

# iDRAC9 Redfish API Guide

Firmware version: 4.20.20.20

## Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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# Overview

The Redfish Scalable Platforms Management API is a standard defined by the Distributed Management Task Force (DMTF). Redfish is a next-generation systems management interface standard, which enables scalable, secure, and open server management. It is a new interface that uses RESTful interface semantics to access data that is defined in model format to perform out-of-band systems management. It is suitable for a wide range of servers ranging from stand-alone servers to rack mount and bladed environments and for large scale cloud environments.

Dell PowerEdge servers offer a comprehensive range of embedded systems management functions enabled by the Integrated Dell Remote Access Controller (iDRAC) with Lifecycle Controller. These functions are designed by adhering industry standard application programming interfaces (APIs) including Redfish.

iDRAC with Lifecycle Controller technology is part of a larger data center solution that helps keep business critical applications and workloads available always. The technology allows administrators to deploy, monitor, manage, configure, update, troubleshoot, and remediate Dell servers from any location, and without the use of agents. It accomplishes this regardless of an operating system or a Hypervisor presence or state.

This document provides a brief overview on Redfish and information on various aspects of Redfish protocol, supported schema, and Redfish Eventing implemented in iDRAC. It also provides guidelines for using the Dell Redfish APIs.

## Topics:

- [New API Documentation](#)
- [New in this release](#)
- [Benefits](#)
- [Key technologies](#)
- [Other documents you may need](#)

## New API Documentation

The Redfish API documentation for iDRAC9 firmware version 4.40.00.00 and later versions is now available at the Developers portal. To access the Redfish API guide:

1. Go to <https://developer.dell.com>.
2. Under Servers, click **iDRAC9 Redfish API**.

## New in this release


- **iDRAC version 4.20.20.20**
  - Added support for Redfish 2018R3, 2019R1, and 2019R2 features
  - Added support for the following:
    - [PCleSlots](#)
    - [Sensor Collection](#)
    - [Sensor](#)
  - Added support for following properties:

Schema	Property
ManagerAccount	PasswordChangeRequired
Processor	TotalEnabledCores
Service Root	Vendor
VirtualMedia	<ul style="list-style-type: none"><li>▪ <a href="#">UserName</a></li><li>▪ <a href="#">Password</a></li></ul>

Schema	Property
	<ul style="list-style-type: none"> <li>TransferProtocolType</li> <li>TransferMethod</li> </ul>
Triggers	<ul style="list-style-type: none"> <li>EventTriggers</li> <li>MetricReportDefinition</li> <li>RedfishMetricReport</li> </ul>
Task	PercentComplete
Storage	<ul style="list-style-type: none"> <li>SupportedRAIDTypes</li> <li>ControllerRates</li> <li>PCleFunctions</li> </ul>
Drive	PCleFunctions
Chassis	<ul style="list-style-type: none"> <li>Sensors</li> <li>EnvironmentalClass</li> </ul>
EventDestination	<ul style="list-style-type: none"> <li>DeliveryRetryPolicy</li> <li>Status</li> <li>MetricReportDefinitions</li> </ul>
Bios	<ul style="list-style-type: none"> <li>SoftwareImages</li> <li>ActiveSoftwareImage</li> </ul>
Manager	<ul style="list-style-type: none"> <li>SoftwareImages</li> <li>ActiveSoftwareImage</li> </ul>
MetricReportDefinition	MetricReportDefinitionEnabled

- **iDRAC version 4.00.00.00**

- Added Support for Redfish 2018 R1 and R2 including:
  - Streaming of Telemetry metric reports with Server-Sent Events
  - Streaming of Redfish alerts with Server-Sent Events
  - Telemetry and common sensor model for consolidated metric sets and event-based generation of metric sets
  - Support for SettingsApplyTime
  - Support for OperationApplyTime
  - Configuration of AD and LDAP services
  - Job scheduling and recurring jobs
  - Certificate management for HTTPS-BIOS certificates
  - Support for Only (?only) query parameter
  - Force change of password (FCP)
  - OpenAPI compliance

 **NOTE:** Some Dell-OEM actions may not be listed in the Open-API YAML file.

- Added support for the following Dell OEM APIs mapping WS-Man methods to iDRAC RESTful APIs:

<a href="#">DellAssemblyCollection</a>	<a href="#">DellNICPortMetricsCollection</a>
<a href="#">DellAssembly</a>	<a href="#">DellNICPortMetrics</a>
<a href="#">DellBIOSService</a>	<a href="#">DellOpaqueManagementDataCollection</a>
<a href="#">DellChassisCollection</a>	<a href="#">DellOpaqueManagementData</a>
<a href="#">DellChassis</a>	<a href="#">DellSerialInterface</a>
<a href="#">DellControllerBatteryCollection</a>	<a href="#">DellSwitchConnectionService</a>
<a href="#">DellControllerBattery</a>	<a href="#">DellSystemManagementService</a>
<a href="#">DellFCCapabilitiesCollection</a>	<a href="#">DellSystemQuickSyncCollection</a>
<a href="#">DellFCCapabilities</a>	<a href="#">DellSystemQuickSync</a>
<a href="#">DellFCPortMetricsCollection</a>	<a href="#">DellTimeService</a>

<a href="#">DellFCPortMetrics</a>	<a href="#">DellUSBDeviceCollection</a>
<a href="#">DellGPUSensorCollection</a>	<a href="#">DellUSBDevice</a>
<a href="#">DellGPUSensor</a>	<a href="#">DellVideoCollection</a>
<a href="#">DellLicensableDeviceCollection</a>	<a href="#">DellVideo</a>
<a href="#">DellLicensableDevice</a>	<a href="#">DellVideoNetworkCollection</a>
<a href="#">DellMetricService</a>	<a href="#">DellVideoNetwork</a>

## Benefits

Redfish is a global standard for open server management. It has the capabilities to support single servers, converged infrastructure, and hyper—scale architecture. It provides the following benefits over existing server management methods:

- Increased simplicity and usability
- High data security
- Programmable interface that can be easily scripted
- Widely-used standard

## Key technologies

Redfish uses web and cloud-based technologies that enable communications with servers using common programming and scripting languages such as Python, JAVA, and C. The key technologies are as follows:

- REpresentational State Transfer (REST) interface — REST is a web based API, which provides a way to interact with a system over a normal web connection. It supports both HTTPS and HTTP.
- Java Script Notation (JSON) — JSON represents data in such a way that it is much easier to read than XML. It also provides the formatting that is required for scripting languages to interface with the data.
- OData — It is important to standardize the data format when implementing a common interface across multiple vendors. OData provides the required framework to ensure that the data structure remains interchangeable between server vendors.

## Other documents you may need

For more information about Redfish, see the DMTF website <https://www.dmtf.org/standards/redfish>. This website provides access to schema files, white papers, technical notes, and so on.

To download or access a file, go to <https://www.dmtf.org/standards/redfish>, locate the desired section, and click the link to open or download the files.

You can download the OEM schemas from the Dell website at <https://downloads.dell.com/redfish/bmc/schemas/>.

For Python and PowerShell scripting, go to <https://github.com/dell/idrac-redfish-scripting>.

For information about documentation versions and the available Redfish white papers, see the Redfish article at <https://www.dell.com/support/article/sln310624>

# Redfish-based systems management

This section provides an overview of the Redfish service implemented in the iDRAC firmware. It includes information about the Redfish API, schema, configuration, authentication, authorization, and so on.


## Topics:

- [URL support](#)
- [Redfish configuration](#)
- [Redfish schema](#)
- [Redfish authentication and authorization](#)
- [Roles and privileges](#)
- [iDRAC licensing](#)
- [HTTP methods](#)
- [HTTP headers](#)
- [HTTP status codes and error messages](#)
- [SSL certificates of iDRAC](#)
- [Settings Resources](#)
- [Eventing](#)
- [Updating firmware using SimpleUpdate](#)
- [Query Parameters](#)
- [Telemetry](#)
- [Scheduling Jobs](#)
- [Delegated Authority](#)
- [Common and Frequently Used Properties](#)

## URL support

Redfish is a web-based API which implies that resources are accessed using client supplied URLs. URLs are required to identify the Redfish resources. The Redfish API uses a simple URL hierarchy which follows a `/redfish/v1/` pattern for all resources. To access a Redfish resource, use the URL pattern `https://<iDRAC IP>/redfish/v1/<Resource Path>`. For more information on the supported resources, see [Redfish resources](#) on page 28. iDRAC supports the following URL patterns:

- `/redfish` — URL for the Redfish version object.
- `/redfish/v1` — Root URL for version 1 of the Redfish services.
- `/redfish/v1/odata` — Redfish services expose an OData service document at this URI. This service document provides a standard format for enumerating resources that are exposed by the service by enabling all generic hypermedia-driven OData clients to navigate to the resources of the service.
- `/redfish/v1/$metadata` — Redfish services expose a metadata document in XML format. This document describes the resources and collections that are available at the service root URI. It also provides references to other metadata documents, which describe the complete set of resource types that are exposed by the service.
- `/redfish/v1/$metadata#<Collection or a Singleton resource>` — Metadata URL specified as a part of `@odata.context` property for all resources. This URL returns data in XML format.
- `/redfish/v1/JsonSchemas/{JsonSchemaFileId}` — This URL returns data in JSON format. The output is a collection of the JsonSchemaFile resource instances.
- `/redfish/v1/JsonSchemas/<resource URI>` — The JSON Schema File resource instance describes the location (URI) of a particular Redfish schema definition being implemented or referenced by a Redfish service. This URL returns data in JSON format.
- `/redfish/v1/<other resource specific URIs>` — All instrumentation resources follow this pattern.

 **NOTE:** The Redfish standard implemented in iDRAC supports only HTTPS protocol.

**NOTE:** As per RFC3986, a hash (#) character in the URI represents a URI fragment and is not sent in HTTP requests. So, when iDRAC returns a URI as part of HTTP response, it encodes a hash character as '%23' to be compatible with HTTP most clients.

## Redfish configuration

You can configure the Redfish interface on iDRAC by enabling or disabling the iDRAC attribute. If this attribute is disabled, HTTPS requests to Redfish URIs fail with an HTTP status code of 404 and an error message indicating that this attribute is disabled.

**NOTE:** You do not need to restart the web server when enabling or disabling Redfish attribute.

### Configuring Redfish service using iDRAC web interface

To enable or disable the Redfish service on iDRAC, perform the following tasks:

1. In the iDRAC web interface, navigate to the following screen:
  - Previous generation of PowerEdge servers: **Overview > iDRAC Settings > Network > Services**
  - Current generation of PowerEdge servers: **iDRAC Settings > Services > Redfish**
2. Under **Redfish**, select **Enabled** and click **Apply** to enable the service.

### Configuring Redfish service by using iDRAC RACADM

You can enable or disable the Redfish service using the iDRAC attribute `iDRAC.Redfish.Enable` (Read or Write).

### Configuring Redfish service by using WS-MAN

The Redfish attribute `iDRAC.Redfish.Enable` is modeled under the existing `DCIM_iDRACCardEnumeration` class. You can configure the Redfish service using existing methods such as `SetAttribute`, `SetAttributes`, and `ApplyAttributes` of `DCIM_iDRACCardService` class.

## Redfish schema

The Schemas for the Redfish resources are defined according to the OData Schema representation, which can be directly translated to a JSON Schema representation.

## Redfish authentication and authorization

For certain resources, the Redfish clients may require to authenticate access. Redfish relies on the managed system for the required credentials and supported forms of authentication. In iDRAC, authentication is based on local credentials and remote protocols such as Active Directory and LDAP.

**NOTE:** You must have the required iDRAC license to use Active Directory and LDAP.

Authorization includes both user privilege and license authorization. Redfish support is included in all levels of iDRAC licensing. The following table details the authentication and authorization required for each Redfish action:

**Table 1. Redfish authentication and authorization**

Redfish actions	Authentication required	Authorization required
Read operation on any instrumentation data	Yes	Yes
Modify instrumentation data	Yes	Yes



**Table 1. Redfish authentication and authorization (continued)**

Redfish actions	Authentication required	Authorization required
Invoke actions	Yes	Yes
View service root	No	No
View metadata document	No	No
View OData service document	No	No
View message registry	No	No
View Redfish version URI	No	No
View JSONSchemaFile resource URI	No	No
View JSON schemas URI	No	No

The Redfish service provides access to Redfish URLs by using the following methods:

- **Basic authentication:** In this method, user name and password are provided for each Redfish API request.
- **Session-based authentication:** This method is used while issuing multiple Redfish operation requests.
  - Session login is initiated by accessing the Create session URI. The response for this request includes an X-Auth-Token header with a session token. Authentication for subsequent requests is made using the X-Auth-Token header.
  - Session logout is performed by issuing a DELETE of the Session resource provided by the Login operation including the X-Auth-Token header.

**NOTE:** The iDRAC firmware incorporates the concept of application sessions for various existing interfaces such as the web interface, WSMAN, and RACADM. With the introduction of Redfish-specific sessions, Redfish inherits the characteristics of web server sessions and the property Session Timeout inherits the web server session timeout value.

**NOTE:** To ensure a secure connection, Dell recommends using TLS 1.1 or later.

## Roles and privileges

To allow different levels of access to Redfish services, you can create user accounts with specific roles. The following table lists the roles and the privileges assigned to them:

**Table 2. Roles and privileges**

Role	Assigned privileges	OEM privileges
Administrator	<ul style="list-style-type: none"> <li>• Login</li> <li>• ConfigureComponents</li> <li>• ConfigureManager</li> <li>• ConfigureSelf</li> <li>• ConfigureUsers</li> </ul>	<ul style="list-style-type: none"> <li>• ClearLogs</li> <li>• AccessVirtualConsole</li> <li>• AccessVirtualMedia</li> <li>• TestAlerts</li> <li>• ExecuteDebugCommands</li> </ul>
Operator	<ul style="list-style-type: none"> <li>• Login</li> <li>• ConfigureComponents</li> <li>• ConfigureSelf</li> </ul>	-
ReadOnly	<ul style="list-style-type: none"> <li>• Login</li> </ul>	-

## iDRAC licensing

Redfish support is included in all license types of iDRAC. However, some of the iDRAC features require specific licenses. If a required license is not present, certain Redfish APIs may not be accessible and return an HTTP 403 status code. 403 implies that there is no sufficient privileges. In other cases, some of the properties in certain resource may not be returned in a

response. The service may also return errors when such properties are modified. For information of specific license requirements for the resources, see [Redfish resources](#) on page 28.

## HTTP methods

The REST API allows you to specify the type of request. It adheres to the Create, Retrieve, Update, and Delete (CRUD) standard format. The data is generated by accessing URLs that can be accessed by using the following HTTP methods:

- GET
- HEAD
- POST
- PUT
- PATCH
- DELETE

### GET

Use the GET method to retrieve a representation of a resource. The representation can either be a single resource or a collection. Depending on the media type, the service returns the resource representation by using one of the media types specified in the Accept header. If the Accept header is not present, the service returns the resource representations either as `application/json` or `application/xml`. The resources support the formats defined by the Redfish standard.

The HTTP GET method is used to retrieve a resource. The service ignores the content of the body on a GET. The GET operation is unchanged in the absence of external changes to the resource.

### HEAD

All URLs support the HEAD method. This method returns the response headers.

### POST

Use the POST method to invoke actions and create a resource. The POST request is submitted to the resource collection to which the new resource belongs. Submitting a POST request to a resource that represents a collection is equivalent to submitting the request to the Members property of that resource. Services that support adding members to a collection support both forms.


Services support the POST method for creating resources. If the resource does not support this method, status code 405 is returned. The body of the create request contains a representation of the object to be created. The service can ignore any service-controlled properties such as ID, forcing those properties for the service to be overridden. The service sets the Location header to the URI of the newly created resource.

### PUT

Use the PUT method to replace the property values of a resource. Properties omitted from the request body are reset to their default value. Services support the PUT method to replace a resource completely. If a service does not support this method, status code 405 is returned. Services may return a representation of the resource after any server-side transformations occur in the body of the response. The PUT operation must be unchanged in the absence of external changes to the resource. The exception is that the ETag values may change as a result of this operation.

### PATCH

Use the PATCH method to update pre-existing resources. Changes to the resource are sent in the request body. This method does not change the properties that are not specified in the request body. The response is either empty or a representation of the resource after the update is done, or a success code if the operation is successful. Depending on the policies, the implementation may reject the update operation on certain fields and not apply any of the requested updates.

 **NOTE:** Starting from iDRAC version 3.15.15.15 release, you can use the PATCH method with up to 50 attributes at a time.

## DELETE

Use the DELETE method to remove a resource. Services support the DELETE method for resources that can be deleted. If the resource cannot be deleted, status code 405 is returned. Services return a representation of the deleted resource in the response body.

## HTTP headers

The server response contains only basic information about related resources. Any metadata that is required to process a request or response is accessed by using HTTP headers. iDRAC supports the following request headers:

Header	Description
<b>If-Match</b>	Supported only for AccountService and FirmwareInventory URIs.
<b>If-None-Match</b>	Supported only for AccountService, FirmwareInventory, and metadata URIs.
<b>Content-Length</b>	Returned on all responses except responses that have Transfer-Encoding: chunked.
<b>Content-Type</b>	<ul style="list-style-type: none"><li>Responses other than OData metadata—application/json;charset=utf-8</li><li>OData responses—application/xml;charset=utf-8</li></ul>
<b>ETag</b>	Supported on AccountService, FirmwareInventory, and metadata URIs.
<b>Location</b>	Service sets this header when resources are created or when HTTP requests are redirected to other resources.
<b>Cache-Control</b>	Returned on all responses. Metadata URIs support cached responses. Instrumentation resources cannot be cached.
<b>X-Auth-Token</b>	Used for authentication of user sessions. See “Session-based authentication” under <a href="#">Redfish authentication and authorization</a> on page 16.

## HTTP status codes and error messages

HTTP defines the status codes that are returned in response messages. When the HTTP status code indicates a failure, the response body contains an extended error resource, which provides meaningful and deterministic error semantics.

The extended-error information for the Redfish service that Dell has implemented contains error or exception information that is unique to Dell. This information provides more details and recommendations for error resolution. To learn more about extended-error information, see the *Event and Error Message Reference Guide* available at [www.dell.com/manuals](http://www.dell.com/manuals).

For more details about the error messages, see the following:

- Base messages: **Registries > BaseMessage** schema. Examples of base messages are GeneralError, PropertyUnknown, InsufficientPrivilege, and so on.
- Event and Error messages: **Registries > Message** schema. Examples of Event and Error messages are AMP0300, ASR0001, HWC7014, and so on.

For more information about supported status codes and error messages, see the *Redfish Scalable Platforms Management API Specification* document available at [www.dmtf.org/standards/redfish](http://www.dmtf.org/standards/redfish).

### NOTE:

- For some URLs, if you execute an unsupported method, the response code may not indicate that the method is unsupported. To see the methods that the URL supports, see the relevant section in this document. You can also use the Get method on the URL and see the supported methods in the response.
- If you perform a Patch operation on multiple attributes, and if some attributes do not get updated due to dependency issues, HTTP code 400 is returned.
- You may not receive extended information for all invalids URLs.

# SSL certificates of iDRAC

iDRAC includes a web server that uses the industry-standard SSL security protocol to transfer encrypted data over a network. Built upon asymmetric encryption technology, SSL is widely accepted for providing authenticated and encrypted communication between clients and servers to prevent eavesdropping across a network.

By default, the iDRAC web server has a Dell self-signed SSL digital certificate. Redfish service reuses this certificate installed on the iDRAC web server. You can replace the default SSL certificate with a certificate signed by a well-known Certificate Authority (CA). You can replace SSL certificates using the iDRAC interfaces such as web interface, RACADM, or WSMAN. For more information on managing SSL certificates of iDRAC, see the latest iDRAC User's Guide available at [Dell.com/ idracmanuals](https://www.dell.com/support/manuals).

## Settings Resources


Settings resources can be used to perform PATCH method on a desired future configuration. There are scenarios when iDRAC cannot apply changes at runtime, for example changing BIOS or Network settings. In other cases, some of the resource configuration may be disruptive to services offered by iDRAC (for example web server configuration) or reachability of iDRAC (for example change in network configuration). In such cases, it is recommended that IT administrators plan the configuration change tasks outside of critical business hours, that is a future maintenance window. A Settings resource is useful in such cases and represents the future state of a resource. When a resource response contains a "@Redfish.Settings" annotation property, it is implied that the resource supports future state and configuration. Settings resource typically supports GET and PATCH methods. An HTTP GET on Settings resource returns the previously configured values that are yet to be applied. An HTTP PATCH request on Settings resource is useful to configure the desired future configuration.

## Eventing

The Redfish service generates asynchronous notifications (events) that are defined by Redfish subscription for the eventing service. These events are sent to an event destination by using HTTP POST method. Events are generated when some significant change or error condition typically of time critical nature occurs. When an event occurs on the service, it notifies the clients. Redfish service must be enabled and iDRAC must be configured to create event subscriptions and to gain read-only privilege for viewing event subscriptions.

The iDRAC implementation of a Redfish service supports only HTTPS notifications. In certain situations, iDRAC may not be able to verify certificates sent by a peer. To handle such situations, iDRAC can be configured to skip certificate verification by using the attribute `iDRAC.RedfishEventing.IgnoreCertificateErrors`. This attribute can be configured to True or False (Default) using RACADM or the WS-MAN interface. Set this attribute to True if certificate validation is not required.

Redfish service provides Lifecycle and Alert events. Lifecycle events may occur when resources are created, modified, or destroyed. Alert events occur when a resource needs to indicate a significant event. Alert events may be either directly or indirectly pertaining to the resource. Examples of these kinds of event are a chassis being opened, button being pressed, cable being unplugged, or threshold being exceeded. iDRAC supports up to 20 event subscriptions.

 **NOTE:** In this release, iDRAC supports only Alert event notifications.

If an event delivery fails, the event service of iDRAC retries delivering the failed event. The number of retries and delivery intervals can be configured using the following attributes:

- `iDRAC.RedfishEventing.DeliveryRetryAttempts`
- `iDRAC.RedfishEventing.DeliveryRetryIntervalInSeconds`

## Event delivery retry settings in RACADM

**Table 3. iDRAC.RedfishEventing.DeliveryRetryAttempts (Read or Write)**

Description	Specifies the number of retry attempts made for Redfish event delivery
Legal values	Value ranges from 0 to 5
Default value	3

**Table 3. iDRAC.RedfishEventing.DeliveryRetryAttempts (Read or Write) (continued)**

Write privilege	Configure iDRAC
-----------------	-----------------

**Table 4. iDRAC.RedfishEventing.DeliveryRetryIntervalInSeconds (Read or Write)**

Description	Specifies the intervals (in seconds) of retry attempts made for Redfish event delivery
Legal values	Value ranges from 5 to 60
Default value	30
Write privilege	Configure iDRAC

## Eventing operations

The Redfish event service provides the following URIs:

**Table 5. Eventing operations**


HTTP method type	Description	URI	Metadata reference
GET	Get detailed information about Event Service	/redfish/v1/EventService	EventService.xml
PATCH	Property Name: ServiceEnabled  Indicates whether this service is enabled	/redfish/v1/EventService	EventService_v1.xml
POST	Register an event notification receiver	/redfish/v1/EventService/Subscriptions	EventDestination.xml
DELETE	Remove a subscription	/redfish/v1/EventService/Subscriptions/<Subscription ID>	EventService.xml

## SSE URI for Event

```
https://<iDRAC-IP>/redfish/v1/SSE?$filter=EventFormatType eq Event
```

## Updating firmware using SimpleUpdate

Using Redfish API you can update the iDRAC, BIOS, and all device firmware. The firmware image can be uploaded locally or using HTTP share. Depending on the component, to apply the update the system automatically reboots or requires a manual reboot.

 **NOTE:** Redfish API only supports uploading one firmware image at a time.

## Updating firmware using a local image

To perform a component firmware update using the image file available on the local system:

1. To get the value of header ETag, execute GET on SoftwareInventoryCollection URL

```
/redfish/v1/UpdateService/FirmwareInventory
```

2. Upload the package by executing POST on `SoftwareInventoryCollection` with additional header as **Content-Type** and value `multipart/form-data` and header **if-Match** with ETag as value.

Once the upload is complete, the firmware image is represented with (available package)

```
/redfish/v1/UpdateService/FirmwareInventory/Available
```

along with component and version ids.

3. Execute POST on URL `SimpleUpdate` with the available package URL (`/redfish/v1/UpdateService/Actions/UpdateService.SimpleUpdate`) added in payload.

A job id gets created that can be used to check the status of the job.

**NOTE:** The name of the component being updated is not displayed in the JOB ID, instead it is displayed as a Firmware update.

**NOTE:** While the firmware update job is in process, the `JobState` displays the status as scheduled, check the `PercentComplete` function to get status of the job.

4. Reboot the system to apply the update by executing POST on URL `Reset` (`/redfish/v1/Systems/<System-Id>/Actions/ComputerSystem.Reset`).

## Updating firmware using HTTP share

To perform a component firmware update using the image file from HTTP share:

1. Execute POST on URL `SimpleUpdate` (`/redfish/v1/UpdateService/Actions/UpdateService.SimpleUpdate`) with an open HTTP share added in the payload.

A job id gets created that can be used to check the status of the job.

**NOTE:** The name of the component being updated is not displayed in the JOB ID, instead it is displayed as a Firmware update.

**NOTE:** While the firmware update job is in process, the `JobState` displays the status as scheduled, check the `PercentComplete` function to get the status of the job.

2. Reboot the system to apply the update by executing POST on URL `Reset` (`/redfish/v1/Systems/<System-Id>/Actions/ComputerSystem.Reset`).

## Query Parameters

There are various query parameters available that can be used to request information from a service. Features like filtering, selecting, and expansion add support for query parameters on GET request to receive additional information. These features are explained below:

- **Select**— The `$select` parameter indicates to the implementation that it should return a subset of the properties of the resource based on the value of the select clause.
- **Filter**— The `$filter` parameter indicates to the implementation that it should include a subset of the members of a collection based on the expression specified as the value of the filter clause. The `$query` parameter is a set of properties and literal values with an operator.

**NOTE:** While performing GET method using `$filter` with unsupported parameters, you may receive 400 status code response instead of 501.

- **Expand**— The `$expand` parameter indicates to the implementation that it should include a hyperlink as well as the contents of that hyperlink in the current response as if a GET had been performed and included in line with that hyperlink.

**NOTE:**

- The `$expand` parameter is not supported for the URI

```
/redfish/v1/Systems/<System-Id>
```

- While applying expand parameter on a resource, if the required license or privilege criteria for the resource are not met then a failure in sub resource may cause a failure in the entire output.
  - While performing GET method with \$expand on unsupported URI, you may receive 400/404/405 status code instead of 501.
  - For PCIe slots and sensors schema, the Expand query parameter may not expand the resource.
- Only**— The ?only parameter applies to resource collections. If the target Resource Collection contains exactly just one member, then use the only query parameter to get that member's resource.

**NOTE:** The ?only parameter is not supported on OEM resources.

See the section [Examples](#) for the examples of the above parameters.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
400	QueryNotSupported	SYS457
400	MalformedJSON	SYS405
400		SYS451
400	Base.1.2.QueryCombinationInvalid	
400	Base.1.2.QueryNotSupportedOnResource	
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## Telemetry

Telemetry is standard that allows one-to-many solution for collecting and streaming the live system data from one or more PowerEdge servers (iDRAC) to a centralized Remote Server Monitoring, Analysis, and Alerting service. Telemetry enables you to collect metric and data logs from various devices on PowerEdge server and stream that data to the subscribed external client or server application. Using telemetry, it is possible to set types of reports and the frequency of reports that needs to be generated. To take advantage of this feature, ensure that you have the Datacenter license installed in iDRAC and Telemetry along with Reports is enabled in iDRAC. For more information about Telemetry Streaming, see the iDRAC User's Guide.

**NOTE:** Telemetry can be configured through Redfish, RACADM, or Server configuration profile.

**NOTE:** In Redfish interface, perform the patch method on DellAttributes schema to enable and configure Telemetry and Reports.

The Telemetry model has Telemetry Service with four subordinate collection resources:


- Metric Definitions - these contain the definition of metric properties (characteristics, metadata).
- Metric Report Definitions - contains definition of metric reports that will be generated on request.
- Metric Reports - this contains metric definitions that creates a metric report.
- Triggers - these contain threshold triggers and actions that apply to a metric property.

Telemetry reports can be accessed through the following channels:

- Pull or perform GET on MetricReport.
- Server-Sent Events
- Subscriptions

## Server-Sent Events

Server-Sent Events (SSE) are a standard that allows a client system to open an HTTP connection with a web-service that continuously pushes rapidly changing data to the client. That is, a client subscribes to a "stream" from a server and the server sends messages to the client until either the server or the client closes the stream. This is contrary to the conventional HTTP request-response paradigm whereupon receiving an HTTP request, the server processes the request and generates a response optionally closing the connection. Resource responses for SSE contains a Content-Type header set as "text/event-stream; charset=UTF-8".

 **NOTE:** Server-Sent Events are only accessible on web browsers that support Telemetry.

### SSE URI for Telemetry


To start streaming all available data, use the following URI in the web browser:

```
https://<iDRAC-IP>/redfish/v1/SSE?$filter=EventFormatType eq MetricReport
```

For streaming specific data, use the following URI in the web browser:

```
https://<iDRAC-IP>/redfish/v1/SSE?$filter=EventFormatType eq '/redfish/v1/TelemetryService/MetricReportDefinitions/<Report-ID>'
```

In the above URI, few examples for Report-ID are; PSUMetrics, PowerStatistics, CUPS, CPUMemMetrics, ThermalSensor, NICStatistics, CPUSensor. etc.

 **NOTE:** If a connection is closed for some reason, ensure that you wait for 20 seconds to 30 seconds before restarting a new connection.

## Subscription

A subscription is a contract between a subscription service and a subscriber that specifies the data to be pushed. In order for client to stream data from the server, a subscription may be set where the server (iDRAC) will stream specific data to the subscriber (client). To create a subscription, execute POST method on the following URI along with the payload mentioned:

```
https://<iDRAC-IP>/redfish/v1/EventService/Subscriptions/
```

**Payload:**

```
{
  "Context": "Public1",
  "Description": "Event Subscription Details",
  "Destination": "https://<Client-IP>",
  "EventFormatType": "MetricReport",
  "EventTypes": [
    "MetricReport"
  ],
  "EventTypes@odata.count": 1,
  "Protocol": "Redfish",
  "SubscriptionType": "RedfishEvent"
}
```

## Scheduling Jobs

The JobService schema allows you to configure and schedule jobs through Redfish interface in iDRAC. If scheduling is supported for a job, you can set recurring jobs. This means that the job repeats automatically according to the interval set. For example, you can set a recurring job to clear the system event logs at the end of every week.

Recurring jobs can be reconfigured or deleted at any point. Creating various recurring jobs of different type is supported. However, at any given time, Redfish supports only one type of recurring job. For instance, you are allowed to create only one Manager reset recurring job.



With JobService schema, you can also check:

- the status of old jobs
- if scheduling is supported
- the maximum number of jobs supported


See the JobCollection or JobService schema in Redfish resources section to create and check the status of recurring jobs.

## Delegated Authority

Delegated Auth allows iDRAC to delegate user management to a remote Authorization Server. Once configured, iDRAC accepts OAuth 2.0 specification compliant JSON Web Tokens (JWT) that are issued by the server. These tokens can be used in place of the basic authorization header in Redfish HTTP requests. Following table describes the operations that are supported through iDRAC Redfish API:

### Supported Methods

Method	Description	URI	Payload
GET	Get all Delegated Authority instances.	/redfish/v1/AccountService/ExternalAccountProviders	N/A
POST	Create a new Delegated Authority instance.	/redfish/v1/AccountService/ExternalAccountProviders	<pre>{   "AccountProviderType":   "OEM",   "Oem": {     "Dell": {       "OAuthConfig": {          "HttpsCertificate":         "HttpsCertificate",         "ServerURL":         "ServerURL",         "NameTag":         "URL_SAFE_NAME",          "PublicSigningKey":         "PublicSigningKey",         "Issuer":         "Issuer"       }     }   } }</pre> <p>Along with the NameTag, you must provide a complete online configuration or an offline configuration or both to create an instance successfully.</p>
GET	Get a Delegated Authority instance.	/redfish/v1/AccountService/ExternalAccountProviders/{ NameTag Attribute Value}	None
DELETE	Delete a Delegated Authority instance.	/redfish/v1/AccountService/ExternalAccountProviders/{ NameTag Attribute Value}	None
PATCH	Update a Delegated Authority instance.	/redfish/v1/AccountService/ExternalAccountProviders/{ NameTag Attribute Value}	<pre>{   "Oem": {     "Dell": {       "OAuthConfig": {</pre>

Method	Description	URI	Payload
			<pre>       "HttpsCertificate":       "HttpsCertificate",         "ServerURL":         "NameTag":         "URL_SAFE_NAME",          "PublicSigningKey":         "PublicSigningKey",         "Issuer":         "Issuer"       }     }   } } </pre> <p>You can set any number of Attributes(0-5) in one go.</p>
 <b>NOTE:</b> Updating the NameTag value, will also change the URI.			
POST	Test a Token.	/redfish/v1/AccountService/ExternalAccountProviders/{ExternalAccountProviderId} /Actions/Oem/DellOAuthConfig.SubmitTestToken	<pre> {   "Token": "YOUR TEST TOKEN",   "ForceDownload": false } </pre> <p>Token is required and ForceDownload is optional and is set to false by default.</p>

## Common and Frequently Used Properties

Following table lists all the common supported properties for every schema. They are added here to avoid any repetition in the resource section of this guide.

### Supported Properties

Property	Description
Members	Single resource instance in a resource collection It contains the members of a collection.
Members@odata.count	The count of resource instances in a resource collection.
Name	This object represents the name of this Resource or array member. The Resource values shall comply with the Redfish Specification-described requirements. This string value shall be of the 'Name' reserved word format.
Id	This property represents an identifier for the Resource. The Resource values shall comply with the Redfish Specification described requirements.
Oem	The manufacturer- or provider-specific extension name that divides the Oem object into sections.
@odata.id	The value of this property is the unique identifier for the resource and it shall be of the form that is defined in the Redfish specification.
@odata.type	The value of this property is an absolute URL that specifies the type of the resource and it shall be of the form defined in the Redfish specification.

Property	Description
Links	These are the links associated with the Resource, as defined by that Resource's schema definition. All associated reference properties defined for a Resource are nested under the Links property. Find all directly referenced, or subordinate, Resource properties from the root of the Resource.
Status	This property describes the status and health of the resource and its children.
Description	This object represents the description of this Resource. The Resource values shall comply with the Redfish Specification described requirements.

# Redfish resources

This section describes the resource URIs and related operations that are available in the iDRAC implementation of a Redfish service API.

## Topics:

- [AccountService](#)
- [DellJobCollection](#)
- [AttributeRegistry](#)
- [Assembly](#)
- [Bios](#)
- [BootOptionCollection](#)
- [ChassisCollection](#)
- [Chassis](#)
- [Chassis — Settings resource](#)
- [CertificateCollection](#)
- [Certificates](#)
- [CertificateLocations](#)
- [CertificateService](#)
- [ComputerSystemCollection](#)
- [ComputerSystem](#)
- [DellAssemblyCollection](#)
- [DellAssembly](#)
- [DellAttributes](#)
- [DellBootSources](#)
- [DellBootSourcesRegistry](#)
- [DellBIOSService](#)
- [DellCertificatesCollection](#)
- [DellCertificateStore](#)
- [DellCertificates](#)
- [DellChassisCollection](#)
- [DellChassis](#)
- [DellControllerCollection](#)
- [DellController](#)
- [DellControllerBatteryCollection](#)
- [DellControllerBattery](#)
- [DellGPUSensorCollection](#)
- [DellGPUSensor](#)
- [DellIDRACCardCollection](#)
- [DellIDRACCard](#)
- [DellIDRACCardService](#)
- [DellEnclosureCollection](#)
- [DellEnclosure](#)
- [DellEnclosureEMMCollection](#)
- [DellEnclosureEMM](#)
- [DellEnclosureFanSensorCollection](#)
- [DellEnclosureFanSensor](#)
- [DellEnclosurePowerSupplyCollection](#)
- [DellEnclosurePowerSupply](#)
- [DellEnclosureTemperatureSensorCollection](#)
- [DellEnclosureTemperatureSensor](#)

- [DellFCCapabilitiesCollection](#)
- [DellFCCapabilities](#)
- [DellFCCollection](#)
- [DellFC](#)
- [DellFCStatisticsCollection](#)
- [DellFCStatistics](#)
- [DellFCPortMetricsCollection](#)
- [DellFCPortMetrics](#)
- [DellJobService](#)
- [DellLCService](#)
- [DellLicenseCollection](#)
- [DellLicenseManagementService](#)
- [DellLicensableDeviceCollection](#)
- [DellLicensableDevice](#)
- [DellMemoryCollection](#)
- [DellMemory](#)
- [DellMetricService](#)
- [DellNICCapabilitiesCollection](#)
- [DellNIC](#)
- [DellNICCapabilitiesCollection](#)
- [DellNICCapabilities](#)
- [DellNICStatisticsCollection](#)
- [DellNICStatistics](#)
- [DellNICPortMetricsCollection](#)
- [DellNICPortMetrics](#)
- [DellNumericSensorCollection](#)
- [DellNumericSensor](#)
- [DellOpaqueManagementDataCollection](#)
- [DellOpaqueManagementData](#)
- [DellOSDeploymentService](#)
- [TelemetryService](#)
- [DellPCleSSDExtenderCollection](#)
- [DellPCleSSDExtender](#)
- [DellPCleSSDCollection](#)
- [DellPCleSSD](#)
- [DellPCleSSDBackPlaneCollection](#)
- [DellPCleSSDBackPlane](#)
- [DellPCleFunctionCollection](#)
- [DellPCleFunction](#)
- [DellPersistentStorageService](#)
- [DellPhysicalDiskCollection](#)
- [DellPhysicalDisk](#)
- [DellPresenceAndStatusSensorCollection](#)
- [DellPresenceAndStatusSensor](#)
- [DellPowerSupplyCollection](#)
- [DellPowerSupply](#)
- [DellPowerSupplyViewCollection](#)
- [DellPowerSupplyView](#)
- [DellProcessorCollection](#)
- [DellProcessor](#)
- [DellRaidService](#)
- [DellSensorCollection](#)
- [DellSensor](#)
- [DellSwitchConnectionService](#)
- [DellSystemQuickSyncCollection](#)
- [DellSystemQuickSync](#)

- [DellSystemManagementService](#)
- [DellSoftwareInstallationService](#)
- [DellSwitchConnectionCollection](#)
- [DellSwitchConnection](#)
- [DellSystem](#)
- [DellTimeService](#)
- [DellvFlashCollection](#)
- [DellvFlash](#)
- [DellVirtualDiskCollection](#)
- [DellVirtualDisk](#)
- [DellSerialInterface](#)
- [DellServiceRoot](#)
- [DellUpdateService](#)
- [DellUSBDeviceCollection](#)
- [DellUSBDevice](#)
- [DellVideoCollection](#)
- [DellVideo](#)
- [DellVideoNetworkCollection](#)
- [DellVideoNetwork](#)
- [JobService](#)
- [JobCollection](#)
- [Job](#)
- [DellManager](#)
- [Sensor Collection](#)
- [Sensor](#)
- [Drive](#)
- [EthernetInterfaceCollection](#)
- [EthernetInterfaces](#)
- [EventService](#)
- [FabricCollection](#)
- [PCIe](#)
- [HostInterfaceCollection](#)
- [HostInterface](#)
- [JSONSchemaFileCollection](#)
- [JsonSchemaFile](#)
- [LogServiceCollection](#)
- [LogService](#)
- [LogEntryCollection](#)
- [ManagerCollection](#)
- [Manager](#)
- [ManagerAccountCollection](#)
- [ManagerAccount](#)
- [ManagerNetworkProtocol](#)
- [MemoryCollection](#)
- [Memory](#)
- [MessageRegistryFileCollection](#)
- [MessageRegistryFile](#)
- [Messages](#)
- [NetworkAdapterCollection](#)
- [NetworkAdapters](#)
- [NetworkDeviceFunctionCollection](#)
- [NetworkDeviceFunctions — Instance](#)
- [NetworkInterfaceCollection](#)
- [NetworkPortCollection](#)
- [NetworkPort](#)
- [PCIeDevice](#)

- [PCleFunction](#)
- [PortCollection](#)
- [Port](#)
- [PCleSlots](#)
- [Power](#)
- [PrivilegeRegistry](#)
- [ProcessorCollection](#)
- [Processor](#)
- [RoleCollection](#)
- [Role](#)
- [SecureBoot](#)
- [SerialInterfaceCollection](#)
- [SerialInterface](#)
- [ServiceRoot](#)
- [SessionService](#)
- [Session](#)
- [SimpleStorageCollection](#)
- [SimpleStorage](#)
- [SoftwareInventoryCollection](#)
- [StorageCollection](#)
- [StorageController](#)
- [EventDestinationCollection](#)
- [Switch Collection](#)
- [TaskCollection](#)
- [TaskService](#)
- [Thermal](#)
- [UpdateService](#)
- [VirtualMediaCollection](#)
- [VirtualMedia](#)
- [VLANNetworkInterface](#)
- [VolumeCollection](#)
- [Volumes](#)
- [Storage — Settings resource](#)
- [Redundancy](#)


## AccountService

### Description

The AccountService schema contains properties for managing user accounts. The properties are common to all user accounts, such as password requirements, and control features such as account lockout. The schema also contains links to the collections of Manager Accounts and Roles.

### Old URL

```
/redfish/v1/Managers/<Manager-Id>/AccountService
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

### New URL

```
/redfish/v1/AccountService
```

## Supported HTTP Method and Privileges


HTTP Method	Required Privilege
GET	Login
PATCH	ConfigureManager, Login

**Table 6. Supported properties for AccountService**

Property	Type	Read Only	Description
AccountLockoutCounterResetAfter	Integer	Yes	The interval of time in seconds between the last failed login attempt and reset of the lockout threshold counter. This value must be less than or equal to AccountLockoutDuration. Reset sets the counter to zero.
AccountLockoutDuration	Integer	Yes	The time in seconds an account is locked out. The value must be greater than or equal to the value of the AccountLockoutCounterResetAfter property. If set to 0, no lockout occurs.
AccountLockoutThreshold	Integer	Yes	The number of failed login attempts allowed before a user account is locked for a specified duration. A value of 0 means it is never locked.
Accounts	String	Yes	A link to a collection of Manager Accounts.
ActiveDirectory	Object	Yes	The first ActiveDirectory external account provider this AccountService supports.
ActiveDirectory.Authentication	Object	Yes	Contains the authentication information for the external service.
ActiveDirectory.Authentication.KerberosKeytab	String	No	This property is used with a PATCH to write a base64 encoded version of the Kerberos keytab for the account. This property is null on a GET.
ActiveDirectory.RemoteRoleMapping	Array	Yes	The mapping rules to convert the external account providers account information to the local Redfish Role.
ActiveDirectory.RemoteRoleMapping.RemoteGroup	String	No	The name of the remote group, or the remote role in the case of a Redfish Service, that maps to the local Redfish Role to which this entity links.
ActiveDirectory.RemoteRoleMapping.LocalRole	String	No	The name of the local Redfish Role to which to map the remote user or group.
AdditionalExternalAccountProviders	Object	Yes	The additional external account providers this AccountService is using.
AuthFailureLoggingThreshold	Integer	Yes	The number of authorization failures allowed before the failure attempt is logged to the manager log.
LDAP	String	Yes	The first LDAP external account provider that AccountService supports.
LDAP.LDAPService	Object	Yes	The settings required to parse a generic LDAP service.
LDAP.LDAPService.BaseDistinguishedNames	String	No	The base distinguished names to use to search an external LDAP service.



**Table 6. Supported properties for AccountService (continued)**

Property	Type	Read Only	Description
LDAP.LDAPService.GroupNameAttribute	String	No	The attribute name that contains the LDAP group name entry.
LDAP.LDAPService.UsernameAttribute	String	No	The attribute name that contains the LDAP user name entry.
LDAP.RemoteRoleMapping	Array	Yes	The mapping rules to convert the external account providers account information to the local Redfish Role.
LDAP.RemoteRoleMapping.LocalRole	String	No	The name of the local Redfish Role to which to map the remote user or group.
LDAP.RemoteRoleMapping.RemoteGroup	String	No	The name of the remote group, or the remote role in the case of a Redfish Service, that maps to the local Redfish Role to which this entity links.
LDAP.ServiceAddresses	String	No	The addresses of the user account providers to which this external account provider links. The format of this field depends on the type of external account provider.
LDAP.ServiceEnabled	Boolean	No	An indication of whether the Account Service is enabled. If `true`, it is enabled. If `false`, it is disabled and users cannot be created, deleted, or modified, and new sessions cannot be started. However, established sessions may still continue to run. Any service, such as the Session Service, that attempts to access the disabled Account Service fails. However, this does not affect HTTP Basic Authentication connections.
LocalAccountAuth	String	Yes	Controls when this service will use the accounts defined withing this AccountService as part of authentication.
MaxPasswordLength	Integer	Yes	The maximum password length for this service.
MinPasswordLength	Integer	Yes	The minimum password length for this service.
PrivilegeMap		Yes	A reference to the Privilege mapping that defines the privileges needed to perform a requested operation on a URI associated with this service.
Roles	String	Yes	A link to a collection of Roles.
 <b>NOTE:</b> DMTF implementation for Redfish does not display all the assigned roles for a user. To view all the privileges, see the Users section in iDRAC GUI under iDRAC Settings.			
ServiceEnabled	Boolean	Yes	Indicates whether this service is enabled. If set to false, the AccountService is disabled. This means no users can be created, deleted or modified. Any service attempting to access the AccountService resource (for example, the Session Service) will fail. New sessions cannot be started when the service is disabled. However, established sessions may still continue operating. This does not affect Basic AUTH connections.
Status	String	Yes	This property describes the status and health of the resource and its children.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## DellJobCollection

### Description

A Collection of Job resource instances.

### URL

```
/redfish/v1/Managers/<Manager-Id>/Jobs
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

**Table 7. Status codes**

HTTP status code	Extended Information	Error Code
200		
202	Base.1.2.Success	SYS413
400		SYS446

## DellJob

### Description

DellJob contains information about a specific configuration job scheduled by or being executed by a Redfish service's Job Service.

### URL

```
/redfish/v1/Managers/<Manager-Id>/Jobs/<Job-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
DELETE	ConfigureComponents, Login
GET	Login

## Supported Properties

Property	Type	Read-only	Description
CompletionTime	String	Yes	This property represents completion time of Job.
EndTime	String	Yes	This property represents End time of Job. This is the timestamp until when the service will wait for a job to complete. If a job did not complete within this time, it will be killed and marked as failed. TIME_NA is a default value that implies EndTime is not applicable. It is optional for clients to specify this property when creating a job.
JobState	String	Yes	The State of the Job.
JobType	String	Yes	This property represent configuration type of job. The value of this property will be one of the possible configuration type of job.
Message	String	Yes	The status Message for the Job.
MessageArgs	String	Yes	This array of message arguments are substituted for the arguments in the message.
MessageId	String	Yes	The Message Id of the Job.
PercentComplete	Integer	Yes	The percentage completion of the Job.
StartTime	String	Yes	This property represents start time of Job.
TargetSettingsURI	String	Yes	This property will be resource uri of settings object.

**Table 8. Status codes**

HTTP status code
200
404

# AttributeRegistry

## Description

An Attribute Registry is a set of key-value pairs that are specific to a particular implementation or product. This schema describes the structure of a registry and also includes mechanisms for building user interfaces allowing consistent navigation of the contents.

## URL

- Manager:

```
/redfish/v1/Registries/ManagerAttributeRegistry
```

- BIOS:

```
/redfish/v1/Systems/<ComputerSystem-Id>/Bios/BiosRegistry
```

## Methods and privileges

**Table 9. Methods and privileges for AttributeRegistry**

HTTP method	Required privilege
GET	Login

**Table 10. Supported properties for AttributeRegistry**

ManagerAttributeRegistry			
Property	Type	Read only	Description
Languages	String	Yes	This is the RFC 5646 compliant language code for the registry
Location	Array	Yes	Location information for this registry file.

BiosAttributeRegistry			
Property	Type	Read only	Description
Languages	String	Yes	Language codes for the schemas available.
Location	Array	Yes	Location information for this registry file.
Registry	String	Yes	The Registry Name, Major, and Minor version. This Registry can reference any type of Registry, such as a Message Registry, Privilege Registry, or Attribute Registry.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# Assembly

## Description

This is the schema definition for the Assembly properties.

## URL

```
/redfish/v1/Chassis/<Chassis-ID>/Assembly
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 11. Supported properties for Assembly**

Property	Type	Read-only	Description
Assemblies	Array	Yes	This is the definition for an assembly information record.


## Supported Status Codes


HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# Bios

## Description

The Bios schema contains properties related to the BIOS Attribute Registry. The Attribute Registry describes the system-specific BIOS attributes and Actions for changing to BIOS settings. Changes to the BIOS typically require a system reset before they take effect.

 **NOTE:** If you get an error "iDRAC not Ready" while executing any methods on BIOS after a host reboot, ensure that you wait for 20-30 seconds before performing the method again.

 **NOTE:** Performing GET method with Expand query parameter, may not expand properties under the Links property.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Bios
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

**Table 12. Supported Properties for BIOS**

Property	Type	Read-only	Description
AttributeRegistry	String	Yes	The Resource ID of the Attribute Registry that has the system-specific information about a BIOS resource
Attributes	String	Yes	The list of BIOS attributes specific to the manufacturer or provider

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	Base.1.2.GeneralError	IDRAC.1.6.RAC1035
405		SYS402

[Supported Action — ChangePassword](#) on page 38

[Supported Action — ResetBios](#) on page 39

[BIOS — Settings resource](#) on page 40

## Supported Action — ChangePassword

### Description

This action is used to change the BIOS passwords.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Bios/Actions/Bios.ChangePassword
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Description
NewPassword*	String	The value of the new BIOS password.
OldPassword*	String	The value of the existing password.
PasswordName*	String	The name of the BIOS password to change. For instance, this could be the AdminPassword or UserPassword.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.2.Success	RAC1133
405	Base.1.2.GeneralError	SYS402


## Supported Action — ResetBios

### Description

This action is used to reset the BIOS attributes to default.

### URL

```
/redfish/v1/Systems/<System-Id>/Bios/Actions/Bios.ResetBios
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.2.Success	RAC1133
405	Base.1.2.GeneralError	SYS402

## Supported Action — RunBIOSLiveScanning

### Description

This action is used to perform BIOS live scanning.

**NOTE:** RunBIOSLiveScanning action is available with iDRAC version 4.10.10.10 and later versions and only on PowerEdge Rx5x/Cx5x (AMD) systems. For the list of systems, see the Supported systems section in the release notes document for version 4.10.10.10.

**NOTE:** When this action is performed, a recurring job gets scheduled for immediate implementation. After the job is complete, the recurring task gets deleted automatically. Therefore, performing a GET on the task URI may result in a 404 response after the job is completed.

## URL

```
/redfish/v1/Systems/<System-Id>/Bios/Actions/Oem/DellBios.RunBIOSLiveScanning
```

**NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
202		
400	Base.1.5.GeneralError	JCP029 , RAC1130
403	Base.1.5.GeneralError	LIC501
405	Base.1.2.GeneralError	SYS402

## BIOS — Settings resource

### Description

This resource is used for representing the pending configuration and related resources to clear pending and navigation to Jobs resource.

## URL

```
/redfish/v1/Systems/<ComputerSystem-ID>/Bios/Settings
```

## HTTP methods and privileges

**Table 13. HTTP methods and privileges for the Settings resource**

HTTP method	Required privilege
GET	Login
PATCH	ConfigureComponents, Login



## Supported Properties

Property name	Type	Read-only	Description
AttributeRegistry	String	Yes	The Resource ID of the Attribute Registry that has the system-specific information about a BIOS resource
Attributes	String	Yes	The manufacturer or provider-specific list of BIOS attributes.
Actions	String	Yes	The available actions for this resource

## Status codes

**Table 14. Status codes for the Settings resource**

HTTP status code	Extended information	Error Code
202		
400	<ul style="list-style-type: none"><li>Base.1.2.PropertyMissing</li><li>Base.1.0.PropertyValueTypeError</li><li>Base.1.0.PropertyValueNotInList</li></ul>	
400		SYS426, SYS011, SYS428, SYS405, SUP017, SUP447
403		
500		


## Supported Action — ClearPending

### Description

This action is used to clear all the pending values.

### URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Bios/Settings/Actions/Oem/  
DellManager.ClearPending
```

 **NOTE:** No parameters are required to perform this action.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400	Base.1.2.GeneralError	RAC1035

# BootOptionCollection

## Description

A Collection of BootOption resource instances.

## URL

```
/redfish/v1/Systems/<ComputerSystem-ID>/BootOptions
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405	Base.1.2.GeneralError	SYS402
500	Base.1.2.InternalError	SYS446
503		

# ChassisCollection

## Description

A Collection of Chassis resource instances.

## URL

```
/redfish/v1/Chassis
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## Chassis

### Description

The Chassis schema represents the physical components of a system. It represents the sheet-metal confined spaces and logical zones such as racks, enclosures, chassis and all other containers. Subsystems (like sensors) that operate outside of a system's data plane (meaning the resources are not accessible to software running on the system) are linked either directly or indirectly through this resource.

### URL

```
/redfish/v1/Chassis/<Chassis-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
PATCH	ConfigureManager, Login
POST	ConfigureManager, Login

**Table 15. Supported properties**

Property name	Type	Read-only	Description
Assembly	String	Yes	The value of this property is a link to a resource of type Assembly.
ChassisType	String	Yes	The type of physical form factor of the chassis.
AssetTag	String	Yes	The value of this property is an identifying String used to track the chassis for inventory purposes.

**Table 15. Supported properties (continued)**

Property name	Type	Read-only	Description
ChassisType	String	Yes	ChassisType indicates the physical form factor for the type of chassis.
IndicatorLED	String	No	The value of this property contains the indicator light state for the indicator light associated with this system. Following values are supported: <ul style="list-style-type: none"> <li>Blinking</li> <li>Lit</li> </ul>
Location	String	Yes	This property contains location information of the associated chassis.
Manufacturer	String	Yes	The value of this property is the name of the organization responsible for producing the chassis. This organization might be the entity from whom the chassis is purchased, but this is not necessarily true.
Model	String	Yes	The model number of the chassis.
NetworkAdapters	String	Yes	A reference to the collection of Network Adapters associated with this chassis.
PartNumber	String	Yes	The part number of the chassis.
PhysicalSecurity	String	Yes	The state of the physical security sensor.
Power	String	Yes	A reference to the power properties (power supplies, power policies, sensors) of this chassis.
PowerState		Yes	The current power state of the chassis.
SKU	String	Yes	The SKU of the chassis.
SerialNumber	String	Yes	The serial number of the chassis.
Status	String	Yes	This property describes the status and health of the resource and its children.
Thermal	String	Yes	A reference to the thermal properties (fans, cooling, sensors) of this chassis.
UUID	String	Yes	The Universal Unique Identifier (UUID) for this Chassis.

## Supported Status Codes

HTTP Status Code	Extended Information
200	Base.1.0.success
400	<ul style="list-style-type: none"> <li>Base.1.0.PropertyValueTypeError</li> <li>Base.1.0.PropertyValueNotInList</li> <li>Base.1.0.PropertyUnknown</li> <li>Base.1.0.PropertyNotWritable</li> <li>Base.1.0.PropertyValueFormatError</li> </ul>
500	Base.1.0.InternalError

## Supported action — Reset

### Description

This action is used to reset the chassis. The action resets the chassis, not Systems or other contained resources, although side effects may occur which affect those resources.

### URL

```
/redfish/v1/Chassis/<Chassis-Id>/Actions/Chassis.Reset
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

### Supported Parameters

Parameter	Type	Values	Description
ResetType	String	On, ForceOff, GracefulShutdown, GracefulRestart, ForceRestart	Following types of reset can be performed <ul style="list-style-type: none"><li>On: Turn on the unit.</li><li>ForceOff: Turn off the unit immediately (nongraceful shutdown).</li><li>GracefulShutdown: Shut down gracefully and power off.</li><li>GracefulRestart: Shut down gracefully and power off.</li><li>ForceRestart: Shut down immediately and nongracefully and restart the system.</li></ul>

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		
400	Base.1.2.PropertyValueNotInList	SYS426
404	Base.1.2.ResourceMissingAtURI	SYS403
409		PSU501, PSU502
500	Base.1.2.InternalError	SYS446

[Supported action — ClearPending](#) on page 58

# Chassis — Settings resource

## Description

This resource is used for representing the pending configuration and related resources to clear pending and navigation to Jobs resource.

## URL

```
/redfish/v1/Chassis/<Chassis-Id>/Settings
```

## HTTP methods and privileges

Table 16. HTTP methods and privileges for the Settings resource

HTTP method	Required privilege
GET	Login
PATCH	ConfigureComponents, Login

## Supported Properties

Property name	Type	Read-only	Description
AssetTag	String	No	The user assigned asset tag of this chassis.
ChassisType	String	Yes	The type of physical form factor of the chassis.
Manufacturer	String	Yes	The manufacturer of this chassis.
Model	String	Yes	The model number of the chassis.
PartNumber	String	Yes	The part number of the chassis.
PowerState	String	Yes	The current power state of the chassis.
SKU	String	Yes	The SKU of the chassis.
SerialNumber	String	Yes	The serial number of the chassis.
Status	String	Yes	This property describes the status and health of the resource and its children.

## Status codes

Table 17. Status codes for the Settings resource

HTTP status code	Extended information	Error Code
202		

**Table 17. Status codes for the Settings resource (continued)**

HTTP status code	Extended information	Error Code
400	<ul style="list-style-type: none"> <li>Base.1.2.PropertyMissing</li> <li>Base.1.0.PropertyValueTypeError</li> <li>Base.1.0.PropertyValueNotInList</li> </ul>	
400		SYS426, SYS011, SYS428, SYS405, SUP017, SUP447
403		
500		

## CertificateCollection

### Description

A Collection of Certificate resource instances.

### URL

```
/redfish/v1/Managers/<Manager-Id>/NetworkProtocol/HTTPS/Certificates
```

**NOTE:** In the future iDRAC releases, BIOS HTTP certificate properties will not be displayed in the response body. Perform GET method on the certificate URI to get information pertaining to BIOS HTTP certificate.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

**Table 18. Supported Parameters**

Parameter	Type	Description
CertificateString	String	This property contains the certificate, and the format that follows the requirements specified by the CertificateType property value. If the certificate contains any private keys, they shall be removed from the string in responses. If the service does not know the private key for the certificate and is needed to use the certificate, the client shall provide the private key as part of the string in the POST request.
CertificateType	String	This property contains the format type for the certificate.

**Table 19. Status codes**

HTTP status code	Extended Information	Error Code
200		RAC1256
400		SYS428, SYS446, SYS467, SYS465, SYS466, SYS446

# Certificates

## Description

This resource is used to represent a Certificate for a Redfish implementation.

## URL

```
/redfish/v1/Managers/<Manager-Id>/NetworkProtocol/HTTPS/Certificates/<Certificate-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
DELETE	ConfigureComponents, Login


Table 20. Status codes

HTTP status code	Extended Information	Error Code
200		

# CertificateLocations

## Description

The CertificateLocations schema defines a resource that an administrator can use in order to locate all certificates installed on a given service. The resource can be used to represent the Certificate Location Properties for Redfish implementation.

 **NOTE:** In the future iDRAC releases, BIOS HTTP certificate properties will not be displayed in the response body. Perform GET method on the certificate URI to get information pertaining to BIOS HTTP certificate.

## URL

```
/redfish/v1/CertificateService/CertificateLocations
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 21. Status codes

HTTP status code	Extended Information	Error Code
200		



# CertificateService

## Description

The CertificateService schema defines a Certificate Service which represents the actions available to manage certificates and links to where certificates are installed.

## URL

```
/redfish/v1/CertificateService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 22. Status codes

HTTP status code	Extended Information	Error Code
200		

## Supported Action — ReplaceCertificate

### Description

The value of this property is the string of the certificate, and the format follows the requirements specified by the value of the CertificateType property. If the certificate contains any private keys, they will be removed from the string on GET requests. If the private key for the certificate is not known by the service and is needed to use the certificate, the client shall provide the private key as part of the string in the POST request.


## URL

```
/redfish/v1/CertificateService/Actions/CertificateService.ReplaceCertificate
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Description
CertificateString*	String	The string for the certificate.
CertificateType*	String	The format of the certificate.

Parameter	Type	Description
CertificateUri*	String	A link to the certificate that is being replaced.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		RAC1256
400		SYS428, SYS446, SYS467, SYS465, SYS466, SYS446

# ComputerSystemCollection

## Description

This resource is used to represent resources that represent a computing system in the Redfish specification.

## URL

```
/redfish/v1/Systems
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# ComputerSystem

## Description

The ComputerSystem schema represents a computer or system instance and the software-visible Resources, or items within the data plane, such as memory, CPU, and other devices that it can access. Details of those Resources or subsystems are also linked through this Resource.


## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login
PATCH	ConfigureComponents, Login

**Table 23. Supported Properties**

Property	Type	Read Only	Description
AssetTag	String	No	The user definable tag that can be used to track this computer system for inventory or other client purposes.
Bios	Object	Yes	A reference to the BIOS settings associated with this system
BiosVersion	String	Yes	The version of the system BIOS or primary system firmware
Boot	Object	Yes	Information about the boot settings for this system
Boot.BootSourceOverrideEnabled	String	No	The state of the boot source override feature. This is a sub property under Boot.
Boot.BootSourceOverrideMode	String	No	The BIOS boot mode to use when the system boots from the BootSourceOverrideTarget boot source. This is a sub property under Boot.
Boot.BootSourceOverrideTarget	String	No	The current boot source to use at the next boot instead of the normal boot device, if BootSourceOverrideEnabled is `true`. This is a sub property under Boot.
 <b>NOTE:</b> If the BootSourceOverrideTarget is set to a value other than None, then the BootSourceOverrideEnabled is automatically set to Once.			
EthernetInterfaces	Object	Yes	A reference to the collection of Ethernet interfaces associated with this system
HostName	String	No	The DNS Host Name, without any domain information
HostWatchdogTimer	Object	Yes	This object describes the Host Watchdog Timer functionality for this system. It also contains

**Table 23. Supported Properties (continued)**

Property	Type	Read Only	Description
			some updatable properties including FunctionEnabled and TimeoutAction.
HostWatchdogTimer.FunctionEnabled	boolean	No	FunctionEnabled is a sub property for HostWatchdogTimer. It indicates if the Host Watchdog Timer functionality has been enabled. Additional host-based software is necessary to activate the timer function.
HostWatchdogTimer.TimeoutAction	String	No	TimeoutAction is a sub property for HostWatchdogTimer. It indicates the action to perform when the Watchdog Timer reaches its timeout value. Following values are supported: <ul style="list-style-type: none"> <li>• None</li> <li>• ResetSystem</li> <li>• PowerCycle</li> <li>• PowerDown</li> </ul>
HostingRoles	Array	Yes	The hosing roles that this computer system supports
IndicatorLED	String	No	The state of the indicator LED, used to identify the system. Following values are supported: <ul style="list-style-type: none"> <li>• Off</li> <li>• Blinking</li> </ul>
Manufacturer	String	Yes	The manufacturer or OEM of this system
Memory	Object	Yes	A reference to the collection of Memory associated with this system
MemorySummary	Object	Yes	This object describes the central memory of the system in general detail
Model	String	Yes	The product name for this system, without the manufacturer name
NetworkInterfaces	Object	Yes	A reference to the collection of Network Interfaces associated with this system
PCleDevices	Array	Yes	A reference to a collection of PCle Devices used by this computer system
PCleFunctions	Array	Yes	A reference to a collection of PCle Functions used by this computer system

**Table 23. Supported Properties (continued)**

Property	Type	Read Only	Description
PartNumber	String	Yes	The part number for this system
PowerState	String	Yes	This is the current power state of the system
ProcessorSummary	Object	Yes	This object describes the central processors of the system in general detail
Processors	Object	Yes	A reference to the collection of Processors associated with this system
SKU	String	Yes	The manufacturer SKU for this system
SecureBoot	Object	Yes	A reference to the UEFI SecureBoot resource associated with this system
SerialNumber	String	Yes	The serial number for this system
SimpleStorage	Object	Yes	A reference to the collection of storage devices associated with this system
Status	Object	Yes	This property describes the status and health of the resource and its children
Storage	Object	Yes	A reference to the collection of storage devices associated with this system
SystemType	String	Yes	The type of computer system represented by this resource
TrustedModules	Array	Yes	This object describes the Array of Trusted Modules in the system
UUID	String	Yes	The universal unique identifier (UUID) for this system

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.success	
400	Base.1.0.PropertyValueTypeError, Base.1.0.PropertyValueNotInList, Base.1.0.PropertyUnknown, Base.1.0.PropertyNotWritable, Base.1.0.PropertyValueFormatError	SYS426
500	Base.1.0.InternalError	SYS446

[Supported Action — Reset](#) on page 54

## Supported Action — Reset

### Description

This action is used to reset the system.

### URL

```
/redfish/v1/Systems/<ComputerSystem-ID>/Actions/ComputerSystem.Reset
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
ResetType	string	On, ForceOff, ForceRestart, GracefulShutdown, PushPowerButton, Nmi	Following types of reset can be performed <ul style="list-style-type: none"><li>• On: Turn on the unit.</li><li>• ForceOff: Turn off the unit immediately (nongraceful shutdown).</li><li>• ForceRestart: Shut down immediately and nongracefully and restart the system.</li><li>• GracefulShutdown: Shut down gracefully and power off.</li><li>• PushPowerButton: Simulate the pressing of the physical power button on the unit</li><li>• Nmi: Generate a diagnostic interrupt, which is usually an NMI on x86 systems, to stop normal operations, complete diagnostic actions, and typically, terminate all the processes running in the system.</li></ul>

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		

HTTP Status Code	Extended Information	Error Message Code
400	PropertyValueTypeError	
400	Base.1.2.PropertyValueNotInList	SYS426
404	Base.1.2.ResourceMissingAtURI	SYS403
409		PSU501, PSU502
500	Base.1.2.InternalError	SYS446

## DellAssemblyCollection

### Description

A collection of DellAssembly resource.

### URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellAssemblyCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 24. Status codes**

HTTP status code	Extended Information	Error Code
200		

## DellAssembly

### Description

This resource represents assembly information.

### URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellAssembly/<Assembly-Id>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 25. Supported Properties**

Property	Type	Read Only	Description
DeviceFQDD	String	Yes	This property has the value of the FQDD of the device.
PackageType	String	Yes	Enumeration that defines the type of the PhysicalPackage.
SerialNumber	String	Yes	A manufacturer-allocated number used to identify the Physical Element.

**Table 26. Status codes**

HTTP status code	Extended Information	Error Code
200		

## DellAttributes

### Description

DellAttributes contains attributes surrounding attribute registry and actions needed to perform changes to settings, that typically doesn't require a manager reset to apply.

### URL

- Manager:


```
/redfish/v1/Managers/<Manager-ID>/Attributes
```

- System:

```
/redfish/v1/Managers/<System-ID>/Attributes
```

- Lifecycle Controller:

```
/redfish/v1/Managers/<LC-ID>/Attributes
```


 **NOTE:** For above URLs, a custom \$select query parameter is supported. For example, \$select=SSH.1.Timeout, where 'SSH.1.Timeout' is attribute under 'Attributes' complex property.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
PATCH	SystemControl

**Table 27. Supported Properties**

Property	Type	Read Only	Description
AttributeRegistry	String	Yes	The Resource ID of the Attribute Registry for the manager Attributes resource
Attributes	String	No	This is the manufacturer/provider specific list of manager attributes

 **NOTE:** The Attributes listed on performing GET method on DellAttributes, are not arranged in alphabetical order.



**Table 28. Status codes**

HTTP status code	Extended information
200	Base.1.0.Success
400	Base.1.0.PropertyValueNotInList, Base.1.0.PropertyValueTypeError
500	Base.1.0.InternalError

## DellAttributes — Settings resource

### Description

This resource is used for representing the pending configuration and related resources to clear pending and navigation to Jobs resource.

### URL

```
/redfish/v1/Managers/<Manager-ID>/Attributes/Settings
```

### HTTP methods and privileges

**Table 29. HTTP methods and privileges for the Settings resource**

HTTP method	Required privilege
GET	Login
PATCH	ConfigureComponents, Login

**Table 30. Supported Properties for the Settings resource**

Property	Type	Read Only	Description
AttributeRegistry	String	Yes	The Resource ID of the Attribute Registry for the manager Attributes resource
Attributes	String	No	This is the manufacturer/provider specific list of manager attributes

### Status codes

**Table 31. Status codes for the Settings resource**

HTTP status code	Extended information	Error Code
200	Base.1.5.Success	SYS413
400	<ul style="list-style-type: none"><li>Base.1.5.MalformedJSON</li><li>Base.1.5.PropertyUnknown</li><li>Base.1.5.PropertyValueTypeError</li><li>Base.1.5.PropertyMissing</li></ul>	SYS405, BIOS015, RAC947, SWC0283


# Supported action —ClearPending

## Description

This action is used to clear all the pending values.

## URL

```
/redfish/v1/Managers/System.Embedded.1/Attributes/Settings/Actions/Oem/DellManager.ClearPending
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

## Status codes

Table 32. Status codes for the Settings resource

HTTP status code	Extended information	Error Code
200		
400		RAC1035, HWC0001, RAC947
404	Base.1.2.ResourceMissingAtURI	SYS403
500	Base.1.2.InternalError	SYS446

# DellBootSources

## Description

This resource is used to represent the Dell Boot Sources Configuration and the related resources to the settings resource.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/BootSources
```

## HTTP methods and privileges

Table 33. HTTP methods and privileges for DellBootSources

HTTP method	Required privilege
GET	Login
PATCH	Login, ConfigureComponents

**Table 34. Supported Properties**

Property	Type	Read Only	Description
Attributes	Object	Yes	This is the manufacturer/provider specific list of BootSources attributes.

## Status codes

HTTP status code	Extended information	Error Code
200		
405		SYS402

## DellBootSources — Settings resource

### Description

This resource is used to represent the Boot Sources pending configuration and related resources to clear pending and navigation to Jobs resource.

### URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/BootSources/Settings
```

### HTTP methods and privileges

HTTP method	Required privilege
GET	Login
PATCH	SystemControl
POST	ConfigureComponents, Login

### Supported Properties

Property name	Type	Read-only	Description
AttributeRegistry	String	Yes	The Resource ID of the Attribute Registry that has the system-specific information about a BIOS resource
Attributes	String	Yes	The manufacturer or provider-specific list of BIOS attributes.
Actions	String	Yes	The available actions for this resource

## Status codes

**Table 35. Status codes for the Settings resource**

HTTP status code	Extended information	Error Code
202		
400	<ul style="list-style-type: none"><li>Base.1.2.PropertyMissing</li><li>Base.1.0.PropertyValueTypeError</li><li>Base.1.0.PropertyValueNotInList</li></ul>	
400		SYS426, SYS011, SYS428, SYS405, SUP017, SUP447
403		
500		

## DellBootSourcesRegistry

### Description

A Boot Sources Registry is a set of key-value pairs that are specific to a particular implementation or product. This schema describes the structure of a registry and also includes mechanisms for building user interfaces allowing consistent navigation of the contents.

### URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/BootSources/BootSourcesRegistry
```

### HTTP methods and privileges

**Table 36. HTTP methods and privileges for DellBootSourcesRegistry**

HTTP method	Required privilege
GET	Login

**Table 37. Supported Properties for DellBootSourcesRegistry**

Property	Type	Read Only	Description
Languages	String	Yes	This is the RFC 5646 compliant language code for the registry
OwningEntity	String	Yes	This is the organization or company that publishes this registry
RegistryEntries	Object	Yes	List of all attributes and their metadata for this component
RegistryVersion	String	Yes	This is the BootSources registry version which is used in the middle portion of a BootSourcesRegistry

# Status codes

Table 38. Status codes for DellBootSourcesRegistry

HTTP status code	Extended information	Error Message Code
200	Base.1.0.Success	
500	Base.1.0.InternalError	

# DellBIOSService

## Description

The DellBIOSService resource provides some actions to support BIOS functionality.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellBIOSService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
POST	ConfigureComponents, Login

Table 39. Status codes

HTTP status code	Extended Information	Error Code
200		

## Supported Action — DeviceRecovery

### Description

The DeviceRecovery action is used to perform recovery of the component provided in the Device parameter. If the Device is BIOS, a successful invocation of this command will result in shutdown of the host and initiation of the BIOS recovery sequence.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellBIOSService/Actions/  
DellBIOSService.DeviceRecovery
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

**Table 40. Supported Parameters**

Parameter	Type	Value	Description
Device	String	BIOS	Type of the device to be recovered

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400		RAC003, RAC095, RAC004, RAC1234, RAC1236, RAC1115

# DellCertificatesCollection

## Description

A Collection of Certificate resource instances.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/SecureBoot/Certificates
```

## HTTP methods and privileges

**Table 41. HTTP methods and privileges for DellCertificates**

HTTP method	Required privilege
GET	Login

## Status codes

**Table 42. Status codes for DellCertificates**

HTTP status code	Extended information	Error Message Code
200	Base.1.0.Success	
400	Base.1.0.PropertyValueTypeError, Base.1.0.PropertyValueNotInList	
403	Base.1.0. InsufficientPrivilege	
500	Base.1.0.InternalError	

# DellCertificateStore

## Description

This resource contains information about a SecureBoot Certificate database.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/SecureBoot/Certificates/<CertificateStore-Id>
```

## HTTP methods and privileges

HTTP method	Required privilege
GET	Login
POST	SystemControl

**Table 43. Supported Properties for DellCertificatesStore**

Property	Type	Read Only	Description
Certificates	Array	Yes	Contains the members of type certificates
Hash	Array	Yes	Contains the members of type Hash

## Status codes

**Table 44. Status codes for the instance of CertificateStore**

HTTP status code	Extended information	Error Message Code
200	Base.1.0.Success	
400	<ul style="list-style-type: none"><li>Base.1.0.PropertyValueTypeError</li><li>Base.1.0.PropertyValueNotInList</li></ul>	
403	Base.1.0. InsufficientPrivilege	
500	Base.1.0.InternalError	

## DellCertificates

### Description

This resource contains information about a SecureBoot Certificate.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/SecureBoot/Certificates/<CertificateStore-Id>
```

## HTTP methods and privileges

HTTP method	Required privilege
GET	Login

**Table 45. Supported Properties for DellCertificatesStore**

Property	Type	Read Only	Description
Certificates	Array	Yes	Contains the members of type certificates
Hash	Array	Yes	Contains the members of type Hash

## Status codes

**Table 46. Status codes for the instance of CertificateStore**

HTTP status code	Extended information	Error Message Code
200	Base.1.0.Success	
400	<ul style="list-style-type: none"> <li>Base.1.0.PropertyValueTypeError</li> <li>Base.1.0.PropertyValueNotInList</li> </ul>	
403	Base.1.0. InsufficientPrivilege	
500	Base.1.0.InternalError	

## Navigation URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/SecureBoot/Certificates/<CertificateStore-Id>/<Certificate-Id>
```

## HTTP methods and privileges

**Table 47. HTTP methods and privileges for instance of Certificate**

HTTP method	Required privilege
GET	Login
DELETE	SystemControl

**NOTE:** By default, GET requests on the Certificate member resource generate an output of application/json. Use GET request with Accept header application/pkix-cert to download certificate and use application/octet-stream to download the Hash files.

**Table 48. Supported Properties for instance of Certificate**

Property	Type	Read Only	Description
CertificateSubtype	String	Yes	The certificate subtype
CertificateType	String	Yes	The certificate type
SecureBootPolicy	String	Yes	The current SecureBoot Policy
IssuerCommonName_CN	String	Yes	The issuer common name
IssuerCountryCode_CC	String	Yes	The issuer country code
IssuerLocality_L	String	Yes	The issuer locality
IssuerOrganization_O	String	Yes	The issuer organization
IssuerState_S	String	Yes	The issuer state



**Table 48. Supported Properties for instance of Certificate (continued)**

Property	Type	Read Only	Description
SerialNumber	String	Yes	The certificate serial number
SubjectCommonName_CN	String	Yes	The subject common name
SubjectCountryCode_CC	String	Yes	The subject country code
SubjectLocality_L	String	Yes	The subject locality
SubjectOrganization_O	String	Yes	The subject organization
SubjectState_S	String	Yes	The subject state
Thumbprint	String	Yes	The certificate identifier
ValidFrom	String	Yes	A String providing the validity start date
ValidTo	String	Yes	A String providing the validity end date

## Status codes

**Table 49. Status codes for the instance of Certificate**

HTTP status code	Extended information	Error Message Code
200	Base.1.0.Success	
400	<ul style="list-style-type: none"> <li>Base.1.0.PropertyValueTypeError</li> <li>Base.1.0.PropertyValueNotInList</li> </ul>	
403	Base.1.0. InsufficientPrivilege	
500	Base.1.0.InternalError	

## DellChassisCollection

### Description

A collection of DellChassis resource.

### URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellChassisCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 50. Status codes**

HTTP status code	Extended Information	Error Code
200		

# DellChassis

## Description

This resource provides information about the enclosure or chassis the system is installed into.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellChassis/<Chassis-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
CanBeFRUed	Boolean	Yes	Boolean that indicates whether this PhysicalElement can be FRUed (TRUE) or not (FALSE).
Links	String	Yes	Contains references to other resources that are related to this resource.
SystemID	INT	Yes	This property value is the unique Dell EMC System ID for the platform.

**Table 51. Status codes**

HTTP status code	Extended Information	Error Code
200		

# DellControllerCollection

## Description

A collection of DellController resource.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Storage/DellControllerCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 52. Status codes**

HTTP status code	Extended Information	Error Code
200		
400	Base.1.5. QueryParameterValueFormatError, Base.1.5. QueryParameterOutOfRange	SYS407, SYS417, SYS457
401	Base.1.2.AccessDenied	
404	Base.1.5. ResourceMissingAtURI	SYS403
405		SYS402

## DellController

### Description

An instance of DellController will have RAID Controller specific data.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Storage/DellController/<DellController-Id>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 53. Supported Parameters for DellController**

Property	Type	Read Only	Description
AlarmState	String	Yes	This property represents the state of Alarm if it is present.
BootVirtualDiskFQDD	String	Yes	This property indicates FQDD of BootVD. If no VD is set as BootVD in the controller, this property is an empty String.
CacheSizeInMB	Integer	Yes	This property shall represent the controller cache size in MB.
CachecadeCapability	String	Yes	The property shall represent the controllers support of cachecade virtual disk creation.
ConnectorCount	integer	Yes	This property represents the count of SAS connectors.
ControllerFirmwareVersion	String	Yes	This property gives information about the Firmware Version installed on the Controller.
Device	String	Yes	This property represents the PCI device.

**Table 53. Supported Parameters for DellController (continued)**

Property	Type	Read Only	Description
DeviceCardDataBusWidth	String	Yes	This property represents the bus width.
DeviceCardSlotLength	String	Yes	This property represents the controller slot length.
DeviceCardSlotType	String	Yes	The property shall represent the the controller slot type. Example the String value will be Unknown, PCI Express x8, PCI Express Gen 3, PCI Express Gen 3x1, PCI Express Gen 3x2, PCI Express Gen 3x4, PCI Express Gen 3x8, PCI Express Gen 3x16.
DriverVersion	String	Yes	This property shall represent the controller driver version.
EncryptionCapability	String	Yes	The property shall represent the possible encryption states on the controller.
EncryptionMode	String	Yes	The property shall represent the current encryption state on the controller.
KeyID	String	Yes	KeyID provides details about the Key identification on the controller when the controller is in Local Key Management mode.
LastSystemInventoryTime	String	Yes	This property provides the time when System Inventory Collection On Reboot(CSIOR) was last performed or the object was last updated on iDRAC. The value is represented as yyyyymmddHHMMSS.
LastUpdateTime	String	Yes	This property provides the time the data was last updated. The value is represented as yyyyymmddHHMMSS.
MaxAvailablePCILinkSpeed	String	Yes	This property represents the maximum PCI link speed that the controller is set to allow.
MaxPossiblePCILinkSpeed	String	Yes	This property represents the maximum possible PCI link speed, which is the speed this device is capable of.
PCISlot	Integer	Yes	The property represent the associated PCI slot.
PatrolReadState	String	Yes	This property shall represent the current state of the patrol read operation.
PersistentHotspare	String	Yes	This property indicates status of the persistent hotspare slot of the controller.
RealtimeCapability	String	Yes	This property indicates whether this controller supports Realtime.

**Table 53. Supported Parameters for DellController (continued)**

Property	Type	Read Only	Description
RollupStatus	String	Yes	RollupStatus provides overall health status of the system by considering their sub-component health statuses, e.g RollupStatus will be degraded if any one of the sub-component is degraded.
SASAddress	String	Yes	The property provides the unique ID of the controller and is in hexadecimal form.
SecurityStatus	String	Yes	The property shall represent the controller security configuration information.
SharedSlotAssignmentAllowed	String	Yes	This property indicates whether the controller allows shared assignments of slots, that is, whether the controller can access slots that are shared with other controllers.
SlicedVDCapability	String	Yes	The property shall represent the controllers support of sliced virtual disk creation and shall have one of the following values:0 - Sliced Virtual Disk not supported, 1-Sliced Virtual Disk supported.
SupportControllerBootMode	String	Yes	This property indicates whether this controller supports setting of controller boot mode.
SupportEnhancedAutoForeignImport	String	Yes	This property represents the controller supports automatic foreign import operation when the device is in foreign import mode.
SupportRAID10UnevenSpans	String	Yes	This property indicates whether this controller supports uneven spans for RAID 10.
T10PICapability	String	Yes	This property indicates whether this controller supports T10 Protection Information (T10 PI).

**Table 54. Status codes**

HTTP status code	Extended Information	Error Code
200		
400	Base.1.5. QueryParameterValueFormatError, Base.1.5. QueryParameterOutOfRange	SYS407, SYS417, SYS457
401	Base.1.2.AccessDenied	
404	Base.1.5. ResourceMissingAtURI	SYS403
405		SYS402

# DellControllerBatteryCollection

## Description

A collection of DellControllerBattery resource.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellControllerBatteryCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 55. Status codes

HTTP status code	Extended Information	Error Code
200		
404	Base.1.5.GeneralError	

# DellControllerBattery

## Description

An instance of DellController will have RAID Controller specific data.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellControllerBattery/<ControllerBattery-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 56. Supported Properties

Property	Type	Read Only	Description
FQDD	String	Yes	This property represents the Fully Qualified Device Description (FQDD) that uniquely identifies a device.
PrimaryStatus	String	Yes	PrimaryStatus provides a high-level status of the device.
RAIDState	String	Yes	RAIDState provides the current battery status.

**Table 57. Status codes**

HTTP status code	Extended Information	Error Code
200		
404	Base.1.5.GeneralError	SYS403

## DellGPUSensorCollection

### Description

A collection of DellGPUSensor resource.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellGPUSensorCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 58. Status codes**

HTTP status code	Extended Information	Error Code
200		

## DellGPUSensor

### Description

This resource represents a Graphical Processor sensor, which is a hardware device capable of measuring the characteristics of a physical property. It represents a managed sensor device and its properties that returns GPU sensor readings such as Power, Thermal and Temperature.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellGPUSensor/<GPUSensor-Id>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read only	Description
BoardPowerSupplyStatus	String	Yes	Indicates GPU board power supply status.
BoardTemperatureCel	Integer	Yes	Indicates temperature on GPU board.
DeviceID	String	Yes	An address or other identifying information to uniquely name the LogicalDevice.
GPUShutdownTemperatureCel	Integer	Yes	Indicates GPU Shutdown Temperature.
GPUTargetTemperatureCel	Integer	Yes	Indicates GPU target temperature.
MaximumGPUOperatingTemperatureCel	Integer	Yes	Indicates Maximum GPU Operating Temperature.
MaximumMemoryOperatingTemperatureCel	Integer	Yes	Indicates Maximum Memory Operating Temperature.
MemoryTemperatureCel	Integer	Yes	Indicates temperature on GPU memory.
MinimumGPUHardwareSlowdownTemperatureCel	Integer	Yes	Indicates Minimum GPU Hardware Slowdown Temperature.
PowerBrakeStatus	String	Yes	Indicates Power Brake Status.
PowerConsumptionmW	Integer	Yes	Indicates Total GPU board power consumption in milliwatt.
PowerSupplyStatus	String	Yes	Indicates Power supply (NVVDD, FBVDD etc) status.
PrimaryGPUTemperatureCel	Integer	Yes	Indicates primary GPU temperature.
SecondaryGPUTemperatureCel	Integer	Yes	Indicates secondary GPU temperature.
ThermalAlertStatus	String	Yes	Indicates Thermal Alert Status.

**Table 59. Status codes**

HTTP status code	Extended Information	Error Code
200		

## DelliDRACCardCollection

### Description

A collection of DelliDRACCard resource

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DelliDRACCardCollection
```

### Supported HTTP Method and Privileges

HTTP Method
GET



## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		

## DelliDRACCard

### Description

An instance of DelliDRACCard will have data specific to the Integrated Dell Remote Access Controller (iDRAC) in the managed system.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DelliDRACCard/<iDRAC-Card-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 60. Supported properties for DelliDRACCard**

Property	Type	Read Only	Description
IPMIVersion	String	Yes	A string containing the IPMI Version.
LastSystemInventoryTime	String	Yes	This property provides the last time System Inventory Collection On Reboot(CSIOR) was performed or the object was last updated on iDRAC. The value is represented as yyyyymmddHHMMSS.
LastUpdateTime	String	Yes	This property provides the last time the data was updated. The value is represented as yyyyymmddHHMMSS.
URLString	String	Yes	A string containing the URL for the iDRAC Web GUI.

**Table 61. Status codes**

HTTP status code	Extended Information	Error Code
200		
400	Base.1.5. QueryParameterValueFormatError, Base.1.5. QueryParameterOutOfRange	SYS407, SYS417, SYS457
401	Base.1.2.AccessDenied	
404	Base.1.5. ResourceMissingAtURL	SYS403

**Table 61. Status codes (continued)**

HTTP status code	Extended Information	Error Code
405		SYS402

## DelliDRACCardService

### Description

The DelliDRACCardService resource provides support for actions intended for features specific to iDRAC.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DelliDRACCardService
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 62. Status codes**

HTTP status code	Extended Information	Error Code
200		
400	Base.1.5. QueryParameterValueFormatError, Base.1.5. QueryParameterOutOfRange	SYS407, SYS417, SYS457
401	Base.1.2.AccessDenied	
404	Base.1.5. ResourceMissingAtURI	SYS403
405		SYS402

[Supported Action — ExportSSLCertificate](#) on page 82

[Supported Action — iDRACReset](#) on page 83

[Supported Action — ImportSSLCertificate](#) on page 84

[Supported Action — iDRACResetCfg](#) on page 83

## Supported Action — TestRsyslogServerConnection

### Description


The TestRsyslogServerConnection() method is used to test rsyslog connection from iDRAC, i.e Whether Test message from iDRAC is reaching to the the Rsyslog Listener or not.

### URL

```
/redfish/v1/Dell/Managers/<ManagerID>/DelliDRACCardService/Actions/  
DelliDRACCardService.TestRsyslogServerConnection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

 **NOTE:** No parameters are required to perform this action.

## Supported Status Codes

HTTP status code	Extended Information	Error Code
200		
400		SYS406, SYS460
401	Base.1.2.AccessDenied	
403	Base.1.5. InsufficientPrivilege	LIC501
404	Base.1.5. ResourceMissingAtURI	SYS403
405		SYS402

## Supported Action — SendTestSNMPTrap

### Description

This method is used to send a test snmp alert for a particular attribute.

### URL

```
/redfish/v1/Dell/Managers/<ManagerID>/DelliDRACCardService/Actions/  
DelliDRACCardService.SendTestSNMPTrap
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

**Table 63. Supported parameters for Supported Action — SendTestSNMPTrap**

Parameter	Type	Value	Description
InstanceID	String		The property shall have the value of the InstanceID property of the attribute for which the test email alert is generated.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	RAC013, RAC012, RAC010, RAC016, RAC015, RAC014, RAC018, RAC039, RAC038, RAC043, RAC031, RAC030, RAC033, RAC032, RAC035, RAC037, RAC050, RAC042, RAC004, RAC005, RAC006, RAC007, RAC001, RAC002,

HTTP Status Code	Extended Information	Error Message Code
		RAC003, RAC044, RAC008, RAC009, RAC045, RAC040, RAC041, RAC028, RAC029, LIC503, LIC502, RAC046, RAC047, RAC022, RAC023, RAC020, RAC021, RAC026, RAC027, RAC024, RAC025, RAC048, RAC049, RAC051

## Supported Action — SendTestEmailAlert

### Description

This method is used to send a test email alert for a particular attribute.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DelliDRACCardService/Actions/  
DelliDRACCardService.SendTestEmailAlert
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

### Action Parameters

Parameter	Type	Value	Description
InstanceID	String		The property shall have the value of the InstanceID property of the attribute for which the test email alert is generated

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	RAC013, RAC012, RAC010, RAC016, RAC015, RAC014, RAC018, RAC039, RAC038, RAC043, RAC031, RAC030, RAC033, RAC032, RAC035, RAC037, RAC050, RAC042, RAC004, RAC005, RAC006, RAC007, RAC001, RAC002, RAC003, RAC044, RAC008, RAC009, RAC045, RAC040, RAC041, RAC028, RAC029, LIC503, LIC502, RAC046, RAC047, RAC022, RAC023, RAC020, RAC021, RAC026, RAC027, RAC024, RAC025, RAC048, RAC049, RAC051

## Supported Action — SSLResetCfg

### Description


This method is used to restores the web-server certificate to factory.

### URL

```
/redfish/v1/Dell/Managers/<ManagerID>/DelliDRACCardService/Actions/  
DelliDRACCardService.SSLResetCfg
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

 **NOTE:** No parameters are required to perform this action.

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	RAC070,RAC095

## Supported Action — RemoveSelf

### Description

The method is used to remove the iDRAC from a group, that the iDRAC is a member of.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DelliDRACCardService/Actions/  
DelliDRACCardService.RemoveSelf
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

### Action Parameters

Parameter	Type	Value	Description
GroupName	String		Name of the group which the iDRAC is a part of.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	GMGR0006, GMGR0010, GMGR0060, RAC095, RAC004, GMGR0039, RAC003

## Supported Action — JoinGroup

### Description

The method is used join an existing group providing the GroupPasscode.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DelliDRACCardService/Actions/  
DelliDRACCardService.JoinGroup
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

## Action Parameters

Parameter	Type	Value	Description
CloneConfiguration	String	Disable, Enable	Clones email alert configuration from the group once joined.0-Disable, 1-Enable.
GroupName	String		Name of the group to be joined.
GroupPasscode	String		Passcode of the group to be joined.
GroupUUID	String		Unique Identifier of the group to be joined.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	RAC004, GMGR0016, RAC095, RAC003

## Supported Action — ImportCertificate

### Description

This action is used to export SSL certificate from iDRAC. Based on input parameter type ExportSSLCertificate returns the certificate.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DelliDRACCardService/Actions/  
DelliDRACCardService.ImportCertificate
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

## Action Parameters

Parameter	Type	Value	Description
CertificateFile	String		A base 64 encoded String of the Certificate file.
CertificateType	String	CA, CSC, ClientTrustCertificate, KMS_Server_CA, RSYSLOG_SERVER_CA , SEKM_SSL_CERT, Server	Type of the certificate to be imported.
Instance	integer		This parameter represent the instance number. Applicable only for CertificateType RSYSLOG_SERVER_CA and max 2 instance are allowed to store.
Passphrase	String		A passphrase for certificate file.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	RAC004,LC107,LC011,RAC003

## Supported Action — GenerateSEKMCSR

### Description


This method is used to create the SEKM certificate signing request(CSR) and return the certificate file. The certificate file should be signed by an authority. Note: For creating the CSR, the following DelliDRACCardString attributes under SEKM Cert group must be configured. 1.CommonName, 2.OrganizationUnit, 3.LocalityName, 4.StateName, 5. CountryCode, 6. EmailAddress, 7.OrganizationName and optional attributes are 1.SubjectAltName 2.UserId.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DelliDRACCardService/Actions/  
DelliDRACCardService.GenerateSEKMCSR
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

 **NOTE:** No parameters are required to perform this action.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	RAC004,LC110,LC106

## Supported Action — ExportCertificate

### Description

This action is used to export SSL certificate from iDRAC. Based on input parameter type ExportSSLCertificate returns the certificate.

### URL

```
/redfish/v1/Dell/Managers/<ManagerID>/DellIDRACCardService/Actions/  
DellIDRACCardService.ExportCertificate
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

## Action Parameters

Parameter	Type	Value	Description
CertificateType	String	CA, CSC, ClientTrustCertificate, KMS_SERVER_CA, RSYSLOG_SERVER_CA , SEKM_SSL_CERT, Server	The type of the certificate to be exported.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	RAC004,LC074,RAC003



## Supported Action — DeleteGroup

### Description

The method is used delete the group.

### URL

```
/redfish/v1/Dell/Managers/<ManagerID>/DelliDRACCardService/Actions/  
DelliDRACCardService.DeleteGroup
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

### Action Parameters

Parameter	Type	Value	Description
GroupName	String		Name of the group to be joined.

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	RAC004, GMGR0033, GMGR0039, RAC095, RAC003

## Supported Action — DeleteCertificate

### Description

This method is used to delete the certificate from iDRAC, on the basis of input parameter type.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DelliDRACCardService/Actions/  
DelliDRACCardService.DeleteCertificate
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

## Action Parameters

Parameter	Type	Value	Description
CertificateType	String	CA, CSC, ClientTrustCertificate, KMS_SERVER_CA, RSYSLOG_SERVER_CA , SEKM_SSL_CERT, Server	The type of the certificate to be deleted.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	LC109,RAC004,LC111,RAC003

## Supported Action — ExportSSLCertificate

### Description

This action is used to export SSL certificate from iDRAC. Based on input parameter type ExportSSLCertificate returns the certificate.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellIDRACCardService/Actions/  
DellIDRACCardService.ExportSSLCertificate
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

## Action Parameters

Parameter	Type	Value	Description
SSLCertType	String	CA, CSC, ClientTrustCertificate, Server	The type of the certificate to be exported.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	LC067
400	<null>	LC074

## Supported Action — iDRACReset

### Description

This action is used to reset iDRAC.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellIDRACCardService/Actions/  
DellIDRACCardService.iDRACReset
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

### Action Parameters

Parameter	Type	Value	Description
Force	String	Force, Graceful	This option is used to reset the iDRAC by force or gracefully.

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	RAC064
400		RAC065, RAC071, RAC073

## Supported Action — iDRACResetCfg

### Description

This action is used to reset the iDRAC to the factory default configurations.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellIDRACCardService/Actions/  
DellIDRACCardService.iDRACResetCfg
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

## Action Parameters

Parameter	Type	Value	Description
Force	String	Force, Graceful	This option is used to reset the iDRAC to factory defaults by force or gracefully.
Preserve	String	All, Default, ResetAllWithRootDefaults	<ul style="list-style-type: none"><li>• Default—Reset all configuration to default except network and users.</li><li>• All—Reset all configuration to default including network and users.</li><li>• ResetAllWithRootDefaults—Reset all configuration to default including network preserve default user as root/calvin.</li></ul>

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	RAC066
400	<null>	RAC067, RAC072, RAC074, RAC095

## Supported Action — ImportSSLCertificate

### Description

This action is used to import the SSL certificate to iDRAC, on the basis of input parameter type. After importing the certificate, iDRAC automatically restarts.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DelliDRACCardService/Actions/  
DelliDRACCardService.ImportSSLCertificate
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

## Action Parameters

Parameter	Type	Value	Description
CertificateType	String	CA, CSC, ClientTrustCertificate, KMS_SERVER_CA, RSYSLOG_SERVER_CA, SEKM_SSL_CERT, Server	Type of the certificate to be imported.

Parameter	Type	Value	Description
Passphrase	String		A passphrase for certificate file. Note: This is optional parameter for CSC certificate, and not required for Server and CA certificates.
SSLCertificateFile	String		A base-64 encoded string of the XML Certificate file. Note: For importing CSC certificate, user has to convert PKCS file to base64 format. Use the openssl command. The CTC file content must be in PEM the format (base-64 encoded).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	
400		LC011, LC077, RAC095, DH010

# DellEnclosureCollection

## Description

A collection of DellEnclosure resource.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellEnclosureCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 64. Status codes**

HTTP status code
200
404

# DellEnclosure

## Description

An instance of DellEnclosure will have storage enclosure specific data.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellEnclosure/<Enclosure-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 65. Supported properties for DellEnclosure

Property	Type	Read Only	Description
AssetName	String	Yes	This property contains up to 32 ASCII alpha-numeric characters
Connector	Integer	Yes	The property shall represent the enclosure port connection
LastSystemInventoryTime	String	Yes	This property provides the time when System Inventory Collection On Reboot (CSIOR) was last performed or the object was last updated on iDRAC. The value is represented as yyyymmddHHMMSS.
LastUpdateTime	String	Yes	This property provides the time when the data was last updated. The value is represented as yyyymmddHHMMSS.
SlotCount	Integer	Yes	The property shall represent the number of drive slots in the enclosure.
TempProbeCount	Integer	Yes	This property represents the number of temperature probes present.
Version	String	Yes	The property shall represent the EMM or Backplane version.
WiredOrder	Integer	Yes	For JBOD this property shall represent the enclosure position or connection sequence in a daisy chain of enclosures in the relation to the controller port. For internal backplane, the wiredorder is same as BayID.

Table 66. Status codes

HTTP status code
200
404

# DellEnclosureEMMCollection

## Description

A collection of DellEnclosureEMM resource.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellEnclosureEMMCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 67. Status codes

HTTP status code
200
404

# DellEnclosureEMM

## Description

An instance of DellEnclosureEMM contains Enclosure Management Module specific data.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellEnclosureEMM/<EnclosureEMM-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 68. Supported properties for DellEnclosureEMM**

Property	Type	Read Only	Description
DeviceDescription	String	Yes	A String that contains the friendly Fully Qualified Device Description (FQDD), which is a property that describes the device and its location.
FQDD	String	Yes	The property shall represent Fully Qualified Device Description (FQDD).
InstanceID	String	Yes	A unique identifier for the instance
PartNumber	String	Yes	The property represents the part number of Enclosure management module, which is assigned by organization
PrimaryStatus	String	Yes	The property shall represent the status of the device and shall be one of the following values:0 - Unknown, 1 - OK, 2 - Degraded, 3 -Error.
Revision	String	Yes	The property shall represent the version of the EMM firmware.
State	String	Yes	This property represents the state of the device.

**Table 69. Status codes**

HTTP status code
200
404

## DellEnclosureFanSensorCollection

### Description

A collection of DellEnclosureFanSensor resource.

### URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellEnclosureFanSensorCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 70. Status codes**

HTTP status code
200
404



# DellEnclosureFanSensor

## Description

An instance of DellEnclosureFanSensor contains Storage Enclosure fan sensor specific data.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellEnclosureFanSensor/<EnclosureFanSensor-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Property	Type	Read Only	Description
CurrentReading	integer	Yes	The current value indicated by the Sensor
DeviceDescription	String	Yes	A string that contains the friendly Fully Qualified Device Description (FQDD), which is a property that describes the device and its location.
ElementName	String	Yes	The user-friendly name for this instance.
FQDD	String	Yes	The property shall represent Fully Qualified Device Description (FQDD).
LowerThresholdCritical	Integer	Yes	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, Critical, or Fatal conditions. If the CurrentReading is between LowerThresholdCritical and LowerThresholdFatal, the CurrentState is Critical.
LowerThresholdNonCritical	Integer	Yes	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, Critical, or Fatal conditions. If Current Reading is between LowerThresholdNonCritical and Upper ThresholdNonCritical, the Sensor is reporting a normal value. If CurrentReading is between LowerThresholdNonCritical and LowerThresholdCritical, the CurrentState is NonCritical.
PrimaryStatus	String	Yes	PrimaryStatus provides a high-level status of the device.
RateUnits	String	Yes	Specifies if the units returned by this Sensor are rate units. All the values

Property	Type	Read Only	Description
			returned by this Sensor are represented in the units obtained by (BaseUnits * 10 raised to the power of the UnitModifier). This is true unless this property (RateUnits) has a value other than "None". For example, if BaseUnits is Volts and the UnitModifier is -6, the units of the values returned are MicroVolts. But, if the RateUnits property is set to a value other than "None", the units are further qualified as rate units. In the above example, if RateUnits is set to "Per Second", the values returned by the Sensor are in MicroVolts/Second. The units apply to all numeric properties of the Sensor, unless explicitly overridden by the Units qualifier. Any implementation of CurrentReading must be qualified with either a Counter or a Gauge qualifier, depending on the characteristics of the sensor being modeled. The property is not applicable.
ReadingUnits	String	Yes	This property represents units of the current reading value, such as Degrees Celsius. This is the base unit of the values returned by this Sensor. All the values returned by this Sensor are represented in the units obtained by (BaseUnits * 10 raised to the power of the UnitModifier). For example, if BaseUnits is Volts and the UnitModifier is -6, the units of the values returned are MicroVolts. However, if the RateUnits property is set to a value other than "None", the units are further qualified as rate units. In the above example, if RateUnits is set to "Per Second", the values returned by the Sensor are in MicroVolts/Second. The units apply to all numeric properties of the Sensor, unless explicitly overridden by the Units qualifier.
State	String	Yes	This property displays the current state of the device.
UnitModifier	Integer	Yes	The unit multiplier for the values returned by this Sensor. All the values returned by this Sensor are represented in the units obtained by (BaseUnits * 10 raised to the power of the UnitModifier). For example, if BaseUnits is Volts and the Unit Modifier is -6, the units of the values returned are MicroVolts. However, if the RateUnits property is set to a value other than "None", the units are further qualified as rate units. In the above example, if RateUnits is set to "Per Second", the values returned by the Sensor are in MicroVolts/Second. The units apply to all numeric properties of the Sensor, unless explicitly overridden by the Units qualifier.

Property	Type	Read Only	Description
UpperThresholdCritical	Integer	Yes	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, Critical, or Fatal conditions. If the CurrentReading is between UpperThresholdCritical and UpperThresholdFatal, the CurrentState is Critical.
UpperThresholdNonCritical	Integer	Yes	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, Critical, or Fatal conditions. If the CurrentReading is between LowerThresholdNonCritical and UpperThresholdNonCritical, the Sensor is reporting a normal value. If the CurrentReading is between UpperThresholdNonCritical and UpperThresholdCritical, the CurrentState is NonCritical.

**Table 71. Status codes**

HTTP status code
200
404

## DellEnclosurePowerSupplyCollection

### Description

A collection of DellEnclosurePowerSupply resource.

### URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellEnclosurePowerSupplyCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 72. Status codes**

HTTP status code
200
404

# DellEnclosurePowerSupply

## Description

An instance of DellEnclosurePowerSupply contains Storage Enclosure power supply unit specific data.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellEnclosurePowerSupply/  
<EnclosurePowerSupply-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 73. Supported properties for DellEnclosurePowerSupply

Parameter	Type	Read Only	Description
FQDD	String	Yes	The property shall represent Fully Qualified Device Description (FQDD).
PartNumber	String	Yes	The property shall represent the enclosure power supply unit part number, which is assigned by the organization.
PrimaryStatus	String	Yes	The property shall represent the status of the device.

Table 74. Status codes

HTTP status code
200
404

# DellEnclosureTemperatureSensorCollection

## Description

A collection of DellEnclosureTemperatureSensor resource.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellEnclosureTemperatureSensorCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 75. Status codes**

HTTP status code
200
404

## DellEnclosureTemperatureSensor

### Description

An instance of DellEnclosureTemperatureSensor will have Storage Enclosure temperature sensor specific data.

### URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/DellEnclosureTemperatureSensor/  
<EnclosureTemperatureSensor-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Property	Type	Read Only	Description
CurrentReading	Integer	Yes	The current value indicated by the sensor. The property value is in Degrees Celsius.
DeviceDescription	String	Yes	A string that contains the friendly Fully Qualified Device Description (FQDD), which is a property that describes the device and its location.
ElementName	String	Yes	The user-friendly name for this instance.
FQDD	String	Yes	The property shall represent Fully Qualified Device Description (FQDD).
LowerThresholdCritical	Integer	Yes	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, or Critical conditions. If the CurrentReading is below LowerThresholdCritical, the CurrentState is Critical. The lower critical threshold value in Degree Celsius.

Property	Type	Read Only	Description
LowerThresholdNonCritical	Integer	Yes	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, or Critical conditions. If CurrentReading is between LowerThresholdNonCritical and UpperThresholdNonCritical, the Sensor is reporting a normal value. If CurrentReading is between LowerThresholdNonCritical and LowerThresholdCritical, the CurrentState is NonCritical. The lower non-critical threshold value in Degree Celsius.
PrimaryStatus	String	Yes	This property represents the status of the device.
RateUnits	String	Yes	Specifies if the units returned by this Sensor are rate units. All the values returned by this Sensor are represented in the units obtained by (BaseUnits * 10 raised to the power of the UnitModifier). This is true unless this property (RateUnits) has a value different than "None". For example, if BaseUnits is Volts and the UnitModifier is -6, the units of the values returned are MicroVolts. But, if the RateUnits property is set to a value other than "None", the units are further qualified as rate units. In the above example, if RateUnits is set to "Per Second", the values returned by the Sensor are in MicroVolts/Second. The units apply to all numeric properties of the Sensor, unless explicitly overridden by the Units qualifier. Any implementation of CurrentReading should be qualified with either a Counter or a Gauge qualifier, depending on the characteristics of the sensor being modeled. The property value is 0 (None).
ReadingUnits	String	Yes	This property represents the units of current reading value. Example: Degrees C.
SensorType	String	Yes	The Type of the Sensor such as Fan, Voltage, or Temperature. The value is 2(Temperature).
State	String	Yes	This property displays the current state of the device.
UnitModifier	Integer	Yes	The unit multiplier for the values returned by this Sensor. All the values returned by this Sensor are represented in the units obtained by (BaseUnits * 10 raised to the power of the UnitModifier). For

Property	Type	Read Only	Description
			example, if BaseUnits is Volts and the Unit Modifier is -6, the units of the values returned are MicroVolts. However, if the RateUnits property is set to a value other than "None", the units are further qualified as rate units. In the above example, if RateUnits is set to "Per Second", the values returned by the Sensor are in MicroVolts/Second. The units apply to all numeric properties of the Sensor, unless explicitly overridden by the Units qualifier. The property must have the value 0 denoting that the CurrentReading property value need not be multiplied by the UnitModifier property value.
UpperThresholdCritical	Integer	Yes	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, or Critical conditions. If the CurrentReading is above UpperThresholdCritical, the CurrentState is Critical. The upper critical threshold value in Degree Celsius.
UpperThresholdNonCritical	Integer	Yes	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, or Critical conditions. If the CurrentReading is between LowerThresholdNonCritical and UpperThresholdNonCritical, the Sensor is reporting a normal value. If the CurrentReading is between UpperThresholdNonCritical and UpperThresholdCritical, the CurrentState is NonCritical. The upper non-critical threshold value in Degree Celsius.

**Table 76. Status codes**

HTTP status code	Extended Information	Error Code
200		
400	Base.1.5. QueryParameterValueFormatError, Base.1.5. QueryParameterOutOfRange	SYS407, SYS417, SYS457
401	Base.1.2.AccessDenied	
404	Base.1.5. ResourceMissingAtURI	SYS403
405		SYS402

# DellFCCapabilitiesCollection

## Description

A collection of DellFCCapabilities resource.

## URL

```
/redfish/v1/Dell/Chassis/{ComputerSystemId}/NetworkPorts/DellFCCapabilitiesCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 77. Status codes

HTTP status code	Extended Information	Error Code
200		

# DellFCCapabilities

## Description

This resource represents Fibre Channel HBA capabilities in the managed system.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystemId>/NetworkPorts/DellFCCapabilities/  
<FCCapabilitiesId>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
FCMaxNumberExchanges	Integer	Yes	This property represents the maximum number of exchanges.
FCMaxNumberOutStandingCommands	Integer	Yes	This property represents the maximum number of outstanding commands across all connections.
FeatureLicensingSupport	String	Yes	The property provides details of the FC's feature licensing support.



Property	Type	Read Only	Description
FlexAddressingSupport	String	Yes	The property provides detail of the FC's port's flex addressing support.
OnChipThermalSensor	String	Yes	The property provides details of the FC's on-chip thermal sensor support.
PersistencePolicySupport	String	Yes	This property specifies if the card supports persistence policy.
uEFISupport	String	Yes	The property provides details of the FC's port's UEFI support.

**Table 78. Status codes**

HTTP status code	Extended Information	Error Code
200		

## DellFCCollection

### Description

A collection of Dell Fiber Channel resource.

### URL

```
/redfish/v1/Dell/Chassis/<System-ID>/NetworkAdapters/DellFCCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Status Codes

HTTP status code
200
404

## DellFC

### Description

An instance of DellFC contains data specific to Fiber Channel devices.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/NetworkAdapters/DellFC/<FC-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 79. Supported properties for DellFC**

Property	Type	Read Only	Description
Bus	Integer	Yes	This property represents the bus number of the PCI device.
CableLengthMetres	Integer	Yes	This property represents the cable length of Small Form Factor pluggable(SFP) Transceiver.
ChipType	String	Yes	This property represents the chip type.
Description		Yes	
Device	Integer	Yes	This property represents the device number of the PCI device.
DeviceName	String	Yes	This property represents FC HBA device name.
EFIVersion	String	Yes	This property represents the EFI version on the device.
FCTapeEnable		Yes	This property represents the FC Tape state.
FabricLoginRetryCount	Integer	Yes	This property represents the Fabric Login Retry Count.
FabricLoginTimeout	Integer	Yes	This property represents the Fabric Login Timeout in milliseconds.
FamilyVersion	String	Yes	This property represents the firmware version.
FramePayloadSize	String	Yes	This property represents the frame payload size.
Function	Integer	Yes	This property represents the function number of the PCI device.
HardZoneAddress	Integer	Yes	This property represents the Hard Zone Address.
HardZoneEnable		Yes	This property represents the Hard Zone state.
IdentifierType		Yes	This property represents the type of Small Form Factor pluggable(SFP) Transceiver.
LinkDownTimeout	Integer	Yes	This property represents the Link Down Timeout in milliseconds.
LoopResetDelay	Integer	Yes	This property represents the Loop Reset Delay in seconds.

**Table 79. Supported properties for DellFC (continued)**

Property	Type	Read Only	Description
PartNumber	String	Yes	The part number assigned by the organization that is responsible for producing or manufacturing the Small Form Factor pluggable(SFP) Transceivers.
PortDownRetryCount	Integer	Yes	This property represents the Port Down Retry Count.
PortDownTimeout	Integer	Yes	This property represents the Port Down Timeout in milliseconds.
PortLoginRetryCount	Integer	Yes	This property represents the Port Login Retry Count.
PortLoginTimeout	Integer	Yes	This property represents the Port Login Timeout in milliseconds.
Revision	String	Yes	This property represents the revision number of the Small Form Factor pluggable(SFP) Transceiver.
SerialNumber	String	Yes	A manufacturer-allocated number used to identify the Small Form Factor pluggable(SFP) Transceiver.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		

## DellFCStatisticsCollection

### Description

A collection of Dell Fiber Channel Statistics resource.

### URL

```
/redfish/v1/Dell/Chassis/<System-ID>/NetworkPorts/DellFCStatisticsCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP status code
200

HTTP status code
404

## DellFCStatistics

### Description

An instance of DellFCStatistics will have the statistics of the Fiber Channel HBA port.

### URL

```
/redfish/v1/Dell/Chassis/<System-ID>/NetworkPorts/DellFCStatistics/<FCStatisticsID>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 80. Supported properties for DellFCStatistics

Property	Type	Read only	Description
PortStatus		Yes	This property represents port status.

### Supported Status Codes

HTTP status code
200
404

## DellFCPortMetricsCollection

### Description

A collection of DellFCPortMetrics resource.

### URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/NetworkPorts/DellFCPortMetricsCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 81. Status codes**

HTTP status code	Extended Information	Error Code
200		

## DellFCPortMetrics

### Description

DellFCPortMetrics resource represents the statistics of the Fibre Channel HBA port.

### URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/NetworkPorts/DellFCPortMetrics/  
<FCPortMetrics-Id>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Properties

Property	Type	Read Only	Description
FCInvalidCRCs	Integer	Yes	This property represents invalid CRCs
FCLinkFailures	Integer	Yes	This property represents link failures.
FCLossOfSignals	Integer	Yes	This property represents loss of signals.
FCRxKBCount	Integer	Yes	This property represents the KB count received.
FCRxSequences	Integer	Yes	This property represents the FC sequences received.
FCRxTotalFrames	Integer	Yes	This property represents the total FC frames received.
FCTxKBCount	Integer	Yes	This property represents the KB count transmitted.
FCTxSequences	Integer	Yes	This property represents the FC sequences transmitted.
FCTxTotalFrames	Integer	Yes	This property represents the total FC frames transmitted.
OSDriverState	String	Yes	This property indicates the OS driver states.
PortStatus	String	Yes	This property represents port status.
RXInputPowermW	Integer	Yes	Indicates the RX input power value of Small Form Factor pluggable (SFP) Transceiver.
TXBiasCurrentmA	Integer	Yes	Indicates the TX Bias current value of Small Form Factor pluggable (SFP) Transceiver.
TXOutputPowermW	Integer	Yes	Indicates the TX output power value of Small Form Factor pluggable (SFP) Transceiver.
TemperatureCel	Integer	Yes	Indicates the temperature value of Small Form Factor pluggable (SFP) Transceiver.
TemperatureStatus	String	Yes	Indicates the status of Temperature value limits.

Property	Type	Read Only	Description
VoltageStatus	String	Yes	Indicates the status of voltage value limits.
VoltageValueVolts	Integer	Yes	Indicates the voltage value of Small Form Factor pluggable (SFP) Transceiver.

**Table 82. Status codes**

HTTP status code	Extended Information	Error Code
200		

## DellJobService

### Description

The DellJobService resource provides some actions to support Job management functionality.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellJobService
```

### HTTP methods and privileges

**Table 83. HTTP methods and privileges for DellJobService**

HTTP method	Required privilege
GET	Login
POST	SystemControl

**Table 84. Supported properties for DellJobService**

Parameter	Type	Read only	Description
CurrentNumberOfJobs	Integer	Yes	CurrentNumberOfJobs represents the current number of jobs in the job store
DeleteOnCompletionTimeoutMinutes	Integer	Yes	DeleteOnCompletionTimeout represents the timeout period, in minutes, for completed jobs to qualify for auto deletion. If the time taken to complete a job is more than the value of DeleteOnCompletionTimeout, the job is deleted during the auto-delete
MaximumNumberOfJobs	Integer	Yes	MaximumNumberOfJobs represents the maximum number of jobs that the job store supports
StartAutoDeleteAtThreshold	Integer	Yes	StartAutoDeleteAtThreshold represents the percentage of the MaximumNumberOfJobs which, when reached, causes all jobs that have taken more time than the DeleteOnCompletionTimeout to be deleted

**Table 85. Status codes**

HTTP status code
200
404


Supported Action — [DeleteJobQueue](#) on page 103

Supported Action — [SetupJobQueue](#) on page 104

## Supported Action — DeleteJobQueue

### Description

The DeleteJobQueue action is used for deleting jobs from the JobQueue or the job store. To clear all the jobs, use the keyword JID\_CLEARALL for the JobID. Successful execution of this method with the JID\_CLEARALL parameter value also clears all the pending attribute values. When the number of jobs in the JobQueue reaches the maximum limit, jobs in the Completed state are deleted automatically.

 **NOTE:** On the older PowerEdge systems, jobs in the Failed state are not deleted automatically and must be removed manually one at a time, or all together using the keyword JID\_CLEARALL.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellJobService/Actions/  
DellJobService.DeleteJobQueue
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
JobID	String		The JobID parameter specifies the job to be deleted. The value "JID_CLEARALL" for the JobID clears all the jobs.


### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	SUP020
400	Base.1.0.PropertyMissing	JCP013
400	<null>	JCP012, JCP015, SUP011

## Supported Action — SetDeleteOnCompletionTimeout

### Description

This method sets the job store auto-delete policy. After successful execution, the jobs that have been completed for longer than what is specified in DeleteOnCompletionTimeout parameter are deleted when the auto-delete threshold is reached. The auto-delete threshold is specified in the DellJobService.StartAutoDeleteAtThreshold property and represents percentage of maximum jobs.

 **NOTE:** On the older PowerEdge systems, jobs in the Failed state are not deleted automatically and must be removed manually one at a time, or all together using the keyword JID\_CLEARALL.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellJobService/Actions/  
DellJobService.SetDeleteOnCompletionTimeout
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

### Supported Parameters


 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
DeleteOnCompletionTimeout	integer		Specifies the wait time, in minutes, for auto job-deletion. Minimum value is 15 and maximum value is 10080.

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	SUP022,JCP010,JCP011,JCP012,JCP013

## Supported Action — SetupJobQueue

 **NOTE:** No parameters are required to perform this action.

### Description

This method is used for creating a job queue that shall contain one or more DellJobs with a specified order of execution within the queue.



## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellJobService/Actions/  
DellJobService.SetupJobQueue
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
JobArray	String		The JobArray parameter will contain the array of JobIDs which represent the set of jobs to add to the job queue. This is an ordered array that represents the sequence in which the jobs are run.
StartTimeInterval	String		Start time for the job execution in the format yyyyymmddhmmss. The string "TIME_NOW" indicates immediate start.
UntilTime	String		End time for the job execution in the format yyyyymmddhmmss. If this parameter is not NULL then the StartTimeInterval parameter must be specified.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	JCP010
400	Base.1.0.PropertyMissing	JCP013
400	<null>	JCP011, JCP012, JCP014, JCP015, JCP016, SUP011, SUP017, SUP018, SUP022, SUP023

# DellLCService

## Description

The DellLCService resource provides some actions to support Lifecycle Controller functionality.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	Maximum job limit reached, cannot create new jobs	JCP017

Supported Action — [ExportFactoryConfiguration](#) on page 131

Supported Action — [BackupImage](#) on page 128

Supported Action — [ClearProvisioningServer](#) on page 130

Supported Action — [GetRSStatus](#) on page 137

Supported Action — [ExportLCLog](#) on page 132

Supported Action — [GetRemoteServicesAPIStatus](#) on page 136

Supported Action — [ExportTechSupportReport](#) on page 135

Supported Action — [ExportHWInventory](#) on page 134

Supported Action — [LCWipe](#) on page 138

Supported Action — [ReinitiateDHS](#) on page 138

Supported Action — [RestoreImage](#) on page 139

## Supported Action — UpdateOSAppHealthData

### Description

This method is used for getting the latest OSAppHealth data based on the input parameter UpdateType.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.UpdateOSAppHealthData
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
UpdateType	String	Automatic	UpdateType parameter is used for selecting the OSAppHealthData update type.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	SRV081, LC050, SYS094

## Supported Action — TestNetworkShare

### Description

The TestNetworkShare() method is used for testing the network connection for Lifecycle Controller.


### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/DellLCService.TestNetworkShare
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
IPAddress	String		IP address of the NFS or CIFS share such as 192.168.10.12. The parameter is required if the ShareType parameter has value 0 (NFS), 2 (CIFS), 3- TFTP, 5- HTTP, 6- HTTPS, or is not specified. For FTP, the default value is ftp.dell.com.
IgnoreCertWarning	String	'Off', 'On'	Specifies if certificate warning should be ignored when HTTPS is specified. If IgnoreCertWarning is On, warnings are ignored. Default is 2 (On).
Password	String		Password to access Network Share.

Parameter	Type	Value	Description
ProxyPasswd	String		The password for the proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxySupport	String	DefaultProxy, 'Off', ParametersProxy	Specifies if proxy should be used. Default is 1 (Off).
ProxyType	String	HTTP, SOCKS	The proxy type of the proxy server. Default is 0 (HTTP).
ProxyUname	String		The user name for the proxy server.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share (if supported), this may be treated as the path of the directory containing the file.
ShareType	Object	CIFS, FTP, HTTP, HTTPS, Local, NFS, TFTP, VFLASH	Type of the network share. Default is NFS, when this parameter is not passed.
UserName	String		UserName for Network share authentication.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	LC017, LC016, LC023

## Supported Action — SystemErase

### Description

This method is to create granular and user selectable categories to increase flexibility and improve the repurposing aspect of the existing System Wipe feature. This method takes the component name as input. Multiple options can also be provided. Upon successful creation of job , a job ID is returned.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/DellLCService.SystemErase
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

**i** **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
Component	Array	AllApps, BIOS&ltbr/>CryptographicErasePD, DIAG, DrvPack, IDRAC, LCDATA, NonVolatileMemory, OverwritePD, PERCNVCache, vFlash	'Array to select the components to be erased. The System Components are: BIOS , DIAG, AllApps, DrvPack, LCData, IDRAC. The Storage Components are: PERCNVCache, vFlash, CryptographicErasePD, OverwritePD, NonVolatileMemory. The parameters Component and ComponentBitmap are mutually exclusive. ( Note: SecureErasePD has been renamed to CryptographicErasePD, however, for backwards compatibility SecureErasePD will still work)'
ComponentBitmap	Integer		'A composite Bitmap that may be used to select the components to erase. The parameters ComponentBitmap and Component shall be Mutually Exclusive. The following are the masks for the individual components which may be OR-ed together to specify multiple components. The lowest Byte will have 8 bits reserved for the System components. The second lowest byte will have 8 bits reserved for the Storage components. The various component masks in the format (decimal-hexadecimal-component) are as follows. System Component masks: 1-0x1-BIOS, 2-0x2-DIAG, 4-0x4-DrvPack, 8-0x8-LCData, 16-0x10-iDRAC, 128-0x80-AllApps. Storage Component Masks: 256-0x100-PERCNVCache, 512-0x200-vFlash, 1024-0x400-CryptographicErasePD, 2048-0x800-OverwritePD, 4096-0x1000-NonVolatileMemory'

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	LC044, RAC042, LC040, LC017, LC016, LC063


## Supported Action — SupportAssistUploadLastCollection

### Description

This method is used for exporting the last SupportAssist collection

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.SupportAssistUploadLastCollection
```

 **NOTE:** No parameters are required to perform this action.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP status code	Extended Information	Error Code
200		
202		
400	Base.1.5.PropertyMissing, Base.1.5.PropertyUnknown, Base.1.5.PropertyValueNotInList, Base.1.5.PropertyValueTypeError, Base.1.5.MalformedJSON	SYS428, SYS429, SYS426, SYS425, SYS405, LC002, SRV084, SRV086, SRV046, SRV045, SRV081, SRV121, SRV082, SRV083, SRV085, SRV105, SRV003, SRV125, SRV119, SRV118
401	Base.1.2.AccessDenied	
404	Base.1.5. ResourceMissingAtURI	SYS403
405		SYS402

## Supported Action — SupportAssistSetAutoCollectSchedule

### Description

This method is used for auto-scheduling the collection of logs.


## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.SupportAssistSetAutoCollectSchedule
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
DayOfMonth	string		'1-28 : Day of Month, L: Last day of the month 28,29,30 or 31 depending on the month. Default value is *, which indicates any value.'
DayOfWeek	string		'Valid values : single day of week. Mapping for day of week: Mon = 1, Tue = 2, Wed = 3, Thu = 4, Fri = 5, Sat = 6, Sun = 0 or 7(The default is first Sunday of the current month and if that is already past while applying then first Sunday of next month is the first time the job is scheduled). Default value is *, which indicates any value.'
Recurrence	string	Monthly, Quarterly, Weekly	Specifies the collection recurrence. If recurrence is Monthly or Quarterly, then either 1. DayOfMonth or 2. WeekOfMonth and DayOfWeek must be passed.
Time	string		Hh:mm AM/PM (hour and minute of day to run).
WeekOfMonth	string		Means any value and this is the default value. Only one of the characters above. Default * (The default is first week of the month and if that is already past while applying then first week of next month is the first time the job is scheduled). 1 4 : Week Number, L : Means the last week of the month, A non * value is mutually exclusive with "DayOfMonth". If this value is non * then DayOfWeek is required.'

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	LC001, RED073, SRV084

## Supported Action — SupportAssistRegister

### Description

This method is used registering for SupportAssist features.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.SupportAssistRegister
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Action Parameters

Parameter	Type	Value	Description
City	String		Contains city name.
CompanyName	String		Contains company name.
Country	String		Contains Country address.
PrimaryAlternateNumber	String		Contains primary alternate number.
PrimaryEmail	String		Contains primary email address.
PrimaryFirstName	String		Contains primary first name.
PrimaryLastName	String		Contains primary last name.
PrimaryPhoneNumber	String		Contains primary phone number.
ProxyHostName	String		Contains proxy hostname.
ProxyPassword	String		Contains proxy password.
ProxyPort	Integer		Contains proxy port.
ProxyUserName	String		Contains proxy username.
SecondaryAlternateNumber	String		Contains secondary alternate phone number.
SecondaryEmail	String		Contains secondary email address.



Parameter	Type	Value	Description
SecondaryFirstName	String		Contains secondary first name.
SecondaryLastName	String		Contains secondary last name.
SecondaryPhoneNumber	String		Contains secondary phone number.
State	String		Contains State address.
Street1	String		Contains Street Address.
Street2	String		Contains Street2 address.
Zip	String		Contains Zip code.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	SRV003, SRV111, SRV081, SRV085, SRV105

## Supported Action — SupportAssistGetEULAStatus

### Description


This method is used for getting the acceptance status of the EULA terms and conditions required for SupportAssist registration.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.SupportAssistGetEULAStatus
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

 **NOTE:** No parameters are required to perform this action.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	SRV074, SRV104

## Supported Action — SupportAssistGetAutoCollectSchedule

### Description


This method is used to retrieve the periodic collections schedule for SupportAssist.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.SupportAssistGetAutoCollectSchedule
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

 **NOTE:** No parameters are required to perform this action.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	LC001, SRV112

## Supported Action — SupportAssistExportLastCollection

### Description

This method is used for exporting the last SupportAssist collection (stored in iDRAC) to a network share. If no parameters are passed, the default share parameters of iDRAC are used. The default share parameters may be stored by setting the appropriate attributes in iDRAC.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.SupportAssistExportLastCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Action Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
IPAddress	String		The IP address of network share. This parameter is mandatory when ShareType is NFS or CIFS.
IgnoreCertWarning	String	Off, On	Specifies if certificate warning should be ignored when HTTPS is specified. If

Parameter	Type	Value	Description
			IgnoreCertWarning is On, warnings are ignored. Default is 2 (On).
Password	String		Password of the account to access the share. This parameter is mandatory of ShareType is CIFS.
Port	Integer		Port for FTP server. Default is set to 21.
ProxyPasswd	String		The password to login into proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxySupport	String	DefaultProxy, 'Off', ParametersProxy	Specifies if proxy should be used. Default is 1 (Off).
ProxyType	String	HTTP, SOCKS	The proxy type of the proxy server. Default is 0 (HTTP).
ProxyUname	String		The user name for the proxy server.
ShareName	String		Name of the CIFS share or full path to the NFS share. This parameter is mandatory when ShareType is passed.
ShareType	String	CIFS, FTP, HTTP, HTTPS, Local, NFS, TFTP, VFLASH	Type of the network share.
UserName	String		UserName used to access the share. This parameter is mandatory when ShareType is CIFS.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	SRV113, SRV109, SRV085

## Supported Action — SupportAssistCollection

### Description

This method is used for triggering a SupportAssist collection and, optionally, send the collection to Dell or a network share.


### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/DellLCService.SupportAssistCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Action Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
DataSelectorArrayIn	array	DebugLogs, HWData, OSAppData, OSAppDataWithoutPII, TTYLogs	This property allows to select the different type of logs in the collection. Default value for this parameter is HW Data and MUT logs are part of every collection.
Filter	string	'No', 'Yes'	This property specifies whether the collection should be filtered for PII (Personal Identification Information). Filter = 1 indicates that the collection is filtered for PII and excludes all debug logs and storage logs. When this parameter is not passed, default value is 0 (No filtering).
IPAddress	string		The IP address of network share. This parameter is mandatory when ShareType is NFS or CIFS.
IgnoreCertWarning	string	'Off', 'On'	Specifies if certificate warning should be ignored when HTTPS is specified. If IgnoreCertWarning is On, warnings are ignored. Default is 2 (On).
Password	string		Password of the account to access the share. This parameter is mandatory if ShareType is CIFS.
Port	integer		Port for FTP server. Default is set to 21.
ProxyPasswd	string		The password to login into proxy server.
ProxyPort	string		Port for the proxy server. Default is set to 80.
ProxyServer	string		The IP address of the proxy server.
ProxySupport	string	DefaultProxy, 'Off', ParametersProxy	Specifies if proxy should be used. Default is 1 (Off).
ProxyType	string	HTTP, SOCKS	The proxy type of the proxy server. Default is 0 (HTTP).

Parameter	Type	Value	Description
ProxyUname	string		The user name for the proxy server.
ShareName	string		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share (if supported), this may be treated as the path of the directory containing the file.
ShareType	string	CIFS, FTP, HTTP, HTTPS, Local, NFS, TFTP, VFLASH	Type of the network share. Default value is based on iDRAC. Embedded.1#SupportAssist.1#DefaultProtocol attribute, when this parameter is not passed.
Transmit	string	'No', 'Yes'	This property specifies if collection should be transmitted to Dell. Default value is 0 (No).
UserName	string		UserName used to access the share. This parameter is mandatory when ShareType is CIFS.
Workgroup	string		Workgroup for the CIFS share - optional.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	LC001, SRV112


## Supported Action — SupportAssistClearAutoCollectSchedule

### Description

This method is used for clearing all the periodic collections settings for SupportAssist.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/DellLCService.SupportAssistClearAutoCollectSchedule
```

 **NOTE:** No parameters are required to perform this action.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	LC001, SRV112


## Supported Action — SupportAssistAcceptEULA

### Description

This method is used for accepting the EULA terms and conditions required for SupportAssist registration.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.SupportAssistAcceptEULA
```

 **NOTE:** No parameters are required to perform this action.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	SRV095, SRV074

## Supported Action — RunePSADiagnostics

### Description

The method is used for running the diagnostics based on the runmode switch and save the report in the Maser partition (MAS002). The diagnostics can be run in either Express or Extended mode or as a long run that encompasses all tests.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.RunePSADiagnostics
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
RebootJobType	String	GracefulRebootWithForcedShutdown, GracefulRebootWithoutForcedShutdown, PowerCycle	The value contains the requested reboot type.
RunMode	String	Express, ExpressAndExtended, Extended	RunMode to run the diagnostics.
ScheduledStartTime	String		Schedules the job at the time specified. The format is yyyyymmddhhmmss. Default value is TIME_NOW, which will start the job immediately.
UntilTime	String		Scheduled end time for job execution in datetime format:yyyyymmddhhmmss. If not specified, there is no end time.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	LC008, LC009, LC002, LC065, LC004

## Supported Action — ReInitiateAutoDiscovery

### Description

The ReInitiateAutoDiscovery() method is used for reinitiating the discovery and handshake with static IP configuration. If the method successfully executes, iDRAC is in the static IP mode after the auto-discovery is initiated and thus, does not require DHCP setup. The static IP information for auto-discovery can be set either through the optional input parameters of this method or through the iDRAC attributes in the iDRAC Card Profile. After the successful auto-discovery initiation, if the IPAddress parameter has non-NULL value, the iDRAC IPv4 address is set to that parameter's value, otherwise the iDRAC IPv4 Address is set to the Address attribute in the IPv4 Information group in the iDRAC Card Profile. After the successful auto-discovery initiation, if the Mask parameter has a non-NULL value, the iDRAC IPv4 address net mask is set to that parameter's value, otherwise the iDRAC IPv4 address net mask is set to the to the Netmask attribute in the IPv4 Information group in the iDRAC Card Profile. After the successful auto-discovery initiation, if the Gateway parameter has non-NULL value, then the iDRAC IPv4 gateway address is set to that parameter's value, otherwise the iDRAC IPv4 gateway is set to the to the Gateway attribute in the IPv4 Information group in the iDRAC Card Profile. After the successful auto-discovery initiation, if the DNS parameter has non-NULL value, then the iDRAC IPv4 DNS address is set to that parameter's value, otherwise the iDRAC IPv4 DNS address is set to the to the DNS1 attribute in the IPv4 Information group in the iDRAC Card Profile. After the successful auto-discovery initiation, if the Domain parameter has non-NULL value, then the iDRAC domain name is set to that parameter's value, otherwise the iDRAC domain name is set to the to the DNSDomainName attribute in the NIC Information group in the iDRAC Card Profile.


### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.ReInitiateAutoDiscovery
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Action Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
DNS	String		Specifies the DNS IP address. If not specified, iDRAC static DNS IP address setting is used.
Domain	String		Specifies the domain name. If not specified, iDRAC static domain name setting is used.
Gateway	String		Specifies the gateway IP address. If not specified, iDRAC static gateway setting is used.
IPAddress	String		Specifies the static IP address. If not specified, iDRAC static IP address setting is used.
Mask	String		Specifies the subnet mask. If not specified, iDRAC static mask setting is used.
PerformAutoDiscovery	String	NextBoot, Now, 'Off'	'Specifies the auto discovery mode. "Off": Disables auto discovery, "Now": Enables and initiates auto discovery immediately, "NextBoot": Delays reconfiguration and discovery till next power cycle.'
ProvisioningServer	String		This property specifies the provisioning server addresses and ports used for auto discovery. If omitted, Lifecycle Controller gets the value from DHCP or DNS.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	LC008, LC009, LC002, LC065, LC004



## Supported Action — InsertCommentInLCLog

### Description

This method adds Worknotes and insert Comments into existing LCLog entries. If a LogSequenceNumber is passed, the Comment is inserted into the corresponding entry. If not passed, a new Worknote is created in the LCLogs with the Description given in Comment.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.InsertCommentInLCLog
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
Comment	String		Comment/Worknote message to be inserted in the Lifecycle Controller log.
LogSequenceNumber	Integer		SequenceNumber of the LC Log entry into which comment needs to be inserted.

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	LC008, LC017, RAC953, LC002, LC014, RAC954, RAC955

## Supported Action — ExportePSADiagnosticsResult

### Description

This method exports the result file of the last completed diagnostics to a remote share (CIFS/NFS). The result file includes time stamps to show when the diagnostics was run.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.ExportePSADiagnosticsResult
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
FileName	String		Diagnostic Result File name. FileName is not required if share type is Local.
IPAddress	String		IP address of the network share. IP address is not required if share type is Local.
IgnoreCertWarning	String	Off, On	Specifies if certificate warning should be ignored when HTTPS is specified. If IgnoreCertWarning is On, warnings are ignored. Default is 2 (On).
Password	String		Password of the account to access the share.
ProxyPasswd	String		The password to login into proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxySupport	String	DefaultProxy, 'Off', ParametersProxy	Specifies if proxy should be used. Default is 1 (Off).
ProxyType	String	HTTP, SOCKS	The proxy type of the proxy server. Default is 0 (HTTP).
ProxyUname	String		The user name for the proxy server.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share (if supported), this may be treated as the path of the directory containing the file. ShareName is not required if share type is Local.
ShareType	String	CIFS, FTP, HTTP, HTTPS, Local, NFS, TFTP, VFLASH	Type of the network share.
UserName	String		UserName of the account to access the share.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	SYS086, SYS085, SYS084, SYS083, SYS095

## Supported Action — ExportVideoLog

### Description

This method is used to export the bootcapture or crashcapture from iDRAC to a local folder. The ExportVideoLog() method is used to export the bootcapture or crashcapture from iDRAC to a local folder.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/DellLCService.ExportVideoLog
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
FileType	String	BootCaptureVideo, CrashCaptureVideo, LastCrashScreenShot, Preview, ServerScreenShot	Type of screen shot required.
ShareType	String	CIFS, FTP, HTTP, HTTPS, Local, NFS, TFTP, VFLASH	Type of the network share.

## Supported Status Codes

HTTP status code	Extended Information	Error Code
202		
400	Base.1.5.PropertyMissing, Base.1.5.PropertyUnknown, Base.1.5.PropertyValueNotInList, Base.1.5.PropertyValueTypeError, Base.1.5.MalformedJSON	SYS428, SYS429, SYS426, SYS425, SYS405, LC084, LC086
401	Base.1.2.AccessDenied	
403	Base.1.5. InsufficientPrivilege	LIC502
404	Base.1.5. ResourceMissingAtURI	SYS403
405		SYS402

## Supported Action — ExportServerScreenShot

### Description

The ExportServerScreenShot() method is used for exporting preview page of server or server screen shot file from the iDRAC to management application local store in encoded base64 format.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.ExportServerScreenShot
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
FileType	String	BootCaptureVideo, CrashCaptureVideo, LastCrashScreenShot, Preview, ServerScreenShot	Type of screen shot required.

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	nil	LC080, LC081, LC088

## Supported Action — ExportSVGFile

### Description

This method is used for exporting the SVG file from the iDRAC.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/DellLCService.ExportSVGFile
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
ShareType	String	CIFS, FTP, HTTP, HTTPS, Local, NFS, TFTP, VFLASH	Type of the network share.

## Supported Status Codes

HTTP status code	Extended Information	Error Code
200		
202		
400	Base.1.5.PropertyMissing, Base.1.5.PropertyUnknown, Base.1.5.PropertyValueNotInList, Base.1.5.PropertyValueTypeError, Base.1.5.MalformedJSON	SYS428, SYS429, SYS426, SYS425, SYS405, LC016, LC017, LC095
401	Base.1.2.AccessDenied	
404	Base.1.5.ResourceMissingAtURI	SYS403
405		SYS402

## Supported Action — ExportCompleteLCLog

### Description

The ExportCompleteLCLog() method is used for exporting the log from the Lifecycle Controller to a remote share.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.ExportCompleteLCLog
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
FileName	String		The target output file name. FileName is not required if share type is Local.

Parameter	Type	Value	Description
IPAddress	String		The IP address of the target export server. IP address is not required if share type is Local.
IgnoreCertWarning	String	Off, On	Specifies if certificate warning should be ignored when HTTPS is specified. If IgnoreCertWarning is On, warnings are ignored. Default is 2 (On).
Password	String		Password of the account to access the share.
ProxyPasswd	String		The password for the proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxySupport	String	DefaultProxy, Off, ParametersProxy	Specifies if proxy should be used. Default is 1 (Off).
ProxyType	String	HTTP, SOCKS	The proxy type of the proxy server. Default is 0 (HTTP).
ProxyUname	String		The user name for the proxy server.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share (if supported), this may be treated as the path of the directory containing the file.
ShareType	String	CIFS, FTP, HTTP, HTTPS, Local, NFS, TFTP, VFLASH	Type of the network share.
UserName	String		UserName of the account to access the share.
Workgroup	String		Workgroup for the CIFS share - optional.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	LC047, JCP018, JCP019, LC017, LC016, LC002, JCP017, LC040

## Supported Action — DownloadClientCerts

### Description

DownloadClientCerts() is used for copying a CA certificate and private key to the iDRAC to sign the iDRAC certificate. When this command is issued the iDRAC will generate a new auto-discovery client certificate and sign it using the CA cert and

private key. After this, the CA certificate has be added to the provisioning server trusted Root CA list before performing auto-discovery.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.DownloadClientCerts
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
CAContent	String		base64 encoded String containing CA Certificate content.
CAHash	String		
HashType	Integer		
KeyContent	String		base64 encoded String containing the CA private key content.
KeyHash	String		
PWHash	String		
Password	String		CA private key password.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	LC047, JCP018, JCP019, LC017, LC016, LC002, JCP017, LC040

## Supported Action — DeleteAutoDiscoveryServerPublicKey

### Description

The DeleteAutoDiscoveryServerPublicKey() method is used for deleting the server public key set previously by the auto discovery method.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.DeleteAutoDiscoveryServerPublicKey
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	LC002


## Supported Action — DeleteAutoDiscoveryClientCerts

### Description

The DeleteAutoDiscoveryClientCerts() method is used for wiping all configurations from Lifecycle Controller before the system is retired.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.DeleteAutoDiscoveryClientCerts
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	LC002

## Supported Action — BackupImage

### Description

The BackupImage action is used for backing-up the firmware and configurations for Lifecycle Controller.



## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/DellLCService.BackupImage
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Action Parameters

Parameter	Type	Value	Description
CheckBackupDestinationAvailability	String	Check, DoNotCheck	Check backup destination availability. Default is Check.
IPAddress	String		The IP address for the network share for the backup image. This is a required parameter when ShareType is specified as NFS or CIFS.
IgnoreCertWarning	String	Off, On	Specifies if certificate warning should be ignored when HTTPS is specified. Default is On.
ImageName	String		
JobName	String		A name for the job. Default is 'Backup:Image'.
Passphrase	String		The passphrase for the backup image. This parameter is required if ShareType is NFS or CIFS.
Password	String		The password to access the network share.
ProxyPasswd	String		The password for the proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxySupport	String	DefaultProxy, Off, ParametersProxy	Specifies if proxy should be used. Default is Off.
ProxyType	String	HTTP, SOCKS	The proxy type of the proxy server. Default is HTTP.
ProxyUname	String		The user name for the proxy server.
ScheduledStartTime	String		The start time for the job execution in format: yyyyymmddhhmmss. The String "TIME_NOW" means immediate.

Parameter	Type	Value	Description
ShareName	String		Share name for the network share such as "imageshare". The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified. Sharename shall be considered as a path to a sub-folder in case of HTTP/HTTPS.
ShareType	String	CIFS, HTTP, HTTPS, Local, NFS, VFLASH	If ShareType is blank or null, it shall be considered as NFS type. The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified.
UntilTime	String		End time for the job execution in format: yyyymmddhhmmss. : If this parameter is not NULL, then ScheduledStartTime parameter shall also be specified.
UserName	String		The user name for the remote share
Workgroup	String		The Workgroup for the share.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400	Maximum job limit reached, cannot create new jobs	JCP017
400	<null>	JCP018, JCP019, LC002, LC017, LC023, LC051, SUP017, SUP018


## Supported Action — ClearProvisioningServer

### Description

The ClearProvisioningServer action is used for clearing the provisioning server values.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/DellLCService.ClearProvisioningServer
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400		LC002

## Supported Action — ExportFactoryConfiguration

### Description

The ExportFactoryConfiguration action is used for exporting the factory configuration from Lifecycle Controller to a remote share.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.ExportFactoryConfiguration
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Action Parameters

Parameter	Type	Value	Description
FileName	String		The target output file name. FileName is not required if share type is Local.
IPAddress	String		IP address of the network share. IP address is not required if share type is Local.
IgnoreCertWarning	String	Off, On	Specifies if certificate warning should be ignored when HTTPS is specified. Default is On.
Password	String		Password of the account to access the share.
ProxyPasswd	String		The password for the proxy server.
ProxyServer	String		The IP address of the proxy server.

Parameter	Type	Value	Description
ProxySupport	String	DefaultProxy, Off, ParametersProxy	Specifies if proxy should be used. Default is Off.
ProxyType	String	HTTP, SOCKS	The proxy type of the proxy server. Default is HTTP.
ProxyUname	String		The user name for the proxy server.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share (if supported), this may be treated as the path of the directory containing the file.
ShareType	String	CIFS, HTTP, HTTPS, Local, NFS, VFLASH	If ShareType is blank or null, it shall be considered as NFS type. The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified.
UserName	String		UserName of the account to access the share.
Workgroup	String		Workgroup for the CIFS share - optional.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400	Maximum job limit reached, cannot create new jobs	JCP017

## Supported Action — ExportLCLog

### Description

The ExportLCLog action is used for exporting the log from the Lifecycle Controller to a remote share.


### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/DellLCService.ExportLCLog
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Action Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
FileName	String		The target output file name. A file name is not required if the share type is Local.
IPAddress	String		IP address of the NFS or CIFS share such as 192.168.10.12. The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified.
IgnoreCertWarning	string	Off, On	Specifies if certificate warning should be ignored when HTTPS is specified. Default is On.
Password	String		The password for the remote share.
ProxyPasswd	String		The password for the proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxySupport	string	DefaultProxy, Off, ParametersProxy	Specifies if proxy should be used. Default is Off.
ProxyType	string	HTTP, SOCKS	The proxy type of the proxy server. Default is HTTP.
ProxyUname	String		The user name for the proxy server.
ShareName	String		Share name for the network share such as "imageshare". The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified. Sharename shall be considered as a path to a sub-folder in case of HTTP/HTTPS.
ShareType	string	CIFS, HTTP, HTTPS, Local, NFS, VFLASH	If ShareType is blank or null, it shall be considered as NFS type. The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified.
UserName	String		The user name for the remote share
Workgroup	String		The Workgroup for the share.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400	Maximum job limit reached, cannot create new jobs	JCP017
400	Base.1.0.PropertyMissing	LC016
400	<null>	JCP018, JCP019, LC017, LC022, LC023, LC030, LC037, LC040

## Supported Action — ExportHWInventory

### Description

The ExportHWInventory action is used for exporting the hardware inventory from the Lifecycle Controller to a remote share.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.ExportHWInventory
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Action Parameters

Parameter	Type	Value	Description
IgnoreCertWarning	String	Off, On	Specifies if certificate warning should be ignored when HTTPS is specified. Default is On.
ProxySupport	String	DefaultProxy, Off, ParametersProxy	Specifies if proxy should be used. Default is Off.
ProxyType	String	HTTP, SOCKS	The proxy type of the proxy server. Default is HTTP.
ShareType	String	CIFS, HTTP, HTTPS, Local, NFS, VFLASH	If ShareType is blank or null, it shall be considered as NFS type. The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified.
XMLSchema	String	CIM-XML, Simple	Type of XML output format. Default is CIM-XML.
IPAddress	String		IP address of the NFS or CIFS share such as 192.168.10.12. The parameter

Parameter	Type	Value	Description
			shall be required, if the ShareType parameter has value NFS, CIFS, or not specified.
Password	String		The password for the remote share.
ProxyPasswd	String		The password for the proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxyUname	String		The user name for the proxy server.
FileName	String		The target output file name. A file name is not required if the share type is Local.
ShareName	String		Share name for the network share such as "imageshare". The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified. Sharename shall be considered as a path to a sub-folder in case of HTTP/HTTPS.
UserName	String		The user name for the remote share
Workgroup	String		The Workgroup for the share.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	Maximum job limit reached, cannot create new jobs	JCP017
400	Base.1.0.PropertyMissing	LC016
400	Base.1.0.PropertyValueFormatError	LC017
400	<null>	JCP018, JCP019, LC023, LC025, LC027, LC029, LC030, LC038, LC040

## Supported Action — ExportTechSupportReport

### Description

This action is used to collect the TSR that includes hardware, OS, and application data. The data is compressed into a zip file and saved on the remote share (CIFS/NFS ).

## URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellLCService/Actions/  
DellLCService.ExportTechSupportReport
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

Parameter	Type	Value	Description
ShareType	String	CIFS, NFS	Type of the network share.
DataSelectorArrayIn	Array (String)	HWData, OSAppData, OSAppDataWithoutPII, TTYLogs	DataSelectorArrayIn to select the TSR data.
IPAddress	String		IP address of the network share.
Password	String		Password of the account to access the share.
FileName	String		File name of the export tech support report.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share, which may be treated as the path of the directory containing the file.
UserName	String		The user name for the remote share


## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400	<null>	SYS094

## Supported Action — GetRemoteServicesAPIStatus

### Description

The GetRemoteServicesAPIStatus action is used for obtaining the overall remote services API status that includes host system status, the remote services (Data Manager) status, and real-time status. The overall rolled up status is reflected in the Status output parameter.

 **NOTE:** The LCStatus output parameter value includes the status reported by the DMStatus output parameter in the GetRSStatus action and the Lifecycle Controller status. Thus, GetRSStatus action invocation is redundant.




## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/  
DellLCService.GetRemoteServicesAPIStatus
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

 **NOTE:** No parameters are required to perform this action.


## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	LC061
400	<null>	LC060

## Supported Action — GetRSStatus

### Description

The GetRSStatus action is used for obtaining the Data Manager (Remote Services) status.


 **NOTE:** The GetRemoteServicesAPIStatus action execution reports more granular and detailed status of the Remote Services API.

## URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellLCService/Actions/  
DellLCService.GetRSStatus
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

 **NOTE:** No parameters are required to perform this action.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	RSI0001
400		RSI0002, RSI0003, RSI0004

## Supported Action — LCWipe

### Description

The LCWipe action is used for deleting all configurations from Lifecycle Controller before the system is retired. Host must be manually rebooted for the changes to take effect.

### URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellLCService/Actions/DellLCService.LCWipe
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400	<null>	LC012, LC044

## Supported Action — ReInitiateDHS

### Description

The ReInitiateDHS action is used for reinitiating the provisioning server discovery and handshake.

### URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellLCService/Actions/  
DellLCService.ReInitiateDHS
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters

Parameter	Type	Value	Description
PerformAutoDiscovery	ENUM	Off, Now, NextBoot	A value of "Off = 1" disables auto discovery. A value of "Now = 2" enables and initiates auto discovery immediately. A

Parameter	Type	Value	Description
			value of "NextBoot = 3" delays reconfiguration and auto discovery until next AC powercycle. Note—If NextBoot has a value of 3 then after successful execution, the Discovery Factory Defaults attribute is set to "On".
ProvisioningServer	String		This property specifies the provisioning server addresses and ports used for auto discovery. If omitted, Lifecycle Controller gets the value from DHCP or DNS.
ResetToFactoryDefaults	Boolean		If ResetToFactoryDefaults is True, all configuration information is replaced with auto-discovery factory default properties. If False, an error is returned.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400	<null>	LC002, LC004, LC008, LC009

## Supported Action — RestoreImage

### Description

This RestoreImage action is used to restore firmware and configurations.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLCService/Actions/DellLCService.RestoreImage
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

Parameter	Type	Value	Description
IgnoreCertWarning	ENUM	Off, On	Specifies if certificate warning should be ignored when

Parameter	Type	Value	Description
			HTTPS is specified. Default is On.
PreserveVDConfig	ENUM	False, True	Specifies whether to preserve the virtual drive configuration.
ProxySupport	ENUM	DefaultProxy, Off, ParametersProxy	Specifies if proxy should be used. Default is Off.
ProxyType	ENUM	HTTP, SOCKS	The proxy type of the proxy server. Default is HTTP.
ShareType	ENUM	CIFS, HTTP, HTTPS, Local, NFS, VFLASH	Type of the network share. Default is NFS, when this parameter is not passed.
ImageName	String		Name of the image file.
IPAddress	String		IP address of the NFS or CIFS share such as 192.168.10.12. The parameter is required if the ShareType parameter has value NFS, CIFS, or not specified.
Password	String		The password for the remote share.
ProxyPasswd	String		The password for the proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxyUname	String		The user name for the proxy server.
ScheduledStartTime	String		Schedules the job at the time specified. The format is yyyyymmddhhmmss. Default setting is TIME_NOW, which will start the job immediately.
UntilTime	String		End time for the job execution in format: yyyyymmddhhmmss. If not specified, there is no end time.
FileName	String		The target output file name. A file name is not required if the share type is Local.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share, which may be treated as the path of the directory containing the file.
UserName	String		The user name for the remote share
Workgroup	String		The Workgroup for the share.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400	<null>	JCP017, JCP018, JCP019, LC002, LC017, LC023, LC052, SUP017, SUP018

## DellLicenseCollection

### Description

A collection of DellLicense resource

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLicenseCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 86. Status codes**

HTTP status code
200
404

## DellLicenseManagementService

### Description

The DellLicenseManagementService resource provides some actions to support License Management functionality.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLicenseManagementService
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login
GET	Login

**Table 87. Status codes**

HTTP status code
200
404

[Supported Action — ExportLicenseToNetworkShare](#) on page 142

[Supported Action — ImportLicenseFromNetworkShare](#) on page 144

[Supported Action — ImportLicense](#) on page 145

[Supported Action — ShowLicenseBits](#) on page 146

[Supported Action — DeleteLicense](#) on page 146

[Supported Action — ExportLicenseByDeviceToNetworkShare](#) on page 148

## Supported Action — ExportLicenseByDevice

### Description

The ExportLicenseByDevice method exports license files specific to a device from iDRAC. The ExportLicenseByDevice method returns all licenses assigned to a device specified by FQDD, as a base64 encoded string.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLicenseManagementService/Actions/  
DellLicenseManagementService.ExportLicenseByDevice
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters

Parameter	Type	Value	Description
FQDD	String		Unique device ID.

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	<null>	LIC012, LIC036, LIC902, LIC038, LIC014, LIC903, LIC011, LIC008, LIC009, LIC900, LIC010, LIC002, LIC003, LIC901, LIC001, LIC006, LIC007, LIC004, LIC016

## Supported Action — ExportLicenseToNetworkShare

### Description

ExportLicenseToNetworkShare is an action used to export License files from iDRAC. The ExportLicenseToNetworkShare action exports a License specified by EntitlementID to a user defined location.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLicenseManagementService/Actions/  
DellLicenseManagementService.ExportLicenseToNetworkShare
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

Parameter	Type	Value	Description
EntitlementID	String		Entitlement ID of the license being exported.
FileName	String		If included, the exported license is renamed as <FileName>.
IPAddress	String		IP address of the server hosting the network share.
IgnoreCertWarning	ENUM	Off, On	Specifies if certificate warning is to be ignored when HTTPS is specified. If IgnoreCertWarning is on, certificate will be ignored. Default is 1 (Off).
Password	String		Password for Network share authentication.
ProxyPasswd	String		The password to log in to the proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP Address of the proxy server.
ProxySupport	ENUM	Off, DefaultProxy, ParametersProxy	Specifies if proxy is to be used or not. Default is 1 (Off).
ProxyType	ENUM	HTTP, SOCKS	The proxy type of the proxy server. Default is 0 (HTTP).
ProxyUname	String		The user name for proxy server.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP or HTTPS share, which may be treated as the path of the directory containing the file.
ShareType	ENUM	NFS, CIFS, HTTP, HTTPS	Type of the network share.
UserName	String		Username for the network share authentication.

Parameter	Type	Value	Description
Workgroup	String		Optional. Workgroup for the CIFS share.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	LIC900
400	<null>	JCP017, LIC001, LIC002, LIC003, LIC004, LIC006, LIC007, LIC008, LIC009, LIC010, LIC011, LIC012, LIC014, LIC016, LIC901, LIC902, LIC903, LIC904

## Supported Action — ImportLicenseFromNetworkShare

### Description

The ImportLicenseFromNetworkShare action imports the license given in the network share location.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLicenseManagementService/Actions/DellLicenseManagementService.ImportLicenseFromNetworkShare
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Action Parameters

Parameter	Type	Value	Description
FQDD	String		FQDD of the device to export licenses to.
IPAddress	String		IP address of the server hosting the network share.
IgnoreCertWarning	ENUM	Off, On	Specifies if certificate warning is to be ignored when HTTPS is specified. If IgnoreCertWarning is On, the certificate will be ignored. Default is 1 (Off).
ImportOptions	ENUM	NoOption, Force, All	Flag to force or install for all similar devices.
LicenseName	String		The file name of the license file to be imported.
Password	String		Password for Network share authentication.



Parameter	Type	Value	Description
ProxyPasswd	String		The password to log in proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP Address of the proxy server.
ProxySupport	ENUM	Off, DefaultProxy, ParametersProxy	Specifies if proxy is to be used or not. Default is 1 (Off).
ProxyType	ENUM	HTTP, SOCKS	The proxy type of the proxy server. Default is 0 (HTTP).
ProxyUname	String		The username for proxy server.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share, this may be treated as the path of the directory containing the file.
ShareType	ENUM	NFS, CIFS, HTTP, HTTPS	Type of the network share.
UserName	String		User name for network share authentication.
Workgroup	String		Optional. Workgroup for the CIFS share.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	LIC900
400	<null>	JCP017, LIC001, LIC002, LIC003, LIC004, LIC006, LIC007, LIC008, LIC009, LIC010, LIC011, LIC012, LIC014, LIC016, LIC901, LIC902, LIC903, LIC904, LIC905, LIC906

## Supported Action — ImportLicense

### Description

The ImportLicense() method imports the License given in the input parameter to the License Manager Data Store.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLicenseManagementService/Actions/DellLicenseManagementService.ImportLicense
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

Parameter	Type	Value	Description
FQDD	String		FQDD of the device to apply the license to.
ImportOptions	ENUM	NoOption, Force, All	Flag to force or install for all similar devices.
LicenseFile	String		A base-64 encoded string of the XML License file.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	LIC900
400	<null>	JCP017, LIC001, LIC002, LIC003, LIC004, LIC006, LIC007, LIC008, LIC009, LIC010, LIC011, LIC012, LIC014, LIC016, LIC901, LIC902, LIC903, LIC904

## Supported Action — ShowLicenseBits

### Description

The ShowLicenseBits action is used to retrieve the iDRAC feature license bit string for the Licenses in iDRAC in a hexadecimal representation of a 256 bit-string. To read the output, you'll need to see which bit position is TRUE from right-to-left. Please refer to the Appendix section that will show which bit represents what feature.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLicenseManagementService/Actions/  
DellLicenseManagementService.ShowLicenseBits
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		

## Supported Action — DeleteLicense

### Description

This action is used to delete assigned licenses. The DeleteLicense action deletes a specific license from all devices it is assigned to if only the EntitlementID parameter is present, all licenses from a specific device if only the FQDD parameter is present, or a

specific license from a specific device if both the EntitlementID and FQDD parameters are present. Either the EntitlementID or FQDD parameter shall be present.

URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLicenseManagementService/Actions/  
DellLicenseManagementService.DeleteLicense
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Action Parameters

Parameter	Type	Value	Description
FQDD	String		FQDD of the device to delete the license from.
DeleteOptions	ENUM	NoOption, Force, All	Flag used to force delete or delete license from all like devices.
EntitlementID	String		Entitlement ID of the license to delete.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400	<null>	LIC001, LIC002, LIC003, LIC004, LIC006, LIC007, LIC008, LIC009, LIC010, LIC011, LIC012, LIC014, LIC015, LIC016, LIC019, LIC900, LIC901, LIC902, LIC903

Supported Action — ExportLicense

Description

ExportLicense is an action used to export License files from the iDRAC. The ExportLicense action returns a License, specified by Entitlement ID, as a base64 encoded string.

URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLicenseManagementService/Actions/  
DellLicenseManagementService.ExportLicense
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

Parameter	Qualifier	Type	Description
EntitlementID	Input	String	Entitlement ID of the license being exported.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	LIC900
400	<null>	LIC001, LIC002, LIC003, LIC004, LIC006, LIC007, LIC008, LIC009, LIC010, LIC011, LIC012, LIC014, LIC016, LIC901, LIC902, LIC903

## ActionSupported Action — ExportLicenseByDeviceToNetworkShare

### Description

ExportLicenseByDeviceToNetworkShare is an action used to export License files from the iDRAC. The ExportLicenseByDeviceToNetworkShare action exports all licenses from a device, specified by FQDD, to a user defined location. The following tables specify ExportLicenseByDeviceToNetworkShare return values and parameters.

### URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellLicenseManagementService/Actions/  
DellLicenseManagementService.ExportLicenseByDeviceToNetworkShare
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

**Table 88. Supported properties for Supported Action — ExportLicenseByDeviceToNetworkShare**

Parameter	Type	Description
target	string	Link to invoke action
title	string	Friendly action name

## Action Parameters

Parameter	Type	Value	Description
FQDD	String		FQDD of the device to export licenses from.
FileName	String		The exported license is renamed to <FileName>.
IPAddress	String		IP Address of the machine hosting the CIFS, NFS, HTTP, or HTTPS share.
Password	String		Password for CIFS share authentication.
ShareName	String		Name of the CIFS share or full file folder path to the NFS share. Optional for HTTP/HTTPS share, which may be treated as the path of the directory containing the file.
ShareType	ENUM	NFS, CIFS	Type of the network share.
UserName	String		Username for CIFS share authentication.
Workgroup	String		Workgroup for the CIFS share, optional.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	LIC900
400	<null>	JCP017, LIC001, LIC002, LIC003, LIC004, LIC006, LIC007, LIC008, LIC009, LIC010, LIC011, LIC012, LIC014, LIC016, LIC901, LIC902, LIC903, LIC904

# DellLicensableDeviceCollection

## Description

A collection of DellLicensableDevice resource.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLicensableDeviceCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 89. Status codes

HTTP status code	Extended Information	Error Code
200		

## DellLicensableDevice

### Description

DellLicensableDevice represents a device in the system that has registered with the License Manager.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellLicensableDevice/<LicensableDevice-Id>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Properties

Property	Type	Read Only	Description
DeviceID	String	Yes	An address or other identifying information to uniquely name the LogicalDevice.
DevicePrimaryStatus	String	Yes	The property represents the license status for the device.
DeviceState	String	Yes	The value of this property represent the current device state.
DeviceStatusMessage	String	Yes	The property has the message string associated with the license status of the device. If the property has a NULL value, no message is associated with the license status of the device.
DeviceStatusMessageID	String	Yes	The property represents the message ID associated with the license status of the device. If the property has a NULL value, no message is associated with the license status of the device.
DeviceType	String	Yes	The value of this property represents the device type.
FQDD	String	Yes	A string that contains the Fully Qualified Device Description (FQDD), which is a user-friendly name for the object.
LicenseList	String	Yes	The values of this property array contain the Entitlement IDs of the licenses that are assigned to this device.
Model	String	Yes	The value of this property represents the model description of the device.
RollupStatus	String	Yes	RollupStatus provides a high-level status value, intended to align with Red-Yellow-Green type representation of status.
SubsystemID	String	Yes	The value of this property represents the PCI subsystem ID.
SubsystemVendorID	String	Yes	The value of this property represents the PCI subsystem vendor ID.

Property	Type	Read Only	Description
UniqueID	String	Yes	The value of this property represents the unique ID of the devices, as used in the binding information. The information may not be available for all the licensable devices. In such cases, the property value is NULL.
VendorID	String	Yes	The value of this property represents the PCI vendor or manufacturer ID.

**Table 90. Status codes**

HTTP status code	Extended Information	Error Code
200		

## DellMemoryCollection

### Description

A collection of DellMemory resource.

### URL

```
/redfish/v1/Dell/Systems/<System-Id>/Memory/DellMemoryCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Status Codes

HTTP status code
200
404

## DellMemory

### Description

An instance of DellMemory will have Memory Device specific data.

### URL

```
/redfish/v1/Dell/Systems/<System-Id>/Memory/DellMemory/<DellMemory-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
BankLabel	String	Yes	The property shall represent a string identifying the physically labeled bank where the memory is located.
LastSystemInventoryTime	String	Yes	This property indicates the time when Collection of System Inventory on Reboot (CSIOR) was last performed or the object was last updated on iDRAC. The value is represented in the format yyyyymmddHHMMSS.
LastUpdateTime	String	Yes	This property provides the time when the data was last updated The value is represented as yyyyymmddHHMMSS.
ManufactureDate	String	Yes	The property shall represent manufacture date of the product.
MemoryTechnology	Integer	Yes	This property indicates the type of memory technology that the memory device uses.
Model	String	Yes	The name by which the PhysicalElement is generally known.
RemainingRatedWriteEndurancePercent	Integer	Yes	Displays the wear-out percentage of the NVDIMMs. Possible values are between 100% and 0%.
SystemEraseCapability	String	Yes	The property indicates whether or not the device has the capability of being erased through SystemErase() API.

## Supported Status Codes

HTTP status code
200
404



# DellMetricService

## Description

This resource provides the ability to manage metrics.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellMetricService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 91. Status codes

HTTP status code	Extended Information	Error Code
200		

## Supported Action — ExportThermalHistory

### Description

The ExportThermalHistory action is used to export the thermal history of the system from Lifecycle Controller to a remote share, in xml or csv format.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellMetricService/Actions/  
DellMetricService.ExportThermalHistory
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
FileName	String		The target output file name.
FileType	String	CSV, XML	Type of exported file.
IPAddress	String		IP address of the network share.

Parameter	Type	Value	Description
Password	String		Password of the account to access the share.
ShareName	String		Name of the CIFS share or full path of the NFS share.
ShareType	String	CIFS, NFS	Type of the network Share.
Username	String		User name for the network share authentication.
Workgroup	String		Workgroup for the CIFS share - optional.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400		SYS026, JCP018, JCP019, SYS027, JCP017, SYS022, SYS004, SYS003, SYS002, SYS028

# DellNICCapabilitiesCollection

## Description

A collection of DellNICCapabilities resource.

## URL

```
/redfish/v1/Dell/Systems/<System-Id>/NetworkDeviceFunctions/DellNICCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 92. Status codes**

HTTP status code
200
404

# DellNIC

## Description

An instance of DellNIC will have NIC device specific data.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/NetworkDeviceFunctions/DellNIC/<DellNIC-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 93. Supported properties— DellNIC**

Property	Type	Read Only	Description
BusNumber	integer	Yes	The bus number where this PCI device resides.
CableLengthMetres	integer	Yes	This property represents the cable length of Small Form Factor pluggable(SFP) Transceiver.
ControllerBIOSVersion	string	Yes	This property represents the firmware version of Controller BIOS.
DataBusWidth	string	Yes	This property represents the data-bus width of the NIC PCI device.
DeviceDescription	string	Yes	A string that contains the friendly Fully Qualified Device Description (FQDD), which is a property that describes the device and its location.
EFIVersion	string	Yes	This property represents the firmware version of EFI.
FQDD	string	Yes	A string that contains the Fully Qualified Device Description (FQDD), which is a user-friendly name for the object.
FamilyVersion	string	Yes	Represents family version of firmware.
IdentifierType	string	Yes	This property represents the type of Small Form Factor pluggable(SFP) Transceiver.
InstanceID	string	Yes	A unique identifier for the instance.
LastSystemInventoryTime	string	Yes	This property represents the time when System Inventory Collection On Reboot (CSIOR) was last performed or the object was last updated on iDRAC. The value is represented in the format yyyyymmddHHMMSS.
LastUpdateTime	string	Yes	This property represents the time when the data was

**Table 93. Supported properties— DellNIC (continued)**

Property	Type	Read Only	Description
			last updated. The value is represented in the format yyyyymmddHHMMSS.
LinkDuplex	string	Yes	This property indicates whether the Link is full-duplex or half-duplex.
MediaType	string	Yes	The property shall represent the drive media type.
NicMode	string	Yes	Represents if network interface card personality is enabled or disabled on current partition in a Converged Network Adaptor device.
PCIDeviceID	string	Yes	This property contains a value assigned by the device manufacturer used to identify the type of device.
PCISubDeviceID	string	Yes	Represents PCI sub device ID.
PCISubVendorID	string	Yes	This property represents the subsystem vendor ID. ID information is reported from a PCIDevice through protocol-specific requests.
PCIVendorID	string	Yes	This property represents the register that contains a value assigned by the PCI SIG used to identify the manufacturer of the device.
PartNumber	string	Yes	The part number assigned by the organization that is responsible for producing or manufacturing the Small Form Factor pluggable(SFP) Transceivers.
PermanentFCOEMACAddress	string	Yes	PermanentFCOEMACAddress defines the network address that is hardcoded into a port for FCoE.
PermanentiSCSIMACAddress	string	Yes	PermanentAddress defines the network address that is hardcoded into a port for iSCSI. This 'hardcoded' address can be changed using a firmware upgrade or a software configuration. When this change is made, the field should be updated at the same time. PermanentAddress should be left blank if no 'hardcoded' address exists for the NetworkAdapter.
ProductName	string	Yes	A string containing the product name.

**Table 93. Supported properties— DellNIC (continued)**

Property	Type	Read Only	Description
Protocol	string	Yes	Supported Protocol Types.
Revision	string	Yes	This property represents the revision number of the Small Form Factor pluggable(SFP) Transceiver.
SerialNumber	string	Yes	A manufacturer-allocated number used to identify the Small Form Factor pluggable(SFP) Transceiver.
SlotLength	string	Yes	This property represents the represents the slot length of the NIC PCI device.
SlotType	string	Yes	This property indicates the slot type of the NIC PCI device.
VendorName	string	Yes	This property represents the vendor name.
iScsiOffloadMode	string	Yes	This property indicates if Internet Small Computer System Interface (iSCSI) personality is enabled or disabled on current partition in a Converged Network Adaptor device.

**Table 94. Status codes**

HTTP status code
200
404

## DellNICCapabilitiesCollection

### Description

A collection of DellNICCapabilities resource.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/NetworkDeviceFunctions/  
DellNICCapabilitiesCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 95. Status codes**

HTTP status code
200
404

## DellNICCapabilities

### Description

An instance of DellNICCapabilities will have data specific to NIC and its port and partitions capabilities.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/NetworkDeviceFunctions/DellNICCapabilities/  
<DellNICCapabilities-ID>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 96. Supported properties— DellNICCapabilities**

Property	Type	Read Only	Description
BPESupport	string	Yes	This property represents Bridge Port Extension (BPE) for the ports of the NIC.
CongestionNotification	string	Yes	This property represents congestion notification support for a NIC port.
ETS	string	Yes	This property represents Enhanced Transmission Selection support for a NIC port.
EVBModesSupport	string	Yes	This property represents EVB (Edge Virtual Bridging) mode support for the ports of the NIC. Possible values are 0 Unknown, 2 Supported, 3 Not Supported.
FCoEBootSupport	string	Yes	The property shall represent FCoE boot support for a NIC port.
FCoEMaxIOsPerSession	integer	Yes	This property represents the maximum number of I/Os per connection supported by the NIC.
FCoEMaxNPIVPerPort	integer	Yes	This property represents the maximum number of FCoE targets supported by the NIC.

**Table 96. Supported properties— DellNICCapabilities (continued)**

Property	Type	Read Only	Description
FCoEMaxNumberExchanges	integer	Yes	This property represents the maximum number of exchanges for the NIC.
FCoEMaxNumberLogins	integer	Yes	This property represents the maximum logins per port for the NIC.
FCoEMaxNumberOfFCTargets	integer	Yes	This property represents the maximum number of FCoE targets supported by the NIC.
FCoEMaxNumberOutStanding Commands	integer	Yes	This property represents the maximum number of outstanding commands supported across all connections for the NIC.
FCoEOffloadSupport	string	Yes	The property shall represent FCoE offload support for the NIC.
FeatureLicensingSupport	string	Yes	This property represents feature licensing support for the NIC.
FlexAddressingSupport	string	Yes	The property shall represent flex addressing support for a NIC port.
IPSecOffloadSupport	string	Yes	This property represents IPSec offload support for a NIC port.
MACSecSupport	string	Yes	This property represents secure MAC support for a NIC port.
NWManagementPassThrough	string	Yes	This property represents network management passthrough support for a NIC port.
OSBMCMManagementPassThrough	string	Yes	This property represents OS-inband to BMC-out-of-band management passthrough support for a NIC port.
OnChipThermalSensor	string	Yes	This property represents on-chip thermal sensor support for the NIC.
OpenFlowSupport	string	Yes	This property represents open-flow support for a NIC port.
PXEBootSupport	string	Yes	The property shall represent PXE boot support for a NIC port.
PartitionWOLSupport	string	Yes	This property represents Wake-On-LAN support for a NIC partition.

**Table 96. Supported properties— DellNICCapabilities (continued)**

Property	Type	Read Only	Description
PersistencePolicySupport	string	Yes	This property specifies whether the card supports persistence policy.
PriorityFlowControl	string	Yes	This property represents priority flow-control support for a NIC port.
RDMASupport	string	Yes	This property represents RDMA support for a NIC port.
RemotePHY	string	Yes	This property represents remote PHY support for a NIC port.
TCPChimneySupport	string	Yes	This property represents TCP Chimney support for a NIC port.
VEB	string	Yes	This property provides details about the VEB (Virtual Ethernet Bridging) - single channel support for the ports of the NIC.
VEBVEPAMultiChannel	string	Yes	This property provides details about the VEB-VEPA (Virtual Ethernet Bridging and Virtual Ethernet Port Aggregator) multichannel support for the ports of the NIC.
VEBVEPASingleChannel	string	Yes	This property provides details about the VEB-VEPA (Virtual Ethernet Bridging and Virtual Ethernet Port Aggregator) - single channel support for the ports of the NIC.
VirtualLinkControl	string	Yes	This property represents virtual link-control support for a NIC partition.
iSCSIBootSupport	string	Yes	The property shall represent iSCSI boot support for a NIC port.
iSCSIOffloadSupport	string	Yes	The property shall represent iSCSI offload support for a NIC port.
uEFISupport	string	Yes	This property represents UEFI support for a NIC port.

**Table 97. Status codes**

HTTP status code
200
404



# DellNICStatisticsCollection

## Description

A collection of DellNICStatistics resource.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/NetworkAdapters/NetworkDeviceFunctions/  
DellNICStatisticsCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 98. Status codes

HTTP status code
200
404

# DellNICStatistics

## Description

An instance of DellNICStatistics will have the statistics of the NIC, NIC port or partition.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/NetworkAdapters/NetworkDeviceFunctions/  
DellNICStatistics/<DellNICStatistics-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 99. Supported properties —DellNICStatistics

Property	Type	Read Only	Description
RxBytes	integer	Yes	Counts the total number of bytes received, including host and remote management pass through traffic (remote management pass through

**Table 99. Supported properties —DellNICStatistics (continued)**

Property	Type	Read Only	Description
			traffic is applicable to LOMs only).
RxMulticastPackets	integer	Yes	Counts the total number of good multicast packets transmitted.
RxUnicastPackets	integer	Yes	Counts the total number of good unicast packets transmitted.
TxBytes	integer	Yes	Counts the total number of bytes transmitted, including host and remote management pass through traffic (remote management pass through traffic is applicable to LOMs only).
TxMulticastPackets	integer	Yes	Counts the total number of good multicast packets transmitted.
TxUnicastPackets	integer	Yes	Counts the total number of good unicast packets transmitted.

**Table 100. Status codes**

HTTP status code
200
404

## DellNICPortMetricsCollection

### Description

This resource represents the statistics of the NIC, NIC port, or partition.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/NetworkAdapters/NetworkDeviceFunctions/  
DellNICPortMetricsCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 101. Status codes**

HTTP status code	Extended Information	Error Code
200		

# DellNICPortMetrics

## Description

This resource represents the statistics of the NIC, NIC port, or partition.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/NetworkAdapters/NetworkDeviceFunctions/  
DellNICPortMetrics/<NICPortMetrics-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties—DellNICPortMetrics

Property	Type	Read Only	Description
DiscardedPkts	INT	Yes	Indicates the total number of discarded packets.
FCCRCErrCount	INT	Yes	Indicates the number of FC frames with CRC errors.
FCOELinkFailures	INT	Yes	Indicates the number of FCoE/FIP login failures.
FCOEPktRxCount	INT	Yes	Indicates the number of good (FCS valid) packets received with the active FCoE MAC address of the partition.
FCOEPktTxCount	INT	Yes	Indicates the number of good (FCS valid) packets transmitted that passed L2 filtering by a specific MAC address.
FCOERxPktDroppedCount	INT	Yes	Indicates the number of receive packets with FCS errors.
FQDD	String	Yes	A string that contains the Fully Qualified Device Description (FQDD), which is a user-friendly name for the object.
LanFCSRxErrors	INT	Yes	Indicates the Lan FCS receive Errors.
LanUnicastPktRXCount	INT	Yes	Indicates the total number of Lan Unicast Packets Received.
LanUnicastPktTXCount	INT	Yes	Indicates the total number of Lan Unicast Packets Transmitted.
OSDriverState	String	Yes	Indicates operating system driver states.
PartitionLinkStatus	String	Yes	Indicates whether the partition link is up or down.
PartitionOSDriverState	String	Yes	Indicates operating system driver states of the partitions.
RDMA RxTotalBytes	INT	Yes	Indicates the total number of RDMA bytes received.
RDMA RxTotalPackets	INT	Yes	Indicates the total number of RDMA packets received.
RDMA TotalProtectionErrors	INT	Yes	Indicates the total number of RDMA Protection errors.
RDMA TotalProtocolErrors	INT	Yes	Indicates the total number of RDMA Protocol errors.
RDMA TxTotalBytes	INT	Yes	Indicates the total number of RDMA bytes transmitted.
RDMA TxTotalPackets	INT	Yes	Indicates the total number of RDMA packets transmitted.

Property	Type	Read Only	Description
RDMATxTotalReadReqPkts	INT	Yes	Indicates the total number of RDMA ReadRequest packets transmitted.
RDMATxTotalSendPkts	INT	Yes	Indicates the total number of RDMA Send packets transmitted.
RDMATxTotalWritePkts	INT	Yes	Indicates the total number of RDMA Write packets transmitted.
RxInputPowermW	Number	Yes	Indicates the RX input power value of Small Form Factor pluggable (SFP) Transceiver.
RxBroadcast	INT	Yes	Indicates the total number of good broadcast packets received.
RxBytes	INT	Yes	Indicates the total number of bytes received, including host and remote management pass through traffic. Remote management passthrough traffic is applicable to LOMs only.
RxErrorPktAlignmentErrors	INT	Yes	Indicates the total number of packets received with alignment errors.
RxErrorPktFCSErrors	INT	Yes	Indicates the total number of packets received with FCS errors.
RxFalseCarrierDetection	INT	Yes	Indicates the total number of false carrier errors received from PHY.
RxJabberPkt	INT	Yes	Indicates the total number of frames that are too long.
RxMulticastPackets	INT	Yes	Indicates the total number of good multicast packets transmitted.
RxPauseXOFFFrames	INT	Yes	Indicates the flow control frames from the network to pause transmission.
RxPauseXONFrames	INT	Yes	Indicates the flow control frames from the network to resume transmission.
RxRuntPkt	INT	Yes	Indicates the total number of frames that are too short (< 64 bytes).
RxUnicastPackets	INT	Yes	Indicates the total number of good unicast packets transmitted.
StartStatisticTime	String	Yes	Indicates the measurement time for the first NIC statistics. The property is used with the StatisticTime property to calculate the duration over which the NIC statistics are gathered.
StatisticTime	String	Yes	Indicates the most recent measurement time for NIC statistics. The property is used with the StatisticStartTime property to calculate the duration over which the NIC statistics are gathered.
TXBiasCurrentmA	Number	Yes	Indicates the TX Bias current value of Small Form Factor pluggable (SFP) Transceiver.
TXOutputPowermW	Number	Yes	Indicates the TX output power value of Small Form Factor pluggable (SFP) Transceiver.
TemperatureCel	Number	Yes	Indicates the temperature value of Small Form Factor pluggable (SFP) Transceiver.
TemperatureStatus	String	Yes	Indicates the status of Temperature value limits.
TxBroadcast	INT	Yes	Indicates the total number of good broadcast packets transmitted.
TxBytes	INT	Yes	Indicates the total number of bytes transmitted, including host and remote management passthrough traffic. Remote management passthrough traffic is applicable to LOMs only.
TxErrorPktExcessiveCollision	INT	Yes	Indicates the number of times a single transmitted packet encountered more than 15 collisions.
TxErrorPktLateCollision	INT	Yes	Indicates the number of collisions that occurred after one slot time (defined by IEEE 802.3).
TxErrorPktMultipleCollision	INT	Yes	Indicates the number of times that a transmitted packet encountered 2-15 collisions.
TxErrorPktSingleCollision	INT	Yes	Indicates the number of times that a successfully transmitted packet encountered a single collision.
TxMulticastPackets	INT	Yes	Indicates the total number of good multicast packets transmitted.

Property	Type	Read Only	Description
TxPauseXOFFFrames	INT	Yes	Indicates the number of XOFF packets transmitted to the network.
TxPauseXONFrames	INT	Yes	Indicates the number of XON packets transmitted to the network.
TxUnicastPackets	INT	Yes	Indicates the total number of good unicast packets transmitted.
VoltageStatus	String	Yes	Indicates the status of voltage value limits.
VoltageValueVolts	Number	Yes	Indicates the voltage value of Small Form Factor pluggable (SFP) Transceiver.

**Table 102. Status codes**

HTTP status code	Extended Information	Error Code
200		

## DellNumericSensorCollection

### Description

A collection of DellNumericSensor resource

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellNumericSensorCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 103. Status codes**

HTTP status code
200
404

## DellNumericSensor

### Description

An instance of DellNumericSensor will have data specific to sensor devices that returns only numeric readings and optionally supports thresholds settings.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellNumericSensor/<Sensor-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
PATCH	ConfigureManager, Login

## Supported Properties

Property	Type	Read Only	Description
CurrentReading	integer	Yes	The current value indicated by the Sensor. The property value shall be in units specified by the BaseUnit property value multiplied by 10 to the power of the UnitModier property value.
CurrentState	string	Yes	The current state indicated by the Sensor. This value is always one of the "PossibleStates".
DeviceID	string	Yes	An address or other identifying information to uniquely name the LogicalDevice.
ElementName	string	Yes	The user-friendly name for the class instance.This value does not have to be unique within its namespace.
EnabledDefault	string	Yes	An enumerated value that indicates an administrator's default or startup configuration for the Enabled State of an element. By default, the element is "Enabled" (value=2).
EnabledState	string	Yes	EnabledState is an integer enumeration that indicates the enabled and disabled states of an element.
HealthState	string	Yes	Indicates the current health of the element.
Links	string	Yes	Contains references to other resources that are related to this resource.
LowerThresholdCritical	integer	Yes	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, or Critical conditions. If the CurrentReading is below

Property	Type	Read Only	Description
			LowerThresholdCritical, the CurrentState is Critical.
LowerThresholdNonCritical	integer	No	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, or Critical conditions. If Current Reading is between LowerThresholdNonCritical and Upper ThresholdNonCritical, the Sensor is reporting a normal value. If CurrentReading is between LowerThresholdNonCritical and LowerThresholdCritical, the CurrentState is NonCritical.
OperationalStatus	array	Yes	Indicates the operational status of the represented resource.
OtherSensorTypeDescription	string	Yes	A string that describes the sensor type. This property is used when the SensorType property is set to "Other".
PossibleStates	array	Yes	PossibleStates enumerates the string outputs of the Sensor.
PrimaryStatus	string	Yes	PrimaryStatus provides a high-level status value, intended to align with Red-Yellow-Green type representation of status.
RateUnits	string	Yes	Specifies if the units returned by this sensor are rate units. All the values returned by this Sensor are represented in the units obtained by (BaseUnits * 10 raised to the power of the UnitModifier). This is true unless this property (RateUnits) has a value other than "None".
ReadingUnits	string	Yes	The base unit of the values returned by this Sensor.
RequestedState	string	Yes	RequestedState is an integer enumeration that indicates the last requested or desired state for the element, irrespective of the mechanism through which it was requested.
SensorType	string	Yes	The Type of the Sensor, e.g. Voltage or Temperature

Property	Type	Read Only	Description
			Sensor. If the type is set to "Other", then the OtherSensorType Description can be used to further identify the type, or if the Sensor has numeric readings, then the type of the Sensor can be implicitly determined by the Units.
SystemName	string	Yes	The Name of the scoping System.
UnitModifier	integer	Yes	This property represents the unit multiplier for the values returned by this sensor.
UpperThresholdCritical	integer	Yes	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, or Critical conditions.
UpperThresholdNonCritical	integer	No	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, or Critical conditions.
ValueFormulation	object	Yes	This property has the value 2 (Measured).

**Table 104. Status codes**

HTTP status code
200
404

## DellOpaqueManagementDataCollection

### Description

A collection of DellOpaqueManagementData resource.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellOpaqueManagementDataCollection
```



## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 105. Status codes**

HTTP status code	Extended Information	Error Code
200		

## DellOpaqueManagementData

### Description

DCIM\_OpaqueManagementData is a derivation of CIM\_OpaqueManagementData. It represents a partition on a storage device such as the vFlash.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellOpaqueManagementData/<OpaqueManagementData-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Properties

Property	Type	Read Only	Description
AccessType	String	Yes	Access describes whether the media is readable. The property has the value "Read Only" or "Read- Write".
AttachedState	String	Yes	This property represents if the partition is attached to OS.
DataFormat	String	Yes	The property has the value "Raw", "Ext2", "Ext3", "FAT16", or "FAT32".
DeviceID	String	Yes	An address or other identifying information to uniquely name the LogicalDevice.
PartitionIndex	INT	Yes	This property represents the index of the partition.
PartitionType	String	Yes	This property represents the type of the partition specified during creation. The property has the value "Floppy", "HDD", or "CD-DVD".
Size	INT	Yes	The value of this property is in MB.

**Table 106. Status codes**

HTTP status code	Extended Information	Error Code
200		

# DellOSDeploymentService

## Description

The DellOSDeploymentService resource provides some actions that support operating system deployment configurations.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	OSD1

- Supported Action — [BootToHD](#) on page 170
- Supported Action — [BootToISOFromVFlash](#) on page 171
- Supported Action — [BootToNetworkISO](#) on page 172
- Supported Action — [ConfigurableBootToNetworkISO](#) on page 173
- Supported Action — [ConnectNetworkISOImage](#) on page 175
- Supported Action — [DeleteISOFromVFlash](#) on page 176
- Supported Action — [DetachISOFromVFlash](#) on page 176
- Supported Action — [DetachDrivers](#) on page 177
- Supported Action — [DetachISOImage](#) on page 178
- Supported Action — [UnpackAndShare](#) on page 182
- Supported Action — [DownloadISOToVFlash](#) on page 179
- Supported Action — [GetNetworkISOImageConnectionInfo](#) on page 181
- Supported Action — [GetDriverPackInfo](#) on page 180
- Supported Action — [GetAttachStatus](#) on page 180
- Supported Action — [DisconnectNetworkISOImage](#) on page 178
- Supported Action — [UnpackAndAttach](#) on page 181


## Supported Action — BootToHD

### Description

The BootToHD action is used for one time boot to the host server's hard disk.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/  
DellOSDeploymentService.BootToHD
```

 **NOTE:** No parameters are required to perform this action.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	Base.1.0.Success	OSD3, OSD35, OSD8, OSD9

## Supported Action — BootToISOFromVFlash

### Description

The BootToISOFromVFlash action is used to boot to the downloaded pre-operating system image on the vFlash SD card. The following table lists the return values for BootToISOFromVFlash action, where the action-execution behavior matches the return-code description.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/  
DellOSDeploymentService.BootToISOFromVFlash
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters—BootToISOFromVFlash

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
ExposeDuration	string		Identifies the amount of time, up to 18 hours, for the drivers to be exposed as a USB device to the host. The default value shall be 18 hours, if the parameter is not specified. The format for intervals is: YYYY-MM-DDThh:mm:ss[.SSS](Z (+ -)hh:mm).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	OSD1
400		OSD19, OSD21, OSD3, OSD36, OSD40, OSD41, OSD43, OSD50, OSD51, OSD52, OSD53, OSD55, OSD9

## Supported Action — BootToNetworkISO

### Description

The BootToNetworkISO action is used to boot to the iDRAC pre-operating system image that was already downloaded. The following table lists the return values for BootToNetworkISO action, where the action-execution behavior matches the return-code description.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/  
DellOSDeploymentService.BootToNetworkISO
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters—BootToNetworkISO

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
ExposeDuration	string		Identifies the amount of time (up to 18 hours) for the ISO image file to be exposed as a local CD-ROM device to the host server after which it will be automatically detached. The default value shall be 18 hours, if the parameter is not specified. The format for intervals is: YYYY-MM-DDThh:mm:ss[.SSS](Z (+ -)hh:mm)
FolderName	string		Folder name containing the ISO image file.
HashType	string	MD5, SHA1	Type of hash algorithm used to compute checksum.
HashValue	String		Checksum value in string format computed by using the 'HashType' algorithm.

Parameter	Type	Value	Description
IPAddress	String		NFS, CIFS, HTTP, HTTPS share IPv4 address. For example, 192.168.10.100.
ImageName	String		Name of the image file.
Password	String		Password, if applicable.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP or HTTPS share, which may be treated as the path of the directory containing the file.
ShareType	string	NFS, CIFS, TFTP	Type of the network share.
UserName	String		User name, if applicable. If the value contains domain name—for example, domain name or user name—the "domain name" will be considered as the work group. Work group parameter will take precedence if value is separately passed for it along with a user name. Supports only " and '/' for separator.
Workgroup	String		Optional. Workgroup for the CIFS share.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		OSD1, OSD16, OSD17, OSD19, OSD21, OSD28, OSD3, OSD30, OSD35, OSD36, OSD47, OSD50, OSD51, OSD9

## Supported Action — ConfigurableBootToNetworkISO

### Description

The ConfigurableBootToNetworkISO action exposes an ISO Image present on a network share as a CDROM device to the host server for a specified exposure duration interval or by default for 18 hrs. Upon the successful execution, based on the ResetType parameter, the host system shall either immediately cold boot or warm boot. Upon this reset, the system shall then boot to the ISO Image. If ResetType specifies no immediate reboot, then upon the next host system reset, the system shall boot to the ISO Image. Furthermore, if immediate reset is not specified, then the system should be rebooted before the exposure duration interval expires, otherwise the system shall fail to boot to the ISO Image.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/DellOSDeploymentService.ConfigurableBootToNetworkISO
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters—ConfigurableBootToNetworkISO

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
ExposeDuration	DateTimeOffset		Identifies the amount of time (up to 18 hours) for the ISO image file to be exposed as a local CD-ROM device to the host server after which it will be automatically detached. The default value shall be 18 hours, if the parameter is not specified. The format for intervals is: YYYY-MM-DDThh:mm:ss[.SSS] (Z   (+ -)hh:mm)
HashType	ENUM	MD5, SHA1	Type of hash algorithm used to compute checksum.
HashValue	String		Checksum value in string format computed by using the 'HashType' algorithm.
IPAddress	String		NFS, CIFS, HTTP, HTTPS share IPv4 address. For example, 192.168.10.100.
ImageName	String		Name of the image file.
Password	String		Password, if applicable.
ResetType	ENUM	NoReset, WarmReset, ColdReset	Specifies if the host system needs to be immediately forced to cold- or warm reset in order to boot to the ISO Image.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP or HTTPS share, which may be treated as the path of the directory containing the file.
ShareType	ENUM	NFS, CIFS, TFTP	Type of the network share.
UserName	String		User name, if applicable.
Workgroup	String		Optional. Workgroup for the CIFS share.


## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		OSD1, OSD16, OSD17, OSD19, OSD21, OSD28, OSD3, OSD30, OSD35, OSD36, OSD47, OSD50, OSD51, OSD64, OSD65, OSD9

## Supported Action — ConnectNetworkISOImage

### Description

The ConnectNetworkISOImage action is used to connect to the ISO present on the network share and expose the ISO as a local USB CD-ROM device to the host system. This action will connect to the ISO located on an NFS/CIFS share and expose it as a virtual CDROM device to the host server. Even though the successful action execution shall not change the boot order of that device, the host shall always boot to the virtual CDROM. Also, note that after the ISO is exposed to the host server, Lifecycle Controller shall be locked and no other jobs like configuration/update etc shall be performed until the ISO is detached using the DisconnectNetworkISOImage action. The successful execution of the DisconnectNetworkISOImage shall revert the host system to the regular boot list.

 **NOTE:** The recommended methodology for connecting to an ISO image is by using the ConnectRFSISOImage action that utilizes the remote file system (RFS).

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/  
DellOSDeploymentService.ConnectNetworkISOImage
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters—ConnectNetworkISOImage

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
HashType	ENUM	MD5, SHA1	Type of hash algorithm used to compute checksum.
HashValue	String		Checksum value in string format computed by using the 'HashType' algorithm.
IPAddress	String		NFS, CIFS, HTTP, HTTPS share IPv4 address. For example, 192.168.10.100.
ImageName	String		Name of the image file.
Password	String		Password, if applicable.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP or HTTPS

Parameter	Type	Value	Description
			share, which may be treated as the path of the directory containing the file.
ShareType	ENUM	NFS, CIFS, TFTP	Type of the network share.
UserName	String		User name, if applicable.
Workgroup	String		Optional. Workgroup for the CIFS share.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	Base.1.0.Success	OSD1, OSD16, OSD17, OSD19, OSD28, OSD3, OSD35, OSD47, OSD50, OSD51, OSD61


## Supported Action — DeleteISOFromVFlash

### Description

The DeleteISOFromVFlash action is used to delete the ISO Image from vFlash SD card. The following table lists the return values for the DeleteISOFromVFlash action, where the action-execution behavior matches the return-code description.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/DellOSDeploymentService.DeleteISOFromVFlash
```

 **NOTE:** No parameters are required to perform this action.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		OSD3, OSD39, OSD40, OSD41, OSD43, OSD45, OSD52, OSD53

## Supported Action — DetachISOFromVFlash


### Description

The DetachISOFromVFlash action is used to detach the ISO Image (on a vFlash SD card) from the host system.



## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/  
DellOSDeploymentService.DetachISOFromVFlash
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		OSD23, OSD39, OSD40, OSD41, OSD43, OSD44, OSD52, OSD53


## Supported Action — DetachDrivers

### Description

This OSDDeploymentService.DetachDrivers action is used to detach the USB device containing the drivers from the host server. The following table lists the return values for DetachDrivers action, where the action-execution behavior matches the return-code description.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/  
DellOSDeploymentService.DetachDrivers
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		OSD24, OSD25, OSD7

# Supported Action — DetachISOImage

## Description

The DetachISOImage action is used to detach the ISO Image from the host server. The following table lists the return values for DetachISOImage action, where the action-execution behavior matches the return-code description. The following table lists the return values for BootToNetworkISO action, where the method-execution behavior matches the return-code description.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/DellOSDeploymentService.DetachISOImage
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		OSD22, OSD23, OSD32, OSD7


# Supported Action — DisconnectNetworkISOImage

## Description

The DisconnectNetworkISOImage action is used to disconnect and detach the ISO Image from the host system. The following table lists the return values for the DisconnectNetworkISOImage action, where the action-execution behavior matches the return-code description.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/DellOSDeploymentService.DisconnectNetworkISOImage
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		OSD22, OSD32, OSD7

## Supported Action — DownloadISOToVFlash

### Description

The DownloadISOToVFlash action is used to download the pre-operating system ISO Image to the vFlash SD card. The following table lists the return values for DownloadISOToVFlash action, where the action-execution behavior matches the return-code description.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/  
DellOSDeploymentService.DownloadISOToVFlash
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
HashType	String	MD5, SHA1	Type of hash algorithm used to compute checksum.
HashValue	String		Checksum value in string format computed by using the 'HashType' algorithm.
IPAddress	String		The TFTP, CIFS, NFS, HTTP, or HTTPS share IPv4 address. For example, 192.168.10.100.
ImageName	String		Name of the image file.
Password	String		Password, if applicable.
Port	Integer		Port Number
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP or HTTPS share, which may be treated as the path of the directory containing the file.
ShareType	String	NFS, CIFS, TFTP	Type of the network share.
UserName	String		User name, if applicable.

Parameter	Type	Value	Description
Workgroup	String		Optional. Workgroup for the CIFS share.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	OSD1
400		OSD16, OSD18, OSD19, OSD28, OSD3, OSD37, OSD40, OSD42, OSD43, OSD47, OSD48, OSD52, OSD53, OSD54, OSD55


## Supported Action — GetAttachStatus

### Description

The GetAttachStatus() method will give the status of the Drivers and ISO Image that has been exposed to host.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/DellOSDeploymentService.GetAttachStatus
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	OSD1

## Supported Action — GetDriverPackInfo

### Description

The GetDriverPackInfo action is used get the list of operating systems that can be installed on the host system using the embedded device drivers present in the Lifecycle Controller.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/DellOSDeploymentService.GetDriverPackInfo
```

 **NOTE:** No parameters are required to perform this action.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		OSD2, OSD29, OSD3, OSD35, OSD4, OSD5, OSD6


## Supported Action — GetNetworkISOImageConnectionInfo

### Description

The GetNetworkISOImageConnectionInfo action is used to give the status of the ISO Image that has been exposed to the host system. The following table lists the return values for GetNetworkISOImageConnectionInfo, where the action-execution behavior matches the return-code description.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/  
DellOSDeploymentService.GetNetworkISOImageConnectionInfo
```

 **NOTE:** No parameters are required to perform this action.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		OSD32

## Supported Action — UnpackAndAttach

### Description

The UnpackAndAttach action is used to extract the drivers for the selected operating system to a USB device that is attached locally to the server for the specified time interval. The following table specifies the return values for UnpackAndAttach action, where the action-execution behavior matches the return-code description.


URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/  
DellOSDeploymentService.UnpackAndAttach
```


Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters—UnpackAndAttach

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
ExposeDuration	string		Identifies the amount of time (up to 18 hours) for the drivers to be exposed as an USB device to the host. The default value shall be 18 hours, if the parameter is not specified. The format for intervals is: YYYY-MM-DDThh:mm:ss[.SSS](Z (+ -)hh:mm)
OSName	String		Name of the OS to unpack drivers for, this value shall match one of the strings in OSList returned for GetDriverPackInfo.

 **NOTE:** While performing this action for OS deployment, if a GET method is performed to check the status of the job, the PercentComplete property may display null. To check the status, see the TaskStatus or TaskState property.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	OSD1
400		OSD10, OSD11, OSD12, OSD13, OSD19, OSD2, OSD20, OSD27, OSD3, OSD30, OSD35, OSD4, OSD5

Supported Action — UnpackAndShare

Description

The UnpackAndShare action is used to extract the drivers for the selected operating system, and copy them to the specified network share. The following table lists the return values for UnpackAndShare, where the action-execution behavior matches the return-code description.

URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellOSDeploymentService/Actions/DellOSDeploymentService.UnpackAndShare
```

Supported HTTP Method and Privileges

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
FolderName	String		Folder name.
IPAddress	String		CIFS, NFS, HTTP, or HTTPS share IPv4 address. For example, 192.168.10.100.
OSName	String		The OS name.
Password	String		Password, if applicable.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share, which may be treated as the path of the directory containing the file.
ShareType	ENUM	NFS, CIFS, TFTP	Type of the network share.
UserName	String		User name, if applicable.
Workgroup	String		Optional. Workgroup for the CIFS share.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	OSD1
400		OSD10, OSD11, OSD12, OSD13, OSD19, OSD2, OSD20, OSD27, OSD3, OSD30, OSD35, OSD4, OSD47, OSD5

TelemetryService

Description

This is the schema definition for the Metrics Service. It can be used to represent a Metrics Service for a Redfish implementation.

## URL

```
/redfish/v1/TelemetryService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
POST	ConfigureManager, Login

## Supported Properties—TelemetryService

Property	Type	Read Only	Description
MetricDefinitions	String	Yes	A link to the collection of Metric Definitions.
MetricReportDefinitions	String	Yes	A link to the collection of Metric Report Definitions.
MetricReports	String	Yes	A link to the collection of Metric Reports.
Triggers	String	Yes	A link to the collection of Triggers, which apply to metrics.

**Table 107. Status codes**

HTTP status code	Extended Information	Error Code
200		SYS413
400		SYS462, SYS460
403		LIC501
500		SYS446

## Supported Action — SubmitTestMetricReport

### Description

This action causes the event service to immediately generate the metric report, as an Alert Event. This message should then be sent to any appropriate ListenerDestination targets.

## URL

```
/redfish/v1/TelemetryService/Actions/TelemetryService.SubmitTestMetricReport
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login



## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Description
GeneratedMetricReportValues*	array	The content of the MetricReportValues in the generated metric report.
MetricReportName*	string	The Name property of the metric report in generated metric report.
MetricReportValues	string	The content of MetricReportValues array in generated metric report.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.5.Success	SYS413
400		SYS462, SYS460
403		LIC501
500		SYS446

## MetricDefinitionCollection

### Description

This resource represents a Resource Collection of MetricDefinition instances for a Redfish implementation.

### URL

```
/redfish/v1/TelemetryService/MetricDefinitions
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 108. Status codes

HTTP status code	Extended Information	Error Code
200		

## MetricDefinitions

### Description

This resource contains the metadata information for a metric.

## URL

```
/redfish/v1/TelemetryService/MetricDefinitions/<MetricDefinition-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
DELETE	Login

## Supported Properties

Property	Type	Read Only	Description
Accuracy	Number	Yes	Estimated percent error of measured vs. actual values.
Calculable	String	No	Indicates whether the metric can be used in a calculation.
CalculationAlgorithm	String	Yes	The calculation which is performed on a source metric to obtain the metric being defined.
CalculationParameters	Array		Specifies the metric properties which are part of the synthesis calculation. This property is present when the MetricType property has the value 'Synthesized'.
CalculationTimeInterval	String	No	The time interval over which the metric calculation is performed.
Calibration	Number	Yes	Specifies the calibration offset added to the metric reading.
DiscreteValues	Array	No	This array property specifies possible values of a discrete metric. This property may return a null response, if MetricType is set to Discrete.
Implementation	String	Yes	The implementation of the metric.
IsLinear	Boolean	No	Indicates whether the metric values are linear (vs non-linear).
MaxReadingRange	Number	Yes	Maximum value for metric reading.
MetricDataType	String	No	The data type of the metric.
MetricType	String	No	The type of metric. This is set to 'Discrete' value by default.
MinReadingRange	Number	Yes	Minimum value for metric reading.
PhysicalContext	String	Yes	Specifies the physical context of the metric.
Precision	INT	Yes	Number of significant digits in the metric reading.
SensingInterval	String	No	The time interval between when a metric is updated.
TimestampAccuracy	String	Yes	Accuracy of the timestamp.
Units	String	No	The units of measure for this metric.
MetricProperties	URI	No	A list of URIs with wildcards and property identifiers for which this metric definition is defined. If a URI has wildcards, the wildcards are substituted as specified in the Wildcards array property.

**Table 109. Status codes**

HTTP status code
200

## MetricReportDefinitionCollection

### Description

This resource is used to represent a Resource Collection of MetricReportDefinition instances for a Redfish implementation.

### URL

```
/redfish/v1/TelemetryService/MetricReportDefinitions
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 110. Status codes**

HTTP status code	Extended Information	Error Code
200		
400	Base.1.2.GeneralError	SYS460

## MetricReportDefinition

### Description

This resource specifies a set of metrics that shall be collected into a metric report.

### URL

```
/redfish/v1/TelemetryService/MetricReportDefinitions/<MetricReportDefinition-Id>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
PATCH	ConfigureManager , Login

## Supported Properties

Property	Type	Read Only	Description
MetricReport	String	Yes	The location where the resultant metric report is placed.
MetricReportDefinitionEnabled	Boolean	No	An indication of whether the generation of new metric reports is enabled.
MetricReportDefinitionType	String	Yes	Specifies when the metric report is generated.
Schedule	String	No	Specifies the schedule for generating the metric report. If a schedule is present, the metric report is generated at an interval specified by Schedule.RecurrenceInterval property.
<b>i</b> <b>NOTE:</b> While configuring a subscription for CUPS report, it is recommended to set the recurrence interval to 60 seconds or above.			
ReportActions	Array	Yes	Specifies the actions to perform when a metric report is generated.
Metrics	Array	Yes	Specifies a list of metrics to include in the metric report. The metrics may include metric properties or calculations applied to a metric property.
ReportUpdates	String	Yes	When logging metric reports, specifies how subsequent metric reports are handled in relationship to an existing metric report created from the metric report definition. Namely, whether to overwrite, append, or create new report resource.
MetricReport	String	Yes	Specifies the location where the resultant metric report is placed.

**Table 111. Status codes**

HTTP status code	Extended Information	Error Code
200	Base.1.5.Success	SYS413
400		SYS425, SYS029, SWC0283, SYS460, RAC004, SYS446
400	Base.1.5.MalformedJSON, Base.1.5.PropertyUnknown	SYS405, SYS429
403		LIC501

## MetricReportCollection

### Description

This property shall contain an array of references to the members of this collection.

### URL

```
/redfish/v1/TelemetryService/MetricReports
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 112. Status codes**

HTTP status code	Extended Information	Error Code
200		
400	Base.1.2.GeneralError	
404		

## MetricReport

### Description

The metric definitions used to create a metric report.

### URL

```
/redfish/v1/TelemetryService/MetricReports/<MetricReport-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
ReportSequence	String	Yes	The current sequence identifier for this metric report.
MetricReportDefinition	String	Yes	The metric definitions used to create a metric report.
Timestamp	String	Yes	The time associated with the metric report in its entirety. The time of the metric report may be relevant when the time of individual metrics are minimally different.
<b>i</b> <b>NOTE:</b> Although the timestamp for usage readings such as CPUUsagePctReading, MemoryUsagePctReading, IOUsagePctReading and SystemUsagePctReading in Sensor report and CUPS report may be same, the readings may vary as Sensor reports are generated every minute on an average, while CUPS report are generated instantaneously.			
MetricValues	Array	Yes	An array of metric values for the metered items of this Metric.

**i** **NOTE:** In the statistics for NICSensor presented for a NIC port, ignore the property *Port1 Partition 1*, as Telemetry does not collect port level statistics.

**Table 113. Status codes**

HTTP status code
200
404

## TriggersCollection

### Description

This resource is used to represent a Resource Collection of Triggers instances for Redfish implementation.

### URL

```
/redfish/v1/TelemetryService/Triggers
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 114. Status codes**

HTTP status code	Extended Information	Error Code
200		
400	Base.1.2.GeneralError	

## Triggers

### Description

This resource specifies a trigger, that applies to metric(s).

### URL

```
/redfish/v1/TelemetryService/Triggers/<Triggers-Id>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
DiscreteTriggerCondition	String	Yes	Specifies the conditions when a discrete metric triggers.
DiscreteTriggers	Array	Yes	This property shall contains a list of value to which a metric reading will be compared. This property shall be present when the DiscreteTriggerCondition property has a value of 'Specified'.
EventTriggers	String	Yes	A list of MessageIds that specify when a trigger occurs based on an event.
MetricProperties	URI		A list of URIs with wildcards and property identifiers for which this trigger is defined. If a URI has wildcards, the wildcards are substituted as specified in the Wildcards array property.
MetricType	String	Yes	The value of this property shall specific the type of trigger.
TriggerActions	Array	Yes	This property specifies the actions to perform when the trigger occurs.
EventTriggers	String	No	The array of MessageIds that specify when a trigger condition is met based on an event.
Links.MetricReportDefinitions	Array	No	The metric report definitions that generate new metric reports when a trigger condition is met and when the TriggerActions property contains `RedfishMetricReport`.

**Table 115. Status codes**

HTTP status code	Extended Information	Error Code
200		
202		
204		
404	Base.1.5.GeneralError	

## DellPCleSSDExtenderCollection

### Description

A collection of DellPCleSSDExtender resource.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Storage/DellPCleSSDExtenderCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 116. Status codes**

HTTP status code
200
404

# DellPCleSSDExtender

## Description

An instance of DellPCleSSDExtender will have data specific to the PCIeSSD extender in the managed system.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Storage/DellPCleSSDExtender/  
<DellPCleSSDExtender-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
DeviceDescription	string	Yes	A string containing the friendly Fully Qualified Device Description,a property that describes the device and its location.
InstanceID	string	Yes	A unique identifier for the instance.
RollupStatus	string	Yes	RollupStatus provides overall health status of the system by considering their sub-component health statuses, e.g RollupStatus will be degraded if any one of the sub-component is degraded.

**Table 117. Status codes**

HTTP status code
200
404



# DellPCleSSDCollection

## Description

A collection of DellPCleSSD resource.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Storage/DellPCleSSDCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 118. Status codes

HTTP status code	Extended Information	Error Code
200		
400	Base.1.5. QueryParameterValueFormatError, Base.1.5. QueryParameterOutOfRange	SYS407, SYS417, SYS457
401	Base.1.2.AccessDenied	
404	Base.1.5. ResourceMissingAtURI	SYS403
405		SYS402

# DellPCleSSD

## Description

An instance of DellPCleSSD will have PCIe Solid State Drive specific data.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Storage/DellPCleSSD/<DellPCleSSD-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
Bus	string	Yes	This property represents the PCI bus.
BusProtocol	string	Yes	This property represents the bus protocol.
Device	string	Yes	This property represents the PCI device.
DriveFormFactor	string	Yes	This property shall represent the physical disk form factor and shall be one of the following values: 0 - Unknown, 1 - 1.8 inch, 2 - 2.5 inch, 3 - 3.5 inch, 4-2.5 inch Add-in card, 5-M.2.'
FreeSizeInBytes	integer	Yes	This property represents the free space available for a virtual disk.
Function	string	Yes	This property represents the PCI function.
HotSpareStatus	string	Yes	This property represents the hot-spare status and is one of the following values: 0-No, 1-Dedicated, 2-Global.
MediaType	string	Yes	This property represents the drive media type.
PCleCapableLinkWidth	string	Yes	The property indicates the Capable Link Width of the PCIe SSD and is one of the following values x1, x2, x4, x8, x12, x16, x32.
PCleNegotiatedLinkWidth	string	Yes	The property indicates the Negotiated Link width of the PCIe SSD and is one of the following values x1, x2, x4, x8, x12, x16, x32.
ProductID	string	Yes	This property represents the DeviceID of the PCIe SSD.
RAIDType	string	Yes	The property indicates type of RAID and indicates if the RAID is software based.
SystemEraseCapability	string	Yes	The property indicates the storage component system-erase capability.

**Table 119. Status codes**

HTTP status code
200
404

# DellPCleSSDBackPlaneCollection

## Description

A collection of DellPCleSSDBackPlane resource.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Storage/DellPCleSSDBackPlaneCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 120. Status codes

HTTP status code	Extended Information	Error Code
200		
400	Base.1.5. QueryParameterValueFormatError, Base.1.5. QueryParameterOutOfRange	SYS407, SYS417, SYS457
401	Base.1.2.AccessDenied	
404	Base.1.5. ResourceMissingAtURI	SYS403
405		SYS402

# DellPCleSSDBackPlane

## Description

An instance of DellPCleSSDBackPlane will have PCleSSD back plane specific data.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Storage/DellPCleSSDBackPlane/  
<DellPCleSSDBackPlane-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
FirmwareVersion	string	Yes	This property provides information about the firmware installed on the backplane.
SlotCount	integer	Yes	This is the number of slots on the BackPlane.

**Table 121. Status codes**

HTTP status code
200
404

## DellPCleFunctionCollection

### Description

A collection of DellPCleFunction resource.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellPCleFunctionCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP status code
200
404

## DellPCleFunction

### Description

An instance of DellPCleFunction will have PCI device specific data.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellPCIEFunction/<DellPCIEFunction-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
DataBusWidth	string	yes	Data bus width of the PCI.
LastSystemInventoryTime	string	yes	This property provides the last time System Inventory Collection On Reboot (CSIOR) was performed or the object was last updated on iDRAC. The value is represented as yyyymmddHHMMSS.
LastUpdateTime	string	yes	This property provides the last time the data was updated. The value is represented as yyyymmddHHMMSS.
SlotLength	string	yes	Slot length of the PCI device.
SlotType	string	yes	Slot type of the PCI device.

## Supported Status Codes

HTTP status code
200
404

# DellPersistentStorageService

## Description

The DellPersistentStorageService resource provides some actions to support VFlash functionality.

## URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellPersistentStorageService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login
GET	Login

## Supported Status Codes

HTTP status code
200
404

[Supported Action — FormatPartition](#) on page 206

[Supported Action — CreatePartition](#)

[Supported Action — AttachPartition](#)

[Supported Action — CreatePartitionUsingImage](#)

[Supported Action — DetachPartition](#)

[Supported Action — ExportDataFromPartition](#)

[Supported Action — InitializeMedia](#)

[Supported Action — ModifyPartition](#)

[Supported Action — VFlashStateChange](#)

[Supported Action — DeletePartition](#)

## Supported Action — AttachPartition

### Description

The AttachPartition action exposes a partition as to the managed system's OS.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellPersistentStorageService/Actions/  
DellPersistentStorageService.AttachPartition
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
PartitionIndex	Integer		The index of the partition, which is a value between 1 and 16.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		VF026,VF024,JCP018,JCP019,JCP017,VF047,VF017,VF012,VF018,VF052,VF001,VF013,VF002,VF016,VF004,VF015

## Supported Action — CreatePartition

### Description

The CreatePartition action is used for creating a new partition on a storage device.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellPersistentStorageService/Actions/  
DellPersistentStorageService.CreatePartition
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
OSVolumeLabel	String		The value is limited to 6 characters. This is the same label which will be seen in the OS after attaching the partition.
PartitionIndex	Integer		The index of the partition, which is a value between 1 and 16.
PartitionType	String	CDROM, Floppy, HardDisk,	The Partition Type
Size	Integer		The size of the partition that needs to be created in units specified by the SizeUnit parameter.
SizeUnit	string	GB, MB	The value is 1(MB) or 2(GB)

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		JCP17, JCP18, JCP19, VF001,VF002,VF004, VF012, VF013, VF015, VF016, VF018, VF019, VF021, VF024, VF026, VF027, VF033, VF047, VF052

## Supported Action — CreatePartitionUsingImage

### Description

The CreatePartitionUsingImage action is used to create a partition using an image provided by the user.


### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellPersistentStorageService/Actions/  
DellPersistentStorageService.CreatePartitionUsingImage
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
OSVolumeLabel	String		The value is limited to 6 characters. This is the same label which will be seen in the OS after attaching the partition.
PartitionIndex	Integer		The index of the partition, which is a value between 1 and 16.
HashType	String	MD5, SHA1	Type of hash algorithm used to compute checksum.
HashValue	String		The HashValue parameter is set to the hash value of the image using the specified hash type in the HashType parameter.
IPAddress	String		If the ShareType parameter is set to 0 (NFS) or, 1 (TFTP), or 2 (CIFS), this parameter must be populated.
ImageName	String		Name of the image file.



Parameter	Type	Value	Description
Password	String		The password for accessing the image on a remote node.
SharePath	String		If the ShareType parameter is set to 0 (NFS) or, 1 (TFTP), or 2 (CIFS), this parameter must be populated.
ShareType	String	CIFS, FTP, NFS, TFTP, HTTP,	Type of the network share.
UserName	String		The username for accessing the image on a remote node. This parameter is mandatory for CIFS ShareType.
PartitionType	String	CDROM, Floppy, HardDisk,	The Partition Type
Port	Integer		If the ShareType parameter is set to 1 (TFTP, this parameter must be populated).
URI	String		The parameter is populated, if the ShareType parameter is set to 3(FTP), or 4 (HTTP).
Workgroup	String		Workgroup for the CIFS share-optional.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		VF031,VF032,VF019,VF052,VF012,VF013,VF016,VF015,JCP018,VF022,VF023,JCP019,VF021,JCP017,VF045,VF044,VF046,VF041,VF040,VF043,VF042,VF001,VF002,VF004

## Supported Action — ModifyPartition

### Description

The ModifyPartition action is used for modifying a partition on a vFlash.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellPersistentStorageService/Actions/DellPersistentStorageService.ModifyPartition
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
PartitionIndex	integer		The index of the partition, which is a value between 1 and 16.
AccessType	string		Type of access level.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		VF026,VF024,VF034,VF028,VF047,VF017,VF012,VF018,VF052,VF001,VF013,VF002,VF016,VF004,VF015

## Supported Action — DeletePartition

### Description

The DeletePartition action is used for deleting a partition on a storage device.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellPersistentStorageService/Actions/  
DellPersistentStorageService.DeletePartition
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login

## Supported Parameters

Parameter	Type	Value	Description
PartitionIndex	Integer		The index of the partition, which is a value between 1 and 16.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		VF027,VF026,VF024,VF017,VF012,VF047,VF052,VF001,VF013,VF002,VF004,VF015


## Supported Action — InitializeMedia

### Description

The InitializeMedia action initializes or formats the vFlash media device.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellPersistentStorageService/Actions/  
DellPersistentStorageService.InitializeMedia
```

 **NOTE:** No parameters are required to perform this action.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		VF001,VF002,VF015

## Supported Action — ExportDataFromPartition

### Description

The ExportDataFromPartition action exports an image from a partition and transfers it to a (T)FTP or HTTP server, or on a CIFS or NFS share.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellPersistentStorageService/Actions/  
DellPersistentStorageService.ExportDataFromPartition
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
PartitionIndex	Integer		The index of the partition, which is a value between 1 and 16.
IPAddress	String		If the ShareType parameter is set to 0 (NFS) or, 1 (TFTP), or 2 (CIFS), this parameter must be populated.
ImageName	String		Name of the image file.
Password	String		The password for accessing the image on a remote node.
SharePath	String		If the ShareType parameter is set to 0 (NFS) or, 1 (TFTP), or 2 (CIFS), this parameter must be populated.
ShareType	String	NFS, CIFS, TFTP	Type of the network share.
UserName	String		The username for accessing the image on a remote node.
PartitionType	String	CDROM, Floppy, HardDisk,	The Partition Type
Port	Integer		If the ShareType parameter is set to 1 (TFTP, this parameter must be populated).
Workgroup	String		Workgroup for the CIFS share-optional.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		VF024,JCP018,JCP019,VF044,JCP017,VF047,VF052,VF017,VF045,VF012,VF018,VF041,VF043,VF042,VF001,VF013,VF002,VF016,VF004,VF015

## Supported Action — DetachPartition

### Description

The DetachPartition action is used to remove a partition that was previously exposed to the managed system's OS.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellPersistentStorageService/Actions/DellPersistentStorageService.DetachPartition
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
PartitionIndex	integer		The index of the partition, which is a value between 1 and 16.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		VF026,VF024,JCP018,JCP019,JCP017,VF047,VF017,VF012,VF018,VF052,VF001,VF013,VF002,VF016,VF004,VF015

## Supported Action — VFlashStateChange

### Description

The VFlashStateChange action is used to enable or disable the virtual flash media device.

### URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellPersistentStorageService/Actions/  
DellPersistentStorageService.VFlashStateChange
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
RequestedState	object		The state to set to.


## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		VF027,VF01,VF024,VF052,VF001,VF013,VF003,VF002,VF004,VF014

# Supported Action — FormatPartition

## Description

The FormatPartition action is used for formatting a partition on a vFlash.

 **NOTE:** This method allows formatting the partitions with AccessType as Read-Only.


## URL

```
/redfish/v1/Dell/Managers/<Manager-ID>/DellPersistentStorageService/Actions/  
DellPersistentStorageService.FormatPartition
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
FormatType	String	EXT2, EXT3, FAT16, FAT32	Folder name
PartitionIndex	Integer		The index of the partition that shall have value be between 1 and 16.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		JCP17, JCP18, JCP19, VF001,VF002,VF004, VF012, VF013, VF015, VF016, VF018, VF019, VF021, VF024, VF026, VF027, VF033, VF047, VF052

# DellPhysicalDiskCollection

## Description

A collection of DellPhysicalDisk resource.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Storage/Drives/DellPhysicalDiskCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP status code
200
404

# DellPhysicalDisk

## Description

An instance of DellPhysicalDisk will have Physical Disk specific data.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Storage/Drives/DellPhysicalDisk/<Disk-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
Connector	integer	Yes	The property shall represent the controller port that the physical disk is connected to.
DriveFormFactor	string	Yes	This property shall represent the physical disk form factor.
ForeignKeyIdentifier	string	Yes	This property indicates foreign key identifier of a secured drive. If the drive is not locked or secured by a foreign key, this property is an empty string.
FreeSizeInBytes	integer	Yes	The property shall represent the free space available for a virtual disk.
LastSystemInventoryTime	string	Yes	This property provides the time when System Inventory Collection On

Property	Type	Read Only	Description
			Reboot (CSIOR) was last performed or the object was last updated on iDRAC. The value is represented as yyyymmddHHMMSS.
LastUpdateTime	string	Yes	This property represents the time when the data was last updated. The value is represented as yyyymmddHHMMSS.
ManufacturingDay	integer	Yes	The property shall represent the physical disks manufacturing day.
ManufacturingWeek	integer	Yes	The property shall represent the physical disks manufacturing week.
ManufacturingYear	integer	Yes	The property shall represent the physical disks manufacturing year.
OperationName	string	Yes	This property represents the background operation that is running on a virtual disk. If no operation is running, the value is "None".
OperationPercentCompletePercent	integer	Yes	This property represents the percentage completion of the operation that is represented by the OperationName property.
PPID	string	Yes	The property shall represent the Part Piece Identification (PPID) value for the physical disk.
PredictiveFailureState	string	Yes	The property shall represent the smart alert presence.
RAIDType	string	Yes	This property represents the type of RAID configuration.
RaidStatus	string	Yes	The property shall represent the RAID specific status.
SASAddress	string	Yes	The property shall represent the SAS address of the drive.
Slot	integer	Yes	This property represents the slot where drive is located.
SystemEraseCapability	string	Yes	This property represents the storage component system-erase capability.
T10PICapability	string	Yes	This property represents if this physical disk supports T10 Protection Information.
UsedSizeInBytes	integer	Yes	The property shall represent the space already consumed by virtual disks.



## Supported Status Codes

HTTP status code
200
404

# DellPresenceAndStatusSensorCollection

## Description

A collection of DellPresenceAndStatusSensor resource

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellPresenceAndStatusSensorCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP status code
200
404

# DellPresenceAndStatusSensor

## Description

An instance of DellPresenceAndStatusSensor will have presence and status sensor specific data.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellPresenceAndStatusSensor/<SensorID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
CurrentState	string	Yes	The current state indicated by the Sensor. This is always one of the "PossibleStates".
DeviceID	string	Yes	An address or other identifying information to uniquely name the LogicalDevice.
ElementName	string	Yes	The user-friendly name for the class instance.This value does not have to be unique within its namespace.
SensorType	string	Yes	The Type of the Sensor, e.g. Voltage or Temperature Sensor. If the type is set to "Other", then the OtherSensorType Description can be used to further identify the type, or if the Sensor has numeric readings, then the type of the Sensor can be implicitly determined by the Unit

## Supported Status Codes

HTTP status code
200
404

# DellPowerSupplyCollection

## Description

A collection of DellPowerSupply resource.

## URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/Power/PowerSupplies/  
DellPowerSupplyCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP status code
200
404

## DellPowerSupply

### Description

An instance of DellPowerSupply will have data specific to the Power Supply devices in the managed system.

### URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/Power/PowerSupplies/DellPowerSupply/  
<DellPowerSupply-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
ActiveInputVoltage	String	Yes	This property indicates the input voltage range that is currently in use.
IsSwitchingSupply	String	Yes	Boolean indicating that the PowerSupply is a switching (instead of linear) supply.
OperationalStatus	Array	Yes	Indicates the operational status of the resource represented.
RequestedState	String	Yes	This property is an integer enumeration that indicates the last requested or desired state for the element, irrespective of the mechanism through which it was requested.

## Supported Status Codes

HTTP status code
200

HTTP status code
404

## DellPowerSupplyViewCollection

### Description

A collection of DellPowerSupplyView resource.

### URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/Power/PowerSupplies/  
DellPowerSupplyViewCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Status Codes

HTTP status code
200
404

## DellPowerSupplyView

### Description

An instance of DellPowerSupplyView will have data specific to the Power Supply devices in the managed system.

### URL

```
/redfish/v1/Dell/Chassis/<ComputerSystem-Id>/Power/PowerSupplies/DellPowerSupplyView/  
<DellPowerSupplyView-ID>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
DetailedState	string	Yes	This property describes the further status of the power supply as enumerated for IPMI power supply sensor such as: Predictive Failure, Power Supply AC lost, AC lost or out-of-range, AC out-of-range, but present.
LastSystemInventoryTime	string	Yes	This property indicates the time when Collection of System Inventory on Reboot (CSIOR) was last performed or the object was last updated on iDRAC. The value is represented in the format yyyyymmddHHMMSS.
LastUpdateTime	string	Yes	This property provides the time when the data was last updated The value is represented as yyyyymmddHHMMSS.
PMBusMonitoring	string	Yes	This property indicates whether the PowerSupply is capable of Power Monitoring.
Range1MaxInputPowerWatts	integer	Yes	Represents the Input rated power of the PowerSupply in Watts.0 denotes 'unknown'.

## Supported Status Codes

HTTP status code
200
404

# DellProcessorCollection

## Description

A collection of DellProcessor resource.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Processors/DellProcessorCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP status code
200
404

# DellProcessor

## Description

An instance of DellProcessor will have CPU specific data.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Processors/DellProcessor/<Processor-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
CPUFamily	string	Yes	The property represents the processor family-type in hexadecimal.
CPUStatus	string	Yes	Indicates the current status of the processor.
Cache1Associativity	string	Yes	An integer enumeration that defines the system cache associativity.
Cache1ErrorMethodology	string	Yes	Cache ErrorMethodology - Contains the enumerated value that describes the error detection/correction mechanism of the cache.
Cache1InstalledSizeKB	integer	Yes	This property represents the installed memory size of the cache in KBytes.

Property	Type	Read Only	Description
Cache1Level	string	Yes	The cache level for Cache1 labeled cache.
Cache1Location	string	Yes	Specifies the location of the cache.
Cache1PrimaryStatus	string	Yes	Cache1PrimaryStatus provides a high-level status value, intended to align with Red-Yellow-Green type representation of status.
Cache1SRAMType	string	Yes	Cache SRAM Type.
Cache1SizeKB	integer	Yes	This property represents the total memory size of the cache in KBytes.
Cache1Type	string	Yes	Defines whether this is for instruction caching, data caching or both.
Cache1WritePolicy	string	Yes	Defines whether this is write-back or write-through or "Varies with Address"
Cache2Associativity	string	Yes	An integer enumeration that defines the system cache associativity.
Cache2ErrorMethodology	string	Yes	Cache ErrorMethodology - Contains the enumerated value that describes the error detection/correction mechanism of the cache.
Cache2InstalledSizeKB	integer	Yes	This property represents the installed memory size of the cache in KBytes.
Cache2Level	string	Yes	The cache level for Cache2 labeled cache.
Cache2Location	string	Yes	Specifies the location of the cache.
Cache2PrimaryStatus	string	Yes	Cache2PrimaryStatus provides a high-level status value, intended to align with Red-Yellow-Green type representation of status.
Cache2SRAMType	string	Yes	Cache SRAM Type.
Cache2SizeKB	integer	Yes	This property represents the total memory size of the cache in KBytes.
Cache2Type	string	Yes	Defines whether this is for instruction caching, data caching or both.
Cache2WritePolicy	string	Yes	Defines whether this is write-back or write-through or "Varies with Address"

Property	Type	Read Only	Description
Cache3Associativity	string	Yes	An integer enumeration that defines the system cache associativity.
Cache3ErrorMethodology	string	Yes	Cache ErrorMethodology - Contains the enumerated value that describes the error detection/correction mechanism of the cache.
Cache3InstalledSizeKB	integer	Yes	This property represents the installed memory size of the cache in KBytes.
Cache3Level	string	Yes	The cache level for Cache3 labeled cache.
Cache3Location	string		Specifies the location of the cache.
Cache3PrimaryStatus	string	Yes	Cache3PrimaryStatus provides a high-level status value, intended to align with Red-Yellow-Green type representation of status.
Cache3SRAMType	string	Yes	Cache SRAM Type.
Cache3SizeKB	integer	Yes	This property represents the total memory size of the cache in KBytes.
Cache3Type	string	Yes	Defines whether this is for instruction caching, data caching or both.
Cache3WritePolicy	string	Yes	Defines whether this is write-back or write-through or "Varies with Address"
CurrentClockSpeedMhz	integer	Yes	The current speed (in MHz) of this Processor.
ExternalBusClockSpeedMhz	integer	Yes	The speed (in MHz) of the external bus interface.
HyperThreadingCapable	string	Yes	Variable that specifies if HyperThreading is Capable.
HyperThreadingEnabled	string	Yes	Variable that specifies if HyperThreading is Enabled.
LastSystemInventoryTime	string	Yes	This property provides the last time System Inventory Collection On Reboot (CSIOR) was performed or the object was last updated on iDRAC. The value is represented as yyyyymmddHHMMSS.
LastUpdateTime	string	Yes	This property provides the last time the data was updated. The value is represented as yyyyymmddHHMMSS.



Property	Type	Read Only	Description
TurboModeCapable	string	Yes	Variable that specifies if TurboMode is Capable.
TurboModeEnabled	string	Yes	Variable that specifies if TurboMode is enabled.
VirtualizationTechnologyCapable	string	Yes	Variable that specifies if VirtualizationTechnology is Capable.
VirtualizationTechnologyEnabled	string	Yes	Variable that specifies if VirtualizationTechnology is enabled.
Volts	string	Yes	The property represents the voltage(s) of the processor in Volts.

## Supported Status Codes

HTTP status code
200
404

# DellRaidService

## Description

The DellRaidService resource provides some actions to support RAID functionality.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-ID>/DellRaidService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login
GET	Login

## Supported Status Codes

HTTP status code
200
404

Supported Action — [AssignSpare](#) on page 218

Supported Action — [BlinkTarget](#) on page 219

Supported Action — [CheckVDValues](#) on page 219

Supported Action — [ClearForeignConfig](#) on page 220  
Supported Action — [ConvertToRAID](#) on page 221  
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Supported Action — [ResetConfig](#) on page 242

## Supported Action — AssignSpare

### Description

The AssignSpare action is used to assign a physical disk as a dedicated hot spare for a virtual disk, or as a global hot spare.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.AssignSpare
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		This parameter is the FQDD of the target device (physical drive).
VirtualDiskArray	String		Array of ElementName(s) where each identifies a different Virtual Drive (VD). Currently only one VD can be passed. Array of ElementName(s) where each ElementName identifies a different virtual disk.

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR009, STOR017, STOR028, STOR029, STOR037, STOR038

## Supported Action — BlinkTarget

### Description

The BlinkTarget action is used to Identify a single physical disk by blinking the disk slot LED for the physical disk / Virtual disk. The successful execution of this action results in setting the LED to blink the identify pattern or turns off the blinking of the identify pattern. The action is real time, blink cannot be scheduled as part of a job.


### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.BlinkTarget
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		This parameter is the FQDD of the physical drive, SSD, or VD.


### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR037, STOR038

## Supported Action — CheckVDValues

### Description

The CheckVDValues action is used to determine the possible sizes of Virtual disks and the default settings, provided a RAID level and set of physical disks. The VDPropArray property is filled with Size and other values, so that the method is successfully executed. If the SpanDepth is not provided, a default value of 2 shall be used for RAID levels 10, 50, and 60.

 **NOTE:** For certain numbers of disks such as nine or fifteen, it may be necessary for the user to provide another SpanDepth.


### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.CheckVDValues
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
PDArray	Array of strings		Array of FQDDs where each identifies a physical drive.
Target	String		FQDD of the target device (Controller).
VDPropNameArrayIn	string	RAIDLevel, Size, SpanDepth, SpanLength, StartingLBA, T10PISatus	Indexed array of VD property names. The property names can be Size, SpanDepth, SpanLength, RAIDLevel, StartingLBA or T10PISatus. The values for the property needs to be provided in VDPropValueArrayIn in the same order.
VDPropValueArrayIn	Array of strings		Indexed array of VD property values for the respective VDPropNameArrayIn parameter.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR009, STOR010, STOR011, STOR013, STOR017, STOR029, STOR030, STOR035, STOR037, STOR038, STOR043, STOR045, STOR046, STOR051, STOR052

## Supported Action — ClearForeignConfig

### Description

The ClearForeignConfig action is used to prepare any foreign physical disks for inclusion in the local configuration.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.ClearForeignConfig
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of the target device (Controller).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR018, STOR030, STOR037, STOR038

## Supported Action — ConvertToRAID

### Description

The ConvertToRAID action is used to convert a physical disks in Non-RAID state to a state usable for RAID. After the action is successfully executed the PhysicalDiskView.RAIDStatus property of that physical disk should reflect the new state.


### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.ConvertToRAID
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
PDArray	Array of strings		An array of FQDDs where each identifies a physical drive.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR037, STOR038

## Supported Action — ConvertToNonRAID

### Description

The ConvertToNonRAID action is used to convert a physical disks in RAID state of "Ready" to a Non-RAID state. After the action is successfully executed, the PhysicalDiskView.RAIDStatus property of that physical disk should reflect the new state.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.ConvertToNonRAID
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
PDArray	Array of strings		An array of FQDDs where each identifies a physical drive.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR037, STOR038, STOR074

## Supported Action — EnableControllerEncryption

### Description

The EnableControllerEncryption action sets either Local Key Management (LKM) or Dell Key Management (DKM) on controllers that support encryption of the drives.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.EnableControllerEncryption
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
Key	String		Key is the passcode. This parameter is required if the mode is set to Local Key Management. The key shall be maximum of 32 characters in length, where the expanded form of the special character is counted as a single character. The Key shall have one character from each of the following set—Upper case, lower case, number, special character. The special characters in the following set must be passed as &->&amp;, < ->&lt;, >->&gt;, "->&quot;, and ' ->&apos;".
Keyid	String		Key identifier describes the key. This parameter is required if the mode is set to Local Key Management. The key ID shall be maximum of 32 characters in length and must not have any white spaces.
Mode	ENUM	LKM, DKM, SEKM	Mode of the controller 1 - Local Key Management (LKM).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR019, STOR020, STOR022, STOR030, STOR037, STOR038

# Supported Action — RebuildPhysicalDisk

## Description

The RebuildPhysicalDisk action cancels the rebuild or reconstruct operation of the failed disk to a new disk or a hot spare.


## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.RebuildPhysicalDisk
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of target device (FQDD of the physical disk which is hot spare of the virtual disk).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR038,STOR003,STOR037,STOR004,STOR007,STOR006

# Supported Action - RAIDLevelMigration

## Description

The RAIDLevelMigration action cancels Check Consistency operation that is in progress.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.RAIDLevelMigration
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login



## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
NewRaidLevel	integer		The parameter specific the new RAID Level to be Migrated.
PDArray	array		Specify the disks to be included in the New RAID-Level.
TargetFQDD	String		FQDD of target device (Virtual Disk).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR010,STOR320,STOR318,STOR315,STOR314,STOR317,STOR316,STOR038,STOR313,STOR003,STOR037,STOR319,STOR004,STOR007,STOR006

## Supported Action - CancelCheckConsistency

### Description

The CancelCheckConsistency action cancels Check Consistency operation that is in progress.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.CancelCheckConsistency
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of target device (Virtual Disk).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR009,STOR038,STOR003,STOR037,STOR004,STOR007,STOR006

## Supported Action — PrepareToRemove

### Description

The PrepareToRemove allows the user to add or remove a device without halting or rebooting the system.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.PrepareToRemove
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of target device (Physical Disk/SSD).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR072,STOR038,STOR003,STOR037,STOR004,STOR007,STOR006

## Supported Action — OnlineCapacityExpansion

### Description

The OnlineCapacityExpansion action enables you to increase the storage capacity of selected virtual disk by adding a new physical disk or with the existing physical disk if the virtual disk size is less than the actual size of physical disk size. This feature enables you to add new drives to the array while the system is in use. OCE feature are not available when the disk group has more than one VD. OCE feature is not supported on RAID 50 and RAID 60 virtual disks.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.OnlineCapacityExpansion
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
PDArray	array		Specify the disks to increase the virtual disk capacity.
Size	integer		New VD size in MB.
TargetFQDD	String		FQDD of target device (Virtual Disk).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR017,STOR009,STOR038,STOR028,STOR037,STOR004

## Supported Action — ImportForeignConfig

### Description

The ImportForeignConfig action imports or recovers a foreign configuration.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.ImportForeignConfig
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of target device (Controller).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR038,STOR003,STOR037,STOR030,STOR004,STOR007,STOR006

## Supported Action — ClearControllerPreservedCache

### Description

The ClearControllerPreservedCache action clears the controller cache.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/DellRaidService.ClearControllerPreservedCache
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of target device (FQDD of the physical disk which is hot spare of the virtual disk).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR320,STOR318,STOR315,STOR314,STOR317,STOR316,STOR038,STOR313,STOR003,STOR037,STOR319,STOR004,STOR007,STOR006

## Supported Action — ChangePDState

### Description

The ChangePDState action changes the state of physical disk that is part of virtual disk.


## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.ChangePDState
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of the physical disk.
State	enum	Offline, Online	The desired state of the Physical Disk.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR013,RAC095,STOR009,STOR038,STOR029,RAC1115,STOR037,STOR007,STOR006

## CancelBackgroundInitialization

### Description

The CancelBackgroundInitialization action cancels the background initialization of the virtual disk.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.CancelRebuildPhysicalDisk
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of target device (Virtual Disk).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR038,STOR003,STOR037,STOR004,STOR007,STOR006

## Supported Action — UnassignSpare

### Description

The UnassignSpare allows the user to unassign a physical disk as a dedicated hot spare from a virtual disk, or as a global hot spare. After the method executes successfully, the physical disk is available for use.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.UnassignSpare
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		This parameter is the FQDD of the target device (physical disk).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR009,STOR038,STOR029,STOR003,STOR037,STOR004,STOR007,STOR006

## Supported Action — UnLockSecureForeignConfig

### Description

The UnLockSecureForeignConfig allows the user to add or remove a device without halting or rebooting the system.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.UnLockSecureForeignConfig
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
Key	string		Passphrase of the security key that is used to secure the drives on the source controller.
Keyid	string		Key Identifier that describes the key of the migrated secure foreign configuration on PERC controller.
TargetFQDD	String		FQDD of target device (Controller).

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR100,CTL116,STOR013,RAC095,STOR009,STOR038,STOR029,RAC1115,STOR037,STOR022,STOR007,STOR006

## Supported Action — StopPatrolRead

### Description

The StopPatrolRead allows the user to Stop the Patrol Read operation manually.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.StopPatrolRead
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		This parameter is the FQDD of the RAID Controller Device.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR082,STOR077,STOR009,STOR038,STOR003,STOR037,STOR030,STOR004,STOR007,STOR006

## Supported Action — StartPatrolRead

### Description

The StartPatrolRead allows the user to Start the Patrol Read Operation Manually.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.StartPatrolRead
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.



Parameter	Type	Value	Description
TargetFQDD	String		This parameter is the FQDD of the RAID Controller Device.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR077,STOR009,STOR038,STOR003,STOR037,STOR004,STOR007,STOR006

## Supported Action — SetBootVD

### Description

The SetBootVD action sets a virtual disk as boot virtual disk.


### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.SetBootVD
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
ControllerFQDD	String		FQDD of the Controller.
VirtualDiskFQDD	string		FQDD of the virtual disk to be set as BootVD. Any existing configuration is overwritten.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR082,STOR013,RAC095,STOR009,STOR038,STOR028,RAC1115,STOR037,STOR030,STOR007,STOR006

# Supported Action — SetAssetName

## Description

The SetAssetName allows the user to set the Asset Name of the enclosure.


## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.SetAssetName
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
AssetName	string		Asset Name value. This value can be maximum of 32 ASCII alpha-numeric characters long.
TargetFQDD	String		FQDD of target device (Physical Disk/SSD).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR058,STOR041,STOR004,STOR038,STOR003,STOR037,RAC009,STOR007,STOR006

# Supported Action — ReplacePhysicalDisk

## Description

The ReplacePhysicalDisk action replaces a physical disk in a virtual disk with a new Ready physical disk.


## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.ReplacePhysicalDisk
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of the physical disk to be replaced.
ReplacementDisk	string		FQDD of the replacement physical disk.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR013,RAC095,STOR009,STOR038,STOR029,RAC1115,STOR037,STOR007,STOR006

## Supported Action — RenameVD

### Description

The RenameVD action renames the existing virtual disk name.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.RenameVD
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of target device (Virtual Disk).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR038,STOR003,STOR037,STOR004,STOR007,STOR006

## Supported Action — CancelRebuildPhysicalDisk

### Description

The CancelRebuildPhysicalDisk action cancels the rebuild or reconstructs operation of the failed disk to a new disk or a hot spare.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.CancelRebuildPhysicalDisk
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of target device (FQDD of the physical disk which is hot spare of the virtual disk).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003,STOR004,STOR007,STOR006

## Supported Action — GetAvailableDisks

### Description

The GetAvailableDisks action is used to determine minimum number of drives required to create virtual disks.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.GetAvailableDisks
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
BlockSizeInBytes	ENUM	All, 4096, 512	The parameter specifies the physical drive block size in bytes.
DiskEncrypt	ENUM	All, FDE, NonFDE	The parameter specifies the drive encryption capability.
DiskType	ENUM	All, HDD, SSD	The property represents the drive type.
Diskprotocol	ENUM	AllProtocols, SATA, SAS, NVMe	The parameter specifies the type of drive protocol.
FormFactor	ENUM	All, M.2	This parameter is used to specify the form factor of drives and shall be one of the following: <ul style="list-style-type: none"><li>• 0—Include all</li><li>• 1—Include only BOSS M.2</li></ul>
RaidLevel	ENUM	NoRAID, RAID6, RAID60, RAID0, RAID10, RAID1, RAID5, RAID50	The parameter represents the type of RAID configuration.
T10PIStatus	ENUM	All, T10PICapable, T10PIIncapable	The parameter specifies the T10-Protection Information (PI) capability status.
TargetFQDD	String		This parameter is the FQDD of the target device (Controller).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR030, STOR037, STOR038

# Supported Action — GetDHSDisks

## Description

The GetDHSDisks action is used to determine possible choices of physical drives that can used to set a dedicated hotspare for the identified virtual disk. GetDHSDisks returns success if it has evaluated the physical disks for potential hot spares, the PDArray return list can be empty if no physical disks are suitable for hot spares.


## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.GetDHSDisks
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		This parameter is the FQDD of the target device (VD).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR017, STOR028, STOR037, STOR038

# Supported Action — GetRAIDLevels

## Description

The GetRAIDLevels action is used to determine the possible choices of RAID Levels to create virtual disks. If the list of physical disks is not provided, this action accesses information for all the connected disks.


## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.GetRAIDLevels
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
BlockSizeInBytes	ENUM	All, 4096, 512	The parameter specifies the physical drive block size in bytes.
DiskEncrypt	ENUM	All, FDE, NonFDE	The parameter specifies the drive encryption capability.
DiskType	ENUM	All, HDD, SSD	The parameter specifies the type of the drive.
Diskprotocol	ENUM	AllProtocols, SATA, SAS, NVMe	The parameter specifies the type of drive protocol.
FormFactor	ENUM	All, M.2	This parameter is used to specify the form factor of drives and shall be one of the following: <ul style="list-style-type: none"><li>• 0—Include all</li><li>• 1—Include only BOSS M.2</li></ul>
PDArray	Array of strings		Array of FQDDs where each identifies a physical drive.
T10PIStatus	ENUM	All, T10PICapable, T10PIIncapable	The parameter specifies the T10-Protection Information (PI) capability status.
TargetFQDD	String		FQDD of target device (Controller).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR030, STOR037, STOR038

## Supported Action — LockVirtualDisk

### Description

The LockVirtualDisk action encrypts the virtual disk.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.LockVirtualDisk
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of target device (Controller).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR030, STOR037, STOR038

## Supported Action — ReKey

### Description

The ReKey action resets the key on the controller that support encryption of the of drives. This method switches the controller mode.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.ReKey
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.



Parameter	Type	Value	Description
KeyId	String		Key identifier describes the key. The key ID shall be maximum 32 characters in length and must not have any white spaces.
Mode	ENUM	LKM, DKM, SEKM	Mode of the controller: 1 - Local Key Management (LKM), 2 - Dell Key Manager.
NewKey	String		New controller key. The key shall be maximum of 32 characters in length, where the expanded form of the special character is counted as a single character. The Key shall have one character from each of the following set. Upper case, lower case, number, special character. The special characters in the following set need to be passed as mentioned below and are counted as a single character for the maximum length of the key. &->&lt;, >->&gt;, "->&quot;, and '->&apos;."
OldKey	String		The old controller key.
TargetFQDD	String		This parameter is the FQDD of the target device (Controller).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR019, STOR020, STOR030, STOR037, STOR038, STOR048, STOR050, STOR053

## Supported Action — RemoveControllerKey

### Description

The RemoveControllerKey action erases the encryption key on controller.

 **CAUTION:** This action erases all encrypted drives.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.RemoveControllerKey
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of target device (Controller).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR021, STOR022, STOR030, STOR037, STOR038

## Supported Action — ResetConfig

### Description

The ResetConfig action is used to delete all the virtual disks and unassign all hot spare physical disks.

 **CAUTION:** This action deletes all the data on the existing virtual disks.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.ResetConfig
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		FQDD of target device (Controller).

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR021, STOR022, STOR030, STOR037, STOR038

## Supported Action — SetControllerKey

### Description

The SetControllerKey action is used to set the key on controllers and set the controller in Local key Management (LKM) to encrypt the drives.


URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.SetControllerKey
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
Key	String		The parameter specifies the key passcode. The Key shall be maximum of 32 characters in length, where the expanded form of the special character is counted as a single character. The Key shall have at least one character from each of the following sets. Upper case, lower case, number, special character, The special characters in the following set need to be passed as mentioned below: &->&amp;; , < ->&lt;; , >->&gt;; , "->&quot;; , ' ->&apos;; "
Keyid	String		Key identifier describes the key. The key ID shall be maximum 32 characters in length and must not have any white spaces.
TargetFQDD	String		This parameter is the FQDD of the target device (Controller).

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR021, STOR022, STOR030, STOR037, STOR038

Supported Action — UnBlinkTarget

Description

The UnblinkTarget action is used to stop blinking the light present on the physical disk represented by the Target FQDD. The action is real time, unblink cannot be scheduled as part of a job.

URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellRaidService/Actions/  
DellRaidService.UnBlinkTarget
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
TargetFQDD	String		This parameter is the FQDD of the physical drive, SSD, and VD.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR037, STOR038

# DellSensorCollection

## Description

A collection of DellSensor resource

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystemID>/DellSensorCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP status code
200
404

# DellSensor

## Description

An instance of DellSensor will represent a sensor, a hardware device that is capable of measuring the characteristics of a physical property.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellSensor/<SensorID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
CurrentState	String	Yes	The current state indicated by the Sensor.
ElementName	String	Yes	The user-friendly name for the class instance.
EnabledState	Integer	Yes	EnabledState is an integer enumeration that indicates the enabled and disabled states of an element.
HealthState	String	Yes	Indicates the current health of the element.
SensorType	Object	Yes	The Type of the Sensor, e.g. Voltage or Temperature Sensor.

## Supported Status Codes

HTTP status code
200
404

# DellSwitchConnectionService

## Description

DellSwitchConnectionService provides actions to support switch connection view functionality.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellSwitchConnectionService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 122. Status codes

HTTP status code	Extended Information	Error Code
200		

## Supported Action — ServerPortConnectionRefresh

### Description

This action is performed to refresh the switch connection view information of all the ports.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellSwitchConnectionService/Actions/  
DellSwitchConnectionService.ServerPortConnectionRefresh
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400		RAC089, RAC090

## DellSystemQuickSyncCollection

### Description

A collection of DellSystemQuickSync resource.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellSystemQuickSyncCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 123. Status codes**

HTTP status code	Extended Information	Error Code
200		
404	Base.1.5.GeneralError	

## DellSystemQuickSync

### Description

The DellSystemQuickSyncView class is a representation of the QuickSync device in the managed system.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellSystemQuickSync/<SystemQuickSync-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
FQDD	String	Yes	FQDD contains the Fully Qualified Device Description, a user-friendly name for the object.
FWVersion	String	Yes	The property represents the firmware version of the QuickSync device.
HWStatus	String	Yes	The property represents the hardware status corresponding to the Titan package.
Manufacturer	String	Yes	Manufacturer is the name of the organization responsible for producing the PhysicalElement. This organization might be the entity from whom the element is purchased, but this is not necessarily true.
ProductName	String	Yes	A string containing the product name.
Version	String	Yes	A string that indicates the version of the PhysicalElement.

**Table 124. Status codes**

HTTP status code	Extended Information	Error Code
200		
404	Base.1.5.GeneralError	

## DellSystemManagementService

### Description

DellSystemManagementService provides actions to support System Management functionalities.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellSystemManagementService
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 125. Status codes**

HTTP status code	Extended Information	Error Code
200		

## Supported Action — ShowErrorsOnLCD

### Description

This method is used for hiding and showing LCD Errors.


### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellSystemManagementService/Actions/  
DellSystemManagementService.ShowErrorsOnLCD
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.



Parameter	Type	Value	Description
Show	Boolean		This parameter represents if error should be displayed on the LCD.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400		SYS024, SYS004, SYS003, SYS002, SYS001

# DellSoftwareInstallationService

## Description

The DellSoftwareInstallationService resource provides some actions to support software installation functionality.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellSoftwareInstallationService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

## Supported Status Codes

HTTP status code
200
404

[Supported Action — GetRepoBasedUpdateList](#) on page 249

[Supported Action — InstallFromRepository](#) on page 250

[Supported Action — InstallFromURI](#) on page 252


## Supported Action — GetRepoBasedUpdateList

## Description

This action is used for getting the list of packages and a list of devices that will be updated when a particular repository is used. You must run InstallFromRepository command before running GetRepoBasedUpdateList. If Applyupdate is False, no updates are applied or scheduled. If ApplyUpdate is True, the list contains job IDs for all the jobs queued for the devices.

URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellSoftwareInstallationService/Actions/  
DellSoftwareInstallationService.GetRepoBasedUpdateList
```

 **NOTE:** No parameters are required to perform this action.

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	SUP028
400		SUP029, SUP030


Supported Action — GetUpdateSchedule

Description

This action is used for retrieving periodic updates from the repository. The property UpdateScheduler is the attribute value for the attribute of the same name.

URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellSoftwareInstallationService/Actions/  
DellSoftwareInstallationService.GetUpdateSchedule
```

 **NOTE:** No parameters are required to perform this action.

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Action — InstallFromRepository

Description

This action creates the list of the updates contained in the repository that are supported by LC and are applicable to the system and installed hardware. The successful execution of this action creates a job. The list is copied to a persistent location so that you can query for the updatable list by using GetRepoBasedUpdateList WSMAN Command. If the input parameter ApplyUpdate value is True, only the applicable packages are applied and GetRepoBasedUpdateList gives the JOBIDs for all the jobs queued for the devices.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellSoftwareInstallationService/Actions/  
DellSoftwareInstallationService.InstallFromRepository
```

## Supported HTTP Method and Privileges

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

## Supported Parameters

Parameter	Type	Value	Description
ApplyUpdate	String	False, True	If ApplyUpdate is set to True, the updatable packages from Catalog XML are staged. If it is set to False, no updates are applied. The list of updatable packages can be seen by invoking the GetRepoBasedUpdateList. Default value is True.
CatalogFile	String		Name of the catalog file on the repository. Default is Catalog.xml.
IPAddress	String		IP address for the remote share.
IgnoreCertWarning	String	Off, On	Specifies if certificate warning should be ignored when HTTPS is used. If IgnoreCertWarning is On, warnings are ignored. Default is 2 (On).
Mountpoint	String		The local directory where the share should be mounted. This is applicable for CIFS.
Password	String		Password for the remote share. This parameter must be provided for CIFS.
ProxyPasswd	String		The password for the proxy server.
ProxyPort	Integer		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxySupport	String	DefaultProxy, Off, ParametersProxy	Specifies if a proxy should be used. Default is Off.
ProxyType	String	HTTP, SOCKS	The proxy type of the proxy server. Default is HTTP.

Parameter	Type	Value	Description
ProxyUname	String		The user name for the proxy server.
RebootNeeded	Boolean		This property indicates if a reboot should be performed. True indicates that the system (host) is rebooted during the update process. False indicates that the updates take effect after the system is rebooted the next time. Default value is set to False.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share, this may be treated as the path of the directory containing the file.
ShareType	String	CIFS, FTP, HTTP, HTTPS, NFS, TFTP	Type of the network share. Default value is NFS.
UserName	String		User name for the remote share. This parameter must be provided for CIFS.
Workgroup	String		Workgroup for the CIFS share - optional.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400		SUP001, SUP002, SUP019, SUP026, SUP027

## Supported Action — InstallFromURI

### Description

InstallFromURI action is used for creating a job for update service. The successful execution of this action creates a job.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellSoftwareInstallationService/Actions/DellSoftwareInstallationService.InstallFromURI
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
IgnoreCertWarning	String	Off, On	Specifies if certificate warning should be ignored when HTTPS is used. If IgnoreCertWarning is On, warnings are ignored. Default is 2 (On).
ProxyPasswd	String		The password for the proxy server.
ProxyPort	Integer		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxySupport	String	DefaultProxy, Off, ParametersProxy	Specifies if a proxy should be used. Default is 1 (Off).
ProxyType	String	HTTP, SOCKS	The proxy type of the proxy server. Default is 0 (HTTP).
ProxyUname	String		The user name for the proxy server.
TargetResource	String		A Link to the DellSoftwareInventory resource whose firmware needs to be updated. It shall be the @odata.id of the DellSoftwareInventory Resource.
URI	String		Network file location of the firmware to be installed. Supported network share types are HTTP, HTTPS, CIFS, NFS, TFTP, and FTP. Special characters must be encoded in the URI format.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400		SUP001, SUP002, SUP003, SUP006, SUP007, SUP019, SUP024

## Supported Action — SetUpdateSchedule

### Description

InstallFromURI action is used for creating a job for update service. The successful execution of this action creates a job.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellSoftwareInstallationService/Actions/  
DellSoftwareInstallationService.SetUpdateSchedule
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

## Supported Parameters

Parameter	Type	Value	Description
ApplyReboot	String	NoReboot, RebootRequired	This parameter is used for specifying if a reboot is required. Default value is 0 (Reboot Required).
CatalogID	String		The ID of the catalog to be used.
CatalogName	String		The name of the catalog file. Default is Catalog.xml.
Comment	String		This is an optional text field that supports up to 1024 bytes.
DayOfMonth	String		This parameter represents the day of month on which the update is scheduled. The possible values are * (Any) or a number between 1-28. The default value is *.
DayOfWeek	String		This parameter represents the day of week on which the update is scheduled. The possible values are * (Any), Mon, Tue, Wed, Thu, Fri, Sat, Sun. The default value is *.
Domain	String		The domain of the user name for access to the share, if any. This is prefixed to the user name with a backslash. For example, "DOMAIN\user_name".
IPAddress	String		IP address for the remote share.
IgnoreCertWarning	String	Off, On	Specifies if certificate warning should be ignored when HTTPS is used. If IgnoreCertWarning is On, warnings are ignored. Default is 2 (On).
Password	String		Password for the remote share.

Parameter	Type	Value	Description
ProxyHostName	String		The hostname of the proxy server.
ProxyPassword	String		The password for the proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxySupport	String	DefaultProxy, Off, ParametersProxy	Specifies if proxy should be used. Default is 1 (Off).
ProxyType	String	HTTP, SOCKS	The proxy type of the proxy server. Default is 0 (HTTP).
ProxyUserName	Integer		The user name for the proxy server.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share (if supported), this may be treated as the path of the directory containing the file.
ShareType	String	CIFS, FTP, HTTP, HTTPS, NFS, TFTP	Type of the Network Share.
Time	String		Represents the hour and minute of the day when the update should be performed. Format is hh:mm.
URI	String		The URI to the repository catalog file.
UserName	String		User name for the remote share.
WeekofMonth	String		This parameter represents the week of the month in which the update is scheduled. The possible values are * (Any), a number between 1 and 4, or L. The default value is *.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		RED054, RED061, RED053, RED050, RED051
400		RAC003, RAC095, RAC004, RAC1234, RAC1236, RAC1115

# DellSwitchConnectionCollection

## Description

A collection of DellSwitchConnection resource

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/NetworkPorts/DellSwitchConnectionCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP status code
200
404

# DellSwitchConnection

## Description

An instance of DellSwitchConnection will have the switch connection view information of all the ports.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/NetworkPorts/DellSwitchConnection/  
<SwitchConnectionID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
FQDD	String	Yes	A string containing the Fully Qualified Device Description, a user-friendly name for the object.
InstanceID	String	Yes	A unique identifier for the instance.
StaleData	String	Yes	This property indicates whether the information in this instance is stale or not.



Property	Type	Read Only	Description
SwitchConnectionID	String	Yes	This property represents the Chassis ID information of the switch port.
SwitchPortConnectionID	String	Yes	This property represents the port description information of the switch.

## Supported Status Codes

HTTP status code
200
404

# DellSystem

## Description

An instance of DellSystem will have data representing the overall system devices in the managed system.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellSystem/<System-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
BIOSReleaseDate	String	Yes	BIOSReleaseDate represents the BIOS release date.
BaseBoardChassisSlot	String	Yes	This property represents the modular chassis slot numbers that the server blade occupies in the modular enclosure.
BatteryRollupStatus	String	Yes	BatteryRollupStatus provides the battery rollup status of all the system components.
BladeGeometry	String	Yes	The property represents the geometric dimension of the server blade enclosure in modular enclosure described.

Property	Type	Read Only	Description
CMCIP	String	Yes	This property represents the IP address for the enclosures Chassis Management Controller (CMC).
CPURollupStatus	String	Yes	The property contains the rollup status of all the CPUs.
ChassisModel	String	Yes	This property represents the chassis model for the modular enclosure chassis.
ChassisName	String	Yes	This property represents name of the Chassis.
ChassisServiceTag	String	Yes	This property represents the Service Tag of the modular enclosure chassis.
ChassisSystemHeightUnit	Integer	Yes	The property represents the system height in units of rack space (U).
CurrentRollupStatus	String	Yes	CurrentRollupStatus provides the current rollup status of all the system components.
EstimatedExhaustTemperatureCel	Integer	Yes	Calculated, not measured, exhaust temperature in Degree Celsius.
EstimatedSystemAirflowCFM	Integer	Yes	EstimatedSystemAirflow provides the estimated airflow over the chassis in Cubic Feet per Minute (CFM).
ExpressServiceCode	String	Yes	ExpressServiceCode of the system.
FanRollupStatus	String	Yes	FanRollupStatus provides the fan rollup status of all the system components.
IDSDMRollupStatus	String	Yes	IDSDMRollupStatus provides the live status of IDSDM (Internal Dual SD Mode) sensors.
IntrusionRollupStatus	String	Yes	IntrusionRollupStatus provides the live status of chassis intrusion sensors.
IsOEMBranded	String	Yes	This property is used to identify if the system is OEM branded.
LastSystemInventoryTime	String	Yes	This property provides the last time System Inventory Collection On Reboot(CSIOR) was performed or the object was last updated on iDRAC.
LastUpdateTime	String	Yes	This property provides the last time the data was updated.

Property	Type	Read Only	Description
LicensingRollupStatus	String	Yes	LicensingRollupStatus provides the licensing rollup status of all the system components.
MaxCPUSockets	Integer	Yes	Maximum CPU sockets in the system.
MaxDIMMSlots	Integer	Yes	The number of slots or sockets available for memory devices in the array.
MaxPCleSlots	Integer	Yes	Maximum PCIe slots in the system.
MemoryOperationMode	String	Yes	MemoryOperationMode denotes the mode of operation for system memory, such as mirrored, advanced ECC, or optimized mode.
NodeID	String	Yes	NodeID is a unique property of the blade, based on the Service Tag.
PSRollupStatus	String	Yes	The property contains the power-supply rollup status of all the system components.
PopulatedDIMMSlots	Integer	Yes	This property indicates the memory sockets in the system that are populated.
PopulatedPCleSlots	Integer	Yes	Populated PCIe slots in the system.
PowerCapEnabledState	String	Yes	This property indicates the current state of the power-cap setting of the associated managed system element.
SDCardRollupStatus	String	Yes	SDCardRollupStatus provides the SD-card rollup status.
SELRollupStatus	String	Yes	SELRollupStatus provides the SEL rollup status.
ServerAllocationWatts	Integer	Yes	This property represents the power, in Watt, that is allocated by the chassis manager to the blade systems.
smbiosGUID	String	Yes	System GUID uniquely identifies the system.
StorageRollupStatus	String	Yes	StorageRollupStatus provides the storage rollup status of all the storage components.
SysMemErrorMethodology	String	Yes	The primary hardware error correction or detection method supported by the memory array.
SysMemFailOverState	String	Yes	Represents the failover state of the system memory.

Property	Type	Read Only	Description
SysMemLocation	String	Yes	The physical location of the memory array; whether on the system board or on an add-in board.
SysMemPrimaryStatus	String	Yes	SystemMemoryPrimaryStatus provides a high-level status value that is intended to align with Red-Yellow-Green type representation of status for the system memory.
SystemGeneration	String	Yes	SystemGeneration represents the generation of the Dell EMC system.
SystemID	Integer	Yes	System ID describes the model of the system in integer value.
SystemRevision	String	Yes	System revision indicates the revision of the system from a hardware perspective.
TempRollupStatus	String	Yes	The property contains the temperature rollup status of all the system components.
TempStatisticsRollupStatus	String	Yes	TempStatisticsRollupStatus provides the temperature statistics rollup status of all the system components.
UUID	String	Yes	UUID uniquely identifies the system.
VoltRollupStatus	String	Yes	The property contains the voltage rollup status of all the system components.

## Supported Status Codes

HTTP status code
200
404

## DellTimeService

### Description

DellTimeService provides actions to manage time (retrieve or set time) for the service processor.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellTimeService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 126. Status codes**

HTTP status code	Extended Information	Error Code
200		
404	Base.1.5.GeneralError	

## Supported Action — ManageTime

### Description

The DellTimeService.ManageTime action is used to query the service processor time and to set the service processor time during the host system reboots and service processor resets. The service processor time set through the successful execution of this method is volatile and does not persist. The service processor time resets to the BIOS time at every reset of the host system or the service processor.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellTimeService/Actions/DellTimeService.ManageTime
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
GetRequest	Boolean		The parameter is set to TRUE to request the time for the iDRAC and is set to FALSE for setting the time for iDRAC.
TimeData	String		On input, this is the desired value for the service processor time. On output, this is the service processor time. The value is represented as date-time in the format yyyyymmddHHMMSS.

### Supported Status Codes

HTTP status code	Extended Information	Error Code
200		
400	Base.1.5.PropertyMissing, Base.1.5.PropertyUnknown, Base.1.5.PropertyValueNotInList,	SYS428, SYS429, SYS426, SYS425, SYS405, RAC039, RAC095, RAC040, RAC049, RAC059, RAC038

HTTP status code	Extended Information	Error Code
	Base.1.5.PropertyValueTypeError, Base.1.5.MalformedJSON	
401	Base.1.2.AccessDenied	
404	Base.1.5. ResourceMissingAtURI	SYS403
405		SYS402

## DellvFlashCollection

### Description

A collection of DellvFlash resource.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellvFlashCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Status Codes

HTTP status code
200
404

## DellvFlash

### Description

An instance of DellvFlash will have VFlash specific data.

### URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellvFlash/<ID>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
AvailableSizeMB	Integer	Yes	The property value shall be in MB. This property specifies the available size on the media.
CapacityMB	Integer	Yes	The property value shall be in MB. This property specifies the total size on the media.
ComponentName	String	Yes	This property represents the media.
DeviceDescription	String	Yes	A string containing the friendly Fully Qualified Device Description, a property that describes the device and its location.
FQDD	String	Yes	A string containing the Fully Qualified Device Description, a user-friendly name for the object.
HealthStatus	String	Yes	The HealthStatus property represents the health status of the virtual flash media.
InitializedState	String	Yes	The InitializedState property represents the initialization state of the virtual flash media.
InstanceID	String	Yes	A unique identifier for the instance.
LastSystemInventoryTime	String	Yes	This property provides the last time System Inventory Collection On Reboot(CSIOR) was performed or the object was last updated on iDRAC. The value is represented as yyyyymmddHHMMSS.
LastUpdateTime	String	Yes	This property provides the last time the data was updated. The value is represented as yyyyymmddHHMMSS.
Licensed	Boolean	Yes	This property represents whether the virtual flash media is licensed or not.
VFlashEnabledState	Boolean	Yes	The EnabledState property indicates whether VFlash is enabled.
WriteProtected	Boolean	Yes	This property indicates whether the virtual flash media is write protected (latch is on) or not.

## Supported Status Codes

HTTP Status Code
200
404

# DellVirtualDiskCollection

## Description

A collection of DellVirtualDisk resource.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Storage/Volumes/DellVirtualDiskCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP status code
200
404

# DellVirtualDisk

## Description

An instance of DellVirtualDisk will have data specific to the Virtual Disks in the system.

## URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/Storage/Volumes/DellVirtualDisk/  
<VirtualDisk-ID>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login



## Supported Properties

Property	Type	Read Only	Description
BusProtocol	String	Yes	The property represents the bus protocol.
Cachecade	String	Yes	The property represents the Cachecade property can have following values and is one of the following values:0-Not a cachecade Virtual Disk, 1-Cachecade Virtual Disk.
DiskCachePolicy	String	Yes	The property represents the policy for physical disks included in the virtual disk.
LastSystemInventoryTime	String	Yes	This property provides the time when System Inventory Collection On Reboot (CSIOR) was last performed or the object was last updated on iDRAC. The value is represented as yyyymmddHHMMSS.
LastUpdateTime	String	Yes	This property provides the time when the data was last updated. The value is represented as yyyymmddHHMMSS.
LockStatus	String	Yes	The property represents if this Virtual Disk is locked.
MediaType	String	Yes	The property represents the drive media type.
ObjectStatus	String	Yes	This property represents the virtual disk configuration state.
OperationName	String	Yes	This property represents the operation that is running on a virtual disk in background. If no operation is running, the value is "None".
OperationPercentComplete	Integer	Yes	This property represents the percentage of completion of the operation that is represented by the OperationName property.
PrimaryStatus	String	Yes	This property represents the status of the device.
RaidStatus	String	Yes	This property represents the RAID specific status.
ReadCachePolicy	String	Yes	The property represents the current read policy.
RemainingRedundancy	Integer	Yes	This property provides information about the remaining redundancy of the virtual disk.

Property	Type	Read Only	Description
SpanDepth	Integer	Yes	The property represents the number of spans in virtual disk.
SpanLength	Integer	Yes	The property represents the number of physical disks per span.
StartingLBAInBlocks	Integer	Yes	This property represents the starting logical block address in blocks for virtual disk.
StripeSize	String	Yes	This property represents the current strip size.
T10PIStatus	String	Yes	T10PIStatus indicates whether T10 Protection Information is enabled on the virtual disk.
VirtualDiskTargetID	Integer	Yes	The property represents the virtual disk target number.
WriteCachePolicy	String	Yes	The property represents the current write policy.

## Supported Status Codes

HTTP status code
200
404

## DellSerialInterface

### Description

This property is for adding OEM actions in the SerialInterface feature.

### URL

```
/redfish/v1/Managers/<Manager-Id>/SerialInterfaces/<Serial-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 127. Status codes**

HTTP status code	Extended Information	Error Code
200		


# Supported Action — SerialDataExport

## Description

This action is performed to export Serial Interface data.

## URL

```
/redfish/v1/Managers/<Manager-Id>/SerialInterfaces/<Serial-Id>/Actions/Oem/DellSerialInterface.SerialDataExport
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Control and Configure system, Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400	Base.1.2.GeneralError, MalformedJSON	SYS452
405	Base.1.2.GeneralError	SYS402
500	Base.1.2.GeneralError	SYS446


# Supported Action — SerialDataClear

## Description

This action is performed to clear Serial Interface data.

## URL

```
/redfish/v1/Managers/<Manager-Id>/SerialInterfaces/<Serial-Id>/Actions/Oem/DellSerialInterface.
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Control and Configure System, Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400	Base.1.2.GeneralError, MalformedJSON	SYS452
405	Base.1.2.GeneralError	SYS402
500	Base.1.2.GeneralError	SYS446

## DellServiceRoot

### Description

This object represents the Redfish OEM extensions for root service.

### URL

```
/redfish/v1
```

### HTTP methods and privileges

**Table 128. HTTP methods and privileges for DellServiceRoot**

HTTP method	Required privilege
GET	None

### Supported Properties

Property	Type	Read Only	Description
AccountService	String	Yes	This is a link to the Account Service.
CertificateService	String	Yes	This is a link to the Certificate Service.
Chassis	String	Yes	This is a link to a collection of Chassis.
EventService	String	Yes	This is a link to the EventService.
Fabrics	String	Yes	A link to a collection of all fabric entities.
JobService	String	Yes	This is a link to the JobService.
JsonSchemas	String	Yes	This is a link to a collection of Json-Schema files.
Managers	String	Yes	This is a link to a collection of Managers.

Property	Type	Read Only	Description
Product	String	Yes	The product associated with this Redfish service.
ProtocolFeaturesSupported	String	Yes	Contains information about protocol features supported by the service.
RedfishVersion	String	Yes	The version of the Redfish service.
Registries	String	Yes	This is a link to a collection of Registries.
SessionService	String	Yes	This is a link to the Sessions Service.
Systems	String	Yes	This is a link to a collection of Systems.
Tasks	String	Yes	This is a link to the Task Service.
TelemetryService	String	Yes	This is a link to the TelemetryService.
UpdateService	String	Yes	This is a link to the UpdateService.
Vendor	String	Yes	This property represents the vendor name.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## DellUpdateService

### Description

This action is used to perform firmware updates.

### Supported action — Install

### Description

This resource is used to represent extension of the Update Service schema of Redfish.

Starting from the iDRAC version 3.15.15.15 release, you can use this action to update only one component at a time. Although the `SoftwareIdentityURLs` parameter of the Install OEM action is of the type `Collection`, only one relative URI of the firmware inventory to be installed is allowed. If you attempt to update multiple components at once, error SYS442 is returned. To update multiple components, perform the updates one at a time.

## URL

```
/redfish/v1/UpdateService/Actions/Oem/DellUpdateService.Install
```

## HTTP methods and privileges

**Table 129. HTTP methods and privileges for Install**

HTTP method	Required privilege
POST	<ul style="list-style-type: none"><li>• <b>.d9</b> file type — ConfigureComponents, Login</li><li>• <b>.pm</b> file type — ConfigureComponents, Login</li><li>• <b>.exe</b> file type — ConfigureComponents, Login</li></ul>

## Supported Parameters

**Table 130. Parameters and values for Install**

Parameter	Type	Values	Description
InstallUpon	String	<ul style="list-style-type: none"><li>• Now</li><li>• NowAndReboot</li><li>• NextReboot</li></ul>	This action is used to install firmware inventory instances

## Status codes

**Table 131. Status codes for Install**

HTTP status code	Extended information	Error Message Code
202		SYS408
400		<ul style="list-style-type: none"><li>• SUP024</li><li>• SYS406</li><li>• OSD35</li></ul>
400	Base.1.0. PropertyValueTypeError	
400	Base.1.0. PropertyMissing	
400	Base.1.0.MalformedJSON	SYS405
403	Base.1.0.InsufficientPrivilege	RAC0506
403		LIC501
404	Base.1.0. ResourceMissingAtURI	SYS403
415		SYS401
500	Base.1.0.InternalError	RAC964
503		SUP0108

# DellUSBDeviceCollection

## Description

A collection of DellUSBDevice resource.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellUSBDeviceCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 132. Status codes

HTTP status code	Extended Information	Error Code
200		

# DellUSBDevice

## Description

DellUSBDeviceView provides USB Device specific data.

## URL

```
/redfish/v1/Dell/Managers/<Manager-Id>/DellUSBDevice/<USBDevice-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
BaseClass	String	Yes	Base Class identifies the first byte of the Class Code triple (Assigned by usb.org). It is displayed in hex format and as a user-readable string.
DeviceVersion	String	Yes	A string that contains the version of the device (Assigned by the manufacturer).

Property	Type	Read Only	Description
FQDD	String	Yes	A string that contains the Fully Qualified Device Description (FQDD) - a user-friendly name for the object.
Manufacturer	String	Yes	The name of the organization responsible for producing the PhysicalElement. This organization might be the entity from whom the Element is purchased, but this is not necessarily true.
MaximumCurrentDrawn	String	Yes	A USB device can have multiple configuration and each configuration can have a different power requirement. This property reports the maximum current drawn by a USB device across all available configurations.
ProductID	String	Yes	Used to identify the type of the product (Assigned by the manufacturer).
ProductName	String	Yes	A string containing the product name.
Protocol	String	Yes	Protocol identifies the third byte of the Class Code triple (Assigned by usb.org).
SerialNumber	String	Yes	A manufacturer-allocated number used to identify the Physical Element.
SubClass	String	Yes	Sub Class identifies the second byte of the Class Code triple (Assigned by usb.org).
USBVersion	String	Yes	This property represent the highest USB specification supported by a device. If a device supports two versions, only the highest version is reported. Often, USB devices encode this value as a binary coded decimal with a format of 0xAABC, where AA is the major version number, B is the minor version number, and C is the sub-minor version number.
VendorID	String	Yes	This property represents the part number of the USB device.

**Table 133. Status codes**

HTTP status code	Extended Information	Error Code
200		

## DellVideoCollection

### Description

A collection of DellVideo resource.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellVideoCollection
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login



**Table 134. Status codes**

HTTP status code	Extended Information	Error Code
200		
400	Base.1.5. QueryParameterValueFormatError, Base.1.5. QueryParameterOutOfRange	SYS407, SYS417, SYS457
401	Base.1.2.AccessDenied	
404	Base.1.5. ResourceMissingAtURL	SYS403
405		SYS402

## DellVideo

### Description

DellVideo provides Video specific data which includes supported GPU properties if supported.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellVideo/<Video-Id>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Properties

Property	Type	Read Only	Description
BoardPartNumber	String	Yes	This property represent Board Part Number of GPU device.
BuildDate	String	Yes	This property represents BuildDate of the GPU device in yyyyymmdd format.
BusNumber	INT	Yes	The bus number where this video device resides.
DataBusWidth	String	Yes	Data-bus width of the PCI device.
DeviceNumber	INT	Yes	The device number assigned to this video for this bus.
FQDD	String	Yes	A string that contains the Fully Qualified Device Description (FQDD) - a user-friendly name for the object.
FirmwareVersion	String	Yes	This property represents the software version of GPU Device.
FunctionNumber	INT	Yes	The function number for this video device.
GPUGUID	String	Yes	This property represents the GPU GUID of the device.
GPUHealth	String	Yes	This property represents the GPU Health status.

Property	Type	Read Only	Description
GPUPartNumber	String	Yes	This property represents Part Number of GPU device.
GPUStatus	String	Yes	This property represents the GPU status.
InstanceID	String	Yes	A unique identifier for the instance.
LastSystemInventoryTime	String	Yes	This property provides the last time System Inventory Collection On Reboot (CSIOR) was performed or the object was last updated on iDRAC. The value is represented as yyyyymmddHHMMSS.
LastUpdateTime	String	Yes	This property provides the last time the data was updated. The value is represented as yyyyymmddHHMMSS.
Manufacturer	String	Yes	The name of the organization responsible for producing the PhysicalElement. This organization might be the entity from whom the Element is purchased, but this is not necessarily true.
MarketingName	String	Yes	Indicates Marketing name of the GPU device.
PCIDeviceID	String	Yes	This property contains a value assigned by the device manufacturer used to identify the type of device.
PCISubDeviceID	String	Yes	Register that contains a value assigned by the device manufacturer used to identify the type of device.
PCISubVendorID	String	Yes	Subsystem vendor ID.
PCIVendorID	String	Yes	Register that contains a value assigned by the Video SIG used to identify the manufacturer of the device.
SerialNumber	String	Yes	This property represent Serial Number of GPU device.
SlotLength	String	Yes	Slot length of the PCI device.
SlotType	String	Yes	Slot type of the PCI device.

**Table 135. Status codes**

HTTP status code
200
404

## DellVideoNetworkCollection

### Description

A collection of DellVideoNetwork resource.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellVideoNetworkCollection
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Table 136. Status codes

HTTP status code	Extended Information	Error Code
200		

## DellVideoNetwork

### Description

DellVideoNetwork provides video and network card specific data.

### URL

```
/redfish/v1/Dell/Systems/<ComputerSystem-Id>/DellVideoNetwork/<VideoNetwork-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Properties

Property	Type	Read Only	Description
FQDD	String	Yes	A string that contains the Fully Qualified Device Description (FQDD) - a user-friendly name for the object.
InstanceID	String	Yes	A unique identifier for the instance.
IpAddress	String	Yes	A string that contains the IP Address.
MacAddress	String	Yes	A string that contains the MAC Address.

Table 137. Status codes

HTTP status code	Extended Information	Error Code
200		

## JobService

### Description

The response contains a representation of the JobService resource.

## URL

/redfish/v1/JobService

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
DateTime	String	Yes	The current DateTime (with offset) setting that the job service is using.
Jobs	String	Yes	References to the Jobs collection.
Log	String	Yes	This is a reference to a Log Service used by the Job Service.
ServiceCapabilities	String	Yes	This object describes the supported capabilities of this Job Service implementation.
ServiceEnabled	Boolean	Yes	This indicates whether this service is enabled.
Status	String	Yes	This property describes the status and health of the resource and its children.

**Table 138. Status codes**

HTTP status code	Extended Information	Error Code
200	Base.1.0.Success	

## JobCollection

### Description

This resource is used to represent a Resource Collection of Job instances for a Redfish implementation.

## URL



/redfish/v1/JobService/Jobs

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
POST	ConfigureComponents, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
Payload*	String		This object contains information detailing the HTTP and JSON payload information for executing this job.
TargetUri*	String		<p>The URI of the target for this job. Sample URIs:</p> <pre>/redfish/v1/Systems/&lt;System-Id&gt;/Actions/ComputerSystem.Reset</pre> <pre>/redfish/v1/Chassis/&lt;Chassis-Id&gt;/Actions/Chassis.Reset</pre> <pre>/redfish/v1/Managers/&lt;Manager-Id&gt;/Actions/Manager.Reset</pre> <pre>/redfish/v1/Systems/&lt;System-Id&gt;/Storage/Volumes/&lt;Volume-Id&gt;/Actions/Volume.CheckConsistency</pre> <pre>/redfish/v1/Managers/&lt;Manager-Id&gt;/LogServices/Sel/Actions/LogService.ClearLog</pre>
EnabledDaysOfMonth	Array		Days of month when scheduled occurrences are enabled. Zero indicates that every day of the month is enabled.
 <b>NOTE:</b> Adding a value of 28 or above will automatically schedule the job for last day of the month.			
EnabledDaysOfWeek	Array	Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, Every	Days of the week when scheduled occurrences are enabled, for enabled days of month and months of year.
InitialStartTime	String		This value is a date and time of day on which the initial occurrence is scheduled to occur.
Lifetime	String		The time after provisioning when the schedule as a whole expires. For example, to configure for a year, use the sample value "Lifetime" : "P365D".
MaxOccurrences	INT		Maximum number of scheduled occurrences.
Name	String		The Schedule name.
RecurrenceInterval	String		Distance until the next occurrences. The value shall be a Redfish Duration describing the time until the next occurrence. For example, to configure the reoccurrence to every 90 days, use the sample value "RecurrenceInterval" : "P90D".
 <b>NOTE:</b> While scheduling a job, if RecurrenceInterval's value is added with a decimal in it, then the job will still be created with the value truncated to the whole number preceding the decimal.			

**Table 139. Status codes**

HTTP status code	Extended Information	Error Code
200		

# Job

## Description

This resource contains information about a specific job scheduled or being executed by a Redfish service's Job Service.

## URL

Jobs:


```
/redfish/v1/JobService/Jobs/<Job-Id>
```

Recurring Jobs:

```
/redfish/v1/JobService/Jobs/<Task-Id>/Steps/<Job-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
DELETE	ConfigureComponents, Login

 **NOTE:** Delete operation is not supported on a JOB ID under steps.

## Supported Properties

Property	Type	Read Only	Description
JobState	String	Yes	The state of the job.
JobStatus	String	Yes	The status of the job.
PercentComplete	INT	Yes	The completion percentage of this job.
StartTime	String	Yes	The date-time stamp that the job was started or is scheduled to start.
EndTime	String	Yes	The date-time stamp that the job was completed.
Messages	String	Yes	This is an array of messages associated with the job.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	
400	Base.1.X.GeneralError	BIOS008, JCP015, JCP021, JCP022, JCP035, JCP022, SYS406

# DellManager

## Description

This resource is used to export, import, and preview the Server Configuration Profile (SCP) files Redfish implementation.

**NOTE:** For SCP export, import, and preview, if Lifecycle Controller is disabled, ensure that you enable Lifecycle Controller and retry the operation. To enable Lifecycle Controller, run the following command:

```
racadm set LifecycleController.LCAttributes.LifecycleControllerState 1
```

Redfish SCP is an OEM action and requires OEM privileges *ALL* and role as *ADMIN*. Redfish privileges are not applicable for SCP.

For more information about this schema, the location header, and other details, see the *RESTful Server Configuration with iDRAC REST API* whitepaper at [dell.com/support](http://dell.com/support).

## Supported Action — ResetToDefaults

### Description

This defines the name of the OEM action supported when used in conjunction with a POST operation to this resource. When issued, this operation resets the Manager attributes to default settings.

### URL

```
/redfish/v1/Managers/<Manager-Id>/Actions/Oem/DellManager.ResetToDefaults
```

**NOTE:** No parameters are required to perform this action.

### HTTP methods and privileges

Table 140. HTTP methods and privileges for ResetToDefaults

HTTP method	Required privilege
POST	SystemControl

### Status codes

Table 141. Status codes for ResetToDefaults

HTTP status code	Extended information	Error Message Code
200		
400		RAC1035, HWC0001, RAC947
403	InsufficientPrivilege	RAC0506
404	Base.1.2.ResourceMissingAtURI	SYS403
500	Base.1.2.InternalError	SYS446


# Supported Action — ClearPending

## Description

This defines the name of the OEM action supported when used in conjunction with a POST operation to this resource. When issued, this operation resets the Manager attributes to default settings.

## URL

```
/redfish/v1/Managers/<Manager-Id>/Actions/Oem/DellManager.ClearPending
```

 **NOTE:** No parameters are required to perform this action.

## HTTP methods and privileges

Table 142. HTTP methods and privileges for ResetToDefaults

HTTP method	Required privilege
POST	SystemControl

## Status codes

Table 143. Status codes for ResetToDefaults

HTTP status code	Extended information	Error Message Code
400	Base.1.2	RAC1035

# Supported action — Export, Import, and Preview


Table 144. Supported HTTP methods and features

HTTP method	Feature
POST	Exporting configuration
POST	Importing configuration
POST	Preview configuration

## Export resource URL and response details

## URL

```
redfish/v1/Managers/<Manager-Id>/Actions/Oem/EID_674_Manager.ExportSystemConfiguration
```

 **NOTE:** Exporting InfiniBand and FC card configuration is supported in iDRAC firmware versions 4.30.30.30 and later.

## Supported Parameters and values

Parameters	Value
ExportFormat	XML, JSON



Parameters	Value
ExportUse	Default, Clone, Replace
IncludeInExport	Default, IncludeReadOnly, IncludePasswordHashValues
ShareParameters	See <a href="#">Share parameters and values</a> on page 282.

## Status codes

**Table 145. Status codes for the action**

HTTP status code	Extended information	Error Message Code
202		
400	Base.1.2.PropertyMissing	
400	Base.1.2.PropertyValueTypeError	
400	Base.1.2.PropertyValueNotInList	
400		RAC013, SYS406, SYS433, RAC1155
500	Base.1.2.InternalError	SWC0058
503		RAC052
503		RAC0679

## Import resource URL and response details

### URL

```
redfish/v1/Managers/<Manager-Id>/Actions/Oem/EID_674_Manager.ImportSystemConfiguration
```

**NOTE:** If the Job ID for this action is marked as completed, completed with errors, or failed, performing GET on below URI will return configuration results in JSON output.

```
redfish/v1/TaskService/Tasks/<SCP import job>
```

## Parameters and values

**Table 146. Properties and values for the action**

Parameters	Values
ImportBuffer	Buffer content to perform import. Required only for LOCAL and not required for CIFS, NFS, HTTP, or HTTPS.
ShutdownType	Graceful, Forced, NoReboot
HostPowerState	On, Off
TimeToWait	The time to wait for the host to shut down. Default and minimum value is 300 seconds. Maximum value is 3600 seconds.
ShareParameters	See <a href="#">Share parameters and values</a> on page 282.

## Status codes

**Table 147. Status codes for the action**

HTTP status code	Extended information	Error Message Code
202		
400	Base.1.2.PropertyMissing	
400	Base.1.2.PropertyValueTypeError	
400	Base.1.2.PropertyValueNotInList	
400		RAC013, SYS406, SYS433, RAC1155
500	Base.1.2.InternalError	SWC0058
503		RAC052
503		RAC0679

## Preview resource URL and response details

### URL

```
redfish/v1/Managers/<Manager-Id>/Actions/Oem/  
EID_674_Manager.ImportSystemConfigurationPreview
```

**NOTE:** No parameters are required to perform this action.

**NOTE:** If the Job ID for this action is marked as completed, completed with errors, or failed, performing GET on below URI will return configuration results in JSON output.

```
redfish/v1/TaskService/Tasks/<SCP import job>
```

## Status codes

**Table 148. Status codes for the action**

HTTP status code	Extended information	Error Message Code
202		
400	Base.1.2.PropertyMissing	
400	Base.1.2.PropertyValueTypeError	
400	Base.1.2.PropertyValueNotInList	
400		RAC013, SYS406, SYS433, RAC1155
500	Base.1.2.InternalError	SWC0058
503		RAC052
503		RAC0679

## Share parameters and values

**Table 149. Share parameters and values**

Parameter	Values
IPAddress	IP address of the network share

**Table 149. Share parameters and values (continued)**

Parameter	Values
ShareName	Name of network share
FileName	File name for the SCP
ShareType	LOCAL, CIFS, NFS, HTTP, HTTPS
Username	User name to log on to the share — for CIFS share only.
Password	Password to log on to the share — for CIFS share only.
Workgroup	Workgroup name to log on to the share
Target	Can be the component name or an FQDD. The default value for a Import action is ALL.

## Sensor Collection

### Description

The SensorCollection schema describes a collection of sensor instances.

### URL

```
/redfish/v1/Chassis/<Chassis-Id>/Sensors
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446

## Sensor

### Description

The Sensor schema describes a sensor and its properties.

## URL

```
/redfish/v1/Chassis/<Chassis-Id>/Sensors/<Sensor-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
PATCH	ConfigureManager, Login

## Supported Properties

Property	Type	Read-only	Description
ReadingType	String	Yes	The type of sensor.
ReadingUnits	String	Yes	The units of the reading and thresholds.
Status	Object	Yes	The status and health of the Resource and its subordinate or dependent Resources.
Status.Health	String	Yes	The health state of this Resource in the absence of its dependent Resources.
Status.State	String	Yes	The known state of the Resource, such as, enabled.
Reading	Integer	Yes	The sensor value.
PhysicalContext	String	Yes	This property contains a description of the affected component or region within the equipment to which this sensor measurement applies.
Thresholds	Object	Yes	This property contains the set of thresholds that derive a sensor's health and operational range.
Thresholds.UpperCritical	Integer	Yes	The value at which the reading is above normal range but not yet fatal.
Thresholds.UpperCaution	Integer	Yes	The value at which the reading is above normal range.
Thresholds.LowerCaution	Integer	Yes	The value at which the reading is below normal range.
Thresholds.LowerCritical	Integer	Yes	The value at which the reading is below normal range but not yet fatal.
Thresholds.LowerFatal	Object	Yes	The value at which the reading is below normal range and fatal.
Thresholds.UpperFatal	Object	Yes	The value at which the reading is above normal range and fatal.
Activation	String	No	This property indicates the direction of crossing of the reading for this sensor that activates the threshold. Following values are supported:

Property	Type	Read-only	Description
			<ul style="list-style-type: none"> <li>Increasing</li> <li>Decreasing</li> <li>Either</li> </ul>
DwellTime	String	No	The duration that the sensor value must violate the threshold before the threshold is activated.
Reading	Number	No	This property indicates the reading for this sensor that activates the threshold. The value of the property uses the same units as the Reading property.
VoltageType	String	Yes	The voltage type for this sensor.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400		SYS473,SYS029,SYS429,SWC0283,SWC0281
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446

## Drive

### Description

The Drive schema represents a single physical disk drive for a system, including links to associated Volumes.

### URL

New URL:

```
/redfish/v1/Systems/<System-Id>/Storage/<Storage-Id>/Drives/<Drive-Id>
```

Old URL:

```
/redfish/v1/Systems/<System-Id>/Storage/Drives/<Drive-Id>
```

**NOTE:** Performing GET method on the above URI with an invalid controller ID may respond with a 200 code.

**NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login
PATCH	ConfigureComponents, Login

## Supported Properties

Property	Type	Read only	Description
Assembly	String	Yes	A reference to the Assembly resource associated with this drive.
AssetTag	String	No	The user assigned asset tag for this drive.
BlockSizeBytes	INT	Yes	The size of the smallest addressable unit (Block) of this drive in bytes.
CapableSpeedGbs	Number	Yes	The speed which this drive can communicate to a storage controller in ideal conditions in Gigabits per second.
CapacityBytes	INT	Yes	The size in bytes of this Drive.
EncryptionAbility	String	Yes	The encryption abilities of this drive.
EncryptionStatus	String	Yes	The status of the encryption of this drive.
FailurePredicted	Boolean	Yes	Is this drive currently predicting a failure in the near future.
HotspareReplacementMode	String	No	The replacement mode for the hotspare drive.
HotspareType	String	Yes	The type of hotspare this drive is currently serving as.
Identifiers	Array	Yes	The Durable names for the drive.
Location	Array	Yes	The Location of the drive.
Manufacturer	String	Yes	This is the manufacturer of this drive.
MediaType	String	Yes	The type of media stored in this drive.
Model	String	Yes	This is the model number for the drive.
NegotiatedSpeedGbs	Number	Yes	The speed which this drive is currently communicating to the storage controller in Gigabits per second.
Operations	array	Yes	The operations currently running on the drive.
PartNumber	String	Yes	The part number for this drive.
PhysicalLocation	String	Yes	The Location of the drive.
PredictedMediaLifeLeftPercent	Number	Yes	The percentage of reads and writes that are predicted to still be available for the media.
Protocol	String	Yes	The protocol this drive is using to communicate to the storage controller.
Revision	String	Yes	The revision of this Drive. This is typically the firmware/hardware version of the drive.
RotationSpeedRPM	Number	Yes	The rotation speed of this Drive in Revolutions per Minute (RPM).
SKU	String	Yes	This is the SKU for this drive.
SerialNumber	String	Yes	The serial number for this drive.
Status	String	Yes	This property describes the status and health of the resource and its children.

Property	Type	Read only	Description
StatusIndicator	String	No	The state of the status indicator, used to communicate status information about this drive.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
202		
200	Base.1.0.Success	
405	Base.1.2.GeneralError	SYS402

## Supported Action—SecureErase

### Description

This action is used to securely erase the contents of the drive.

### URL

```
/redfish/v1/Systems/<System-Id>/Storage/<Storage-Id>/Drives/<Drive-Id>/Actions/Drive.SecureErase
```

**NOTE:** ApplyTime as immediate is not supported on PCIeSSD through Redfish interface.

**NOTE:** For properties that are not updatable at real time and if the OperationApplyTime is not set during Patch, then a job is created and scheduled for that operation.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

## Supported Parameters

**NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
HotspareType	String	None, Global, Dedicated,	The type of hotspare this drive is currently serving as.
EncryptionStatus	String	Unencrypted, Unlocked, Locked, Foreign	The status of the encryption of this drive.
EncryptionAbility	String	None, SelfEncryptingDrive,	The encryption abilities of this drive.
MediaType	String	HDD, SSD	The type of media contained in this drive.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	
202		

EthernetInterfaceCollection

Description

A Collection of EthernetInterface resource instances.

URL

```
/redfish/v1/Systems/<System-Id>/EthernetInterfaces
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

EthernetInterfaces

Description

This resource is used to represent NIC resources as part of the Redfish specification. It also updates the properties of Manager Ethernet Interface.

**NOTE:** Only device FQDDs that are associated with physical network controllers are displayed. If iSM is installed and running, and there are only software Ethernet interfaces available on the system, a response code of 200 and an empty collection is returned.



## URL

```
/redfish/v1/Managers/<Manager-Id>/EthernetInterfaces
```

## HTTP methods and privileges

**Table 150. HTTP methods and privileges for EthernetInterfaces**

HTTP method	Required privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## Ethernet — Instance

### URL

```
/redfish/v1/Managers/<ManagerInstance-Id>/EthernetInterfaces/<EthernetInstance-Id>
```

## HTTP methods and privileges

**Table 151. HTTP methods and privileges for instance of EthernetInterfaces**


HTTP method	Required privilege
PATCH	ConfigureManager

## Properties

**Table 152. Supported properties for EthernetInterfaces**

Property	Type	Read-only	Description
Hostname	String	No	The DNS Host Name, without any domain information.
IPv4Addresses	Array	No	Updates IPv4
IPv6Addresses	Array	No	Updates IPv6
IPv6Static	Array	No	Updates IPv6Static

**Table 152. Supported properties for EthernetInterfaces (continued)**

Property	Type	Read-only	Description
AutoNeg	Boolean	No	An indication of whether the speed and duplex are automatically negotiated and configured on this interface.
FQDN	String	No	The complete, fully qualified domain name that DNS obtains for this interface.
FullDuplex	Boolean	No	An indication of whether full-duplex mode is enabled on the Ethernet connection for this interface.
IPv6AddressPolicyTable	Array	No	An array that represents the RFC6724-defined address selection policy table.
IPv6DefaultGateway	String	Yes	This is the IPv6 default gateway address that is currently in use on this interface.
IPv6StaticAddresses	Array	Yes	Represents in an array all of the IPv6 static addresses to be assigned on this interface.
LinkStatus	String	Yes	The link status of this interface, or port.
 <b>NOTE:</b> LinkDown status is reported for a network failure or even when the network cable is unplugged.			
MACAddress	String	No	The currently configured MAC address of the interface, or logical port.
MTUSize	Integer	No	The currently configured maximum transmission unit (MTU), in bytes, on this interface.
MaxIPv6StaticAddresses	Integer	Yes	The maximum number of static IPv6 addresses that can be configured on this interface.
NameServers	String	Yes	The DNS servers in use on this interface.
PermanentMACAddress	String	Yes	The permanent MAC address assigned to this interface, or port.
SpeedMbps	Integer	No	The current speed, in Mbps, of this interface.
Status	Object	Yes	The status and health of the Resource and its subordinate or dependent Resources.
Status.Health	Object	Yes	The health state of this Resource in the absence of its dependent Resources.
Status.State	Object	Yes	The known state of the Resource, such as, enabled.
VLAN	Boolean	Yes	This property contains the VLAN for this interface. If this interface supports more than one VLAN, the VLAN property shall be absent and, instead, the VLAN collection link shall be present.
VLAN.VLANEnable	Boolean	No	An indication of whether this VLAN is enabled for this VLAN network interface.
VLAN.VLANId	Integer	No	The ID for this VLAN.

## Status codes and error message codes

**Table 153. Status codes and error message codes for EthernetInterfaces**

HTTP status code	Extended information	Error Message Code
200	Base.1.0.success	
400	<ul style="list-style-type: none"><li>Base.1.0.PropertyValueTypeError</li><li>Base.1.0.PropertyValueNotInList</li><li>Base.1.0.PropertyUnknown</li><li>Base.1.0.PropertyNotWritable</li><li>Base.1.0.PropertyValueFormatError</li></ul>	<ul style="list-style-type: none"><li>ISM0013</li><li>RAC0253</li><li>RAC0254</li><li>RAC0255</li><li>RAC0259</li><li>SWC0296</li></ul>
500	Base.1.0.InternalError	

## Reference Properties

### URL

```
/redfish/v1/Systems/<ServiceTag+Node-Id>/EthernetInterfaces
```

### Description

This resource is used to represent NIC resources as part of the Redfish specification.

### HTTP methods and privileges

**Table 154. HTTP methods and privileges**

HTTP method	Required privilege
GET	Login

### Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		


### Implementation notes

Some of the properties in this schema are dependent on the installed BIOS and iDRAC Service Module (iSM) version. If a compatible version of BIOS is not installed, `UefiDevicePath` is not supported in this resource. If a compatible version of iSM is not installed, certain properties may not be supported.

# EventService

## Description

The Event Service resource contains properties for managing event subscription and generates the events sent to subscribers. The resource has links to the actual collection of subscriptions (called Event Destinations).

 **NOTE:** You can use the IgnoreCertificateErrors attribute in OEMAttributes to ignore certificate errors.

## URL


```
/redfish/v1/EventService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login
GET	Login
PATCH	ConfigureManager, Login

## Supported Properties

Property	Type	Read Only	Description
DeliveryRetryAttempts	Integer	False	This is the number of attempts an event posting is retried before the subscription is terminated.
DeliveryRetryIntervalSeconds	Integer	False	This represents the number of seconds between retry attempts for sending any given Event.
EventFormatTypes	Array	True	Indicates the content types of the message that this service can send to the event destination.
EventTypesForSubscription	Array	True	This is the types of Events that can be subscribed to.
RegistryPrefixes	String	True	A list of the Prefixes of the Message Registries that can be used for the RegistryPrefix property on a subscription.
ResourceTypes	String	True	A list of @odata.type values (Schema names) that can be specified in a ResourceType on a subscription.
SSEFilterPropertiesSupported	String	True	Contains a set of properties that indicate which properties are supported in the \$filter

Property	Type	Read Only	Description
			query parameter for the ServerSentEventUri.
ServerSentEventUri	String	True	Link to a URI for receiving Sever Sent Event representations of the events generated by this service.
ServiceEnabled  <b>NOTE:</b> ServiceEnabled property is not supported for Telemetry report.	Boolean	False	This indicates whether this service is enabled.
Status	Boolean	True	This property shall contain any status or health properties of the resource.
Subscriptions	String	True	This is a reference to a collection of Event Destination resources.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.2.Success	SYS413
400	Base.1.2.GeneralError, Base.1.2.PropertyUnknown	
405	Base.1.2.GeneralError	SYS402

[Supported Action — SubmitTestEvent](#) on page 293

## Contained Resource

[EventDestination](#) on page 352

## Supported Action — SubmitTestEvent

### Description

This action is used to generate a test event.


### URL

```
/redfish/v1/EventService/Actions/EventService.SubmitTestEvent
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
EventId*	String		This is the ID of event to be added.
EventTimestamp*	String	date-time	This is the time stamp of event to be added.
EventType*	String		This is the type of event to be added.
MessageArgs*	String		This is the array of message arguments of the event to be added.
MessageId*	String		This is the message ID of event to be added.
OriginOfCondition*	String	URI	This is the string of the URL within the OriginOfCondition property of the event to be added.
Severity*	String		This is the Severity of event to be added.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
201		
400		IDRAC.1.6.SYS423

# FabricCollection

## Description

A Collection of Fabric resource instances.

## URL

```
/redfish/v1/Fabrics
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Contained resources

[PCIe](#) on page 295

# PCIE

## Description

The Fabric schema represents a simple fabric consisting of one or more switches, zero or more endpoints, and zero or more zones.

## URL

```
/redfish/v1/Fabrics/PCIE
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
FabricType			
Status			
Switches			

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## Contained resources

[Switch Collection](#) on page 354

# HostInterfaceCollection

## Description

A Collection of HostInterface resource instances.

## URL

```
/redfish/v1/Managers/<Manager-Id>/HostInterfaces
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## HostInterface

### Description

A Host Interface is a connection between host software and a Redfish Service.

## URL

```
/redfish/v1/Managers/<Manager-Id>/HostInterfaces/<HostInterfaces-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
ExternallyAccessible	Boolean	Yes	An indication of whether external entities can access this interface. External entities are non-host entities. For example, if the host and manager are connected through a switch and the



Property	Type	Read Only	Description
			switch also exposes an external port on the system, external clients can also use the interface, and this property value is `true`.
HostInterfaceType	String	Yes	The Host Interface type for this interface.
InterfaceEnabled	String	Yes	An indication of whether this interface is enabled.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## JSONSchemaFileCollection

### Description

This resource is used for representing the Schema File locator resource for a Redfish implementation.


### URL

New URL:

```
/redfish/v1/JsonSchemas
```

Old URL:

```
/redfish/v1/JSONSchemas
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

### HTTP methods and privileges

**Table 155. HTTP methods and privileges for JSONSchemas**

HTTP method	Required privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## JsonSchemaFile

### Description

This resource is used for the schema definition of the Schema File locator resource for a Redfish implementation.


### URL

New URL:

```
/redfish/v1/JsonSchemas/<JsonSchemaFile-Id>
```

Old URL:

```
/redfish/v1/JSONSchemas/<JsonSchemaFile-Id>
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

## HTTP methods and privileges

**Table 156. HTTP methods and privileges for JSONSchemas**

HTTP method	Required privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
Languages	Array	Yes	Language codes for the schemas available.
Location	Array	Yes	Location information for this schema file.
Schema	String	Yes	The @odata.type name this schema describes.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		

# LogServiceCollection

## Description

A Collection of LogService resource instances.

## URL

```
/redfish/v1/Managers/<Manager-Id>/LogServices
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Action — [ClearLog](#) on page 299

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## Supported Action — ClearLog

## Description

This action is used to clear the log for this Log Service.

## URL

```
/redfish/v1/Managers/<Manager-Id>/LogServices/Sel/Actions/LogService.ClearLog
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ClearLogs, Login

## Supported Parameters

Parameter	Value
OverWritePolicy	WrapsWhenFull

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
204		
400		SYS406
403	Base.1.2.InsufficientPrivilege	RAC0506
500	Base.1.2.InternalError	RAC049, RAC446

# LogService

## Description

This resource represents the log service for the resource or service to which it is associated.

## URL

```
/redfish/v1/Managers/<Manager-Id>/LogServices/FaultList
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ClearLogs, Login
GET	Login
PATCH	ConfigureManager, Login

## Supported Properties

Property	Type	Read Only	Description
DateTime	String	True	The current DateTime (with offset) for the log service, used to set or read time.

Property	Type	Read Only	Description
DateTimeLocalOffset	String	False	The time offset from UTC that the DateTime property is set to in format: +06:00 .
Entries	String	True	References to the log entry collection.
LogEntryType	String	True	The format of the Entries of this log.
MaxNumberOfRecords	Integer	True	The maximum number of log entries this service can have.
OverWritePolicy	String	True	The overwrite policy for this service that takes place when the log is full.
ServiceEnabled	Boolean	True	This indicates whether this service is enabled.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		

# LogEntryCollection

## Description

A Collection of LogEntry resource instances.

## URL

- **SEL**

New URL:

```
/redfish/v1/Managers/<Manager-Id>/LogServices/Sel/Entries
```

Old URL:

```
/redfish/v1/Managers/<Manager-Id>/Logs/Sel/Entries
```

- **LC Log**

New URL:

```
/redfish/v1/Managers/<Manager-Id>/LogServices/Lclog/Entries
```

Old URL:

```
/redfish/v1/Managers/<Manager-Id>/Logs/Lclog/Entries
```



**NOTE:** LC log filtering was implemented as OEM and not as per DMTF standard.

- the odata.count reflects the total number of entries according to the filter applied.
- \$filter query parameter is supported only on properties including Messageld, Severity, Created, and Id.


- **Fault list**

New URL:

```
/redfish/v1/Managers/<Manager-Id>/LogServices/FaultList/Entries
```

Old URL:

```
/redfish/v1/Managers/<Manager-Id>/Logs/FaultList/Entries
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# ManagerCollection

## Description

A Collection of Manager resource instances.

## URL

```
/redfish/v1/Managers
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## Manager

### Description

A manager is a systems management entity that may implement or provide access to a Redfish Service. Examples of managers are BMCs, enclosure managers, management controllers, and other subsystems that are assigned manageability functions. An implementation may have multiple managers, which may or may not be directly accessible through a Redfish-defined interface.

### URL

```
/redfish/v1/Managers/<Manager-Id>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login
GET	Login
PATCH	ConfigureManager, Login

### Supported Properties

Property	Type	Read Only	Description
ManagerType	String	True	This property represents the type of manager that this resource represents.
CommandConnectTypesSupported	String	True	This object is used to enumerate the Command Shell connection types allowed by the implementation.
GraphicalConnectTypesSupported	String	True	This object is used to enumerate the Graphical Console connection types allowed by the implementation.

Property	Type	Read Only	Description
ResetType	Object	False	This is the type of reset to be performed.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		
400	MalformedJSON	SYS405
400	Base.1.2.PropertyValueNotInList	SYS426
400		SYS406
400	PropertyValueTypeError	
403	InsufficientPrivilege	RAC0506
403		LIC501
404	Base.1.2.ResourceMissingAtURI	SYS403
500	Base.1.2.InternalError	SYS446

[Supported Action — Reset](#) on page 304

[Supported Action — ResetToDefaults](#) on page 279

Related Link: [DellManager](#) on page 279

## Supported Action — Reset

### Description

The reset action resets/reboots the manager.

### URL

```
/redfish/v1/Managers/<Manager-Id>/Actions/Manager.Reset
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		
400	MalformedJSON	SYS405
400	Base.1.2.PropertyValueNotInList	SYS426
400		SYS406



HTTP Status Code	Extended Information	Error Message Code
400	PropertyValueTypeError	
403	InsufficientPrivilege	RAC0506
403		LIC501
404	Base.1.2.ResourceMissingAtURI	SYS403
500	Base.1.2.InternalError	SYS446

## ManagerAccountCollection

### Description

This resource represents the BMC user accounts collection for a Redfish implementation.

### URL

New URL:

```
/redfish/v1/AccountService/Accounts
```

Old URL:

```
/redfish/v1/Managers/<Manager-Id>/Accounts
```

### HTTP methods and privileges

**Table 157. HTTP methods and privileges for ManagerAccount**

HTTP method	Required privilege
GET	Login

### Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# ManagerAccount

## Description

This resource represents the BMC user accounts collection for a Redfish implementation. The user accounts, owned by a manager, are defined in this Resource. Changes to a manager account may affect the current Redfish Service connection if this manager is responsible for the Redfish Service.

## URL

```
/redfish/v1/AccountService/Accounts/<Account-Id>
```

## HTTP methods and privileges

Table 158. HTTP methods and privileges for the instance of the resource

HTTP method	Required privilege
GET	Login
PATCH	ConfigureUsers, Login

## Supported Properties

Table 159. Properties and values for instance of the resource

Property	Type	Read Only	Description
UserName	String	True	This property contains the user name for the account service.
Password	String	True	This property contains the password for the account service.
RoleId	String	True	This property contains the account role id for the account service.
Enabled	Boolean	True	Enables or disables the user
PasswordChangeRequired	Boolean	No	An indication of whether the service requires that the password for this account be changed before further access to the account is allowed. This property is available in iDRAC version 4.20.20.20 and later.

## Status codes

Table 160. Status codes for the instance of the resource

HTTP status code	Extended Information	Error code
200	Base.1.5.Success	SYS413

**Table 160. Status codes for the instance of the resource (continued)**

HTTP status code	Extended Information	Error code
400	Base.1.5.MalformedJSON, Base.1.5.PropertyValueNotInList, Base.1.5.PropertyNotWritable, Base.1.5.PropertyUnknown	SYS405, RAC063, RAC0291, SYS474, RAC0288, SWC0296
401	Base.1.2.AccessDenied	
403		SWC1908
412		SYS400
500		
503		SWC0286

Role on page 337

## ManagerNetworkProtocol

### Description


This resource is used to obtain or modify the network services managed by a given manager.

### URL

```
/redfish/v1/Managers/<Manager-Id>/NetworkProtocol
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
PATCH	ConfigureManager, Login
GET	Login

 **NOTE:** For information about the DHCP version, execute GET on URL

```
/redfish/v1/Managers/<Manager-Id>/Attributes
```

### Supported Properties

Property	Type	Read Only	Description
DHCP	String	True	Settings for this Manager's DHCPv4 protocol support.
DHCPv6	String	True	Settings for this Manager's DHCPv6 protocol support.
FQDN	String	True	This is the fully qualified domain name for the manager obtained by DNS including the host name and top-level domain name.

Property	Type	Read Only	Description
Hostname	String	True	The DNS Host Name of this manager, without any domain information.
HTTP	String	True	Settings for this Manager's HTTP protocol support.
HTTPS	String	True	Settings for this Manager's HTTPS protocol support.
IPMI	String	True	Settings for this Manager's IPMI-over-LAN protocol support.
KVMIP	String	True	Settings for this Manager's KVM-IP protocol support.
NTP	String	True	Settings for this Manager's NTP protocol support.
RFB	String	True	Settings for this Manager's Remote Frame Buffer protocol support, which can be used to support VNC.
SNMP	String	True	Settings for this Manager's SNMP support.
Status	String	True	This property describes the status and health of the resource and its children.
SSH	String	True	Settings for this Manager's SSH (Secure Shell) protocol support.
Telnet	String	True	Settings for this Manager's Telnet protocol support.
VirtualMedia	String	True	Settings for this Manager's Virtual Media support.

## Status codes

HTTP status code	Extended information
200	Base.1.0.Success
400	Base.1.0.PropertyValueTypeError, Base.1.0.PropertyValueNotInList, Base.1.0.PropertyUnknown, Base.1.0.PropertyNotWritable, Base.1.0.PropertyValueFormatError
403	Insufficient privileges
500	Base.1.0.InternalError

## MemoryCollection

### Description

A Collection of Memory resource instances.

## URL

```
/redfish/v1/Systems/<System-Id>/Memory
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
403		SWC1908
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## Memory

### Description

This schema is for definition of a memory and its configuration.

## URL

```
/redfish/v1/Systems/<System-Id>/Memory/<Memory-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login, ConfigureComponents
GET	Login

**Table 161. Supported Properties**

Property	Type	Read Only	Description
ErrorCorrection	String	True	Error correction scheme supported for this memory.
MemoryDeviceType	String	True	Type details of the Memory.
MemoryMedia	String	True	Media of this Memory.

Table 161. Supported Properties (continued)

Property	Type	Read Only	Description
OperatingMemoryModes	String	True	Memory modes supported by the Memory.
BaseModuleType	String	True	The base module type of Memory.
MemoryType	String	True	The type of Memory.

## Supported Parameters

Parameter	Value
ErrorCorrection	NoECC, SingleBitECC, MultiBitECC, AddressParity
MemoryDeviceType	ROM SDRAM DDR DDR2 DDR3 DDR4
MemoryMedia	Null
OperatingMemoryModes	Null
BaseModuleType	Null
MemoryType	Null

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
403		SWC1908
405	Base.1.2.GeneralError	SYS402

Supported Action — [MemoryMetrics](#) on page 310

## Supported Action — MemoryMetrics

### Description

MemoryMetrics contains usage and health statistics for a single Memory module or device instance.


### URL

New URL:

```
/redfish/v1/Systems/<System-Id>/Memory/<Memory-Id>/MemoryMetrics
```

Old URL:

```
/redfish/v1/Systems/<System-Id>/Memory/<Memory-Id>/Metrics
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login, ConfigureComponents

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
405	Base.1.2.GeneralError	IDRAC.1.6.SYS402

# MessageRegistryFileCollection

## Description

A Collection of MessageRegistryFile resource instances.

## URL

```
/redfish/v1/Registries
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# MessageRegistryFile

## Description

This is the schema definition for the Schema File locator resource.

# URL

/redfish/v1/Registries/Messages

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	

## Supported Properties

Property	Type	Read Only	Description
Language	String	True	Language codes for the schemas available.
Location	String	True	Location information for this registry file.
Registry	String	True	The Registry Name, Major, and Minor version.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# Messages

## Description

This resource is used to represent a Event and Error message registry for a Redfish implementation.

# URL

/redfish/v1/Registries/Messages



# HTTP methods and privileges

Table 162. HTTP methods and privileges for Messages

HTTP method	Required privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
Language	String	True	Language codes for the schemas available.
Location	String	True	Location information for this registry file.
Registry	String	True	The Registry Name, Major, and Minor version.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# NetworkAdapterCollection

## Description

A Collection of NetworkAdapter resource instances.

 **NOTE:** The Manufacturer, Model, Serial Number, and Part Number attributes are not applicable for embedded NICs.


## URL

New URL:

```
/redfish/v1/Chassis/<System-Id>/NetworkAdapters
```

Old URL:

```
/redfish/v1/Systems/<System-Id>/NetworkAdapters
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# NetworkAdapters

## Description

A NetworkAdapter represents the physical network adapter capable of connecting to a computer network.

## URL

New URL:

```
/redfish/v1/Chassis/<System-Id>/NetworkAdapters/<NetworkAdapter-Id>
```

Old URL:

```
/redfish/v1/Systems/<System-Id>/NetworkAdapters/<NetworkAdapter-Id>
```

## HTTP methods and privileges

Table 163. HTTP methods and privileges for NetworkAdapters

HTTP method	Required privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
Assembly	Object	True	A reference to the Assembly resource associated with this adapter.

Property	Type	Read Only	Description
Controllers	Array		The set of network controllers ASICs that make up this NetworkAdapter.
<b>NOTE:</b> When GET method is performed on the NetworkAdapter instance while SNAPI state is enabled for the InfiniBand network controller, then Redfish may display two members for the same controller instead of one and the second member may display null value for all the properties.			
Manufacturer	String	True	The manufacturer or OEM of this network adapter.
Model	String	True	The model string for this network adapter.
NetworkDeviceFunctions	String	True	A reference to the collection of NetworkDeviceFunctions associated with this NetworkAdapter.
NetworkPorts	String	True	A reference to the collection of NetworkPorts associated with this NetworkAdapter.
PartNumber	String	True	Part number for this network adapter.
SerialNumber	String	True	The serial number for this network adapter.
SKU	String	True	The manufacturer SKU for this network adapter.
Status	String	True	This property shall contain any status or health properties of the resource.

**NOTE:** For modular systems, Redfish may not display the Manufacturer, Model, Serial Number, and Part Number properties for FC based adapters.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## NetworkDeviceFunctionCollection

### Description

This resource is used to represent the collection of NetworkDeviceFunction.


# URL

New URL:

```
/redfish/v1/Chassis/<System-Id>/NetworkAdapters/<NetworkAdapter-Id>/
NetworkDeviceFunctions
```

Old URL:

```
/redfish/v1/Systems/<System-Id>/NetworkAdapters/<NetworkAdapter-Id>/
NetworkDeviceFunctions
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

## HTTP methods and privileges

Table 164. HTTP methods and privileges for NetworkDeviceFunctions

HTTP method	Required privilege
GET	Login

## Supported Properties

Table 165. Properties for the Settings resource

Property	Description
@Redfish.SettingsApplyTime	Define when the settings are applied. This is supported on the Settings URL.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# NetworkDeviceFunctions — Instance

## Description

This resource is used to represent a logical interface exposed by the network adapter.


## URL

New URL:

```
/redfish/v1/Chassis/<System-Id>/NetworkAdapters/<NetworkAdapter-Id>/  
NetworkDeviceFunctions/<NetworkDeviceFunction-Id>
```

Old URL:

```
/redfish/v1/Systems/<System-Id>/NetworkAdapters/<NetworkAdapter-Id>/  
NetworkDeviceFunctions/<NetworkDeviceFunction-Id>
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

## HTTP methods and privileges

**Table 166. HTTP methods and privileges for the instance of NetworkDeviceFunctions**

HTTP method	Required privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## NetworkDeviceFunctions — Settings

### Description

This resource is used to set the new value and create job to update the attributes of the logical interface exposed by the network adapter.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/NetworkAdapters/<NetworkAdapters-Id>/  
NetworkDeviceFunctions/<NetworkDeviceFunction-Id>/Settings
```

## HTTP methods and privileges

**Table 167. HTTP methods and privileges for the resource**

HTTP method	Required privilege
GET	Login

**Table 167. HTTP methods and privileges for the resource (continued)**

HTTP method	Required privilege
PATCH	Login, SystemControl

## Supported Properties

Property	Type	Read Only	Description
Status	Object	Yes	This property describes the status and health of the resource and its children.
MaxVirtualFunctions	Integer	Yes	The number of virtual functions (VFs) that are available for this Network Device Function.
NetDevFuncCapabilities	Array	Yes	Capabilities of this network device function. <b>i NOTE:</b> The values of NetDevFuncCapabilities are determined by the port that the partition belongs to. The values of NetDevFuncCapabilities for all the partitions belonging to a particular port are the same.
NetDevFuncType	String	No	The configured capability of this network device function. Following values are supported: <ul style="list-style-type: none"> <li>• Disabled</li> <li>• Ethernet</li> <li>• FibreChannel</li> <li>• iSCSI</li> <li>• FibreChannelOverEthernet</li> </ul>
FibreChannel	Object	No	Describes Fibre Channel capabilities, status, and configuration of a network device function.
FibreChannel.WWPN	String	No	The effective current World-Wide Port Name (WWPN) of this network device function (physical function). If an assignable WWPN is not supported, WWPN is a read only alias of the PermanentWWPN.
FibreChannel.PermanentWWPN	String	No	PermanentWWPN is the permanent WWPN address assigned to this network device function (physical function).
FibreChannel.WWNN	String	No	The effective current World-Wide Node Name (WWNN) of this network device

Property	Type	Read Only	Description
			function (physical function). If an assignable WWNN is not supported, WWNN is a read only alias of the PermanentWWNN.
FibreChannel.WWNSource	String	No	The configuration source of the World-Wide Names (WWNs) for this connection (WWPN and WWNN). Following values are supported: <ul style="list-style-type: none"> <li>ConfiguredLocally</li> <li>ProvidedByFabric</li> </ul>
FibreChannel.FCoELocalVLANId	Integer	No	For FCoE connections, VLAN ID is configured locally by setting this property. This value shall be used for FCoE traffic to this network device function during boot unless AllowFIPVLANDiscovery is true and a valid FCoE VLAN ID is found via the FIP VLAN Discovery Protocol.
FibreChannel.FCoEActiveVLANId	Integer	No	The active FCoE VLAN ID.
FibreChannel.BootTargets.WWPN	String	No	World-Wide Port Name (WWPN) to boot from.
FibreChannel.BootTargets.LUNID	String	No	The Logical Unit Number (LUN) ID to boot from on the device referred to by the corresponding WWPN.
Ethernet.MACAddress	String	No	The effective current MAC Address of this network device function. If an assignable MAC address is not supported, this is a read-only alias of the PermanentMACAddress.
Ethernet.PermanentMACAddress	String	No	This is the permanent MAC address assigned to this network device function (physical function).
Ethernet.MTUSize	Integer	No	The Maximum Transmission Unit (MTU) configured for this Network Device Function. This value serves as a default for the OS driver when booting. The value only takes effect on boot.
iSCSIBoot.IPAddressType	String	No	The type of IP address (IPv6 or IPv4) being populated in the iSCSIBoot IP address fields. Mixing of IPv6 and IPv4 addresses on the same network device function shall not be permissible. Following values are supported:

Property	Type	Read Only	Description
			<ul style="list-style-type: none"> <li>IPv4</li> <li>IPv6</li> </ul>
iSCSIBoot.InitiatorIPAddress	String	No	The IPv6 or IPv4 address of the iSCSI boot initiator.
iSCSIBoot.InitiatorName	String	No	The iSCSI boot initiator name.
iSCSIBoot.InitiatorDefaultGateway	String	No	The IPv6 or IPv4 iSCSI boot default gateway.
iSCSIBoot.InitiatorNetmask	String	No	The IPv6 or IPv4 netmask of the iSCSI boot initiator.
iSCSIBoot.TargetInfoViaDHCP	String	No	A boolean indicating whether the iSCSI boot target name, LUN, IP address, and netmask should be obtained from DHCP.
iSCSIBoot.PrimaryTargetName	String	No	The name of the primary iSCSI boot target (iSCSI Qualified Name, IQN).
iSCSIBoot.PrimaryTargetIPAddress	String	No	The IP address (IPv6 or IPv4) for the primary iSCSI boot target.
iSCSIBoot.PrimaryTargetTCPPort	Integer	No	The TCP port for the primary iSCSI boot target.
iSCSIBoot.PrimaryLUN	Integer	No	The logical unit number (LUN) for the primary iSCSI boot target.
iSCSIBoot.PrimaryVLANEnable	Boolean	No	It indicates if this VLAN is enabled for the primary iSCSI boot target.
iSCSIBoot.PrimaryVLANId	Integer	No	The 802.1q VLAN ID to use for iSCSI boot from the primary target. This VLAN ID is only used if PrimaryVLANEnable is true.
iSCSIBoot.PrimaryDNS	String	No	The IPv6 or IPv4 address of the primary DNS server for the iSCSI boot initiator.
iSCSIBoot.SecondaryTargetName	String	No	The name of the Secondary iSCSI boot target (iSCSI Qualified Name, IQN).
iSCSIBoot.SecondaryTargetIPAddress	String	No	The IP address (IPv6 or IPv4) for the Secondary iSCSI boot target.
iSCSIBoot.SecondaryTargetTCPPort	Integer	No	The TCP port for the Secondary iSCSI boot target.
iSCSIBoot.SecondaryLUN	Integer	No	The logical unit number (LUN) for the Secondary iSCSI boot target.
iSCSIBoot.SecondaryVLANEnable	Boolean	No	It indicates if this VLAN is enabled for the Secondary iSCSI boot target.



Property	Type	Read Only	Description
iSCSIBoot.SecondaryVLANId	Integer	No	The 802.1q VLAN ID to use for iSCSI boot from the Secondary target. This VLAN ID is only used if SecondaryVLANEnable is true.
iSCSIBoot.SecondaryDNS	String	No	The IPv6 or IPv4 address of the Secondary DNS server for the iSCSI boot initiator.
iSCSIBoot.IPMaskDNSViaDHCP	Boolean	No	A boolean indicating whether the iSCSI boot initiator uses DHCP to obtain the initiator name, IP address, and netmask.
iSCSIBoot.AuthenticationMethod	String	No	The iSCSI boot authentication method for this network device function. Following values are supported: <ul style="list-style-type: none"> <li>• None</li> <li>• CHAP</li> <li>• MutualCHAP</li> </ul>
iSCSIBoot.CHAPUsername	String	No	The username for CHAP authentication.
iSCSIBoot.CHAPSecret	String	No	The shared secret for CHAP authentication.

## Status codes

**Table 168. Status codes**

HTTP status code	Extended information	Error message code
200		
202		
400	<ul style="list-style-type: none"> <li>• Base.1.0.PropertyValueTypeError</li> <li>• Base.1.0.PropertyUnknown</li> </ul>	
403	Base.1.0.InsufficientPrivilege	RAC0506
404	Base.1.5.GeneralError	SYS403
405	Base.1.0.GeneralError	SYS402
500	Base.1.0.InternalError	

## NetworkInterfaceCollection

### Description

A Collection of NetworkInterface resource instances.

## URL

```
/redfish/v1/Systems/<System-Id>/NetworkInterfaces
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# NetworkPortCollection

## Description

A Collection of NetworkPort resource instances.


## URL

New URL:

```
/redfish/v1/Chassis/<System-Id>/NetworkAdapters/<NetworkAdapter-Id>/NetworkPorts
```

Old URL:

```
/redfish/v1/Systems/<System-Id>/NetworkAdapters/<NetworkAdapter-Id>/NetworkPorts
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## NetworkPort

### Description

A Network Port represents a discrete physical port capable of connecting to a network.


### URL

New URL:

```
/redfish/v1/Chassis/<System-Id>/NetworkAdapters/<NetworkAdapter-Id>/NetworkPorts/  
<NetworkPort-Id>
```

Old URL:


```
/redfish/v1/Systems/<System-Id>/NetworkAdapters/<NetworkAdapter-Id>/NetworkPorts/  
<NetworkPort-Id>
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Properties

 **NOTE:** As patch method is not supported for this schema, the below updatable properties cannot be changed.

Property	Type	Read Only	Description
ActiveLinkTechnology	String	No	Network Port Active Link Technology.
AssociatedNetworkAddresses	String	Yes	The Array of configured network addresses (MAC or WWN) that are associated with this Network Port, including the programmed address of the lowest numbered Network Device Function, the configured but not active address if applicable, the address for hardware port teaming, or other network addresses.

Property	Type	Read Only	Description
CurrentLinkSpeedMbps	Integer	No	Network Port Current Link Speed.
EEEEnabled	Boolean	No	Whether IEEE 802.3az Energy Efficient Ethernet (EEE) is enabled for this year.
FlowControlConfiguration	String	No	The locally configured 802.3x flow control setting for this network port.
FlowControlStatus	String	Yes	The 802.3x flow control behavior negotiated with the link partner for this networkport.
LinkStatus	String	Yes	The status of the link between this port and its link partner.
NetDevFuncMaxBWAlloc	Array	Yes	The Array of maximum bandwidth allocation percentages for the Network Device Functions associated with this port.
NetDevFuncMinBWAlloc	Array	Yes	The Array of minimum bandwidth allocation percentages for the Network Device Functions associated with this port.
PhysicalPortNumber	String	Yes	The physical port number label for this port.
SupportedEthernetCapabilities	String	Yes	The set of Ethernet capabilities that this port supports.
SupportedLinkCapabilities	Boolean	Yes	The self-described link capabilities of this port.
VendorId	String	Yes	The Vendor Identification for this port.
WakeOnLANEnabled	Boolean	No	Whether Wake on LAN (WoL) is enabled for this network port.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## PCleDevice

### Description

This is the schema definition for the PCleDevice resource. It represents the properties of a PCleDevice attached to a System.





### URL

New URL:

```
/redfish/v1/Systems/<System-Id>/PCleDevices/<PCleDevice-Id>
```

Old URL:

```
/redfish/v1/Systems/<System-Id>/PCIeDevice/<PCIeDevice-Id>
```

-  **NOTE:** Response for a Get operation for PCIe device will not report Part number or Model for any entry.
-  **NOTE:** For SerialNumber, the value may or may not be displayed depending on the type of PCIe device.
-  **NOTE:** Executing GET for the above URL for network devices may not display the firmware information of the card. For firmware information, execute GET on the other ports of the same card.
-  **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.)

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
Assembly	String	Yes	A reference to the Assembly resource associated with this PCIe device.
AssetTag	String	No	The user assigned asset tag for this PCIe device.
DeviceType	String	Yes	The device type for this PCIe device.
FirmwareVersion	String	Yes	The version of firmware for this PCIe device.
Manufacturer	String	Yes	This is the manufacturer of this PCIe device.
Model	String	Yes	This is the model number for the PCIe device.
PartNumber	String	Yes	The part number for this PCIe device.
SKU	String	Yes	This is the SKU for this PCIe device.
SerialNumber	String	Yes	The serial number for this PCIe device.
Status	String	Yes	This property describes the status and health of the resource and its children.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	

HTTP Status Code	Extended Information	Error Code
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## PCIeFunction

### Description

This is the schema definition for the PCIeFunction resource. It represents the properties of a PCIeFunction attached to a System.


### URL


New URL:

```
/redfish/v1/Systems/<System-Id>/PCIeDevices/<PCIeDevice-Id>/PCIeFunctions/<PCIeFunction-Id>
```

Old URL:

```
/redfish/v1/Systems/<System-Id>/PCIeFunction/<PCIeFunction-Id>
```

 **NOTE:** If you execute Get on the above URL, the properties Bus /Device/ Function are not displayed. However, their value is displayed in the format <BUS-Device-Function> for property id (for example <24-0-1>).

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Properties

Name	Type	Read Only	Description
ClassCode	String	Yes	The Class Code of this PCIe function.
DeviceClass	String	Yes	The class for this PCIe Function.
DeviceId	String	Yes	The Device ID of this PCIe function.
FunctionId	Integer	Yes	The PCIe Function identifier.
FunctionType	String	Yes	The type of the PCIe Function.
RevisionId	String	Yes	The Revision ID of this PCIe function.

Name	Type	Read Only	Description
Status	String	Yes	This property describes the status and health of the resource and its children.
SubsystemId	String	Yes	The Subsystem ID of this PCIe function.
SubsystemVendorId	String	Yes	The Subsystem Vendor ID of this PCIe function.
VendorId	String	Yes	The Vendor ID of this PCIe function.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## PortCollection

### Description

PortCollection resource contains the members of selected PCIe switch device.

### URL

```
/redfish/v1/Fabrics/PCIe/Switches/<PCIe switch ID>/Ports
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

**Table 169. Supported Status Codes**

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446

**Table 169. Supported Status Codes (continued)**

HTTP Status Code	Extended Information	Error Code
503		

## Port

### Description

Port contains properties describing a port of a PCIe switch. This resource is used to represent a PCIe switch port for a Redfish implementation.

### URL

```
/redfish/v1/Fabrics/<Fabric-Id>/Switches/<Switch-Id>/Ports/<Port-Id>
```

 **NOTE:** Performing GET method on the above URI with an invalid switch ID may respond with a 200 code.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
POST	Login, ConfigureComponents

**Table 170. Supported Properties**

Property	Type	Read only	Description
CurrentSpeedGbps	Number	True	Contains the current speed of this port.
Id	String	True	Contains references to other resources that are related to this resource.
Links	String	True	Contains references to other resources that are related to this resource.
Location	String	True	Contains the location of the port.
MaxSpeedGbps	Number	True	Contains the maximum speed of this port as currently configured.
PortId	String	True	This is the label of this port on the physical switch package.
PortProtocol	String	True	The protocol being sent over this port.
PortType	String	True	This is the type of this port.
Status	String	True	This property describes the status and health of the resource and its children.



**Table 170. Supported Properties (continued)**

Property	Type	Read only	Description
Width	INT	True	The number of lanes or other physical transport links that this port contains.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## PCleSlots

### Description

This Resource represents a set of PCIe slot information.

### URL

```
/redfish/v1/Chassis/<Chassis-Id>/PCleSlots
```

**NOTE:** Performing GET on PCIeSlots URI may not fetch the information about Mezz cards, LOMs, Integrated PERC cards, Chassis Assigned PCIe Slot, slots that are directly attached or through an extender.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
400	Base.1.2.GeneralError	SYS457
404	Base.1.5.GeneralError	SYS403
405	Base.1.2.GeneralError	SYS402

# Power

## Description

This is the schema definition for the Power Metrics. It represents the properties for Power Consumption and Power Limiting.

## URL

```
/redfish/v1/Chassis/<Chassis-Id>/Power
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read Only	Description
PowerControl	Array	Yes	This is the definition for power control function (power reading/limiting).
PowerSupplies	Array	Yes	Details of the power supplies associated with this system or device.
Redundancy	Array	Yes	Redundancy information for the power subsystem of this system or device.
Voltages	Array	Yes	This is the definition for voltage sensors.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## Reference Properties

[PowerControl](#) on page 331

[Voltage](#) on page 332

## PowerControl

### Description

This is the base type for addressable members of an array.

### URL


```
/redfish/v1/Chassis/<Chassis-Id>/Power/PowerControl
```

**Table 171. Supported HTTP Method and Privileges**

HTTP Method	Required Privilege
GET	Login
PATCH	ConfigureManager, Login

### Supported Properties

Property	Type	Read Only	Description
PowerAllocatedWatts	Integer	Yes	The total amount of power that has been allocated (or budgeted) to chassis resources.
PowerAvailableWatts	Integer	Yes	The amount of power not already budgeted and therefore available for additional allocation. (powerCapacity - powerAllocated). This indicates how much reserve power capacity is left.
PowerCapacityWatts	Integer	Yes	The total amount of power available to the chassis for allocation. This may be the power supply capacity, or power budget assigned to the chassis from an up-stream chassis.
PowerConsumedWatts	Integer	Yes	The actual power being consumed by the chassis.
PowerLimit	Enum	Yes	Power limit status and configuration information for this chassis.
PowerLimit.CorrectionInMs	Integer	No	The time required for the limiting process to reduce power consumption to below the limit.
PowerLimit.LimitException	String	No	The action that is taken if the power cannot be maintained below the LimitInWatts.
PowerLimit.LimitInWatts	Number	No	The power limit, in watts. If `null`, power capping is disabled.

Property	Type	Read Only	Description
 <b>NOTE:</b> LimitInWatts property only supports integer type value.			
PowerMetrics	Integer	Yes	Power readings for this chassis.
PowerRequestedWatts	Integer	Yes	The potential power that the chassis resources are requesting which may be higher than the current level being consumed since requested power includes budget that the chassis resource wants for future use.
RelatedItem	Array	Yes	The ID(s) of the resources associated with this Power Limit.

## Status codes

**Table 172. Status codes for the instance of the resource**

HTTP status code	Extended Information	Error code
200	Base.1.5.Success	SYS413
403		SWC1908

## Voltage

### Description

This is the base type for addressable members of an array.

### URL

```
/redfish/v1/Chassis/<System-Id>/Sensors/Voltages/<Voltage-Id>
```

## Supported Properties

Property	Type	Read Only	Description
LowerThresholdCritical	Number	True	Below normal range but not yet fatal.
LowerThresholdFatal	Number	True	Below normal range and is fatal.
LowerThresholdNonCritical	Number	True	Below normal range.
MaxReadingRange	Number	True	Maximum value for this Voltage sensor.
MemberId	String	True	This is the identifier for the member within the collection.
MinReadingRange	Number	True	Minimum value for this Voltage sensor.

Property	Type	Read Only	Description
PhysicalContext	String	True	Describes the area or device to which this voltage measurement applies.
ReadingVolts	Number	True	The present reading of the voltage sensor.
RelatedItem	Array	True	
SensorNumber	Integer	True	A numerical identifier to represent the voltage sensor.
UpperThresholdCritical	Number	True	Above normal range but not yet fatal.
UpperThresholdFatal	Number	True	Above normal range and is fatal.
UpperThresholdNonCritical	Number	True	Above normal range.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login
GET	Login
PATCH	ConfigureManager, Login

## PrivilegeRegistry

### Description

This is the schema definition for Operation to Privilege mapping. The Privileges displayed for each entity are in accordance to the capabilities furnished in the corresponding schema and does not mandatorily imply support for that operation in the implementation.

### URL

```
/redfish/v1/Managers/<Manager-Id>/PrivilegeRegistry
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	

### Supported Properties

Property	Type	Read Only	Description
Mappings	Array	Yes	This property describes the mappings between entities

Property	Type	Read Only	Description
			and the relevant privileges used to access them.
Mappings@odata.count	Integer	Yes	
OEMPrivilegesUsed	String	Yes	Lists the set of OEM Privileges used in building this mapping.
OEMPrivilegesUsed@odata.count	Integer	Yes	This is the manufacturer/provider specific extension moniker used to divide the Oem object into sections.
PrivilegesUsed	Array	Yes	Lists the set of Redfish standard privileges used in building this mapping.
PrivilegesUsed@odata.count	Integer	Yes	

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## ProcessorCollection

### Description

A Collection of Processor resource instances.

### URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Processors
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## Processor

### Description

This is the schema definition for the Processor resource. It represents the properties of a processor attached to a System.

### URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Processors/<Processor-Id>
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Properties

Property	Type	Read Only	Description
Assembly	String	Yes	A reference to the Assembly resource associated with this processor.
InstructionSet	String	Yes	The instruction set of the processor.
Manufacturer	String	Yes	The processor manufacturer.
MaxSpeedMHz	Integer	Yes	The maximum clock speed of the processor.
Model	String	Yes	The product model number of this device.
ProcessorArchitecture	String	Yes	The architecture of the processor.
ProcessorId	String	Yes	Identification information for this processor.
ProcessorType	String	Yes	The type of processor.

Property	Type	Read Only	Description
Socket	String	Yes	The socket or location of the processor.
TotalCores	Integer	Yes	The total number of cores contained in this processor.
TotalThreads	Integer	Yes	The total number of execution threads supported by this processor.
TotalEnabledCores	Integer	Yes	The total number of enabled cores that this processor contains. This property is available in iDRAC firmware version 4.20.20.20 and later.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## RoleCollection

### Description

A Collection of Role resource instances.


### URL

New URL:

```
/redfish/v1/AccountService/Roles
```

Old URL:

```
/redfish/v1/Managers/<Manager-Id>/Roles
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login



## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## Role

### Description

This resource defines a user role to be used in conjunction with a Manager Account.


### URL

New URL:

```
/redfish/v1/AccountService/Roles/<Role-Id>
```

Old URL:


```
/redfish/v1/Managers/<Manager-Id>/Roles/<Role-Id>
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Properties

 **NOTE:** As patch method is not supported for this schema, the below updatable properties cannot be changed.

Property	Type	Read Only	Description
AssignedPrivileges	Array	No	The Redfish privileges that this role includes.
IsPredefined	Boolean	Yes	This property is used to indicate if the Role is one of the is a predefined role.
OemPrivileges	String	No	The OEM privileges that this role includes.

Property	Type	Read Only	Description
RoleId	String	Yes	This property contains the name of the Role.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## SecureBoot

### Description

This resource contains UEFI Secure Boot information. It represents properties for managing the UEFI Secure Boot functionality of a system.

### URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/SecureBoot
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login
PATCH	ConfigureComponents, Login

## Supported Properties

Property	Type	Read Only	Description
Action	String	Yes	The available actions for this resource.
SecureBootCurrentBoot	String	Yes	Secure Boot state during the current boot cycle.
SecureBootEnable	Boolean	No	Enable or disable UEFI Secure Boot (takes effect on next boot).
SecureBootMode	String	Yes	Current Secure Boot Mode.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200	Base.1.0.Success	
200	Base.1.2.Success	SYS413
400	Base.1.0.PropertyValueTypeError, Base.1.0.PropertyValueNotInList	
403	Base.1.0. InsufficientPrivilege	
404	Base.1.0.ResourceMissingAtURI	
405	Base.1.2.GeneralError	SYS402
500	Base.1.0.InternalError	

Supported Action — ResetKeys on page 339

## Supported Action — ResetKeys

### Description

This action is used to reset the Secure Boot keys.

### URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/SecureBoot/Actions/SecureBoot.ResetKeys
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

## Supported Parameters

Property	Description
ResetKeysType	<ul style="list-style-type: none"><li>ResetAllKeysToDefault - Reset the content of all UEFI Secure Boot key databases (PK, KEK, DB, DBX) to their default values.</li><li>DeletePK - Delete the content of the PK UEFI Secure Boot database. This puts the system in Setup Mode.</li><li>DeleteAllKeys - Delete the content of all UEFI Secure Boot key databases (PK, KEK, DB, DBX). This puts the system in Setup Mode.</li></ul>

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	
400	Base.1.5.GeneralError	SYS402

HTTP Status Code	Extended Information	Error Message Code
400	Base.1.5.PropertyValueNotInList, Base.1.5.MalformedJSON	

## SerialInterfaceCollection

### Description

A Collection of SerialInterface resource instances.

### URL

```
/redfish/v1/Managers/<Manager-Id>/SerialInterfaces
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## SerialInterface

### Description

The SerialInterface schema describes an asynchronous serial interface, such as an RS-232 interface, available to a system or device.

### URL

```
/redfish/v1/Managers/<Manager-Id>/SerialInterfaces/<Serial-key>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
POST	ConfigureManager, Login
PATCH	ConfigureManager, Login

## Supported Properties

Property	Type	Read Only	Description
BitRate	String	No	The receive and transmit rate of data flow, typically in bits-per-second (bps), over the serial connection.
ConnectorType	String	Yes	The type of connector used for this interface.
DataBits	String	No	The number of data bits that follow the start bit over the serial connection.
FlowControl	String	No	The type of flow control, if any, that is imposed on the serial connection.
InterfaceEnabled	Boolean	No	An indication of whether this interface is enabled.
Parity	String	No	The type of parity used by the sender and receiver to detect errors over the serial connection.
PinOut	String	Yes	The physical pinout configuration for a serial connector.
SignalType	String	Yes	The type of signal used for the communication connection.
StopBits	String	No	The period of time before the next start bit is transmitted.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# ServiceRoot

## Description

This object represents the root Redfish service.

## URL

```
/redfish/<Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	

## Supported Properties

Property	Type	Read Only	Description
AccountService	String	Yes	This is a link to the Account Service.
Chassis	String	Yes	This is a link to a collection of Chassis.
CertificateService	String	Yes	This is a link to the CompositionService.
EventService	String	Yes	This is a link to the EventService.
Fabrics	String	Yes	A link to a collection of all fabric entities.
JobService	String	Yes	This is a link to the JobService.
JsonSchemas	String	Yes	This is a link to a collection of Json-Schema files.
Managers	String	Yes	This is a link to a collection of Managers.
Product	String	Yes	The product associated with this Redfish service.
ProtocolFeaturesSupported	String	Yes	Contains information about protocol features supported by the service.
RedfishVersion	String	Yes	The version of the Redfish service.
Registries	String	Yes	This is a link to a collection of Registries.
SessionService	String	Yes	This is a link to the Sessions Service.

Property	Type	Read Only	Description
StorageService	String	Yes	A link to a collection of all storage service entities.
StorageSystems	String	Yes	This is a link to a collection of storage systems.
Systems	String	Yes	This is a link to a collection of Systems.
Tasks	String	Yes	This is a link to the Task Service.
TelemetryService	String	Yes	This is a link to the TelemetryService.
UpdateService	String	Yes	This is a link to the UpdateService.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## SessionService

### Description

This is the schema definition for the Session Service. It represents the properties for the service itself and has links to the actual list of sessions.

### URL

```
/redfish/v1/SessionService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
PATCH	ConfigureManager, Login

## Supported Properties

Property	Type	Read Only	Description
ServiceEnabled	Boolean	No	This indicates whether this service is enabled. If set to false, the Session Service is disabled, and new sessions cannot be created old sessions cannot be deleted, and established sessions may continue operating.
ServiceTimeout	Integer	No	This is the number of seconds of inactivity that a session may have before the session service closes the session due to inactivity.
Sessions	String	Yes	Link to a collection of Sessions.

## Supported Status Codes

HTTP Status Code	Extended information	Error code
200	Base.1.0.Success	
400	Base.1.5.PropertyValueNotInList, Base.1.5.PropertyValueTypeError, Base.1.5.PropertyNotWritable, Base.1.5.PropertyUnknown	
403	Base.1.5.InsufficientPrivilege	RAC0506
500	Base.1.0.InternalError	SYS446

## Session


### URL

New URL:

```
/redfish/v1/SessionService/Sessions
```

Old URL:

```
/redfish/v1/Sessions
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

### Description

This resource is used to represent a session for a Redfish implementation.



## HTTP methods and privileges

**Table 173. HTTP methods and privileges for Session**

HTTP method	Required privilege
GET	Login
POST	ConfigureManager

## Status codes

**Table 174. Status codes for Session**

HTTP Status Code	Extended information	Error code
200	Base.1.0.Success	
400		SYS416
401		SYS415
403	Base.1.5.InsufficientPrivilege	RAC0506, SWC1908
500	Base.1.5.InternalError	SYS446

## Action — Delete


### URL

New URL:

```
/redfish/v1/SessionService/Sessions/<Session-ID>
```

Old URL:

```
/redfish/v1/Sessions/<Session-Id>
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

### Description

Performs delete operation on the session ID.

## HTTP methods and privileges

**Table 175. HTTP methods and privileges for Delete**

HTTP method	Required privilege
DELETE	ConfigureManager, Login

## Status codes

HTTP Status Code	Extended information	Error code
400		SYS406
403	Base.1.5.InsufficientPrivilege	RAC0506

HTTP Status Code	Extended information	Error code
404	Base.1.5.ResourceMissingAtURI	SYS403
500	Base.1.5.InternalError	SYS446

# SimpleStorageCollection

## Description

This property contains the UEFI device path used to identify and locate a specific storage controller.


## URL

New URL:

```
/redfish/v1/Systems/<System-Id>/SimpleStorage
```

Old URL:

```
/redfish/v1/Systems/<System-Id>/SimpleStorage/Controllers
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

## HTTP methods and privileges

Table 176. HTTP methods and privileges for SimpleStorage

HTTP method	Required privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# SimpleStorage

## Description

This property contains the UEFI device path used to identify and locate a specific storage controller.


## URL

New URL:

```
/redfish/v1/Systems/<System-Id>/SimpleStorage/<SimpleStorage-Id>
```

Old URL:

```
/redfish/v1/Systems/<System-Id>/SimpleStorage/Controllers/<SimpleStorage-Id>
```

 **NOTE:** This URI was updated as per Open API compliance. The old URI may get deprecated in the upcoming release.

## HTTP methods and privileges

**Table 177. HTTP methods and privileges for SimpleStorage**

HTTP method	Required privilege
GET	Login
POST	Login, ConfigureComponents

## Supported Properties

Property	Type	Read Only	Description
Devices	Array	True	The storage devices associated with this resource.
UefiDevicePath	String	True	The UEFI device path used to access this storage controller.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		

# SoftwareInventoryCollection

## Description

Collection of Firmware Inventory.

## URL

```
/redfish/v1/UpdateService/FirmwareInventory
```

# Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

## Status codes


Table 178. Status codes for SoftwareInventory

HTTP status code	Extended information	Error message code
201		
400		<ul style="list-style-type: none"><li>• SYS406</li><li>• OSD35</li><li>• SYS0604</li><li>• SYS434</li></ul>
400	Base.1.2.InternalError	SYS446
403	Base.1.0.InsufficientPrivilege	RAC0506
403		LIC501
404	Base.1.0. ResourceMissingAtURI	SYS403
405		SYS402
412		SYS400
413		SYS411
415		SYS401
428		SYS404
500	Base.1.0.InternalError	SYS412
503		SUP0108

## SoftwareInventory

### Description

The SoftwareInventory schema contains an inventory of software components. It includes software components such as BIOS, BMC firmware, firmware for other devices, system drivers, and provider software.

 **NOTE:** Firmware installation for a component may fail if the value for RevisionNumber, MajorVersion, and MinorVersion are zero.

### URL

```
/redfish/v1/UpdateService/SoftwareInventory/<SoftwareInventoryId>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read-only	Description
LowestSupportedVersion	String	Yes	The lowest supported version of this software.
Manufacturer	String	Yes	The manufacturer or producer of this software.
RelatedItem	Array	Yes	The IDs of the Resources associated with this software inventory item.
ReleaseDate	String	Yes	The release date of this software.
SoftwareId	String	Yes	The implementation-specific label that identifies this software.
Status	String	Yes	The status and health of the Resource and its subordinate or dependent Resources.
UefiDevicePaths	String	Yes	The list of UEFI device paths of the components associated with this software inventory item.
Updateable	Boolean	Yes	An indication of whether the Update Service can update this software.
Version	String	Yes	The version of this software.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# StorageCollection

## Description

A Collection of Storage resource instances.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Storage
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# Storage

## Description

The Storage schema defines a storage subsystem and its respective properties. A storage subsystem represents a set of physical or virtual storage controllers and the Resources, such as volumes, that can be accessed from that subsystem.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Storage/<Storage-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
POST	ConfigureComponents, Login

## Supported Properties

Property	Type	Read Only	Description
Status	Object	Yes	The status and health of the Resource and its subordinate or dependent Resources.
Status.Health	Object	Yes	The health state of this Resource in the absence of its dependent Resources.
Status.HealthRollup	Object	Yes	The overall health state from the view of this Resource.
Status.State	Object	Yes	The known state of the Resource, such as, enabled.
StorageControllers	Array	Yes	The set of storage controllers that this Resource represents.
StorageControllers.Assembly	String	Yes	The link to the assembly associated with this storage controller.
StorageControllers.CacheSummary	String	Yes	The cache memory of the storage controller in general detail.
StorageControllers.ControllerRates	Object	Yes	This property describes the various controller rates used for processes such as Volume Rebuild or Consistency Checks.
StorageControllers.FirmwareVersion	String	Yes	The firmware version of this storage controller.
StorageControllers.Identifiers	Array	Yes	The Durable names for the storage controller.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
405	Base.1.2.GeneralError	SYS402

# StorageController

## Description

This schema defines a storage controller and its respective properties. A storage controller represents a storage device (physical or virtual) that produces Volumes.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Storage/DellControllers/<Controller-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

# EventDestinationCollection

## Description

A Collection of EventDestination Resource instances.

## URL

/redfish/v1/EventService/Subscriptions

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP status code	Extended information	Error code
200		
201		
400	Base.1.5.GeneralError	SYS405, SYS460, SYS462, SYS464, SYS470
403	Base.1.5.GeneralError	LIC501
405	Base.1.5.GeneralError	SYS402

# EventDestination

## Description

This property contains a URL to the destination where the events are sent.

## URL

/redfish/v1/EventService/Subscriptions/<Subscription-Id>

## HTTP methods and privileges

Table 179. HTTP methods and privileges for EventDestination

HTTP method	Required privilege
GET	Login
PATCH	ConfigureManager, Login



## Supported Properties for EventDestination

Property	Type	Read-only	Description
Context	String	No	A client-supplied string that is stored with the event destination subscription.
DeliveryRetryPolicy	String	No	This property shall contain the subscription delivery retry policy for events, where the subscription type is RedfishEvent.
Destination	String	Yes	The URI of the destination event receiver.
EventFormatType	String	Yes	The content types of the message that are sent to the EventDestination.
EventTypes	Array	Yes	The types of events that are sent to the destination.
HttpHeaders	Array	Yes	An array of settings for HTTP headers, such as authorization information. This array is null or an empty array in responses. An empty array is the preferred return value on read operations.
MessageIds	String	Yes	The list of MessageIds that the service sends. If this property is absent or the array is empty, events with any MessageId are sent to the subscriber.
MetricReportDefinitions	Array	Yes	A list of metric report definitions for which the service only sends related metric reports. If this property is absent or the array is empty, metric reports that originate from any metric report definition are sent to the subscriber.
Protocol	String	Yes	The protocol type of the event connection.
RegistryPrefixes	String	Yes	The list of the prefixes for the Message Registries that contain the MessageIds that are sent to this event destination.
ResourceTypes	String	Yes	The list of Resource Type values (Schema names) that correspond to the OriginOfCondition. The version and full namespace should not be specified.
Status	String	Yes	This property contains the status of the subscription.

Property	Type	Read-only	Description
SubordinateResources	Boolean	Yes	An indication of whether the subscription is for events in the OriginResources array and its subordinate Resources. If `true` and the OriginResources array is specified, the subscription is for events in the OriginResources array and its subordinate Resources. Note that Resources associated through the Links section are not considered subordinate. If `false` and the OriginResources array is specified, the subscription shall be for events in the OriginResources array only. If the OriginResources array is not present, this property shall have no relevance.
SubscriptionType	Object	Yes	The subscription type for events.

## Status codes

**Table 180. Status codes for EventDestination**

HTTP status code	Extended information	Error code
200		
405	Base.1.5.GeneralError	SYS402

# Switch Collection

## Description

A Collection of Switch resource instances.

## URL

```
/redfish/v1/Fabrics/<Fabric-Id>/Switches
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

# Switch

## Description

The Switch schema contains properties that describe a fabric switch.

## URL

```
/redfish/v1/Fabrics/<Fabric-Id>/Switches/<Switch-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
PATCH	ConfigureComponents, Login

## Supported Properties

Property	Type	Read-only	Description
DomainID	Integer	Yes	The domain ID for this switch.
FirmwareVersion	String	Yes	The firmware version of this switch.
IndicatorLED	String	No	The state of the indicator LED, which identifies the switch. Following values are supported: <ul style="list-style-type: none"><li>Blinking</li><li>Off</li></ul>
IsManaged	Boolean	No	An indication of whether the switch is in a managed or unmanaged state.
Location	String	Yes	The location of the switch.
LogServices		Yes	The link to the collection of Log Services associated with this switch.
Manufacturer	String	Yes	The manufacturer of this switch.
Model	String	Yes	The product model number of this switch.
PartNumber	String	Yes	The part number for this switch.
Ports	Object	Yes	The link to the collection ports for this switch.
PowerState	String	Yes	The current power state of the switch.
Redundancy	Array	Yes	Redundancy information for the switches.
SKU	String	Yes	The SKU for this switch.
SerialNumber	String	Yes	The serial number for this switch.

Property	Type	Read-only	Description
Status	String	Yes	The status and health of the Resource and its subordinate or dependent Resources.
SwitchType	String	Yes	The type of switch.
TotalSwitchWidth	Integer	Yes	The total number of lanes, phys, or other physical transport links that this switch contains.

## TaskCollection

### Description

A Collection of Task resource instances.

### URL

```
/redfish/v1/TaskService/Tasks
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## Task

### Description

The Task schema contains information about a task that the Redfish Task Service schedules or executes. Tasks represent operations that take more time than a client typically wants to wait.

## URL

```
/redfish/v1/TaskService/Tasks/<Task-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Properties

Property	Type	Read-only	Description
EndTime	String	Yes	The date and time when the task was completed. This property will only appear when the task is complete.
HidePayload	Boolean	Yes	An indication of whether the contents of the payload should be hidden from view after the task has been created. If `true`, responses do not return the payload. If `false`, responses return the payload. If this property is not present when the task is created, the default is `false`.
Messages	String	Yes	An array of messages associated with the task.
Payload	Object	Yes	The HTTP and JSON payload details for this task.
PercentComplete	Integer	Yes	The completion percentage of this task.
StartTime	String	Yes	The date and time when the task was started.
TaskMonitor	String	Yes	The URI of the Task Monitor for this task.
TaskState	String	Yes	The state of the task.
TaskStatus	String	Yes	The completion status of the task.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402

HTTP Status Code	Extended Information	Error Code
500	Base.1.2.InternalError	SWC0058
503		

## TaskService

### Description

This is the schema definition for the Task Service. It represents the properties for the service itself and has links to the actual list of tasks.


### URL

```
/redfish/v1/TaskService
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

### Supported Properties

 **NOTE:** As patch method is not supported for this schema, the below updatable properties cannot be changed.

Property	Type	Read Only	Description
DateTime	String	Yes	The current DateTime (with offset) setting that the task service.
ServiceEnabled	Boolean	No	This indicates whether this service is enabled.
Tasks	String	Yes	References to the Tasks collection.

### Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

# Thermal

## Description

This is the schema definition for the Thermal properties. It represents the properties for Temperature and Cooling.

 **NOTE:** LowerThresholdFatal, UpperThresholdFatal, MinReadingRange, and MaxReadingRange are not supported and may display a null value.

## URL

```
/redfish/v1/Chassis/<Chassis-Id>/Thermal
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login
GET	Login
PATCH	ConfigureManager, Login

## Supported Properties

Property	Type	Read Only	Description
Fans	Array	No	This is the definition for fans.
Redundancy	Array	Yes	This structure is used to show redundancy for fans. The component ids will reference the members of the redundancy groups.
Temperatures	Array	No	This is the definition for temperature sensors.

## Supported Parameters

Parameter	Type	Read Only	Description
ReadingUnits	String	True	Units in which the reading and thresholds are measured.

# Temperature

## Description

Above normal range.

## URL

```
/redfish/v1/Chassis/<ComputerSystem-Id>/DellEnclosureTemperatureSensor/  
<EnclosureTemperatureSensor-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login
GET	Login
PATCH	ConfigureManager, Login

## Supported Properties

Property	Type	Read only	Description
CurrentReading	Integer	Yes	The current value indicated by the sensor. The property value is in Degrees Celsius.
DeviceDescription	String	Yes	A string that contains the friendly Fully Qualified Device Description (FQDD), which is a property that describes the device and its location.
ElementName	String	Yes	The user-friendly name for this instance.
FQDD	String	Yes	The property shall represent Fully Qualified Device Description.
LowerThresholdCritical	Integer	No	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, or Critical conditions. If the CurrentReading is below LowerThresholdCritical, the CurrentState is Critical. The lower critical threshold value in Degree Celsius.
LowerThresholdNonCritical	Integer	No	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, or Critical conditions. If Current Reading is between LowerThresholdNonCritical and Upper ThresholdNonCritical, the Sensor is reporting a normal value. If CurrentReading is between LowerThresholdNonCritical and LowerThresholdCritical, the CurrentState is NonCritical. The lower non-critical threshold value in Degree Celsius.
PrimaryStatus	String	Yes	This property represents the status of the device.



Property	Type	Read only	Description
RateUnits	String	Yes	Specifies if the units returned by this Sensor are rate units. All the values returned by this Sensor are represented in the units obtained by (BaseUnits * 10 raised to the power of the UnitModifier). This is true unless this property (RateUnits) has a value different than "None". For example, if BaseUnits is Volts and the UnitModifier is -6, the units of the values returned are MicroVolts. But, if the RateUnits property is set to a value other than "None", the units are further qualified as rate units. In the above example, if RateUnits is set to "Per Second", the values returned by the Sensor are in MicroVolts/Second. The units apply to all numeric properties of the Sensor, unless explicitly overridden by the Units qualifier. Any implementation of CurrentReading should be qualified with either a Counter or a Gauge qualifier, depending on the characteristics of the sensor being modeled. The property value is 0 (None).
ReadingUnits	String	Yes	This property represents the units of current reading value. For example Degrees C.
SensorType	String	Yes	The Type of the Sensor such as Fan, Voltage, or Temperature. The value is 2(Temperature).
State	String	Yes	This property displays the current state of the device.
UnitModifier	Integer	Yes	The unit multiplier for the values returned by this Sensor. All the values returned by this Sensor are represented in the units obtained by (BaseUnits * 10 raised to the power of the UnitModifier). For example, if BaseUnits is Volts and the Unit Modifier is -6, the units of the values returned are MicroVolts. However, if the RateUnits property is set to a value other than "None", the units are further qualified as rate units. In the above example, if RateUnits is set to "Per Second", the values returned by the Sensor are in MicroVolts/Second. The units apply to all numeric properties of the Sensor, unless explicitly overridden by the Units qualifier. The property must have the value 0 denoting that the CurrentReading property value need not be multiplied by the UnitModifier property value.

Property	Type	Read only	Description
UpperThresholdCritical	Integer	No	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, or Critical conditions. If the CurrentReading is above UpperThresholdCritical, the CurrentState is Critical. The upper critical threshold value in Degree Celsius.
UpperThresholdNonCritical	Integer	No	The threshold values of the sensor specify the ranges (minimum and maximum values) for determining whether the Sensor is operating under Normal, NonCritical, or Critical conditions. If the CurrentReading is between LowerThresholdNonCritical and UpperThresholdNonCritical, the Sensor is reporting a normal value. If the CurrentReading is between UpperThresholdNonCritical and UpperThresholdCritical, the CurrentState is NonCritical. The upper non-critical threshold value in Degree celsius.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		

# UpdateService

## Description

This is the schema definition for the Update Service. It represents the properties for the service itself and has links to collections of firmware and software inventory.

## URL

```
/redfish/v1/UpdateService
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
POST	ConfigureComponents, Login

## Supported Properties

Property	Type	Read Only	Description
FirmwareInventory	String	Yes	An inventory of firmware.
HttpPushUri	String	Yes	The URI used to perform an HTTP or HTTPS push update to the Update Service.
ServiceEnabled	Boolean	No	This indicates whether this service is enabled.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		

## Supported action — SimpleUpdate

### Description

This resource is used to represent extension of the UpdateService schema of Redfish.

You can use the this action to update only one component at a time. If you attempt to update multiple components at once, error SYS442 is returned. To update multiple components, perform the updates one at a time.

If you use this action to update iDRAC, the update is applied immediately and the system reboots. For other components, the update is applied at the next reboot.

### URL

```
/redfish/v1/UpdateService/Actions/UpdateService.SimpleUpdate
```

## HTTP methods and privileges

**Table 181. HTTP methods and privileges for SimpleUpdate**

HTTP method	Required privilege
POST	<ul style="list-style-type: none"><li>• <b>.d9</b> file type — ConfigureComponents, Login</li><li>• <b>.pm</b> file type — ConfigureComponents, Login</li><li>• <b>.exe</b> file type — ConfigureComponents, Login</li></ul>

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Description
ImageURI*	String	The URI of the software image to install.
Password	String	The password to access the URI specified by the ImageURI parameter.

Parameter	Type	Description
Targets	String	An array of URIs that indicate where to apply the update image.
TransferProtocol	String	The network protocol that the Update Service uses to retrieve the software image file located at the URI provided in ImageURI, if the URI does not contain a scheme.
Username	String	The user name to access the URI specified by the ImageURI parameter.

## Status codes


**Table 182. Status codes for SimpleUpdate**


HTTP status code	Extended information	Error Message Code
202		SYS408
400		<ul style="list-style-type: none"> <li>• SYS406</li> <li>• OSD35</li> <li>• RAC0604</li> <li>• SYS434</li> <li>• SUP019</li> <li>• SUP024</li> <li>• SYS442</li> </ul>
400	<ul style="list-style-type: none"> <li>• Base.1.2.InternalError</li> <li>• Base.1.2.PropertyMissing</li> <li>• Base.1.2.PropertyValueTypeError</li> <li>• Base.1.2.PropertyValueNotInList</li> </ul>	SYS446
400	Base.1.2.MalformedJSON	SYS405
403	InsufficientPrivilege	RAC0506
403		LIC501
404	Base.1.2. ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	<ul style="list-style-type: none"> <li>• SYS446</li> <li>• SUP1907</li> </ul>
503		SUP0108

## VirtualMediaCollection

### Description

A Collection of VirtualMedia resource instances.

 **NOTE:** HTTP shares with authentication are not supported for virtual media.

 **NOTE:** Using the character '@' in virtual media User name or Password is not supported.

# URL

```
/redfish/v1/Managers/<Manager-Id>/VirtualMedia
```

## HTTP methods and privileges

Table 183. HTTP methods and privileges for VirtualMedia

HTTP method	Required privilege
GET	Login
POST	ConfigureManager, Login



## Supported Status Codes

HTTP Status Code	Extended information	Error code
403	Base.1.5.InsufficientPrivilege	RAC0506

# VirtualMedia

## Description

This resource is used to represent a virtual media service for a Redfish implementation.

-  **NOTE:** HTTP shares with authentication are not supported for virtual media.
-  **NOTE:** Using the character '@' in virtual media User name or Password is not supported.

# URL

```
/redfish/v1/Managers/<Manager-Id>/VirtualMedia/<VirtualMedia-Id>
```

## HTTP methods and privileges

Table 184. HTTP methods and privileges for VirtualMedia

HTTP method	Required privilege
GET	Login
POST	ConfigureManager, Login

## Supported Properties

Property	Type	Read Only	Description
ConnectedVia	String	Yes	Current virtual media connection methods.
Image	String	No	A URI providing the location of the selected image.

Property	Type	Read Only	Description
ImageName	String	Yes	The current image name.
Inserted	Boolean	No	Indicates if virtual media is inserted in the virtual device.
MediaTypes	Array	Yes	This is the media types supported as virtual media.
WriteProtected	Boolean	No	Indicates the media is write protected.
UserName	String	No	The user name to access the Image parameter-specified URI. This property is available in iDRAC firmware version 4.20.20.20 and later.
Password	String	No	The password to access the Image parameter-specified URI. This property is null in responses and is available in iDRAC firmware version 4.20.20.20 and later.
TransferMethod	String	No	The transfer method to use with the Image. This property is available in iDRAC firmware version 4.20.20.20 and later.
TransferProtocolType	String	No	The network protocol to use with the image. This property is available in iDRAC firmware version 4.20.20.20 and later.

## Properties and values

**Table 185. Properties and values for VirtualMedia**

Property	Values
MediaTypes	<ul style="list-style-type: none"> <li>• CD</li> <li>• DVD</li> <li>• USBStick</li> </ul>
ConnectedVia	<ul style="list-style-type: none"> <li>• NotConnected</li> <li>• Applet</li> </ul>

## Status codes

**Table 186. Status codes for VirtualMedia**

HTTP Status Code	Extended information	Error code
403	Base.1.5.InsufficientPrivilege	RAC0506


## Supported Action — EjectMedia

### Description

This action is used to detach remote media from virtual media.


## URL

```
/redfish/v1/Managers/<Manager-Id>/VirtualMedia/<VirtualMedia-Id>/Actions/  
VirtualMedia.EjectMedia
```

 **NOTE:** No parameters are required to perform this action.

## Supported HTTP Method and Privileges

HTTP method	Required privilege
GET	Login
POST	ConfigureManager, Login

 **NOTE:** No parameters are required to perform this action.

## Supported Status codes

HTTP Status Code	Extended information	Error code
200	Base.1.5.Success	
400	Base.1.5.MalformedJSON	SYS405, SYS452
403	Base.1.5.InsufficientPrivilege	RAC0506, LIC501
500	Base.1.5.InternalError	SYS446, VRM0009, VRM0010

## Supported Action — InsertMedia

### Description

This action is used to attach remote media to virtual media.

## URL


```
/redfish/v1/Managers/<Manager-Id>/VirtualMedia/<VirtualMedia-Id>/Actions/  
VirtualMedia.InsertMedia
```

## Supported HTTP Method and Privileges

HTTP method	Required privilege
GET	Login
POST	ConfigureManager, Login

## Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

 **NOTE:** From iDRAC firmware version 4.20.20.20 release onwards, Redfish supports inserting Username, Password, and Share name as separate fields in the payload while performing the action. Firmware backward compatibility allows you

to continue using the previous supported method that is by inserting the credentials in the payload in the format <username>:<Password>@<share name>. In the latest version of iDRAC, if both these methods are used then the information that is provided in separate fields take precedence over the previous supported method.

Parameter	Type	Value	Description
Image*	String		The URI of the remote media to attach to the virtual media.
Inserted	Boolean		Indicates if the image is to be treated as inserted upon completion of the action.
WriteProtected	Boolean		Indicates if the remote media is supposed to be treated as write protected.

## Supported Status codes

HTTP Status Code	Extended information	Error code
200	Base.1.5.Success	
400	Base.1.5.MalformedJSON, Base.1.5.PropertyValueFormatError, Base.1.5.PropertyMissing	SYS405, SYS453, SYS458, RAC0720, RAC0904
403	Base.1.5.InsufficientPrivilege	RAC0506, LIC501
500	Base.1.5.InternalError	VRM0012

# VLANNetworkInterface

## Description

The value of this property indicates if VLAN is enabled for this interface.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/EthernetInterfaces/<EthernetInstance-Id>/Vlans
```

## HTTP methods and response content type

**Table 187. HTTP methods and response content type for VLANNetworkInterface**

HTTP method	Response content type
GET	application/json

## Supported Properties

Property	Type	Read Only	Description
VLANEnable	Boolean	Yes	This indicates if this VLAN is enabled.
VLANId	Integer	Yes	This indicates the VLAN identifier for this VLAN.



# Status codes

Table 188. Status codes for VlanNetworkInterface

HTTP status code	Extended Information
200	
400	
500	

# VolumeCollection

## Description

A Collection of Volume resource instances.

**NOTE:** Creating RAID 10 configuration is not supported through Redfish interface. Use the other iDRAC interfaces to create a RAID 10 configuration.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Storage/<Storage-Id>/Volumes
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	

# Volumes

## Description

A Collection of Volume resource instances.

## URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Storage/<Storage-Id>/Volumes/<Volume-Id>
```

## Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
DELETE	ConfigureComponents, Login

## Supported Properties

Property	Type	Read Only	Description
AccessCapabilities	Array	No	Supported IO access capabilities.
AllocatedPools	Object	Yes	An array of references to StoragePools allocated from this Volume.
BlockSizeBytes	Integer	Yes	The size of the smallest addressable unit (Block) of this volume in bytes.
Capacity	String	Yes	Information about the utilization of capacity allocated to this storage volume.
CapacityBytes	Integer	No	The size in bytes of this Volume.
CapacitySources	Array	No	An array of space allocations to this volume.
Compressed	Boolean	No	Indicator of whether or not the Volume has compression enabled.
Deduplicated	Boolean	No	Indicator of whether or not the Volume has deduplication enabled.
DisplayName	String	No	A user-configurable string to name the volume.
Encrypted	Boolean	No	This property contains a boolean indicator if the Volume is currently utilizing encryption or not.
EncryptionTypes	Array	No	The types of encryption used by this Volume.
IOStatistics	String	Yes	Statistics for this volume.
Identifiers	Array	Yes	The Durable names for the volume.
LogicalUnitNumber	Integers	Yes	Indicates the host-visible LogicalUnitNumber assigned to this Volume.
LowSpaceWarningThresholdPercents	Integers	No	Low space warning.
Manufacturer	String	Yes	The manufacturer or OEM of this storage volume.
MaxBlockSizeBytes	Integer	Yes	Max Block size in bytes.
MediaSpanCount	Integer	Yes	Indicates the number of media elements used per span in the secondary RAID for a hierarchical RAID type.
Model	String	Yes	The model number for this storage volume.

Property	Type	Read Only	Description
Operations	Array	Yes	The operations currently running on the Volume.
OptimumIOSizeBytes	Integer	Yes	The size in bytes of this Volume's optimum IO size.
ProvisioningPolicy	String	No	This property specifies the volume's storage allocation, or provisioning policy.
RAIDType	String	Yes	The RAID type of this volume.
ReadCachePolicy	String	No	Indicates the read cache policy setting for the Volume.
RecoverableCapacitySourceCount	Integer	No	Current number of capacity source resources that are available as replacements.
RemainingCapacityPercent	Integer	Yes	The percentage of the capacity remaining in the Volume.
ReplicaInfo	String	Yes	Describes this storage volume in its role as a target replica.
ReplicaTargets	Array	Yes	The resources that are target replicas of this source.
Status	String	Yes	The property contains the status of the Volume.
StorageGroups	Array	Yes	An array of references to Storage Groups that includes this volume.
StripSizeBytes	Integer	No	The number of blocks (bytes) in a strip in a disk array that uses striped data mapping.
VolumeType	String	Yes	The type of this volume.
VolumeUsage	String	Yes	Indicates the Volume usage type setting for the Volume.
WriteCachePolicy	String	No	Indicates the write cache policy setting for the Volume.
WriteCacheState	String	Yes	Indicates the WriteCacheState policy setting for the Volume.
WriteHoleProtectionPolicy	String	No	The policy that the RAID volume is using to address the write hole issue.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	


[Supported Action — Initialize](#) on page 372

[Supported Action — CheckConsistency](#) on page 372

## Supported Action — CheckConsistency

### Description

This action is used to force a check of the Volume's parity or redundant data to ensure it matches calculated values.

 **NOTE:** No parameters are required to perform this action.

### URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Storage/Volumes/  
Disk.Direct.0-0:AHCI.Embedded.2-1/Actions/Volume.CheckConsistency
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

### Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	
200		

## Supported Action — Initialize

### Description

This action is used to prepare the contents of the volume for use by the system.

### URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Storage/Volumes/<Volume-Id>/Actions/  
Volume.Initialize
```

### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

### Supported Parameters

 **NOTE:** A star (\*) indicates a required parameter, else the parameter is optional.

Parameter	Type	Value	Description
InitializeType	Object	Fast, Slow	The type of initialization to be performed.

## Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	
200		

## Storage — Settings resource

### Description

This resource is used for representing the pending configuration and related resources to clear pending and navigation to Jobs resource.

### URL

```
/redfish/v1/Systems/<ComputerSystem-Id>/Storage/<Storage-Id>/Volumes/<Volume-Id>/Settings
```

## HTTP methods and privileges

**Table 189. HTTP methods and privileges for the Settings resource**

HTTP method	Required privilege
GET	Login
PATCH	ConfigureComponents, Login

## Supported properties

Property	Type	Read only	Description
BlockSizeBytes	INT	Yes	The size of the smallest addressable unit (Block) of this volume in bytes.
CapacityBytes	INT	Yes	The size in bytes of this volume.
Encrypted	Boolean	No	This property contains a boolean indicator, if the Volume is currently utilizing encryption or not.
EncryptionTypes	Array	Yes	The types of encryption used by this Volume.

Property	Type	Read only	Description
<i>i</i> <b>NOTE:</b> EncryptionTypes only support NativeDriveEncryption option that is enabled by default. Setting options such as "ControllerAssisted" or "SoftwareAssisted" is not a valid operation and would fail with an error "The property EncryptionTypes is a read-only property and cannot be assigned a value."			
Operations	Array	Yes	The operations currently running on the volume.
OptimumIOSizeBytes	Array	Yes	The size in bytes of this Volume's optimum IO size.
Status	String	Yes	This property describes the status and health of the resource and its children.
VolumeType	String	Yes	The type of the associated volume.

## Status codes

**Table 190. Status codes for the Settings resource**

HTTP status code	Extended information	Error Code
202		
400	<ul style="list-style-type: none"> <li>Base.1.2.PropertyMissing</li> <li>Base.1.0.PropertyValueTypeError</li> <li>Base.1.0.PropertyValueNotInList</li> </ul>	
400		SYS426, SYS011, SYS428, SYS405, SUP017, SUP447
403		
500		

## Redundancy

### Description

This is the redundancy definition to be used in other resource schemas.

### URL

```
/redfish/v1/Chassis/<ComputerSystem-Id>/Thermal/Redundancy/iDRAC.Embedded.1%23SystemBoardFanRedundancy
```


### Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

## Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		
401	Base.1.2.AccessDenied	
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446
503		

## Examples

 **NOTE:** For more information about Redfish and detailed examples, see the white papers available at <https://www.dmtf.org/standards/redfish>.

The following table provides usage examples for the HTTP supported methods such as GET, POST, PATCH, and DELETE:

### Topics:

- [Example for GET](#)
- [Example for PATCH](#)
- [Example for POST](#)
- [Example for DELETE](#)
- [Example of Job Creation](#)
- [Example of Recurring Job Creation](#)
- [Examples for \\$expand](#)
- [Examples for \\$select](#)
- [Examples for \\$filter](#)

## Example for GET

### URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/SerialInterfaces
```

### Output

```
{
  "@odata.context": "/redfish/v1/$metadata#Managers/Members/iDRAC.Embedded.1/SerialInterfaces/$entity",
  "@odata.count": 1,
  "@odata.id": "/redfish/v1/Managers/iDRAC.Embedded.1/SerialInterfaces",
  "@odata.type": "#SerialInterface.1.0.0.SerialInterfaceCollection",
  "Description": "Collection of Serial Interfaces for this System",
  "Members": [
    {
      "@odata.id": "/redfish/v1/Managers/iDRAC.Embedded.1/SerialInterfaces/iDRAC.Embedded.1#Serial.1"
    }
  ],
  "Name": "Serial Interface Collection"
}
```

## Example for PATCH

### URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/Accounts/<Account-id>
```

### Input

```
{"Password": "123", "UserName": "reader"}
```

### Output

```
{
  "Success": {
    "Message": "Successfully Completed Request",
    "MessageId": "Base.1.0.Success",
  }
}
```



```
    "Resolution": "None",
    "Severity": "Ok"
  }
}
```

## Example for POST

### URL

```
/redfish/v1/Systems/System.Embedded.1/Actions/ComputerSystem.Reset
```

### Input

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

### Output

```
204: No Content
```

## Example for DELETE

### URL

```
/redfish/v1/EventService/Subscriptions/<SubscriptionId>
```

### Output

```
200 Ok
{
  "INFO": "<SubscriptionId> subscription deleted successfully"
}
```

## Example of Job Creation

### Request

**Method** POST

**URI** https://100.101.18.90/redfish/v1/Managers/iDRAC.Embedded.1/Jobs

### Headers

Authorization: Basic cm9vdDpjYWx2aW4=

Content-Type: application/json

### Body

```
{
  "TargetSettingsURI" : "/redfish/v1/Systems/System.Embedded.1/Bios/Settings",
  "StartTime" : "TIME_NOW",
  "EndTime" : "TIME_NA"
}
```

Or

```
{
  "TargetSettingsURI" : "/redfish/v1/Systems/System.Embedded.1/Bios/Settings",
  "StartTime" : "2017-08-21T18:11:00",
  "EndTime" : "2017-08-21T20:11:00"
}
```

## Response

HTTP Status code: 200

### Headers

```
OData-Version: 4.0
Keep-Alive: timeout=60, max=199
Content-Type: application/json;odata.metadata=minimal;charset=utf-8
Server: Appweb/4.5.4
Location: /redfish/v1/Managers/iDRAC.Embedded.1/Jobs/JID_471269252011
Date: Thu, 06 Jan 2000 02:48:49 GMT
Cache-Control: no-cache
Content-Length: 501
Connection: Keep-Alive Access-Control-Allow-Origin: *
Accept-Ranges: bytes
```

### BODY

```
{
  "@Message.ExtendedInfo": [
    {
      "Message": "Successfully Completed Request",
      "MessageArgs": [],
      "MessageArgs@odata.count": 0,
      "MessageId": "Base.1.0.Success",
      "RelatedProperties": [],
      "RelatedProperties@odata.count": 0,
      "Resolution": "None",
      "Severity": "OK"
    },
    {
      "Message": "The operation successfully completed.",
      "MessageArgs": [],
      "MessageArgs@odata.count": 0,
      "MessageId": "iDRAC.1.5.SYS413",
      "RelatedProperties": [],
      "RelatedProperties@odata.count": 0,
      "Resolution": "No response action is required.",
      "Severity": "Informational"
    }
  ]
}
```

## Example of Recurring Job Creation

### Request

In the following example, a job is created to reset the manager every Sunday:

<b>Method</b>	POST
<b>URI</b>	https://100.101.18.90/redfish/v1/JobService/Jobs

### Headers

Authorization: Basic cm9vdDpjYWx2aW4=

Content-Type: application/json

### Body

```
{
  "Payload": {
    "TargetUri": "/redfish/v1/Managers/iDRAC.Embedded.1/
    Actions/Manager.Reset";
  },
}
```

```

        "Schedule": {
            "EnabledDaysOfWeek": ["Sunday"],
            "Name": "Manager.Reset"
        }
    }
}

```

## Response

HTTP Status code: 202 Accepted

### Headers

```

OData-Version: 4.0
Keep-Alive: timeout=60, max=199
Content-Type: application/json;odata.metadata=minimal;charset=utf-8
Server: Appweb/4.5.4
Location: /redfish/v1/JobService/Jobs/Autoa4139dd2
Date: Thu, 06 Jan 2019 02:48:49 GMT
Cache-Control: no-cache
Content-Length: 501
Connection: Keep-Alive Access-Control-Allow-Origin: *
Accept-Ranges: bytes

```

### BODY

```

{
    "@Message.ExtendedInfo": [
        {
            "Message": "The resource has been
created successfully",
            "MessageArgs": [],
            "MessageArgs@odata.count": 0,
            "MessageId": "Base.1.5.Created",
            "RelatedProperties": [],
            "RelatedProperties@odata.count": 0,
            "Resolution": "None",
            "Severity": "OK"
        },
        {
            "Message": "A new resource is
successfully created.",
            "MessageArgs": [],
            "MessageArgs@odata.count": 0,
            "MessageId": "IDRAC.2.1.SYS414",
            "RelatedProperties": [],
            "RelatedProperties@odata.count": 0,
            "Resolution": "No response action is
required.",
            "Severity": "Informational"
        }
    ]
}

```

## Examples for \$expand

1. ManagerCollection Schema includes only NavigationProperties, it does not include Links. In this scenario, following behavior is expected:
  - a. /redfish/v1/Managers?\$expand=\* (\$levels=1) \$expand command will expand NavigationProperty
  - b. /redfish/v1/Managers?\$expand=. (\$levels=1) \$expand command will expand NavigationProperty
2. ManagerAccount Schema includes only Links Property, it does not include NavigationProperties. In this scenario, following behavior is expected:
  - a. /redfish/v1/Managers/iDRAC.Embedded.1/Accounts/3?\$expand=\* (\$levels=1) \$expand command will expand all properties

- b. /redfish/v1/Managers/iDRAC.Embedded.1/Accounts/3?\$expand =~(\$levels=1) \$expand command will expand properties under links

## Examples for \$select

Resource Type	Example
Resource.Resource	<ul style="list-style-type: none"> <li>https://&lt;IP&gt;/redfish/v1/Chassis/System.Embedded.1?\$select=AssetTag</li> <li>https://&lt;IP&gt;/redfish/v1/Chassis/System.Embedded.1?\$select=Status</li> <li>https://&lt;IP&gt;/redfish/v1/Chassis/System.Embedded.1?\$select=Status/State</li> <li>https://&lt;IP&gt;/redfish/v1/Chassis/System.Embedded.1?\$select=Assembly</li> <li>https://&lt;IP&gt;/redfish/v1/Chassis/System.Embedded.1?\$select=Links/ComputerSystems</li> <li>https://&lt;IP&gt;/redfish/v1/Chassis/System.Embedded.1?\$select=Links/Oem/Dell/DellEnclosureEMMCollection</li> <li>https://&lt;IP&gt;/redfish/v1/Chassis/System.Embedded.1?\$select=Location/Placement</li> <li>https://&lt;IP&gt;/redfish/v1/Chassis/System.Embedded.1?\$select=Location/Placement/Rack</li> <li>https://&lt;IP&gt;/redfish/v1/Chassis/System.Embedded.1?\$select=Assembly/@odata.id</li> </ul>
Resource.ResourceCollection	<ul style="list-style-type: none"> <li>https://&lt;IP&gt;/redfish/v1/Systems?\$select=Members</li> </ul>
Resource.ReferenceableMember	<ul style="list-style-type: none"> <li>https://&lt;IP&gt;/redfish/v1/Chassis/System.Embedded.1/Power?\$select=PowerControl</li> </ul>

## Examples for \$filter

Resource Type	Example
Resource.ResourceCollection	https://<IP>/redfish/v1/Managers/iDRAC.Embedded.1/Logs/Sel?\$filter=Severity eq "OK"