# GIGABYTE™

# Redfish API Specification

for ASPEED AST2600

## User Guide

Rev. 1.0

## Copyright

## Disclaimer

## Documentation Classifications

In order to assist in the use of this product, Giga Computing provides the following types of documentation:

■ User Manual: detailed information & steps about the installation, configuration and use of this product (e.g. motherboard, server barebones), covering hardware and BIOS.

■ User Guide: detailed information about the installation & use of an add-on hardware or software component (e.g. BMC firmware, rail-kit) compatible with this product.

■ Quick Installation Guide: a short guide with visual diagrams that you can reference easily for installation purposes of this product (e.g. motherboard, server barebones).

Please see the support section of the online product page to check the current availability of these documents.

## For More Information

For related product specifications, the latest firmware and software, and other information please visit our website at
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## Conventions

The following conventions are used in this user's guide:

| | |
|---|---|
| | **NOTE!**<br>Pieces of additional<br>information related to the current topic. |
| | **CAUTION!**<br>Precautionary measures to<br>avoid possible hardware or software problems. |
| | **WARNING!**<br>Alerts to any damage that might<br>result from doing or not doing specific actions. |

## Server Warnings and Cautions

Before installing a server, be sure that you understand the following warnings and cautions.

**WARNING!**

**To reduce the risk of electric shock or damage to the equipment:**

• Do not disable the power cord grounding plug. The grounding plug is an important safety feature.

• Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.

• Unplug the power cord from the power supply to disconnect power to the equipment.

• Do not route the power cord where it can be walked on or pinched by items placed against it. Pay particular attention to the plug, electrical outlet, and the point where the cord extends from the server.

**WARNING!**
**To reduce the risk of personal injury from hot surfaces, allow the drives and the internal system components to cool before touching them.**

**WARNING!**
**This server is equipped with high speed fans. Keep away from hazardous moving fan blades during servicing.**

**CAUTION!**

• Do not operate the server for long periods with the access panel open or removed. Operating the server in this manner results in improper airflow and improper cooling that can lead to thermal damage.

• Danger of explosion if battery is incorrectly replaced.

• Replace battery with the same or equivalent type recommended by the manufacturer.

• Dispose of used batteries according to the manufacturer's instructions.

**CAUTION!**

Risk of explosion if battery is replaced incorrectly or with an incorrect type. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

# ⚠️ Electrostatic Discharge (ESD)

**CAUTION!**

ESD CAN DAMAGE DRIVES, BOARDS, AND OTHER PARTS. WE RECOMMEND THAT YOU PERFORM ALL PROCEDURES AT AN ESD WORKSTATION. IF ONE IS NOT AVAILABLE, PROVIDE SOME ESD PROTECTION BY WEARING AN ANTI-STATIC WRIST STRAP AT-TACHED TO CHASSIS GROUND -- ANY UNPAINTED METAL SURFACE -- ON YOUR SERVER WHEN HANDLING PARTS.

Always handle boards carefully, they can be extremely sensitive to ESD. Hold boards only by their edges without touching any components or connectors. After removing a board from its protective ESD bag or from the system, place the board component side up on a grounded, static free surface. Use a conductive foam pad if available but not the ESD bag. Do not slide the board over any surface.

**System power on/off:** To service components within the server, please ensure the power has been disconnected.
e.g. Remove the node from the server chassis (to disconnect power) or disconnect the power from the server chassis.
Make sure the system is removed from the rack before opening the chassis, adding, or removing any non hot-plug components.

**Hazardous conditions, devices and cables:** Hazardous electrical conditions may be present on power, telephone, and communication cables. Turn off the system chassis and disconnect the cables attached to the system before servicing the chassis. Otherwise, personal injury or equip-ment damage can result.

**Electrostatic discharge (ESD) and ESD protection:** ESD can damage drives, boards, and other parts. We recommend that you perform all procedures in this chapter only at an ESD work-station. If one is not available, provide some ESD protection by wearing an antistatic wrist strap attached to chassis ground (any unpainted metal surface on the server) when handling parts.

**ESD and handling boards:** Always handle boards carefully. They can be extremely sensi-tive to electrostatic discharge (ESD). Hold boards only by their edges. After removing a board from its protective wrapper or from the system, place the board component side up on a grounded, static free surface. Use a conductive foam pad if available but not the board wrapper. Do not slide board over any surface.

**Installing or removing jumpers:** A jumper is a small plastic encased conductor that slips over two jumper pins. Some jumpers have a small tab on top that can be gripped with fin-gertips or with a pair of fine needle nosed pliers. If the jumpers do not have such a tab, take care when us-ing needle nosed pliers to remove or install a jumper; grip the narrow sides of the jumper with the pliers, never the wide sides. Gripping the wide sides can dam-age the contacts inside the jumper, causing intermittent problems with the function con-trolled by that jumper. Take care to grip with, but not squeeze, the pliers or other tool used to remove a jumper, or the pins on the board may bend or break.

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# 1. Introduction

The Redfish Scalable Platform Management API ("Redfish") is a management standard using a data model representation inside of a hypermedia RESTful interface. Because it is based on REST, Redfish is easier to use and implement than many other solutions. Since it is model oriented, it is capable of expressing the relationships between components in modern systems as well as the semantics of the services and components within them. It is also easily extensible. By using a hypermedia approach to REST, Redfish can express a large variety of systems from multiple vendors. By requiring JSON representation, a wide variety of resources can be created in a denormalized fashion not only to improve scalability, but the payload can be easily interpreted by most programming environments as well as being relatively intuitive for a human examining the data. The model is exposed in terms of an interoperable Redfish Schema, expressed in an OData Schema representation with translations to a JSON Schema representation, with the payload of the messages being expressed in a JSON following OData JSON conventions. The ability to externally host the Redfish Schema definition of the resources in a machine-readable format allows the meta data to be associated with the data without encumbering Redfish services with the meta data, thus enabling more advanced client scenarios as found in many data center and cloud environments.

# 2. Redfish Request Methods

The following HTTP methods are provided on our Redfish APIs.

## 2-1    HTTP GET (Read)

Use GET requests to retrieve resource representation/information only. For any given HTTP GET API, if resource is found on server then it must return HTTP response code 200 (OK) – along with response body which is JSON content. In case resource is NOT found on server then it must return HTTP response code 404 (NOT FOUND). Similarly, if it is determined that GET request itself is not correctly formed then server will return HTTP response code 400 (BAD REQUEST).

## 2-2    HTTP POST (Create)

Use POST APIs to create new subordinate resources, POST methods are used to create a new resource into the collection of resources. In this case, either HTTP response code 200 (OK) or 204 (No Content) is the appropriate

## 2-3    HTTP PATCH (Partial Update)

HTTP PATCH requests are **to make partial update on a resource**.

## 2-4    HTTP DELETE (Delete)

DELETE APIs are used to delete resources. A successful response of DELETE requests SHOULD be HTTP response code 200 (OK) if the response includes an entity describing the status, 202 (Accepted) if the action has been queued, or 204 (No Content) if the action has been performed but the response does not include an entity.

# 3. Redfish API

| Resource API | Note |
|---|---|
| /redfish/v1 | |
| /redfish/v1/odata | |
| /redfish/v1/$metadata | |
| /redfish/v1/AccountService | |
| /redfish/v1/AccountService/Accounts | |
| /redfish/v1/AccountService/Accounts/{instance} | |
| /redfish/v1/AccountService/Accounts/{instance} | |
| /redfish/v1/AccountService/Configurations | |
| /redfish/v1/AccountService/ExternalAccountProviders/RADIUS | |
| /redfish/v1/AccountService/ExternalAccountProviders/RADIUS/Oem/Ami/AdvancedRADIUS-Setting | |
| /redfish/v1/ AccountService/LDAP/Certificates | |
| /redfish/v1/ AccountService/LDAP/Certificates/1 | |
| /redfish/v1/AccountService/LDAP/Certificates/Oem/Ami/ClientCertificates | |
| /redfish/v1/ AccountService/LDAP/Certificates/Oem/Ami/ClientCertificates/1 | |
| /redfish/v1/AccountService/Roles | |
| /redfish/v1/AccountService/Roles/{instance} | |
| /redfish/v1/CertificateService | |
| /redfish/v1/CertificateService/Actions/CertificateService.GenerateCSR | |
| redfish/v1/CertificateService/Actions/CertificateService.ReplaceCertificate | |
| /redfish/v1/CertificateService/CertificateLocations | |
| /redfish/v1/Chassis | |
| /redfish/v1/Chassis/{instance} | |
| /redfish/v1/Chassis/{instance}/Actions/Chassis.Reset | |
| /redfish/v1/Chassis/{instance}/Power | |
| /redfish/v1/Chassis/{instance}/LogServices | |
| /redfish/v1/Chassis/{instance}/LogServices/Logs/Entries | |
| /redfish/v1/Chassis/{instance}/LogServices/Logs/Entries/{instance} | |
| /redfish/v1/Chassis/{instance}/LogServices/Logs | |
| /redfish/v1/Chassis/{instance}/LogServices/Logs/Actions/LogService.ClearLog | |
| /redfish/v1/Chassis/{instance}/NetworkAdapters | |

| Resource API | Note |
|---|---|
| /redfish/v1/Chassis/{instance}/PCIeDevices | |
| /redfish/v1/Chassis/{instance}/PCIeDevices/{instance} | |
| /redfish/v1/Chassis/{instance}/PCIeDevices/{instance}/PCIeFunctions/{instance} | |
| /redfish/v1/Chassis/{instance}/Sensors | |
| /redfish/v1/Chassis/{instance}/Sensors/{instance} | |
| /redfish/v1/Chassis/{instance}/Sensors/Energy | |
| /redfish/v1/Chassis/{instance}/Sensors/Power | |
| /redfish/v1/Chassis/{instance}/Thermal | |
| /redfish/v1/Chassis/{instance}/Thermal/FanprofileService | |
| /redfish/v1/Chassis/{instance}/Thermal/FanprofileService/Fanprofile | |
| /redfish/v1/Chassis/{instance}/Thermal/FanprofileService/SupportPCIEDevice | |
| /redfish/v1/Oem/Ami/configurations | |
| /redfish/v1/CompositionService | |
| /redfish/v1/CompositionService/ResourceBlocks | |
| /redfish/v1/CompositionService/ResourceBlocks/{instance} | |
| /redfish/v1/CompositionService/ResourceZones | |
| /redfish/v1/CompositionService/ResourceZones/{ instance } | |
| /redfish/v1/EventService | |
| /redfish/v1/EventService/Actions/EventService.SubmitTestEvent | |
| /redfish/v1/EventService/Subscriptions | |
| /redfish/v1/EventService/Subscriptions/{instance} | |
| /redfish/v1/EventService/SubmitTestEventActionInfo | |
| /redfish/v1/JsonSchemas | |
| /redfish/v1/JsonSchemas/{instance} | |
| /redfish/v1/Managers | |
| /redfish/v1/Managers/{instance} | |

| Resource API | Note |
|---|---|
| /redfish/v1/Managers/{instance}/Actions/Oem/AMIManager.RedfishDBReset | |
| redfish/v1/Managers/{instance}/EthernetInterfaces | |
| redfish/v1/Managers/{instance}/EthernetInterfaces/{instance} | |
| redfish/v1/Managers/{instance}/HostInterfaces | |
| redfish/v1/Managers/{instance}/HostInterfaces/{instance} | |
| redfish/v1/Managers/{instance}/HostInterfaces/{instance}/HostEthernetInterfaces | |
| /redfish/v1/Managers/{instance}/LogServices | |
| /redfish/v1/Managers/{instance}/LogServices/{instance} | |
| /redfish/v1/Managers/{instance}/LogServices/{instance}/Actions/LogServices.ClearLog | |
| /redfish/v1/Managers/{instance}/LogServices/{instance}/Entries | |
| /redfish/v1/Managers/{instance}/LogServices/{instance}/Entries/{instance} | |
| /redfish/v1/Managers/{instance}/NetworkProtocol | |
| /redfish/v1/Managers/{instance}/NetworkProtocol/HTTPS/Certificates | |
| /redfish/v1/Managers/{instance}/NetworkProtocol/HTTPS/Certificates/{instance} | |
| /redfish/v1/Managers/{instance}/RedfishDBResetActionInfo | |
| /redfish/v1/Managers/{instance}/RemoteAccountService/LDAP/Certificates | |
| /redfish/v1/Managers/{instance}/ResetActionInfo | |
| /redfish/v1/Managers/{instance}/SerialInterfaces | |
| /redfish/v1/Managers/{instance}/SerialInterfaces/{instance} | |
| /redfish/v1/Managers/{instance}/VirtualMedia | |
| /redfish/v1/Managers/{instance}/VirtualMedia/{instance} | |

| Resource API | Note |
|---|---|
| /redfish/v1/Managers/{instance}/VirtualMedia/{instance}/Actions/VirtualMedia.InsertMedia | |
| /redfish/v1/Managers/{instance}/VirtualMedia/{instanc}/Actions/VirtualMedia.EjectMedia | |
| /redfish/v1/Managers/{instance}/Actions/Oem/AMIVirtualMedia.ConfigureCDInstance | |
| /redfish/v1/Managers/{instance}/Actions/Oem/AMIVirtualMedia.EnableRMedia | |
| /redfish/v1/Registries | |
| /redfish/v1/Registries/{instance} | |
| /redfish/v1/Registries/{instance.json} | |
| /redfish/v1/SessionService | |
| /redfish/v1/SessionService/Sessions | |
| /redfish/v1/SessionService/Sessions/{instance} | |
| /redfish/v1/Systems | |
| /redfish/v1/Systems/Capabilities | |
| /redfish/v1/Systems/{instance} | |
| /redfish/v1/Systems/{instance}/Actions/ComputerSystem.Reset | |
| /redfish/v1/Systems/{instance}/Bios | |
| /redfish/v1/Systems/{instance}/Bios/Actions/Bios.ResetBios | |
| /redfish/v1/Systems/{instance}/Bios/Actions/Bios.ChangePassword | |
| /redfish/v1/Systems/{instance}/Bios/SD | |
| /redfish/v1/Systems/{instance}/Bootoptions | |
| /redfish/v1/Systems/{instance}/Bootoptions/{instance} | |
| /redfish/v1/Systems/{instance}/EthernetInterfaces | |
| /redfish/v1/Systems/{instance}/EthernetInterfaces/{instance} | |

| Resource API | Note |
|---|---|
| /redfish/v1/Systems/{instance}/EthernetInterfaces/{instance}/VLANs | |
| /redfish/v1/Systems/{instance}/EthernetInterfaces/{instance}/VLANs/{instance} | |
| /redfish/v1/Systems/{instance}/LogServices | |
| /redfish/v1/Systems/{instance}/LogServices/{instance} | |
| /redfish/v1/Systems/{instance}/LogServices/{instance}/Actions/LogService.ClearLog | |
| /redfish/v1/Systems/{instance}/LogServices/{instance}/Entries | |
| /redfish/v1/Systems/{instance}/LogServices/{instance}/Entries/{instance} | |
| /redfish/v1/Systems/{instance}/Memory | |
| /redfish/v1/Systems/{instance}/Memory/{instance} | |
| /redfish/v1/Systems/{instance}/MemoryDomains | |
| /redfish/v1/Systems/{instance}/NetworkInterfaces | |
| /redfish/v1/Systems/{instance}/NetworkInterfaces/{instance} | |
| /redfish/v1/Systems/{instance}/Processors | |
| /redfish/v1/Systems/{instance}/Processors/{instance} | |
| /redfish/v1/Systems/{instance}/SimpleStorage | |
| /redfish/v1/Systems/{instance}/SimpleStorage/{instance} | |
| /redfish/v1/Systems/{instance}/Storage | |
| /redfish/v1/Systems/{instance}/Storage /{instance} | |
| /redfish/v1/TaskService | |
| /redfish/v1/TaskService/Tasks | |
| /redfish/v1/TaskService/Tasks/{instance} | |
| /redfish/v1/TelemetryService | |
| /redfish/v1/TelemetryService/Actions/ TelemetryService.SubmitTestMetricReport | |
| /redfish/v1/TelemetryService/LogServices | |
| /redfish/v1/TelemetryService/LogService/Actions/LogService.ClearLog | |

| Resource API | Note |
|---|---|
| /redfish/v1/TelemetryService/LogServices | |
| /redfish/v1/TelemetryService/LogServices/Actions/LogService.ClearLog | |
| /redfish/v1/TelemetryService/LogServices/Entries | |
| /redfish/v1/TelemetryService/LogServices/Entries/{instance} | |
| /redfish/v1/TelemetryService/MetricDefinitions | |
| /redfish/v1/TelemetryService/MetricDefinitions/{instance} | |
| /redfish/v1/TelemetryService/MetricReportDefinitions | |
| /redfish/v1/TelemetryService/MetricReportDefinitions/{instance} | |
| /redfish/v1/TelemetryService/MetricReports | |
| /redfish/v1/TelemetryService/MetricReports/{instance} | |
| /redfish/v1/TelemetryService/Triggers | |
| /redfish/v1/TelemetryService/Triggers/{instance} | |
| /redfish/v1/UpdateService | |
| /redfish/v1/ UpdateService/Actions/SimpleUpdate | |
| /redfish/v1/UpdateService/FirmwareInventory | |
| /redfish/v1/UpdateService/FirmwareInventory/{instance} | |
| /redfish/v1/UpdateService/SimpleUpdateActionInfo | |

# 4. Common Field to all Schemas

- *- @odata.context*
- *- @odata.id*
- *- @odata.type - @odata.etag*
- *- Id*
- *- Name*

# 5. ServiceRoot

*[GET] /redfish/v1*

- *- Oem*
  - *- Ami*
    - *- Configurations*
    - *- RtpVersion*
- *- Id*
- *- Name*
- *- Description*
- *- RedfishVersion*
- *- Systems*
- *- Chassis*
  - *- Managers*
  - *- Tasks*
  - *- AccountService*
  - *- EventService*
  - *- SessionService*
  - *- Registries*
  - *- JsonSchemas*
  - *- UpdateService*
  - *- CompositionService*
  - *- TelemetryService*
  - *- Links*
  - *- Sessions*
- *- JobService*
- *- Product*
- *- ProtocolFeaturesSupported*
- *-     ExcerptQuery*
  - *- ExpandQuery*
    - *- ExpandAll*
    - *- Levels*
    - *- Links*
    - *- MaxLevels*
    - *- NoLinks*
- *- FilterQuery*
- *- OnlyMemberQuery*
- *- SelectQuery*

*- UUID*
*- Vendor*
*- CertificateService*
*- Oem*

# 6. ODATA

*[GET] /redfish/v1/odata*

# 7. $metadata

*[GET] /redfish/v1/$metadata*

# 8. AccountServicea

*[GET] /redfish/v1/AccountService*
*[PATCH] /redfish/v1/AccountService*

- *AccountLockoutCounterResetAfter*
- *AccountLockoutDuration*
- *AccountLockoutThreshold*
- *Accounts*
- *AuthFailureLoggingThreshold*
- *Description*
- *Id*
- *MaxPasswordLength*
- *MinPasswordLength*
- *Name*
- *Oem*
  - *Ami*
    - *Configuration*
- *Roles*
- *ServiceEnabled*
- *Status*
  - *Health*
  - *State*
- *PrivilegeMap*
- *ActiveDirectory*
- *Authentication*
  - *AuthenticationType*
  - *Username*
  - *Password*
- *RemoteRoleMapping*
- *ServiceEnabled*
- *AccountLockoutCounterResetEnabled- AdditionalExternalAccountProviders*
- *LDAP*
- *Authentication*
  - *AuthenticationType*
  - *Username*
  - *Password*
- *LDAPService*
  - *SearchSettings*
    - *GroupNameAttribute*
    - *GroupsAttribute*
    - *UsernameAttribute*
- *RemoteRoleMapping*
- *ServiceEnabled*

# 8-1    Account Collection

*[GET] /redfish/v1/AccountService/Accounts*
*[POST] /redfish/v1/AccountService/Accounts*
    ***- Description***
    ***- Members@odata.count***
    ***- Members***
    ***- Name- Oem***

**POST**
    **Request:**

```
POST https://{{ip}}/redfish/v1/AccountService/Accounts
Content-Type: application/json
```

**Example POST Request Body:**

```
{ "Name":
"TestUser Account",
"Description": "Test User Account",
"Enabled": true,
"Password": "superuser",
"UserName": "user_account",
"RoleId": "Operator",
"Locked": false,
"PasswordChangeRequired": false
}
```

## 8-1-1    Accounts

*[GET] /redfish/v1/AccountService/Accounts/{instance}*
*[PATCH] /redfish/v1/AccountService/Accounts/{instance}*
*[DELETE] /redfish/v1/AccountService/Accounts/{instance}*

    ***Description***
    ***- Enabled***
    ***- Id***
    ***- Links***
    ***- Role***
    ***- Locked***
    ***- Name***
    ***- RoleId***
    ***- UserName***
    ***- Password***
    ***- PasswordChangeRequired***
       ***- Oem***
       ***- Actions***

- *Certificates*
- *AccountTypes*
- *Certificates*
- *AccountTypes*
- *SNMP*
    - *AuthenticationProtocol*
    - *EncryptionProtocol*

# 8-2    PAM Configuration

*[GET] /redfish/v1/AccountService/Configurations*
*[PATCH] /redfish/v1/AccountService/Configurations*
- *Id*
- *Name*
- *PAMEnabled*
- *PAMOrder*

# 8-3    Radius Authentication

*[GET] /redfish/v1/AccountService/ExternalAccountProviders/RADIUS*
*[PATCH] /redfish/v1/AccountService/ExternalAccountProviders/RADIUS*
- *ServicePort*
- *ServiceEnabled*
- *ExtendedPrivilege*
- *ServiceAddress*
- *Secret*
- *ExtendedPrivilege*
    - *KVMAccess*
    - *VMediaAccess*
- *AdvancedRADIUSSetting*
- *Timeout*
- *AccountProviderTypes*
- *Oem*

## 8-3-1    AdvancedRADIUSSetting

*[GET] /redfish/v1/AccountService/ExternalAccountProviders/RADIUS/Oem/Ami/*
*AdvancedRADIUSSetting*
*[PATCH] /redfish/v1/AccountService/ExternalAccountProviders/RADIUS/Oem/Ami/*
*AdvancedRADIUSSetting*
- *RADIUSAuthorization*

## 8-4    Role Collection

*[GET] /redfish/v1/AccountService/Roles*
*[POST] /redfish/v1/AccountService/Roles*
> **- Description**
> **- Members@odata.count**
> **- Members**
> **- Name**
> **- Oem**

**POST**
> **Request:**

```
POST https://{{ip}}/redfish/v1/AccountService/Roles
Content-Type: application/json
```

**Example POST Request Body:**

```
{
"AssignedPrivileges": [
"ConfigureUsers",
"ConfigureManager",
"ConfigureSelf",
"Login",
"ConfigureComponents"
],
"Description":
"TestRole User Role",
"Id": "TestRole",
"RoleId": "TestRole",
"Enabled": true,
"IsPredefined": true,
"Name": "TestRole Role",
"OemPrivileges":
   ["OemPowerControl",
   "OemClearLog"
]
}
```

### 8-4-1    Role

*[GET] /redfish/v1/AccountService/Roles/{instance}*
*[PATCH] /redfish/v1/AccountService/Roles/{instance}*
*[DELETE] /redfish/v1/AccountService/Roles/{instance}*
> **- AssignedPrivileges**
> **- Description**
> **- Id**

*- IsPredefined*
*- Name*
*- RoleId*
*- OemPrivileges*
*- Actions*
*- Oem*

# 9. CertificateService

*[GET] /redfish/v1/CertificateService*
*[POST] /redfish/v1/CertificateService/Actions/CertificateService.GenerateCSR*
*[POST] redfish/v1/CertificateService/Actions/ CertificateService.ReplaceCertificate*

- ***- Action***
- ***- Id***
- ***- Name***
- ***- Description***
- ***- CertificateLocations***
- ***- Oem***

**POST**
**Request:**

```
POST https://{{ip}}/redfish/v1/CertificateService/Actions/CertificateService.GenerateCSR
Content-Type: application/json
```

**Example POST Request Body:**

```
{
"Country": "US",
"State": "Oregon",
"City": "Portland",
"Organization": "Contoso",
"OrganizationalUnit": " Service Processors",
"CommonName": "manager.contoso.org",
"AlternativeNames": [ "manager.contoso.com", "manager.contoso.us", "169.254.0.17" ],
"Email": "admin@contoso.org",
"KeyBitLength": 2048,
"KeyUsage": [ "DigitalSignature" ],
"ChallengePassword" : "challengepassword",
"GivenName" : "userGivenName",
"ContactPerson" : "AMI Manager",
"Initials" : "userInitials",
"Surname" : "userSurname",
"UnstructuredName" : "userUnstructuredName",
"CertificateCollection" : {"@odata.id" : "/redfish/v1/Managers/Self/NetworkProtocol/HTTPS/Certificates"}
}
```

**Request:**

```
POST https://{{ip}}/redfish/v1/CertificateService/Actions/CertificateService. ReplaceCertificate
Content-Type: application/json
```

**Note: If use Certificate chain, CertificateType must be "PEMchain"**

---

**Example POST Request Body:**

```
{
"CertificateString": "-----BEGIN CERTIFICATE-----
\nMIIEOzCCAyOgAwIBAgIJAO8c/Hd0c/0GMA0GCSqGSIb3DQEBCwUAMIG7MQswCQYD\nVQQGEwJVU
zEQMA4GA1UECAwHR2VvcmdpYTERMA8GA1UEBwwITm9yY3Jvc3MxNDAy\nBgNVBAoMK0FtZXJpY2F
uIE1lZ2F0cmVuZHMgSW50ZXJuYXRpb25hbCBMTEMgKEFN\nSSkxGzAZBgNVBAsMElNlcnZpY2UgUHJvY
2Vzc29yczEUMBIGA1UEAwwLbWVnYXJh\nYy5jb20xHjAcBgkqhkiG9w0BCQEWD3N1cHBvcnRAYW1pLmN
vbTAeFw0xOTA4Mjcx\nMzAzMDBaFw0zNDA4MjMxMzAzMDBaMIG7MQswCQYDVQQGEwJVUzEQMA
4GA1UECAwH\nR2VvcmdpYTERMA8GA1UEBwwITm9yY3Jvc3MxNDAyBgNVBAoMK0FtZXJpY2FuIE1l\nZ
2F0cmVuZHMgSW50ZXJuYXRpb25hbCBMTEMgKEFNSSkxGzAZBgNVBAsMElNlcnZp\nY2UgUHJvY2Vzc2
9yczEUMBIGA1UEAwwLbWVnYXJhYy5jb20xHjAcBgkqhkiG9w0B\nCQEWD3N1cHBvcnRAYW1pLmNvbTC
CASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoC\nggEBAPjhY7RBU5kLGB3yHZfiEk9Zm9vJhe/1mRZlW
TT77g8iy5eo2L9BiIsctpTm\n2clMGBRwFgCjOyZqkldU2Mu2zeALS31Bkvx12/OOloG/MkvVxc09MrNWwEU0
Q2Az\njGu7X+bEKSAQAYzFZIWSYf4hnadEtzh53rkdk9mKYp101YfnAqZ+zg9MxXuzl8TM\nEGh7iemTtwozs
LTHlwIH6cIKNm7TmsL7ILifEQUP4wBTJBf1nmVe80fdNoDC+FB\nvXwSuvHI5wIt4Nd2hthI6Ll6GRJrKGF
E7FsqxVzBVb2anp8U44VDV69guPo47XIS\n2yYXHPNwZmw9zm7mD5TCRJLKT20CAwEAAaNAMD4wCQ
YDVR0TBAIwADALBgNVHQ8E\nBAMCBeAwJAYDVR0RBB0wG4ILbWVnYXJhYy5jb22CDDE2OS4yNTQu
MC4xNzANBgkq\nhkiG9w0BAQsFAAOCAQEAZi3ILVGGyVR6LJ+Au7gY5w9T+k+CpXgzorF+yRcSJo/h\n/kfS
MPPgH6yY+5ja4Z9kQ57nTfnaBqmHnEhwhAQrPVAPd3iKYEHNHO4u0gB4ZnkA\nyeLA4vM3KG5510Iry8o
BhYuvwZwE3YhtYNNocZd1ct5A8zJmpeuS4ffPwWFGZGmV\nfiDSGa4NdzLr1auPt5FUgbsm5V0FNPNhYNRP
YvHRMYh+orv727sJrxocr4BJ3ncq\nUGNdPvVow5QQrmm0WsSjv285F3BiIeE1b6iSDksiiZ4lYLcr8twBeTq5gjc9
1qVh\nY7Ms4UrZYTJhYxq0oVGplADOn+LL9qEZ9MXAR6SkeQ==\n-----END CERTIFICATE-----\n-----
BEGIN RSA PRIVATE KEY-----
\nMIIEowIBAAKCAQEA+OFjtEFTmQsYHfIdl+IST1mb28mF7/WZFmVZNPvuDyLLl6jY\nv0GIixy2lObZyUw
YFHAWAKM7JmqSV1TYy7bN4AtLfUGS/HXb846Wgb8yS9XFzT0y\ns1bARTRDYDOMa7tf5sQpIBABjMVkh
ZJh/iGdp0S3OHneuR2T2YpinXTVh+cCpn7O\nD0zFe7OXxMwQaHuJ6ZO3CjOwtMeXAiIfpwgo2btOawvsguJ8
RBQ/jAFMkF/WeZV7\nzR902gML4UG9fBK68cjnAi3g13aG2EjouXoZEmsoYUTsWyrFXMFVvZqenxTjhUNX\n
r2C4+jjteVLbJhcc83BmbD3ObuYPlMJEkspPbQIDAQABAoIBACTpiNgbOELimlkW\np7z3ErAiJjOe1/aW/nWL
4ocxNkWYa4m6ySrUlWPMhmffNT3dw1SEqz689vDjrYC2\nXNEZ877e7ftN1ncLI+wjob7slJEay5N9GB/xJeMdt
UB3ZMQ1riuTvGW8+f3e6OHG\nrrDH82l0MnAAMUzQxZtRE6gtgYKsfFSyxgMc+X4i1hZUszA1IKa2uXk+6X
mEEtuCu\noadu5KmHM0Oxh5ph4JCb1HgSxrRVjunsd+x1zNPFcJchjz4V5CRQ6gDPl/EzmrF1\nnTtdnsW8gFzh6
v6faHe11bCDrXIG3wDlqOwPHm7Vk0TqToMgEceEu+DcLcnEun2iK\nnrWD13SECgYEA/xyzJOenwIEVuxHizb
8H7ZwgYV5k1jj0ygzRFEGf+vrDi8ao9HR+\nbSKmqG1oZi0Dorat1wQb3Lj5ggoYRiYP1SPGqdFDaDgdn9jcuVF
QpQ+5jsLB8V03\noAUmSEB9Yk3eGZ1XAZro+FzGb5BsZyaG0QlLnCcQx/GcJZ+G75lgJt8CgYEA+b8j\nKu0Xr
BaBrGCs988OSpuebEQgO7zZH9TvN+ea2ZR9N7cDOXsSpsTQsjJsQ4pwIhOD\ng0Jv3CTFKCqK2inXA3SJ+Uz
lmvIPDg31+Y3qbpA+ZBYjG8rp7v4uSjbBBFkbxJuV\n1S8oVQbIfljdTfnypK5+TPTNig4C5IBzAuqUjzMCgYB0
+VHjIB05FXdDWYYnVOpr\nntuTaAJA38dG8O3g604RpbkXvd13NCQVXQUYtgE0YXJeIKj83kfi8kkxFph9POv
CT\niF31S7CevuxGeQdsKa7SoI0yunZ3F4kD5JiTFI7pXk7ya8STRdaA2vlZ+lzaRz4V\n5y82IGt/Ynd4gNc8UZV
W/QKBgQCKdeubauMK51dxKA/9O3Ai8O/9+i8cr3B482bE\nnycTSCD772p0RCyimCMvjX40iTOgqHEN3TCg
UFtavlBZzKWspYTz1WCqbosOx+Q98\nnEa/9KD9O4e8JA5B6jbVAM+cC8Bwy/kctb/2eVipl0gKvmlVz9/57mbdu
TLlWElr\nnPn6qfQKBgEqL9ShURu6pytGlfF6CVPT1DiXXvzAvj8KWwdWpwob3BFl+82T9jNgt\nnVv441iirH4iz
d7IzPNv56vb3F4D2lY4zAfWhfrMytrv8aKghDyyZq5Qo6mXmz5hq\nnd071CuwqgoRn6UG5gZWs+B/Oh16xPYk
wZmZOYEZaoE7ubEtzB7qW\n-----END RSA PRIVATE KEY-----",
"CertificateType": "PEM",
"CertificateUri" : {"@odata.id":"/redfish/v1/Managers/Self/NetworkProtocol/HTTPS/Certificates/1"}
}
```

# 9-1 CertificateLocations

*[GET] /redfish/v1/CertificateService/CertificateLocations*
- **- Id**
- **- Name**
- **- Description**
- **- Links**
    - **- Certificates**
- **- Action**
- **- Oem**

## 9-1-1　Certificate

*[GET] /redfish/v1/Managers/{instance}/NetworkProtocol/HTTPS/Certificates/{instance}*

*[GET] /redfish/v1/ Managers/{instance}/RemoteAccountService/LDAP/Certificates/1*

*[GET] /redfish/v1/AccountService/LDAP/Certificates/Oem/Ami/ClientCertificates/1*

*[POST] /redfish/v1/AccountService/LDAP/Certificates*

*[POST] /redfish/v1/AccountService/LDAP/Certificates/Oem/Ami/ClientCertificates*

*[DELETE] /redfish/v1/AccountService/LDAP/Certificates/1*

*[DELETE] /redfish/v1/AccountService/LDAP/Certificates/Oem/Ami/ClientCertificates/1*

## POST
### Request:

```
POST https://{{ip}}/redfish/v1/AccountService/LDAP/Certificates
POST https://{{ip}}/redfish/v1/AccountService/LDAP/Certificates/Oem/Ami/ClientCertificates
Content-Type: application/json
```

### Example POST Request Body:

```
{
"CertificateString": "------BEGIN CERTIFICATE-----
\nMIIC2DCCAoICCQDrKFHkCkpC2zANBgkqhkiG9w0BAQsFADCB8jELMAkGA1UEBhMC\nVVMxDzAN
BgNVBAgMBk9yZWdvbjERMA8GA1UEBwwIUG9ydGxhbmQxEDAOBgNVBAoM\nB0Nvbm5vyc28xDDAKBg
NVBAsMA0FCQzEcMBoGA1UEAwwTbWFuYWdlci5jb250b3Nv\nLm9yZzEgMB4GCSqGSIb3DQEJARYRYW
RtaW5AY29udG9zby5vcmcxGjAYBgNVBCkM\nEXRlc3RDb250YWN0UGVyc29uMRYwFAYDVQQqDA10ZX
N0R2l2ZW5OYW1lMRUwEwYD\nVQQrDAx0ZXN0SW5pdGlhbHMxFDASBgNVBAQMC3Rlc3RTdXJuYW1
lMB4XDTE5MTIx\nOTAyNTg0NVoXDTIwMDExODAyNTg0NVowgfIxCzAJBgNVBAYTAlVTMQ8wDQYD
VQQI\nDAZPcmVnb24xETAPBgNVBAcMCFBvcnRsYW5kMRAwDgYDVQQKDAdDb250b3Nv\nCgY
DVQQLDANBQkMxHDAaBgNVBAMME21hbmFnZXIuY29udG9zby5vcmcxIDAeBgkq\nhkiG9w0BCQEWE
WFkbWluQGNvbnRvc28ub3JnMRowGAYDVQQpDBF0ZXN0Q29udGFj\ndFBlcnNvbjEWMBQGA1UEKgwN
dGVzdEdpdmVuTmFtZTEVMBMGA1UEKwwMdGVzdElu\naXRpYWxzMRQwEgYDVQQEDAt0ZXN0U3Vy
bmFtZTBcMA0GCSqGSIb3DQEBAQUAA0sA\nMEgCQQC2vTAZtvPrByReb065z6E/n7Rv8ymt4Goowjet6s0kf
m/WnJumTt0/eJfk\n2j5c+XSg6q1wgmZOZA+NZVL7DFUjAgMBAAEwDQYJKoZIhvcNAQELBQADQQCsYyR
Y\n3RX7fsLQr0M/LgHCHF9ke9mF8KsockAQlZLkXuwSZHe6+0b7p6OeWrdiuil6cpmO\nb32QIGFrKWq8JXD
+\n-----END CERTIFICATE-----\n-----BEGIN PRIVATE KEY-----
\nMIIBVgIBADANBgkqhkiG9w0BAQEFAASCAUAwggE8AgEAAkEAtr0wGbbz6wckXm9O\nuc+hP5+0b/Mpre
BqKMI3rerNJH5v1pybpk7dP3iX5No+XPl0oOqtcIJmTmQPjWVS\n+wxVIwIDAQABAkEAn6j0WcNLolF/KTM/
```

## 9-1-1-1　Rekey

*[POST] /redfish/v1/AaccountService/Accounts/{instance}/Certificates/{instance}/Actions/Certificate.Rekey*

## POST
### Request:

```
POST https://{{ip}}/redfish/v1/AaccountService/Accounts/{instance}/Certificates/{instance}/Actions/Certificate.Rekey
Content-Type: application/json
```

**Example POST Request Body:**

```
{
"KeyBitLength": 512,
"ChallengePassword" : "challengepassword"
}
```

### 9-1-1-2    Renew
*[POST] redfish/v1/AaccountService/Accounts/{instance}/Certificates/{instance}/Actions/Certificate.Renew*
- *- Oem*
- *- Actions*
- *- Id*
- *- Name*
- *- Description*
- *- Issuer*
- *- KeyUsage*
- *- Subject*
- *- ValidNotAfter*
- *- ValidNotBefore*
- *- CertificateString*
- *- CertificateType*

## POST
### Request:

```
POST https://{{ip}}/redfish/v1/AaccountService/Accounts/{instance}/Certificates/{instance}/Actions/Certificate.Renew
Content-Type: application/json
```

**Example POST Request Body:**

```
{
"ChallengePassword" :
"challengepassword"
}
```

## 10.  Chassis Collection

*[GET] /redfish/v1/Chassis*
- ***Description***
- ***Name***
- ***Members@odata.count***
- ***Members***
- ***Oem***

## 10-1   Chassis

*[GET] /redfish/v1/Chassis/{instance}*
*[PATCH] /redfish/v1/Chassis/{instance}*
*[POST] /redfish/v1/Chassis/{instance}/Actions/Chassis.Reset*
- ***Id***
- ***Name***
- ***Description***
- ***ChassisType***
- ***Manufacturer***
- ***Model***
- ***SKU***
- ***Sensors***
- ***SerialNumber***
- ***PartNumber***
- ***PCIeDevices***
- ***AssetTag***
- ***IndicatorLED***
- ***Links***
    - ***ComputerSystems***
    - ***ComputerSystems@odata.count***
    - ***ManagedBy***
    - ***ManagedBy@odata.count***
    - ***Drives***
    - ***Drives @odata.count***
    - ***Storage***
    - ***Storage@odata.count***
    - ***ResourceBlocks***
    - ***ResourceBlocks @odata.count***
    - ***ContainedBy***
    - ***Contains***
    - ***Contains @odata.count***
    - ***PowerBy***
    - ***PowerBy @odata.count***
    - ***CooledBy***
    - ***CooledBy @odata.count***
    - ***ManagersInChassis***
    - ***ManagersInChassis @odata.count***

        *- Processors*
        *- Processors @odata.count*
*- Actions*
*- Status*
*- LogServices*
*- Thermal*
*- Power*
*- PowerState*
*- NetworkAdapters*
*- Assembly*
*- Oem*
*- UUID*
*- Location*
*- HeightMm*
*- WidthMm*
*- DepthMm*
*- WeightKg*
*- MediaControllers*
*- EnvironmentalClass*

**POST**
    **Request:**

```
POST https://{{ip}}/redfish/v1/Chassis/Self/Actions/Chassis.Reset
Content-Type: application/json
```

**Request Body:**
*The ResetType can be one of the following values: "On", "ForceOff", "GracefulShutdown", "ForceRestart".*
**Example POST Request Body:**

```
{
"ResetType" : "On"
}
```

## 10-1-1  Power

*[GET] /redfish/v1/Chassis/{instance} /Power*
*[PATCH] /redfish/v1/Chassis/{instance}/Power*
    *- Description*
    *- Id*
    *- Name*
    *- PowerControl*
        *- Name*
        *- MemberId*
        *- PowerMetrics*
            *- IntervalInMin*
            *- MinConsumedWatts*

- *- MaxConsumedWatts*
- *- AverageConsumedWatts*
- *- RelatedItem@odata.count*
- *- PhysicalContext*
- *- PowerConsumedWatts*
- *- PowerRequestedWatts*
- *- PowerAvailableWatts*
- *- PowerCapacityWatts*
- *- PowerAllocatedWatts*
- *- PowerLimit*
- *- LimitInWatts*
- *- LimitException*
- *- CorrectionInMs*
- *- PowerControl@odata.count*
- *- Voltage*
  - *- MemberId*
  - *- Name*
  - *- SensorNumber*
  - *- Status*
  - *- ReadingVolts*
  - *- UpperThresholdNonCritical*
  - *- UpperThresholdCritical*
  - *- LowerThresholdNonCritical*
  - *- LowerThresholdCritical*
  - *- MinReadingRange*
  - *- MaxReadingRange*
  - *- RelatedItem*
  - *- OwnerLUN*
  - *- UpperThresholdFatal*
  - *- LowerThresholdFatal*
  - *- PhysicalContext*
  - *- RelatedItem (RelatedItem@odata.count)*

- *- Voltages@odata.count*
- *- PowerSupply*
  - *- MemberId*
  - *- Name*
  - *- LineInputVoltage*
  - *- PowerCapacityWatts*
  - *- LastPowerOutputWatts*
  - *- Model*
  - *- FirmwareVersion*
  - *- SerialNumber*
  - *- PowerInputWatt*
  - *- PowerOutputWatts*
  - *- PowerSupplyType*

- *LineInputVoltageType*
- *PartNumber*
- *SparePartNumber*
- *Status*
- *Location*
- *EfficiencyPercent*
- *HotPluggable*
- *RelatedItem*
- *Redundancy*
- *Oem*

## 10-1-2  LogServices (Support services after version 12.41.07)

*[GET] /redfish/v1/Chassis/{instance}/LogServices*
- *Description*
- *Members*
- *Members@odata.count*
- *Name*
- *Oem*

### 10-1-2-1    Log Service

*[GET] /redfish/v1/Chassis/{instance}/LogServices/Logs*
*[PATCH] /redfish/v1/Chassis/{instance}/LogServices/Logs*
*[POST] /redfish/v1/Chassis/{instance}/LogServices/Log/Actions/LogServices.ClearLog*
- *Id*
- *Name*
- *Description*
- *ServiceEnabled*
- *MaxNumberOfRecords*
- *OverWritePolicy*
- *DateTime*
- *DateTimeLocalOffset*
- *Actions*
- *Status*
- *Entries*
- *LogEntry Type*
- *Oem*

## POST
### Request:

```
POST https://{{ip}}/redfish/v1/Chassis/Self/LogServices/SEL/Actions/LogServices.ClearLog
Content-Type: application/json
```

**Request Body:**

```
{
}
```

**10-1-2-1-1    Entry Collection**

*[GET] /redfish/v1/Chassis/{instance}/LogServices/Log/Entries*
- *- Description*
- *- Members*
- *- Members@odata.count*
- *- Name*
- *- Oem*

**10-1-2-1-1-1       Entry**

*[GET] /redfish/v1/Chassis/{instance}/LogServices/Log/Entries/{instance}*
- *- Id*
- *- Name*
- *- Description*
- *- Severity*
- *- Created*
- *- EventTimestamp*
- *- EntryType*
- *- EntryCode*
- *- SensorType*
- *- SensorNumber*
- *- Message*
- *- MessageId*
- *- Links*
    - *- OriginOfConfition*
- *- Oem*
- *- EventId*
- *- MessageArgs*
- *- OemLogEntryCode*
- *- OemSensorType*

## 10-1-3  Sensor Collection

*[GET] /redfish/v1/Chassis/{instance}/Sensors*
- *- Description*
- *- Members*
- *- Members@odata.count*
- *- Name*
- *- Oem*

**10-1-3-1    Sensor**

*[GET] /redfish/v1/Chassis/{instance}/Sensors/{instance}*

- *- PeakReading*
- *- PeakReadingTime*
- *- Reading*
- *- ReadingType*
- *- Oem*
- *- Accuracy*
- *- AdjustedMaxAllowableOperatingValue*
- *- AdjustedMinAllowableOperatingValue*
- *- ApparentVA*
- *- ElectricalContext*
- *- LoadPercent*
- *- Location*
- *- MaxAllowableOperatingValue*
- *- MinAllowableOperatingValue*
- *- PhysicalContext*
- *- PhysicalSubContext*
- *- PowerFactor*
- *- Precision*
- *- ReactiveVAR*
- *- ReadingRangeMax*
- *- ReadingRangeMin*
- *- ReadingUnits*
- *- SensingFrequency*
- *- SensorResetTime*
- *- Status*
- *- Thresholds*
- *- VoltageType*

**10-1-3-2    Sensor Energy**

*[GET] /redfish/v1/Chassis/{instance}/Sensors/Energy*

- *- Id*
- *- Name*
- *- Oem*
- *- Reading*
- *- ReadingType*
- *- PeakReading*
- *- PeakReadingTime*

**10-1-3-3 Sensor Power**

*[GET] /redfish/v1/Chassis/{instance}/Sensors/Power*
    *- Id*
    *- Name*
    *- PeakReading*
    *- PeakReadingTime*
    *- Reading*
    *- ReadingType*

## 10-1-4 Thermal

*[GET] /redfish/v1/Chassis/{instance} /Thermal*
    *- Description*
    *- Id*
    *- Name*
    *- Temperatures*
        *- Name*
        *- MemberId*
        *- SensorNumber*
        *- Status*
        *- ReadingCelsius*
        *- UpperThresholdNonCritical*
        *- UpperThresholdCritical*
        *- LowerThresholdNonCritical*
        *- LowerThresholdCritical*
        *- PhysicalContext*
        *- OwnerLUN*
        *- UpperThresholdFatal*
        *- LowerThresholdFatal*
        *- MinReadingRangeTemp*
        *- MaxReadingRangeTemp*
        *- RelatedItem*
        *- DeltaReadingCelsius*
        *- DeltaPhysicalContext*
        *- MaxAllowableOperatingValue*
        *- MinAllowableOperatingValue*
        *- AdjustedMaxAllowableOperatingValue*
        *- AdjustedMinAllowableOperatingValue*
    *- Fan*
        *- MemberId*
        *- Name*
        *- PhysicalContext*
        *- Status*
        *- Reading*
        *- LowerThresholdNonCritical*
        *- LowerThresholdCritical*
        *- MinReadingRange*

- *MaxReadingRange*
   - *RelatedItem (RelatedItem@odata.count)*
   - *OwnerLUN*
   - *UpperThresholdNonCritical*
   - *UpperThresholdCritical*
   - *UpperThresholdFatal*
   - *LowerThresholdFatal*
   - *Redundancy*
   - *HotPluggable*
   - *Location*
   - *SensorNumebr*
  - *Oem*
  - *Redundancy*
  - *Actions*


**10-1-4-1    FanprofileService (GBT)**
*[GET] /redfish/v1/Chassis/{instance}/Thermal/FanprofileService*
  - *Fanprofile*
  - *Id*
  - *Name*
  - *SupportPCIEDevice*


**10-1-4-1-1   Fanprofile**
*[GET] /redfish/v1/Chassis/{instance}/Thermal/FanprofileService/Fanprofile*
*[PUT] /redfish/v1/Chassis/{instance}/Thermal/FanprofileService/Fanprofile*
  - *Id*
  - *Name*
  - *arrProfile*
     *-arrPolicy*
         - *arrDuty*
         - *arrFanSensor*
         - *arrHexDeviceID*
         - *arrHexVendorID*
         - *arrRef*
         - *arrSensor*
         - *iAmbientSensor*
         - *iAmbientSensorTemp*
         - *iCpuTdp*
         - *iInSDR*
         - *iInitDuty*
         - *iPCIEDeviceEnable*
         - *iPolicyType*
         - *iSensorCodee*
     - *strName*
     - *strVersion*
  - *strMode*

*- strVersion*

### 10-1-4-1-2   SupportPCIEDevice
*[GET] /redfish/v1/Chassis/{instance}/Thermal/FanprofileService/SupportPCIEDevice*
*[PUT] /redfish/v1/Chassis/{instance}/Thermal/FanprofileService/SupportPCIEDevice*
  - *Id*
  - *Name*
  - *arrPCIEDevices*
    - *hexDeviceID*
    - *hexVendorID*
    - *strName*
  - *strVersion*


### 10-1-5  NetworkAdapterCollection
*[GET] /redfish/v1/Chassis/{instance}/NetworkAdapters*
  - *Description*
  - *Members*
  - *Members@odata.count*
  - *Name*
  - *Oem*

### 10-1-5-1     NetworkAdapter
*[GET] /redfish/v1/Chassis/{instance}/NetworkAdapters/{instance}*
  - *Members*
  - *Members@odata.count*
  - *Name*
  - *Description*
  - *Oem*


### 10-1-6  PCIeDevice Collection
*[GET] /redfish/v1/Chassis/{instance}/PCIeDevices/{instance}*
  - *Description*
  - *Members*
  - *Members@odata.count*
  - *Name*
  - *Description*
  - *Oem*


### 10-1-6-1     PCIeDecice
*[GET] /redfish/v1/Chassis/{instance}/PCIeDevices/{instance}*
  - *Id*
  - *Name*
  - *Description*
  - *Status*
  - *Manufacturer*

- *Model*
- *SKU*
- *SerialNumber*
- *PartNumber*
- *AssetTag*
- *FirmwareVersion*
- *Links*
- *PCIeFunctions*
- *PCIeInterface*
- *Oem*
- *DeviceType*
- *Assembly*

**10-1-6-1-1   PCIeFunction**
*[GET] /redfish/v1/Chassis/{instance}/PCIeDevices/{instance}/PCIeFunctions/{instance}*
   *Id*
- *Name*
- *Description*
- *Status*
- *DeviceClass*
- *VendorId*
- *ClassCode*
- *Link*
- *FunctionId*
- *FunctionType*
- *DeviceId*
- *RevisionId*
- *SubsystemId*
- *SubsystemVendorId*
- *Actions*

# 11. CompositionService

*[Get] /redfish/v1/CompositionService*
*[Patch] /redfish/v1/CompositionService*
- ***Description***
- ***Id***
- ***Name***
- ***ResourceBlocks***
- ***ResourceZones***
- ***ServiceEnabled***
- ***Status***
- ***Oem***

## 11-1   ResourceBlocks Collection

*[Get] /redfish/v1/CompositionService/ResourceBlocks*
- ***Description***
- ***Members***
- ***Members@odata.count***
- ***Name***
- ***Oem***

### 11-1-1   ResourceBlocks

*[Get] /redfish/v1/CompositionService/ResourceBlocks/{instance}*
*[Patch] /redfish/v1/CompositionService/ResourceBlocks/{instance}*
- ***Id***
- ***Name***
- ***Description***
- ***Status***
- ***CompositionStatus***
    - ***Reserved***
    - ***MaxCompositions***
    - ***CompositionState***
- ***ResourceBlockType***
- ***Processors***
- ***Memory***
- ***Oem***
- ***Link***
    - ***Chassis***
- ***Storage***
- ***SimpleStorage***
- ***Drivers***
- ***EthernetInterfaces***

## 11-2   ResourceZones Collection

*[Get] /redfish/v1/CompositionService/ResourceBlocks*
- ***- Description***
- ***- Members***
- ***- Members@odata.count***
- ***- Name***

## 11-2-1   ResourceZones

*[Get] /redfish/v1/CompositionService/ResourceBlocks/{instance}*
- ***- Id***
- ***- Name***
- ***- Description***
- ***- Links***
    - ***- Oem***
    - ***- ResourceBlocks***
- ***- Status***

## 12. AMI OEM Entities - Configuration

*[Get] /redfish/v1/Oem/Ami/Configuration*
- *- Id*
- *- Name*
- *- CertificateAuthorityUrl*
- *- Oem*

# 13. EventService

*[GET] /redfish/v1/EventService*
*[PATCH] /redfish/v1/EventService*
*[POST] /redfish/v1/EventService/Actions/EventService.SubmitTestEvent*

- ***Actions***
- ***DeliveryRetryAttempts***
- ***DeliveryRetryIntervalSeconds***
- ***Description***
- ***EventFormatTypes***
- ***Id***
- ***Name***
- ***ServiceEnabled***
- ***Status***
- ***Subscriptions***
- ***ServerSentEventUri***
- ***SSEFilterPropertiesSupported***
- ***Oem***
- ***RegistryPrefixes***
- ***ResourceTypes***
- ***SubordinateResourcesSupported***
- ***SMTP***
    - ***Authentication***
    - ***ConnectionProtocol***
    - ***Password***
    - ***Port***
- ***ServiceEnabled***

## POST
### Request:

```
POST https://{{ip}}/redfish/v1/EventService/Actions/EventService.SubmitTestEvent
Content-Type: application/json
```

**EventServie.SubmitTestEvent can test using below RegistryPrefiexes MessageId**
- Base1.5.0
- EventLog.1.0.0
- HttpStatus.1.0.0
- IPMI.1.0.0
- Security.1.0.0
- SyncAgent.1.0.0

https://{{ip}}/redfish/v1/Registries/{{Registry_instance.json}}
Eg: https://{{ip}}/redfish/v1/Registries/Base.1.5.0.json
Example: Base.1.5.0 [ PropertyValueNotInList as MessageId ]

**Example POST Request Body:**

```
{
"EventTimestamp":"2019-09-20T23:04:09+02:00",
"EventId":"1531584914",
"OriginOfCondition":"/redfish/v1/Chassis/Self",
"MessageId":"PropertyValueNotInList",
"MessageArgs":["Lit","IndicatorLED"],
"Severity":"Warning"
}
```

# 13-1   Subscription Collection

*[GET] /redfish/v1/EventService/Subscriptions*
*[POST] /redfish/v1/EventService/Subscriptions*
>    *- Description*
>    *- Members*
>    *- Members@odata.count*
>    *- Name*
>    *- Oem*

**POST**
>    **Request:**

```
POST https://{{ip}}/redfish/v1/EventService/Subscriptions
Content-Type: application/json
```

>    **Example POST Request Body:**

```
{
"Context": "Rocket All",
"Destination": "http://10.1.112.223:7628/",
"EventFormatType": "Event",
"Protocol": "Redfish",
"RegistryPrefixes":["SyncAgent.1.0.0","Base.1.5.0","EventLog.1.0.0"],
"ResourceTypes":["Chassis","Systems","EventService"]
}
```

>    **Empty or Absent RegistryPrefixes, ResourceTypes and Absent EventFormatType:**
>    RegistryPrefixes, ResourceTypes values are absent or empty are accepted in POST call. In
>    this case service shall sent events with any ResourceTypes or any RegistryPrefixes.
>    If EventFormatType property was absent on POST call then default value will be Event.

**Example POST Request Body:**

```
{
"Context": "Rocket All",
"Destination": "http://10.1.112.223:7628/",
"Protocol": "Redfish",
"RegistryPrefixes":[],
"ResourceTypes":[]
}
```

## 13-1-1  Subscription

*[GET] /redfish/v1/EventService/Subscriptions/{instance}*
*[PATCH] /redfish/v1/EventService/Subscriptions/{instance}*
*[DELETE] /redfish/v1/EventService/Subscriptions/{instance}*
> *- Id*
> *- Name*
> *- Description*
> *- EventTypes*
> *- Context*
> *- SubscriptionType*
> *- Protocol*
> *- MessageIds*
> *- OriginResources*
> *- OriginResources@odata.count*
> *- Status*
> *- DeliveryRetryPolicy*
> *- Oem*
> *- Destination*
> *- Actions*
> *- SubordinateResources*
> *- EventFormarType*
> *- RegistryPrefixes*
> *- ResourceTypes*
> *- MetricReportDefinitions*
> *- DeliveryRetryPolicy*

## 13-1-2  Subscription Test Event

*[GET] /redfish/v1/EventService/Subscriptions/SubmitTestEventActionInfo*
> *- Description*
> *- Id*
> *- Name*
> *- Parameters*
> *- Oem*

## 14.  JsonSchemas Collection

*[Get] /redfish/v1/JsonSchemas*
- ***- Description***
- ***- Members***
- ***- Members@odata.count***
- ***- Name***
- ***- Oem***

## 14-1   JsonSchemas

*[Get] /redfish/v1/ JsonSchemas/{instance}*
- ***- Oem***
- ***- Id***
- ***- Name***
- ***- Description***
- ***- Languages***
- ***- Schema***
- ***- Location***
- ***- Actions***

## 15. Manager Collection

*[GET] /redfish/v1/Managers*
- *- Description*
- *- Members*
- *- Members@odata.count*
- *- Name*

## 15-1 Manager

*[GET] /redfish/v1/Managers/{instance}*
*[PATCH] /redfish/v1/Managers/{instance}*
*[POST] /redfish/v1/Managers/{instance}/Actions/Manager.Reset*
*[POST] /redfish/v1/Managers/{instance}/Actions/Oem/AMIManager.RedfishDBReset*
- *- Id*
- *- Name*
- *- Description*
- *- ManagerType*
- *- Links*
    - *- ManagerForServers*
    - *- ManagerForServers@odata.count*
    - *- ManagerForChassis*
    - *- ManagerForChassis@odata.count*
- *- ManagerInChassis- ServiceEntryPointUUID*
- *- UUID*
- *- Model*
- *- DateTime*
- *- DateTimeLocalOffset*
- *- FirmwareVersion*
- *- SerialConsole*
- *- CommandShell*
- *- GraphicalConsole*
- *- Actions*
- *- Status*
- *- EthernetInterfaces*
- *- SerialInterfaces*
- *- NetworkProtocol*
- *- LogServices*
- *- HostInterfaces*
- *- PowerState*
- *- Redundancy@odata.count*
- *- Oem*
    - *- VirtualMedia*
    - *- ManagerServiceInfo*
        - *- CommandShellServiceInfo*
        - *- Links*

        *- NetworkProtocol*
     *- VirtualMedia*
     *- AutoDSTEnabled*

## POST
### Request:

```
POST https://{{ip}}/redfish/v1/Managers/Self/Actions/Manager.Reset
Content-Type: application/json
```

### Request Body:
*The ResetType can be one of the following values: "On", "ForceOff", "GracefulShutdown", "ForceRestart".*

### Example POST Request Body:

```
{
"ResetType" : "On"
}
{
"ResetType" : "On"
}
```

### Request:

```
POST https://{{ip}}/redfish/v1/Managers/Self/Actions/RedfishDBReset
Content-Type: application/json
```

### Example POST Request Body:

```
{
"RedfishDBResetType": "ResetAll"
}
```

### 15-1-1  EthernetInterfaces Collection

*[Get] /redfish/v1/Managers/{instance}/EthernetInterfaces*
- *Description*
- *Members*
- *Members@odata.count*
- *Name*
- *Oem*

### 15-1-1-1    EthernetInterfaces

*[Get] /redfish/v1/Managers/{instance}/EthernetInterfaces/bond0*
*[PATCH] /redfish/v1/Managers/{instance}/EthernetInterfaces/{{manager_ethifc_instance}}*
- *Id*
- *Name*
- *Description*
- *Status*
- *InterfaceEnabled*
- *PermanentMACAddress*
- *MACAddress*
- *SpeedMbps*
- *AutoNeg*
- *FullDuplex*
- *MTUSize*
- *HostName*
- *FQDN*
- *MaxIPv6StaticAddresses*
- *VLAN*
- *Ipv4Addresses*
- *Ipv6Addresses*
- *IPv6DefaultGateway*
- *NameServers*
- *LinkStatus*
- *DHCPv4*
- *Oem*
- *UefiDevicePath*
- *StatelessAddressAutoConfig*
- *Ipv6StaticAddresses*
- *VLANs*
- *Actions*
- *DHCPv6*
- *IPv6StaticDefaultGateways*
- *IPv4StaticAddresses*

*[GET] /redfish/v1/Managers/Self/EthernetInterfaces/eth0*
- ***Id***
- ***Name***
- ***Description***
- ***InterfaceEnabled***
- ***PermanentMACAddress***
- ***MACAddress***
- ***LinkStatus***
- ***Oem***
- ***UefiDevicePath***
- ***Status***
- ***SpeedMbps***
- ***StatelessAddressAutoConfig***
- ***AutoNeg***
- ***FullDuplex***
- ***MTUSize***
- ***HostName***
- ***FQDN***
- ***MaxIPv6StaticAddresses***
- ***VLAN***
- ***Ipv4Addresses***
- ***Ipv6Addresses***
- ***Ipv6DefaultGateway***
- ***NameServers***
- ***StaticNameServers***
- ***VLANs***
- ***Actions***
- ***DHCPv4***
- ***DHCPv6***
- ***IPv6StaticDefaultGateways***
- ***IPv4StaticAddresses***
- ***IPv6AddressPolicyTable***

*[GET] /redfish/v1/Managers/Self/EthernetInterfaces/eth1*
- ***Id***
- ***Name***
- ***Description***
- ***InterfaceEnabled***
- ***PermanentMACAddress***
- ***MACAddress***
- ***LinkStatus***
- ***Oem***
- ***UefiDevicePath***
- ***Status***
- ***SpeedMbps***
- ***StatelessAddressAutoConfig***

- *AutoNeg*
- *FullDuplex*
- *MTUSize*
- *HostName*
- *FQDN*
- *MaxIPv6StaticAddresses*
- *VLAN*
- *Ipv4Addresses*
- *Ipv6Addresses*
- *Ipv6StaticAddresses*
- *Ipv6DefaultGateway*
- *NameServers*
- *VLANs*
- *Actions*
- *DHCPv4*
- *DHCPv6*
- *IPv6StaticDefaultGateways*
- *IPv4StaticAddresses*

*[GET] /redfish/v1/Managers/Self/EthernetInterfaces/usb0*
- *Id*
- *Name*
- *Description*
- *Status*
- *InterfaceEnabled*
- *PermanentMACAddress*
- *MACAddress*
- *Ipv4Addresses*
- *Ipv6Addresses*
- *LinkStatus*
- *Oem*
- *UefiDevicePath*
- *SpeedMbps*
- *StatelessAddressAutoConfig*
- *AutoNeg*
- *FullDuplex*
- *MTUSize*
- *HostName*
- *FQDN*
- *MaxIPv6StaticAddresses*
- *VLAN*
- *Ipv6StaticAddresses*
- *Ipv6DefaultGateway*
- *NameServers*
- *VLANs*
- *Actions*

- *- DHCPv4*
- *- DHCPv6*
- *- IPv6StaticDefaultGateways*
- *- IPv4StaticAddresses*

## 15-1-2  CertificateCollection

*[Get] /redfish/v1/Managers/{instance}/NetworkProtocol/HTTPS/Certificates*
- *- Description*
- *- Members*
- *- Members@odata.count*
- *- Name*
- *- Oem*

## 15-1-3  Factory Reset ActionInfo

*[GET] /redfish/v1/Managers/{instance}/RedfishDBResetActionInfo*
- *- Description*
- *- Id*
- *- Name*
- *- Parameters*

## 15-1-4  HostInterfaces Collection

*[Get] /redfish/v1/Managers/{instance}/HostInterfaces*
- *- Description*
- *- Members*
- *- Members@odata.count*
- *- Name*
- *- Oem*

### 15-1-4-1     HostInterfaces
*[Get] /redfish/v1/Managers/{instance}/HostInterfaces/{instance}*
*[PATCH] /redfish/v1/Managers/{instance}/HostInterfaces/{instance}*
- *Id*
- *- Name*
- *- Description*
- *- HostInterfaceType*
- *- Status*
- *- InterfaceEnabled*
- *- ExternallyAccessible*
- *- AuthenticationModes*
- *- KernelAuthRoleId*
- *- KernelAuthEnabled*
- *- FirmwareAuthRoleId*
- *- FirmwareAuthEnabled*
- *- Links*
    - *- ComputerSystems@odata.count*

- **- ComputerSystems**
- **- CredentialBootstrappingRole**
- **- KernelAuthRole**
- **- FirmwareAuthRole**
- **- HostEthernetInterfaces**
- **- ManagerEthernetInterface**
- **- NetworkProtocol**
- **- Oem**
- **- AuthNoneRoleId**
- **- CredentialBootstrapping**
  - **- Enabled**
  - **- EnableAfterReset**
  - **- RoleId**

### 15-1-4-2    HostEthernetInterface Collection

*[GET] /redfish/v1/Managers/Self/HostInterfaces/Self/HostEthernetInterfaces*
- **- Description**
- **- Members**
- **- Members@odata.count**
- **- Name**
- **- Oem**

## 15-1-5  LogServices Collection

*[GET] /redfish/v1/Managers/{instance}/LogServices*
*[POST] /redfish/v1/Managers/{instance}/LogServices/AuditLog/Actions/LogService.ClearLog*
*[POST] /redfish/v1/Managers/{instance}/LogServices/EventLog/Actions/LogService.ClearLog*
*[POST] /redfish/v1/Managers/{instance}/LogServices/SEL/Actions/LogService.ClearLog*
- **- Description**
- **- Members**
- **- Members@odata.count**
- **- Name**
- **- Oem**

### POST
#### Request:

```
POST https://{{ip}}/redfish/v1/Managers/Self/LogServices/AuditLog/Actions/LogService.ClearLog
     https://{{ip}}/redfish/v1/Managers/Self/LogServices/EventLog/Actions/LogService.ClearLog
     https://{{ip}}/redfish/v1/Managers/Self/LogServices/SEL/Actions/LogService.ClearLog
Content-Type: application/json
```

#### Example POST Request Body:

```
{
}
```

**15-1-5-1      LogServices**
*[GET] /redfish/v1/Managers/{instance}/LogServices/{instance}*
*[PATCH] /redfish/v1/Managers/{instance}/LogServices/{instance}*
- ***Id***
- ***Name***
- ***Description***
- ***ServiceEnabled***
- ***MaxNumberOfRecords***
- ***OverWritePolicy***
- ***DateTime***
- ***DateTimeLocalOffset***
- ***Actions***
- ***Status***
- ***Entries***
- ***LogEntry Type***
- ***Oem***

**15-1-5-1-1    Log Entry Collection**
*[GET] /redfish/v1/Managers/{instance}/LogServices/{instance}/Entries*
- ***Description***
- ***Members***
- ***Members@odata.count***
- ***Name***
- ***Oem***

**15-1-5-1-1-1      Log Entry**
*[GET] /redfish/v1/Managers/Self/LogServices/AuditLog/Entries/{instance}*
- ***Id***
- ***Name***
- ***Description***
- ***Severity***
- ***Created***
- ***EventTimestamp***
- ***EntryType***
- ***Message***
- ***MessageId***
- ***MessageArgs***
- ***Oem***
- ***EventId***
- ***EntryCode***
- ***SensorType***
- ***SensorNumber***
- ***Links***
    - ***OriginOfCondition***
- ***OemLogEntryCode***
- ***OemSensorType***

*[GET] /redfish/v1/Managers/Self/LogServices/EventLog/Entries/{instance}*
- ***Id***
- ***Name***
- ***Description***
- ***Severity***
- ***Created***
- ***EventTimestamp***
- ***EntryType***
- ***EntryCode***
- ***Message***
- ***MessageId***
- ***MessageArgs***
- ***Links***
    - ***OriginOfCondition***
- ***Oem***
- ***EventId***
- ***SensorType***
- ***OemLogEntryCode***
- ***OemSensorType***

*[GET] /redfish/v1/Managers/Self/LogServices/SEL/Entries/{instance}*
- ***Id***
- ***Name***
- ***Description***
- ***Severity***
- ***Created***
- ***EventTimestamp***
- ***EntryType***
- ***EntryCode***
- ***SensorType***
- ***SensorNumber***
- ***MessageId***
- ***Oem***
- ***EventId***
- ***Message***
- ***MessageArgs***
- ***Links***
    - ***OriginOfCondition***
- ***OemLogEntryCode***
- ***OemSensorType***

### 15-1-6  NetworkProtocol

*[GET] /redfish/v1/Managers/ {instance}/NetworkProtocol*
*[PATCH] /redfish/v1/Managers/{instance}/NetworkProtocol*
- *- Id*
- *- Name*
- *- Description*
- *- HostName*
- *- FQDN*
- *- HTTPS*
- *- SNMP*
    - *- ProtocolEnabled*
    - *- Port*
    - *- AuthenticationProtocol*
    - *- EncryptionProtocol*
    - *- EngineId*
    - *- EnableSNMPv1*
    - *- EnableSNMPv2c*
    - *- EnableSNMPv3*
- *- VirtualMedia*
- *- SSDP*
- *- IPMI*
- *- SSH*
- *- KVMIP*
- *- Status*
- *- Oem*
- *- Telnet*
- *- Actions*
- *- NTP*
    - *- ProtocolEnabled*
    - *- Port*
    - *- NTPServers*

### 15-1-7  Reset ActionInfo

*[GET] /redfish/v1/Managers/{instance}/ResetActionInfo*
- *- Description*
- *- Id*
- *- Name*
- *- Parameters*

### 15-1-8  SerialInterfaces Collection

*[GET] /redfish/v1/Managers/{instance}/SerialInterfaces*
- ***- Description***
- ***- Members***
- ***- Members@odata.count***
- ***- Name***
- ***- Oem***

#### 15-1-8-1    SerialInterfaces

*[GET] /redfish/v1/Managers/{instance}/SerialInterfaces/{instance}*
*[PATCH] /redfish/v1/Managers/{instance}/SerialInterfaces/{instance}*
- ***- Id***
- ***- Name***
- ***- Description***
- ***- Interface Enabled***
- ***- BitRate***
- ***- Parity***
- ***- DataBits***
- ***- StopBits***
- ***- FlowControl***
- ***- Oem***
- ***- SignalType***
- ***- ConnectorType***
- ***- PinOut***
- ***- Actions***

### 15-1-9  VirtualMedia Collection

*[GET] /redfish/v1/Managers/{instance}/VirtualMedia*
- ***- Description***
- ***- Members***
- ***- Members@odata.count***
- ***- Name***
- ***- Oem***

#### 15-1-9-1    VirtualMedia Collection

*[GET] /redfish/v1/Managers/{instance}/VirtualMedia/{instance}*
*[POST] /redfish/v1/Managers/{instance}/VirtualMedia/{instance}/Actions/VirtualMedia.InsertMedia*
*[POST] /redfish/v1/Managers/{instance}/VirtualMedia/{instanc}}/Actions/VirtualMedia.EjectMedia*
*[POST] /redfish/v1/Managers/{instance}/Actions/Oem/AMIVirtualMedia.ConfigureCDInstance*
*[POST] /redfish/v1/Managers/{instance}/Actions/Oem/AMIVirtualMedia.EnableRMedia*
- ***- Actions***
- ***- ConnectedVia***
- ***- Description***
- ***- Id***
- ***- Image***

- *ImageName*
- *Inserted*
- *Name*
- *WriteProtected*
- *Oem*
- *MediaType*
- *TransferProtocolType*
- *TransferMethod*
- *UserName*

**POST**

    **Request:**

*POST https://{{ip}}/redfish/v1/Managers/Self/VirtualMedia/CD1/Actions/VirtualMedia.InsertMedia*
*Content-Type: application/json*

    **Example POST Request Body:**

```
{
"Image": "nfs://10.0.125.169/home/tamil/images/images/ubuntu-14.04.1-desktop-amd64.iso",
"TransferProtocolType" : "NFS"
}
```

    **Request:**

POST https://{{ip}}/redfish/v1/Managers/Self/VirtualMedia/CD1/Actions/VirtualMedia.EjectMedia
Content-Type: application/json

    **Example POST Request Body:**

```
{}
```

    **Request:**

*POST https://{{ip}}/redfish/v1/Managers/Self/Actions/Oem/AMIVirtualMedia.ConfigureCDInstance*
*Content-Type: application/json*

    **Example POST Request Body:**

```
{
"CDInstance": 4
}
```

    **Request:**

POST https://{{ip}}/redfish/v1/Managers/Self/Actions/Oem/AMIVirtualMedia.EnableRMedia
Content-Type: application/json

**Example POST Request Body:**

```
{
"RMediaState": "Enable"
}
```

## 16. InventoryData Status URI

*[GET] /redfish/v1/Oem/Ami/InventoryData/Status*
- *Id*
- *Name*
- *Description*
- *InventoryData*

## 17. InventoryData Status URI

*[GET] /redfish/v1/Registries*
- *Description*
- *Members*
- *Members@odata.count*
- *Name*
- *Oem*

## 17-1   Message Registries

*[GET] /redfish/v1/Registries/{instance}*
- *Description*
- *Id*
- *Languages*
- *Name*
- *Oem*
- *RegistryPrefix*
- *RegistryVersion*
- *OwningEntity*
- *Messages*

## 17-2   Message Registries File

*[GET] /redfish/v1/Registries/{instance.json}*
- *Description*
- *Id*
- *Languages*
- *Messages*
- *Name*
- *OwningEntity*
- *RegistryPrefix*
- *RegistryVersion*
- *Oem*

# 18. Session Service

*[GET] /redfish/v1/SessionService*
*[PATCH] /redfish/v1/SessionService*
- ***Description***
- ***Id***
- ***Name***
- ***ServiceEnabled***
- ***SessionTimeout***
- ***Sessions***
- ***Status***
- ***Oem***
- ***Actions***

# 18-1   Session Collection

*[GET] /redfish/v1/SessionService/Sessions*
*[POST] /redfish/v1/SessionService/Sessions*
- ***Description***
- ***Members***
- ***Members@odata.count***
- ***Name***
- ***Oem***

**POST**

**Request:**

```
POST https://{{ip}}/redfish/v1/SessionService/Sessions
Content-Type: application/json
```

**Example POST Request Body:**

```
{
"UserName": "admin",
"Password": "password"
}
```

### 18-1-1  Session

*[GET] /redfish/v1/SessionService/Sessions/{instance}*
*[DELETE] /redfish/v1/SessionService/Sessions/{instance}*
- ***- Id***
- ***- Name***
- ***- Description***
- ***- UserName***
- ***- Oem***
- ***- Password***
- ***- Actions***

# 19. System Collection

*[GET] /redfish/v1/Systems*
*[POST] /redfish/v1/Systems*
   *@Redfish.CollectionCapabilities*
      ***- Capabilities***
   *- Members*
   *- Members@odata.count*
   *- Name*
   *- Description*
   *- Oem*

## POST
### Request:

```
POST https://{{ip}}/redfish/v1/Systems
Content-Type: application/json
```

### Example POST Request Body:

```
{
"Name": "NewSystem",
 "Links": {
     "ResourceBlocks": [{
         "@odata.id": "/redfish/v1/CompositionService/ResourceBlocks/ComputeBlock"
         } ]
         },
 "HostName":"gigabyte"
 }
```

# 19-1  Capabilities

*[GET] /redfish/v1/Systems/Capabilities*
   *- Id*
   *- Name*
   *- Description*
   *- Links*
      *- ResourceBlocks*
   *- Boot*
   *- HostName*

## 19-2  System

*[GET] /redfish/v1/Systems/{instance}*
*[PATCH] /redfish/v1/Systems/{instance}*
*[POST]/redfish/v1/Systems/{instance}/Actions/ComputerSystem.Reset*

- ***Id***
- ***Name***
- ***Description***
- ***SystemType***
    - ***Physical***
- ***Links***
    - ***Oem***
    - ***Chassis***
    - ***Chassis@odata.count***
    - ***ManagedBy***
    - ***ManagedBy@odata.count***
- ***AssetTag***
- ***Manufacturer***
- ***Model***
- ***SKU***
- ***SerialNumber***
- ***PartNumber***
- ***UUID***
- ***IndicatorLED***
- ***PowerState***
- ***Boot***
- ***BiosVersion***
- ***ProcessorSummary***
    - ***Count***
    - ***Model***
    - ***Status***
- ***MemorySummary***
    - ***TotalSystemMemoryGiB- Status***
    - ***MemoryMirroring***
    - ***TotalSystemPersistentMemoryGiB***
- ***Actions***
- ***Processors***
- ***EthernetInterfaces***
- ***SimpleStorage***
- ***LogServices***
- ***Status***
- ***SecureBoot***
- ***Bios***
- ***Memory***
- ***Storage***
- ***NetworkInterfaces***

- *- Oem*
- *- SubModel*
- *- Hostname*
- *- TrustedModules*
- *- HostingRoles*
- *- HostedServices*
- *- PCIeDevices*
- *- PCIeDevices@odata.count*
- *- PCIeFunctions*
- *- PCIeFunctions@odata.count*
- *- PowerRestorePolicy*

## POST

**Request:**

```
POST https://{{ip}}/redfish/v1/Systems/Self/Actions/ComputerSystem.Reset
Content-Type: application/json
```

**Request Body:**
*The ResetType can be one of the following values: "On", "ForceOff", "GracefulShutdown", "ForceRestart".*

**Example POST Request Body:**

```
{
"ResetType" : "On"
}
```

## 19-2-1  BIOS

*[GET] /redfish/v1/Systems/{instance}/Bios*
*[POST] /redfish/v1/Systems/{instance}/Bios/Actions/Bios.ResetBios*
*[POST] /redfish/v1/Systems/{instance}/Bios/Actions/Bios.ChangePassword*
- *- Oem*
- *- Id*
- *- Name*
- *- Description*
- *- AttributeRegistry*
- *- Actions*
- *- Attributes*

**POST**

    **Request:**

```
POST https://{{ip}}/redfish/v1/Systems/Self/Bios/Actions/Bios.ResetBios
Content-Type: application/json
```

**Example POST Request Body:**

```
{
"ResetType": "Reset"
}
```

**Request:**

```
POST https://{{ip}}/redfish/v1/Systems/Self/Bios/Actions/Bios.ChangePassword
Content-Type: application/json
```

**Example POST Request Body:**

```
{
"PasswordName": "SETUP001",
"OldPassword": "old",
"NewPassword": "new"
}
```

**19-2-1-1    BIOS SD**
*[POST] /redfish/v1/Systems/{instance}/Bios/SD*
*[PATCH] /redfish/v1/Systems/{instance}/Bios/SD*
*[PUT] /redfish/v1/Systems/{instance}/Bios/SD*
    *- Id*
    *- Name*
    *- Description*
    *- AttributeRegistry*
    *- Attributes*
    *- Actions*

**POST**
**Request:**

```
POST https://{{ip}}/redfish/v1/Systems/Self/Bios/SD
Content-Type: application/json
```

**Example POST Request Body:**

```
{
"Attributes": {
    "PCIS003": "Disabled"
    }
}
```

## 19-2-2  BootOption Collection

*[GET] /redfish/v1/Systems/{instance}/Bootoptions*
- *Description*
- *Members*
- *Members@odata.count*
- *Name*
- *Oem*

### 19-2-2-1      BootOption Collection

*[GET] /redfish/v1/Systems/{instance}/Bootoptions/{instance}*
- *Id*
- *Name*
- *Description*
- *BootOptionEnabled*
- *BootOptionReference*
- *DisplayName*
- *UefiDevicePath*
- *Alias*
- *Oem*
- *RelatedItem*
- *RelatedItem@odata.count*

## 19-2-3  EthernetInterfaces Collection

*[GET] /redfish/v1/Systems/{instance}/EthernetInterfaces*
- *Description*
- *Members*
- *Members@odata.count*
- *Name*
- *Oem*

### 19-2-3-1      EthernetInterfaces

*[GET] /redfish/v1/Systems/{instance}/EthernetInterfaces/{instance}*
- *Id*
- *Status*
- *MACAddress*
- *LinkStatus*
- *Links*
- *Name*

- *Oem*
- *UefiDevicePath*
- *InterfaceEnabled*
- *PermanentMACAddress*
- *Ipv4Addresses*
- *Ipv6Addresses*
- *Ipv6DefaultGateway*
- *VLANs*
- *Actions*
- *DHCPv4*
- *DHCPv6*

### 19-2-3-1-1　　　VLAN Network Interface Collection

*[GET] /redfish/v1/Systems/{instance}/EthernetInterfaces/{instance}/VLANs*
*[POST] /redfish/v1/Systems/{instance}/EthernetInterfaces/{instance}/VLANs*
- *Members*
- *Members@odata.count*
- *Name*
- *Description*
- *Oem*

**POST**
**Request:**

```
https://{{ip}}/redfish/v1/Systems/{{system_instance}}/EthernetInterfaces/{{system_ethifc_instance}}/VLANs
Content-Type: application/json
```

**Example POST Request Body:**

```
{
"VLANId": 100,
"VLANEnable":true,
"VLANPriority":2
}
```

### 19-2-3-1-1-1-1　　　VLANNetworkInterface

*[GET] /redfish/v1/Systems/{instance}/EthernetInterfaces/{instance}/VLANs/{instance}*
*[PATCH] redfish/v1/Systems/{instance}/EthernetInterfaces/{instance}/VLANs/{instance}*
*[DELETE] redfish/v1/Systems/{instance}/EthernetInterfaces/{instance}/VLANs/{instance}*

- *Id*
- *Name*
- *Description*
- *VLANEnable*
- *VLANId*
- *Oem*
- *Actions*

## 19-2-4  LogServices Collection

*[GET] /redfish/v1/Systems/{instance}/LogServices*
- *Description*
- *Members*
- *Members@odata.count*
- *Name*
- *Oem*

### 19-2-4-1     LogServices

*[GET] /redfish/v1/Systems/{instance}/LogServices /{instance}*
*[PATCH] /redfish/v1/Systems/{instance}/LogServices/{instance}*
*[POST] /redfish/v1/Systems/{instance}/LogServices/{instance}/Actions/LogService.ClearLog*
- *Oem*
- *Id*
- *Name*
- *Description*
- *ServiceEnabled*
- *MaxNumberOfRecords*
- *OverWritePolicy*
    - *WrapsWhenFull*
- *DateTime*
- *DateTimeLocalOffset*
- *Actions*
- *Status*
- *Entries*
- *LogEntry Type*

**POST**
**Request:**

```
POST https://{{ip}}/redfish/v1/Systems/Self/LogServices/BIOS/Actions/LogService.ClearLog
Content-Type: application/json
```

**Example POST Request Body:**

```
{
}
```

**19-2-4-1-1   Log Entry Collection**

*[GET] /redfish/v1/Systems/{instance}/LogServices /{instance}/Entries*
  - *- Description*
  - *- Members*
  - *- Members@odata.count*
  - *- Name*
  - *- Oem*

**19-2-4-1-1-1      Log Entry**

*[GET] /redfish/v1/Systems/{instance}/LogServices /{instance}/Entries /{instance}*
  - *- Id*
  - *- Name*
  - *- Description*
  - *- Severity*
  - *- Created*
  - *- EventId*
  - *- EventTimestamp*
  - *- EntryType*
  - *- EntryCode*
  - *- SensorType*
  - *- SensorNumber*
  - *- Message*
  - *- MessageId*
  - *- MessageArgs*
  - *- Oem*
  - *- Links*
      - *- OriginOfCondition*
  - *- OemLogEntryCode*
  - *- OemSensorType*

**19-2-5  Memory Collection**

*[GET] /redfish/v1/Systems/{instance}/Memory*
  - *- Description*
  - *- Members*
  - *- Members@odata.count*
  - *- Name*
  - *- Oem*

**19-2-5-1      Memory**

*[GET] /redfish/v1/Systems/{instance}/Memory/{instance}*
  - *- Id*
  - *- Name*
  - *- Description*
  - *- MemoryType*
  - *- MemoryDeviceType*
  - *- CapacityMiB*

- *DataWidthBits*
- *BusWidthBits*
- *Manufacturer*
- *SerialNumber*
- *PartNumber*
- *AllowedSpeedsMHz*
- *DeviceLocator*
- *ErrorCorrection*
- *OperatingSpeedMhz*
- *Links*
    - *Chassis*
- *Status*
- *Oem*
- *BaseModuleType*
- *MemoryMedia*
- *Assembly*
- *FirmwareRevision*
- *FirmwareApiVersion*
- *FunctionClasses*
- *MaxTDPMilliWatts*
- *SecurityCapabilities*
- *SpareDeviceCount*
- *ConfigurationLocked*
- *RankCount*
- *MemoryLocation*
- *VolatileRegionSizeLimitMiB*
- *PersistentRegionSizeLimitMiB*
- *Regions*
- *OperatingMemoryModes*
- *PowerManagementPolicy*
- *IsSpareDeviceEnabled*
- *IsRankSpareEnabled*
- *VolatileRegionNumberLimit*
- *PersistentRegionNumberLimit*
- *VolatileRegionSizeMaxMiB*
- *PersistentRegionSizeMaxMiB*
- *AllocationIncrementMiB*
- *AllocationAlignmentMiB*
- *ModuleManufacturerID*
- *ModuleProductID*
- *MemorySubsystemControllerManufacturerID*
- *MemorySubsystemControllerProductID*
- *VolatileSizeMiB*
- *NonVolatileSizeMiB*
- *CacheSizeMiB*
- *LogicalSizeMiB*

     *- Location*
     *- Metrics*

## 19-2-6  MemoryDomains Collection

*[GET] /redfish/v1/Systems/{instance}/MemoryDomains*
     *- Description*
     *- Members*
     *- Members@odata.count*
     *- Name*
     *- Oem*

## 19-2-7  NetworkInterface Collection

*[GET] /redfish/v1/Systems/{instance}/NetworkInterfaces*
     *- Description*
     *- Members*
     *- Members@odata.count*
     *- Name*
     *- Oem*

### 19-2-7-1  NetworkInterface
*[GET] /redfish/v1/Systems/{instance}/NetworkInterfaces/{instance}*
     *- Id*
     *- Name*
     *- Description*
     *- Status*
     *- Links*
     *- NetworkDeviceFunctions*
     *- Actions*

## 19-2-8  Processor Collection

*[GET] /redfish/v1/Systems/{instance}/Processors*
     *- Members*
     *- Members@odata.count*
     *- Name*
     *- Description*
     *- Oem*

### 19-2-8-1  Processor
*[GET] /redfish/v1/Systems/{instance}/Processors/{instance}*
     *- Id*
     *- Name*
     *- Description*
     *- Socket*
     *- Status*
       *- State*

        *- Health*
    *- ProcessorType*
    *- ProcessorArchitecture*
    *- InstructionSet*
    *- ProcessorId*
        *- IdentificationRegisters*
        *- EffectiveFamily*
        *- EffectiveModel*
    *- Step*
    *- Manufacturer*
    *- Model*
    *- MaxSpeedMHz*
    *- TotalCores*
    *- TotalThreads*
    *- Links*
        *- Chassis*
    *- Oem*
    *- Actions*
    *- SubProcessors*
    *- Location*
    *- Assembly*
    *- MaxTDPWatts*
    *- Metrics*
    *- TDPWatts*
    *- TotalEnabledCores*
    *- UUID*
    *- FPGA*
    *- ProcessorMemory*
        *- CapacityMiB*
        *- IntegratedMemory*
        *- MemoryType*
        *- SpeedMHz*

## 19-2-9  SimpleStorage Collection

*[GET] /redfish/v1/Systems/{instance}/SimpleStorage*
    *- Members*
    *- Members@odata.count*
    *- Name*
    *- Description*
    *- Oem*

### 19-2-9-1    SimpleStorage
*[GET] /redfish/v1/Systems/{instance}/SimpleStorage/{instance}*

- *Id*
- *Name*
- *Description*
- *Links*
- *Oem*
- *UefiDevicePath*
- *Status*
- *Actions*

## 19-2-10 Storage Collection

*[Get] /redfish/v1/Systems/{instance}/Storage*
- *Members*
- *Members@odata.count*
- *Name*
- *Description*
- *Oem*

### 19-2-10-1 Storage

*[GET] /redfish/v1/Systems/{instance}/Storage/{instance}*
- *Id*
- *Name*
- *Description*
- *Oem*
- *Status*
- *Links*
- *StorageControllers@odata.count*
- *StorageControllers*
- *Drives@odata.count*
- *Drives*
- *Volumes*
- *Redundancy@odata.count*
- *Redundancy*

## 20. TaskService

*[GET] /redfish/v1/TaskService*
- *CompletedTaskOverWritePolicy*
- *DateTime*
- *Description*
- *Id*
- *LifeCycleEventOnTaskStateChange*
- *Name*
- *ServiceEnabled*
- *Status*
- *Tasks*
- *Oem*
- *Actions*

## 20-1  Task Collection

*[GET] /redfish/v1/TaskService/Tasks*
- *Description*
- *Members*
- *Members@odata.count*
- *Name*
- *Oem*

### 20-1-1  Task

*[GET] /redfish/v1/TaskService/Tasks/{instance}*
*[DELETE] /redfish/v1/TaskService/Tasks/{instance}*
- *Oem*
- *Id*
- *Name*
- *Description*
- *TaskState*
- *StartTime*
- *EndTime*
- *TaskStatus*
- *Messages*
- *Actions*
- *HidePayload*
- *PercentComplete*
- *Payload*

## 21. TelemetryService

*[Get] /redfish/v1/TelemetryService*
*[POST] /redfish/v1/TelemetryService/Actions/TelemetryService.SubmitTestMetricReport*
*[PATCH] /redfish/v1/TelemetryService*
- ***Oem***
- ***Id***
- ***MetricDefinitions***
- ***MetricReportDefinitions***
- ***MetricReports***
- ***Triggers***
- ***Status***
- ***Name***
- ***MaxReports***
- ***MinCollectionInterval***
- ***SupportedCollectionFunctions***
- ***Actions***
- ***LogService***
- ***Description***
- ***ServiceEnabled***
- ***SupportedCollectionFunctions@Redfish.AllowableValues***

**POST**
>   **Request:**

```
POST https://{{ip}}/redfish/v1/TelemetryService/Actions/TelemetryService.SubmitTestMetricReport
Content-Type: application/json
```

>   **Example POST Request Body:**

```
{
"MetricReportName":"Average2",
"GeneratedMetricReportValues":[{
    "MetricId": "Temp_average_reading_Average",
    "MetricProperty": "/redfish/v1/Chassis/Self/Thermal#/Temperatures/0/ReadingCelsius",
    "MetricValue": "23",
    "Timestamp": "2019-07-01T06:05:52Z"
    }]
}
```

## 21-1  MetricReportLog Collection

*[Get] /redfish/v1/TelemetryService/LogServices*
*[POST] /redfish/v1/TelemetryService/LogService/Actions/LogService.ClearLog*
- ***Description***
- ***Members***

- *Members@odata.count*
- *Name*
- *Oem*

**POST**

    **Request:**

```
POST https://{{ip}}/redfish/v1//TelemetryService/LogService/Actions/LogService.ClearLog
Content-Type: application/json
```

    **Example POST Request Body:**

```
{
}
```

## 21-1-1  MetricReportLog

*[Get] /redfish/v1/TelemetryService/LogServices*
*[Post] redfish/v1/TelemetryService/LogServices/Actions/LogService.ClearLog*
- *Id*
- *Name*
- *Description*
- *ServiceEnabled*
- *MaxNumberOfRecords*
- *OverWritePolicy*
- *Actions*
- *Status*
- *Entries*
- *DateTime*
- *DateTimeLocalOffset*
- *Oem*
- *LogEntryType*

**POST**

    **Request:**

```
POST https://{{ip}}/TelemetryService/LogServices/Actions/LogService.ClearLog
Content-Type: application/json
```

    **Example POST Request Body:**

```
{
}
```

**21-1-1-1-1        Entries Collection**

*[Get] /redfish/v1/TelemetryService/LogServices/Entries*
- *Description*
- *Members*
- *Members@odata.count*
- *Name*
- *Oem*

**21-1-1-1-1-1        Entries**

*[Get] /redfish/v1/TelemetryService/LogServices/Entries/{instance}*
- *Id*
- *Name*
- *Description*
- *Severity*
- *Created*
- *EntryType*
- *EntryCode*
- *Message*
- *MessageId*
- *MessageArgs*
- *Links*
    - *OriginOfCondition*
- *Oem*
- *EventId*
- *EventTimestamp*
- *SensorType*
- *SensorNumber*
- *OemLogEntryCode*
- *OemSensorType*

# 21-2   MetricDefinitions Collection

*[Get] /redfish/v1/TelemetryService/MetricDefinitions*
- *Members*
- *Members@odata.count*
- *Name*

## 21-2-1  MetricDefinitions

*[Get] /redfish/v1/TelemetryService/MetricDefinitions/{instance}*
- *Id*
- *Name*
- *MetricType*
- *MetricDataType*
- *Implementation*
- *Units*
- *IsLinear*

> *- MetricProperties*
> *- Precision*

*- Accuracy*

# 21-3   MetricReportDefinition Collection

*[Get] /redfish/v1/TelemetryService/MetricReportDefinitions*
*[POST] /redfish/v1/TelemetryService/MetricReportDefinitions*
> *- Members*
> *- Members@odata.count*

*- Name*

## POST
> ### Request:

```
POST https://{{ip}}/redfish/v1/TelemetryService/MetricReportDefinitions
Content-Type: application/json
```

> ### Example POST Request Body:

```
{
"Id":"Voltage_Report",
"Name":"Voltage_Report",
"Schedule":{
     "RecurrenceInterval":"PT20S"
     },
"MetricReportDefinitionType":"Periodic",
"MetricReport":{
     "@odata.id":"/redfish/v1/TelemetryService/MetricReports/Voltage_Report"
     }, "MetricProperties":["/redfish/v1/Chassis/Self/Power#/Voltages/0/ReadingVolts"]
}
```

## 21-3-1  MetricReportDefinitions

*[Get] /redfish/v1/TelemetryService/MetricReportDefinitions/{instance}*
*[Delete] /redfish/v1/TelemetryService/MetricReportDefinitions/{instance} [PATCH] /redfish/v1/*
*TelemetryService/MetricReportDefinitions/{instance}*
> *- Id*
> *- Name*
> *- Schedule*
> *- MetricReportDefinitionType*
> *- Status*
> *- MetricReport*
> *- Metrics/MetricProperties*
> *- MetricReportDefinitionEnable*
> *- ReportTimespan*
> *- ReportActions*

*- ReportUpdates*
*- Metrics*
   *- MetricProperties*

# 21-4   MetricReports Collection

*[Get] /redfish/v1/TelemetryService/MetricReports*
  *- Members*
  *- Members@odata.count*
  *- Name*

## 21-4-1  MetricReports

*[Get] /redfish/v1/TelemetryService/MetricReports/{instance}*
  *- Id*
  *- Name*
  *- MetricReportDefinition*
  *- Timestamp*
  *- ReportSequence*
  *- MetricValues*

# 21-5   Triggers Collection

*[Get] /redfish/v1/TelemetryService/Triggers*
*[Post] /redfish/v1/TelemetryService/Triggers*
  *- Members*
  *- Members@odata.count*
*- Name*

**POST**
  **Request:**

```
POST https://{{ip}}/redfish/v1/TelemetryService/Triggers
Content-Type: application/json
```

  **The following properties are mandatory to create a trigger:**
- **Id**
- **Name**
- **MetricType**
- **TriggerActions**
- **NumericTriggers or (DiscreteTriggerCondition & DiscreteTriggers)**
- **MetricProperties**

  **Note:**
- Status->State and Status-Health are read-only attributes and cannot be passed in the POST Request Body.
- Only a maximum of 25 triggers can be created.

---

**Example POST Request to create Numeric Triggers Body:**

```
{
"Id":"Temperature_Trigger",
"Name":"Temperature_Trigger",
"MetricType":"Numeric",
"TriggerActions":["LogToLogService"],
"NumericTriggers":[ {
     "Name":"UpperThresholdCritical",
     "Value": 50.0,
     "DirectionOfCrossing":"Increasing"
     }, {
     "Name":"UpperThresholdNonCritical",
     "Value": 48.1, "DirectionOfCrossing":"Increasing"
     }],
"MetricProperties":["/redfish/v1/Chassis/Self/Thermal#/Temperatures/0/ReadingCelsius"]
}
```

**Example POST Request to create Discrete Triggers Body:**

```
{
"Id":"Chassis_LED",
"Name":"Chassis_LED",
"MetricType":"Discrete",
"TriggerActions":[ "LogToLogService", "RedfishEvent" ],
"DiscreteTriggerCondition":"Specified",
"DiscreteTriggers":[{
     "Name":"LED_On",
     "Value":"On", "Severity":
     "Warning"
     }],
"MetricProperties":[ "/redfish/v1/Chassis/Self#/IndicatorLED" ]
}
```

## 21-5-1  Triggers

*[Get] /redfish/v1/TelemetryService/Triggers/{instance}*
*[Delete] /redfish/v1/TelemetryService/Triggers/{instance}*
   - *Id*
   - *Name*
   - *MetricType*
   - *DiscreteTriggerCondition*
   - *Status*
   - *DiscreteTriggers*
   - *Description*

## 22. UpdateService

*[GET] /redfish/v1/UpdateService*
*[PATCH] /redfish/v1/UpdateService*
*[POST] /redfish/v1/UpdateService/Actions/SimpleUpdate*

- ***Actions***
- ***Description***
- ***Id***
- ***Name***
- ***Oem***
- ***ServiceEnabled***
- ***Status***
- ***MaxImageSizeBytes***
- ***MultipartHttpPushUri***
- ***FirmwareInventory***

**POST**

    **Request:**

```
POST https://{{ip}}/redfish/v1/UpdateService/Actions/SimpleUpdate
Content-Type: application/json
```

    **Example POST Request Body:**

```
Anonymous:
{"TransferProtocol":" FTP ", "ImageURI": " ftp://{FTP_server_IP}/{image_name}.ima"}
{"TransferProtocol":" HTTP", "ImageURI": "http://{HTTP_server_IP}/{image_name}.ima"}
user account:
{"TransferProtocol":" FTP ", "ImageURI":ftp://{FTP_server_IP}/{image_name}.ima","User":"User","Password":"Password"}
```

## 22-1   SimpleUpdateActionInfo

*[GET] /redfish/v1/UpdateService/SimpleUpdateActionInfo*

- ***Id***
- ***Name***
- ***Parameters***

## 22-2 FirmwareInventory Collection

*[GET] /redfish/v1/UpdateService/FirmwareInventory*
- ***Description***
- ***Members***
- ***Members@odata.count***
- ***Name***
- ***Oem***

### 22-2-1 FirmwareInventory

*[GET] /redfish/v1/UpdateService/FirmwareInventory /{instance}*
- ***Id***
- ***Name***
- ***Updateable***
- ***Oem***
- ***Description***