

iDRAC9 with Lifecycle Controller Version 3.31.31.31

Redfish API Guide

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

New in this release

- Added certificate management support for Dell EMC OpenManage Secure Enterprise Key Manager. See the `DellIDRACCardService` API section for SEKM certificate management APIs.

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/>.

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](#)
- [Eventing](#)
- [Updating firmware using SimpleUpdate](#)
- [Query Parameters](#)

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](#). 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` — 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: In previous versions of Redfish implementation, `#` character was parsed as `#`. Because this character is treated as a break character by the code, any characters after `#` were ignored. Now, `#` character is automatically converted to `%23`. This conversion allows the consoles or REST clients to use the URL without any errors.

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:
 - 13th generation of PowerEdge servers: **Overview > iDRAC Settings > Network > Services**
 - 14th 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
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	• Login • ConfigureComponents • ConfigureManager • ConfigureSelf • ConfigureUsers	• ClearLogs • AccessVirtualConsole • AccessVirtualMedia • TestAlerts • ExecuteDebugCommands
Operator	• Login • ConfigureComponents • ConfigureSelf	-
ReadOnly	• Login	-

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](#).

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 URIs 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
If-Match	Supported only for AccountService and FirmwareInventory URIs.
If-None-Match	Supported only for AccountService, FirmwareInventory, and metadata URIs.
Content-Length	Returned on all responses except responses that have Transfer-Encoding: chunked.
Content-Type	- Responses other than OData metadata—application/json;charset=utf-8 - OData responses—application/xml;charset=utf-8
ETag	Supported on AccountService, FirmwareInventory, and metadata URIs.
Location	Service sets this header when resources are created or when HTTP requests are redirected to other resources.

Header	Description
Cache-Control	Returned on all responses. Metadata URLs support cached responses. Instrumentation resources cannot be cached.
X-Auth-Token	Used for authentication of user sessions. See “Session-based authentication” under Redfish authentication and authorization .

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.

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.

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.**

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.

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

`iDRAC.RedfishEventing.DeliveryRetryAttempts` (Read or Write)

`iDRAC.RedfishEventing.DeliveryRetryIntervalInSeconds` (Read or Write)

Eventing operations

The Redfish event service provides the following URIs:

Table 3. Eventing operations

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

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/Managers/iDRAC.Embedded.1/Actions/Manager.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/Managers/iDRAC.Embedded.1/Actions/Manager.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 `$query` parameter is a set of properties and literal values with an operator.
- **Expand**— The `$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 resources under OEM section.

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

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](#)
- [AttributeRegistry](#)
- [Assembly](#)
- [BaseMessages](#)
- [Bios](#)
- [BootOption](#)
- [Chassis](#)
- [ComputerSystem](#)
- [DellAttributes](#)
- [DellBootSources](#)
- [DellBootSourcesRegistry](#)
- [DellCertificates](#)
- [DellController](#)
- [DellIDRACCard](#)
- [DellIDRACCardService](#)
- [DellEnclosure](#)
- [DellEnclosureCollection](#)
- [DellEnclosureEMM](#)
- [DellEnclosureEMMCollection](#)
- [DellEnclosureFanSensor](#)
- [DellEnclosureFanSensorCollection](#)
- [DellEnclosurePowerSupply](#)
- [DellEnclosurePowerSupplyCollection](#)
- [DellEnclosureTemperatureSensor](#)
- [DellEnclosureTemperatureSensorCollection](#)
- [DellFC](#)
- [DellFCCollection](#)
- [DellFCStatistics](#)
- [DellFCStatisticsCollection](#)
- [DellJobCollection](#)
- [DellJobService](#)
- [DellLCService](#)
- [DellLicenseCollection](#)
- [DellLicenseManagementService](#)
- [DellManager](#)
- [DellMemory](#)
- [DellNIC](#)
- [DellNICCapabilitiesCollection](#)
- [DellNICCapabilities](#)
- [DellNICCapabilitiesCollection](#)
- [DellNICStatistics](#)
- [DellNICStatisticsCollection](#)
- [DellNumericSensor](#)
- [DellNumericSensorCollection](#)
- [DellOSDeploymentService](#)
- [DellPowerSupplyCollection](#)

- [DellPowerSupplyViewCollection](#)
- [DellPCleSSDExtender](#)
- [DellPCleSSDExtenderCollection](#)
- [DellPCleSSD](#)
- [DellPCleSSDCollection](#)
- [DellPCleSSDBackPlane](#)
- [DellPCleSSDBackPlaneCollection](#)
- [DellPCleFunction](#)
- [DellPersistentStorageService](#)
- [DellPhysicalDisk](#)
- [DellPresenceAndStatusSensor](#)
- [DellPresenceAndStatusSensorCollection](#)
- [DellPowerSupply](#)
- [DellPowerSupplyView](#)
- [DellProcessor](#)
- [DellRaidService](#)
- [DellSensorCollection](#)
- [DellServiceRoot](#)
- [DellSoftwareInstallationService](#)
- [DellSwitchConnection](#)
- [DellSwitchConnectionCollection](#)
- [DellSystem](#)
- [DellUpdateService](#)
- [DellvFlashCollection](#)
- [DellVirtualDisk](#)
- [DellVirtualDiskCollection](#)
- [Drive](#)
- [EthernetInterfaces](#)
- [EthernetInterfaceCollection](#)
- [EventService](#)
- [FabricCollection](#)
- [PCle](#)
- [HostInterfaceCollection](#)
- [JSONSchemas](#)
- [LogEntryCollection](#)
- [LogService](#)
- [LogServiceCollection](#)
- [Manager](#)
- [ManagerAccountCollection](#)
- [ManagerNetworkProtocol](#)
- [Memory](#)
- [MessageRegistryFile](#)
- [MessageRegistryFileCollection](#)
- [Messages](#)
- [NetworkAdapterCollection](#)
- [NetworkInterfaceCollection](#)
- [PCleDevice](#)
- [PCleFunction](#)
- [Port](#)
- [PortCollection](#)
- [Power](#)
- [PrivilegeRegistry](#)
- [Processor](#)
- [Role](#)
- [RoleCollection](#)
- [SecureBoot](#)
- [SecureErase](#)

- [SerialInterface](#)
- [ServiceRoot](#)
- [Session](#)
- [SessionService](#)
- [SimpleStorage](#)
- [SoftwareInventoryCollection](#)
- [Storage](#)
- [StorageController](#)
- [Subscriptions](#)
- [Switches](#)
- [TaskCollection](#)
- [TaskService](#)
- [Thermal](#)
- [UpdateService](#)
- [VirtualMedia](#)
- [VLanNetworkInterface](#)
- [Volume](#)
- [NetworkPort](#)
- [NetworkPortCollection](#)
- [NetworkDeviceFunctionCollection](#)
- [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.

URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/AccountService
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

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

```
/redfish/v1/Registries/ManagerAttributeRegistry/ManagerAttributeRegistry.v1_0_0.json  
/redfish/v1/Systems/<ID>/Bios/BiosRegistry
```

Methods and privileges

Table 4. Methods and privileges for AttributeRegistry

HTTP method	Required privilege
GET	Login

Status codes

Table 5. Status codes for AttributeRegistry

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

Assembly

Description

This is the schema definition for the Assembly properties.

URL

```
/redfish/v1/Chassis/System.Embedded.1/Assembly
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

```
/redfish/v1/Chassis/System.Embedded.1/Assembly/<id>
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

BaseMessages

Description

This resource is used to represent the base message registry for a Redfish implementation.

URL

/redfish/v1/Registries/BaseMessages

HTTP methods and privileges

Table 6. HTTP methods and privileges for BaseMessages

HTTP method	Required privilege
GET	Login

Status codes

Table 7. Status codes for BaseMessages

HTTP status code
200
400
500

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.

URL

/redfish/v1/Systems/System.Embedded.1/Bios

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
400	Base.1.2.GeneralError	IDRAC.1.6.RAC1035

[Supported Action — ChangePassword](#)
[Supported Action — ClearPending](#)
[Supported Action — ResetBios](#)
[Settings resource](#)

Supported Action — ChangePassword

Description

This action is used to change the BIOS passwords.

URL

```
/redfish/v1/Systems/System.Embedded.1/Bios/Actions/Bios.ChangePassword
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Status Codes

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

Supported Action — ClearPending

Description

This action is used to clear all the pending values.

URL

```
/redfish/v1/Systems/System.Embedded.1/Bios/Settings/Actions/Oem/DellManager.ClearPending
```

Supported Action — ResetBios

Description

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

URL

```
/redfish/v1/Systems/System.Embedded.1/Bios/Actions/Bios.ResetBios
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Status Codes

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

Settings resource

Description

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

URL

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

HTTP methods and privileges

Table 8. HTTP methods and privileges for the Settings resource

HTTP method	Required privilege
GET	Login

Updatable properties

Table 9. Properties for the Settings resource

Property	Description
Attributes	Collection of all the attributes and their values supported by the BIOS configuration
@Redfish.SettingsApplyTime	Define when the settings are applied. This is supported on the Settings URL.

Status codes

Table 10. Status codes for the Settings resource

HTTP status code	Extended information
200	Base.1.0.Success
400	- Base.1.0.PropertyValueTypeError - Base.1.0.PropertyValueNotInList
403	Base.1.0. InsufficientPrivilege
500	Base.1.0.InternalError

BootOption

Description

A Collection of BootOption resource instances.

URL

```
/redfish/v1/Systems/System.Embedded.1/BootOptions
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

```
/redfish/v1/Systems/System.Embedded.1/BootOptions/<id>
```

Supported HTTP Method and Privileges

Required Privilege
DELETE
POST
GET
PATCH
Configure Component

Chassis

Description

A Collection of Chassis resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

```
/redfish/v1/Chassis/<id>
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Parameters

Parameter

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		
Supported action — Reset		

Supported action — Reset

Description

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

URL

```
/redfish/v1/Chassis/System.Embedded.1/Actions/Chassis.Reset
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter	Value
ResetType	On, ForceOff

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		
Supported action — ClearPending		

Contained resources

Power
Thermal

ComputerSystem

Description

A Collection of ComputerSystem resource instances.

URL

/redfish/v1/Systems

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

/redfish/v1/Systems/<id>

Supported HTTP Method and Privileges

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

Supported Parameters

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		

Supported Action — Reset

Supported Action — Reset

Description

This action is used to reset the system.

URL

```
/redfish/v1/Systems/System.Embedded.1/Actions/ComputerSystem.Reset
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, L

Supported Parameters

Parameter	Value
ResetType	On, ForceOff, ForceResta

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		

DellAttributes

Description

DellAttributes contains properties of additional properties to complement the Attribute Registry DMTF schema. It contains attributes surrounding attribute registry and Actions needed to perform changes to settings, which typically doesn't require a manager reset to apply.

URL

```
/redfish/v1/Managers/System.Embedded.1/Attributes
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

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
```

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/<ID>/BootSources
```

HTTP methods and privileges

Table 11. HTTP methods and privileges for DellBootSources

HTTP method	Required privilege
GET	Login

Status codes

Table 12. Status codes for DellBootSources

HTTP status code	Extended information
200	
500	Base.1.0.InternalError

Supported action — ClearPending

Description

This action is used to clear the pending values.

URL

```
/redfish/v1/Systems/<ID>/BootSources/Actions/Oem/DellManager.ClearPending
```

HTTP methods and privileges

Table 13. HTTP methods and privileges for ClearPending

HTTP method	Required privilege
POST	SystemControl

Status codes

Table 14. Status codes for ClearPending

HTTP status code	Extended information
200	Base.1.0.Success
400	- Base.1.0.PropertyValueTypeError - Base.1.0.PropertyValueNotInList
403	Base.1.0.InsufficientPrivilege
404	Base.1.0.ResourceMissingAtURI
500	Base.1.0.InternalError

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/<ID>/BootSources/Settings
```

HTTP methods and privileges

Table 15. HTTP methods and privileges for the Settings resource

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

Updatable properties

Table 16. Properties for the Settings resource

Property	Description
Attributes	Collection of all the attributes and their values supported for Boot Sources.

Status codes

Table 17. Status codes for the Settings resource

HTTP status code	Extended information
200	Base.1.0.Success
400	- Base.1.0.PropertyTypeError - Base.1.0.PropertyValueNotInList
403	Base.1.0.InsufficientPrivilege
404	Base.1.0.ResourceMissingAtURI
500	Base.1.0.InternalError

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/<ID>/BootSources/BootSourcesRegistry
```

HTTP methods and privileges

Table 18. HTTP methods and privileges for DellBootSourcesRegistry

HTTP method	Required privilege
GET	Login

Status codes

Table 19. Status codes for DellBootSourcesRegistry

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

DellCertificates

Description

This resource is used to represent Secure Boot certificates for a Redfish implementation.

URL

```
/redfish/v1/Systems/<ID>/SecureBoot/Certificates
```

HTTP methods and privileges

Table 20. HTTP methods and privileges for DellCertificates

HTTP method	Required privilege
GET	Login

Status codes

Table 21. Status codes for DellCertificates

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

URL

```
/redfish/v1/Systems/<ID>/SecureBoot/Certificates/<CertificateStore-ID>
```

HTTP methods and privileges

Table 22. HTTP methods and privileges for the instance of CertificateStore

HTTP method	Required privilege
GET	Login
POST	SystemControl

Updatable properties

Table 23. Properties for the instance of CertificateStore

Parameter	Description
CryptographicHash	A string providing the Cryptographic Hash value of SHA256, SHA384, or SHA512.

Status codes

Table 24. Status codes for the instance of CertificateStore

HTTP status code	Extended information
200	Base.1.0.Success
400	- Base.1.0.PropertyValueTypeError - Base.1.0.PropertyValueNotInList
403	Base.1.0. InsufficientPrivilege
500	Base.1.0.InternalError

URL

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

HTTP methods and privileges

Table 25. 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.

Status codes

Table 26. Status codes for the instance of Certificate

HTTP status code	Extended information
200	Base.1.0.Success
400	- Base.1.0.PropertyTypeError - Base.1.0.PropertyValueNotInList
403	Base.1.0. InsufficientPrivilege
500	Base.1.0.InternalError

DellController

Description

An instance of DellController will have RAID Controller specific data.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/Storage/DellController/<id>
```

Supported HTTP Method and Privileges

Rethinking Methodology

Supported Parameters

Parameter

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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/iDRAC.Embedded.1/DelliDRACCard/<id>
```

Supported HTTP Method and Privileges

Redfish Embedded iDRAC v1.0
-
GET
POST
PUT
DELETE
PATCH
OPTIONS

DelliDRACCardService

Description

The DelliDRACCardService resource provides some actions to support iDRAC configurations.

URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DelliDRACCardService
```

Supported HTTP Method and Privileges

Redfish Embedded iDRAC v1.0
-
GET
POST
PUT
DELETE
PATCH
OPTIONS

Supported Parameters

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	RAC066

Supported Action — ExportSSLCertificate
Supported Action — iDRACReset
Supported Action — ImportSSLCertificate
Supported Action — iDRACResetCfg

Supported Action — ExportSSLCertificate

Description

This method is used to export the ssl certificate from the idrac, based on input parameter Type. ExportSSLCertificate returns the certificate.

URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DelliDRACCardService/Actions/  
DelliDRACCardService.ExportSSLCertificate
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Parameters

Parameter	Qualifier	Type	Value
SSLCertType	Input	String	CA, CSC, ClientTrustCertificate, Server
CertificateFile	Output	String	
Message	Output	String	
MessageArgs	Output	String	
MessageID	Output	String	

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	RAC066

Supported Action — iDRACReset

Description

This method is used to reset iDRAC .

URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellIDRACCardService/Actions/DellIDRACCardService.iDRACReset
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Parameters

Parameter	Qualifier	Type	Value
Force	Input	String	Force, Graceful
Message	Output	String	
MessageArgs	Output	String	
MessageID	Output	String	

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	RAC066

Supported Action — iDRACResetCfg

Description

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

URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellIDRACCardService/Actions/DellIDRACCardService.iDRACResetCfg
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
Force	Input	String	Force, Graceful	This option is used to
Preserve	Input	String	All, Default, ResetAllWithRootDefaults	- Default—Reset - All—Reset all co - ResetAllWithRo
Message	Output	String		Error information m
MessageArgs	Output	String		Substitution variable

Parameter	Qualifier	Type	Value	Description
MessageID	Output	String		The message ID for

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	RAC066

Supported Action — ImportSSLCertificate

Description

This method is used to import the ssl certificate to iDRAC, on the basis of input parameter Type. After importing the certificate, the iDRAC will automatically restart.

URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellIDRACCardService/Actions/DellIDRACCardService.ImportSSLCertificate
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
CertificateType	Input	String	CA, CSC, ClientTrustCertificate, Server	Type of the certificate.
Passphrase	Input	String		A passphrase for certificates.
SSLCertificateFile	Input	String		A base-64 encoded certificate in PEM format. U
Message	Output	String		Error information message.
MessageArgs	Output	String		Substitution variables.
MessageID	Output	String		The message ID for

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	RAC066

Supported Action — Generate SEKM CSR

Description

This method can be used to generate SEKM CSR.

URL

```
redfish/v1/Dell/Managers/iDRAC.Embedded.1/DelliDRACCardService/Actions/DelliDRACCardService.GenerateSEKMCSR
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
202	Accepted	RAC004, LC106, LC110

Supported Action — Import Certificate

Description

This method is used to import the certificate to iDRAC, on the basis of input parameter type

URL

```
redfish/v1/Dell/Managers/iDRAC.Embedded.1/DelliDRACCardService/Actions/DelliDRACCardService.ImportCertificate
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Parameters

Parameter	Value
CertificateType	SEK
CertificateFile	certi

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		RAC003, RAC004, RAC0622, LC011, LC112

Supported Action — Export Certificate

Description

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

URL

```
redfish/v1/Dell/Managers/iDRAC.Embedded.1/DelliDRACCardService/Actions/DelliDRACCardService.ExportCertificate
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Parameters

Parameter	Value
CertificateType	SEK

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
202	Accepted	RAC003, RAC004, LC074

Supported Action — Delete Certificate

Description

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

URL

```
redfish/v1/Dell/Managers/iDRAC.Embedded.1/DelliDRACCardService/Actions/DelliDRACCardService.DeleteCertificate
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Parameters

Parameter	Value
CertificateType	SEK

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		RAC003, RAC004, LC111

DellEnclosure

Description

An instance of DellEnclosure will have storage enclosure specific data.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/DellEnclosure/Enclosure.Internal.0-1:RAID.Slot.5-1
```

Supported HTTP Method and Privileges

Required Privilege
- GET

DellEnclosureCollection

Description

A collection of DellEnclosure resource.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/DellEnclosureCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosureEMM

Description

An instance of DellEnclosureEMM will have Enclosure Management Module specific data.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/DellEnclosureEMM/  
EMM.Slot.1:Enclosure.External.0-0:RAID.Slot.4-1
```

Supported HTTP Method and Privileges

Redfish Method Privilege Group

Supported Parameters

Parameter Description

DellEnclosureEMMCollection

Description

A collection of DellEnclosureEMM resource.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/DellEnclosureEMMCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosureFanSensor

Description

An instance of DellEnclosureFanSensor will have Storage Enclosure fan sensor specific data.

URL

```
/redfish/v1/Dell/Chassis/System.Emdedded.1/DellEnclosureFanSensor
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosureFanSensorCollection

Description

A collection of DellEnclosureFanSensor resource.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/DellEnclosureFanSensorCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosurePowerSupply

Description

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

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/DellEnclosurePowerSupply/  
PSU.Slot.1:Enclosure.External.0-0:RAID.Slot.4-1
```

Supported HTTP Method and Privileges

Redfish Method Privilege
GET
POST
PUT
DELETE
PATCH
HEAD
OPTIONS

Supported Parameters

Parameter
Name
Type
Required
Default
Value
Description
OK
Unknown

DellEnclosurePowerSupplyCollection

Description

A collection of DellEnclosurePowerSupply resource.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/DellEnclosurePowerSupplyCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosureTemperatureSensor

Description

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

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/DellEnclosureTemperatureSensor
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosureTemperatureSensorCollection

Description

A collection of DellEnclosureTemperatureSensor resource.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/DellEnclosureTemperatureSensorCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellFC

Description

An instance of DellFC will have Fiber Channel device specific data.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/NetworkAdapters/DellFC
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Parameters

Parameter	Value
DCIM_FCView	InstanceID

DellFCCollection

Description

A collection of DellFC resource.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/NetworkAdapters/DellFCCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellFCStatistics

Description

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

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/NetworkPorts/DellFCStatistics
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Parameters

Parameter	Value
DCIM_FCStatistics	InstanceID
PortStatus	Down, Up, Unknown

DellFCStatisticsCollection

Description

A collection of DellFCStatistics resource.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/NetworkPorts/DellFCStatisticsCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellJobCollection

Description

A Collection of Job resource instances.

URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/Jobs
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

Navigation URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/Jobs/<id>
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
DELETE	ConfigureComponents, Login
GET	Login

Supported Parameters

Parameter	Value
JobType	FirmwareUpdate FirmwareRollback RepositoryUpdate RebootPowerCycle RebootForce RebootNoForce Shutdown RAIDConfiguration BIOSConfiguration NICConfiguration FCCConfiguration iDRACConfiguration SystemInfoConfiguration InbandBIOSConfiguration ExportConfiguration ImportConfiguration PreviewConfiguration RemoteDiagnostics ExportToolResults LocalFileExport RealTimeNoRebootConfiguration vFlashInit vFlashCreatePartition vFlashCreatePartitionUsingImage vFlashFormatPartition vFlashAttachPartition vFlashDetachPartition vFlashExportDataFromPartition AutoDiscoveryReplacePublicKey AutoDiscoveryGenerateClientCertPrivateKey LCLogExport HardwareInventoryExport FactoryConfigurationExport LicenseImport LicenseExport ThermalHistoryExport LCConfig LCExport HardwareExport FactoryConfigurationExport BackupImage RestoreImage DownloadServerPublicKey LCDownloadClientCertificate LCExportCertificate Unknown
JobState	New Scheduled Running Completed unknown

DellJobService

Description

This resource represents the Dell-specific implementation of a scheduling resource for pending configuration.

URL

```
/redfish/v1/Managers/<ID>/Jobs
```

HTTP methods and privileges

Table 27. HTTP methods and privileges for DellJob

HTTP method	Required privilege
GET	Login
POST	SystemControl

Properties required for job creation

Table 28. Properties required for job creation for DellJob

Parameter	Description
TargetSettingsURI	Settings object resource URI
StartTime	Scheduled start time
EndTime	Scheduled end time

Status codes

Table 29. Status codes for DellJob

HTTP status code	Extended information
200	Base.1.0.Success
400	- Base.1.0.PropertyValueTypeError - Base.1.0.PropertyValueNotInList
403	Base.1.0.InsufficientPrivilege
404	Base.1.0.ResourceMissingAtURI
500	Base.1.0.InternalError

Navigation URL

```
/redfish/v1/Managers/<ID>/Jobs
```

HTTP methods and privileges

Table 30. HTTP methods and privileges for the instance of the resource

HTTP method	Required privilege
GET	Login
DELETE	SystemControl

Status codes

Table 31. Status codes for the instance of the resource

HTTP status code	Extended information
200	Base.1.0.Success
400	- Base.1.0.PropertyValueTypeError - Base.1.0.PropertyValueNotInList
403	Base.1.0.InsufficientPrivilege
404	Base.1.0.ResourceMissingAtURI
500	Base.1.0.InternalError

Supported Action — DeleteJobQueue

Supported Action — SetupJobQueue

Supported Action — DeleteJobQueue

Description

The DeleteJobQueue() method 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 11th Generation of 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/iDRAC.Embedded.1/DellJobService/Actions/  
DellJobService.DeleteJobQueue
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
JobID	Input	String		The JobID parameter
Message	Output	String		Error or information
MessageArgs	Output	String		Substitution variable
MessageID	Output	String		The message ID for

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	JCP010

Supported Action — SetupJobQueue

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/iDRAC.Embedded.1/DellJobService/Actions/DellJobService.SetupJobQueue
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
JobArray	Input	String		The JobArray parameter is an ordered array that contains the job objects.
StartTimeInterval	Input	String		Start time for the job queue.
UntilTime	Input	String		End time for the job queue. The parameter must be a valid ISO 8601 timestamp.
Message	Output	String		Error Message in Error Message ID.
MessageArgs	Output	String		Substitution variables for the error message.
MessageID	Output	String		Error Message ID.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	JCP010

DellLCService

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method
POST
GET

Supported Status Codes

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

Supported Action — ExportFactoryConfiguration
Supported Action — BackupImage
Supported Action — ClearProvisioningServer
Supported Action — GetRSStatus
Supported Action — ExportLCLog
Supported Action — GetRemoteServicesAPIStatus
Supported Action — ExportTechSupportReport
Supported Action — ExportHWInventory
Supported Action — LCWipe
Supported Action — ReInitiateDHS
Supported Action — RestoreImage

Supported Action — BackupImage

Description

The BackupImage() method is used for backing-up the firmware and configurations for Lifecycle Controller.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value
CheckBackupDestinationAvailability	Input	String	Check, DoNotCheck
IgnoreCertWarning	Input	String	Off, On
ProxySupport	Input	String	DefaultProxy, Off, ParametersProxy
ProxyType	Input	String	HTTP, SOCKS
ShareType	Input	String	CIFS, HTTP, HTTPS, Local, NFS, VFLASH
IPAddress	Input	String	
ImageName	Input	String	
JobName	Input	String	
Passphrase	Input	String	
Password	Input	String	

Parameter	Qualifier	Type	Value
ProxyPasswd	Input	String	
ProxyPort	Input	String	
ProxyServer	Input	String	
ProxyUname	Input	String	
ScheduledStartTime	Input	String	
ShareName	Input	String	
UntilTime	Input	String	
UserName	Input	String	
Workgroup	Input	String	
UntilTime	Input	String	
Job	Output	String	
Message	Output	String	
MessageArgs	Output	String	
MessageID	Output	String	

Supported Status Codes

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

Supported Action — ClearProvisioningServer

Description

The ClearProvisioningServer() method is used for clearing the provisioning server values.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
Message	Output	String		Error or information

Parameter	Qualifier	Type	Value	Description
MessageArgs	Output	String		Substitution variable
MessageID	Output	String		The message ID for

Supported Status Codes

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

Supported Action — ExportFactoryConfiguration

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
IgnoreCertWarning	Input	String	Off, On	Spe
ProxySupport	Input	String	DefaultProxy, Off, ParametersProxy	Spe
ProxyType	Input	String	HTTP, SOCKS	The
ShareType	Input	String	CIFS, HTTP, HTTPS, Local, NFS, VFLASH	If S
IPAddress	Input	String		IP a
Password	Input	String		The
ProxyPasswd	Input	String		The
ProxyPort	Input	String		Por
ProxyServer	Input	String		The
ProxyUname	Input	String		The
FileName	Input	String		The
ShareName	Input	String		Sha
UserName	Input	String		The
Workgroup	Input	String		The
Job	Output	String		The
Message	Output	String		Err
MessageArgs	Output	String		Sub

Parameter	Qualifier	Type	Value	Description
MessageID	Output	String		The

Supported Status Codes

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

Supported Action — ExportLCLog

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
IgnoreCertWarning	Input	String	Off, On	Spe
ProxySupport	Input	String	DefaultProxy, Off, ParametersProxy	Spe
ProxyType	Input	String	HTTP, SOCKS	The
ShareType	Input	String	CIFS, HTTP, HTTPS, Local, NFS, VFLASH	If S
IPAddress	Input	String		IP a
Password	Input	String		The
ProxyPasswd	Input	String		The
ProxyPort	Input	String		Por
ProxyServer	Input	String		The
ProxyUname	Input	String		The
FileName	Input	String		The
ShareName	Input	String		Sha
UserName	Input	String		The
Workgroup	Input	String		The
Job	Output	String		The
Message	Output	String		Err
MessageArgs	Output	String		Sub
MessageID	Output	String		The

Supported Status Codes

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

Supported Action — ExportHWInventory

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
IgnoreCertWarning	Input	String	Off, On	Specifies whether to ignore certificate warnings.
ProxySupport	Input	String	DefaultProxy, Off, ParametersProxy	Specifies whether proxy support is enabled.
ProxyType	Input	String	HTTP, SOCKS	The type of proxy to use.
ShareType	Input	String	CIFS, HTTP, HTTPS, Local, NFS, VFLASH	If share type is specified, the share must exist.
XMLSchema	Input	String	CIM-XML, Simple	The XML schema to use.
IPAddress	Input	String		IP address of the remote share.
Password	Input	String		Password of the remote share.
ProxyPasswd	Input	String		Proxy password.
ProxyPort	Input	String		Proxy port.
ProxyServer	Input	String		Proxy server.
ProxyUname	Input	String		Proxy username.
FileName	Input	String		The file name to export to.
ShareName	Input	String		Share name.
UserName	Input	String		Username of the remote share.
Workgroup	Input	String		Workgroup of the remote share.
Job	Output	String		The job ID.
Message	Output	String		The message.
MessageArgs	Output	String		Sub-parameters of the message.
MessageID	Output	String		The message ID.

Supported Status Codes

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

Supported Action — ExportTechSupportReport

Description

This method 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	Qualifier	Type	Value
ShareType	Input	String	CIFS, NFS
DataSelectorArrayIn	Input	String	HWDData, OSAppData, OSAppDataWithoutPII, TTYLogs
IPAddress	Input	String	
Password	Input	String	
FileName	Input	String	
ShareName	Input	String	
UserName	Input	String	
Job	Output	String	
Message	Output	String	
MessageArguments	Output	String	
MessageID	Output	String	

Supported Status Codes

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

Supported Action — GetRemoteServicesAPIStatus

Description

The GetRemoteServicesAPIStatus() method 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() method and the Lifecycle Controller status. Thus, GetRSStatus() method invocation is redundant.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
LCStatus	Output	String		The Lifecycle Controller status that incl
RTStatus	Output	String		The RealTime Status of the host server
ServerStatus	Output	String		Status of the host server.
Message	Output	String		Error or information message correspon
MessageArguments	Output	String		Substitution variables for dynamic error
MessageID	Output	String		The message ID for the output message
Status	Output	String		The overall status of the Remote Servi

Supported Status Codes

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

Supported Action — GetRSStatus

Description

The GetRSStatus() method is used for obtaining the Data Manager (Remote Services) status. Note: The GetRemoteServicesAPIStatus() method 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

Supported Parameters

Parameter	Qualifier	Type	Value	Description
Message	Output	String		Error or information message corresponding to the action
MessageArguments	Output	String		Substitution variables for dynamic error messages
MessageID	Output	String		The message ID for the output message
Status	Output	String		The status for the Data Manager—Ready, Error, or Information

Supported Status Codes

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

Supported Action — LCWipe

Description

The LCWipe() method 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 Parameters

Parameter	Qualifier	Type	Value	Description
Message	Output	String		Error or information message corresponding to the action
MessageArguments	Output	String		Substitution variables for dynamic error messages
MessageID	Output	String		The message ID for the output message

Supported Status Codes

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

Supported Action — ReInitiateDHS

Description

The ReInitiateDHS() method 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	Qualifier	Type	Value	Description
PerformAutoDiscovery	Input	String	Off, Now, NextBoot	A v
ProvisioningServer	Input	String		Dis
ResetToFactoryDefaults	Input	String		This
Message	Output	String		If R
MessageArguments	Output	String		Err
MessageID	Output	String		Sub
				The

Supported Parameters

Parameter
PerformAutoDiscovery
ProvisioningServer
ResetToFactoryDefaults

Supported Status Codes

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

Supported Action — RestoreImage

Description

This RestoreImage method is used to restore firmware and configurations.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
IgnoreCertWarning	Input	String	Off, On	Spe
PreserveVDConfig	Input	String	False, True	Spe
ProxySupport	Input	String	DefaultProxy, Off, ParametersProxy	Spe
ProxyType	Input	String	HTTP, SOCKS	The
ShareType	Input	String	CIFS, HTTP, HTTPS, Local, NFS, VFLASH	Typ
ImageName	Input	String		Nar
IPAddress	Input	String		IP a
Password	Input	String		The
ProxyPasswd	Input	String		The
ProxyPort	Input	String		Por
ProxyServer	Input	String		The
ProxyUname	Input	String		The
ScheduledStartTime	Input	String		Sch
UntilTime	Input	String		En
FileName	Input	String		The
ShareName	Input	String		Nar
UserName	Input	String		The
Workgroup	Input	String		The
Job	Output	String		The
Message	Output	String		Err
MessageArgs	Output	String		Sub
MessageID	Output	String		The

Supported Status Codes

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

DellLicenseCollection

Description

A collection of DellLicense resource

URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellLicenseCollection
```

Supported HTTP Method and Privileges

Redfish Method Privilege Group

DellLicenseManagementService

Description

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

URL

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

Supported HTTP Method and Privileges

Rethinking the Privilege Positioning

Supported Parameters

Warning: Do not use

Supported Action — [ExportLicenseToNetworkShare](#)
 Supported Action — [ImportLicenseFromNetworkShare](#)
 Supported Action — [ImportLicense](#)
 Supported Action — [ShowLicenseBitsSupported](#) Action — [DeleteLicenseSupported](#) Action — [ExportLicenseSupported](#) Action — [ExportLicenseByDeviceToNetworkShare](#)

Supported Action — ExportLicenseToNetworkShare

Description

ExportLicenseToNetworkShare is a method used to export License files from the IDRAC. The ExportLicenseToNetworkShare method exports a License, specified by EntitlementID, to a user defined location.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
EntitlementID	Input	String		Entitlement ID
FileName	Input	String		If in use, the file name of the license to be imported.
IPAddress	Input	String		IP address of the network share.
IgnoreCertWarning	Input	String	Off, On	Whether to ignore certificate warnings.
Password	Input	String		Password of the network share.
ProxyPasswd	Input	String		Proxy password.
ProxyPort	Input	String		Proxy port.
ProxyServer	Input	String		Proxy server.
ProxySupport	Input	String	Off, DefaultProxy, ParametersProxy	Whether to support proxy.
ProxyType	Input	String	HTTP, SOCKS	Proxy type.
ProxyUname	Input	String		Proxy username.
ShareName	Input	String		Share name.
ShareType	Input	String	NFS, CIFS, HTTP, HTTPS	Share type.
UserName	Input	String		Username of the network share.
Workgroup	Input	String		Workgroup of the network share.
Job	Output	String		Job ID.
Message	Output	String		Message.
MessageArgs	Output	String		Message arguments.
MessageID	Output	String		Message ID.

Supported Action — ImportLicenseFromNetworkShare

Description

The ImportLicenseFromNetworkShare() method imports the License given in the network share location.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
FQDD	Input	String		FQDD of the device
IPAddress	Input	String		IP address of the device
IgnoreCertWarning	Input	String	Off, On	Whether to ignore certificate warnings
ImportOptions	Input	String	NoOption, Force, All	Options for importing the license
LicenseName	Input	String		Name of the license
Password	Input	String		Password of the device
ProxyPasswd	Input	String		Proxy password
ProxyPort	Input	String		Proxy port
ProxyServer	Input	String		Proxy server
ProxySupport	Input	String	Off, DefaultProxy, ParametersProxy	Whether to support proxy
ProxyType	Input	String	HTTP, SOCKS	Proxy type
ProxyUname	Input	String		Proxy username
ShareName	Input	String		Share name
ShareType	Input	String	NFS, CIFS, HTTP, HTTPS	Share type
UserName	Input	String		Username of the device
Workgroup	Input	String		Workgroup of the device
Job	Output	String		Job ID
Message	Output	String		Message
MessageArgs	Output	String		Message arguments
MessageID	Output	String		Message ID

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/iDRAC.Embedded.1/DellLicenseManagementService/Actions/DellLicenseManagementService.ImportLicense
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
FQDD	Input	String		FQDD
ImportOptions	Input	String		Flag
LicenseFile	Input	String		A b
Message	Output	String		Err
MessageArgs	Output	String		Sub
MessageID	Output	String		The

Supported Action — ShowLicenseBits

Description

The ShowLicenseBits() method 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/iDRAC.Embedded.1/DellLicenseManagementService/Actions/  
DellLicenseManagementService.ShowLicenseBits
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
LicenseBits	Input	String		The
Message	Output	String		Err
MessageArgs	Output	String		Sub
MessageID	Output	String		The

Supported Action — DeleteLicense

Description

A method used to delete assigned licenses. The DeleteLicense() method 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/iDRAC.Embedded.1/DellLicenseManagementService/Actions/  
DellLicenseManagementService.DeleteLicense
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
FQDD	Input	String		FQDD
DeleteOptions	Input	String	NoOption, Force, All	Flags
EntitlementID	Input	String		Entitlement ID
Message	Output	String		Error Message
MessageArgs	Output	String		Sub-parameters
MessageID	Output	String		The ID of the message

Supported Action — ExportLicense

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Qualifier	Type	Value	Description
EntitlementID	Input	String		Entitlement ID
LicenseFile	Output	String		Base64 encoded license file
Message	Output	String		Error Message
MessageArgs	Output	String		Sub-parameters
MessageID	Output	String		The ID of the message

Supported Action — ExportLicenseByDeviceToNetworkShare

Description

ExportLicenseByDeviceToNetworkShare is a method used to export License files from the IDRAC. The ExportLicenseByDeviceToNetworkShare method 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

Supported Parameters

Parameter	Qualifier	Type	Value	Description
FQDD	Input	String		FQDD of the device
FileName	Input	String		The name of the file to export
IPAddress	Input	String		IP Address of the device
Password	Input	String		Password of the device
ShareName	Input	String		Name of the network share
ShareType	Input	String	NFS, CIFS	Type of the network share
UserName	Input	String		Username of the network share
Workgroup	Input	String		Workgroup of the network share
Job	Output	String		Job ID of the operation
Message	Output	String		Message of the operation
MessageArgs	Output	String		Sub-parameters of the message
MessageID	Output	String		The ID of the message

[Supported Action — ExportLicense](#)
[Supported Action — ExportLicenseByDeviceToNetworkShare](#)

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.LCAAttributes.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* white paper at 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/<ID>/Actions/Oem/DellManager.ResetToDefaults
```

HTTP methods and privileges

Table 32. HTTP methods and privileges for ResetToDefaults

HTTP method	Required privilege
POST	SystemControl

Status codes

Table 33. Status codes for ResetToDefaults

HTTP status code	Extended information	Error Message Code
200	Base.1.0.Success	
400		- RAC1035 - HWC0001 - RAC947
403	InsufficientPrivilege	RAC0506
404	Base.1.2.ResourceMissingAtURI	SYS403
500	Base.1.2.InternalError	SYS446

Updatable properties

Table 34. Supported properties and values for ResetToDefaults

Property	Values
ResetType	- All - ResetAllWithRootDefaults - Default

Supported action — Export, Import, and Preview

Table 35. Supported HTTP methods and features

HTTP method	Feature
POST	Exporting configuration
POST	Importing configuration

HTTP method	Feature
POST	Preview configuration

Export resource URL and response details

URL

```
redfish/v1/Managers/<id>/Actions/Oem/EID_674_Manager.ExportSystemConfiguration
```

Status codes

Table 36. Status codes for the action

HTTP status code	Extended information	Error Message Code
202		
400	- Base.1.2.PropertyMissing - Base.1.2.PropertyValueTypeError - Base.1.2.PropertyValueNotInList	
400		- RAC013 - SYS406 - SYS433 - RAC1155
500	Base.1.2.InternalError	SWC0058
503		- RAC052 - RAC0679

Properties and values

Table 37. Properties and values for the action

Property	Values
ExportFormat	XML, JSON
ExportUse	Default, Clone, Replace
IncludeInExport	Default, IncludeReadOnly, IncludePasswordHashValues
ShareParameters	See Share parameters and values .

Import resource URL and response details

URL

```
redfish/v1/Managers/<id>/Actions/Oem/EID_674_Manager.ImportSystemConfiguration
```

Status codes

Table 38. Status codes for the action

HTTP status code	Extended information
202	Accepted

Properties and values

Table 39. Properties and values for the action

Property	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 Share parameters and values .

Preview resource URL and response details

URL

```
redfish/v1/Managers/<id>/Actions/Oem/EID_674_Manager.ImportSystemConfigurationPreview
```

Status codes

Table 40. Status codes for the action

HTTP status code	Extended information	Error Message Code
202		
400	- Base.1.2.PropertyMissing - Base.1.2.PropertyValueTypeError - Base.1.2.PropertyValueNotInList	
400		- RAC013 - SYS406 - SYS433 - RAC1155
500	Base.1.2.InternalError	SWC0058
503		- RAC052 - RAC0679

Share parameters and values

Table 41. Share parameters and values

Parameter	Values
IPAddress	IP address of the network share
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 is ALL.

DellMemory

Description

An instance of DellMemory will have Memory Device specific data.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/Memory/DellMemory/<id>
```

Supported HTTP Method and Privileges

Required Privilege
-
Get

DellNIC

Description

An instance of DellNIC will have NIC device specific data.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/NetworkDeviceFunctions/DellNIC
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Parameters

Parameter	Value
DCIM_NICView	BusNumber, MediaType, ProductName, NicMode, PermanentiSCSIMACAddress
NicMode	Unknown, Enabled, Disabled

DellNICCapabilitiesCollection

Description

A collection of DellNIC resource.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/NetworkDeviceFunctions/DellNICCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellNICCapabilities

Description

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

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/NetworkDeviceFunctions/DellNICCapabilities
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Parameters

Parameter	Value
DCIM_NICCapabilities	iSCSIOffloadSupport, iSCSIBootSupport, FCoEBootSupport, PXEBootSupport, FlexAddressingSupport
Properties	Unknown, Supported, NotSupported

DellNICCapabilitiesCollection

Description

A collection of DellNICCapabilities resource.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/NetworkDeviceFunctions/  
DellNICCapabilitiesCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellNICStatistics

Description

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

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/NetworkAdapters/NetworkDeviceFunctions/  
DellNICStatistics
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Parameters

Parameter	Value
DCIM_NICStatistics	RxUnicast, TxUnicast, TxBytes, RxBytes, TxMut

DellNICStatisticsCollection

Description

A collection of DellNICStatistics resource.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/NetworkAdapters/NetworkDeviceFunctions/  
DellNICStatisticsCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

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/System.Embedded.1/DellNumericSensor/<id>
```

Supported HTTP Method and Privileges

Required Privilege
- GET
Login

Supported Parameters

Parameter
-
Sensor
-
Flow
-
Water
-
Type
-
Counter
-
Current
-
Humidity
-
Intrusion
-
Lock
-
Other

V a t a m e t e r

, Power Consumption
, Power Production
, Presence
, Pressure
, Smoke

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Parameter

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DellNumericSensorCollection

Description

A collection of DellNumericSensor resource

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellNumericSensorCollection
```

Supported HTTP Method and Privileges

Redfish
Resource
Privilege
-
Group
in

DellOSDeploymentService

Description

The DellOSDeploymentService resource provides some actions to support OS deployment configurations.

URL

/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService

Supported HTTP Method and Privileges

Redfish
Resource
Privilege
-
Group
in

Supported Parameters

Supported Status Codes

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

- Supported Action — BootToHD
- Supported Action — BootToISOFromVFlash
- Supported Action — BootToNetworkISO
- Supported Action — ConfigurableBootToNetworkISO
- Supported Action — ConnectNetworkISOImage
- Supported Action — DeleteISOFromVFlash
- Supported Action — DetachISOFromVFlash
- Supported Action — DetachDrivers
- Supported Action — DetachISOImage
- Supported Action — UnpackAndShare
- Supported Action — DownloadISOToVFlash
- Supported Action — GetNetworkISOImageConnectionInfo
- Supported Action — GetDriverPackInfo
- Supported Action — GetAttachStatus
- Supported Action — DisconnectNetworkISOImage
- Supported Action — UnpackAndAttach

Supported Action — BootToHD

Description

The BootToHD() method is used for one time boot to the host server's hard disk. Return values for BootToHD() shall be as specified in Table 29, where the method-execution behavior matches the return- code description. BootToHD() method's parameters are specified in Table 30.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService/Actions/DellOSDeploymentService.BootToHD
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter
-
Method
-
Supported
-
Reset
-
Warm
Reset
-
Shutdown

Supported Status Codes

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

Supported Action — BootToISOFromVFlash

Description

The BootToISOFromVFlash() method 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() method, where the method-execution behavior matches the return-code description.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService/Actions/DellOSDeploymentService.BootToISOFromVFlash
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Supported Status Codes

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

Supported Action — BootToNetworkISO

Description

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

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService/Actions/DellOSDeploymentService.BootToNetworkISO
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter - MetadataProperties, NoReset, WarmR

Supported Status Codes

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

Supported Action — ConfigurableBootToNetworkISO

Description

The ConfigurableBootToNetworkISO() method 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/System.Embedded.1/DelOSDeploymentService/Actions/
DelOSDeploymentService.ConfigurableBootToNetworkISO

```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter
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Supported Status Codes

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

Supported Action — ConnectNetworkISOImage

Description

The ConnectNetworkISOImage() method 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 method 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 method 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() method. 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() method that utilizes the remote file system (RFS).

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService/Actions/DellOSDeploymentService.ConnectNetworkISOImage
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter

Supported Status Codes

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

Supported Action — DeleteISOFromVFlash

Description

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

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService/Actions/  
DellOSDeploymentService.DeleteISOFromVFlash
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter
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Supported Status Codes

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

Supported Action — DetachISOFromVFlash

Description

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

URL

```

/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService/Actions/
DellOSDeploymentService.DetachISOFromVFlash

```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Supported Status Codes

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

Supported Action — DetachDrivers

Description

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

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService/Actions/DellOSDeploymentService.DetachDrivers
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter
-
Method
-
Supported
-
Reset
-
Warm
-
Reset
-
Shutdown

Supported Status Codes

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

Supported Action — DetachISOImage

Description

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

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService/Actions/DellOSDeploymentService.DetachISOImage
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Supported Status Codes

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

Supported Action — DisconnectNetworkISOImage

Description

The DisconnectNetworkISOImage() method is used to disconnect and detach the ISO Image from the host system. The following table lists the return values for the DisconnectNetworkISOImage() method, where the method-execution behavior matches the return-code description.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DelOSDeploymentService/Actions/DelOSDeploymentService.DisconnectNetworkISOImage
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter - MetadataSystemProperties, NoReset, WarmR

Supported Status Codes

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

Supported Action — DownloadISOToVFlash

Description

The DownloadISOToVFlash() method is used to download the pre-operating system ISO Image to the vFlash SD card. The following table lists the return values for DownloadISOToVFlash() method, where the method-execution behavior matches the return-code description.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService/Actions/DellOSDeploymentService.DownloadISOToVFlash
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter
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Supported Status Codes

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

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/System.Embedded.1/DellOSDeploymentService/Actions/DellOSDeploymentService.GetAttachStatus
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter - MetadataType, NoReset,

Supported Status Codes

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

Supported Action — GetDriverPackInfo

Description

The GetDriverPackInfo() method 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/System.Embedded.1/DellOSDeploymentService/Actions/DellOSDeploymentService.GetDriverPackInfo
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter
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Supported Status Codes

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

Supported Action — GetNetworkISOImageConnectionInfo

Description

The GetNetworkISOImageConnectionInfo() method 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 method-execution behavior matches the return-code description.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService/Actions/DellOSDeploymentService.GetNetworkISOImageConnectionInfo
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter - Method: POST, Requested: No response

Supported Status Codes

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

Supported Action — UnpackAndAttach

Description

The UnpackAndAttach() method 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() method, where the method-execution behavior matches the return- code description.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService/Actions/  
DellOSDeploymentService.UnpackAndAttach
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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Supported Status Codes

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

Supported Action — UnpackAndShare

Description

The UnpackAndShare() method 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 method-execution behavior matches the return-code description.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellOSDeploymentService/Actions/DellOSDeploymentService.UnpackAndShare
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter - Metadata

Supported Status Codes

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

DellPowerSupplyCollection

Description

A collection of DellPowerSupply resource.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/Power/PowerSupplies/DellPowerSupplyCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPowerSupplyViewCollection

Description

A collection of DellPowerSupplyView resource.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/Power/PowerSupplies/DellPowerSupplyViewCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPCleSSDExtender

Description

An instance of DellPCleSSDExtender will have data specific to the PCleSSD extender in the managed system.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/Storage/DellPCleSSDExtender
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Parameters

Parameter	Value
RollupStatus	Unknown, Ok, Degraded, Error

DellPCleSSDExtenderCollection

Description

A collection of DellPCleSSDExtender resource.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/Storage/DellPCleSSDExtenderCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPCleSSD

Description

An instance of DellPCleSSD will have PCIe Solid State Drive specific data.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/Storage/DellPCleSSD
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Parameters

Parameter	Value
DriveFormFactor	Unknown, 1.8Inch, 2.5Inch, 3.5Inch, AddInCard,

DellPCleSSDCollection

Description

A collection of DellPCleSSD resource.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/Storage/DellPCleSSDCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPCleSSDBackPlane

Description

An instance of DellPCleSSDBackPlane will have PCIeSSD back plane specific data.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/Storage/DellPCleSSDBackPlane
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPCleSSDBackPlaneCollection

Description

A collection of DellPCleSSDBackPlane resource.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/Storage/DellPCleSSDBackPlaneCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPCleFunction

Description

An instance of DellPCleFunction will have PCI device specific data.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellPCleFunction/<id>
```

Supported HTTP Method and Privileges

Rethinking Methodology

Supported Parameters

Parameter

Parameter

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Parameter

, Other, Unknown, AGP4X, AGP8X, EISA, I/O Riser Card Slot

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Parameter

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DellPersistentStorageService

Description

The DellPersistentStorageService resource provides some actions to support VFlash functionality.

URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellPersistentStorageService
```

Supported HTTP Method and Privileges

Supported Parameters

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	JCP017	

Supported Action — FormatPartition

Supported Action — FormatPartition

Description

The FormatPartition Action is used for formatting a partition on a vFlash.

URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellPersistentStorageService/Actions/DellPersistentStorageService.FormatPartition
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login

Supported Parameters

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	JCP017	

DellPhysicalDisk

Description

An instance of DellPhysicalDisk will have Physical Disk specific data.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/Storage/Drives/DellPhysicalDisk/<id>
```

Supported HTTP Method and Privileges

Supported Parameters

Parameter
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DellPresenceAndStatusSensor

Description

An instance of DellPresenceAndStatusSensor will have presence and status sensor specific data.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellPresenceAndStatusSensor/<id>
```

Supported HTTP Method and Privileges

Redfish Method Privilege Group

Supported Parameters

Parameter Set Name

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V a t a n e t e r

n , P o w e r P r o d u c t i o n , P r e s e n c e , P r e s s u r e , S m o k e D e t e c t i o n , S w i t c

DellPresenceAndStatusSensorCollection

Description

A collection of DellPresenceAndStatusSensor resource

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellPresenceAndStatusSensorCollection
```

Supported HTTP Method and Privileges

Redfish Managed Privilege Group

DellPowerSupply

Description

An instance of DellPowerSupply will have data specific to the Power Supply devices in the managed system.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/Power/PowerSupplies/DellPowerSupply/PSU.Slot.2
```

Supported HTTP Method and Privileges

Redfish Managed Privilege Group

DellPowerSupplyView

Description

An instance of DellPowerSupplyView will have data specific to the Power Supply devices in the managed system.

URL

```
/redfish/v1/Dell/Chassis/System.Embedded.1/Power/PowerSupplies/DellPowerSupplyView/PSU.Slot.2
```

Supported HTTP Method and Privileges

Redfish
Method
Supported
Privileges

DellProcessor

Description

An instance of DellProcessor will have CPU specific data.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/Processors/DellProcessor/<id>
```

Supported HTTP Method and Privileges

Rethinking Methodology

Supported Parameters

Parameter - **Not** **enabled** **for** **new** **models**

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DellRaidService

Description

The DellRaidService resource provides some actions to support RAID functionality.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService
```

Supported HTTP Method and Privileges

Required Privileges

Supported Parameters

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Parameter

IDD6, RAID60
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Proposals
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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	
Supported Action		
— AssignSpare		
Supported Action — BlinkTarget		
Supported Action — CheckVDValues		
Supported Action — ClearForeignConfig		
Supported Action — ConvertToRAID		
Supported Action — ConvertToNonRAID		
Supported Action — GetDHSDisks		
Supported Action — LockVirtualDisk		
Supported Action — GetRAIDLevels		
Supported Action — SetControllerKey		
Supported Action — RemoveControllerKey		
Supported Action — UnBlinkTarget		
Supported Action — EnableControllerEncryption		
Supported Action — ReKey		
Supported Action — ResetConfig		

Supported Action — AssignSpare

Description

The AssignSpare() method 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/System.Embedded.1/DellRaidService/Actions/DellRaidService.AssignSpare
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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Wait timer

Any Bytes

At 100 PPS Data capable

, 10 PPS Line capable

Dislike Embedded with FDE

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — BlinkTarget

Description

The BlinkTarget() method 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 method results in setting the LED to blink the identify pattern or turns off the blinking of the identify pattern. The method is real time, blink cannot be scheduled as part of a job.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService/Actions/DellRaidService.BlinkTarget
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter
DiskIdentifyPattern

Parameter
- ALL
RAID0
, RAID1
, RAID10
, RAID5
, RAID50
, RAID6
, RAID60
Disks
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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — CheckVDValues

Description

The CheckVDValues() method is used to determine the possible sizes of Virtual disks and the default settings, provided a RAID level and set of physical disks. The VDDPropArray 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/System.Embedded.1/DellRaidService/Actions/  
DellRaidService.CheckVDValues
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — ClearForeignConfig

Description

The ClearForeignConfig() method is used to prepare any foreign physical disks for inclusion in the local configuration.

URL

```

/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService/Actions/DellRaidService.ClearForeignConfig

```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter

DiskType
Description
Abstraction
Manufacturer
Qtor
Near
All
Vendor
Valid
RAID1
RAID10
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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — ConvertToRAID

Description

The ConvertToRAID() method is used to convert a physical disks in Non-RAID state to a state usable for RAID. After the method is successfully executed the DCIM_PhysicalDiskView.RAIDStatus property of that physical disk should reflect the new state.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService/Actions/DellRaidService.ConvertToRAID
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — ConvertToNonRAID

Description

The ConvertToNonRAID() method is used to convert a physical disks in RAID state of "Ready" to a Non-RAID state. After the method is successfully executed, the DCIM_PhysicalDiskView.RAIDStatus property of that physical disk should reflect the new state.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService/Actions/DellRaidService.ConvertToNonRAID
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter - DiskReadyStatus - AbortMigrate

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — EnableControllerEncryption

Description

The EnableControllerEncryption() method sets either Local Key Management (LKM) or Dell Key Management (DKM) on controllers that support encryption of the drives.

URL

/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService/Actions/DellRaidService.EnableControllerEncryption

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter
Disk
HDD
SSD
Abstract
Manufacturer
RAID
RAID1

Parameter

RAID10,
RAID5,
RAID50,
RAID6,
RAID60
Disks
Proposed
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NVMe,
SAS,
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Parameter

Boolean, Topology, Status, Block Size, Topology, Data Capable, Topology, Link

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — GetAvailableDisks

Description

The GetAvailableDisks () method is used to determine minimum number of drives required to create virtual disks.

URL

```

/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService/Actions/
DellRaidService.GetAvailableDisks

```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter

DiskType
Description
Abstract
Manufacturer
Qtor
Near
All
Valid
RAID1
RAID10
RAID5

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — GetDHSDisks

Description

The GetDHSDisks() method 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/System.Embedded.1/DellRaidService/Actions/DellRaidService.GetDHSDisks
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter

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SSD

About
Manufacturer

RAID
0
, RAID
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, RAID
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, RAID
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, R

Parameter

ALD6, RAID60
Disks, NVMe, SAS, SATA
M&M
eLKM
VRAP
ID
ePM
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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — GetRAIDLevels

Description

The GetRAIDLevels() method is used to determine the possible choices of RAID Levels to create virtual disks. If the list of physical disks is not provided, this method accesses information for all the connected disks.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService/Actions/DellRaidService.GetRAIDLevels
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

RAIDLevel

Parameter
- ALL VRAID0, RAID1, RAID10, RAID5, RAID50, RAID6, RAID60
- **Disks**
- **Properties**

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — LockVirtualDisk

Description

The LockVirtualDisk() method encrypts the virtual disk.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService/Actions/  
DellRaidService.LockVirtualDisk
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Natameter

Disk
 HDD
 SSD
 Abstract
 Model
 RAID
 RAID 1

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — ReKey

Description

The ReKey () method resets the key on the controller that support encryption of the of drives. This method switches the controller mode.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService/Actions/DellRaidService.ReKey
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter

DiskType
Description
Abstraction
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RAID5

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — RemoveControllerKey

Description

The RemoveControllerKey() method erases the encryption key on controller. CAUTION: All encrypted drives shall be erased.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService/Actions/DellRaidService.RemoveControllerKey
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — ResetConfig

Description

The ResetConfig() method is used to delete all the virtual disks and unassign all hot spare physical disks. CAUTION: All data on the existing virtual disks will be lost.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService/Actions/DellRaidService.ResetConfig
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — SetControllerKey

Description

The SetControllerKey() method 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/System.Embedded.1/DellRaidService/Actions/  
DellRaidService.SetControllerKey
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

Supported Action — UnBlinkTarget

Description

The UnblinkTarget () method is used to stop blinking the light present on the physical disk represented by the Target FQDD. The method is real time, unblink cannot be scheduled as part of a job.

URL

```

/redfish/v1/Dell/Systems/System.Embedded.1/DellRaidService/Actions/
DellRaidService.UnBlinkTarget

```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter

DiskType
Description
Abstract
Manufacturer
Qtor
Near
All
Vendor
Valid
RAID1
RAID10
RAID5

V
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i
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m
e
t
e
r

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R
A
I
D
5
0

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	STOR003	

DellSensorCollection

Description

A collection of DellSensor resource

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellSensorCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellSensor/<id>
```

Supported HTTP Method and Privileges

Required Privilege
T T P M e t h o d
Get
E
T

Supported Parameters

Parameter	Value
SensorType	AirFlow, Counter, Current, Humidity, Intrusion, Lock, Other, PowerConsumption, PowerSupplyFan, SmokeDetection, Switch, Tachometer, Temperature, Unknown, Voltage
EnabledState	Deferred, Disabled, Enabled, EnabledButOffline, InTest, NotApplicable, Other, Quiesced
HealthState	CriticalFailure, Degraded/Warning, MajorFailure, MinorFailure, NonRecoverableError, OK

DellServiceRoot

Description

This object represents the Redfish OEM extensions for root service.

URL

```
/redfish/v1
```

HTTP methods and privileges

Table 42. HTTP methods and privileges for DellServiceRoot

HTTP method	Required privilege
GET	Login

Properties

Table 43. Properties for DellServiceRoot

Property	Description
ManagerMACAddress	iDRAC MAC address
IsBranded	Integer
ServiceTag	System Service Tag

DellSoftwareInstallationService

Description

The DellSoftwareInstallationService resource provides some actions to support software installation functionality.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellSoftwareInstallationService
```

Supported HTTP Method and Privileges

Required privileges: Configuration, Component, Login

Supported Parameters

Parameter
-
O
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O
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C
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W
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x
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O
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f
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P
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o
x
y

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	SUP001	

Supported Action — GetRepoBasedUpdateList
Supported Action — InstallFromRepository
Supported Action — InstallFromURI

Supported Action — GetRepoBasedUpdateList

Description

This method 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/System.Embedded.1/DellSoftwareInstallationService/Actions/  
DellSoftwareInstallationService.GetRepoBasedUpdateList
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	SUP001	

Supported Action — InstallFromRepository

Description

This method 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 method 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/System.Embedded.1/DellSoftwareInstallationService/Actions/DellSoftwareInstallationService.InstallFromRepository
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter
Origin
Certificate
Warning
Proxy
Property
Of
Parameter
Proxy
Port

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	SUP001	

Supported Action — InstallFromURI

Description

InstallFromURI method is used for creating a job for update service. The successful execution of this method creates a job.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellSoftwareInstallationService/Actions/DellSoftwareInstallationService.InstallFromURI
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter - Minimum of 10 characters, Warning, ID, of system support, of

Parameter

Parameter Proxy

Parameter Proxy

Parameter Proxy

Parameter Proxy

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400	SUP001	

DellSwitchConnection

Description

An instance of DellSwitchConnection will have the switch connection view information of all the ports.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/NetworkPorts/DellSwitchConnection/<id>
```

Supported HTTP Method and Privileges

DellSwitchConnectionCollection

Description

A collection of DellSwitchConnection resource

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/NetworkPorts/DellSwitchConnectionCollection
```

Supported HTTP Method and Privileges

DellSystem

Description

An instance of DellSystem will have data representing the overall system devices in the managed system.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/DellSystem/<id>
```

Supported HTTP Method and Privileges

Redfish Method Privilege Group

Supported Parameters

Parameter Definition

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Unknown

Dear Reader, I don't know

Unknown

Dear Reader, I don't know

Registrar

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premium
table
is OK

Unknown
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complete
table
state
Department
of
Education

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Parameter

ψ Half Width, 1 U Quarter Width, Dual Width, Full Height, Dual Width

Parameter

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, Half Height
, Not Applicable
, Single Width
, Full Height
, Single

V a t a m e t e r

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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 44. HTTP methods and privileges for Install

HTTP method	Required privilege
POST	.d9 file type — ConfigureComponents, Login .pm file type — ConfigureComponents, Login .exe file type — ConfigureComponents, Login

Updatable properties

Table 45. Properties and values for Install

Property	Values
InstallUpon	- Now - NowAndReboot - NextReboot

Status codes

Table 46. Status codes for Install

HTTP status code	Extended information	Error Message Code
202		SYS408
400		- SUP024 - SYS406 - OSD35
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

DellvFlashCollection

Description

A collection of DellvFlash resource

URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellvFlashCollection
```

Supported HTTP Method and Privileges

Required Privileges

DellVirtualDisk

Description

An instance of DellVirtualDisk will have data specific to the Virtual Disks in the system.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/Storage/Volumes/DellVirtualDisk/  
Disk.Virtual.0:RAID.Slot.5-1
```

Supported HTTP Method and Privileges

Redfish Method Privilege
- GET
PUT
POST
DELETE
PATCH
OPTIONS

Supported Parameters

Parameter
- BIOS
Boot
BootOrder
BootSourceOverride
BootSourceOverrideList
SAS
SAS, SATA
SAS, SCSI
USB

Parameter

Unknown

Default Catchability

Enabled

Unknown

Default Catchability

Ra**t**i**o****n**e**r**
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N
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DellVirtualDiskCollection

Description

A collection of DellVirtualDisk resource.

URL

```
/redfish/v1/Dell/Systems/System.Embedded.1/Storage/Volumes/DellVirtualDiskCollection
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Drive

Description

The Drive schema represents a single physical disk drive for a system, including links to associated Volumes.

URL

```
/redfish/v1/Systems/System.Embedded.1/Storage/Drives/<id>
```

Supported HTTP Method and Privileges

Required Privilege
Read Only
Figure Component

Redfish Metadata privileges

· Login
· Get
· Attach
· Configure
· Components
· Login

Supported Parameters

Parameter
Non
supported
to be
dedicated
.
Empty
property
set
with
checked
.
Locked
.
Fo

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
202		

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/<ID>/EthernetInterfaces
```

HTTP methods and privileges

Table 47. HTTP methods and privileges for EthernetInterfaces

HTTP method	Required privilege
GET	Login

Ethernet — Instance

URL

```
/redfish/v1/Managers/<ManagerInstanceID>/EthernetInterfaces/<EthernetInstanceID>
```

HTTP methods and privileges

Table 48. HTTP methods and privileges for instance of EthernetInterfaces

HTTP method	Required privilege
PATCH	ConfigureManager

Properties

Table 49. Properties for EthernetInterfaces

Property	Description
Hostname	Updates hostname
IPv4	Updates IPv4
IPv6	Updates IPv6
IPv6Static	Updates IPv6Static

Status codes and error message codes

Table 50. Status codes and error message codes for EthernetInterfaces

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	- ISM0013 - RAC0253 - RAC0254 - RAC0255 - RAC0259 - SWC0296
500	Base.1.0.InternalError	

Reference Properties

URL

```
/redfish/v1/Systems/<ServiceTag+nodeid>/EthernetInterfaces
```

Description

This resource is used to represent NIC resources as part of the Redfish specification.

HTTP methods and privileges

Table 51. HTTP methods and privileges

HTTP method	Required privilege
GET	Login

Status codes

Table 52. Status codes

HTTP status code
200
400
500

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.

EthernetInterfaceCollection

Description

A Collection of EthernetInterface resource instances.

URL

```
/redfish/v1/Systems/System.Embedded.1/EthernetInterfaces
```

Supported HTTP Method and Privileges

Redfish Method Privilege Group

EventService

Description

The Event Service resource contains properties for managing event subscriptions 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

Redfish Resource Privilege
-
RESTful Figure Manager, Login, GET, PATCH, Figure Manager, L

Supported Action — SubmitTestEvent

Contained Resource

Subscriptions

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

FabricCollection

Description

A Collection of Fabric resource instances.

URL

```
/redfish/v1/Fabrics
```

Supported HTTP Method and Privileges

Required Privilege
GET
Login

Contained resources

PCle

PCle

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/PCle
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Contained resources

Switches

HostInterfaceCollection

Description

A Collection of HostInterface resource instances.

URL

/redfish/v1/Managers/iDRAC.Embedded.1/HostInterfaces

Supported HTTP Method and Privileges

Redfish Embedded iDRAC Privilege
GET

Navigation URL

/redfish/v1/Managers/iDRAC.Embedded.1/HostInterfaces/<id>

Supported HTTP Method and Privileges

Redfish Embedded iDRAC Privilege
POST
GET

JSONSchemas

Description

This resource is used for representing the Schema File locator resource for a Redfish implementation.

URL

```
/redfish/v1/JSONSchemas
```

HTTP methods and privileges

Table 53. HTTP methods and privileges for JSONSchemas

HTTP method	Required privilege
GET	Login

Status codes

Table 54. Status codes for JSONSchemas

HTTP status code
200
400
500

LogEntryCollection

Description

A Collection of LogEntry resource instances.

URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/Logs/FaultList
```

Supported HTTP Method and Privileges

Redfish Embedded privileges

LogService

Description

This resource represents the log service for the resource or service to which it is associated.

URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/LogServices/FaultList
```

Supported HTTP Method and Privileges

Required Privileges

- Read Logs, Login
- Get Login
- Authenticate Manager, Login

Supported Parameters

Parameter
-
@
v
a
p
w/
rW
in
e
a
P
a
l
i
c
y

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		

LogServiceCollection

Description

A Collection of LogService resource instances.

URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/LogServices
```

Supported HTTP Method and Privileges

Required Privilege

Supported Action — ClearLog

Supported Action — ClearLog

Description

This action is used to clear the log for this Log Service.

URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/LogServices/Sel/Actions/LogService.ClearLog
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ClearLogs, Login

Supported Parameters

Parameter

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		

Manager

Description

A Collection of Manager resource instances.

URL

```
/redfish/v1/Managers
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

```
/redfish/v1/Managers/<id>
```

Supported HTTP Method and Privileges

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

Supported Parameters

Parameter	Value
ManagerType	BMC

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](#)
Supported Action — [ResetToDefaults](#)

Related Link: [DellManager](#)

Supported Action — Reset

Description

The reset action resets/reboots the manager.

URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/Actions/Manager.Reset
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Status Codes

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

```
/redfish/v1/Managers/<ID>/Accounts
```

HTTP methods and privileges

Table 55. HTTP methods and privileges for ManagerAccount

HTTP method	Required privilege
GET	Login

Navigation URL

```
/redfish/v1/Managers/<ID>/Accounts/<Account-id>
```

HTTP methods and privileges

Table 56. HTTP methods and privileges for the instance of the resource

HTTP method	Required privilege
GET	Login

Updatable properties

Table 57. Properties and values for instance of the resource

Property	Value
UserName	Updates account user name
Password	Updates account password
RoleId	Updates account role
Enabled	Enables or disables the user

Status codes

Table 58. Status codes for the instance of the resource

HTTP status code	Error message code
200	
400	• RAC0288 • RAC0291
404	
500	

Role

ManagerNetworkProtocol

Description

This resource is used to obtain or modify the network services managed by a given manager.

URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/NetworkProtocol
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login
GET	Login

NOTE: For information about the DHCP version, execute GET on URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/Attributes
```

Memory

Description

A Collection of Memory resource instances.

URL

```
/redfish/v1/Systems/System.Embedded.1/Memory
```

Supported HTTP Method and Privileges

Redfish Embedded Management
Privilege
-
GET

Navigation URL

/redfish/v1/Systems/System.Embedded.1/Memory/<id>

Supported HTTP Method and Privileges

Redfish Embedded Management
Privilege
-
POST
Configuration

Supported Parameters

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Supported Status Codes

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

[Supported Action](#) — [MemoryMetrics](#)

Supported Action — MemoryMetrics

Description

MemoryMetrics contains usage and health statistics for a single Memory module or device instance.

URL

```
/redfish/v1/Systems/System.Embedded.1/Memory/iDRAC.Embedded.1%23DIMMSLOT1/Metrics
```

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

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	

MessageRegistryFileCollection

Description

A Collection of MessageRegistryFile resource instances.

URL

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

Supported HTTP Method and Privileges

Required privilege
GET

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 59. HTTP methods and privileges for Messages

HTTP method	Required privilege
GET	Login

Status codes

Table 60. Status codes for Messages

HTTP status code
200
400
500

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

```
/redfish/v1/Systems/System.Embedded.1/NetworkAdapters
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

NetworkDeviceFunctions

Description

This resource is used to represent the collection of NetworkDeviceFunction.

URL

```
/redfish/v1/Systems/System.Embedded.1/NetworkAdapters/<NetworkAdapters-Id/NetworkDeviceFunctions
```

HTTP methods and privileges

Table 61. HTTP methods and privileges for NetworkDeviceFunctions

HTTP method	Required privilege
GET	Login

Updatable properties

Table 62. Properties for the Settings resource

Property	Description
@Redfish.SettingsApplyTime	Define when the settings are applied. This is supported on the Settings URL.

Status codes

Table 63. Status codes

HTTP status code	Extended information	Error message code
200		
405	Base.1.0.GeneralError	SYS402
500	Base.1.0.InternalError	

NetworkDeviceFunctions — Instance

Description

This resource is used to represent a logical interface exposed by the network adapter.

URL

```
/redfish/v1/Systems/System.Embedded.1/NetworkAdapters/<NetworkAdapters-Id/NetworkDeviceFunctions/<NetworkDeviceFunction-Id>
```

HTTP methods and privileges

Table 64. HTTP methods and privileges for the instance of NetworkDeviceFunctions

HTTP method	Required privilege
GET	Login

Status codes

Table 65. Status codes

HTTP status code	Extended information	Error message code
200		
405	Base.1.0.GeneralError	SYS402
500	Base.1.0.InternalError	

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/System.Embedded.1/NetworkAdapters/<NetworkAdapters-Id/NetworkDeviceFunctions/<NetworkDeviceFunction-Id>/Settings
```

HTTP methods and privileges

Table 66. HTTP methods and privileges for the resource

HTTP method	Required privilege
GET	Login
PATCH	Login + SystemControl

Required parameters

Table 67. Parameters for NetworkDeviceFunction Settings

Parameter	Type	Description
Status		
MaxVirtualFunctions	Int64	The number of virtual functions (VFs) that are available for this Network Device Function.
NetDevFuncCapabilities	Collection(NetworkDeviceFunction.v1_0_0. NetworkDeviceTechnology)	Capabilities of this network device function.

Parameter	Type	Description
 NOTE: 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	NetworkDeviceFunction.v1_0_0.NetworkDeviceTechnology	The configured capability of this network device function.
FibreChannel		
WWPN	String	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.
PermanentWWPN	String	PermanentWWPN is the permanent WWPN address assigned to this network device function (physical function).
WWNN	String	The effective current World-Wide Node Name (WWNN) of this network device function (physical function). If an assignable WWNN is not supported, WWNN is a read only alias of the PermanentWWNN.
WWNSource	NetworkDeviceFunction.v1_0_0.WWNSource	The configuration source of the World-Wide Names (WWNs) for this connection (WWPN and WWNN).
FCoELocalVLANId	Int64	For FCoE connections, The VLAN ID 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.
FCoEActiveVLANId	Int64	The active FCoE VLAN ID.
BootTargets		
WWPN	String	World-Wide Port Name (WWPN) to boot from.
LUNID	String	The Logical Unit Number (LUN) ID to boot from on the device referred to by the corresponding WWPN.
Ethernet		
MACAddress	String	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.
PermanentMACAddress	String	This is the permanent MAC address assigned to this network device function (physical function).
MTUSize	Int64	The Maximum Transmission Unit (MTU) configured for this Network Device Function. This value serves as a default for

Parameter	Type	Description
		the OS driver when booting. The value only takes effect on boot.
iSCSIBoot		
IPAddressType	NetworkDeviceFunction.v1_0_0.IPAddressType	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.
InitiatorIPAddress	String	The IPv6 or IPv4 address of the iSCSI boot initiator.
InitiatorName	String	The iSCSI boot initiator name.
InitiatorDefaultGateway	String	The IPv6 or IPv4 iSCSI boot default gateway.
InitiatorNetmask	String	The IPv6 or IPv4 netmask of the iSCSI boot initiator.
TargetInfoViaDHCP	String	A boolean indicating whether the iSCSI boot target name, LUN, IP address, and netmask should be obtained from DHCP.
PrimaryTargetName	String	The name of the primary iSCSI boot target (iSCSI Qualified Name, IQN).
PrimaryTargetIPAddress	String	The IP address (IPv6 or IPv4) for the primary iSCSI boot target.
PrimaryTargetTCPPort	Int64	The TCP port for the primary iSCSI boot target.
PrimaryLUN	Int64	The logical unit number (LUN) for the primary iSCSI boot target.
PrimaryVLANEnable	Boolean	It indicates if this VLAN is enabled for the primary iSCSI boot target.
PrimaryVLANId	Int64	The 802.1q VLAN ID to use for iSCSI boot from the primary target. This VLAN ID is only used if PrimaryVLANEnable is true.
PrimaryDNS	String	The IPv6 or IPv4 address of the primary DNS server for the iSCSI boot initiator.
SecondaryTargetName	String	The name of the Secondary iSCSI boot target (iSCSI Qualified Name, IQN).
SecondaryTargetIPAddress	String	The IP address (IPv6 or IPv4) for the Secondary iSCSI boot target.
SecondaryTargetTCPPort	Int64	The TCP port for the Secondary iSCSI boot target.
SecondaryLUN	Int64	The logical unit number (LUN) for the Secondary iSCSI boot target.
SecondaryVLANEnable	Boolean	It indicates if this VLAN is enabled for the Secondary iSCSI boot target.
SecondaryVLANId	Int64	The 802.1q VLAN ID to use for iSCSI boot from the Secondary target. This VLAN ID is only used if SecondaryVLANEnable is true.
SecondaryDNS	String	The IPv6 or IPv4 address of the Secondary DNS server for the iSCSI boot initiator.

Parameter	Type	Description
IPMaskDNSViaDHCP	Boolean	A boolean indicating whether the iSCSI boot initiator uses DHCP to obtain the initiator name, IP address, and netmask.
AuthenticationMethod	NetworkDeviceFunction.v1_0_0.AuthenticationMethod	The iSCSI boot authentication method for this network device function.
CHAPUsername	String	The username for CHAP authentication.
CHAPSecret	String	The shared secret for CHAP authentication.

Status codes

Table 68. Status codes

HTTP status code	Extended information	Error message code
200		
202		
400	- Base.1.0.PropertyValueTypeError - Base.1.0.PropertyUnknown	
403	Base.1.0.InsufficientPrivilege	RAC0506
405	Base.1.0.GeneralError	SYS402
500	Base.1.0.InternalError	

NetworkInterfaceCollection

Description

A Collection of NetworkInterface resource instances.

URL

```
/redfish/v1/Systems/System.Embedded.1/NetworkInterfaces
```

Supported HTTP Method and Privileges

PCleDevice

Description

This is the schema definition for the PCleDevice resource. It represents the properties of a PCleDevice attached to a System.

URL

```
/redfish/v1/Systems/System.Embedded.1/PCleDevice/<id>
```

- NOTE:** Response for a Get operation for PCle 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 PCle 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.

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

PCleFunction

Description

This is the schema definition for the PCleFunction resource. It represents the properties of a PCleFunction attached to a System.

URL

```
/redfish/v1/Systems/System.Embedded.1/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>).

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

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/PCIE/Switches/<PCIE switch ID>/Ports/<PCIE Switch port Id>
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

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

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/System.Embedded.1/Power
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Reference Properties

PowerControl
Voltage

PowerControl

Description

This is the base type for addressable members of an array.

URL

```
/redfish/v1/Chassis/System.Embedded.1/Power/PowerControl
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
PATCH	ConfigureManager, Login

Voltage

Description

This is the base type for addressable members of an array.

URL

```
/redfish/v1/Chassis/System.Embedded.1/Sensors/Voltages/<id>
```

Supported HTTP Method and Privileges

Redfish Method Privilege
POST Figure Manager
Login
GET Login
PATCH Figure Manager
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/iDRAC.Embedded.1/PrivilegeRegistry
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	

Processor

Description

A Collection of Processor resource instances.

URL

```
/redfish/v1/Systems/System.Embedded.1/Processors
```

Supported HTTP Method and Privileges

Redfish Embedded Management
- GET Privilege

Navigation URL

/redfish/v1/Systems/System.Embedded.1/Processors/<id>

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Parameters

Parameter
- ProcessorType

Role

Description

This resource defines a user role to be used in conjunction with a Manager Account.

URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/Roles/None
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

RoleCollection

Description

A Collection of Role resource instances.

URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/Roles
```

Supported HTTP Method and Privileges

Required Privilege - GET

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/System.Embedded.1/SecureBoot
```

Supported HTTP Method and Privileges

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

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	
403	Base.1.0. InsufficientPrivilege	
404	Base.1.0.ResourceMissingAtURI	
500	Base.1.0.InternalError	

[Supported Action — ResetKeys](#)

Supported Action — ResetKeys

Description

This action is used to reset the Secure Boot keys.

URL

```
/redfish/v1/Systems/System.Embedded.1/SecureBoot/Actions/SecureBoot.ResetKeys
```

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	
400	Base.1.0.PropertyValueTypeError	
	Base.1.0.PropertyValueNotInList	
403	Base.1.0. InsufficientPrivilege	
404	Base.1.0.ResourceMissingAtURI	
500	Base.1.0.InternalError	

SecureErase

Description

This action is used to securely erase the contents of the drive.

URL

```
/redfish/v1/Systems/System.Embedded.1/Storage/Drives/Disk.Direct.0-0:AHCI.Embedded.2-1/
Actions/Drive.SecureErase
```

Supported HTTP Method and Privileges

Required Privileges

Supported Parameters

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Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
202		

SerialInterface

Description

A Collection of SerialInterface resource instances.

URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/SerialInterfaces
```

Supported HTTP Method and Privileges

Redfish
Method
Privilege
Group

Navigation URL

```
/redfish/v1/Managers/iDRAC.Embedded.1/SerialInterfaces/<id>
```

Supported HTTP Method and Privileges

Redfish
Method
Privilege
Figure
Manager
Login
Get
Patch
Figure
Manager
Login

Supported Parameters

ServiceRoot

Description

This object represents the root Redfish service.

URL

```
/redfish/<id>
```

Supported HTTP Method and Privileges

Session

URL

```
/redfish/v1/Sessions
```

Description

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

HTTP methods and privileges

Table 69. HTTP methods and privileges for Session

HTTP method	Required privilege
GET	Login
POST	ConfigureManager

Updatable properties

Table 70. Properties and values for Session

Parameter	Description
UserName	Username
Password	Password

Status codes

Table 71. Status codes for Session

HTTP status code	Extended information
200	
201	
400	- Base.1.0.PropertyValueTypeError - Base.1.0.PropertyValueNotInList - Base.1.0.PropertyUnknown - Base.1.0.PropertyNotWritable - Base.1.0.PropertyValueFormatError
500	Base.1.0.InternalError

Action — Delete

URL

```
/redfish/v1/Sessions/<session-id>
```

Description

Performs delete operation on the session ID.

HTTP methods and privileges

Table 72. HTTP methods and privileges for Delete

HTTP method	Required privilege
DELETE	ConfigureManager, Login

Status codes

Table 73. Status codes for Delete

HTTP status code
200
400
500

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
PATCH	ConfigureManager, Login

SimpleStorage

Description

This property contains the UEFI device path used to identify and locate a specific storage controller.

URL

```
/redfish/v1/Systems/System.Embedded.1/SimpleStorage/Controllers
```

HTTP methods and privileges

Table 74. HTTP methods and privileges for SimpleStorage

HTTP method	Required privilege
GET	Login

Status codes

Table 75. Status codes for SimpleStorage

HTTP status code	Extended information
200	
400	
403	Insufficient privileges.
500	

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 76. Status codes for SoftwareInventory

HTTP status code	Extended information	Error message code
201		
400		· SYS406 · OSD35 · SYS0604 · SYS434
400	Base.1.2.InternalError	SYS446
403	Base.1.0.InsufficientPrivilege	RAC0506
403		LIC501
404	Base.1.0. ResourceMissingAtURI	SYS403
405		SYS402
412		SYS400
415		SYS4011
428		SYS404
500	Base.1.0.InternalError	SYS412

HTTP status code	Extended information	Error message code
503		SUP0108

Navigation URL

```
/redfish/v1/UpdateService/FirmwareInventory/<id>
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Status codes

Table 77. Status codes for the action

HTTP status code	Extended information	Error message code
200		
400		- SYS406 - OSD35 - RAC0604
400	Base.1.2.InternalError	SYS446
403	InsufficientPrivilege	RAC0506
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
412		SYS400
428		SYS404
500	Base.1.2.InternalError	SYS446

Storage

Description

A Collection of Storage resource instances.

URL

```
/redfish/v1/Systems/System.Embedded.1/Storage
```

Supported HTTP Method and Privileges

Required Privilege

Navigation URL

/redfish/v1/Systems/System.Embedded.1/Storage/<id>

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

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/System.Embedded.1/StorageControllers/<id>

Supported HTTP Method and Privileges

R e g i s t e r e d i t i o n s

POSTigureComponents: Login GETlogin PATH€HfigureComponent

Subscriptions

Description

This property contains a URL to the destination where the events are sent.

URL

```
/redfish/v1/EventService/Subscriptions
```

HTTP methods and privileges

Table 78. HTTP methods and privileges for EventDestination

HTTP method	Required privilege
GET	Login
POST	ConfigureManager

Properties

Table 79. Properties for EventDestination

Property	Description
Destination	Destination IP to send event
EventTypes	Contains the type of the event
Context	Client-supplied string — Optional
Protocol	Protocol type used by event

Status codes

Table 80. Status codes for EventDestination

HTTP status code	Extended information
200	
201	
400	- Base.1.0.PropertyValueTypeError - Base.1.0.PropertyValueNotInList - Base.1.0.PropertyUnknown - Base.1.0.PropertyNotWritable - Base.1.0.PropertyValueFormatError
404	Base.1.0.ResourceMissingAtURI
500	Base.1.0.InternalError
503	

Switches

Description

A Collection of Switch resource instances.

URL

```
/redfish/v1/Fabrics/PCIE/Switches
```

Supported HTTP Method and Privileges

Required privileges: GET, POST, PATCH, DELETE

TaskCollection

Description

A Collection of Task resource instances.

URL

```
/redfish/v1/TaskService/Tasks
```

Supported HTTP Method and Privileges

Required Privileges

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

Thermal

Description

This is the schema definition for the Thermal properties. It represents the properties for Temperature and Cooling.

URL

```
/redfish/v1/Chassis/Chassis.Embedded.1/Thermal
```

Supported HTTP Method and Privileges

Redfish API Privileges
- POST
Configure Manager
Login
Get
Get
Read

Supported Parameters

Reference Properties

Temperature

Temperature

Description

Above normal range.

URL

```
/redfish/v1/Chassis/System.Embedded.1/Sensors/Temperatures/<id>
```

Supported HTTP Method and Privileges

Read Only
Method
Privilege
Read Only
Administrator
Login
Get
Put
Delete
Patch
Configure

Supported Parameters

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 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 81. HTTP methods and privileges for SimpleUpdate

HTTP method	Required privilege
POST	.d9 file type — ConfigureComponents, Login .pm file type — ConfigureComponents, Login .exe file type — ConfigureComponents, Login

Status codes

Table 82. Status codes for SimpleUpdate

HTTP status code	Extended information	Error Message Code
202		SYS408
400		- SYS406 - OSD35 - RAC0604 - SYS434 - SUP019

HTTP status code	Extended information	Error Message Code
		- SUP024 - SYS442
400	- Base.1.2.InternalError - Base.1.2.PropertyMissing - Base.1.2.PropertyValueTypeError - Base.1.2.PropertyValueNotInList	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	- SYS446 - SUP1907
503		SUP0108

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/<ID>/VirtualMedia
```

HTTP methods and privileges

Table 83. HTTP methods and privileges for VirtualMedia

HTTP method	Required privilege
GET	Login
POST	ConfigureManager, Login

Status codes

Table 84. Status codes for VirtualMedia

HTTP status code	Extended information
200	
400	
403	Insufficient privileges.

HTTP status code	Extended information
500	

Properties and values

Table 85. Properties and values for VirtualMedia

Property	Values
MediaTypes	- CD - DVD - USBStick
ConnectedVia	- NotConnected - Applet

VLanNetworkInterface

Description

The value of this property indicates if VLAN is enabled for this interface.

URL

```
/redfish/v1/Systems/<ID>/EthernetInterfaces/<EthernetInstanceID>/Vlans
```

HTTP methods and response content type

Table 86. HTTP methods and response content type for VLanNetworkInterface

HTTP method	Response content type
GET	application/json

Status codes

Table 87. Status codes for VLanNetworkInterface

HTTP status code
200
400
500

Volume

Description

A Collection of Storage resource instances.

URL

/redfish/v1/Systems/System.Embedded.1/Storage/AHCI.Embedded.2-1/Volumes

Supported HTTP Method and Privileges

Redfish Method Privilege
Figure Components, Logging in

Navigation URL

/redfish/v1/Systems/System.Embedded.1/Storage/Volumes/<id>

Supported HTTP Method and Privileges

Redfish Resource Privilege
-
OBFIGURE COMPONENTS
- LOGIN
OBFIGURE COMPONENTS
- L

Redfish Metadata

o g i n
G B g i n
R A T C H
g u r e
C o m p o n e n t s
, L o g i n

Supported Parameters

Parameter
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Write
Delete
Create
Update
Delete
Non
Redundant
,
Mirrored
,
Striped
With
Parity
,
Spa

V a i a n e t e r

n n e d M i r r o r s , S p a n n e d S t r i p e s W i t h P a r i t y

N a c i y p d i r o n t e p e s y p t i

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200		
200	Base.1.0.Success	
Supported Action — Initialize		
Supported Action — CheckConsistency		

Supported Action — CheckConsistency

Description

URL

```
/redfish/v1/Systems/System.Embedded.1/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 Parameters

Parameter	Value
VolumeType	RawDevice, NonRedundant, Mirror, Striped

Parameter

Value

EncryptionTypes

Parameter

Value

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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/System.Embedded.1/Storage/Volumes/Disk.Direct.0-0:AHCI.Embedded.2-1/Actions/Volume.Initialize
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter - ReadWriteMetadata, MirrorOrder, S

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Supported Status Codes

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

NetworkPort

Description

A Network Port represents a discrete physical port capable of connecting to a network.

URL

```
/redfish/v1/Systems/System.Embedded.1/NetworkAdapters/NIC.Embedded.2/NetworkPorts/  
NIC.Embedded.2-1
```

Supported HTTP Method and Privileges

Supported Parameters

NetworkPortCollection

Description

A Collection of NetworkPort resource instances.

URL

```
/redfish/v1/Systems/System.Embedded.1/NetworkAdapters/NIC.Embedded.1/NetworkPorts
```

Supported HTTP Method and Privileges

NetworkDeviceFunctionCollection

Description

A Collection of NetworkDeviceFunction resource instances.

URL

/redfish/v1/Systems/System.Embedded.1/NetworkAdapters/NIC.Embedded.1/NetworkDeviceFunctions

Supported HTTP Method and Privileges

Required Privilege

Redundancy

Description

This is the redundancy definition to be used in other resource schemas.

URL

/redfish/v1/Chassis/System.Embedded.1/Thermal/Redundancy/iDRAC.Embedded.1%23SystemBoardFanRedundancy

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

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](#)
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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"
    }
  ]
}
```

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	https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=AssetTag
	https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Status
	https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Status/State

Resource Type	Example
Resource.Embedded	• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Assembly</code>
	• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Links/ComputerSystems</code>
	• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Links/Oem/Dell/DellEnclosureEMMCollection</code>
	• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Location/Placement</code>
	• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Location/Placement/Rack</code>
	• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Assembly/@odata.id</code>
Resource.ResourceCollection	• <code>https://<IP>/redfish/v1/Systems?\$select=Members</code>
Resource.ReferenceableMember	• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1/Power?\$select=PowerControl</code>

Examples for \$filter

Resource Type	Example
Resource.ResourceCollection	<code>https://<IP>/redfish/v1/Managers/iDRAC.Embedded.1/Logs/Sel?\$filter=Severity eq "OK"</code>