration.                 |
| UserName       | String  | Username of the account resource.                              |
| @odata.id      | String  | Access path of the role corresponding to the account resource. |

## 10.5 Creating an Account

### Function

Create an account.

### Permission Required

User management.

### Syntax

- Operation Type: POST
- URL: *https://device\_ip/redfish/v1/AccountService/Accounts*
- Request Header:

X-Auth-Token: auth\_value  
Content-Type: header\_type

- Request Message Body:

{

```

 "UserName": name,
 "Password": password,
 "RoleId": role,
 "Id" : id
}

```

## Parameters

For the parameter descriptions for creating an account, refer to [Table 10-9](#).

**Table 10-9 Parameter Descriptions for Creating an Account**

| Parameter   | Description                                                                                                  | Value                                                                                                                                                                                               |
|-------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                                                     | IPv4 or IPv6 address.                                                                                                                                                                               |
| header_type | Format of the request message.                                                                               | application/json                                                                                                                                                                                    |
| auth_value  | When the post request is executed, the "X-Auth-Token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions.                                                                                                               |
| name        | Username of the new account.                                                                                 | A string of 4–16 characters.                                                                                                                                                                        |
| password    | Password of the new account.                                                                                 | A string of 8–16 characters.                                                                                                                                                                        |
| role        | Role of the new account.                                                                                     | Available role types include: <ul style="list-style-type: none"> <li>● Administrator</li> <li>● Operator</li> <li>● User</li> <li>● OEM1</li> <li>● OEM2</li> <li>● OEM3</li> <li>● OEM4</li> </ul> |
| id          | Account ID.                                                                                                  | String, range: 2–16 characters.                                                                                                                                                                     |

## Usage Guidelines

None

## Example

- Request Example:

```
POST https://device_ip/redfish/v1/AccountService/Accounts
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

```
Content-Type: application/json
```

- Request Message Body:

```
{
 "Id": "7",
 "UserName": "test77",
 "Password": "Superuser9!",
 "RoleId": "Administrator"
}
```

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#ManagerAccount.ManagerAccount",
 "@odata.id": "/redfish/v1/AccountService/Accounts/7",
 "@odata.type": "#ManagerAccount.v1_1_1.ManagerAccount",
 "Name": "User Account",
 "Enabled": true,
 "Id": "7",
 "Links": {
 "Roles": {
 "@odata.id": "/redfish/v1/AccountService/Roles/Administrator"
 }
 },
 "Locked": false,
 "RoleId": "Administrator",
 "UserName": "test77"
}
```

- Response code: 201

## Output Description

a description of the output returned when you create an account, refer to [Table 10-10](#).

**Table 10-10 Output Descriptions for Creating an Account**

| Field          | Type   | Description                                                |
|----------------|--------|------------------------------------------------------------|
| @odata.context | String | OData description of the specified account resource model. |
| @odata.id      | String | Access path of the specified account resource node.        |
| @odata.type    | String | Type of the specified account resource.                    |
| Id             | String | ID of the specified user resource.                         |
| Name           | String | Name of the account resource.                              |

| Field     | Type    | Description                                                                                                                                                                                    |
|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Enabled   | Boolean | Whether the account is enabled.                                                                                                                                                                |
| Links     | Object  | Links to the account resource.                                                                                                                                                                 |
| Roles     | Object  | Links to the roles corresponding to the account.                                                                                                                                               |
| Locked    | Boolean | Locked state of the account.                                                                                                                                                                   |
| RoleId    | String  | Role name, including:<br><ul style="list-style-type: none"> <li>● Administrator</li> <li>● Operator</li> <li>● User</li> <li>● OEM1</li> <li>● OEM2</li> <li>● OEM3</li> <li>● OEM4</li> </ul> |
| UserName  | String  | Username                                                                                                                                                                                       |
| @odata.id | String  | Access path of the role resource corresponding to the user.                                                                                                                                    |

## 10.6 Deleting an Account

### Function

Delete a specified account.

### Permission Required

User management.

### Syntax

- Operation Type: DELETE
- **URL:** `https://device_ip/redfish/v1/AccountService/Accounts/account_id`
- Request Header:
 

X-Auth-Token: auth\_value
- Request Message Body: None

### Parameters

For a description of the parameters for deleting a specified account, refer to [Table 10-11](#).

**Table 10-11 Parameter Descriptions for Deleting a Specified Account**

| Parameter  | Description                                                                                                    | Value                                                                                               |
|------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                       | IPv4 or IPv6 address.                                                                               |
| account_id | Subscriber ID.                                                                                                 | It can be obtained by querying the account list.                                                    |
| auth_value | When the DELETE request is executed, the "X-Auth-Token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

**Usage Guidelines**

None

**Example**

- Request Example:

```
DELETE https://device_ip/redfish/v1/AccountService/Accounts/1
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example: None
- Response Code: 204

**Output Description**

None

## 10.7 Modifying Information About a Specified Account

**Function**

Modify the username, password, permission, lockout status, enabling status, and login interface of a specified account.

**Permission Required**

User management.

**Syntax**

- Operation Type: PATCH
- URL: `https://device_ip/redfish/v1/AccountService/Accounts/account_id`
- Request Header:

X-Auth-Token: auth\_value  
Content-Type: header\_type

- Request Message Body:

```
{
 "UserName":name,
 "Password":password,
 "RoleId":role,
 "Enabled": flag,
 "Oem": {
 "Public": {
 "snmpAuthentication": authprotocol,
 "snmpPrivacy": privprotocol
 }
 }
}
```

## Parameters

For the parameter descriptions for modifying information about the specified account, refer to [Table 10-12](#).

**Table 10-12 Parameter Descriptions for Modifying Information About the Specified account**

| Parameter   | Description                                                  | Value                                                                                                                                                               |
|-------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                     | IPv4 or IPv6 address.                                                                                                                                               |
| auth_value  | Authentication parameters of the request message.            | It can be obtained by creating a session through /redfish/v1/SessionService/Sessions.                                                                               |
| header_type | Format of the request message.                               | application/json                                                                                                                                                    |
| name        | Username of the account whose information is to be modified. | A string of 4–16 characters.                                                                                                                                        |
| password    | Password of the account whose information is to be modified. | The maximum length of the string is 20 characters.                                                                                                                  |
| role        | Role of the account whose information is to be modified.     | Available role types include: <ul style="list-style-type: none"> <li>● Administrator</li> <li>● Operator</li> <li>● User</li> <li>● OEM1</li> <li>● OEM2</li> </ul> |

| Parameter    | Description                      | Value                                                                                                                                          |
|--------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
|              |                                  | <ul style="list-style-type: none"> <li>● OEM3</li> <li>● OEM4</li> </ul>                                                                       |
| flag         | Whether the account is enabled.  | Range:<br><ul style="list-style-type: none"> <li>● true</li> <li>● false</li> </ul>                                                            |
| authprotocol | SNMPv3 authentication algorithm. | String, range:<br><ul style="list-style-type: none"> <li>● SHA</li> <li>● MD5</li> <li>● SHA256</li> <li>● SHA384</li> <li>● SHA512</li> </ul> |
| privprotocol | SNMPv3 encryption algorithm.     | String, range:<br><ul style="list-style-type: none"> <li>● DES</li> <li>● AES</li> <li>● AES256</li> </ul>                                     |

## Usage Guidelines

For a specified account, one or more properties in the requested message body can be modified at the same time.



The Oem parameter is optional. If no Oem is added, this parameter is not modified.

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/AccountService/Accounts/1
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234e
Content-Type: application/json
```

- Request Message Body:

```
{
 "UserName": "username",
 "Password": "Superuser9!",
 "RoleId": "Administrator",
 "Oem": {
 "Public": {
 "snmpAuthentication": "SHA",
 "snmpPrivacy": "AES"
 }
 }
}
```

```

 "snmpPrivacy": "DES"
 }
}
}

```

- Response Example: None
- Response Code: 204

#### Output Description

None

## 10.8 Querying Information About the Role Resource Collection

#### Function

Query information about the role resource collection of a server.

#### Permission Required

User management.

#### Syntax

- Operation Type: GET
- **URL:** *https://device\_ip/redfish/v1/AccountService/Roles*
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

#### Parameters

For the parameter description for querying information about the role resource collection, refer to [Table 10-13](#).

**Table 10-13 Parameter Descriptions for Querying Information About the Role Resource Collection**

| Parameter  | Description                                                                           | Value                                                                                         |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                         |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <i>/redfish/v1/SessionService/Sessions</i> . |

#### Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/AccountService/Roles
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#RoleCollection.RoleCollection",
 "@odata.id": "/redfish/v1/AccountService/Roles",
 "@odata.type": "#RoleCollection.RoleCollection",
 "Name": "Roles Collection",
 "Members": [
 {
 "@odata.id": "/redfish/v1/AccountService/Roles/Administrator"
 },
 {
 "@odata.id": "/redfish/v1/AccountService/Roles/Operator"
 },
 {
 "@odata.id": "/redfish/v1/AccountService/Roles/User"
 },
 {
 "@odata.id": "/redfish/v1/AccountService/Roles/OEM1"
 },
 {
 "@odata.id": "/redfish/v1/AccountService/Roles/OEM2"
 },
 {
 "@odata.id": "/redfish/v1/AccountService/Roles/OEM3"
 },
 {
 "@odata.id": "/redfish/v1/AccountService/Roles/OEM4"
 }
],
 "Members@odata.count": 7
}
```

- Status Code: 200

## Output Description

a description of the output returned when you query information about the role resource collection, refer to [Table 10-14](#).

**Table 10-14 Output Description for Querying Information About the Role Resource Collection**

| Field               | Type   | Description                                   |
|---------------------|--------|-----------------------------------------------|
| @odata.context      | String | OData description of the role resource model. |
| @odata.id           | String | Access path of the role resource node.        |
| @odata.type         | String | Type of role resource.                        |
| Name                | String | Name of the role resource.                    |
| Members@odata.count | Number | Number of role members.                       |
| Members             | Array  | Session List.                                 |
| @odata.id           | String | Access path of a single role resource node.   |

## 10.9 Querying Information About a Specified Role Resource

### Function

Query information about a specified role resource of a server.

### Permission Required

User management.

### Syntax

- Operation Type: GET
- URL: [https://device\\_ip/redfish/v1/AccountService/Roles/role\\_id](https://device_ip/redfish/v1/AccountService/Roles/role_id)
- Request Header:

X-Auth-Token: auth\_value

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the specified role resource, refer to [Table 10-15](#).

**Table 10-15 Parameter Descriptions for Querying Information About the Specified Role Resource**

| Parameter  | Description                                                                           | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| role_id    | Role ID.                                                                              | It can be obtained from the role resource collection.                                               |

### Usage Guidelines

None

### Example

- Request Example:

```
GET https://device_ip/redfish/v1/AccountService/Roles/Administrator
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Role.Role",
 "@odata.id": "/redfish/v1/AccountService/Roles/Administrator",
 "@odata.type": "#Role.v1_2_1.Role",
 "IsPredefined": true,
 "Name": "User Role",
 "Id": "Administrator",
 "AssignedPrivileges": [
 "ConfigureUsers",
 "ConfigureComponents",
 "ConfigureManager",
 "ConfigureSelf",
 "Login"
],
 "OemPrivileges": [
 "OEMSecureConfig",
 "OEMRemoteControl",
 "OEMTelecommunicationsMedium",
 "OEMPowerControl",
 "OEMNetworkControl"
]
}
```

```

 "OEMDebugDiagnostics"
]
}

```

- Status Code: 200

### Output Description

a description of the output returned when you query information about the specified role resource, refer to [Table 10-16](#).

**Table 10-16 Output Descriptions for Querying Information About the Specified Role Resource**

| Field              | Type    | Description                                             |
|--------------------|---------|---------------------------------------------------------|
| @odata.context     | String  | OData description of the specified role resource model. |
| @odata.id          | String  | Access path of the specified role resource node.        |
| @odata.type        | String  | Type of the specified role resource.                    |
| Id                 | String  | ID of the specified role resource.                      |
| Name               | String  | Name of the specified role resource.                    |
| IsPredefined       | Boolean | Whether the specified role is pre-defined.              |
| AssignedPrivileges | Array   | Privileges assigned to the specified role.              |
| OemPrivileges      | Array   | Customized privileges assigned to the specified role.   |

## 10.10 Querying Information About the LDAP Service Resource

### Function

Query the [LDAP](#) about the LDAP service resource.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- [URL](#): `https://device_ip/redfish/v1/AccountService/LdapService`
- Request Header:
 

`x-auth-token:auth_value`
- Request Message Body: None

## Parameters

For a description of the parameters for querying the LDAP about the LDAP service resource, refer to [Table 10-17](#).

**Table 10-17 Parameter Descriptions for Querying Information About the LDAP Service Resource**

| Parameter  | Description                                                                                                 | Value                                                                                               |
|------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                    | <a href="#">IPv4</a> or <a href="#">IPv6</a> address.                                               |
| auth_value | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/AccountService/LdapService
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#AccountService.LdapService",
 "@odata.id": "/redfish/v1/AccountService/LdapService",
 "@odata.type": "#LdapCollection.LdapServiceCollection",
 "Id": "Ldap Service",
 "LdapControllers": [
 {
 "@odata.id": "/redfish/v1/AccountService/LdapService/LdapControllers"
 }
],
 "Name": "Ldap Service"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the LDAP about the LDAP service resource, refer to [Table 10-18](#).

**Table 10-18 Output Descriptions for Querying Information About the LDAP Service Resource**

| Field           | Type   | Description                                           |
|-----------------|--------|-------------------------------------------------------|
| @odata.context  | String | OData description of the LDAP service resource model. |
| @odata.id       | String | Access path of the LDAP service resource node.        |
| @odata.type     | String | Type of LDAP service resource.                        |
| Id              | String | ID of the LDAP service resource.                      |
| Name            | String | Name of the LDAP service resource.                    |
| LdapControllers | Array  | Controller list.                                      |
| @odata.id       | String | LDAP controller information.                          |

## 10.11 Querying Information About the Collection of LDAP Domain Controller Resources

### Function

Query information about the collection of LDAP domain controller resources.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/AccountService/LdapService/Ldap-Controllers`
- Request Header:

`x-auth-token:auth_value`

- Request Message Body: None

### Parameters

For a description of the parameters for querying information about the collection of LDAP domain controller resources, refer to [Table 10-19](#).

**Table 10-19 Parameter Descriptions for Querying Information About the Collection of LDAP Domain Controller Resources**

| Parameter  | Description                                                                                                 | Value                                                                                               |
|------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                               |
| auth_value | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/AccountService/LdapService/LdapControllers
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#AccountService.LdapService.LdapControllers",
 "@odata.id": "/redfish/v1/AccountService/LdapService/LdapControllers",
 "@odata.type": "#AccountService.LdapService.LdapControllers.ActiveDirectory",
 "Members": [
 {
 "@odata.id": "/redfish/v1/AccountService/LdapService/LdapControllers/ActiveDirectory"
 },
 {
 "@odata.id": "/redfish/v1/AccountService/LdapService/LdapControllers/LDAP"
 }
],
 "Members@odata.count": 2,
 "Name": "Ldap Controller Collection"
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query information about the collection of LDAP domain controller resources, refer to [Table 10-20](#).

**Table 10-20 Output Descriptions for Querying Information About the Collection of LDAP Controller Resources**

| Field               | Type   | Description                                                       |
|---------------------|--------|-------------------------------------------------------------------|
| @odata.context      | String | OData description of the LDAP domain controller collection model. |
| @odata.id           | String | Access path of the LDAP domain controller collection node.        |
| @odata.type         | String | Type of LDAP domain controller collection.                        |
| Name                | String | Name of the LDAP domain controller collection.                    |
| Members             | Array  | LDAP controller member list.                                      |
| @odata.id           | String | ID of an LDAP controller member.                                  |
| Members@odata.count | Number | Number of LDAP controller members.                                |

## 10.12 Querying the Active Directory Information

### Function

Query the Active Directory information.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- URL: `https://device_ip/redfish/v1/AccountService/LdapService/LdapControllers/Activedirectory`
- Request Header:

```
x-auth-token:auth_value
```

- Request Message Body: None

### Parameters

For a description of the parameters for querying the Active Directory information, refer to [Table 10-21](#).

**Table 10-21 Parameter Descriptions for Querying the Active Directory Information**

| Parameter  | Description                                                                                                 | Value                                                                                               |
|------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                                    | IPv4 or IPv6 address.                                                                               |
| auth_value | When the Get request is executed, the "x-auth-token" value must be carried in "Headers" for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

**Usage Guidelines**

None

**Example**

- Request Example:

```
GET https://device_ip/redfish/v1/AccountService/LdapService/LdapControllers/Activedirectory
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#AccountService.LdapService.LdapControllers.Activedirectory",
 "@odata.id": "/redfish/v1/AccountService/LdapService/LdapControllers/Activedirectory",
 "@odata.type": "#LdapCollection.LdapControllers.Activedirectory",
 "ADAAuthenticationEnable": true,
 "ADRoleGroups": [
 {
 "GroupDomain": "",
 "GroupLoginInterface": [],
 "GroupName": "",
 "GroupRole": null,
 "MemberId": 0
 },
 {
 "GroupDomain": "",
 "GroupLoginInterface": [],
 "GroupName": "",
 "GroupRole": null,
 "MemberId": 1
 }
]
}
```

```
{
 "GroupDomain": "",
 "GroupLoginInterface": [],
 "GroupName": "",
 "GroupRole": null,
 "MemberId": 2
},
{
 "GroupDomain": "",
 "GroupLoginInterface": [],
 "GroupName": "",
 "GroupRole": null,
 "MemberId": 3
},
{
 "GroupDomain": "",
 "GroupLoginInterface": [],
 "GroupName": "",
 "GroupRole": null,
 "MemberId": 4
}
],
"ADSSLEnable": false,
"DomainControllerServerAddress1": "192.168.5.3",
"DomainControllerServerAddress2": null,
"DomainControllerServerAddress3": null,
"Name": "Activedirectory",
"Password": null,
"UserDomain": null,
"UserName": null
}
```

- Status Code: 200

## Output Description

For a description of the output returned when you query the Active Directory information, refer to [Table 10-22](#).

**Table 10-22 Output Descriptions for Querying the Active Directory Information**

| Field          | Type   | Description                                                           |
|----------------|--------|-----------------------------------------------------------------------|
| @odata.context | String | OData description of the Active Directory information resource model. |
| @odata.id      | String | Access path of Active Directory information resource node.            |

| Field                          | Type    | Description                                                                                                                      |
|--------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------|
| @odata.type                    | String  | Type of Active Directory information resource.                                                                                   |
| Id                             | String  | ID of the Active Directory information resource.                                                                                 |
| Name                           | String  | Name of the Active Directory information resource.                                                                               |
| Password                       | String  | Displayed as null.                                                                                                               |
| ADAAuthenticationEnable        | Boolean | Whether Active Directory authentication is enabled.                                                                              |
| ADSSLEnable                    | Boolean | Whether <a href="#">SSL</a> encryption is enabled.                                                                               |
| DomainControllerServerAddress1 | String  | Domain controller server address 1.                                                                                              |
| DomainControllerServerAddress2 | String  | Domain controller server address 2.                                                                                              |
| DomainControllerServerAddress3 | String  | Domain controller server address 3.                                                                                              |
| UserDomain                     | String  | User domain.                                                                                                                     |
| ADRoleGroups                   | Array   | <a href="#">AD</a> role group.                                                                                                   |
| GroupName                      | String  | Group name.                                                                                                                      |
| GroupDomain                    | String  | Group domain.                                                                                                                    |
| GroupLoginInterface            | Array   | Access permission: <ul style="list-style-type: none"> <li>● KVM</li> <li>● VMedia</li> </ul>                                     |
| GroupRole                      | String  | Role group permission: <ul style="list-style-type: none"> <li>● Administrator</li> <li>● Operator</li> <li>● ReadOnly</li> </ul> |
| MemberId                       | Number  | Role group ID: 0-4                                                                                                               |
| UserName                       | String  | Username                                                                                                                         |

## 10.13 Modifying the Active Directory Information

### Function

Modify the Active Directory information.

### Permission Required

User management.

## Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/AccountService/LdapService/Ldap-Controllers/Activedirectory](https://device_ip/redfish/v1/AccountService/LdapService/Ldap-Controllers/Activedirectory)
- Request Header:

```
x-auth-token:auth_value
Content-Type: header_type
```

- Request Message Body:

```
{
 "ADAAuthenticationEnable": ad_authentication_enable_value,
 "DomainControllerServerAddress1": DomainControllerServerAddress1_value ,
 "DomainControllerServerAddress2": DomainControllerServerAddress2_value ,
 "DomainControllerServerAddress3": DomainControllerServerAddress3_value ,
 "Password": password_value,
 "UserDomain": user_domain_value,
 "UserName": user_name_value,
 "ADSSLEnable": adssl_enable_value,
 "ADRoleGroups": [
 {
 "GroupDomain": group_domain_value,
 "GroupName": group_name_value,
 "GroupRole": group_role_value,
 "MemberId": member_id_value
 }
]
}
```

## Parameters

For a description of the parameters for modifying the Active Directory information, refer to [Table 10-23](#).

**Table 10-23 Parameter Descriptions for Modifying the Active Directory Information**

| Parameter   | Description                                                                             | Value                                                                                                                                    |
|-------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip   | IP address for logging in to the device.                                                | IPv4 or IPv6 address.                                                                                                                    |
| auth_value  | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |
| header_type | Format of the request message.                                                          | application/json                                                                                                                         |

| Parameter                            | Description | Value                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ad_authenticationEnable_value        | Boolean     | Whether Active Directory authentication is enabled. <ul style="list-style-type: none"><li>● true: enabled.</li><li>● false: disabled.</li></ul>                                                                                                                                                                                          |
| domainControllerServerAddress1_value | String      | Domain controller server address 1.                                                                                                                                                                                                                                                                                                      |
| DomainControllerServerAddress2_value | String      | Domain controller server address 2.                                                                                                                                                                                                                                                                                                      |
| DomainControllerServerAddress3_value | String      | Domain controller server address 3.                                                                                                                                                                                                                                                                                                      |
| adssl_enable_value                   | Boolean     | SSL encryption enabled: <ul style="list-style-type: none"><li>● true</li><li>● false</li></ul>                                                                                                                                                                                                                                           |
| password_value                       | String      | Password                                                                                                                                                                                                                                                                                                                                 |
| user_domain_value                    | String      | User domain.                                                                                                                                                                                                                                                                                                                             |
| user_name_value                      | String      | Username<br>The following requirements must be met: <ul style="list-style-type: none"><li>● Range: 1–64 characters.</li><li>● Consists of letters, digits, spaces, and hyphens (-).</li><li>● Must begin with a letter.</li><li>● Case-sensitive.</li></ul>                                                                              |
| group_domain_value                   | String      | Group domain.<br>The following requirements must be met: <ul style="list-style-type: none"><li>● Range: 2–255 characters.</li><li>● Consists of letters, digits, spaces, hyphens (-), and periods (.).</li></ul>                                                                                                                         |
| group_name_value                     | String      | Group name. If this parameter is set to null, the role group is deleted.<br>The following requirements must be met: <ul style="list-style-type: none"><li>● Range: 1–64 characters.</li><li>● Consists of case-sensitive letters, digits, spaces, hyphens (-), and underscores (_).</li><li>● Must not consist of only spaces.</li></ul> |

| Parameter        | Description | Value                                                                                                                      |
|------------------|-------------|----------------------------------------------------------------------------------------------------------------------------|
|                  |             | <ul style="list-style-type: none"> <li>If this parameter is set to null, the role group is deleted.</li> </ul>             |
| group_role_value | String      | Role group permission: <ul style="list-style-type: none"> <li>Administrator</li> <li>Operator</li> <li>ReadOnly</li> </ul> |
| member_id_value  | Number      | Role group ID: 0-4                                                                                                         |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/AccountService/LdapService/LdapControllers/Activedirectory
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: application/json
```

- Request Message Body:

```
{
 "ADAAuthenticationEnable": true,
 "DomainControllerServerAddress1": "2.4.3.5",
 "Password": "Superuser7!",
 "UserDomain": "MyDddidntest.com",
 "UserName": "teseddst", "ADRoleGroups": [
 {
 "GroupDomain": "example.com",
 "GroupName": "bsp",
 "GroupRole": "ReadOnly",
 "MemberId": 1
 },
 {
 "GroupDomain": "exampdle.com",
 "GroupName": "testd",
 "GroupRole": "Administrator",
 "MemberId": 3
 }
]
}
```

- Response Example:

```
{
 "@odata.context":
 "/redfish/v1/$metadata#AccountService.LdapService.LdapControllers.ActiveDirectory",
 "@odata.id":
 "/redfish/v1/AccountService/LdapService/LdapControllers/ActiveDirectory",
 "@odata.type": "#LdapCollection.LdapControllers.ActiveDirectory",
 "ADAAuthenticationEnable": true,
 "ADRoleGroups": [
 {
 "GroupDomain": "",
 "GroupLoginInterface": [],
 "GroupName": "",
 "GroupRole": null,
 "MemberId": 0
 },
 {
 "GroupDomain": "",
 "GroupLoginInterface": [],
 "GroupName": "",
 "GroupRole": null,
 "MemberId": 1
 },
 {
 "GroupDomain": "",
 "GroupLoginInterface": [],
 "GroupName": "",
 "GroupRole": null,
 "MemberId": 2
 },
 {
 "GroupDomain": "",
 "GroupLoginInterface": [],
 "GroupName": "",
 "GroupRole": null,
 "MemberId": 3
 },
 {
 "GroupDomain": "",
 "GroupLoginInterface": [],
 "GroupName": "",
 "GroupRole": null,
 "MemberId": 4
 }
]
}
```

```

 },
 "ADSSLEnable": false,
 "DomainControllerServerAddress1": "192.168.5.3",
 "DomainControllerServerAddress2": null,
 "DomainControllerServerAddress3": null,
 "Name": "Activedirectory",
 "Password": null,
 "UserDomain": null,
 "UserName": null
 }
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you modify the Active Directory information, refer to [Table 10-24](#).

**Table 10-24 Output Descriptions for Modifying the Active Directory Information**

| Field                          | Type    | Description                                                           |
|--------------------------------|---------|-----------------------------------------------------------------------|
| @odata.context                 | String  | OData description of the Active Directory information resource model. |
| @odata.id                      | String  | Access path of Active Directory information resource node.            |
| @odata.type                    | String  | Type of Active Directory information resource.                        |
| Id                             | String  | ID of the Active Directory information resource.                      |
| Name                           | String  | Name of the Active Directory information resource.                    |
| Password                       | String  | Displayed as null.                                                    |
| ADAuthenticationEnable         | Boolean | Whether Active Directory authentication is enabled.                   |
| DomainControllerServerAddress1 | String  | Domain controller server address 1.                                   |
| DomainControllerServerAddress2 | String  | Domain controller server address 2.                                   |
| DomainControllerServerAddress3 | String  | Domain controller server address 3.                                   |
| UserDomain                     | String  | User domain.                                                          |
| ADRoleGroups                   | Array   | <a href="#">AD</a> role group.                                        |
| GroupName                      | String  | Group name.                                                           |

| Field               | Type   | Description                                                                                                                  |
|---------------------|--------|------------------------------------------------------------------------------------------------------------------------------|
| GroupDomain         | String | Group domain.                                                                                                                |
| GroupLoginInterface | Array  | Access permission: <ul style="list-style-type: none"><li>● KVM</li><li>● VMedia</li></ul>                                    |
| GroupRole           | String | Role group permission: <ul style="list-style-type: none"><li>● Administrator</li><li>● Operator</li><li>● ReadOnly</li></ul> |
| MemberId            | Number | Role group ID: 0-4                                                                                                           |
| UserName            | String | Username                                                                                                                     |

## 10.14 Querying LDAP Information

### Function

Query LDAP information.

### Permission Required

Query.

### Syntax

- Operation Type: GET
- **URL:** *https://device\_ip/redfish/v1/AccountService/LdapService/Ldap-Controllers/LDAP*
- Request Header:  

X-Auth-Token: auth\_value
- Request Message Body: None

### Description

For a description of the parameters for querying LDAP information, refer to [Table 10-25](#).

**Table 10-25 Parameter Descriptions for Querying LDAP Information**

| Parameter  | Setting                                                                                        | Value                                                                                         |
|------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                                       | IPv4 or IPv6 address.                                                                         |
| auth_value | X-Auth-Token value contained in Request Header in <i>/redfish/v1/SessionService/Sessions</i> . | It can be obtained by creating a session through <i>/redfish/v1/SessionService/Sessions</i> . |

| Parameter | Setting                             | Value |
|-----------|-------------------------------------|-------|
|           | the GET request for authentication. |       |

## Usage Guidelines

None

## Example

- Request Example:

```
GET https://device_ip/redfish/v1/AccountService/LdapService/LdapControllers/LDAP
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

- Request Message Body: None
- Response Example:

```
{
 "@odata.context":
 "/redfish/v1/$metadata#AccountService.LdapService.LdapControllers.LDAP",
 "@odata.id": "/redfish/v1/AccountService/LdapService/LdapControllers/LDAP",
 "@odata.type": "#LdapCollection.LdapControllers.LDAP",
 "LDAPRoleGroups": [
 {
 "GroupDomain": "cn=manager",
 "GroupLoginInterface": [
 "KVM",
 "vMedia"
],
 "GroupName": "testAdmin",
 "GroupRole": "Administrator",
 "MemberId": 0
 },
 {
 "GroupDomain": "ou=login",
 "GroupLoginInterface": [],
 "GroupName": "testUser",
 "GroupRole": "ReadOnly",
 "MemberId": 1
 }
],
 "BindDN": "cn=manager",
 "CommonNameType": "IP",
}
```

```

 "EncryptionType": "NoEncryption",
 "LDAPAuthenticationEnable": true,
 "Name": "LDAP",
 "Password": null,
 "Port": 389,
 "SearchBase": "dc=com",
 "ServerAddress": "192.168.1.5",
 "UserLoginAttribute": "cn"
}

```

- Status Code: 200

## Output Description

For a description of the output returned when you query LDAP information, refer to [Table 10-26](#).

**Table 10-26 Output Descriptions for Querying LDAP Information**

| Field                    | Type    | Description                                                                                                                               |
|--------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------|
| @odata.context           | String  | OData description of the LDAP resource model.                                                                                             |
| @odata.id                | String  | Access path of the LDAP resource node.                                                                                                    |
| @odata.type              | String  | Type of LDAP resource.                                                                                                                    |
| BindDN                   | String  | Bound DN.                                                                                                                                 |
| CommonNameType           | String  | Common name type. Options: <ul style="list-style-type: none"> <li>● IP</li> <li>● FQDN</li> </ul>                                         |
| EncryptionType           | String  | Encryption type. Options: <ul style="list-style-type: none"> <li>● NoEncryption</li> <li>● SSL</li> <li>● StartTLS</li> </ul>             |
| LDAPAuthenticationEnable | Boolean | Whether LDAP authentication is enabled.                                                                                                   |
| LDAPRoleGroups           | Array   | LDAP role group.                                                                                                                          |
| GroupName                | String  | Group name.                                                                                                                               |
| GroupDomain              | String  | Group domain                                                                                                                              |
| GroupLoginInterface      | Array   | Access permission, options: <ul style="list-style-type: none"> <li>● KVM</li> <li>● VMedia</li> </ul>                                     |
| GroupRole                | String  | Role group permission, options: <ul style="list-style-type: none"> <li>● Administrator</li> <li>● Operator</li> <li>● ReadOnly</li> </ul> |

| Field              | Type   | Description                                               |
|--------------------|--------|-----------------------------------------------------------|
| MemberId           | Number | Role group ID, range: 0–4.                                |
| Name               | String | Name of the LDAP information resource.                    |
| Password           | String | Password, which is displayed as null in the query result. |
| Port               | Number | Port number.                                              |
| SearchBase         | String | Search base.                                              |
| ServerAddress      | String | Server address.                                           |
| UserLoginAttribute | String | User login attribute, options:<br>● uid<br>● cn           |

## 10.15 Modifying the LDAP Information

### Function

Modify the LDAP information.

### Permission Required

User management.

### Syntax

- Operation Type: PATCH
- URL: [https://device\\_ip/redfish/v1/AccountService/LdapService/Ldap-Controllers/LDAP](https://device_ip/redfish/v1/AccountService/LdapService/Ldap-Controllers/LDAP)
- Request Header:

X-Auth-Token: auth\_value  
Content-Type: header\_type

- Request Message Body:

```
{
 "LDAPRoleGroups": [
 {
 "GroupDomain": group_domain_value,
 "GroupName": group_name_value,
 "GroupRole": group_role_value,
 "MemberId": member_id_value
 }
],
}
```

```

 "BindDN": bind_dn_value,
 "EncryptionType": encryption_type_value,
 "LDAPAuthenticationEnable": ldap_authentication_enable_value,
 "Name": name_value,
 "Password": password_value,
 "Port": port_value,
 "SearchBase": search_base_value,
 "ServerAddress": server_address_value,
 "UserLoginAttribute": user_login_attribute_value
}

```

## Description

For a description of the parameters for modifying the LDAP information, refer to [Table 10-27](#).

**Table 10-27 Parameter Descriptions for Modifying the LDAP Information**

| Parameter          | Setting                                                                                 | Value                                                                                                                                                                                                                                                                                                                   |
|--------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip          | IP address for logging in to the device.                                                | IPv4 or IPv6 address.                                                                                                                                                                                                                                                                                                   |
| auth_value         | X-Auth-Token value contained in Request Header in the PATCH request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> .                                                                                                                                                                                                                     |
| header_type        | Format of the request message.                                                          | application/json                                                                                                                                                                                                                                                                                                        |
| group_domain_value | String                                                                                  | Group domain name (which consists of 4–253 letters and digits, and starts with a letter. The following special characters are allowed: ".", ",", "-", "-", and "=~". Before "=", only the following characters are allowed: "cn", "uid", "ou", "dc", and "o". Two examples are as follows: "cn=login", and "dc=domain") |
| group_name_value   | String                                                                                  | Group name. If this parameter is set to null, the role group is deleted.                                                                                                                                                                                                                                                |
| group_role_value   | String                                                                                  | Role group permission: <ul style="list-style-type: none"> <li>● Administrator</li> <li>● Operator</li> <li>● ReadOnly</li> </ul>                                                                                                                                                                                        |
| member_id_value    | Number                                                                                  | Role Group ID: 0–4.                                                                                                                                                                                                                                                                                                     |
| bind_dn_value      | Bound DN.                                                                               | The following requirements must be met: <ul style="list-style-type: none"> <li>● Range: 4–64 characters.</li> </ul>                                                                                                                                                                                                     |

| Parameter                        | Setting                                 | Value                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  |                                         | <ul style="list-style-type: none"> <li>● Consists of letters and digits.</li> <li>● Supported special characters: ".", ",", "-", ".," and "=".</li> <li>● It must start with a letter and cannot end with "," or "=".</li> <li>● The value before "=" must be "cn", "uid", "ou", "dc", or "o", and the first segment must start with "cn" or "uid".</li> </ul> <p>Examples: "cn=manager", "ou=login", "dc=domain", or "dc=com".</p> |
| encryption_type_value            | String                                  | <p>Encryption type, options:</p> <ul style="list-style-type: none"> <li>● NoEncryption</li> <li>● SSL</li> <li>● StartTLS</li> </ul> <p>You can set the encryption type to <b>SSL</b> or <b>Start TLS</b>. This interface is not used for uploading certificates.</p>                                                                                                                                                               |
| ldap_authentication_enable_value | Whether LDAP authentication is enabled. | <ul style="list-style-type: none"> <li>● true</li> <li>● false</li> </ul>                                                                                                                                                                                                                                                                                                                                                           |
| name_value                       | Name of the LDAP information resource.  | Name of the LDAP information resource.                                                                                                                                                                                                                                                                                                                                                                                              |
| password_value                   | Password                                | The following requirements must be met: <ul style="list-style-type: none"> <li>● Range: 1–47 characters.</li> <li>● There is no space in the middle.</li> </ul>                                                                                                                                                                                                                                                                     |
| port_value                       | Port number.                            | Number, range: 1–65535.                                                                                                                                                                                                                                                                                                                                                                                                             |
| server_address_value             | Server address.                         | IPv4 address, IP v6 address, or domain name format.                                                                                                                                                                                                                                                                                                                                                                                 |
| user_login_attribute_value       | User login attribute.                   | Supports <b>cn</b> and <b>uid</b> , which must be the same as the LDAP user information of the bound DN.                                                                                                                                                                                                                                                                                                                            |
| search_base_value                | Search base.                            | The following requirements must be met: <ul style="list-style-type: none"> <li>● Range: 4–253 characters.</li> <li>● Consists of letters and digits.</li> <li>● Supported special characters: ".", ",", "-", ".," and "=".</li> <li>● It must start with a letter.</li> </ul>                                                                                                                                                       |

## Usage Guidelines

None

## Example

- Request Example:

```
PATCH https://device_ip/redfish/v1/AccountService/LdapService/LdapControllers/LDAP
```

- Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
Content-Type: application/json
```

- Request Message Body:

```
{
 "BindDN": "cn=admin,dc=ldapdomain,dc=com",
 "EncryptionType": "NoEncryption",
 "LDAPAuthenticationEnable": true,
 "LDAPRoleGroups": [
 {
 "GroupDomain": "ou=testgroup,dc=ldapdomain,dc=com",
 "GroupName": "sdf",
 "GroupRole": "Operator",
 "MemberId": 0
 }
],
 "Password": "Superuser9!",
 "Port": 392,
 "SearchBase": "ou=login,dc=domain,dc=com",
 "ServerAddress": "192.168.1.5",
 "UserLoginAttribute": "uid"
}
```

- Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#AccountService.LdapService.LdapControllers.LDAP",
 "@odata.id": "/redfish/v1/AccountService/LdapService/LdapControllers/LDAP",
 "@odata.type": "#LdapCollection.LdapControllers.LDAP",
 "LDAPRoleGroups": [
 {
 "GroupDomain": "cn=manager",
 "GroupLoginInterface": [
 "KVM",
 "vMedia"
],
 "GroupName": "sdf",
 "GroupRole": "Administrator"
 }
]
}
```

```

 "GroupRole": "Operator",
 "MemberId": 0
 },
],
"BindDN": "cn=manager",
"CommonNameType": "IP",
"EncryptionType": "NoEncryption",
"LDAPAuthenticationEnable": true,
"Name": "LDAP",
"Password": null,
"Port": 389,
"SearchBase": "dc=com",
"ServerAddress": "192.168.1.5",
"UserLoginAttribute": "cn"
}

```

- Status Code: 200

### Output Description

For a description of the output returned when you modify the LDAP information, refer to [Table 10-28](#).

**Table 10-28 Output Descriptions for Modifying the LDAP Information**

| Field                    | Type    | Description                                                                                                                   |
|--------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------|
| @odata.context           | String  | OData description of the LDAP resource model.                                                                                 |
| @odata.id                | String  | Access path of the LDAP information resource node.                                                                            |
| @odata.type              | String  | Type of LDAP resource.                                                                                                        |
| BindDN                   | String  | Bound DN..                                                                                                                    |
| CommonNameType           | String  | Common name type. Options: <ul style="list-style-type: none"> <li>● IP</li> <li>● FQDN</li> </ul>                             |
| EncryptionType           | String  | Encryption type. Options: <ul style="list-style-type: none"> <li>● NoEncryption</li> <li>● SSL</li> <li>● StartTLS</li> </ul> |
| LDAPAuthenticationEnable | Boolean | Whether LDAP authentication is enabled.                                                                                       |
| LDAPRoleGroups           | Array   | LDAP role group.                                                                                                              |
| GroupName                | String  | Group name.                                                                                                                   |
| GroupDomain              | String  | Group domain                                                                                                                  |
| GroupLoginInterface      | Array   | Access permission, options:                                                                                                   |

| Field              | Type   | Description                                                                                                                                  |
|--------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------|
|                    |        | <ul style="list-style-type: none"> <li>● KVM</li> <li>● VMedia</li> </ul>                                                                    |
| GroupRole          | String | Role group permission, options:<br><ul style="list-style-type: none"> <li>● Administrator</li> <li>● Operator</li> <li>● ReadOnly</li> </ul> |
| MemberId           | Number | Role group ID, range: 0–4.                                                                                                                   |
| Name               | String | Name of the LDAP information resource.                                                                                                       |
| Password           | String | Password, which is displayed as null in the query result.                                                                                    |
| Port               | Number | Port number.                                                                                                                                 |
| SearchBase         | String | Search base.                                                                                                                                 |
| ServerAddress      | String | Server address.                                                                                                                              |
| UserLoginAttribute | String | User login attribute, options:<br><ul style="list-style-type: none"> <li>● uid</li> <li>● cn</li> </ul>                                      |

# Chapter 11

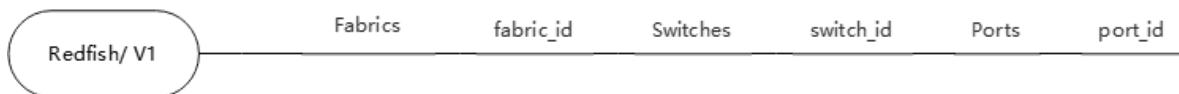
## Operations on Fabric Resources

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[Figure 11-1](#) shows the path requirements for the Fabric resources supported by for VANTAGEO servers.

**Figure 11-1 Fabric Resource Path Requirements**



For a description of properties of Fabric resources and operations supported by the properties, refer to [Table 11-1](#)

**Table 11-1 Descriptions of Fabric Resources Properties**

| URL                                           | Attribute           | Description                     | Command |
|-----------------------------------------------|---------------------|---------------------------------|---------|
| <a href="#">/redfish/v1/Fabrics</a>           | Name                | Name of the Fabric resource.    | GET     |
|                                               | Members@odata.count | Number of Fabric resources.     | GET     |
|                                               | Members             | List of Fabric resources.       | GET     |
| <a href="#">/redfish/v1/Fabrics/fabric_id</a> | Id                  | ID of the Fabric resource.      | GET     |
|                                               | Name                | Name of the Fabric resource.    | GET     |
|                                               | FabricType          | Type of Fabric resource.        | GET     |
|                                               | Switchs             | Collection of switch resources. | GET     |

| <b>URL</b>                                                     | <b>Attribute</b>    | <b>Description</b>                                                         | <b>Command</b> |
|----------------------------------------------------------------|---------------------|----------------------------------------------------------------------------|----------------|
| /redfish/v1/Fabrics/fabric_id/Switches                         | Description         | Description of the switch resource collection.                             | GET            |
|                                                                | Name                | Name of the switch resource collection.                                    | GET            |
|                                                                | Members@odata.count | Number of members in the switch resource collection.                       | GET            |
|                                                                | Members             | List of switch resources.                                                  | GET            |
| /redfish/v1/Fabrics/fabric_id/Switches/switch_id               | Id                  | ID of a switch resource.                                                   | GET            |
|                                                                | Name                | Name of the switch resource.                                               | GET            |
|                                                                | Ports               | List of port resources of a specified switch.                              | GET            |
| /redfish/v1/Fabrics/fabric_id/Switches/switch_id/Ports         | Description         | Description of the port resource collection of a specified switch.         | GET            |
|                                                                | Members@odata.count | Number of members in the port resource collection of the specified switch. | GET            |
|                                                                | Members             | List of port resources of the specified switch.                            | GET            |
|                                                                | Name                | Name of the port resource collection of the specified switch.              | GET            |
| /redfish/v1/Fabrics/fabric_id/Switches/switch_id/Ports/port_id | Id                  | Access path of the specified port resource of the specified switch.        | GET            |
|                                                                | PortProtocol        | Protocol used by the port resource.                                        | GET            |
|                                                                | Name                | Name of the port resource.                                                 | GET            |
|                                                                | ActiveWidth         | Number of active channels of the port.                                     | GET            |
|                                                                | LinkStatus          | Link status of the port.                                                   | GET            |
|                                                                | CurrentSpeedGbps    | Current speed of the port.                                                 | GET            |
|                                                                | SFP.PartNumber      | Part number the SFP.                                                       | GET            |
|                                                                | SFP.SerialNumber    | Optical module sequence number                                             | GET            |
|                                                                | SFP.Manufacturer    | Manufacturer of the SFP.                                                   | GET            |

| URL | Attribute      | Description                          | Command |
|-----|----------------|--------------------------------------|---------|
|     | SFP.MediumType | Data transmission media type of SFP. | GET     |

## 11.1 Querying Information About the Fabrics Resource Collection

### Function

Query the information about the Fabrics resource collection.

### Permission Required

Query.

### Syntax

Operation Type: GET

URL: `https://device_ip/redfish/v1/Fabrics`

Request Header:

`x-auth-token:auth_value`

Request Message Body: None

### Parameters

For a description of the parameters for querying information about the Fabrics resource collection, refer to [Table 11-2](#).

**Table 11-2 Parameter Descriptions for Querying Information About the Fabrics Resource Collection**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

### Usage Guidelines

Only servers with GPUs support this function.

### Example

Request Example:

`GET https://device_ip/redfish/v1/Fabrics`

**Request Header:**

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```

**Request Message Body: None****Response Example:**

```
{
 "@odata.context": "/redfish/v1/$metadata#FabricCollection.FabricCollection",
 "@odata.id": "/redfish/v1/Fabrics",
 "@odata.type": "#FabricCollection.FabricCollection",
 "Description": "The Collection of Fabric",
 "Members": [
 {
 "@odata.id": "/redfish/v1/Fabrics/PCIe"
 },
 {
 "@odata.id": "/redfish/v1/Fabrics/Serdes"
 }
],
 "Members@odata.count": 2,
 "Name": "FabricCollection"
}
```

**Status Code: 200****Output Description**

For a description of the output returned when you query information about the Fabrics resource collection, refer to [Table 11-3](#).

**Table 11-3 Output Descriptions for Querying Information About the Fabrics Resource Collection**

| Field               | Type   | Description                                           |
|---------------------|--------|-------------------------------------------------------|
| @odata.context      | String | OData description of the Fabrics resource collection. |
| @odata.id           | String | Access path of the Fabric resource collection.        |
| @odata.type         | String | Type of Fabric resource collection.                   |
| Description         | String | Description of the Fabric resource collection.        |
| Name                | String | Name of the Fabric resource collection.               |
| Members@odata.count | Number | Number of Fabric resources.                           |
| Members             | Array  | List of Fabric resources.                             |
| @odata.id           | String | Access path of a single Fabric resource node.         |

## 11.2 Querying Information About a Specified Fabrics Resource

### Function

Query the information about a specified Fabrics resource.

### Permission Required

Query.

### Syntax



Operation Type: GET



URL: [https://device\\_ip/redfish/v1/Fabrics/fabric\\_id](https://device_ip/redfish/v1/Fabrics/fabric_id)



Request Header:

x-auth-token:auth\_value



Request Message Body: None

### Parameters

For a description of the parameters for querying information about the specified Fabrics resource, refer to [Table 11-4](#).

**Table 11-4 Parameter Descriptions for Querying Information About the Specified Fabrics Resource**

| Parameter  | Setting                                                                               | Value                                                                                                                                    |
|------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                                                                    |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <a href="/redfish/v1/SessionService/Sessions">/redfish/v1/SessionService/Sessions</a> . |
| fabric_id  | ID of the Fabric resource.                                                            | PCIe or SerDes.                                                                                                                          |

### Usage Guidelines

Only servers with GPUs support this function.

### Example



Request Example:

GET https://device\_ip/redfish/v1/Fabrics/PCIe



Request Header:

X-Auth-Token: 8574621d21b84756218c7456821c234



Request Message Body: None



Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Fabric.Fabric",
 "@odata.id": "/redfish/v1/Fabrics/PCIe",
 "@odata.type": "#Fabric.v1_2_2.Fabric",
 "FabricType": "PCIe",
 "Name": "PCIe Fabric",
 "Id": "PCIe",
 "Switches": {
 "@odata.id": "/redfish/v1/Fabrics/PCIe/Switches"
 }
}
```



Status Code: 200

### Output Description

For a description of the output returned when you query information about the specified Fabrics resource, refer to [Table 11-5](#).

**Table 11-5 Output Descriptions for Querying Information About the Specified Fabrics Resource**

| Field          | Type   | Description                                         |
|----------------|--------|-----------------------------------------------------|
| @odata.context | String | OData description of the Fabrics resource.          |
| @odata.id      | String | Access path of the Fabric resource.                 |
| @odata.type    | String | Type of Fabric resource.                            |
| Id             | String | ID of the Fabric resource.                          |
| Name           | String | Name of the Fabric resource.                        |
| FabricType     | String | Type of Fabric resource.                            |
| Switches       | Object | Collection of switch resources.                     |
| @odata.id      | String | Access path of the switch resource collection node. |

## 11.3 Querying Information About the Switch Resource Collection

### Function

Query the information about the switch resource collection.

### Permission Required

Query.

## Syntax

Operation Type: GET

URL:  
`https://device_ip/redfish/v1/Fabrics/fabric_id/switches`

Request Header:

`x-auth-token:auth_value`

Request Message Body: None

## Parameters

For a description of the parameters for querying information about the switch resource collection, refer to [Table 11-6](#).

**Table 11-6 Parameter Descriptions for Querying Information About the Switch Resource Collection**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| fabric_id  | ID of the Fabric resource.                                                            | PCIe or SerDes.                                                                                     |

## Usage Guidelines

Only servers with GPUs support this function.

## Example

Request Example:

`GET https://device_ip/redfish/v1/Fabrics/PCIe/switches`

Request Header:

`X-Auth-Token: 8574621d21b84756218c7456821c234`

Request Message Body: None

Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#switchCollection.switchCollection",
 "@odata.id": "/redfish/v1/Fabrics/PCIe/switches",
 "@odata.type": "#SwitchCollection.SwitchCollection",
 "Description": "The Collection of Switch",
 "Name": "Switch collection",
```

```

 "Members": [
 {
 "@odata.id": "/redfish/v1/Fabrics/PCIe/Switches/PCIeRetimer0"
 }
],
 "Members@odata.count": 1
}

```



Status Code: 200

### Output Description

For a description of the output returned when you query the information about the switch resource collection, refer to [Table 11-7](#).

**Table 11-7 Output Descriptions for Querying Information About the Switch Resource Collection**

| Field               | Type   | Description                                          |
|---------------------|--------|------------------------------------------------------|
| @odata.context      | String | OData description of the switch resource collection. |
| @odata.id           | String | Access path of the switch resource collection.       |
| @odata.type         | String | Type of switch resource collection.                  |
| Name                | String | Name of the switch resource collection.              |
| Members@odata.count | Number | Number of members in the switch resource collection. |
| Members             | Array  | List of switch resources.                            |
| @odata.id           | String | Access path of a single switch resource node.        |

## 11.4 Querying Information About a Specified Switch Resource

### Function

Query information about a specified switch resource.

### Permission Required

Query.

### Syntax

Operation Type: GET

URL:

`https://device_ip/redfish/v1/Fabrics/fabric_id/Switches/switch_id`

Request Header:

x-auth-token:auth\_value



Request Message Body: None

## Parameters

For a description of the parameters for querying information about the specified switch resource, refer to [Table 11-8](#).

**Table 11-8 Parameter Descriptions for Querying Information About the Specified Switch Resource**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| fabric_id  | ID of the Fabric resource.                                                            | PCIe or SerDes.                                                                                     |
| switch_id  | Switch resource ID.                                                                   | Obtained from the upper-level URL.                                                                  |

## Usage Guidelines

Only servers with GPUs support this function.

## Example



Request Example:

GET `https://device_ip/redfish/v1/Fabrics/PCIe/Switches/PCIeRetimer0`



Request Header:

X-Auth-Token: 8574621d21b84756218c7456821c234



Request Message Body: None



Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#switch.Switch",
 "@odata.id": "/redfish/v1/Fabrics/PCIe/Switches/PCIeRetimer0",
 "@odata.type": "#Switch.v1_6_0.Switch",
 "Id": "PCIeRetimer0",
 "Name": "PCIeRetimer0",
 "Ports": {
 "@odata.id": "/redfish/v1/Fabrics/PCIe/switches/PCIeRetimer0/Ports"
 }
}
```



Status Code: 200

### Output Description

For a description of the output returned when you query information about the specified switch resource, refer to [Table 11-9](#).

**Table 11-9 Output Descriptions for Querying Information About the Specified Switch Resource**

| Field          | Type   | Description                                     |
|----------------|--------|-------------------------------------------------|
| @odata.context | String | OData description of the switch resource model. |
| @odata.id      | String | Access path of the switch resource.             |
| @odata.type    | String | Type of switch resource.                        |
| Id             | String | ID of the switch resource.                      |
| Name           | String | Name of the switch resource.                    |
| Ports          | Object | Port resources.                                 |
| @odata.id      | String | Access path of a specified port resource node.  |

## 11.5 Querying Information About the Port Resource Collection of a Specified Switch

### Function

Query the information about the port resource collection of a specified switch.

### Permission Required

Query.

### Syntax



Operation Type: GET



URL:

```
https://device_ip/redfish/v1/Fabrics/fabric_id/Switches/switch_id/Ports
```



Request Header:

|                         |
|-------------------------|
| x-auth-token:auth_value |
|-------------------------|



Request Message Body: None

### Parameters

For a description of the parameters for querying information about the port resource collection of the specified switch, refer to [Table 11-10](#).

**Table 11-10 Querying Information About the Port Resource Collection of a Specified Switch**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| fabric_id  | ID of the Fabric resource.                                                            | PCIe or SerDes.                                                                                     |
| switch_id  | Switch resource ID.                                                                   | Obtained from the upper-level URL.                                                                  |

## Usage Guidelines

Only servers with GPUs support this function.

## Example



### Request Example:

```
GET https://device_ip/redfish/v1/Fabrics/PCIe/Switches/PCIeRetimer0/Ports
```



### Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```



### Request Message Body: None



### Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#PortCollection.PortCollection",
 "@odata.id": "/redfish/v1/Fabrics/PCIe/Switches/PCIeRetimer0/Ports",
 "@odata.type": "#PortCollection.PortCollection",
 "Description": "The Collection of Port",
 "Members": [
 {
 "@odata.id": "/redfish/v1/Fabrics/PCIe/Switches/PCIeRetimer0/Ports/0"
 }
],
 "Members@odata.count": 1,
 "Name": "Port Collection"
}
```



### Status Code: 200

## Output Description

For a description of the output returned when you query information about the port resource collection of the specified switch, refer to [Table 11-11](#).

**Table 11-11 Output Descriptions for Querying Information About the Port Resource Collection of the Specified Switch**

| Field               | Type   | Description                                                                 |
|---------------------|--------|-----------------------------------------------------------------------------|
| @odata.context      | String | OData description of the port resource collection model.                    |
| @odata.id           | String | Access path of the port resource collection.                                |
| @odata.type         | String | Type of port resource collection.                                           |
| Description         | String | Description of the port resource collection.                                |
| Members@odata.count | Number | Number of members in the port resources collection of the specified switch. |
| Members             | Array  | List of port resources of the specified switch.                             |
| @odata.id           | String | Access path of a single port resource node of the specified switch.         |
| Name                | String | Name of the switching port resource collection.                             |

## 11.6 Querying Information About a Specified Port of a Specified Switch

### Function

Query information about a specified port of a specified switch.

### Permission Required

Query.

### Syntax

Operation Type: GET

URL:

```
https://device_ip/redfish/v1/Fabrics/fabric_id/Switches/switch_id/Ports/port_id
```

Request Header:

|                         |
|-------------------------|
| x-auth-token:auth_value |
|-------------------------|

Request Message Body: None

### Parameters

For a description of the parameters for querying information about the specified port of the specified switch, refer to [Table 11-12](#).

**Table 11-12 Parameter Descriptions for Querying LDAP Service Resources**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| fabric_id  | ID of the Fabric resource.                                                            | PCIe or SerDes.                                                                                     |
| switch_id  | ID of the switch resource.                                                            | Obtained from the upper-level URL.                                                                  |
| port_id    | ID of the port resource.                                                              | The port number can be obtained by querying the specified port resource collection.                 |

## Usage Guidelines

Only servers with GPUs support this function.

### Example



#### Request Example:

```
GET https://device_ip/redfish/v1/Fabrics/PCIe/Switches/PCIeRetimer0/Ports/0
```



#### Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```



#### Request Message Body: None



#### Response Example:

```
{
 "@odata.context": "/redfish/v1/$metadata#Ports.Ports",
 "@odata.id": "/redfish/v1/Fabrics/PCIe/Switches/PCIeRetimer0/Ports/0",
 "@odata.type": "#Port.v1_5_0.Port",
 "PortProtocol": "PCIe",
 "Id": "0",
 "Name": "PCIeRetimer0 Port 0",
 "Activewidth": "0",
 "LinkStatus": "Starting",
 "CurrentSpeedGbps": 0,
 "SFP": {
 "PartNumber": null,
 "SerialNumber": null,
 "Manufacturer": null,
 "MediumType": null
 }
}
```



Status Code: 200

## Output Description

For a description of the output returned when you query the specified port of the specified switch, refer to [Table 11-13](#).

**Table 11-13 Output Descriptions for Querying the Specified Port of the Specified Switch**

| Field            | Type   | Description                                   |
|------------------|--------|-----------------------------------------------|
| @odata.context   | String | OData description of the port resource model. |
| @odata.id        | String | Access path of the port resource.             |
| @odata.type      | String | Type of port resource.                        |
| PortProtocol     | String | Protocol used by the port resource.           |
| Id               | String | ID of the port resource.                      |
| Name             | String | Name of the port resource.                    |
| ActiveWidth      | String | Number of active channels of the port.        |
| LinkStatus       | String | Link status of the port.                      |
| CurrentSpeedGbps | Number | Current speed of the port.                    |
| SFP.PartNumber   | String | Part number the SFP.                          |
| SFP.SerialNumber | String | Sequence number of the SFP.                   |
| SFP.Manufacturer | String | Manufacturer of the SFP.                      |
| SFP.MediumType   | String | Data transmission media type of SFP.          |

# Chapter 12

## Operations on Registry Resources

### Table of Contents

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[Figure 12-1](#) shows the Redfish registry resource path requirements applicable to VANTAGEO servers.

**Figure 12-1 Redfish Registry Resource Path Requirements**



For a description of the properties of registry resources and the operations supported by the properties, refer to [Table 12-1](#).

**Table 12-1 Descriptions for Properties of Registry Resources**

| URL                                  | Property            | Description                                            | Command |
|--------------------------------------|---------------------|--------------------------------------------------------|---------|
| /redfish/v1/Registries               | Name                | Name of the registry resource collection.              | GET     |
|                                      | Description         | Description of the registry resource collection.       | GET     |
|                                      | Members@odata.count | Number of members in the registry resource collection. | GET     |
|                                      | Members             | List of registry resources.                            | GET     |
| /redfish/v1/Registries/registries_id | Description         | Description of the specified registry resource.        | GET     |
|                                      | Id                  | ID of the specified registry resource.                 | GET     |
|                                      | Name                | Name of the specified registry resource.               | GET     |

| URL                                               | Property              | Description                                                                | Command |
|---------------------------------------------------|-----------------------|----------------------------------------------------------------------------|---------|
|                                                   | Languages             | RFC5646-compliant languages for the specified registry resource.           | GET     |
|                                                   | Languages@odata.count | Number of languages for the specified registry resource.                   | GET     |
|                                                   | Location              | Location of the specified registry resource file.                          | GET     |
|                                                   | Language              | RFC5646-compliant language for the specified registry resource file.       | GET     |
|                                                   | Uri                   | URI of the specified registry resource file.                               | GET     |
|                                                   | Location@odata.count  | Number of locations for the specified registry resource file.              | GET     |
|                                                   | Registry              | Registry name and version.                                                 | GET     |
| /redfish/v1/Registries/registries_id/resourceName | RegistryVersion       | Registry version.                                                          | GET     |
|                                                   | OwningEntity          | Entity that the specified registry belongs to.                             | GET     |
|                                                   | Name                  | Name of the specified registry file.                                       | GET     |
|                                                   | RegistryEntries       | List of all attributes and their metadata for the specified register file. | GET     |
|                                                   | Attributes            | Attributes of the specified registry file.                                 | GET     |
|                                                   | Language              | RFC5646-compliant language for the specified registry resource file.       | GET     |
|                                                   | Id                    | ID of the specified registry file.                                         | GET     |
|                                                   | Description           | Description of the specified registry file.                                | GET     |

## 12.1 Querying Information About the Registry Resource Collection

### Function

Query the information about the registry resource collection.

### Permission Required

Query.

### Syntax



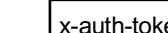
Operation Type: GET



URL: `https://device_ip/redfish/v1/Registries`



Request Header:



`x-auth-token:auth_value`



Request Message Body: None

### Parameters

For a description of the parameters for querying information about the registry resource collection, refer to [Table 12-2](#).

**Table 12-2 Parameter Descriptions for Querying Information About the Registry Resource Collection**

| Parameter  | Setting                                                                               | Value                                                                                               |
|------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip  | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |

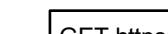
### Usage Guidelines

None

### Example



Request Example:



`GET https://device_ip/redfish/v1/Registries`



Request Header:



`X-Auth-Token: 8574621d21b84756218c7456821c234`



Request Message Body: None

**Response Example:**

```
{
 "@odata.id": "/redfish/v1/Registries",
 "@odata.type": "#MessageRegistryFileCollection.MessageRegistryFileCollection",
 "Name": "Registry File Collection",
 "Description": "Registry Repository",
 "Members": [
 {
 "@odata.id": "/redfish/v1/Registries/BiosAttributeRegistryResource"
 }
],
 "Members@odata.count": 1
}
```



Status Code: 200

**Output Description**

For a description of the output returned when you query information about the registry resource collection, refer to [Table 12-3](#).

**Table 12-3 Output Descriptions for Querying Information About the Registry Resource Collection**

| Field               | Type   | Description                                            |
|---------------------|--------|--------------------------------------------------------|
| @odata.id           | String | Access path of the registry resource collection model. |
| @odata.type         | String | Type of registry resource collection.                  |
| Name                | String | Name of the registry resource collection.              |
| Description         | String | Description of the registry resource collection.       |
| Members@odata.count | Number | Number of members in the registry resource collection. |
| Members             | Array  | List of registry resources.                            |
| @odata.id           | String | Access path of a specified registry resource.          |

## 12.2 Querying Information About a Specified Registry Resource

**Function**

Query information about a specified registry resource.

**Permission Required**

Query.

## Syntax



Operation Type: GET



**URL:** `https://device_ip/redfish/v1/Registries/registries_id`



Request Header:

`x-auth-token:auth_value`



Request Message Body: None

## Parameters

For a description of the parameters for querying the information about of the specified registry resource, refer to [Table 12-4](#).

**Table 12-4 Parameter Descriptions for Querying Information About a Specified Registry Resource**

| Parameter     | Setting                                                                               | Value                                                                                               |
|---------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip     | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value    | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| registries_id | ID of the specified registry resource.                                                | BiosAttributeRegistryResource                                                                       |

## Usage Guidelines

None

## Example



Request Example:

```
GET https://device_ip/redfish/v1/Registries/BiosAttributeRegistryResource
```



Request Header:

`X-Auth-Token: 8574621d21b84756218c7456821c234`



Request Message Body: None



Response Example:

```
{
 "@odata.id": "/redfish/v1/Registries/BiosAttributeRegistryResource",
 "@odata.type": "#MessageRegistryFile.v1_1_0.MessageRegistryFile",
 "Description": "BiosAttributeRegistryResource Message Registry File Location",
 "Id": "BiosAttributeRegistryResource",
 "Name": "BiosAttributeRegistryResource",
```

```

 "Languages": [
 "en"
],
 "Languages@odata.count": 1,
 "Location": [
 {
 "Language": "en",
 "Uri": "/redfish/v1/Registries/BiosAttributeRegistryResource/
BiosAttributeRegistry"
 }
],
 "Location@odata.count": 1,
 "Registry": "BiosAttributeRegistryResource.0.71.0"
}

```



Status Code: 200

## Output Description

For a description of the output returned when you query the information about the specified registry resource, refer to [Table 12-5](#).

**Table 12-5 Output Descriptions for Querying Information About the Specified Registry Resource**

| Field                 | Type   | Description                                                          |
|-----------------------|--------|----------------------------------------------------------------------|
| @odata.id             | String | Access path of a specified registry resource.                        |
| @odata.type           | String | Type of the specified registry resource.                             |
| Description           | String | Description of the specified registry resource.                      |
| Id                    | String | ID of the specified registry resource.                               |
| Name                  | String | Name of the specified registry resource.                             |
| Languages             | Array  | RFC5646-compliant languages for the specified registry resource.     |
| Languages@odata.count | Number | Number of languages for the specified registry resource.             |
| Location              | Array  | Location of the specified registry resource file.                    |
| Language              | String | RFC5646-compliant language for the specified registry resource file. |
| Uri                   | String | URI of the specified registry resource file.                         |
| Location@odata.count  | Number | Number of locations for the specified registry resource file.        |

| Field    | Type   | Description                |
|----------|--------|----------------------------|
| Registry | String | Registry name and version. |

## 12.3 Querying Information About a Specified Registry Resource File

### Function

Query the information about a specified registry resource file.

### Permission Required

Query.

### Syntax



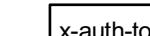
Operation Type: GET



URL: `https://device_ip/redfish/v1/Registries/registries_id/resource-Name`



Request Header:



Request Message Body: None

### Parameters

For a description of the parameters for querying information about the specified registry resource file, refer to [Table 12-6](#).

**Table 12-6 Parameter Descriptions for Querying Information About the Specified Registry Resource File**

| Parameter     | Setting                                                                               | Value                                                                                               |
|---------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| device_ip     | IP address for logging in to the device.                                              | IPv4 or IPv6 address.                                                                               |
| auth_value    | X-Auth-Token value contained in Request Header in the GET request for authentication. | It can be obtained by creating a session through <code>/redfish/v1/SessionService/Sessions</code> . |
| registries_id | ID of the specified registry resource.                                                | BiosAttributeRegistryResource                                                                       |
| resourceName  | Name of the resource file to be queried.                                              | Obtained by querying the resource file name based on the upper-level registry ID.                   |

### Usage Guidelines

None

## Example



Request Example:

```
GET https://device_ip/redfish/v1/Registries/BiosAttributeRegistryResource/BiosAttributeRegistry
```



Request Header:

```
X-Auth-Token: 8574621d21b84756218c7456821c234
```



Request Message Body: None



Response Example:

```
{
 "RegistryVersion": "0.71.0",
 "OwningEntity": "VANTGAE0",
 "Name": "BIOS Attribute Registry",
 "RegistryEntries": {
 "Attributes": [
 {
 ...
 },
 {
 ...
 }
]
 },
 "@odata.type": "#AttributeRegistry.v1_3_1.AttributeRegistry",
 "Language": "en",
 "Id": "BiosAttributeRegistry",
 "Description": "This registry defines a representation of BIOS Attribute instances"
}
```



Status Code: 200

## Output Description

For a description of the output returned when you query information about the specified registry resource file, refer to [Table 12-7](#).

**Table 12-7 Output Descriptions for Querying Information About the Specified Registry Resource File**

| Field           | Type   | Description                                    |
|-----------------|--------|------------------------------------------------|
| RegistryVersion | String | Registry version.                              |
| OwningEntity    | String | Entity that the specified registry belongs to. |
| Name            | String | Name of the specified registry resource.       |

| Field           | Type   | Description                                                                |
|-----------------|--------|----------------------------------------------------------------------------|
| RegistryEntries | Object | List of all attributes and their metadata for the specified register file. |
| Attributes      | Array  | Attributes of the specified registry file.                                 |
| @odata.type     | String | Type of the specified registry file.                                       |
| Language        | String | RFC5646-compliant language for the specified registry resource file.       |
| Id              | String | ID of the specified registry file.                                         |
| Description     | String | Description of the specified registry file.                                |

# Chapter 13

## Redfish Installation and Use

### Table of Contents

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### 13.1 Environment Installation

Redfish supports environment installation in the following two ways:

- (Recommended) Use the Postman tool to manage the Redfish interface. The download link is <https://www.postman.com/>.
- Use the *httprequester-2.2-fx.xpi* plug-in for Firefox earlier than 56.0b3 (64 bits).

### 13.2 Use Case

#### Abstract

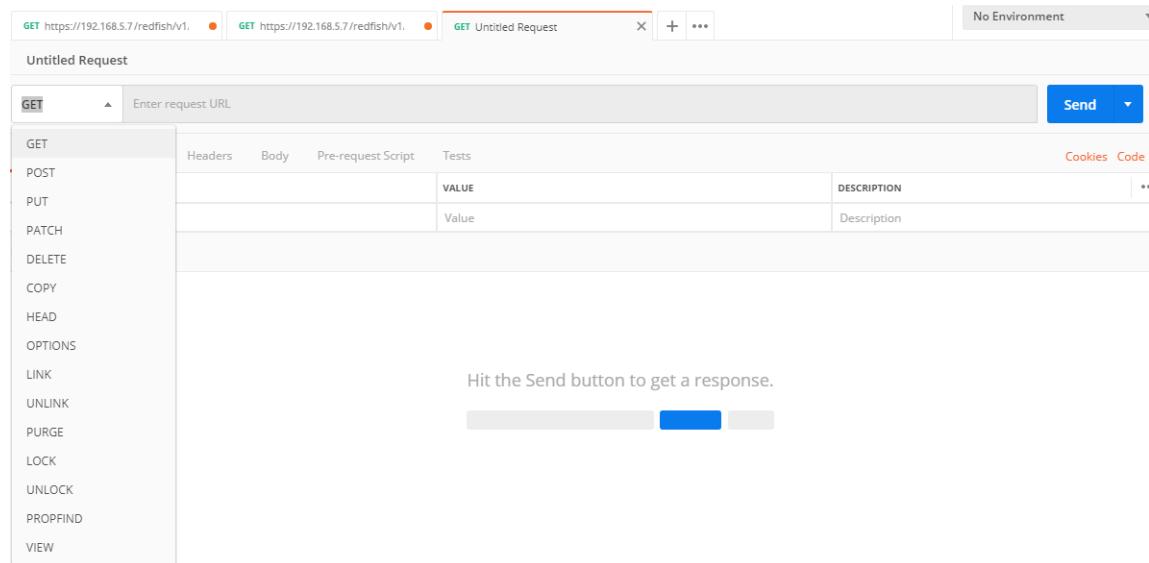
This procedure uses querying the current service root resources as an example to describe how to use the Postman tool. For other resource operation methods, refer to this procedure.



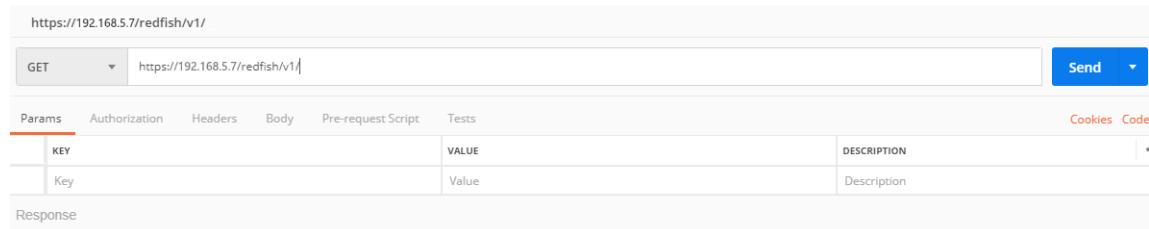
For details on how to query the current root service resources, refer to [3.2 Querying the Current Root Service Resources](#).

#### Steps

1. Open the Postman tool, create a request on the main page, and select a request action, see [Figure 13-1](#).

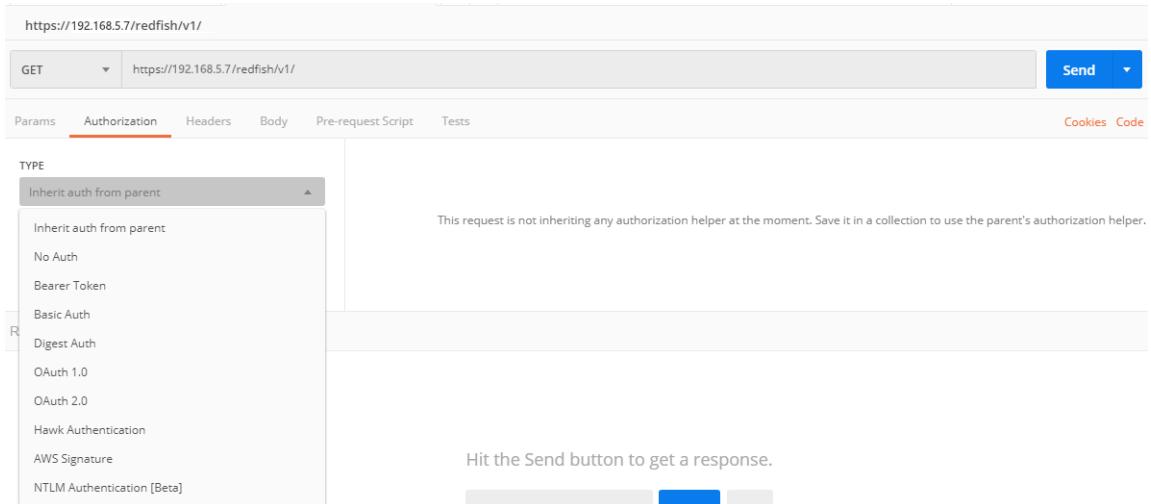
**Figure 13-1 Selecting a Request Action**

2. On the **Params** tab, set the [URL](#) of the Redfish interface, see [Figure 13-2](#).

**Figure 13-2 Setting the URL**

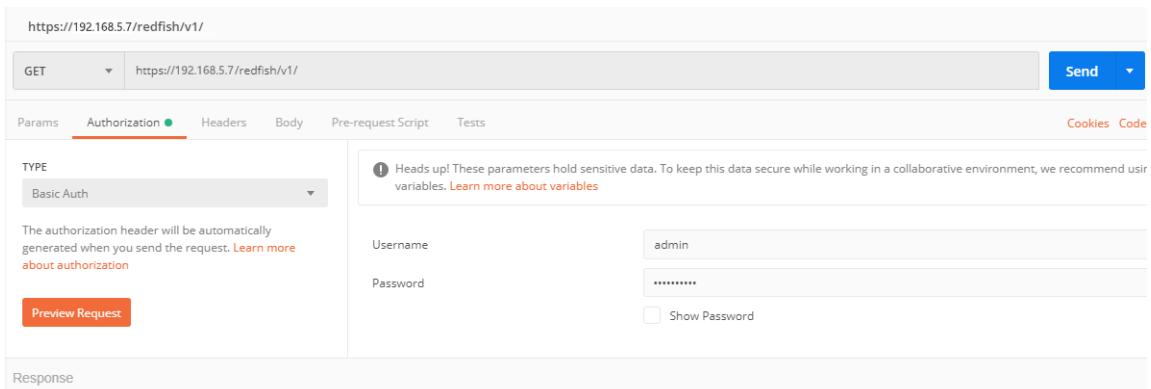
3. Select **Authorization > TYPE**. Select **Basic Auth**, see Figure 13-3.

**Figure 13-3 Selecting an Authentication Type**



4. On the **Authorization** tab, enter the BMC username and password, see Figure 13-4.

**Figure 13-4 Entering the BMC Username and Password**



5. Click **Send** to send a request through the Redfish interface, see [Figure 13-5](#).

**Figure 13-5 Sending a Request**

The screenshot shows the Postman application interface. The URL in the header is `https://192.168.5.7/redfish/v1/`. The method is set to `GET`. The authorization type is `Basic Auth`, with `admin` in the Username field and `*****` in the Password field. A note about sensitive data is present. The response status is `200 OK` with a time of `331 ms` and a size of `1.37 KB`. The response body is a JSON object representing the service root:

```
1 < @odata.context: "/redfish/v1/$metadata#ServiceRoot.ServiceRoot",
2 "@odata.etag": "W/\"155874642\"",
3 "@odata.type": "#ServiceRoot.v1_1_1.ServiceRoot",
4 "AccountService": {
5 "@odata.id": "/redfish/v1/AccountService"
6 },
7 "Chassis": {
8 "@odata.id": "/redfish/v1/Chassis"
9 },
10 "Description": "The service root for all Redfish requests on this host",
11 "EventService": {
12 "@odata.id": "/redfish/v1/EventService"
13 },
14 "Id": "RootService",
15 "Links": {
16 "Sessions": {
17 "@odata.id": "/redfish/v1/SessionService/Sessions"
18 }
19 }
```

# Glossary

---

**AD**

- Active Directory

**AHCI**

- Advanced Host Controller Interface

**API**

- Application Program Interface

**ARM**

- Asynchronous Response Mode

**BBU**

- Battery Backup Unit

**BDF**

- Bus/Device/Function

**BIOS**

- Basic Input/Output System

**BMC**

- Baseboard Management Controller

**BMC**

- Baseboard Management Controller

**CD**

- Compact Disk

**CIFS**

- Common Internet File System

**CPLD**

- Complex Programmable Logic Device

---

**CPU**

- Central Processing Unit

**CSRF**

- Cross-Site Request Forgery

**DDR**

- Double Data Rate

**DHCP**

- Dynamic Host Configuration Protocol

**DNS**

- Domain Name System

**ECC**

- Error Check and Correction

**EPLD**

- Erasable Programmable Logic Device

**FC**

- Fiber Channel

**FCoE**

- Fibre Channel Over Ethernet

**FPGA**

- Field Programmable Gate Array

**FQDN**

- Fully Qualified Domain Name

**FRU**

- Field Replaceable Unit

**FTP**

- File Transfer Protocol

---

**GPU**

- Graphics Processing Unit

**HDD**

- Hard Disk Drive

**HDM**

- Handoff Direction Message

**HTTP**

- Hypertext Transfer Protocol

**HTTPS**

- Hypertext Transfer Protocol Secure

**I/O**

- Input/Output

**IB**

- InfiniBand

**ID**

- Identification

**IO**

- Input & Output

**IP**

- Internet Protocol

**IPv4**

- Internet Protocol Version 4

**IPv6**

- Internet Protocol Version 6

**JSON**

- Java Script Object Notation

---

**KVM**

- Keyboard, Video and Mouse

**SMTP**

- Simple Message Transfer Protocol

**LDAP**

- Lightweight Directory Access Protocol

**LLDP**

- Link Layer Discovery Protocol

**MAC**

- Media Access Control

**MTU**

- Maximum Transfer Unit

**NAT**

- Network Address Translation

**NFS**

- Network File System

**NTP**

- Network Time Protocol

**NVMe**

- Non-Volatile Memory Express

**OEM**

- Original Equipment Manufacturer

**OPA**

- Optical Pre-Amplifier

**OS**

- Operating System

---

**PCB**

- Printed Circuit Board

**PCIe**

- Peripheral Component Interconnect Express

**PSU**

- Power Supply Unit

**PXE**

- Preboot eXecution Environment

**RAID**

- Redundant Array of Independent Disks

**RPM**

- Rotations Per Minute

**SAS**

- Serial Attached SCSI

**SATA**

- Serial ATA

**SEL**

- System Event Log

**SFTP**

- Secure File Transfer Protocol

**SMB**

- Server Message Block

**SMR**

- Switching Mode Rectifier

**SMTP**

- Simple Message Transfer Protocol

---

**SN**

- Serial Number

**SNMP**

- Simple Network Management Protocol

**SPI**

- Serial Peripheral Interface

**SSD**

- Solid State Drive

**SSDP**

- Simple Service Discovery Protocol

**SSH**

- Secure Shell

**SSL**

- Secure Sockets Layer

**TCP**

- Transmission Control Protocol

**TDP**

- Thermal Design Power

**TLS**

- Transport Layer Security

**UDP**

- User Datagram Protocol

**UHCI**

- Universal Host Controller Interface

**UID**

- User Identifier

---

**UID**

- Unique Identifier

**URI**

- Uniform Resource Identifier

**URL**

- Uniform Resource Locator

**USB**

- Universal Serial Bus

**UUID**

- Universal Unique Identifier

**VID**

- VLAN Identifier

**VLAN**

- Virtual Local Area Network

**VNC**

- Virtual Network Computing

**VR**

- Voltage Regulator

**XML**

- Extensible Markup Language

**iBMC**

- intelligent Board Management Controller

**iSCSI**

- Internet Small Computer System Interface