

iDRAC9 with Lifecycle Controller Version 3.30.30.30

Redfish API Guide

Notes, cautions, and warnings

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

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

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

© 2019 Dell Inc. or its subsidiaries. All rights reserved. Dell, EMC, and other trademarks are trademarks of Dell Inc. or its subsidiaries. Other trademarks may be trademarks of their respective owners.

Contents

1 Overview	20
New in this release	20
Benefits	20
Key technologies	21
Other documents you may need	21
2 Redfish-based systems management	22
URL support	22
Redfish configuration	23
Configuring Redfish service using iDRAC web interface	23
Configuring Redfish service by using iDRAC RACADM	23
Configuring Redfish service by using WS-MAN	23
Redfish schema	23
Redfish authentication and authorization	23
Roles and privileges	24
iDRAC licensing	25
HTTP methods	25
GET	25
HEAD	25
POST	25
PUT	26
PATCH	26
DELETE	26
HTTP headers	26
HTTP status codes and error messages	27
SSL certificates of iDRAC	27
Eventing	27
Event delivery retry settings in RACADM	28
Eventing operations	28
Updating firmware using SimpleUpdate	28
Updating firmware using a local image	29
Updating firmware using HTTP share	29
Query Parameters	29
3 Redfish resources	31
AccountService	34
Description	34
URL	34
Supported HTTP Method and Privileges	34
AttributeRegistry	34
Description	34
URL	34

Methods and privileges.....	34
Status codes.....	35
Assembly.....	35
Description.....	35
URL.....	35
Supported HTTP Method and Privileges.....	35
Navigation URL.....	35
Supported HTTP Method and Privileges.....	35
BaseMessages.....	35
Description.....	35
URL.....	36
HTTP methods and privileges.....	36
Status codes.....	36
Bios.....	36
Description.....	36
URL.....	36
Supported HTTP Method and Privileges.....	36
Supported Status Codes.....	37
Supported Action — ChangePassword.....	37
Supported Action — ClearPending.....	37
Supported Action — ResetBios.....	38
Settings resource.....	38
BootOption.....	39
Description.....	39
URL.....	39
Supported HTTP Method and Privileges.....	39
Navigation URL.....	39
Supported HTTP Method and Privileges.....	40
Chassis.....	40
Description.....	40
URL.....	40
Supported HTTP Method and Privileges.....	40
Navigation URL.....	40
Supported HTTP Method and Privileges.....	40
Supported Parameters.....	40
Supported Status Codes.....	41
Supported action — Reset.....	41
Contained resources.....	42
ComputerSystem.....	42
Description.....	42
URL.....	42
Supported HTTP Method and Privileges.....	42
Navigation URL.....	42
Supported HTTP Method and Privileges.....	42
Supported Parameters.....	42

Supported Status Codes.....	43
Supported Action — Reset.....	43
DellAttributes.....	44
Description.....	44
URL.....	44
Supported HTTP Method and Privileges.....	44
Supported action —ClearPending.....	44
DellJobCollection.....	44
Description.....	44
URL.....	44
Supported HTTP Method and Privileges.....	45
Navigation URL.....	45
Supported HTTP Method and Privileges.....	45
Supported Parameters.....	45
DellBootSources.....	45
Description.....	45
URL.....	45
HTTP methods and privileges.....	46
Status codes.....	46
Supported action — ClearPending.....	46
Settings resource.....	47
DellBootSourcesRegistry.....	48
Description.....	48
URL.....	48
HTTP methods and privileges.....	48
Status codes.....	48
DellCertificates.....	48
Description.....	48
URL.....	49
HTTP methods and privileges.....	49
Status codes.....	49
URL.....	49
DellController.....	51
Description.....	51
URL.....	51
Supported HTTP Method and Privileges.....	51
Updatable Properties.....	51
DelliDRACCard.....	51
Description.....	51
URL.....	51
Supported HTTP Method and Privileges.....	52
DelliDRACCardService.....	52
Description.....	52
URL.....	52
Supported HTTP Method and Privileges.....	52

Supported Action — ExportSSLCertificate.....	52
Supported Action — iDRACReset.....	53
Supported Action — iDRACResetCfg.....	54
Supported Action — ImportSSLCertificate.....	55
DellEnclosure.....	55
Description.....	55
URL.....	56
Supported HTTP Method and Privileges.....	56
DellEnclosureCollection.....	56
Description.....	56
URL.....	56
Supported HTTP Method and Privileges.....	56
DellEnclosureEMM.....	56
Description.....	56
URL.....	56
Supported HTTP Method and Privileges.....	56
DellEnclosureEMMCollection.....	57
Description.....	57
URL.....	57
Supported HTTP Method and Privileges.....	57
DellEnclosureFanSensor.....	57
Description.....	57
URL.....	57
Supported HTTP Method and Privileges.....	57
DellEnclosureFanSensorCollection.....	57
Description.....	57
URL.....	58
Supported HTTP Method and Privileges.....	58
DellEnclosurePowerSupply.....	58
Description.....	58
URL.....	58
Supported HTTP Method and Privileges.....	58
DellEnclosurePowerSupplyCollection.....	58
Description.....	58
URL.....	58
Supported HTTP Method and Privileges.....	58
DellEnclosureTemperatureSensor.....	59
Description.....	59
URL.....	59
Supported HTTP Method and Privileges.....	59
DellEnclosureTemperatureSensorCollection.....	59
Description.....	59
URL.....	59
Supported HTTP Method and Privileges.....	59
DellFC.....	59

Description.....	59
URL.....	60
Supported HTTP Method and Privileges.....	60
DellFCCollection.....	60
Description.....	60
URL.....	60
Supported HTTP Method and Privileges.....	60
DellFCStatistics.....	60
Description.....	60
URL.....	60
Supported HTTP Method and Privileges.....	60
DellFCStatisticsCollection.....	61
Description.....	61
URL.....	61
Supported HTTP Method and Privileges.....	61
DellJobService.....	61
Description.....	61
URL.....	61
HTTP methods and privileges.....	61
Supported Action — DeleteJobQueue.....	62
Supported Action — SetupJobQueue.....	62
DellLCService.....	63
Description.....	63
URL.....	63
Supported HTTP Method and Privileges.....	64
Supported Status Codes.....	64
Supported Action — BackupImage.....	64
Supported Action — ClearProvisioningServer.....	66
Supported Action — ExportFactoryConfiguration.....	67
Supported Action — ExportLCLog.....	68
Supported Action — ExportHWInventory.....	69
Supported Action — ExportTechSupportReport.....	71
Supported Action — GetRemoteServicesAPIStatus.....	72
Supported Action — GetRSStatus.....	73
Supported Action — LCWipe.....	73
Supported Action — ReInitiateDHS.....	74
Supported Action — RestoreImage.....	75
DellLicenseCollection.....	76
Description.....	76
URL.....	76
Supported HTTP Method and Privileges.....	76
DellLicenseManagementService.....	77
Description.....	77
URL.....	77
Supported HTTP Method and Privileges.....	77

Supported Action — ExportLicenseToNetworkShare.....	77
Supported Action — ImportLicenseFromNetworkShare.....	79
Supported Action — ImportLicense.....	80
Supported Action — ShowLicenseBits.....	81
Supported Action — DeleteLicense.....	82
Supported Action — ExportLicense.....	83
Supported Action — ExportLicenseByDeviceToNetworkShare.....	83
DellMemory.....	85
Description.....	85
URL.....	85
Supported HTTP Method and Privileges.....	85
DellNIC.....	85
Description.....	85
URL.....	85
Supported HTTP Method and Privileges.....	85
Updatable Properties.....	85
DellNICCapabilitiesCollection.....	86
Description.....	86
URL.....	86
Supported HTTP Method and Privileges.....	86
DellNICCapabilities.....	86
Description.....	86
URL.....	86
Supported HTTP Method and Privileges.....	86
Updatable Properties.....	86
DellNICCapabilitiesCollection.....	87
Description.....	87
URL.....	87
Supported HTTP Method and Privileges.....	87
DellNICStatistics.....	87
Description.....	87
URL.....	87
Supported HTTP Method and Privileges.....	87
DellNICStatisticsCollection.....	87
Description.....	87
URL.....	88
Supported HTTP Method and Privileges.....	88
DellNumericSensor.....	88
Description.....	88
URL.....	88
Supported HTTP Method and Privileges.....	88
Updatable Properties.....	88
DellNumericSensorCollection.....	89
Description.....	89
URL.....	89

Supported HTTP Method and Privileges.....	89
DellOSDeploymentService.....	89
Description.....	89
URL.....	89
Supported HTTP Method and Privileges.....	89
Supported Status Codes.....	89
Supported Action — BootToHD.....	90
Supported Action — BootToISOFromVFlash.....	91
Supported Action — BootToNetworkISO.....	91
Supported Action — ConfigurableBootToNetworkISO.....	93
Supported Action — ConnectNetworkISOImage.....	94
Supported Action — DeleteISOFromVFlash.....	95
Supported Action — DetachISOFromVFlash.....	95
Supported Action — DetachDrivers.....	96
Supported Action — DetachISOImage.....	97
Supported Action — DisconnectNetworkISOImage.....	97
Supported Action — DownloadISOToVFlash.....	98
Supported Action — GetAttachStatus.....	99
Supported Action — GetDriverPackInfo.....	99
Supported Action — GetNetworkISOImageConnectionInfo.....	100
Supported Action — UnpackAndAttach.....	101
Supported Action — UnpackAndShare.....	102
DellPowerSupplyCollection.....	103
Description.....	103
URL.....	103
Supported HTTP Method and Privileges.....	103
DellPowerSupplyViewCollection.....	103
Description.....	103
URL.....	103
Supported HTTP Method and Privileges.....	103
DellPCleSSDExtender.....	103
Description.....	103
URL.....	104
Supported HTTP Method and Privileges.....	104
Updatable Properties.....	104
DellPCleSSDExtenderCollection.....	104
Description.....	104
URL.....	104
Supported HTTP Method and Privileges.....	104
DellPCleSSD.....	104
Description.....	104
URL.....	104
Supported HTTP Method and Privileges.....	105
Supported Parameters.....	105
DellPCleSSDCollection.....	105

Description.....	105
URL.....	105
Supported HTTP Method and Privileges.....	105
DellPCleSSDBackPlane.....	105
Description.....	105
URL.....	105
Supported HTTP Method and Privileges.....	106
DellPCleSSDBackPlaneCollection.....	106
Description.....	106
URL.....	106
Supported HTTP Method and Privileges.....	106
DellPCleFunction.....	106
Description.....	106
URL.....	106
Supported HTTP Method and Privileges.....	106
Updatable Properties.....	107
DellPersistentStorageService.....	107
Description.....	107
URL.....	107
Supported HTTP Method and Privileges.....	107
Supported Action — FormatPartition.....	107
DellPhysicalDisk.....	108
Description.....	108
URL.....	108
Supported HTTP Method and Privileges.....	108
Updatable Properties.....	109
DellPresenceAndStatusSensor.....	109
Description.....	109
URL.....	109
Supported HTTP Method and Privileges.....	109
DellPresenceAndStatusSensorCollection.....	109
Description.....	109
URL.....	109
Supported HTTP Method and Privileges.....	109
DellPowerSupply.....	110
Description.....	110
URL.....	110
Supported HTTP Method and Privileges.....	110
DellPowerSupplyView.....	110
Description.....	110
URL.....	110
Supported HTTP Method and Privileges.....	110
DellProcessor.....	110
Description.....	110
URL.....	111

Supported HTTP Method and Privileges.....	111
Updatable Properties.....	111
DellRaidService.....	111
Description.....	111
URL.....	111
Supported HTTP Method and Privileges.....	111
Updatable Properties.....	112
Supported Action — AssignSpare.....	112
Supported Action — BlinkTarget.....	113
Supported Action — CheckVDValues.....	114
Supported Action — ClearForeignConfig.....	115
Supported Action — ConvertToRAID.....	116
Supported Action — ConvertToNonRAID.....	117
Supported Action — EnableControllerEncryption.....	117
Supported Action — GetAvailableDisks.....	118
Supported Action — GetDHSDisks.....	119
Supported Action — GetRAIDLevels.....	120
Supported Action — LockVirtualDisk.....	121
Supported Action — ReKey.....	122
Supported Action — RemoveControllerKey.....	123
Supported Action — ResetConfig.....	124
Supported Action — SetControllerKey.....	124
Supported Action — UnBlinkTarget.....	125
DellSensorCollection.....	126
Description.....	126
URL.....	126
Supported HTTP Method and Privileges.....	126
DellSensor.....	126
Description.....	126
URL.....	126
Supported HTTP Method and Privileges.....	127
DellSoftwareInstallationService.....	127
Description.....	127
URL.....	127
Supported HTTP Method and Privileges.....	127
Updatable Properties.....	127
Supported Action — GetRepoBasedUpdateList.....	128
Supported Action — InstallFromRepository.....	128
Supported Action — InstallFromURI.....	130
DellSwitchConnection.....	132
Description.....	132
URL.....	132
Supported HTTP Method and Privileges.....	132
DellSwitchConnectionCollection.....	132
Description.....	132

URL.....	132
Supported HTTP Method and Privileges.....	132
DellSystem.....	132
Description.....	132
URL.....	133
Supported HTTP Method and Privileges.....	133
Updatable Properties.....	133
DellvFlashCollection.....	133
Description.....	133
URL.....	133
Supported HTTP Method and Privileges.....	134
DellVirtualDisk.....	134
Description.....	134
URL.....	134
Supported HTTP Method and Privileges.....	134
Updatable Properties.....	134
DellVirtualDiskCollection.....	134
Description.....	134
URL.....	135
Supported HTTP Method and Privileges.....	135
DellServiceRoot.....	135
Description.....	135
URL.....	135
HTTP methods and privileges.....	135
Properties.....	135
DellUpdateService.....	136
Description.....	136
Supported action — Install.....	136
DellManager.....	137
Description.....	137
Supported Action — ResetToDefaults.....	137
Supported action — Export, Import, and Preview.....	138
Drive.....	141
Description.....	141
URL.....	141
Supported HTTP Method and Privileges.....	141
Supported Parameters.....	142
Supported Status Codes.....	142
EthernetInterfaces.....	142
Description.....	142
URL.....	142
HTTP methods and privileges.....	142
Ethernet — Instance.....	142
Reference Properties.....	143
EthernetInterfaceCollection.....	144

Description.....	144
URL.....	144
Supported HTTP Method and Privileges.....	144
EventService.....	145
Description.....	145
URL.....	145
Supported HTTP Method and Privileges.....	145
Contained Resource.....	145
Supported Action — SubmitTestEvent.....	145
FabricCollection.....	146
Description.....	146
URL.....	146
Supported HTTP Method and Privileges.....	146
Contained resources.....	146
PCle.....	146
Description.....	146
URL.....	146
Supported HTTP Method and Privileges.....	146
Contained resources.....	146
HostInterfaceCollection.....	147
Description.....	147
URL.....	147
Supported HTTP Method and Privileges.....	147
Navigation URL.....	147
Supported HTTP Method and Privileges.....	147
JSONSchemas.....	147
Description.....	147
URL.....	147
HTTP methods and privileges.....	148
Status codes.....	148
LogEntryCollection.....	148
Description.....	148
URL.....	148
Supported HTTP Method and Privileges.....	148
LogService.....	148
Description.....	148
URL.....	149
Supported HTTP Method and Privileges.....	149
Supported Parameters.....	149
Supported Status Codes.....	149
LogServiceCollection.....	149
Description.....	149
URL.....	149
Supported HTTP Method and Privileges.....	149
Supported Action — ClearLog.....	150

Manager.....	150
Description.....	150
URL.....	150
Supported HTTP Method and Privileges.....	150
Navigation URL.....	151
Supported HTTP Method and Privileges.....	151
Supported Parameters.....	151
Supported Status Codes.....	151
Supported Action — Reset.....	152
ManagerAccountCollection.....	152
Description.....	152
URL.....	152
HTTP methods and privileges.....	153
Navigation URL.....	153
HTTP methods and privileges.....	153
Updatable properties.....	153
Status codes.....	153
ManagerNetworkProtocol.....	154
Description.....	154
URL.....	154
Supported HTTP Method and Privileges.....	154
Memory.....	154
Description.....	154
URL.....	154
Supported HTTP Method and Privileges.....	154
Navigation URL.....	154
Supported HTTP Method and Privileges.....	155
Supported Parameters.....	155
Supported Status Codes.....	155
Supported Action — MemoryMetrics.....	155
MessageRegistryFile.....	156
Description.....	156
URL.....	156
Supported HTTP Method and Privileges.....	156
MessageRegistryFileCollection.....	156
Description.....	156
URL.....	156
Supported HTTP Method and Privileges.....	156
Messages.....	157
Description.....	157
URL.....	157
HTTP methods and privileges.....	157
Status codes.....	157
NetworkAdapterCollection.....	157
Description.....	157

URL.....	157
Supported HTTP Method and Privileges.....	158
NetworkDeviceFunctions.....	158
NetworkInterfaceCollection.....	163
Description.....	163
URL.....	163
Supported HTTP Method and Privileges.....	163
PCIeDevice.....	163
Description.....	163
URL.....	163
Supported HTTP Method and Privileges.....	163
PCIeFunction.....	163
Description.....	163
URL.....	164
Supported HTTP Method and Privileges.....	164
Port.....	164
Description.....	164
URL.....	164
Supported HTTP Method and Privileges.....	164
PortCollection.....	164
Description.....	164
URL.....	164
Supported HTTP Method and Privileges.....	165
Power.....	165
Description.....	165
URL.....	165
Supported HTTP Method and Privileges.....	165
Reference Properties.....	165
PrivilegeRegistry.....	166
Description.....	166
URL.....	166
Supported HTTP Method and Privileges.....	166
Processor.....	166
Description.....	166
URL.....	167
Supported HTTP Method and Privileges.....	167
Navigation URL.....	167
Supported HTTP Method and Privileges.....	167
Supported Parameters.....	167
Role.....	167
Description.....	167
URL.....	167
Supported HTTP Method and Privileges.....	167
RoleCollection.....	168
Description.....	168

URL.....	168
Supported HTTP Method and Privileges.....	168
SecureBoot.....	168
Description.....	168
URL.....	168
Supported HTTP Method and Privileges.....	168
Supported Status Codes.....	168
Supported Action — ResetKeys.....	169
SecureErase.....	169
Description.....	169
URL.....	170
Supported HTTP Method and Privileges.....	170
Supported Parameters.....	170
Supported Status Codes.....	170
SerialInterface.....	170
Description.....	170
URL.....	170
Supported HTTP Method and Privileges.....	171
Navigation URL.....	171
Supported HTTP Method and Privileges.....	171
Supported Parameters.....	171
ServiceRoot.....	171
Description.....	171
URL.....	171
Supported HTTP Method and Privileges.....	172
Session.....	172
URL.....	172
Description.....	172
HTTP methods and privileges.....	172
Updatable properties.....	172
Status codes.....	172
Action — Delete.....	173
SessionService.....	173
Description.....	173
URL.....	174
Supported HTTP Method and Privileges.....	174
SimpleStorage.....	174
Description.....	174
URL.....	174
HTTP methods and privileges.....	174
Status codes.....	174
SoftwareInventoryCollection.....	175
Description.....	175
URL.....	175
Supported HTTP Method and Privileges.....	175

Status codes.....	175
Navigation URL.....	176
Supported HTTP Method and Privileges.....	176
Status codes.....	176
Storage.....	176
Description.....	176
URL.....	176
Supported HTTP Method and Privileges.....	177
Navigation URL.....	177
Supported HTTP Method and Privileges.....	177
StorageController.....	177
Description.....	177
URL.....	177
Supported HTTP Method and Privileges.....	177
Subscriptions.....	177
Description.....	177
URL.....	178
HTTP methods and privileges.....	178
Properties.....	178
Status codes.....	178
Switches.....	179
Description.....	179
URL.....	179
Supported HTTP Method and Privileges.....	179
TaskCollection.....	179
Description.....	179
URL.....	179
Supported HTTP Method and Privileges.....	179
TaskService.....	179
Description.....	179
URL.....	180
Supported HTTP Method and Privileges.....	180
Thermal.....	180
Description.....	180
URL.....	180
Supported HTTP Method and Privileges.....	180
Supported Parameters.....	180
Reference Properties.....	180
UpdateService.....	181
Description.....	181
URL.....	181
Supported HTTP Method and Privileges.....	181
Supported Status Codes.....	182
Supported action — SimpleUpdate.....	182
VirtualMedia.....	183

Description.....	183
URL.....	183
HTTP methods and privileges.....	183
Status codes	184
Properties and values.....	184
VlanNetworkInterface.....	184
Description.....	184
URL.....	184
HTTP methods and response content type.....	184
Status codes.....	185
Volume.....	185
Description.....	185
URL.....	185
Supported HTTP Method and Privileges.....	185
Navigation URL.....	185
Supported HTTP Method and Privileges.....	185
Supported Parameters.....	186
Supported Status Codes.....	186
Supported Action — CheckConsistency.....	186
Supported Action — Initialize.....	187
NetworkPort.....	187
Description.....	187
URL.....	188
Supported HTTP Method and Privileges.....	188
Supported Parameters.....	188
NetworkPortCollection.....	188
Description.....	188
URL.....	188
Supported HTTP Method and Privileges.....	188
NetworkDeviceFunctionCollection.....	188
Description.....	188
URL.....	189
Supported HTTP Method and Privileges.....	189
Redundancy.....	189
Description.....	189
URL.....	189
Supported HTTP Method and Privileges.....	189
4 Examples.....	190
Example for GET.....	190
Example for PATCH.....	190
Example for POST.....	191
Example for DELETE.....	191
Example of Job Creation.....	191
Request.....	191
Response.....	192

Examples for \$expand..... 192
Examples for \$select..... 193
Examples for \$filter..... 193

Overview

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

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

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

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

Topics:

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

New in this release

- Added 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 Dell OEM APIs mapping WS-Man methods to iDRAC RESTful APIs.
- 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 configuration](#)
- [Redfish schema](#)
- [Redfish authentication and authorization](#)
- [Roles and privileges](#)
- [iDRAC licensing](#)
- [HTTP methods](#)
- [HTTP headers](#)
- [HTTP status codes and error messages](#)
- [SSL certificates of iDRAC](#)
- [Eventing](#)
- [Updating firmware using SimpleUpdate](#)
- [Query Parameters](#)

URL support

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

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

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

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

Redfish configuration

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

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

Configuring Redfish service using iDRAC web interface

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

- 1 In the iDRAC web interface, navigate to the following screen:
 - 13th generation of PowerEdge servers: **Overview > iDRAC Settings > Network > Services**
 - 14th generation of PowerEdge servers: **iDRAC Settings > Services > Redfish**
- 2 Under **Redfish**, select **Enabled** and click **Apply** to enable the service.

Configuring Redfish service by using iDRAC RACADM

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

Configuring Redfish service by using WS-MAN

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

Redfish schema

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

Redfish authentication and authorization

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

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

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

Table 1. Redfish authentication and authorization

Redfish actions	Authentication required	Authorization required
Read operation on any instrumentation data	Yes	Yes
Modify instrumentation data	Yes	Yes
Invoke actions	Yes	Yes
View service root	No	No
View metadata document	No	No
View OData service document	No	No
View message registry	No	No
View Redfish version URI	No	No
View JSONSchemaFile resource URI	No	No
View JSON schemas URI	No	No

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

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

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

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

Roles and privileges

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

Table 2. Roles and privileges

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

Role	Assigned privileges	OEM privileges
ReadOnly	<ul style="list-style-type: none"> Login 	-

iDRAC licensing

Redfish support is included in all license types of iDRAC. However, some of the iDRAC features require specific licenses. If a required license is not present, certain Redfish APIs may not be accessible and return an HTTP 403 status code. 403 implies that there is no sufficient privileges. In other cases, some of the properties in certain resource may not be returned in a response. The service may also return errors when such properties are modified. For information of specific license requirements for the resources, see [Redfish resources](#).

HTTP methods

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

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

GET

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

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

HEAD

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

POST

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


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

PUT

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

PATCH

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

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

DELETE

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

HTTP headers

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

Header	Description
If-Match	Supported only for AccountService and FirmwareInventory URIs.
If-None-Match	Supported only for AccountService, FirmwareInventory, and metadata URIs.
Content-Length	Returned on all responses except responses that have Transfer-Encoding: chunked.
Content-Type	<ul style="list-style-type: none">Responses other than OData metadata—application/json;charset=utf-8OData 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 .

HTTP status codes and error messages

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

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

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

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

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

NOTE:

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

SSL certificates of iDRAC

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

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

Eventing

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

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

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

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

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

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

Event delivery retry settings in RACADM

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

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	Configure iDRAC

Eventing operations

The Redfish event service provides the following URIs:

Table 3. Eventing operations

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

Updating firmware using SimpleUpdate

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

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

Updating firmware using a local image

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

- 1 To get the value of header ETag, execute GET on **SoftwareInventoryCollection** URL
`/redfish/v1/UpdateService/FirmwareInventory`
- 2 Upload the package by executing POST on **SoftwareInventoryCollection** with additional header as **Content-Type** and value multipart/form-data and header **if-Match** with ETag as value.

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

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

along with component and version ids.

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

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

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

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

- 4 Reboot the system to apply the update by executing POST on URL **Reset** (`/redfish/v1/Managers/iDRAC.Embedded.1/Actions/Manager.Reset`).

Updating firmware using HTTP share

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

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

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

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

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

- 2 Reboot the system to apply the update by executing POST on URL **Reset** (`/redfish/v1/Managers/iDRAC.Embedded.1/Actions/Manager.Reset`).

Query Parameters

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

- **Select**— The \$select parameter indicates to the implementation that it should return a subset of the properties of the resource based on the value of the select clause.
- **Filter**— The \$filter parameter indicates to the implementation that it should include a subset of the members of a collection based on the expression specified as the value of the filter clause. The \$query parameter is a set of properties and literal values with an operator.
- **Expand**— The \$expand parameter indicates to the implementation that it should include a hyperlink as well as the contents of that hyperlink in the current response as if a GET had been performed and included in line with that hyperlink.

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

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

Redfish resources

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

Topics:

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

- [DellNICCapabilities](#)
- [DellNICCapabilitiesCollection](#)
- [DellNICStatistics](#)
- [DellNICStatisticsCollection](#)
- [DellNumericSensor](#)
- [DellNumericSensorCollection](#)
- [DellOSDeploymentService](#)
- [DellPowerSupplyCollection](#)
- [DellPowerSupplyViewCollection](#)
- [DellPCleSSDExtender](#)
- [DellPCleSSDExtenderCollection](#)
- [DellPCleSSD](#)
- [DellPCleSSDCollection](#)
- [DellPCleSSDBackPlane](#)
- [DellPCleSSDBackPlaneCollection](#)
- [DellPCleFunction](#)
- [DellPersistentStorageService](#)
- [DellPhysicalDisk](#)
- [DellPresenceAndStatusSensor](#)
- [DellPresenceAndStatusSensorCollection](#)
- [DellPowerSupply](#)
- [DellPowerSupplyView](#)
- [DellProcessor](#)
- [DellRaidService](#)
- [DellSensorCollection](#)
- [DellSensor](#)
- [DellSoftwareInstallationService](#)
- [DellSwitchConnection](#)
- [DellSwitchConnectionCollection](#)
- [DellSystem](#)
- [DellVFlashCollection](#)
- [DellVirtualDisk](#)
- [DellVirtualDiskCollection](#)
- [DellServiceRoot](#)
- [DellUpdateService](#)
- [DellManager](#)
- [Drive](#)
- [EthernetInterfaces](#)
- [EthernetInterfaceCollection](#)
- [EventService](#)
- [FabricCollection](#)
- [PCle](#)
- [HostInterfaceCollection](#)
- [JSONSchemas](#)
- [LogEntryCollection](#)
- [LogService](#)
- [LogServiceCollection](#)

- Manager
- ManagerAccountCollection
- ManagerNetworkProtocol
- Memory
- MessageRegistryFile
- MessageRegistryFileCollection
- Messages
- NetworkAdapterCollection
- NetworkInterfaceCollection
- PCIeDevice
- PCIeFunction
- Port
- PortCollection
- Power
- PrivilegeRegistry
- Processor
- Role
- RoleCollection
- SecureBoot
- SecureErase
- SerialInterface
- ServiceRoot
- Session
- SessionService
- SimpleStorage
- SoftwareInventoryCollection
- Storage
- StorageController
- Subscriptions
- Switches
- TaskCollection
- TaskService
- Thermal
- UpdateService
- VirtualMedia
- VlanNetworkInterface
- Volume
- NetworkPort
- NetworkPortCollection
- NetworkDeviceFunctionCollection
- Redundancy

AccountService

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

AttributeRegistry

Description

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

URL

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

Methods and privileges

Table 4. Methods and privileges for AttributeRegistry

HTTP method	Required privilege
GET	Login

Status codes

Table 5. Status codes for AttributeRegistry

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

Assembly

Description

This is the schema definition for the Assembly properties.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

BaseMessages

Description

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

URL

/redfish/v1/Registries/BaseMessages

HTTP methods and privileges

Table 6. HTTP methods and privileges for BaseMessages

HTTP method	Required privilege
GET	Login

Status codes

Table 7. Status codes for BaseMessages

HTTP status code
200
400
500

Bios

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

Supported Status Codes

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

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

Supported Action — ChangePassword

Description

This action is used to change the BIOS passwords.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Status Codes

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

Supported Action — ClearPending

Description

This action is used to clear all the pending values.

URL

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

Supported Action — ResetBios

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Status Codes

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

Settings resource

Description

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

URL

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

HTTP methods and privileges

Table 8. HTTP methods and privileges for the Settings resource

HTTP method	Required privilege
GET	Login

Updatable properties

Table 9. Properties for the Settings resource

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

Status codes

Table 10. Status codes for the Settings resource

HTTP status code	Extended information
200	Base.1.0.Success
400	<ul style="list-style-type: none">Base.1.0.PropertyValueTypeErrorBase.1.0.PropertyValueNotInList
403	Base.1.0.InsufficientPrivilege
500	Base.1.0.InternalError

BootOption

Description

A Collection of BootOption resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

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

Supported HTTP Method and Privileges

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

Chassis

Description

A Collection of Chassis resource instances.

URL

`/redfish/v1/Chassis`

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Parameters

Parameter	Value
IntrusionSensor	Normal, HardwareIntrusion, null
IntrusionSensorReArm	Manual, null

Parameter	Value
ChassisType	Rack, Blade, Enclosure, StandAlone, Sled, Other
PowerState	On, Off
IndicatorLED	Blinking, Off

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		

Supported action — [Reset](#)

Supported action — Reset

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter	Value
ResetType	On, ForceOff

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		

Supported action — [ClearPending](#)

Contained resources

Power
Thermal

ComputerSystem

Description

A Collection of ComputerSystem resource instances.

URL

`/redfish/v1/Systems`

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

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

Supported HTTP Method and Privileges

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

Supported Parameters

Parameter	Value
InterfaceType	TCM1_0, TPM2_0, TPM1_2
BootSourceOverrideEnabled	Once Continuous Disabled
SystemType	Physical
MemoryMirroring	None, System

Parameter	Value
PowerState	On, null
BootSourceOverrideMode	UEFI, Legacy
IndicatorLED	Blinking Off

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		

Supported Action — Reset

Supported Action — Reset

Description

This action is used to reset the system.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter	Value
ResetType	On, ForceOff, ForceRestart, GracefulShutdown, PushPowerButton, Nmi

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		

DellAttributes

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported action —ClearPending

Description

This action is used to clear all the pending values.

URL

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

DellJobCollection

Description

A Collection of Job resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

Navigation URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
DELETE	ConfigureComponents, Login
GET	Login

Supported Parameters

Parameter	Value
JobType	FirmwareUpdate, FirmwareRollback, RepositoryUpdate, RebootPowerCycle, RebootForce, RebootNoForce, Shutdown
JobState	New, Scheduled, Running, Completed, unknown

DellBootSources

Description

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

URL

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

HTTP methods and privileges

Table 11. HTTP methods and privileges for DellBootSources

HTTP method	Required privilege
GET	Login

Status codes

Table 12. Status codes for DellBootSources

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

Supported action — ClearPending

Description

This action is used to clear the pending values.

URL

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

HTTP methods and privileges

Table 13. HTTP methods and privileges for ClearPending

HTTP method	Required privilege
POST	SystemControl

Status codes

Table 14. Status codes for ClearPending

HTTP status code	Extended information
200	Base.1.0.Success
400	<ul style="list-style-type: none">Base.1.0.PropertyValueTypeError

HTTP status code	Extended information
403	Base.1.0.InsufficientPrivilege
404	Base.1.0.ResourceMissingAtURI
500	Base.1.0.InternalError

Settings resource

Description

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

URL

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

HTTP methods and privileges

Table 15. HTTP methods and privileges for the Settings resource

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

Updatable properties

Table 16. Properties for the Settings resource

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

Status codes

Table 17. Status codes for the Settings resource

HTTP status code	Extended information
200	Base.1.0.Success
400	<ul style="list-style-type: none"> Base.1.0.PropertyValueTypeError

HTTP status code	Extended information
403	Base.1.0.InsufficientPrivilege
404	Base.1.0.ResourceMissingAtURI
500	Base.1.0.InternalError

DellBootSourcesRegistry

Description

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

URL

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

HTTP methods and privileges

Table 18. HTTP methods and privileges for DellBootSourcesRegistry

HTTP method	Required privilege
GET	Login

Status codes

Table 19. Status codes for DellBootSourcesRegistry

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

DellCertificates

Description

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

URL

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

HTTP methods and privileges

Table 20. HTTP methods and privileges for DellCertificates

HTTP method	Required privilege
GET	Login

Status codes

Table 21. Status codes for DellCertificates

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

URL

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

HTTP methods and privileges

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

HTTP method	Required privilege
GET	Login
POST	SystemControl

Updatable properties

Table 23. Properties for the instance of CertificateStore

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

Status codes

Table 24. Status codes for the instance of CertificateStore

HTTP status code	Extended information
200	Base.1.0.Success
400	<ul style="list-style-type: none">Base.1.0.PropertyValueTypeErrorBase.1.0.PropertyValueNotInList
403	Base.1.0. InsufficientPrivilege
500	Base.1.0.InternalError

URL

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

HTTP methods and privileges

Table 25. HTTP methods and privileges for instance of Certificate

HTTP method	Required privilege
GET	Login
DELETE	SystemControl

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

Status codes

Table 26. Status codes for the instance of Certificate

HTTP status code	Extended information
200	Base.1.0.Success
400	<ul style="list-style-type: none">Base.1.0.PropertyValueTypeErrorBase.1.0.PropertyValueNotInList
403	Base.1.0. InsufficientPrivilege
500	Base.1.0.InternalError

DellController

Description

An instance of DellController will have RAID Controller specific data.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Updatable Properties

Property	Value
EncryptionCapability	DellKeyManagementCapable, LocalKeyManagementAndDellKeyManagementCapable, LocalKeyManagementCapable, None
SlicedVDCapability	NotSupported, Supported
SecurityStatus	EncryptionCapable, EncryptionNotCapable, SecurityKeyAssigned
PatrolReadState	Running, Stopped, Unknown
RollupStatus	Degraded, Error, OK, Unknown
CachecadeCapability	NotSupported, Supported
EncryptionMode	DellKeyManagement, LocalKeyManagement, None, PendingDellKeyManagementCapable, Unsupported

DelliDRACCard

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DelliDRACCardService

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login
GET	Login

Supported Action — [ExportSSLCertificate](#)

Supported Action — [iDRACReset](#)

Supported Action — [ImportSSLCertificate](#)

Supported Action — [iDRACResetCfg](#)

Supported Action — ExportSSLCertificate

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Parameters

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

Supported Status Codes

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

Supported Action — iDRACReset

Description

This action is used to reset iDRAC.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Parameters

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

Supported Status Codes

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

Supported Action — iDRACResetCfg

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Parameters

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

Supported Status Codes

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

Supported Action — ImportSSLCertificate

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Parameters

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

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		LC011, LC077, RAC095, DH010

DellEnclosure

Description

An instance of DellEnclosure will have storage enclosure specific data.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosureCollection

Description

A collection of DellEnclosure resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosureEMM

Description

An instance of DellEnclosureEMM contains Enclosure Management Module specific data.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosureEMMCollection

Description

A collection of DellEnclosureEMM resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosureFanSensor

Description

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

URL

/redfish/v1/Dell/Chassis/System.Embedded.1/DellEnclosureFanSensor

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosureFanSensorCollection

Description

A collection of DellEnclosureFanSensor resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosurePowerSupply

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosurePowerSupplyCollection

Description

A collection of DellEnclosurePowerSupply resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosureTemperatureSensor

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellEnclosureTemperatureSensorCollection

Description

A collection of DellEnclosureTemperatureSensor resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellFC

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellFCCollection

Description

A collection of DellFC resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellFCStatistics

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellFCStatisticsCollection

Description

A collection of DellFCStatistics resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellJobService

Description

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

URL

/redfish/v1/Dell/Managers/<ID>/DellJobService

HTTP methods and privileges

Table 27. HTTP methods and privileges for DellJob

HTTP method	Required privilege
GET	Login
POST	SystemControl

Supported Action — DeleteJobQueue

Supported Action — SetupJobQueue

Supported Action — DeleteJobQueue

Description

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

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

URL

```
/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellJobService/Actions/DellJobService.DeleteJobQueue
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

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

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	JCP010
400	Base.1.0.PropertyMissing	JCP013
400	<null>	JCP012, JCP015, SUP011

Supported Action — SetupJobQueue

Description

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

URL

/redfish/v1/Dell/Managers/iDRAC.Embedded.1/DellJobService/Actions/DellJobService.SetupJobQueue

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

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

Supported Status Codes

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

DellLCService

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login
GET	Login

Supported Status Codes

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

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

Supported Action — BackupImage

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
CheckBackupDestinationAvailability	ENUM	Check, DoNotCheck	Check backup destination availability. Default is Check.
IgnoreCertificateWarning	ENUM	Off, On	Specifies if certificate warning should be ignored when HTTPS is specified. Default is On.
ProxySupport	ENUM	DefaultProxy, Off, ParametersProxy	Specifies if proxy should be used. Default is Off.
ProxyType	ENUM	HTTP, SOCKS	The proxy type of the proxy server. Default is HTTP.
ShareType	ENUM	CIFS, HTTP, HTTPS, Local, NFS, VFLASH	If ShareType is blank or null, it shall be considered as NFS type. The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified.
IPAddress	String		IP address of the NFS or CIFS share such as 192.168.10.12. The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified.
ImageName	String		The name of the backup file. The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified.
JobName	String		A name for the job. Default is "Backup:Image"
Passphrase	String		The passphrase for the image. The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified.
Password	String		The password for the remote share.
ProxyPassword	String		The password for the proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxyUsername	String		The user name for the proxy server.
ScheduledStartTime	String		The start time for the job execution in format: yyyyymmddhhmmss. The string "TIME_NOW" means immediate.
ShareName	String		Share name for the network share such as "imageshare". The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified. Sharename shall be considered as a path to a sub-folder in case of HTTP/HTTPS.

Parameter	Type	Value	Description
UntilTime	String		End time for the job execution in format: yyyyymmddhhmmss. : If this parameter is not NULL, then ScheduledStartTime parameter shall also be specified.
UserName	String		The user name for the remote share
Workgroup	String		The Workgroup for the share.
UntilTime	String		Scheduled end time for job execution in datetime format: yyyyymmddhhmmss. If not specified, there is no end time.

Supported Status Codes

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

Supported Action — ClearProvisioningServer

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		LC002

Supported Action — ExportFactoryConfiguration

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
IgnoreCertificateWarning	ENUM	Off, On	Specifies if certificate warning should be ignored when HTTPS is specified. Default is On.
ProxySupport	ENUM	DefaultProxy, Off, ParametersProxy	Specifies if proxy should be used. Default is Off.
ProxyType	ENUM	HTTP, SOCKS	The proxy type of the proxy server. Default is HTTP.
ShareType	ENUM	CIFS, HTTP, HTTPS, Local, NFS, VFLASH	If ShareType is blank or null, it shall be considered as NFS type. The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified.
IPAddress	String		IP address of the NFS or CIFS share such as 192.168.10.12. The parameter shall be required, if the ShareType parameter has value NFS, CIFS, or not specified.
Password	String		The password for the remote share.
ProxyPassword	String		The password for the proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxyUsername	String		The user name for the proxy server.

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

Supported Status Codes

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

Supported Action — ExportLCLog

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
IgnoreCertificateWarning	ENUM	Off, On	Specifies if certificate warning should be ignored when HTTPS is specified. Default is On.
ProxySupport	ENUM	DefaultProxy, Off, ParametersProxy	Specifies if proxy should be used. Default is Off.
ProxyType	ENUM	HTTP, SOCKS	The proxy type of the proxy server. Default is HTTP.

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

Supported Status Codes

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

Supported Action — ExportHWInventory

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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

Parameter	Type	Value	Description
Workgroup	String		The Workgroup for the share.

Supported Status Codes

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

Supported Action — ExportTechSupportReport

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
ShareType	ENUM	CIFS, NFS	Type of the network share.
DataSelectorArrayIn	ENUM	HWData, OSAppData, OSAppDataWithoutPII, TTYLogs	Array of integer values to select TSR components.
IPAddresses	String		IP address of the network share.

Parameter	Type	Value	Description
Password	String		Password of the account to access the share.
FileName	String		File name of the export tech support report.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share, which may be treated as the path of the directory containing the file.
Username	String		The user name for the remote share

Supported Status Codes

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

Supported Action — GetRemoteServicesAPIStatus

Description

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

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

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

Supported Action — GetRSStatus

Description

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

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

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

Supported Action — LCWipe

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

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

Supported Action — ReInitiateDHS

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
PerformAutoDiscovery	Enumeration	Off, Now, NextBoot	A value of "Off = 1" disables auto discovery. A value of "Now = 2" enables and initiates auto discovery immediately. A value of "NextBoot = 3" delays reconfiguration and auto discovery until next AC powercycle. Note—If NextBoot has a value of 3 then after successful execution, the Discovery Factory Defaults attribute is set to "On".
ProvisioningServer	String		This property specifies the provisioning server addresses and ports used for auto discovery. If omitted, Lifecycle Controller gets the value from DHCP or DNS.
ResetToFactoryDefaults	Boolean	lean	If ResetToFactoryDefaults is True, all configuration information is replaced with auto-discovery factory default properties. If False, an error is returned.

Supported Status Codes

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

Supported Action — RestoreImage

Description

This RestoreImage action is used to restore firmware and configurations.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
IgnoreCertWarning	Enumeration	Off, On	Specifies if certificate warning should be ignored when HTTPS is specified. Default is On.
PreserveVDConfig	Enumeration	False, True	Specifies whether to preserve the virtual drive configuration.
ProxySupport	Enumeration	DefaultProxy, Off, ParametersProxy	Specifies if proxy should be used. Default is Off.
ProxyType	Enumeration	HTTP, SOCKS	The proxy type of the proxy server. Default is HTTP.
ShareType	Enumeration	CIFS, HTTP, HTTPS, Local, NFS, VFLASH	Type of the network share. Default is NFS, when this parameter is not passed.
ImageName	String		Name of the image file.
IPAddress	String		IP address of the NFS or CIFS share such as 192.168.10.12. The parameter is required if the ShareType parameter has value NFS, CIFS, or not specified.
Password	String		The password for the remote share.
ProxyPasswd	String		The password for the proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.

Parameter	Type	Value	Description
ProxyUserName	String		The user name for the proxy server.
ScheduledStartTime	String		Schedules the job at the time specified. The format is yyyyymmddhhmmss. Default setting is TIME_NOW, which will start the job immediately.
UntilTime	String		End time for the job execution in format: yyyyymmddhhmmss. If not specified, there is no end time.
FileName	String		The target output file name. A file name is not required if the share type is Local.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share, which may be treated as the path of the directory containing the file.
UserName	String		The user name for the remote share
Workgroup	String		The Workgroup for the share.

Supported Status Codes

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

DellLicenseCollection

Description

A collection of DellLicense resource

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellLicenseManagementService

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login
GET	Login

Supported Action — [ExportLicenseToNetworkShare](#)

Supported Action — [ImportLicenseFromNetworkShare](#)

Supported Action — [ImportLicense](#)

Supported Action — [ShowLicenseBits](#) Supported Action — [DeleteLicense](#) Supported Action — [ExportLicense](#) Supported Action —

[ExportLicenseByDeviceToNetworkShare](#)

Supported Action — ExportLicenseToNetworkShare

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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

Supported Status Codes

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

Supported Action — ImportLicenseFromNetworkShare

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
FQDD	String		FQDD of the device to export licenses to.
IPAddress	String		IP address of the server hosting the network share.
IgnoreCertWarning	ENUM	Off, On	Specifies if certificate warning is to be ignored when HTTPS is specified. If IgnoreCertWarning is On, the certificate will be ignored. Default is 1 (Off).
ImportOptions	ENUM	NoOption, Force, All	Flag to force or install for all similar devices.
LicenseName	String		The file name of the license file to be imported.
Password	String		Password for Network share authentication.
ProxyPasswd	String		The password to log in proxy server.
ProxyPort	String		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP Address of the proxy server.
ProxySupport	ENUM	Off, DefaultProxy, ParametersProxy	Specifies if proxy is to be used or not. Default is 1 (Off).

Parameter	Type	Value	Description
ProxyType	ENUM	HTTP, SOCKS	The proxy type of the proxy server. Default is 0 (HTTP).
ProxyUsername	String		The username for proxy server.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share, this may be treated as the path of the directory containing the file.
ShareType	ENUM	NFS, CIFS, HTTP, HTTPS	Type of the network share.
UserName	String		User name for network share authentication.
Workgroup	String		Optional. Workgroup for the CIFS share.

Supported Status Codes

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

Supported Action — ImportLicense

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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

Supported Status Codes

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

Supported Action — ShowLicenseBits

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Action — DeleteLicense

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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

Supported Status Codes

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

Supported Action — ExportLicense

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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

Supported Status Codes

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

Supported Action — ExportLicenseByDeviceToNetworkShare

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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

Supported Status Codes

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

DellMemory

Description

An instance of DellMemory will have Memory Device specific data.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellNIC

Description

An instance of DellNIC will have NIC device specific data.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Updatable Properties

Property	Value
NicMode	Unknown, Enabled, Disabled

DellNICCapabilitiesCollection

Description

A collection of DellNICCapabilities resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellNICCapabilities

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Updatable Properties

Property	Value
FCoEOffloadSupport	Unknown, Supported, NotSupported
FCoEBootSupport	Unknown, Supported, NotSupported
FlexAddressingSupport	Unknown, Supported, NotSupported
PXEBootSupport	Unknown, Supported, NotSupported
iSCSIBootSupport	Unknown, Supported, NotSupported

Property	Value
iSCSIOffloadSupport	Unknown, Supported, NotSupported

DellNICCapabilitiesCollection

Description

A collection of DellNICCapabilities resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellNICStatistics

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellNICStatisticsCollection

Description

A collection of DellNICStatistics resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellNumericSensor

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Updatable Properties

Property	Value
SensorType	AirFlow, Counter, Current, Humidity, Intrusion, Lock, Other, PowerConsumption, PowerProduction, Presence, Pressure, SmokeDetection, Switch, Tachometer, Temperature, Unknown, Voltage
EnabledState	Deferred, Disabled, Enabled, EnabledButOffline, InTest, NotApplicable, Other, Quiesce, ShuttingDown, Starting, Unknown

Property	Value
HealthState	CriticalFailure, Degraded/Warning, MajorFailure, MinorFailure, NonRecoverableError, OK, Unknown

DellNumericSensorCollection

Description

A collection of DellNumericSensor resource

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellOSDeploymentService

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login
GET	Login

Supported Status Codes

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

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

Supported Action — BootToHD

Description

The BootToHD action is used for one time boot to the host server's hard disk. Return values for BootToHD are specified below, where the method-execution behavior matches the return- code description. BootToHD action's parameters are also specified in the table below.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

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

Supported Action — BootToISOFromVFlash

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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

Supported Status Codes

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

Supported Action — BootToNetworkISO

Description

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

URL

/redfish/v1/Dell/Systems/System.Embedded.1/DelOSDeploymentService/Actions/DelOSDeploymentService.BootToNetworkISO

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
ExposeDuration	DateTimeOffset		Identifies the amount of time (up to 18 hours) for the ISO image file to be exposed as a local CD-ROM device to the host server after which it will be automatically detached. The default value shall be 18 hours, if the parameter is not specified. The format for intervals is: YYYY-MM-DDThh:mm:ss[.SSS] (Z + -)hh:mm
FolderName	String		Folder name containing the ISO image file.
HashType	ENUM	MD5, SHA1	Type of hash algorithm used to compute checksum.
HashValue	String		Checksum value in string format computed by using the 'HashType' algorithm.
IPAddress	String		NFS, CIFS, HTTP, HTTPS share IPv4 address. For example, 192.168.10.100.
ImageName	String		Name of the image file.
Password	String		Password, if applicable.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP or HTTPS share, which may be treated as the path of the directory containing the file.
ShareType	ENUM	NFS, CIFS	Type of the network share.
UserName	String		User name, if applicable. If the value contains domain name—for example, domain name or user name—the "domain name" will be considered as the work group. Work group parameter will take precedence if value is separately passed for it along with a user name. Supports only " and '/' for separator.
Workgroup	String		Optional. Workgroup for the CIFS share.

Supported Status Codes

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

Supported Action — ConfigurableBootToNetworkISO

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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

Supported Status Codes

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

Supported Action — ConnectNetworkISOImage

Description

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

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

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

Parameter	Type	Value	Description
UserName	String		User name, if applicable.
Workgroup	String		Optional. Workgroup for the CIFS share.

Supported Status Codes

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

Supported Action — DeleteISOFromVFlash

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

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

Supported Action — DetachISOFromVFlash

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

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

Supported Action — DetachDrivers

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

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

Supported Action — DetachISOImage

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

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

Supported Action — DisconnectNetworkISOImage

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

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

Supported Action — DownloadISOToVFlash

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
HashType	ENUM	MD5, SHA1	Type of hash algorithm used to compute checksum.
HashValue	String		Checksum value in string format computed by using the 'HashType' algorithm.
IPAddress	String		The TFTP, CIFS, NFS, HTTP, or HTTPS share IPv4 address. For example, 192.168.10.100.
ImageName	String		Name of the image file.
Password	String		Password, if applicable.
Port	ENUM		Port Number
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP or HTTPS share, which may be treated as the path of the directory containing the file.
ShareType	ENUM	NFS, CIFS	Type of the network share.
UserName	String		User name, if applicable.
Workgroup	String		Optional. Workgroup for the CIFS share.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	OSD1
400		OSD16, OSD18, OSD19, OSD28, OSD3, OSD37, OSD40, OSD42, OSD43, OSD47, OSD48, OSD52, OSD53, OSD54, OSD55

Supported Action — GetAttachStatus

Description

The GetAttachStatus() method will give the status of the Drivers and ISO Image that has been exposed to host.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

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

Supported Action — GetDriverPackInfo

Description

The GetDriverPackInfo action is used get the list of operating systems that can be installed on the host system using the embedded device drivers present in the Lifecycle Controller.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		OSD2, OSD29, OSD3, OSD35, OSD4, OSD5, OSD6

Supported Action — GetNetworkISOImageConnectionInfo

Description

The GetNetworkISOImageConnectionInfo action is used to give the status of the ISO Image that has been exposed to the host system. The following table lists the return values for GetNetworkISOImageConnectionInfo, where the action-execution behavior matches the return-code description.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		OSD32

Supported Action — UnpackAndAttach

Description

The UnpackAndAttach action is used to extract the drivers for the selected operating system to a USB device that is attached locally to the server for the specified time interval. The following table specifies the return values for UnpackAndAttach action, where the action-execution behavior matches the return-code description.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
ExposeDuration	DateTime Offset		Identifies the amount of time (up to 18 hours) for the drivers to be exposed as an USB device to the host. The default value shall be 18 hours, if the parameter is not specified. The format for intervals is: YYYY-MM-DDThh:mm:ss[.SSS](Z (+ -)hh:mm)
OSName	String		Name of the OS to unpack drivers for, this value shall match one of the strings in OSList returned for GetDriverPackInfo.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	OSD1
400		OSD10, OSD11, OSD12, OSD13, OSD19, OSD2, OSD20, OSD27, OSD3, OSD30, OSD35, OSD4, OSD5

Supported Action — UnpackAndShare

Description

The UnpackAndShare action is used to extract the drivers for the selected operating system, and copy them to the specified network share. The following table lists the return values for UnpackAndShare, where the action-execution behavior matches the return-code description.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
FolderName	String		Folder name.
IPAddress	String		CIFS, NFS, HTTP, or HTTPS share IPv4 address. For example, 192.168.10.100.
OSName	String		The OS name.
Password	String		Password, if applicable.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share, which may be treated as the path of the directory containing the file.
ShareType	ENUM	NFS, CIFS	Type of the network share.
UserName	String		User name, if applicable.
Workgroup	String		Optional. Workgroup for the CIFS share.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	OSD1
400		OSD10, OSD11, OSD12, OSD13, OSD19, OSD2, OSD20, OSD27, OSD3, OSD30, OSD35, OSD4, OSD47, OSD5

DellPowerSupplyCollection

Description

A collection of DellPowerSupply resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPowerSupplyViewCollection

Description

A collection of DellPowerSupplyView resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPCleSSDExtender

Description

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

URL

/redfish/v1/Dell/Systems/System.Embedded.1/Storage/DellPCIeSSDExtender

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Updatable Properties

Property	Value
RollupStatus	Unknown, Ok, Degraded, Error

DellPCIeSSDExtenderCollection

Description

A collection of DellPCIeSSDExtender resource.

URL

/redfish/v1/Dell/Systems/System.Embedded.1/Storage/DellPCIeSSDExtenderCollection

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPCIeSSD

Description

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

URL

/redfish/v1/Dell/Systems/System.Embedded.1/Storage/DellPCIeSSD

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Parameters

Parameter	Value
DriveFormFactor	Unknown, 1.8Inch, 2.5Inch, 3.5Inch, AddInCard, M.2.

DellPCleSSDCollection

Description

A collection of DellPCleSSD resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPCleSSDBackPlane

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPCleSSDBackPlaneCollection

Description

A collection of DellPCleSSDBackPlane resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPCleFunction

Description

An instance of DellPCleFunction will have PCI device specific data.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Updatable Properties

Parameter	Value
DataBusWidth	128Bit, 12XOrX12, 16Bit, 16XOrX16, 1XOrX1, 2XOrX2, 32Bit, 32XOrX32, 4XOrX4, 64Bit, 8Bit, 8XOrX8, Other, Unknown
SlotType	AGP, AGP2X, AGP4X, AGP8X, EISA, IORiserCardSlot, ISA, MCA, NuBus, Other, PC-98/C20, PC-98/C24, PC-98/Card, PC-98/E, PC-98/LocalBus, PCCard(PCMCIA), PCI, PCI-66MHzCapable, PCI-X, PCIExpress, PCIExpressGen2, PCIExpressGen2SFF-8639, PCIExpressGen2X1, PCIExpressGen2X16, PCIExpressGen2X2, PCIExpressGen2X4, PCIExpressGen2X8, PCIExpressGen3, PCIExpressGen3SFF-8639, PCIExpressGen3X1, PCIExpressGen3X16, PCIExpressGen3X2, PCIExpressGen3X4, PCIExpressGen3X8, PCIExpressX1, PCIExpressX16, PCIExpressX2, PCIExpressX4, PCIExpressX8, ProcessorCardSlot, Proprietary, ProprietaryMemoryCardSlot, Unknown, VL-VESA

DellPersistentStorageService

Description

The DellPersistentStorageService resource provides some actions to support VFlash functionality.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login
GET	Login

[Supported Action — FormatPartition](#)

Supported Action — FormatPartition

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	AccessVirtualMedia, Login

Supported Parameters

Parameter	Type	Value	Description
FormatType	ENUM	EXT2, EXT3, FAT16, FAT32	Folder name.
PartitionIndex	ENUM		CIFS, NFS, HTTP, or HTTPS share IPv4 address. For example, 192.168.10.100.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		JCP17, JCP18, JCP19, VF001, VF002, VF004, VF012, VF013, VF015, VF016, VF018, VF019, VF021, VF024, VF026, VF027, VF033, VF047, VF052

DellPhysicalDisk

Description

An instance of DellPhysicalDisk will have Physical Disk specific data.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Updatable Properties

Property	Value
DriveFormFactor	1.8Inch, 2.5Inch, 3.5Inch, AddInCard, M.2, Unknown
PredictiveFailureState	SmartAlertAbsent, SmartAlertPresent
RaidStatus	Blocked, Degraded, Failed, Foreign, Missing, NonRAID, Offline, Online, Ready, Unknown

DellPresenceAndStatusSensor

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPresenceAndStatusSensorCollection

Description

A collection of DellPresenceAndStatusSensor resource

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPowerSupply

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellPowerSupplyView

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellProcessor

Description

An instance of DellProcessor will have CPU specific data.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Updatable Properties

Property	Value
HyperThreadingEnabled	No, Yes
TurboModeCapable	No, Yes
TurboModeEnabled	No, Yes
VirtualizationTechnologyCapable	No, Yes
VirtualizationTechnologyEnabled	No, Yes
HyperThreadingCapable	No, Yes

DellRaidService

Description

The DellRaidService resource provides some actions to support RAID functionality.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login
GET	Login

Updatable Properties

Property	Value
DiskType	All, HDD, SSD
FormFactor	All, M.2
RaidLevel	NoRAID, RAID0, RAID1, RAID10, RAID5, RAID50, RAID6, RAID60
Diskprotocol	AllProtocols, NVMe, SAS, SATA
Mode	DKM, LKM
VDPropNameArrayIn	RAIDLevel, Size, SpanDepth, SpanLength, StartingLBA, T10PIStatus
BlockSizeInBytes	4096, 512, All
T10PIStatus	All, T10PICapable, T10PIIncapable
DiskEncrypt	All, FDE, NonFDE

Supported Action

— AssignSpare

Supported Action — BlinkTarget

Supported Action — CheckVDValues

Supported Action — ClearForeignConfig

Supported Action — ConvertToRAID

Supported Action — ConvertToNonRAID

Supported Action — GetDHSDisks

Supported Action — LockVirtualDisk

Supported Action — GetRAIDLevels

Supported Action — SetControllerKey

Supported Action — RemoveControllerKey

Supported Action — UnBlinkTarget

Supported Action — EnableControllerEncryption

Supported Action — ReKey

Supported Action — ResetConfig

Supported Action — AssignSpare

Description

The AssignSpare action is used to assign a physical disk as a dedicated hot spare for a virtual disk, or as a global hot spare.

URL

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


Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
Target	String		This parameter is the FQDD of the target device (physical drive).
VirtualDisk Array	String		Array of ElementName(s) where each identifies a different Virtual Drive (VD). Currently only one VD can be passed. Array of ElementName(s) where each ElementName identifies a different virtual disk.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR009, STOR017, STOR028, STOR029, STOR037, STOR038

Supported Action — BlinkTarget

Description

The BlinkTarget action is used to identify a single physical disk by blinking the disk slot LED for the physical disk / Virtual disk. The successful execution of this action results in setting the LED to blink the identify pattern or turns off the blinking of the identify pattern. The action is real time, blink cannot be scheduled as part of a job.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
Target	String		This parameter is the FQDD of the physical drive, SSD, or VD.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR037, STOR038

Supported Action — CheckVDValues

Description

The CheckVDValues action is used to determine the possible sizes of Virtual disks and the default settings, provided a RAID level and set of physical disks. The VDPropArray property is filled with Size and other values, so that the method is successfully executed. If the SpanDepth is not provided, a default value of 2 shall be used for RAID levels 10, 50, and 60.

NOTE: For certain numbers of disks such as nine or fifteen, it may be necessary for the user to provide another SpanDepth.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
PDArray	String		Array of FQDDs where each identifies a physical drive.
Target	String		FQDD of the target device (Controller).
VDPropNameArrayIn	String	RAIDLevel, Size, SpanDepth, SpanLength,	Indexed array of VD property names. The property names can be Size, SpanDepth, SpanLength, RAIDLevel, StartingLBA or T10PIStatus. The values for the property needs to be provided in VDPropValueArrayIn in the same order.

Parameter	Type	Value	Description
		StartingLBA, T10PIStatus	
VDPPropValueArrayIn	String		Indexed array of VD property values for the respective VDPPropNameArrayIn parameter.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR009, STOR010, STOR011, STOR013, STOR017, STOR029, STOR030, STOR035, STOR037, STOR038, STOR043, STOR045, STOR046, STOR051, STOR052

Supported Action — ClearForeignConfig

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
Target	String		FQDD of the target device (Controller).

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR018, STOR030, STOR037, STOR038

Supported Action — ConvertToRAID

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
PDArray	String		An array of FQDDs where each identifies a physical drive.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR037, STOR038

Supported Action — ConvertToNonRAID

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
PDArray	String		An array of FQDDs where each identifies a physical drive.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR037, STOR038, STOR074

Supported Action — EnableControllerEncryption

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
Key	String		Key is the passcode. This parameter is required if the mode is set to Local Key Management. The key shall be maximum of 32 characters in length, where the expanded form of the special character is counted as a single character. The Key shall have one character from each of the following set—Upper case, lower case, number, special character. The special characters in the following set must be passed as <code>&->&amp;;</code> , <code>< ->&lt;;</code> , <code>>->&gt;;</code> , <code>"->&quot;;</code> , and <code>' ->&apos;;</code> .
Keyid	String		Key identifier describes the key. This parameter is required if the mode is set to Local Key Management. The key ID shall be maximum of 32 characters in length and must not have any white spaces.
Mode	ENUM	LKM, DKM	Mode of the controller 1 - Local Key Management (LKM).

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR019, STOR020, STOR022, STOR030, STOR037, STOR038

Supported Action — GetAvailableDisks

Description

The GetAvailableDisks action is used to determine minimum number of drives required to create virtual disks.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
BlockSizeInBytes	ENUM	All, 4096, 512	The parameter specifies the physical drive block size in bytes.
DiskEncrypt	ENUM	All, FDE, NonFDE	The parameter specifies the drive encryption capability.
DiskType	ENUM	All, HDD, SSD	The property represents the drive type.
DiskProtocol	ENUM	AllProtocols, SATA, SAS, NVMe	The parameter specifies the type of drive protocol.
FormFactor	ENUM	All, M.2	This parameter is used to specify the form factor of drives and shall be one of the following: <ul style="list-style-type: none">· 0—Include all· 1—Include only BOSS M.2
RaidLevel	ENUM	NoRAID, RAID6, RAID60, RAID0, RAID10, RAID1, RAID5, RAID50	The parameter represents the type of RAID configuration.
T10PIStatus	ENUM	All, T10PICapable, T10PIIncapable	The parameter specifies the T10-Protection Information (PI) capability status.
Target	String		This parameter is the FQDD of the target device (Controller).

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR030, STOR037, STOR038

Supported Action — GetDHSDisks

Description

The GetDHSDisks action is used to determine possible choices of physical drives that can be used to set a dedicated hot spare for the identified virtual disk. GetDHSDisks returns success if it has evaluated the physical disks for potential hot spares, the PDArray return list can be empty if no physical disks are suitable for hot spares.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
Target	String		This parameter is the FQDD of the target device (VD).

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR017, STOR028, STOR037, STOR038

Supported Action — GetRAIDLevels

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
BlockSizeInBytes	ENUM	All, 4096, 512	The parameter specifies the physical drive block size in bytes.
DiskEncrypt	ENUM	All, FDE, NonFDE	The parameter specifies the drive encryption capability.
DiskType	ENUM	All, HDD, SSD	The parameter specifies the type of the drive.

Parameter	Type	Value	Description
Diskprotocol	ENUM	AllProtocols, SATA, SAS, NVMe	The parameter specifies the type of drive protocol.
FormFactor	ENUM	All, M.2	This parameter is used to specify the form factor of drives and shall be one of the following: <ul style="list-style-type: none"> 0—Include all 1—Include only BOSS M.2
PDArray	String		Array of FQDDs where each identifies a physical drive.
T10PIStatus	ENUM	All, T10PICapable, T10PIIncapable	The parameter specifies the T10-Protection Information (PI) capability status.
Target	String		FQDD of target device (Controller).

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR030, STOR037, STOR038

Supported Action — LockVirtualDisk

Description

The LockVirtualDisk action encrypts the virtual disk.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
Target	String		FQDD of target device (Controller).

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR030, STOR037, STOR038

Supported Action — ReKey

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
Keyid	String		Key identifier describes the key. The key ID shall be maximum 32 characters in length and must not have any white spaces.
Mode	ENUM	LKM, DKM	Mode of the controller: 1 - Local Key Management (LKM), 2 - Dell Key Manager.
NewKey	String		New controller key. The key shall be maximum of 32 characters in length, where the expanded form of the special character is counted as a single character. The Key shall have one character from each of the following set. Upper case, lower case, number, special character. The special characters in the following set need to be passed as mentioned below and are counted as a single character for the maximum length of the key. <code>&->&amp;; < ->&lt;; >->&gt;; "->&quot;;</code> and <code>'->&apos;;</code>
OldKey	String		The old controller key.
Target	String		This parameter is the FQDD of the target device (Controller).

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR019, STOR020, STOR030, STOR037, STOR038, STOR048, STOR050, STOR053

Supported Action — RemoveControllerKey

Description

The RemoveControllerKey action erases the encryption key on controller.

 **CAUTION:** This action erases all encrypted drives.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
Target	String		FQDD of target device (Controller).

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR021, STOR022, STOR030, STOR037, STOR038

Supported Action — ResetConfig

Description

The ResetConfig action is used to delete all the virtual disks and unassign all hot spare physical disks.

 **CAUTION:** This action deletes all the data on the existing virtual disks.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
Target	String		FQDD of target device (Controller).

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR021, STOR022, STOR030, STOR037, STOR038

Supported Action — SetControllerKey

Description

The SetControllerKey action is used to set the key on controllers and set the controller in Local key Management (LKM) to encrypt the drives.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
Key	String		The parameter specifies the key passcode. The Key shall be maximum of 32 characters in length, where the expanded form of the special character is counted as a single character. The Key shall have at least one character from each of the following sets. Upper case, lower case, number, special character, The special characters in the following set need to be passed as mentioned below: &->&;, < -><;, >->>;, "->";, ' ->';"
Keyid	String		Key identifier describes the key. The key ID shall be maximum 32 characters in length and must not have any white spaces.
Target	String		This parameter is the FQDD of the target device (Controller).

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR021, STOR022, STOR030, STOR037, STOR038

Supported Action — UnBlinkTarget

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login

Supported Parameters

Parameter	Type	Value	Description
Target	String		This parameter is the FQDD of the physical drive, SSD, and VD.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		STOR003, STOR004, STOR006, STOR007, STOR037, STOR038

DellSensorCollection

Description

A collection of DellSensor resource

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellSensor

Description

An instance of DellSensor will represent a sensor, a hardware device that is capable of measuring the characteristics of a physical property.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellSoftwareInstallationService

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

Updatable Properties

Property	Value
IgnoreCertWarning	Off, On
ProxySupport	DefaultProxy, Off, ParametersProxy
ProxyType	HTTP, SOCKS
ApplyUpdate	False, True
ShareType	CIFS, FTP, HTTP, HTTPS, NFS, TFTP

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

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

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

Supported Action — GetRepoBasedUpdateList

Description

This action is used for getting the list of packages and a list of devices that will be updated when a particular repository is used. You must run InstallFromRepository command before running GetRepoBasedUpdateList. If Applyupdate is False, no updates are applied or scheduled. If ApplyUpdate is True, the list contains job IDs for all the jobs queued for the devices.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	SUP028
400		SUP029, SUP030

Supported Action — InstallFromRepository

Description

This action creates the list of the updates contained in the repository that are supported by LC and are applicable to the system and installed hardware. The successful execution of this action creates a job. The list is copied to a persistent location so that you can query for the updatable list by using GetRepoBasedUpdateList WSMAN Command. If the input parameter ApplyUpdate value is True, only the applicable packages are applied and GetRepoBasedUpdateList gives the JOBIDs for all the jobs queued for the devices.

URL

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


Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter	Type	Value	Description
ApplyUpdate	ENUM	False, True	If ApplyUpdate is set to True, the updatable packages from Catalog XML are staged. If it is set to False, no updates are applied. The list of updatable packages can be seen by invoking the GetRepoBasedUpdateList. Default value is True.
CatalogFile	String		Name of the catalog file on the repository. Default is Catalog.xml.
IPAddress	String		IP address for the remote share.
IgnoreCertWarning	ENUM	Off, On	Specifies if certificate warning should be ignored when HTTPS is used. If IgnoreCertWarning is On, warnings are ignored. Default is 2 (On).
Mountpoint	String		The local directory where the share should be mounted. This is applicable for CIFS.
Password	String		Password for the remote share. This parameter must be provided for CIFS.
ProxyPasswd	String		The password for the proxy server.
ProxyPort	uint64		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxySupport	ENUM	DefaultProxy, Off, ParametersProxy	Specifies if a proxy should be used. Default is 1 (Off).
ProxyType	ENUM	HTTP, SOCKS	The proxy type of the proxy server. Default is 0 (HTTP).
ProxyUname	String		The user name for the proxy server.

Parameter	Type	Value	Description
RebootNeeded	Boolean		This property indicates if a reboot should be performed. True indicates that the system (host) is rebooted during the update process. False indicates that the updates take effect after the system is rebooted the next time. Default value is set to False.
ShareName	String		Name of the CIFS share or full path to the NFS share. Optional for HTTP/HTTPS share, this may be treated as the path of the directory containing the file.
ShareType	ENUM	CIFS, FTP, HTTP, HTTPS, NFS, TFTP	Type of the network share. Default value is NFS.
UserName	String		User name for the remote share. This parameter must be provided for CIFS.
Workgroup	String		Workgroup for the CIFS share - optional.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		SUP001, SUP002, SUP019, SUP026, SUP027

Supported Action — InstallFromURI

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter	Type	Value	Description
IgnoreCertWarning	ENUM	Off, On	Specifies if certificate warning should be ignored when HTTPS is used. If IgnoreCertWarning is On, warnings are ignored. Default is 2 (On).
ProxyPasswd	String		The password for the proxy server.
ProxyPort	uint64		Port for the proxy server. Default is set to 80.
ProxyServer	String		The IP address of the proxy server.
ProxySupport	ENUM	DefaultProxy, Off, ParametersProxy	Specifies if a proxy should be used. Default is 1 (Off).
ProxyType	ENUM	HTTP, SOCKS	The proxy type of the proxy server. Default is 0 (HTTP).
ProxyUname	String		The user name for the proxy server.
Target	String		A Link to the DellSoftwareInventory resource whose firmware needs to be updated. It shall be the @odata.id of the DellSoftwareInventory Resource.
URI	String		Network file location of the firmware to be installed. Supported network share types are HTTP, HTTPS, CIFS, NFS, TFTP, and FTP. Special characters must be encoded in the URI format.

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
400		SUP001, SUP002, SUP003, SUP006, SUP007, SUP019, SUP024

DellSwitchConnection

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellSwitchConnectionCollection

Description

A collection of DellSwitchConnection resource

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellSystem

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Updatable Properties

Property	Value
IntrusionRollupStatus	Degraded, Error, OK, Unknown
StorageRollupStatus	Degraded, Error, OK, Unknown
PSRollupStatus	Degraded, Error, OK, Unknown
FanRollupStatus	Degraded, Error, OK, Unknown
LicensingRollupStatus	Degraded, Error, OK, Unknown
CPURollupStatus	Degraded, Error, OK, Unknown
PowerCapEnabledState	Disabled, Enabled
TempRollupStatus	Degraded, Error, OK, Unknown
SysMemPrimaryStatus	Degraded, Error, OK, Unknown
BladeGeometry	1UFullWidth, 1UHalfWidth, 1UQuarterWidth, DualWidth, FullHeight, DualWidth, HalfHeight, NotApplicable, SingleWidth, FullHeight, SingleWidth, HalfHeight, SingleWidth, QuarterHeight
BatteryRollupStatus	Degraded, Error, OK, Unknown
VoltRollupStatus	Degraded, Error, OK, Unknown

DellvFlashCollection

Description

A collection of DellvFlash resource

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellVirtualDisk

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Updatable Properties

Property	Value
BusProtocol	FIBRE, PATA, SAS, SATA, SCSI, USB, Unknown
DiskCachePolicy	Default, Disabled, Enabled, Unknown
ReadCachePolicy	AdaptiveReadAhead, NoReadAhead, ReadAhead, Unknown
LockStatus	Locked, Unlocked
Cachecade	CachecadeVD, NonCachecadeVD
MediaType	HardDiskDrive, SolidStateDrive, Unknown
WriteCachePolicy	Unknown, WriteBack, WriteBackForce, WriteThrough

DellVirtualDiskCollection

Description

A collection of DellVirtualDisk resource.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

DellServiceRoot

Description

This object represents the Redfish OEM extensions for root service.

URL

/redfish/v1

HTTP methods and privileges

Table 28. HTTP methods and privileges for DellServiceRoot

HTTP method	Required privilege
GET	Login

Properties

Table 29. Properties for DellServiceRoot

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

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 30. HTTP methods and privileges for Install

HTTP method	Required privilege
POST	<ul style="list-style-type: none">.d9 file type — ConfigureComponents, Login.pm file type — ConfigureComponents, Login.exe file type — ConfigureComponents, Login

Updatable properties

Table 31. Properties and values for Install

Property	Values
InstallUpon	<ul style="list-style-type: none">NowNowAndRebootNextReboot

Status codes

Table 32. Status codes for Install

HTTP status code	Extended information	Error Message Code
202		SYS408
400		<ul style="list-style-type: none">· 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 — ResetToDefaults

Description

This defines the name of the OEM action supported when used in conjunction with a POST operation to this resource. When issued, this operation resets the Manager attributes to default settings.

URL

/redfish/v1/Managers/<ID>/Actions/Oem/DellManager.ResetToDefaults

HTTP methods and privileges

Table 33. HTTP methods and privileges for ResetToDefaults

HTTP method	Required privilege
POST	SystemControl

Updatable properties

Table 34. Supported properties and values for ResetToDefaults

Property	Values
ResetType	<ul style="list-style-type: none">AllResetAllWithRootDefaultsDefault

Status codes

Table 35. Status codes for ResetToDefaults

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

Supported action — Export, Import, and Preview

Table 36. 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 37. Properties and values for the action

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

Status codes

Table 38. 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 39. Properties and values for the action

Property	Values
ImportBuffer	Buffer content to perform import. Required only for LOCAL and not required for CIFS, NFS, HTTP, or HTTPS.
ShutdownType	Graceful, Forced, NoReboot
HostPowerState	On, Off
TimeToWait	The time to wait for the host to shut down. Default and minimum value is 300 seconds. Maximum value is 3600 seconds.
ShareParameters	See Share parameters and values .

Status codes

Table 40. 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 41. 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	

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

Share parameters and values

Table 42. 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/System.Embedded.1/Storage/Drives/<id>
```

Supported HTTP Method and Privileges

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

Supported Parameters

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

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
202		

EthernetInterfaces

Description

This resource is used to represent NIC resources as part of the Redfish specification. It also updates the properties of Manager Ethernet Interface.

NOTE: Only device FQDDs that are associated with physical network controllers are displayed. If iSM is installed and running, and there are only software Ethernet interfaces available on the system, a response code of 200 and an empty collection is returned.

URL

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

HTTP methods and privileges

Table 43. HTTP methods and privileges for EthernetInterfaces

HTTP method	Required privilege
GET	Login

Ethernet — Instance

URL

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

HTTP methods and privileges

Table 44. HTTP methods and privileges for instance of EthernetInterfaces

HTTP method	Required privilege
PATCH	ConfigureManager

Properties

Table 45. Properties for EthernetInterfaces

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

Status codes and error message codes

Table 46. Status codes and error message codes for EthernetInterfaces

HTTP status code	Extended information	Error Message Code
200	Base.1.0.success	
400	<ul style="list-style-type: none">Base.1.0.PropertyValueTypeErrorBase.1.0.PropertyValueNotInListBase.1.0.PropertyUnknownBase.1.0.PropertyNotWritableBase.1.0.PropertyValueFormatError	<ul style="list-style-type: none">ISM0013RAC0253RAC0254RAC0255RAC0259SWC0296
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 47. HTTP methods and privileges

HTTP method	Required privilege
GET	Login

Status codes

Table 48. Status codes

HTTP status code
200
400
500

Implementation notes

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

EthernetInterfaceCollection

Description

A Collection of EthernetInterface resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

EventService

Description

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

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

URL

`/redfish/v1/EventService`

Supported HTTP Method and Privileges

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

Supported Action — [SubmitTestEvent](#)

Contained Resource

[Subscriptions](#)

Supported Action — SubmitTestEvent

Description

This action is used to generate a test event.

URL

`/redfish/v1/EventService/Actions/EventService.SubmitTestEvent`

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

FabricCollection

Description

A Collection of Fabric resource instances.

URL

/redfish/v1/Fabrics

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Contained resources

PCIe

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

Contained resources

Switches

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

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 49. HTTP methods and privileges for JSONSchemas

HTTP method	Required privilege
GET	Login

Status codes

Table 50. Status codes for JSONSchemas

HTTP status code
200
400
500

LogEntryCollection

Description

A Collection of LogEntry resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

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 Action — [ClearLog](#)

Supported Action — ClearLog

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ClearLogs, Login

Supported Parameters

Parameter	Value
OverWritePolicy	WrapsWhenFull

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		

Manager

Description

A Collection of Manager resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

/redfish/v1/Managers/<id>

Supported HTTP Method and Privileges

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

Supported Parameters

Parameter	Value
ManagerType	BMC

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		
400	MalformedJSON	SYS405
400	Base.1.2.PropertyValueNotInList	SYS426
400		SYS406
400	PropertyValueTypeError	
403	InsufficientPrivilege	RAC0506
403		LIC501
404	Base.1.2.ResourceMissingAtURI	SYS403
500	Base.1.2.InternalError	SYS446

[Supported Action — Reset](#)

[Supported Action — ResetToDefaults](#)

Related Link: [DellManager](#)

Supported Action — Reset

Description

The reset action resets/reboots the manager.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login

Supported Status Codes

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
204		
400	MalformedJSON	SYS405
400	Base.1.2.PropertyValueNotInList	SYS426
400		SYS406
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 51. 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 52. HTTP methods and privileges for the instance of the resource

HTTP method	Required privilege
GET	Login

Updatable properties

Table 53. 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 54. Status codes for the instance of the resource

HTTP status code	Error message code
200	
400	<ul style="list-style-type: none">· RAC0288· RAC0291
404	
500	

Role

ManagerNetworkProtocol

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureManager, Login
GET	Login

NOTE: For information about the DHCP version, execute GET on URL `/redfish/v1/Managers/iDRAC.Embedded.1/Attributes`

Memory

Description

A Collection of Memory resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

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](#)

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%23DIMMSL0TA1/Metrics
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	Login, ConfigureComponents

Supported Status Codes

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

MessageRegistryFile

Description

This is the schema definition for the Schema File locator resource.

URL

/redfish/v1/Registries/Messages

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	

MessageRegistryFileCollection

Description

A Collection of MessageRegistryFile resource instances.

URL

/redfish/v1/Registries

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	

Messages

Description

This resource is used to represent a Event and Error message registry for a Redfish implementation.

URL

`/redfish/v1/Registries/Messages`

HTTP methods and privileges

Table 55. HTTP methods and privileges for Messages

HTTP method	Required privilege
GET	Login

Status codes

Table 56. Status codes for Messages

HTTP status code
200
400
500

NetworkAdapterCollection

Description

A Collection of NetworkAdapter resource instances.

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

NetworkDeviceFunctions

Description

This resource is used to represent the collection of NetworkDeviceFunction.

URL

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

HTTP methods and privileges

Table 57. HTTP methods and privileges for NetworkDeviceFunctions

HTTP method	Required privilege
GET	Login

Updatable properties

Table 58. Properties for the Settings resource

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

Status codes

Table 59. Status codes

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

NetworkDeviceFunctions — Instance

Description

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

URL

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

HTTP methods and privileges

Table 60. HTTP methods and privileges for the instance of NetworkDeviceFunctions

HTTP method	Required privilege
GET	Login

Status codes

Table 61. Status codes

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

NetworkDeviceFunctions — Settings

Description

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

URL

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

HTTP methods and privileges

Table 62. HTTP methods and privileges for the resource

HTTP method	Required privilege
GET	Login
PATCH	Login + SystemControl

Required parameters

Table 63. Parameters for NetworkDeviceFunction Settings

Parameter	Type	Description
Status		
MaxVirtualFunctions	Int64	The number of virtual functions (VFs) that are available for this Network Device Function.
NetDevFuncCapabilities	Collection(NetworkDeviceFunction.v1_0_0.NetworkDeviceTechnology)	Capabilities of this network device function. <div style="border-left: 2px solid #0070C0; padding-left: 10px; margin-left: 20px;"> <p>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.</p> </div>
NetDevFuncType	NetworkDeviceFunction.v1_0_0.NetworkDeviceTechnology	The configured capability of this network device function.
FibreChannel		
WWPN	String	The effective current World-Wide Port Name (WWPN) of this network device function (physical function). If an assignable WWPN is not supported, WWPN is a read only alias of the PermanentWWPN.
PermanentWWPN	String	PermanentWWPN is the permanent WWPN address assigned to this network device function (physical function).
WWNN	String	The effective current World-Wide Node Name (WWNN) of this network device function (physical function). If an assignable WWNN is not supported, WWNN is a read only alias of the PermanentWWNN.
WWNSource	NetworkDeviceFunction.v1_0_0.WWNSource	The configuration source of the World-Wide Names (WWNs) for this connection (WWPN and WWNN).
FCoELocalVLANId	Int64	For FCoE connections, The VLAN ID configured locally by setting this property. This value shall be used for FCoE traffic to this network device function during boot unless AllowFIPVLANDiscovery is true and a valid FCoE VLAN ID is found via the FIP VLAN Discovery Protocol.
FCoEActiveVLANId	Int64	The active FCoE VLAN ID.
BootTargets		

Parameter	Type	Description
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.

Parameter	Type	Description
PrimaryVLANEnable	Boolean	It indicates if this VLAN is enabled for the primary iSCSI boot target.
PrimaryVLANId	Int64	The 802.1q VLAN ID to use for iSCSI boot from the primary target. This VLAN ID is only used if PrimaryVLANEnable is true.
PrimaryDNS	String	The IPv6 or IPv4 address of the primary DNS server for the iSCSI boot initiator.
SecondaryTargetName	String	The name of the Secondary iSCSI boot target (iSCSI Qualified Name, IQN).
SecondaryTargetIPAddress	String	The IP address (IPv6 or IPv4) for the Secondary iSCSI boot target.
SecondaryTargetTCPPort	Int64	The TCP port for the Secondary iSCSI boot target.
SecondaryLUN	Int64	The logical unit number (LUN) for the Secondary iSCSI boot target.
SecondaryVLANEnable	Boolean	It indicates if this VLAN is enabled for the Secondary iSCSI boot target.
SecondaryVLANId	Int64	The 802.1q VLAN ID to use for iSCSI boot from the Secondary target. This VLAN ID is only used if SecondaryVLANEnable is true.
SecondaryDNS	String	The IPv6 or IPv4 address of the Secondary DNS server for the iSCSI boot initiator.
IPMaskDNSViaDHCP	Boolean	A boolean indicating whether the iSCSI boot initiator uses DHCP to obtain the initiator name, IP address, and netmask.
AuthenticationMethod	NetworkDeviceFunction.v1_0_0.AuthenticationMethod	The iSCSI boot authentication method for this network device function.
CHAPUsername	String	The username for CHAP authentication.
CHAPSecret	String	The shared secret for CHAP authentication.

Status codes

Table 64. Status codes

HTTP status code	Extended information	Error message code
200		
202		
400	<ul style="list-style-type: none"> · 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

PCleDevice

Description

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

URL

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

- ① **NOTE:** Response for a Get operation for PCle device will not report Part number or Model for any entry.
- ① **NOTE:** For SerialNumber, the value may or may not be displayed depending on the type of PCle device.
- ① **NOTE:** Executing GET for the above URL for network devices may not display the firmware information of the card. For firmware information, execute GET on the other ports of the same card.

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

PCleFunction

Description

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

URL

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

NOTE: If you execute Get on the above URL, the properties Bus /Device/ Function are not displayed. However, their value is displayed in the format <BUS-Device-Function> for property id (for example <24-0-1>).

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Port

Description

Port contains properties describing a port of a PCIE switch. This resource is used to represent a PCIE switch port for a Redfish implementation.

URL

```
/redfish/v1/Fabrics/PCIE/Switches/<PCIE switch ID>/Ports/<PCIE Switch port Id>
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

PortCollection

Description

PortCollection resource contains the members of selected pcie switch device.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Power

Description

This is the schema definition for the Power Metrics. It represents the properties for Power Consumption and Power Limiting.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Reference Properties

PowerControl
Voltage

PowerControl

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login
PATCH	ConfigureManager, Login

Voltage

Description

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

URL

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

Supported HTTP Method and Privileges

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	

Processor

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

Navigation URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Supported Parameters

Parameter	Value
ProcessorType	CPU

Role

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

RoleCollection

Description

A Collection of Role resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

SecureBoot

Description

This resource contains UEFI Secure Boot information. It represents properties for managing the UEFI Secure Boot functionality of a system.

URL

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

Supported HTTP Method and Privileges

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

Supported Status Codes

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

HTTP Status Code	Extended Information	Error Message Code
	Base.1.0.PropertyValueNotInList	
403	Base.1.0. InsufficientPrivilege	
404	Base.1.0.ResourceMissingAtURI	
500	Base.1.0.InternalError	

Supported Action — ResetKeys

Supported Action — ResetKeys

Description

This action is used to reset the Secure Boot keys.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
200	Base.1.0.Success	
400	Base.1.0.PropertyValueTypeError	
	Base.1.0.PropertyValueNotInList	
403	Base.1.0. InsufficientPrivilege	
404	Base.1.0.ResourceMissingAtURI	
500	Base.1.0.InternalError	

SecureErase

Description

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

URL

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

Supported HTTP Method and Privileges

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

Supported Parameters

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

Supported Status Codes

HTTP Status Code	Extended Information	Error Message Code
202		

SerialInterface

Description

A Collection of SerialInterface resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

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

Supported HTTP Method and Privileges

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

Supported Parameters

Parameter	Value
FlowControl	Hardware
SignalType	Rs232
PinOut	Cisco
Parity	None

ServiceRoot

Description

This object represents the root Redfish service.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
-------------	--------------------

GET	
-----	--

Session

URL

/redfish/v1/Sessions

Description

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

HTTP methods and privileges

Table 65. HTTP methods and privileges for Session

HTTP method	Required privilege
GET	Login
POST	ConfigureManager

Updatable properties

Table 66. Properties and values for Session

Parameter	Description
UserName	Username
Password	Password

Status codes

Table 67. Status codes for Session

HTTP status code	Extended information
200	
201	

HTTP status code	Extended information
400	<ul style="list-style-type: none"> 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 68. HTTP methods and privileges for Delete

HTTP method	Required privilege
DELETE	ConfigureManager, Login

Status codes

Table 69. Status codes for Delete

HTTP status code
200
400
500

SessionService

Description

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

URL

/redfish/v1/SessionService

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
PATCH	ConfigureManager, Login

SimpleStorage

Description

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

URL

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

HTTP methods and privileges

Table 70. HTTP methods and privileges for SimpleStorage

HTTP method	Required privilege
GET	Login

Status codes

Table 71. Status codes for SimpleStorage

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

SoftwareInventoryCollection

Description

Collection of Firmware Inventory.

URL

/redfish/v1/UpdateService/FirmwareInventory

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login
GET	Login

Status codes

Table 72. Status codes for SoftwareInventory

HTTP status code	Extended information	Error message code
201		
400		<ul style="list-style-type: none">· 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

Status codes

Table 73. Status codes for the action

HTTP status code	Extended information	Error message code
200		
400		<ul style="list-style-type: none">· SYS406· OSD35· RAC0604
400	Base.1.2.InternalError	SYS446
403	InsufficientPrivilege	RAC0506
404	Base.1.2.ResourceMissingAtURI	SYS403
405		SYS402
412		SYS400
428		SYS404
500	Base.1.2.InternalError	SYS446

Storage

Description

A Collection of Storage resource instances.

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Navigation URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

StorageController

Description

This schema defines a storage controller and its respective properties. A storage controller represents a storage device (physical or virtual) that produces Volumes.

URL

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

Supported HTTP Method and Privileges

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

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 74. HTTP methods and privileges for EventDestination

HTTP method	Required privilege
GET	Login
POST	ConfigureManager

Properties

Table 75. 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 76. Status codes for EventDestination

HTTP status code	Extended information
200	
201	
400	<ul style="list-style-type: none">Base.1.0.PropertyValueTypeErrorBase.1.0.PropertyValueNotInListBase.1.0.PropertyUnknownBase.1.0.PropertyNotWritableBase.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

TaskService

Description

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

URL

/redfish/v1/TaskService

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Thermal

Description

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

URL

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

Supported HTTP Method and Privileges

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

Supported Parameters

Parameter	Value
ReadingUnits	RPM

Reference Properties

Temperature

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 77. HTTP methods and privileges for SimpleUpdate

HTTP method	Required privilege
POST	<ul style="list-style-type: none">• .d9 file type — ConfigureComponents, Login• .pm file type — ConfigureComponents, Login• .exe file type — ConfigureComponents, Login

Status codes

Table 78. Status codes for SimpleUpdate

HTTP status code	Extended information	Error Message Code
202		SYS408
400		<ul style="list-style-type: none">• SYS406• OSD35• RAC0604• SYS434• SUP019• SUP024

HTTP status code	Extended information	Error Message Code
		<ul style="list-style-type: none"> SYS442
400	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 79. HTTP methods and privileges for VirtualMedia

HTTP method	Required privilege
GET	Login
POST	ConfigureManager, Login

Status codes

Table 80. Status codes for VirtualMedia

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

Properties and values

Table 81. Properties and values for VirtualMedia

Property	Values
MediaTypes	<ul style="list-style-type: none">· CD· DVD· USBStick
ConnectedVia	<ul style="list-style-type: none">· 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 82. HTTP methods and response content type for VLANNetworkInterface

HTTP method	Response content type
GET	application/json

Status codes

Table 83. Status codes for VlanNetworkInterface

HTTP status code
200
400
500

Volume

Description

A Collection of Storage resource instances.

URL

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

Supported HTTP Method and Privileges

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 — Initialize

Supported Action — CheckConsistency

Supported Action — CheckConsistency

Description

URL

```
/redfish/v1/Systems/System.Embedded.1/Storage/Volumes/Disk.Direct.0-0:AHCI.Embedded.2-1/Actions/Volume.CheckConsistency
```

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
POST	ConfigureComponents, Login

Supported Parameters

Parameter	Value
VolumeType	RawDevice, NonRedundant, 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
POST	
GET	Login
PATCH	

Supported Parameters

Parameter	Value
LinkStatus	Down, Up
SupportedEthernetCapabilities	WakeOnLAN, EEE

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

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

Redundancy

Description

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

URL

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

Supported HTTP Method and Privileges

HTTP Method	Required Privilege
GET	Login

Examples

NOTE: For more information about Redfish and detailed examples, see the white papers available at <https://www.dmtf.org/standards/redfish>.

The following table provides usage examples for the HTTP supported methods such as GET, POST, PATCH, and DELETE:

Topics:

- [Example for GET](#)
- [Example for PATCH](#)
- [Example for POST](#)
- [Example for DELETE](#)
- [Example of Job Creation](#)
- [Examples for \\$expand](#)
- [Examples for \\$select](#)
- [Examples for \\$filter](#)

Example for GET

URL	<code>/redfish/v1/Managers/iDRAC.Embedded.1/SerialInterfaces</code>
Output	<pre>{ "@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" }</pre>

Example for PATCH

URL	<code>/redfish/v1/Managers/iDRAC.Embedded.1/Accounts/<Account-id></code>
Input	<code>{"Password": "123", "UserName": "reader"}</code>
Output	<pre>{ "Success": { "Message": "Successfully Completed Request", "MessageId": "Base.1.0.Success", "Resolution": "None", "Severity": "Ok" } }</pre>

```
}  
}
```

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	<ul style="list-style-type: none">• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=AssetTag</code>• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Status</code>• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Status/State</code>• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Assembly</code>• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Links/ComputerSystems</code>• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Links/Oem/Dell/DellEnclosureEMMCollection</code>• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Location/Placement</code>• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Location/Placement/Rack</code>• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1?\$select=Assembly/@odata.id</code>
Resource.ResourceCollection	<ul style="list-style-type: none">• <code>https://<IP>/redfish/v1/Systems?\$select=Members</code>
Resource.ReferenceableMember	<ul style="list-style-type: none">• <code>https://<IP>/redfish/v1/Chassis/System.Embedded.1/Power?\$select=PowerControl</code>

Examples for \$filter

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