iDRAC8 with Lifecycle Controller Version 2.70.70.70

Redfish API Guide

DELLEMC

Notes, cautions, and warnings

(i) **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.**

Contents

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 Controler (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 support for Redfish 2016 R2 and R3 APIs including PCIe device and NVDIMM inventory, OS Host Interface access, and Privilege registry.
- Added support for Redfish 2017 R1, R2, and R3 APIs including boot source configuration, virtual media management, and maintenance window scheduling.
- Added support for Memory (DIMMs) inventory and statistics.
- Added support for query parameters.

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 is a web-based API which implies that resources are accessed using client supplied URLs. URLs are required to identify the Redfish resources. The Redfish API uses a simple URL hierarchy which follows a `/redfish/v1/` pattern for all resources. To access a Redfish resource, use the URL pattern `https://<iDRAC IP>/redfish/v1/<Resource Path>`. For more information on the supported resources, see Redfish resources on page 17. 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

Table 1. Redfish authentication and authorization (continued)

Redfish actions	Authentication required	Authorization required
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 on page 17.

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.

(i) **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.
Cache-Control	Returned on all responses. Metadata URIs 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 on page 10.

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.

(i) **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.

(i) **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)`
Description

    Specifies the number of retry attempts made for Redfish event delivery

Legal values

    Value ranges from 0 to 5

Default value

    3

Write privilege

    Configure iDRAC

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

    Specifies the intervals (in seconds) of retry attempts made for Redfish event delivery

Legal values

    Value ranges from 5 to 60

Default value

    30

Write privilege

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	`/redfish/v1/ EventService`	EventService.xml
PATCH	Property Name: ServiceEnabled Indicates whether this service is enabled	`/redfish/v1/ EventService`	EventService_v1.xml
POST	Register an event notification receiver	`/redfish/v1/ EventService/ Subscriptions`	EventDestination.xml
DELETE	Remove a subscription	`/redfish/v1/ EventService/ Subscriptions/ <Subscription ID>`	EventService.xml

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.

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

   (i) **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.

   (i) **NOTE:** The $expand parameter is not supported for resources under OEM section.

See the section Examples for the examples of the above parameters.

Supported Status Codes

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

Redfish resources

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

Topics:

- AccountService
- DellJobCollection
- AttributeRegistry
- BaseMessages
- AssemblyCollection
- Chassis
- ComputerSystem
- DellJob
- EventDestination
- Bios
- BIOS-Settings resource
- BootOption
- ChassisCollection
- ComputerSystemCollection
- LogEntry
- Manager
- ManagerAccount
- Memory collection
- DellBootSources
- Settings resource
- DellBootSourcesRegistry
- DellUpdateService
- DellManager
- Drive
- EthernetInterfaceCollection
- NetworkAdapter collection
- NetworkInterface collection
- EthernetInterfaces
- EventService
- FabricCollection
- PCIe
- HostInterfaceCollection
- JSONSchemas
- LogEntryCollection
- LogService
- LogServiceCollection
- ManagerCollection
- ManagerAccountCollection
- ManagerNetworkProtocol
- MemoryCollection
- MessageRegistryFile
- MessageRegistryFileCollection
- Messages
- NetworkAdapterCollection
- NetworkInterfaceCollection

- [PCIeDevice](#)
- [PCIeFunction](#)
- [Processor](#)
- [Port](#)
- [PortCollection](#)
- [Power](#)
- [PrivilegeRegistry](#)
- [ProcessorCollection](#)
- [Role](#)
- [RoleCollection](#)
- [SecureBoot](#)
- [SerialInterfaceCollection](#)
- [ServiceRoot](#)
- [Session](#)
- [SessionService](#)
- [SimpleStorage](#)
- [SoftwareInventoryCollection](#)
- [SerialInterfaces](#)
- [StorageCollection](#)
- [Storage collection](#)
- [Subscriptions](#)
- [Switches](#)
- [TaskCollection](#)
- [TaskService](#)
- [Thermal](#)
- [UpdateService](#)
- [VirtualMedia](#)
- [VLanNetworkInterface](#)
- [VolumeCollection](#)
- [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

Supported Status Codes

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

DellJobCollection

Description

A Collection of Job resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

Action Parameters

Property	Type	Value
StartTime	String	YYYYY-MM-DD HH:MM:SS
EndTime	String	YYYYY-MM-DD HH:MM:SS
TargetSettingsURI	String	/redfish/v1/Managers/System.Embedded.1/Attributes/Settings /redfish/v1/Systems/System.Embedded.1/BootSources/Settings /redfish/v1/Systems/System.Embedded.1/Bios/Settings /redfish/v1/Managers/LifecycleController.Embedded.1/Attributes/Settings /redfish/v1/Managers/iDRAC.Embedded.1/Attributes/Settings

Table 4. Status codes

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

Navigation URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
DELETE	ConfigureComponents, Login
GET	Login

Table 5. Status codes

HTTP status code
200
404

AttributeRegistry

Description

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

URL

● BIOS:

```
/redfish/v1/Registries/BiosAttributeRegistry.v1_0_0
```

Methods and privileges

Table 6. Methods and privileges for AttributeRegistry

HTTP method	Required privilege
GET	Login

Supported Status Codes

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

HTTP Status Code	Extended Information	Error Code
503		

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 7. HTTP methods and privileges for BaseMessages

HTTP method	Required privilege
GET	Login

Supported Status Codes

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

AssemblyCollection

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

Supported Status Codes

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

Navigation URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

Chassis

Description

This resource is used to represent a chassis or other physical enclosure for a Redfish implementation.

URL

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

HTTP methods and privileges

Table 8. HTTP methods and privileges for Chassis

HTTP method	Required privilege
GET	Login

Navigation URL

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

HTTP methods and privileges

Table 9. HTTP methods and privileges for instance of Chassis

HTTP method	Required privilege
PATCH	ConfigureManager

Status codes

Table 10. Status codes for Chassis

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

Updatable properties

Table 11. Properties and values for Chassis

Property	Values
ResetType	- On - ForceOff
IndicatorLed	- Blinking - Off
ChassisType	- Rack - StandAlone - Blade - Enclosure

Table 11. Properties and values for Chassis (continued)

Property	Values
	● Sled

Supported action — Reset

URL

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

Description

This action is used to reset the chassis.

HTTP methods and privileges

Table 12. HTTP methods and privileges for Reset

HTTP method	Required privilege
POST	ConfigureComponent

Properties and values

Table 13. Properties and values for Reset

Property	Value
ResetType	● On ● ForceOff

Status codes

Table 14. Status codes for Reset

HTTP status code	Extended information
204	
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
503	

URL

```
/redfish/v1/Chassis/<ID>/Sensors/Voltages/<ID>
```

HTTP methods and privileges

Table 15. HTTP methods and privileges for the instance

HTTP method	Required privilege
GET	Login

Status codes

Table 16. Status codes for the instance

HTTP status code
200
400
500

ComputerSystem

Description

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

URL

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

HTTP methods and privileges

Table 17. HTTP methods and privileges for ComputerSystem

HTTP method	Required privilege
GET	Login

Navigation URL

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

HTTP methods and privileges

Table 18. HTTP methods and privileges for the instance of the resource

HTTP method	Required privilege
PATCH	ConfigureManager, ConfigureSelf

Status codes

Table 19. Status codes for ComputerSystem

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

Updatable properties

Table 20. Properties and values for ComputerSystem

Property	Values
ResetType	- On - ForceOff - GracefulRestart - PushPowerButton - NMI
PowerState	- On - Off
SystemType	Physical
BootSource	- Pxe - Floppy - Cd - USB - Hdd - Utilities - UefiTarget - BiosSetup
BootSourceOverrideMode	- UEFI - Legacy
BootSourceOverrideEnabled	- Disabled - Once - Continuous
UefiTargetBootSourceOverride	Any valid UEFI-device path
IndicatorLed	- Lit - Off

Implementation notes

Some of the properties in this schema are dependent on the installed BIOS version. If a compatible BIOS version is not installed, the `UefiTargetBootSourceOverride` property is not supported in this resource.

Supported action — Reset

Description

Resets computer system.

URL

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

HTTP methods and privileges

Table 21. HTTP methods and privileges for Reset

HTTP method	Required privilege
POST	ConfigureComponent, ConfigureSelf

Properties and values

Table 22. Properties and values for Reset

Property	Value
ResetType	- On - ForceOff - GracefulRestart - PushPowerButton - NMI

Status codes

Table 23. Status codes for Reset

HTTP status code	Extended information
200	
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

DellJob

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 24. HTTP methods and privileges for DellJob

HTTP method	Required privilege
GET	Login
POST	SystemControl

Properties required for job creation

Table 25. 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 26. 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 27. HTTP methods and privileges for the instance of the resource

HTTP method	Required privilege
GET	Login
DELETE	SystemControl

Status codes

Table 28. 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

EventDestination

Description

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

URL

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

HTTP methods and privileges

Table 29. HTTP methods and privileges for EventDestination

HTTP method	Required privilege
GET	Login
POST	ConfigureManager

Properties

Table 30. 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 31. Status codes for EventDestination

HTTP status code	Extended information
200	

Table 31. Status codes for EventDestination (continued)

HTTP status code	Extended information
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	

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
405		SYS402

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
200	Base.1.2.Success	RAC1133
405	Base.1.2.GeneralError	SYS402

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 HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Status Codes

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

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
200	Base.1.2.Success	RAC1133
405	Base.1.2.GeneralError	SYS402

BIOS-Settings resource

Description

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

URL

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

HTTP methods and privileges

Table 32. HTTP methods and privileges for the Settings resource

HTTP method	Required privilege
GET	Login
PATCH	ConfigureComponents, Login

Updatable properties

Table 33. Properties for the Settings resource

Property	Description
Attributes	Collection of all the attributes and their values supported by the BIOS configuration

Status codes

Table 34. Status codes for the Settings resource

HTTP status code	Extended information	Error Code
202		
400	- Base.1.2.PropertyMissing - Base.1.0.PropertyValueTypeError - Base.1.0.PropertyValueNotInList	
400		SYS426, SYS011, SYS428, SYS405, SUP017, SUP447
403		
500		

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

Supported Status Codes

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

HTTP Status Code	Extended Information	Error Code
500	Base.1.2.InternalError	SYS446
503		

Instance URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
PATCH	ConfigureComponents, Login

Updatable Properties

- BootOptionEnabled

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.2.Success	SYS430, SYS455
400	Base.1.2.InternalError	SYS446
400	Base.1.2.PropertyMissing	
400	Base.1.2.MalformedJSON	SYS405
400		SYS406, SYS434
403	InsufficientPrivilege	RAC0506
403		LIC501
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
500	Base.1.2.InternalError	SYS446

ChassisCollection

Description

A Collection of Chassis resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

Navigation URL

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

Supported HTTP Method and Privileges

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

Updatable Properties

Property	Value
ResetType	On, Off
IndicatorLed	Blinking, Off
ChassisType	Rack, Blade, Enclosure, StandAlone, Sled, Other

Supported Status Codes

HTTP Status Code	Extended Information
200	Base.1.0.success
400	- Base.1.0.PropertyValueTypeError - Base.1.0.PropertyValueNotInList - Base.1.0.PropertyUnknown - Base.1.0.PropertyNotWritable - Base.1.0.PropertyValueFormatError

HTTP Status Code	Extended Information
500	Base.1.0.InternalError

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

Action Parameters

Parameter	Value
ResetType	On, ForceOff

Supported Status Codes

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

Contained resources

Power on page 88
Thermal on page 112

ComputerSystemCollection

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

Navigation URL

```
/redfish/v1/Systems/<id>
```

Supported HTTP Method and Privileges

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

Updatable Properties

Property
Assettag
HostName
IndicatorLED
FunctionEnabled
TimeoutAction
BootOrder
BootSourceOverrideEnabled
BootSourceOverrideMode

Property
BootSourceOverrideTarget
UefiTargetBootSourceOverride

Supported Status Codes

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

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, Login

Supported Parameters

Parameter	Value
ResetType	On, ForceOff, ForceRestart, GracefulShutdown, PushPowerButton, Nmi
SystemType	Physical
IndicatorLED	Blinking, Off
PowerState	On, null
BootSourceOverrideTarget	None, Pxe, Floppy, Cd, Hdd, BiosSetup, Utilities, UefiTarget, SDCard, UefiHttp
BootSourceOverrideEnabled	Once, Continuous, Disabled
MemoryMirroring	None, System
BootSourceOverrideMode	UEFI, Legacy
InterfaceType	TCM1_0, TPM2_0, TPM1_2

Supported Status Codes

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

LogEntry

Description

This resource represents the log format for log services in a Redfish implementation.

URL

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

HTTP methods and privileges

Table 35. HTTP methods and privileges for LogEntry

HTTP method	Required privilege
GET	Login

Status codes

Table 36. Status codes for LogEntry

HTTP status code
200
400
500

Reference Properties

/redfish/v1/Managers/<ID>/Logs/Lclog

Description

This resource represents the Lifecycle Controller logs for the manager in a Redfish implementation.

HTTP methods and privileges

Table 37. HTTP methods and privileges for the resource

HTTP method	Required privilege
GET	Login

Status codes

Table 38. Status codes for the resource

HTTP status code	Extended information
200	
400	
500	

Logs — System Event Logs

URL

```
/redfish/v1/Managers/<ID>/Logs/Sel
```

Description

This resource represents the System Event Logs for the manager in a Redfish implementation.

HTTP methods and privileges

Table 39. HTTP methods and privileges for the resource

HTTP method	Required privilege
GET	Login

Status codes

Table 40. Status codes for the resource

HTTP status code	Extended information
200	
400	
500	

Manager

Description

This resource is used to represent a management sub-system for a Redfish implementation.

URL

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

HTTP methods and privileges

Table 41. HTTP methods and privileges for Manager

HTTP method	Required privilege
GET	Login

Status codes

Table 42. Status codes for Manager

HTTP status code
200
400
500

Updatable properties

Table 43. Properties and values for Manager

Property	Values
ManagerType	BMC
CommandConnectTypesSupported	- SSH - Telnet - IPMI
GraphicalConnectTypesSupported	KVMIP
ResetType	GracefulRestart

Supported action — Reset

Description

This defines the name of the custom action supported when used in conjunction with a POST operation to this resource. When issued, this operation performs a reset of the manager.

URL

```
/redfish/v1/Managers/<ID>/Actions/Manager.Reset
```

HTTP methods and privileges

Table 44. HTTP methods and privileges for Reset

HTTP method	Required privilege
POST	ConfigureManager

Updatable properties

Table 45. Properties and values for Reset

Property	Value
ResetType	GracefulRestart

Status codes

Table 46. Status codes for Reset

HTTP status code	Extended information
204	
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

ManagerAccount

Description

This resource represents the BMC user accounts collection for a Redfish implementation.

URL

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

HTTP methods and privileges

Table 47. 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 48. HTTP methods and privileges for the instance of the resource

HTTP method	Required privilege
PATCH	ConfigureManager

Updatable properties

Table 49. 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 50. Status codes for the instance of the resource

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

Memory collection

Description

This resource is used to represent the collection of server memory, including DIMMs and nonvolatile DIMMs (NVDIMMs), for a Redfish implementation.

URL

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

HTTP methods and privileges

Table 51. HTTP methods and privileges for the resource

HTTP method	Required privilege
GET	Login

Status codes

Table 52. Status codes

HTTP status code	Extended information	Error message code
200	Base.1.0.0.Success	
405	Base.1.0.GeneralError	SYS402
500	Base.1.0.InternalError	

Memory — Instance

Description

This resource is used to represent the memory instance for a Redfish implementation.

URL

```
/redfish/v1/Systems/System.Embedded.1/Memory/iDRAC.Embedded.1#DIMMSlotA1/
```

HTTP methods and privileges

Table 53. HTTP methods and privileges for the instance of the resource

HTTP method	Required privilege
GET	Login

Status codes

Table 54. Status codes

HTTP status code	Extended information	Error message code
200	Base.1.0.0.Success	
404	Base.1.0.InternalError	SYS403
405	Base.1.0.GeneralError	SYS402
500	Base.1.0.InternalError	

Memory — Metrics

Description

This resource is used to represent the memory statistics of a single memory instance for a Redfish implementation.

URL

```
/redfish/v1/Systems/System.Embedded.1/Memory/iDRAC.Embedded.1#DIMMSlotA1/Metrics
```

HTTP methods and privileges

Table 55. HTTP methods and privileges for the resource

HTTP method	Required privilege
GET	Login

Status codes

Table 56. Status codes

HTTP status code	Extended information	Error message code
200	Base.1.0.0.success	RAC0690
405	Base.1.0.GeneralError	SYS402
500	Base.1.0.InternalError	

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 57. HTTP methods and privileges for DellBootSources

HTTP method	Required privilege
GET	Login

Status codes

Table 58. Status codes for DellBootSources

HTTP status code	Extended information	Error Code
200		
405		SYS402

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 59. HTTP methods and privileges for the Settings resource

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

Updatable properties

Table 60. Properties for the Settings resource

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

Status codes

Table 61. Status codes for the Settings resource

HTTP status code	Extended information	Error Code
202		
400	- Base.1.2.PropertyMissing - Base.1.0.PropertyValueTypeError - Base.1.0.PropertyValueNotInList	
400		SYS426, SYS011, SYS428, SYS405, SUP017, SUP447
403		
500		

DellBootSourcesRegistry

Description

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

URL

```
/redfish/v1/Systems/<ID>/BootSources/BootSourcesRegistry
```

HTTP methods and privileges

Table 62. HTTP methods and privileges for DellBootSourcesRegistry

HTTP method	Required privilege
GET	Login

Status codes

Table 63. Status codes for DellBootSourcesRegistry

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

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 SoftwareIdentityURIs 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 64. 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 65. Properties and values for Install

Property	Values
InstallUpon	- Now - NowAndReboot - NextReboot

Status codes

Table 66. 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

DellManager

Description

This resource is used to export, import, and preview the Server Configuration Profile (SCP) files Redfish implementation.

ⓘ **NOTE:** For SCP export, import, and preview, if Lifecycle Controller is disabled, ensure that you enable Lifecycle Controller and retry the operation. To enable Lifecycle Controller, run the following command:

```
racadm set LifecycleController.LCAttributes.LifecycleControllerState 1
```

Redfish SCP is an OEM action and requires OEM privileges *ALL* and role as *ADMIN*. Redfish privileges are not applicable for SCP.

For more information about this schema, the location header, and other details, see the *RESTful Server Configuration with iDRAC REST API* white paper at dell.com/support.

Supported action — Export, Import, and Preview

Table 67. Supported HTTP methods and features

HTTP method	Feature
POST	Exporting configuration
POST	Importing configuration
POST	Preview configuration

Export resource URL and response details

URL

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

Properties and values

Table 68. 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 on page 51.

Status codes

Table 69. Status codes for the action

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

Import resource URL and response details

URL

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

Properties and values

Table 70. 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 on page 51.

Status codes

Table 71. Status codes for the action

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

Preview resource URL and response details

URL

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

Status codes

Table 72. Status codes for the action

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

HTTP status code	Extended information	Error Message Code
503		RAC0679

Share parameters and values

Table 73. 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.

Drive

Description

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

URL

```
/redfish/v1/Systems/<id>/Storage/Drives/<id>
```

Supported HTTP Method and Privileges

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

Updatable Properties

Property	Value
HotspareType	None, Global, Dedicated,
EncryptionStatus	Unencrypted, Unlocked, Locked, Foregin,
EncryptionAbility	None, SelfEncryptingDrive,
MediaType	HDD, SSD

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
202		

Supported Action—SecureErase

Description

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

URL

```
/redfish/v1/Systems/<ID>/Storage/Drives/<ID>/Actions/Drive.SecureErase
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter	Value
HotspareType	None, Global, Dedicated,
EncryptionStatus	Unencrypted, Unlocked, Locked, Foregin,
EncryptionAbility	None, SelfEncryptingDrive,
MediaType	HDD, SSD

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	
202		

EthernetInterfaceCollection

Description

A Collection of EthernetInterface resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

NetworkAdapter collection

Description

This resource is used to represent the collection of server network adapters for a Redfish implementation.

(i) **NOTE:** The Manufacturer, Model, Serial Number, and Part Number attributes are not applicable for embedded NICs.

URL

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

HTTP methods and privileges

Table 74. HTTP methods and privileges for NetworkAdapter

HTTP method	Required privilege
GET	Login

Status codes

Table 75. Status codes

HTTP status code	Extended information	Error message code
200		

Table 75. Status codes (continued)

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

NetworkAdapter — Instance

Description

This resource is used to represent an instance of a server network adapter for a Redfish implementation.

URL

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

HTTP methods and privileges

Table 76. HTTP methods and privileges for the instance of NetworkAdapter

HTTP method	Required privilege
GET	Login

Status codes

Table 77. Status codes

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

NetworkPort

Description

This resource is used to represent the collection of NetworkPort.

URL

```
/redfish/v1/Systems/System.Embedded.1/NetworkInterfaces/<NetworkInterface-Id>/
NetworkPorts (Logical)
```

```
/redfish/v1/Systems/System.Embedded.1/NetworkAdapters/<NetworkAdapters-Id>/NetworkPorts
(Physical)
```

HTTP methods and privileges

Table 78. HTTP methods and privileges for NetworkPort

HTTP method	Required privilege
GET	Login

Status codes

Table 79. Status codes

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

NetworkPort — Instance

Description

This resource is used to represent discrete physical port capable of connecting to a network.

URL

```
/redfish/v1/Systems/System.Embedded.1/NetworkAdapters/<NetworkAdapters-Id/NetworkPorts/
<NetworkPort-Id>
```

HTTP methods and privileges

Table 80. HTTP methods and privileges for the instance of NetworkPort

HTTP method	Required privilege
GET	Login

Status codes

Table 81. Status codes

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

NetworkPort — Settings

Description

This resource is used to set new values and create jobs to update the attributes of the discrete physical port.

URL

```
/redfish/v1/Systems/System.Embedded.1/NetworkAdapters/<NetworkAdapters-Id/NetworkPorts/
<NetworkPort-Id>/Settings
```

Table 82. HTTP methods and privileges for the resource

HTTP method	Required privilege
GET	Login

Status codes

Table 83. Status codes

HTTP status code	Extended information
200	
400	
500	Base.1.0.InternalError

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 84. HTTP methods and privileges for NetworkDeviceFunctions

HTTP method	Required privilege
GET	Login

Updatable properties

Table 85. Properties for the Settings resource

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

Supported Status Codes

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

HTTP Status Code	Extended Information	Error Code
503		

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 86. HTTP methods and privileges for the instance of NetworkDeviceFunctions

HTTP method	Required privilege
GET	Login

Supported Status Codes

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

NetworkDeviceFunctions — Settings

Description

This resource is used to set the new value and create job to update the attributes of the logical interface exposed by the network adapter.

URL

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

HTTP methods and privileges

Table 87. HTTP methods and privileges for the resource

HTTP method	Required privilege
GET	Login
PATCH	Login + SystemControl

Required parameters

Table 88. 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.NetworkDeviceTechology)	Capabilities of this network device function. ⓘ **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.NetworkDeviceTechology	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.

Table 88. Parameters for NetworkDeviceFunction Settings (continued)

Parameter	Type	Description
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 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.

Table 88. Parameters for NetworkDeviceFunction Settings (continued)

Parameter	Type	Description
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.
IPMaskDNSViaDHCP	Boolean	A boolean indicating whether the iSCSI boot initiator uses DHCP to obtain the iniator 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 89. 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	

NetworkInterface collection

Description

This resource is used to represent the collection of the Network subsystem under ComputerSystem.

URL

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

HTTP methods and privileges

Table 90. HTTP methods and privileges for NetworkInterface

HTTP method	Required privilege
GET	Login

Status codes

Table 91. Status codes

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

NetworkInterface — Contained resources

Description

NetworkInterface contains references linking NetworkAdapter, NetworkPort, and NetworkDeviceFunction resources and represents the functionality available to the containing system.

URL

```
/redfish/v1/Systems/System.Embedded.1/NetworkInterfaces/<NetworkInterface-Id>
```

HTTP methods and privileges

Table 92. HTTP methods and privileges for instance of NetworkInterface

HTTP method	Required privilege
GET	Login

Status codes

Table 93. Status codes

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

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.

(i) **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 94. HTTP methods and privileges for EthernetInterfaces

HTTP method	Required privilege
GET	Login

Supported Status Codes

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

Ethernet — Instance

URL

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

HTTP methods and privileges

Table 95. HTTP methods and privileges for instance of EthernetInterfaces

HTTP method	Required privilege
PATCH	ConfigureManager

Properties

Table 96. Supported properties for EthernetInterfaces

Property	Type	Read-only	Description
Hostname	String	No	The DNS Host Name, without any domain information.
IPv4Addresses	Array	No	Updates IPv4
IPv6Addresses	Array	No	Updates IPv6
IPv6Static	Array	No	Updates IPv6Static

Table 96. Supported properties for EthernetInterfaces (continued)

Property	Type	Read-only	Description
IPv6DefaultGateway	String	Yes	This is the IPv6 default gateway address that is currently in use on this interface.
IPv6StaticAddresses	Array	Yes	Represents in an array all of the IPv6 static addresses to be assigned on this interface.
LinkStatus	String	Yes	The link status of this interface, or port.
(i) **NOTE:** LinkDown status is reported for a network failure or even when the network cable is unplugged.			
SpeedMbps	Integer	Yes	The current speed, in Mbps, of this interface.

Status codes and error message codes

Table 97. 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 98. HTTP methods and privileges

HTTP method	Required privilege
GET	Login

Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		

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

Implementation notes

Some of the properties in this schema are dependent on the installed BIOS and iDRAC Service Module (iSM) version. If a compatible version of BIOS is not installed, `UefiDevicePath` is not supported in this resource. If a compatible version of iSM is not installed, certain properties may not be supported.

EventService

Description

The Event Service resource contains properties for managing event subcriptions and generates the events sent to subscribers. The resource has links to the actual collection of subscriptions (called Event Destinations).

ⓘ **NOTE:** You can use the IgnoreCertificateErrors attribute in OEMAttributes to ignore certificate errors.

URL

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

Supported HTTP Method and Privileges

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

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.2.Success	SYS413
400	Base.1.2.GeneralError, Base.1.2.PropertyUnknown	
405	Base.1.2.GeneralError	SYS402

Contained Resource

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

HTTP Method	Required Privilege
GET	Login

Contained resources

PCIe

Description

The Fabric schema represents a simple fabric consisting of one or more switches, zero or more endpoints, and zero or more zones.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

Contained resources

HostInterfaceCollection

Description

A Collection of HostInterface resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		

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

Navigation URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	
GET	Login
PATCH	

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 99. HTTP methods and privileges for JSONSchemas

HTTP method	Required privilege
GET	Login

Supported Status Codes

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

HTTP Status Code	Extended Information	Error Code
500	Base.1.2.InternalError	SYS446
503		

LogEntryCollection

Description

A Collection of LogEntry resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

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

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

Supported Parameters

Parameter	Value
OverWritePolicy	WrapsWhenFull

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

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

HTTP Status Code	Extended Information	Error Code
503		

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	Value
OverWritePolicy	WrapsWhenFull

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		

ManagerCollection

Description

A Collection of Manager resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

Navigation URL

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

Supported HTTP Method and Privileges

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

Updatable properties

Property	Value
ManagerType	BMC
CommandConnectTypesSupported	SSH, Telnet, IPMI
GraphicalConnectTypesSupported	KVMIP
ResetType	GracefulRestart

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

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
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 100. HTTP methods and privileges for ManagerAccount

HTTP method	Required privilege
GET	Login

Supported Status Codes

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

Navigation URL

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

HTTP methods and privileges

Table 101. HTTP methods and privileges for the instance of the resource

HTTP method	Required privilege
GET	Login

Updatable properties

Table 102. 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 103. Status codes for the instance of the resource

HTTP status code	Error message code
200	
400	- RAC0288 - RAC0291

Table 103. Status codes for the instance of the resource (continued)

HTTP status code	Error message code
404	
500	

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

(i) **NOTE:** For information about the DHCP version, execute GET on URL

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

Updatable properties

Property
FQDN
Hostname
HTTP
HTTPS
IPMI
KVMIP
SNMP
SSH
Telnet
VirtualMedia

Status codes

HTTP status code	Extended information
200	Base.1.0.Success
400	Base.1.0.PropertyValueTypeError, Base.1.0.PropertyValueNotInList, Base.1.0.PropertyUnknown, Base.1.0.PropertyNotWritable, Base.1.0.PropertyValueFormatError
403	Insufficient privileges
500	Base.1.0.InternalError

MemoryCollection

Description

A Collection of Memory resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

Navigation URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login, ConfigureComponents
GET	Login

Supported Parameters

Parameter	Value
ErrorCorrection	NoECC SingleBitECC MultiBitECC AddressParity
MemoryDeviceType	ROM SDRAM DDR DDR2 DDR3 DDR4
MemoryMedia	null
OperatingMemoryModes	Null
BaseModuleType	Null
MemoryType	null

Supported Status Codes

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

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%23DIMMSLOTA1/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	

Supported Status Codes

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

MessageRegistryFileCollection

Description

A Collection of MessageRegistryFile resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	

Supported Status Codes

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

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 104. HTTP methods and privileges for Messages

HTTP method	Required privilege
GET	Login

Supported Status Codes

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

NetworkAdapterCollection

Description

A Collection of NetworkAdapter resource instances.

> (i) **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

Supported Status Codes

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

NetworkDeviceFunctions

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 105. HTTP methods and privileges for NetworkDeviceFunctions

HTTP method	Required privilege
GET	Login

Updatable properties

Table 106. Properties for the Settings resource

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

Supported Status Codes

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

NetworkDeviceFunctions — Instance

Description

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

URL

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

HTTP methods and privileges

Table 107. HTTP methods and privileges for the instance of NetworkDeviceFunctions

HTTP method	Required privilege
GET	Login

Supported Status Codes

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

NetworkDeviceFunctions — Settings

Description

This resource is used to set the new value and create job to update the attributes of the logical interface exposed by the network adapter.

URL

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

HTTP methods and privileges

Table 108. HTTP methods and privileges for the resource

HTTP method	Required privilege
GET	Login
PATCH	Login + SystemControl

Required parameters

Table 109. 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.NetworkDeviceTechology)	Capabilities of this network device function. ⓘ **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.NetworkDeviceTechology	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

Table 109. Parameters for NetworkDeviceFunction Settings (continued)

Parameter	Type	Description
		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 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.

Table 109. Parameters for NetworkDeviceFunction Settings (continued)

Parameter	Type	Description
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.
IPMaskDNSViaDHCP	Boolean	A boolean indicating whether the iSCSI boot initiator uses DHCP to obtain the iniator 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 110. 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

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

PCIeDevice

Description

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

URL

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

ⓘ **NOTE:** Response for a Get operation for PCIe device will not report Part number or Model for any entry.

ⓘ **NOTE:** For SerialNumber, the value may or may not be displayed depending on the type of PCIe device.

ⓘ **NOTE:** Executing GET for the above URL for network devices may not display the firmware information of the card. For firmware information, execute GET on the other ports of the same card.

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

PCIeFunction

Description

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

URL

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

(i) **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

Supported Status Codes

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

Processor

Description

This schema defines the processor resource. It represents the properties of a processor attached to a system.

URL

```
/redfish/v1/Systems/<ID>/Processors
```

HTTP methods and privileges

Table 111. HTTP methods and privileges for Processor

HTTP method	Required privilege
GET	Login

Status codes

Table 112. Status codes for Processor

HTTP status code
200
400
500

Properties and values

Table 113. Properties and values for Processor

Property	Values
ProcessorType	CPU
ProcessorArchitecture	x86
InstructionSet	x86-64

Implementation notes

Some of the properties in this schema depend on the installed BIOS version. If a compatible BIOS version is not installed, some of the properties may not be supported on this resource.

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

Supported Status Codes

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

PortCollection

Description

PortCollection resource contains the members of selected pcie switch device.

URL

```
/redfish/v1/Fabrics/PCIe/Switches/<PCIE switch ID>/Ports
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

HTTP Status Code	Extended Information	Error Code
500	Base.1.2.InternalError	SYS446
503		

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

Supported Status Codes

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

Reference Properties

PowerControl

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

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

PrivilegeRegistry

Description

This is the schema definition for Operation to Privilege mapping. The Privileges displayed for each entity are in accordance to the capabilities furnished in the corresponding schema and does not mandatorily imply support for that operation in the implementation.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	

Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200		

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

ProcessorCollection

Description

A Collection of Processor resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

Navigation URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

Role

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

RoleCollection

Description

A Collection of Role resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

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/<ID>/SecureBoot
```

Supported HTTP Method and Privileges

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

Updatable properties

Property	Description
SecureBootEnable	Enable or disable UEFI Secure Boot (takes effect on next boot)

Supported Status Codes

HTTP Status Code	Extended Information	Error Code
200	Base.1.0.Success	
200	Base.1.2.Success	SYS413
400	Base.1.0.PropertyValueTypeError, Base.1.0.PropertyValueNotInList	
403	Base.1.0. InsufficientPrivilege	
404	Base.1.0.ResourceMissingAtURI	
405	Base.1.2.GeneralError	SYS402
500	Base.1.0.InternalError	

Supported Action — ResetKeys

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	

SerialInterfaceCollection

Description

A Collection of SerialInterface resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

Navigation URL

```
/redfish/v1/Managers/<ID>/SerialInterfaces/<Serial-key>
```

Supported HTTP Method and Privileges

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

Updatable properties

Property	Description
SignalType	Rs232
BitRate	9600, 19200, 38400, 57600, 115200

Property	Description
PinOut	Cisco
Parity	None
DataBits	8
StopBits	1
FlowControl	Hardware
PinOut	Cisco
ConnectorType	DB9 Male

ServiceRoot

Description

This object represents the root Redfish service.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	

Supported Status Codes

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

Session

URL

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

Description

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

HTTP methods and privileges

Table 114. HTTP methods and privileges for Session

HTTP method	Required privilege
GET	Login
POST	ConfigureManager

Updatable properties

Table 115. Properties and values for Session

Parameter	Description
UserName	Username
Password	Password

Status codes

Table 116. 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 117. HTTP methods and privileges for Delete

HTTP method	Required privilege
DELETE	ConfigureManager, Login

Status codes

Table 118. 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

Updatable properties

Property	Description
SessionTimeout	Updates web server timeout

Supported Status Codes

HTTP Status Code	Extended Information
200	Base.1.0.Success
400	Base.1.0.PropertyValueTypeError, Base.1.0.PropertyValueNotInList, Base.1.0.PropertyUnknown, Base.1.0.PropertyNotWritable, Base.1.0.PropertyValueFormatError
500	Base.1.0.InternalError

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 119. HTTP methods and privileges for SimpleStorage

HTTP method	Required privilege
GET	Login

Supported Status Codes

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

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 120. 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
503		SUP0108

Navigation URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

Status codes

Table 121. 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

SerialInterfaces

Description

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

URL

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

HTTP methods and privileges

Table 122. HTTP methods and privileges for SerialInterfaces

HTTP method	Required privilege
GET	Login

Navigation URL

```
/redfish/v1/Managers/<ID>/SerialInterfaces/<Serial-key>
```

HTTP methods and privileges

Table 123. HTTP methods and privileges for the instance of the resource

HTTP method	Required privilege
PATCH	ConfigureManager

Updatable properties

Table 124. Properties for the instance of the resource

Property	Description
BitRate	Updates the bit-rate
InterfaceEnabled	Updates InterfaceEnabled

Status codes

Table 125. 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 - Base.1.0.PropertyUnknown - Base.1.0.PropertyNotWritable - Base.1.0.PropertyValueFormatError
500	Base.1.0.InternalError

Updatable properties

Table 126. Properties and values for SerialInterfaces

Property	Values
SignalType	Rs232
BitRate	9600 19200 38400 57600 115200
Parity	None
DataBits	8
StopBits	1
FlowControl	Hardware
PinOut	Cisco
ConnectorType	DB9 Male

StorageCollection

Description

A Collection of Storage resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

Navigation URL

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

Supported HTTP Method and Privileges

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

Supported Status Codes

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

Storage collection

Description

This resource is used to represent the collection of the storage subsystem under ComputerSystem.

URL

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

HTTP methods and privileges

Table 127. HTTP methods and privileges for Storage

HTTP method	Required privilege
GET	Login

Status codes

Table 128. Status codes

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

ⓘ **NOTE:** For more information on supported storage devices and operations, see the iDRAC User's Guide available at dell.com/idracmanuals.

Storage — Instance

Description

This resource is used to return the status of the storage subsystem. It also returns the navigation URLs to the StorageContoller, Drive, and Volume collections, and the link to Chassis.

ⓘ **NOTE:** AutoExpand is True for StorageController.

URL

```
/redfish/v1/Systems/System.Embedded.1/Storage/<StorageController-Id>
```

HTTP methods and privileges

Table 129. HTTP methods and privileges for the instance of Storage

HTTP method	Required privilege
GET	Login

Status codes

Table 130. Status codes

HTTP status code	Extended information	Error message code
200		

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

StorageController

Description

This resource is used to represent the properties of the storage controller.

> (i) **NOTE:** The Links property represents NULL, because the Redundancy is not supported for StorageController.

> (i) **NOTE:** StorageController is not applicable for NVMe.

URL

```
/redfish/v1/Systems/System.Embedded.1/StorageControllers/<StorageController-Id>
```

HTTP methods and privileges

Table 131. HTTP methods and privileges for StorageController

HTTP method	Required privilege
GET	Login

Status codes

Table 132. Status codes

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

Volume

Description

This resource is used to represent the collection of Volumes, as presented in the operating system.

> (i) **NOTE:** The POST operation on the Volume collection is supported only on RAID, software RAID, and BOSS controllers.

URL

```
/redfish/v1/Systems/System.Embedded.1/Storage/<StorageController-Id>/Volumes/
```

HTTP methods and privileges

Table 133. HTTP methods and privileges for Volume

HTTP method	Required privilege
GET	Login
POST	Login + SystemControl

Parameters

Table 134. Parameters for POST operation

Parameter	Description
VolumeType	The type of the associated volume
CapacityBytes	The size in bytes of this volume — Optional
Name	Name of the virtual disk — Optional
OptimumIOSizeBytes	Stripe size for virtual disk — Optional
Drives	An array of references to the drives that contain this volume. This references drives that either wholly or partly contain this volume.

Status codes

Table 135. 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	

Volume — Instance

Description

Volume instance represent the properties used to describe a volume. The volume can be a virtual disk or other logical storage entities as presented to the operating system.

(i) **NOTE:** The DELETE operation on an instance of Volume is supported only on RAID, software RAID, and BOSS controllers.

URL

```
/redfish/v1/Systems/System.Embedded.1/Storage/<StorageController-Id>/Volumes/<Volume-Id>
```

Settings URL

```
/redfish/v1/Systems/System.Embedded.1/Storage/<StorageController-Id>/Volumes/<Volume-Id>/
Settings
```

Table 136. HTTP methods and privileges for the instance of Volume

HTTP method	Required privilege
GET	Login
PATCH	Login + SystemControl
DELETE	Login + SystemControl

Required parameters

Table 137. Required parameters

Parameter	Description
Encrypted	Whether the volume is encrypted.
@Redfish.SettingsApplyTime	Defines when the settings are applied. This is supported on the Settings URL. — Optional

Status codes

Table 138. 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	

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/<StorageController-Id>/Volumes/<Volume-Id>/
Actions/Volume.Initialize
```

HTTP methods and privileges

Table 139. HTTP methods and privileges for the action

HTTP method	Required privilege
POST	Login + SystemControl

Required parameters

Table 140. Required parameter for the action

Parameter	Description
InitializeType	The type of initialization to be performed either Fast or Slow

Status codes

Table 141. Status codes

HTTP status code	Extended information	Error message code
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	

Supported action — CheckConsistency

Description

This action is used to force a check of the volume's parity or redundant data to ensure it matches the calculated values. It does not require any input parameters.

To check the status of the operation, use the task that is created when you start the action. You can also check the Operations property in the response body.

URL

```
/redfish/v1/Systems/System.Embedded.1/Storage/<StorageController-Id>/Volumes/<Volume-Id>/
Actions/Volume.CheckConsistency
```

HTTP methods and privileges

Table 142. HTTP methods and privileges for the action

HTTP method	Required privilege
POST	Login + SystemControl

Status codes

Table 143. Status codes

HTTP status code	Extended information	Error message code
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	

Drives

Description

This resource is used to represent the physical disks such as HDDs, SSDs, and NVMe SSDs.

URL

```
/redfish/v1/Systems/System.Embedded.1/Storage/<StorageController-Id>/Drives/<Drive-Id>
```

HTTP methods and privileges

Table 144. HTTP methods and privileges for Drives

HTTP method	Required privilege
GET	Login

Status codes

Table 145. Status codes

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

Supported action — SecureErase

Description

This action is used to perform instant Secure Erase on ISE-compliant HDDs, SEDs, SSDs, and NVME SSDs. It does not require any input parameters.

URL

```
/redfish/v1/Systems/System.Embedded.1/Storage/<StorageController-Id>/Drives/<Drive-Id>/
Actions/Drive.SecureErase
```

HTTP methods and privileges

Table 146. HTTP methods and privileges for SecureErase

HTTP method	Required privilege
POST	Login + SystemControl

Status codes

Table 147. Status codes

HTTP status code	Extended information	Error message code
202		
400	● Base.1.0.PropertyValueTypeError	

Table 147. Status codes (continued)

HTTP status code	Extended information	Error message code
	● Base.1.0.PropertyUnknown	
403	Base.1.0.InsufficientPrivilege	RAC0506
405	Base.1.0.GeneralError	SYS402
500	Base.1.0.InternalError	

Storage chassis

Description

This resource is used to represent storage chassis such as backplanes and JBODs.

ⓘ **NOTE:** The storage chassis does not support Chassis Reset .

URL

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

HTTP methods and privileges

Table 148. HTTP methods and privileges for the resource

HTTP method	Required privilege
GET	Login

Status codes

Table 149. Status codes

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

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 150. HTTP methods and privileges for EventDestination

HTTP method	Required privilege
GET	Login
POST	ConfigureManager

Properties

Table 151. 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 152. 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

HTTP Method	Required Privilege
GET	Login

TaskCollection

Description

A Collection of Task resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

TaskService

Description

This is the schema definition for the Task Service. It represents the properties for the service itself and has links to the actual list of tasks.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

Thermal

Description

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

URL

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

Supported HTTP Method and Privileges

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

Supported Parameters

Parameter	Value
ReadingUnits	RPM

Reference Properties

Temperature

Description

Above normal range.

URL

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

Supported HTTP Method and Privileges

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

Supported Parameters

Parameter	Value
ReadingUnits	RPM

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 153. 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 154. Status codes for SimpleUpdate

HTTP status code	Extended information	Error Message Code
202		SYS408
400		- SYS406 - OSD35 - RAC0604 - SYS434 - SUP019 - 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 155. HTTP methods and privileges for VirtualMedia

HTTP method	Required privilege
GET	Login
POST	ConfigureManager, Login

Status codes

Table 156. Status codes for VirtualMedia

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

Properties and values

Table 157. 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 158. HTTP methods and response content type for VLanNetworkInterface

HTTP method	Response content type
GET	application/json

Status codes

Table 159. Status codes for VLanNetworkInterface

HTTP status code
200
400
500

VolumeCollection

Description

A Collection of Storage resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

Navigation URL

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

Supported HTTP Method and Privileges

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

Supported Parameters

Parameter	Value
VolumeType	RawDevice, NonRedundant, Mirrored, StripedWithParity, SpannedMirrors, SpannedStripesWithParity
EncryptionTypes	NativeDriveEncryption, ControllerAssisted, SoftwareAssisted

Supported Status Codes

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

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, Mirrored, StripedWithParity, SpannedMirrors, SpannedStripesWithParity
EncryptionTypes	NativeDriveEncryption, ControllerAssisted, SoftwareAssisted

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	Value
VolumeType	RawDevice, NonRedundant, Mirrored, StripedWithParity, SpannedMirrors, SpannedStripesWithParity
EncryptionTypes	NativeDriveEncryption, ControllerAssisted, SoftwareAssisted

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

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

NetworkPortCollection

Description

A Collection of NetworkPort resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

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

HTTP Method	Required Privilege
GET	Login

Supported Status Codes

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

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

Supported Status Codes

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

Examples

> (i) **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

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

Examples for $filter

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