

Redfish for AIC SAS12G 4U60 JBOD

Oct 27, 2023

Changelog

10/27/2023

1. Based on Redfish Technology Pack API (v12.6)

Known Issue

1 Redfish API

1.1 Redfish standard API List

Resource	Resource URI	Redfish Schema
Service Root	/redfish/v1/	ServiceRoot.v1_5_2.ServiceRoot
Computer System Collection	/redfish/v1/Systems	ComputerSystemCollection. ComputerSystemCollection
Computer System	/redfish/v1/Systems/{{system_instance}}	ComputerSystem.v1_11_0. ComputerSystem
LogServiceCollection	/redfish/v1/Managers/{{manager_instance}}/LogServices /redfish/v1/Chassis/{{chassis_instance}}/LogServices	LogServiceCollection.LogServiceCollection
Log Service	/redfish/v1/Managers/{{manager_instance}}/LogServices/{{manager_log_instance}} /redfish/v1/Chassis/{{chassis_instance}}/LogServices/{{chassis_log_instance}}	LogService.v1_1_3.LogService
LogEntry Collection	/redfish/v1/Managers/{{manager_instance}}/LogServices/{{manager_log_instance}}/Entries /redfish/v1/Chassis/{{chassis_instance}}/LogServices/{{chassis_log_instance}}/Entries	LogEntryCollection.LogEntryCollection
Log Entry	/redfish/v1/Managers/{{manager_instance}}/Log	LogEntry.v1_4_3.LogEntry

	Services/{{manager_log_instance}}/Entries/{ {manager_logentry_instance}} /redfish/v1/Chassis/{{chassis_instance}}/LogServices/{{chassis_log_instance}}/Entries/{{chassis_log_entry_instance}}	
Chassis Collection	/redfish/v1/Chassis	ChassisCollection.ChassisCollection
Chassis	/redfish/v1/Chassis/{{chassis_instance}}	Chassis.v1_14_0.Chassis
Power	/redfish/v1/Chassis/{{chassis_instance}}/Power	Power.v1_5_4.Power
Thermal	/redfish/v1/Chassis/{{chassis_instance}}/Thermal	Thermal.v1_5_3.Thermal
Manager Collection	/redfish/v1/Managers	ManagerCollection.ManagerCollection
Manager	/redfish/v1/Managers/{{manager_instance}}	Manager.v1_6_0.Manager
EthernetInterface Collection	/redfish/v1/Managers/{{manager_instance}}/EthernetInterfaces	EthernetInterfaceCollection.EthernetInterfaceCollection
EthernetInterface	/redfish/v1/Managers/{{manager_instance}}/EthernetInterfaces/{{system_ethifc_instance}}	EthernetInterface.v1_6_2.EthernetInterface
ManagersNetworkProtocol	/redfish/v1/Managers/{{manager_instance}}/NetworkProtocol	ManagerNetworkProtocol.v1_4_2.ManagerNetworkProtocol
SerialInterfaces Collection	/redfish/v1/Managers/{{manager_instance}}/SerialInterfaces	SerialInterfaceCollection.SerialInterfaceCollection
SerialInterfaces	/redfish/v1/Managers/{{manager_instance}}/SerialInterfaces/{{manager_serialifc_instance}}	SerialInterface.v1_1_5.SerialInterface
AccountService	/redfish/v1/AccountService	AccountService.v1_6_0.AccountService
Manager Account Collection	/redfish/v1/AccountService/Accounts	ManagerAccountCollection.ManagerAccountCollection
Manager Account	/redfish/v1/AccountService/Accounts/{{account_instance}}	ManagerAccount.v1_3_1.ManagerAccount
Role Collection	/redfish/v1/AccountService/Roles	RoleCollection.RoleCollection
Role	/redfish/v1/AccountService/Roles/{{role_instance}}	Role.v1_2_4.Role
Event Destination Collection	/redfish/v1/EventService/Subscription	EventDestinationCollection.EventDestinationCollection
Event Destination	/redfish/v1/EventService/Subscriptions/{{Subscri	EventDestination.v1_6_0.E

	ptions_instance}}	ventDestination
EventService	/redfish/v1/EventService	EventService.v1_4_0.Event Service
Task Collection	/redfish/v1/TaskService/Tasks	TaskCollection.TaskCollecti on
Task	/redfish/v1/TaskService/Tasks/{{task_instance}}	Task.v1_4_2.Task
JSON Schema file collection	/redfish/v1/JsonSchemas	JsonSchemaFileCollection. JsonSchemaFileCollection
JSON Schema file	/redfish/v1/JsonSchemas/{{json_schema_name}} }	JsonSchemaFile.v1_1_4.JsonSchemaFile
Session Collection	/redfish/v1/SessionService/Sessions	SessionCollection.Session Collection
Session Service	/redfish/v1/SessionService	SessionService.v1_1_6.Ses sionService
Session	/redfish/v1/SessionService/Sessions/{{session_id}}	Session.v1_2_1.Session
MessageRegistry	/redfish/v1/Registries/{{Registry_instance.json}}	MessageRegistry.v1_3_1.M essageRegistry
MessageRegistryFile Collection	/redfish/v1/Registries	MessageRegistryFileCollect ion.MessageRegistryFileCol lection
UpdateService	/redfish/v1/UpdateService	UpdateService.v1_6_0.Upd ateService
NetworkPort Collection	/redfish/v1/Chassis/{{chassis_instance}}/Network Adapters/{{NetwrokAdapter_instance}}/Network Port	NetworkPortCollection.Netw orkPortCollection
NetworkPort	/redfish/v1/Chassis/{{chassis_instance}}/Network Adapters/{{NetwrokAdapter_instance}}/Network Port/{{NetworkPort_instance}}	NetworkPort.v1_2_3.Netwo rkPort

1.2 Redfish OEM API List

Resource	Resource URI	Redfish Schema
Expander	/redfish/v1/Chassis/Self/Oem/Aic/Expander	AICExpander.v1_0_0.AICE xpander

2 Redfish Resources

2.1 ODATA Properties

2.1.1 OData Attributes

Name	Type	ReadOnly	Description
@odata.context	String	True	The value of this property shall be the context URL that describes the resource according to OData-Protocol and shall be of the form defined in the Redfish specification.
@odata.id	String	True	The value of this property shall be the unique identifier for the resource and it shall be of the form defined in the Redfish specification
@odata.type	String	True	The value of this property shall be an absolute URL that specifies the type of the resource and it shall be of the form defined in the Redfish specification. The type values for each Redfish Entity gives the schema it follows and is mentioned in Redfish API List under Schema column.
@odata.etag	String		ETags provide the ability to conditionally retrieve or update a resource. This value gives the timestamp at which the resource properties have been initialized or modified. Note: According to Redfish Specification 1.7.0 under section 6.1.5 Etags, we have An ETag is a time stamp value that changes when the underlying object changes . So the etag for all Collection resources in Redfish will change if the etag of the underlying instances change.
@odata.nextLink	String	True	Format : uri-reference The URI to the resource containing the next set of partial members. NormalRule It is applicable only for collections and can display only 50 entries a time. If the entries are less than 50, then Members@odata.nextLink property will not be displayed. For example, if only 30 logs, Members@odata.nextLink will not be shown. If it has 63 logs, then Members@odata.nextLink will show

2.2 Resource

2.2.1 Resource Type Definitions

Name	Type	ReadOnly	Description
Id	String	True	Uniquely identifies the resource within the collection of like resources.
Description	Null,String	True	Provides a description of this resource and is used for commonality in the schema definitions.
Name	String	True	This object represents the Name property.
UUID	String	True	pattern: ([0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9af]{12})
Identifier	Object	True	Refer Section 2.2.1.1

2.2.1.1 Identifier Properties

Name	Type	ReadOnly	Description
DurableName	String	True	This indicates the world wide, persistent name of the resource.
DurableNameFormat		True	This represents the format of the DurableName property.

2.2.2 Resource Enum Types

Enum	Description
State	
Enable	This function or resource has been enabled
Disabled	This function or resource has been disabled
StandbyOffline	This function or resource is enabled, but awaiting an external action to activate it
StandbySpare	This function or resource is part of a redundancy set and is awaiting a failover or other external action to activate it
InTest	This function or resource is undergoing testing
Starting	This function or resource is starting
Absent	This function or resource is not present or not detected
UnavailableOffline	This function or resource is present but cannot be used
Deferring	The element will not process any commands but will queue new requests
Quiesced	The element is enabled but only processes a restricted set of commands
Updating	The element is updating and may be unavailable or degraded
Reset	
On	Turn the system on
ForceOff	Turn the system off immediately (non-graceful) shutdown
GracefulShutdown	Perform a graceful system shutdown and power off
ForceRestart	Perform an immediate (non-graceful) shutdown, followed by a restart of the system
Health / HealthRollup	

OK	Normal
Warning	A condition exists that requires attention
Critical	A critical condition exists that requires immediate attention
IndicatorLED	
Lit	The Indicator LED is lit
Blinking	The Indicator LED is blinking
Off	The Indicator LED is of

2.2.3 Resource Complex Types

Name	Type	ReadOnly	Description
Links			
Oem	Object		This object represents the Oem property. It can also contain an object of type OemObject
Status			
State	String	True	<p>This property shall represent if this component is available or not and why. Refer Section 2.2.2 Resource Enum Types for Resource.State for the possible Enum values.</p> <ul style="list-style-type: none"> ● Enabled indicates the resource is available. ● Disabled indicates the resource has been intentionally made unavailable but it can be enabled. ● Offline indicates the resource is unavailable intentionally and requires action to be made available. ● InTest indicates that the component is undergoing testing. ● Starting indicates that the resource is on its way to becoming available. ● Absent indicates the resources is physically unavailable
HealthRollup	String	True	This property shall represent the HealthState of the resource and its dependent resource
Health	String	True	This property shall represent the HealthState of the resource without considering its dependent resource
Oem	Object	False	Oem extension object. This object represents the Oem propertie

2.2.4 Resource .v1_8_1 schema properties

Name	Type	ReadOnly	Description	
Identifier				
DurableName	String	True	This property shall contain the world wide unique identifier for the resource	
DurableName Format	String	True	This property shall represent the format of the DurableName property	
			Enum	Description
			NAA	This durable name shall be a hexadecimal

				representation of the Name Address Authority structure as defined in the T11 Fibre Channel - Framing and Signaling - 3 (FC-FS-3) specification
			FC_WWN	This durable name shall be a hexadecimal representation of the World Wide Name format as defined in the T11 Fibre Channel Physical and Signaling Interface Specification
			UUID	This durable name shall be the hexadecimal representation of the Universal Unique Identifier as defined in the Internation Telecom Union's OSI networking and system aspects - Naming, Addressing and Registration Specification
			EUI	This durable name shall be the hexadecimal representation of the IEEE-defined 64-bit Extended Unique Identifier as defined in the IEEE's Guidelines for 64-bit Global Identifier (EUI-64) Specification
			iQN	This durable name shall be in the iSCSI Qualified Name format as defined in RFC 3720 and RFC 3721
Location				
AltitudeMeters	Number	True	The altitude of the resource in meter	
Latitude	Number	True	The latitude resource	
Longitude	Number	True	The longitude resource in degree	
Oem	Object	True	Refer Resource Complex Types under Section 2.2 .	
Contacts	Array	True	Array of contact information Refer Section 2.2.4.1	
PartLocation	Object	True	Postal address of the addressed resource Refer Section 2.2.4.2	
PostalAddress	Object	False	A place within the addressed location Refer Section 2.2.4.3	
Placement	Object	False	Postal address of the addressed resource Refer Section 2.2.4.4	

2.2.4.1 Contacts properties

Name	Type	ReadOnly	Description
ContactName	String	False	Name of this contact

EmailAddress	String	False	Email address for this contact
PhoneNumber	String	False	Phone number for this contact

2.2.4.2 PartLocation properties

Name	Type	ReadOnly	Description	
Location OrdinalValue	number	True	The number that represents the location of the part. If LocationType is slot and this unit is in slot 2 then the LocationOrdinalValue will be 2	
Location Type	Object	True	The type of location of the part, such as slot, bay, socket and slot	
			Enum	Description
			Slot	Defines a slot as the type of location
			Bay	Defines a bay as the type of location
			Connector	Defines a connector as the type of location
			Socket	Defines a socket as the type of location
Orientation	Object	True	The orientation for the ordering of the slot enumeration used by the LocationOrdinalValue property	
			Enum	Description
			FrontTo Back	Defines the ordering for the LocationOrdinalValue is front to back
			BackToFront	Defines the ordering for the LocationOrdinalValue is back to front
			TopToBottom	Defines the ordering for the LocationOrdinalValue is top to bottom
			BottomToTop	Defines the ordering for the LocationOrdinalValue is bottom to top
			LeftToRight	Defines the ordering for the LocationOrdinalValue is left to right
			RightToLeft	Defines the ordering for the LocationOrdinalValue is right to left
Reference	Object	True	Defines a reference area for the location of the part	
			Enum	Description
			Top	Defines the part as being in the top of the unit
			Bottom	Defines the part as being in the bottom of the unit
			Front	Defines the part as being in the front of the unit

			Rear	Defines the part as being in the rear of the unit
			Left	Defines the part as being in the left of the unit
			Right	Defines the part as being in the right of the unit
			Middle	Defines the part as being in the middle of the unit
ServiceLabel	String	True		

2.2.4.3 PostalAddress properties

Name	Type	ReadOnly	Description
AdditionalInfo	String	False	Area designation or other additional info
AdditionalCode	String	False	The value shall conform the requirements of the ADDCODE field as defined in RFC5139
Building	String	False	Name of the building
City	String	False	City, township, or shi (JP).
Community	String	False	Postal community name
Country	String	False	The value shall conform the requirements of the Country field as defined in RFC5139
District	String	False	A county, parish, gun (JP), or district (IN)
Division	String	False	City division, borough, dity district, ward, chou (JP)
Floor	String	False	The value shall conform the requirements of the FLR field as defined in RFC5139. It is used to provide a floor designation
HouseNumber	String	False	Numeric portion of house number
HouseNumberSuffix	String	False	House number suffix
Landmark	String	False	The value shall conform the requirements of the LMK field as defined in RFC5139. It is used to identify a landmark or vanity address
LeadingStreetDirection	String	False	A leading street direction
Location	String	False	Room designation or other additional info
Name	String	False	The value shall conform the requirements of the NAM field as defined in RFC5139. It is used to name the occupant
POBox	String	False	Post office box (P.O. box)
PlaceType	String	False	A description of the type of place that is addressed
PostalCode	String	False	Postal code (or zip code)

Road	String	False	A primary road or street
RoadBranch	String	False	Road Branch
RoadPostModifier	String	False	Road post-modifier
RoadPreModifier	String	False	Road pre-modifier
RoadSection	String	False	Road Section
RoadSubBranch	String	False	Road Sub Branch
Room	String	False	Name or number of the room
Seat	String	False	Seat (desk, cubicle, workstation)
Street	String	False	Street name
StreetSuffix	String	False	Avenue, Platz, Street, Circle
Territory	String	False	A top-level subdivision within a country
TrailingStreetSuffix	String	False	A trailing street suffix
Unit	String	False	Name or number of the unit (apartment, suite)
Neighborhood	String	False	Neighborhood or block

2.2.4.4 Placement properties

Name	Type	ReadOnly	Description	
AdditionalInfo	String	False	Area designation or other additional info	
Rack	String	False	Name of a rack location within a row	
RackOffset	Number	False	Vertical location of the item in terms of RackOffsetUnits.	
RackOffsetUnits	String	False	Enum	Description
			OpenU	Defines a rack unit as being equal to 48 mm (1.89 in)
			EIA_310	Defines a rack unit as being equal to 1.75 in (44.45 mm)
Row	String	False	Name of row	

2.2.5 Enum Types Indicator LED

Name	Description
Lit	The Indicator LED is lit
Blinking	The Indicator LED is blinking
Off	The Indicator LED is of

2.3 Service Root

2.3.1 GET

Request

<https://{{ip}}/redfish/v1/>

Content-Type: application/json

Response

The response of the request will be in JSON format.

2.3.1.1 Service Root Properties

Name	Type	Readonly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2
Id	String	True	Refer Section 2.2
Name	String	True	Refer Section 2.2
Description	String	True	Provides description of the resource. Refer Section 2.2
UUID	String	True	Refer Section 2.2
RedfishVersion	String	True	The value of this string shall represent the version of the Redfish service.
Product	String	True	The product name associated with this Redfish service.
ProtocolFeaturesSupported	Object	True	Contains information about protocol features supported by the service. Refer Section 2.3.1.2
Systems	Object	True	Link to a collection of Systems
Chassis	Object	True	Link to a collection of Chassis
Managers	Object	True	Link to a collection of Managers
Tasks	Object	True	Link to Task Service
AccountService	Object	True	Link to the Account Service.
EventService	Object	True	Link to the Event Service.
SessionService	Object	True	Link to the Session Service.
Registries	Object	True	Link to a collection of Registries.
JsonSchemas	Object	True	Link to a collection of Json-Schema files.
UpdateService	Object	True	Link to the UpdateService.
CompositionService	Object	True	Link to the CompositionService.
TelemetryService	Object	True	Link to the TelemetryService.
Vendor	String	True	The vendor or manufacturer associated with this Redfish service.

CertificateService	Object	True	Link to the CertificateService
Links	Object	True	The Links property, as described by the Redfish Specification shall contain references to resources that are related to, but not contained by (subordinate to), this resource. Refer Section 2.3.1.3

2.3.1.2 ProtocolFeaturesSupported Properties

Name	Type	ReadOnly	Description
DeepOperations	Object	True	The information about deep operations that the service supports. Refer Section 2.3.1.4
ExcerptQuery	Boolean	True	This indicates whether the 'excerpt' query parameter is supported
ExpandQuery	Object	True	Contains information about the use of \$expand in the service Refer Section 2.3.1.5
FilterQuery	Boolean	True	This indicates whether the \$filter query parameter is supported
OnlyMemberQuery	Boolean	True	This indicates whether the 'only' query parameter is supported
SelectQuery	Boolean	True	This indicates whether the \$select query parameter is supported

2.3.1.3 Links Properties

Name	Type	ReadOnly	Description
Oem	Object	False	OEM extension object Refer Resource Complex Types under Section 2.2
Sessions	Array	True	Link to a collection of Sessions

2.3.1.4 DeepOperations Properties

Name	Type	ReadOnly	Description
DeepPATCH	Boolean	True	An indication of whether the service supports the deep PATCH operation.
DeepPOST	Boolean	True	An indication of whether the service supports the deep POST operation.
MaxLevels	Number	True	The maximum levels of resources allowed in deep operations.

2.3.1.5 ExpandQuery Properties

Name	Type	ReadOnly	Description
ExpandAll	Boolean	True	This indicates whether the \$expand support of asterisk (expand all entries) is supported
Levels	Boolean	True	This indicates whether the expand support of the \$levels qualifier is supported by the service
Links	Boolean	True	This indicates whether the \$expand support of tilde (expand only entries in the Links section) is supported
MaxLevels	Boolean	True	This indicates the maximum number value of the \$levels qualifier in \$expand operations
NoLinks	Boolean	True	This indicates whether the \$expand support of period (expand only entries not in the Links section) is supported

2.3.1.6 Oem Object

Name	Type	ReadOnly	Description
Ami	Object	True	Contains information related to AMI features supported by the service Refer Section 2.3.1.7

2.3.1.7 Ami Properties

Name	Type	ReadOnly	Description
@odata.type	String	True	Refer Section 2.1
Configurations	Object	True	A reference to AMI Oem Configurations URI
RtpVersion	String	True	This indicates the Redfish Technology Pack version

2.4 Collection

2.4.1 Collection Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object	True	Refer Resource Complex Types under Section 2.2
Members	Array	True	Contains the members of this collection
Members@odata.count	Number	True	Collection members count
Name	String	True	Name of the Collection
Description	String	True	Provides a description of the resource

2.5 Computer System Collection

2.5.1 GET

Request

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

Response

Please refer [Section 2.4](#) for the JSON response properties

2.5.2 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"},
      {"@odata.id": "/redfish/v1/CompositionService/ResourceBlocks/DrivesBlock"}
    ],
    "HostName": "Intel"
  }
}
```

Response

The response status is 201 with below response.

```
{
  "@odata.context": "/redfish/v1/$metadata#ComputerSystem.ComputerSystem",
  "@odata.etag": "\"1593017717\"",
  "@odata.id": "/redfish/v1/Systems",
  "@odata.type": "#ComputerSystem.v1_8_0.ComputerSystem",
  "Actions": {
    "#ComputerSystem.Reset": {
      "@Redfish.ActionInfo": "/redfish/v1/Systems/Self/ResetActionInfo",
      "target": "/redfish/v1/Systems/Self/Actions/ComputerSystem.Reset"
    }
  },
  "Boot": {
    "BootSourceOverrideEnabled": "Continuous",

```

```

"BootSourceOverrideEnabled@Redfish.AllowableValues": [ "Disabled", "Once",
"Continuous" ],
"BootSourceOverrideTarget": "Pxe",
"BootSourceOverrideTarget@Redfish.AllowableValues": [ "None", "Pxe", "Floppy", "Cd",
"Usb", "Hdd", "BiosSetup", "Utilities", "Diags", "UefiShell", "UefiTarget", "SDCard", "UefiHttp",
"RemoteDrive", "UefiBootNext" ] },
"Description": "Computer System",
"HostName": "Intel",
"Id": "NewSystem",
"Links": {
  "ResourceBlocks": [
    { "@odata.id": "/redfish/v1/CompositionService/ResourceBlocks/ComputeBlock"},
    { "@odata.id": "/redfish/v1/CompositionService/ResourceBlocks/DrivesBlock" } ] },
"Memory": { "@odata.id": "/redfish/v1/Systems/Self/Memory" },
"Name": "NewSystem",
"PowerState": "Off",
"Processors": { "@odata.id": "/redfish/v1/Systems/Self/Processors" },
"SimpleStorage": { "@odata.id": "/redfish/v1/Systems/Self/SimpleStorage" },
"Storage": { "@odata.id": "/redfish/v1/Systems/Self/Storage" },
"SystemType": "Composed",
"UUID": "e0128b8c-b73f-410f-a48e-0fc4930716bb"
}

```

2.6 Computer System

2.6.1 GET

Request

https://{ip}/redfish/v1/Systems/{system_instance}

Content-Type: application/json

Response

The response of the request will be in JSON format.

2.6.1.1 ComputerSystem Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1

Oem	Object		Refer Resource Complex Types under Section 2.2	
Id	String	True	Resource Identifier	
Name	String	True	Name of the Resource	
Description	String	True	Provides description of the resource. Refer Section 2.2	
SystemType	String	True	An enumeration that indicates the kind of system that this resource represents	
			Enum	Description
			Physical	A computer system
			Composed	A computer system that has been created by binding resource blocks together
Links	Object	True	The Links property, as described by the Redfish Specification, shall contain references to resources that are related to, but not contained by (subordinate to), this resource refer Section 2.6.1.2	
AssetTag	String	False	The user definable tag that can be used to track this computer system for inventory or other client purposes	
Manufacturer	String	True	Manufacturer or OEM of this system.	
Model	String	True	Model number of this system.	
SerialNumber	String	True	The value of this property shall contain the serial number for this system.	
PartNumber	String	True	Part number for this system as defined by the manufacturer.	
IndicatorLED	String	False	The value of this property shall contain the indicator light state for the indicator light associated with this system.	
			Enum	Description
			Unknown	The state of the Indicator LED cannot be determined.
			Lit	The Indicator LED is Lit.
			Blinking	The Indicator LED is Blinking.
			Off	The Indicator LED is Off.
PowerState	String	True	The current power state of the system	
			Enum	Description
			On	The system is powered on.
			Off	The system is powered off, although some components may continue to have AUX power such as management controller
Actions	Object	True	ComputerSystem allows the user to perform Reset Action and it's allowable values are as given in Section 2.2 .	

			Please refer Reset enum type under Resource. It can also contain an Oem Object under Oem attribute under this Actions	
Status	Object	True	Please refer Section 2.2 for Resource.Status.	
PowerRestorePolicy	String	False	This property shall indicate the desired PowerState of the system when power is applied to the system	
			Enum	Description
			AlwaysOn	The system will always power on when power is applied.
			AlwaysOff	The system will always remain powered off when power is applied.
			LastState	The system will return to its last power state (on or off) when power is applied.

2.6.1.2 Links Properties

Name	Type	ReadOnly	Description
Oem	Object		Refer Resource Complex 2.2.
Chassis	Array	True	An array of references to the chassis in which this system is contained
Chassis@odata.count	Number	True	An integer representing the number of items in a collection.
ManagedBy	Array	True	An array of references to the Managers responsible for this system.
ManagedBy@odata.count	Number	True	An integer representing the number of items in a collection.

2.6.2 PATCH

Request

PATCH https://{ip}/redfish/v1/Systems/{system_instance}

Content-Type: application/json

Example PATCH Request Body:

```
{
  "AssetTag": "Free form asset tag",
  "IndicatorLED": "Off",
  "PowerRestorePolicy": "AlwaysOn"
}
```

Response

The response status is 204 with no body

2.6.3 POST

Request

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

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

Example POST Request Body:

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

Response

For success the response status is 202 with below body.

```
{
  "@odata.context": "/redfish/v1/$metadata#Task.Task(TaskState,Description,Name,Id)",
  "@odata.id": "/redfish/v1/TaskService/Tasks/1",
  "@odata.type": "#Task.v1_4_2.Task",
  "Description": "Task for Computer Reset",
  "Id": "1",
  "Name": "Computer Reset",
  "TaskState": "New"
}
```

2.7 LogServiceCollection

2.7.1 GET

Request

```
https://{ip}/redfish/v1/Managers/{manager_instance}/LogServices
https://{ip}/redfish/v1/Chassis/{chassis_instance}/LogServices
```

Response

Please refer [Section 2.4](#) for the JSON response properties

2.8 Log Service

2.8.1 Chassis Logs

Temperature, Fan, Voltage, Current, Physical Intrusion, Power Supply and Power Unit.

2.8.2 Manager Audit Logs

- Any unauthorized usage of the resource based on "AuthFailureLoggingThreshold" property value.
- All Successful HI-NoAuth communication to BMC.
- System Bios, BiosAttributeRegistry, BiosStaticFiles, InventoryData are Posted to BMC.
- All Successful Post Actions except SubmitTestEvent, SubmitTestMetricReport and RedfishDBReset Actions.
- All Successful Patch operations (ResourceModified)

2.8.3 Manager Event Logs

- All Successful Resource creation (Post Operations)
- All Successful Resource deletion (Delete Operations)

2.8.4 Manager SEL Logs

All Successful Resource communication to IPMI SEL Logs

2.8.5 GET

Request

```
https://{ip}/redfish/v1/Managers/{manager_instance}/LogServices/{manager_log_instance}
}}
Content-Type: application/json
OR
https://{ip}/redfish/v1/Chassis/{chassis_instance}/LogServices/{chassis_log_instance}
Content-Type: application/json
```

Response

The response of the request will be in JSON format

2.8.5.1 Log Service Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2

ServiceEnabled	Boolean	False	Indicates whether this service is enabled.	
MaxNumberOfRecords	Number	True	The maximum numbers of LogEntries this service can have. Min value:0	
OverWritePolicy	String	True	Indicates the policy of the log service when the MaxNumberOfRecords has been reached or when the log is full. This value is by default configured as 150 for AuditLog, SEL, BIOS Logs and 100 for MetricReport Logs	
			Enum	Description
			WrapsWhenFull	When full, new entries to the Log will overwrite previous entries
DateTime	String	False	The current DateTime (with offset from UTC) for the log service in Redfish Timestamp format	
DateTimeLocalOffse	String	False	The time offset from UTC that the DateTime property is set to in format: +06:00.	
Actions	Object	True	The Actions property shall contain the available actions for this resource like LogService.ClearLog or any other OEMActions.	
Status	Object	True	Refer Section 2.2 for Resource.Status.	
Entries	Object	True	The value of this property shall reference a collection of resources of type LogEntry	
LogEntryType	String	True	The format of the log entries	
			Enum	Description
			Event	The log contains Redfish-defined messages (events).
			SEL	The log contains legacy IPMI System Event Log (SEL) entries.
			Multiple	The log contains multiple Log Entry types or a single entry type cannot be guaranteed by the Log Service
			OEM	The log contains entries in an OEMdefined format

2.8.6 PATCH

Request

PATCH

```
https://{ip}/redfish/v1/Managers/{manager_instance}/LogServices/{manager_log_instance}}
```

Content-Type: application/json

OR

```
https://{ip}/redfish/v1/Chassis/{chassis_instance}/LogServices/{chassis_log_instance}
```

Content-Type: application/json

Request Body

Please refer to the properties that are patchable in Section 2.8.5.1 Log Service Properties for which ReadOnly is False that can be sent as Request body in json format

Response

The response status is success by either one of the following two scenarios.

- The response status **204**, means success and the response body should not be return.
- The response status **200** means success and the response body is a GET Response with the changed values specified in the Patchable properties in Request body

2.8.7 POST

Request

POST

```
https://{ip}/redfish/v1/Managers/{manager_instance}/LogServices/{manager_log_instance}/Actions/LogService.ClearLog
```

Content-Type: application/json

OR

```
https://{ip}/redfish/v1/Chassis/{chassis_instance}/LogServices/{chassis_log_instance}/Actions/LogService.ClearLog
```

Content-Type: application/json

Example POST Request URL

```
https://{ip}/redfish/v1/Managers/Self/LogServices/AuditLog/Actions/LogService.ClearLog
```

```
https://{ip}/redfish/v1/Chassis/Self/LogServices/Logs/Actions/LogService.ClearLogz
```

Example POST Request Body:

```
{"ClearType": "ClearAll" }
```

Response

The response of the request will be in JSON format with the success status code as 202.

```
{
  "@odata.context": "/redfish/v1/$metadata#Task.Task(TaskState,Description,Name,Id)",
  "@odata.id": "/redfish/v1/TaskService/Tasks/1",
  "@odata.type": "#Task.v1_4_2.Task",
  "Description": "Task for Chassis LogService",
}
```

```
"Id": "1",  
"Name": " Chassis LogService ",  
"TaskState": "New"  
}
```

2.9 LogEntryCollection

2.9.1 GET

Request

```
https://{ip}/redfish/v1/Managers/{manager_instance}/LogServices/{manager_log_instance}/Entries  
Content-Type: application/json  
OR  
https://{ip}/redfish/v1/Chassis/{chassis_instance}/LogServices/{chassis_log_instance}/Entries  
Content-Type: application/json
```

Response

Please refer [Section 2.4](#) for the JSON response properties.

2.10 Log Entry

2.10.1 GET

Request

```
https://{ip}/redfish/v1/Managers/{manager_instance}/LogServices/{manager_log_instance}/Entries/{manager_logentry_instance}  
Content-Type: application/json  
OR  
https://{ip}/redfish/v1/Chassis/{chassis_instance}/LogServices/{chassis_log_instance}/Entries/{chassis_logentry_instance}  
Content-Type: application/json
```

Response

The response of the request will be in JSON format

2.10.1.1 Log Entry Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1

@odata.etag	String	True	Refer Section 2.1																			
Oem	Object		Refer Resource Complex Types under Section 2.2																			
Id	String	True	Resource Identifier																			
Name	String	True	Name of the Resource																			
Description	String	True	Provides description of the resource. Refer Section 2.2																			
Severity	String	True	This is the severity of the log entry. It can take any one of the Enum values OK,Warning or Critical.																			
Created	String	True	The time the log entry was created.																			
EventId	String	True	If present, this LogEntry records an Event and the value shall indicate a unique identifier for the event, the format of which is implementation dependent																			
EventTimestamp	String	True	If present, this LogEntry records an Event and the value shall be the time the event occurred.																			
EntryType	String	True	This property shall represent the type of LogEntry. If the resource represents an IPMI SEL log entry, the value shall be SEL. If the resource represents an Event log, the value shall be Event. If the resource represents an OEM log format, the value shall be Oem. Enum can be Event,SEL or Oem.																			
EntryCode	String	True	This property shall be present if the EntryType value is SEL.																			
			<table><tr><th>Type</th><th>String</th></tr><tr><td rowspan="15">String</td><td>Assert</td></tr><tr><td>Deassert</td></tr><tr><td>Lower Non-critical - going low</td></tr><tr><td>Lower Non-critical - going high</td></tr><tr><td>Lower Critical - going low</td></tr><tr><td>Lower Critical - going high</td></tr><tr><td>Lower Non-recoverable - going low</td></tr><tr><td>Lower Non-recoverable - going high</td></tr><tr><td>Upper Non-critical - going low</td></tr><tr><td>Upper Non-critical - going high</td></tr><tr><td>Upper Critical - going low</td></tr><tr><td>Upper Critical - going high</td></tr><tr><td>Upper Non-recoverable - going low</td></tr><tr><td>Upper Non-recoverable - going high</td></tr><tr><td>Transition to Idle</td></tr><tr><td>Transition to Active</td></tr></table>	Type	String	String	Assert	Deassert	Lower Non-critical - going low	Lower Non-critical - going high	Lower Critical - going low	Lower Critical - going high	Lower Non-recoverable - going low	Lower Non-recoverable - going high	Upper Non-critical - going low	Upper Non-critical - going high	Upper Critical - going low	Upper Critical - going high	Upper Non-recoverable - going low	Upper Non-recoverable - going high	Transition to Idle	Transition to Active
			Type	String																		
String	Assert																					
	Deassert																					
	Lower Non-critical - going low																					
	Lower Non-critical - going high																					
	Lower Critical - going low																					
	Lower Critical - going high																					
	Lower Non-recoverable - going low																					
	Lower Non-recoverable - going high																					
	Upper Non-critical - going low																					
	Upper Non-critical - going high																					
	Upper Critical - going low																					
	Upper Critical - going high																					
	Upper Non-recoverable - going low																					
	Upper Non-recoverable - going high																					
	Transition to Idle																					
Transition to Active																						

				Transition to Busy State Deasserted State Asserted Predictive Failure deasserted Predictive Failure asserted Limit Not Exceeded Limit Exceeded Performance Met Performance Lags Transition to OK Transition to Non-Critical from OK Transition to Critical from less severe Transition to Non-recoverable from less severe Transition to Critical from Nonrecoverable Transition to Non-recoverable Monitor Informational Device Removed / Device Absent Device Inserted / Device Present Device Disabled Device Enabled Transition to Running Transition to In Test Transition to Power Off Transition to On Line Transition to Off Line Transition to Off Duty Transition to Degraded Transition to Power Save Install Error Fully Redundant Redundancy Lost Redundancy Degraded Non-redundant:Sufficient Resources from Redundant Non-redundant:Sufficient Resources from Insufficient Resources Non-redundant:Insufficient Resources
--	--	--	--	---

				Redundancy Degraded from Fully Redundant Redundancy Degraded from Nonredundant D0 Power State D1 Power State D2 Power State D3 Power State
SensorType	String	True	This property shall be present if the EntryType value is SEL.	
			Type	String
			String	Platform Security Violation Attempt Temperature Voltage Current Fan Physical Chassis Security Processor Power Supply / Converter PowerUnit CoolingDevice Other Units-based Sensor Memory Drive Slot/Bay POST Memory Resize System Firmware Progress Event Logging Disabled System Event Critical Interrupt Button/Switch Module/Board Microcontroller/Coprocessor Add-in Card Chassis ChipSet Other FRU Management Subsystem Health Battery Session Audit Version Change

			FRUState OEM
SensorNumber	Number	True	This property decodes from EntryType: If it is SEL, it is the sensor number; if Event it is not applicable. Otherwise, it is Oem specific.
Message	String	True	This property shall be the Message property of the event and decodes from EntryType. If EntryType is "Event" then it is a message description. If EntryType is "SEL" then it contain SEL Specific message otherwise "Oem" specific Log entry. In most cases, this property contains actual Log Entry.
MessageId	String	True	This property shall the MessageId property of the event and decodes from EntryType. If EntryType is "Event" then it is a Redfish Specification-defined MessageId. If EntryType is "SEL" then it contain Event Data otherwise "Oem" specific information.
MessageArgs	Array	True	This contains message arguments to be substituted into the message included or in the message looked up via a registry.
Links	Object		Contains references to other resources that are related to this resource Refer Section 2.10.1.2.
OemLogEntryCode	String	True	If the LogEntryCode type is OEM, this will contain the OEM-specific entry code
OemSensorType	String	True	If the Sensor Type is OEM, this will contain the OEMspecific sensor type

2.10.1.2 Links Properties

Name	Type	ReadOnly	Description
Oem	Object		Refer Section 2.2 for Links under Resource Complex Types
OriginOfCondition	Object	True	This is the URI of the resource that caused the log entry. Refer idRef in odata4.0.0.json.

2.11 Chassis Collection

2.11.1 GET

Request

<https://{{ip}}/redfish/v1/Chassis>

Content-Type: application/json

Response

Please refer [Section 2.4](#) for the JSON response properties.

2.12 Chassis

2.12.1 GET

Request

https://{ip}/redfish/v1/Chassis/{chassis_instance}

Content-Type: application/json

Response

The response of the request will be in JSON format.

2.12.1.1 Chassis Properties

Name	Type	ReadOnly	Description	
@odata.context	String	True	Refer Section 2.1	
@odata.id	String	True	Refer Section 2.1	
@odata.type	String	True	Refer Section 2.1	
@odata.etag	String	True	Refer Section 2.1	
Oem	Object		Refer Resource Complex Types under Section 2.2	
Id	String	True	Resource Identifier	
Name	String	True	Name of the Resource	
Description	String	True	Provides a description of the resource	
ChassisType	String	True	ChassisType shall indicate the physical form factor for the type of chassis. Refer Section 2.12.1.2	
Manufacturer	String	True	The manufacturer of this chassis.	
Model	String	True	The model number for this chassis.	
SKU	String	True	This is the SKU for this chassis.	
SerialNumber	String	True	The serial number for this chassis.	
PartNumber	String	True	The part number for this chassis.	
AssetTag	String	True	The user assigned asset tag for this chassis.	
UUID	String	True	The Universal Unique Identifier (UUID) for this Chassis.	
IndicatorLED	String	True	The state of the indicator LED, used to identify the chassis.	
			Enum	Description
			Unknown	The state of the Indicator LED cannot be determined.

			Lit	The Indicator LED is lit.
			Blinking	The Indicator LED is blinking.
			Off	The Indicator LED is off
Links	Object	True	The links object contains the links to other resources that are related to this resource. Refer Section 2.12.1.3	
Actions	Object	True	The Actions object contains the available custom actions on this resource like Chassis.Reset and OemActions if any.	
Status	Object	True	Refer Section 2.2	
Thermal	Object	True	A reference to the thermal properties (fans, cooling, sensors) for this chassis.	
Power	Object	True	A reference to the power properties (power supplies, power policies, sensors) for this chassis.	
PowerState	String	True	This is the current power state of the chassis.	
			Enum	Description
			On	The components within the chassis has power on.
			Off	The components within the chassis has no power, except some components may continue to have AUX power such as management controller.

2.12.1.2 ChassisType Enum Properties

Enum	Description
Rack	An equipment rack, typically a 19-inch wide freestanding unit
Blade	An enclosed or semi-enclosed, typically vertically-oriented, system chassis which must be plugged into a multi-system chassis to function normally
Enclosure	A generic term for a chassis that does not fit any other description
StandAlone	A single, free-standing system, commonly called a tower or desktop chassis
RackMount	A single system chassis designed specifically for mounting in an equipment rack
Card	A loose device or circuit board intended to be installed in a system or other enclosure
Cartridge	A small self-contained system intended to be plugged into a multi-system chassis
Row	A collection of equipment racks
Pod	A collection of equipment racks in a large, likely transportable, container
Expansion	A chassis which expands the capabilities or capacity of another chassis
Sidecar	A chassis that mates mechanically with another chassis to expand its capabilities or capacity"
Zone	A logical division or portion of a physical chassis that contains multiple devices or systems that cannot be physically separated
Sled	An enclosed or semi-enclosed, system chassis which must be plugged into a multi-system chassis to function normally similar to a blade type chassis.
Shelf	An enclosed or semi-enclosed, typically horizontally-oriented, system chassis which must be plugged into a multi-system chassis to function normally

Drawer	An enclosed or semi-enclosed, typically horizontally-oriented, system chassis which may be slid into a multi-system chassis.
Module	A small, typically removable, chassis or card which contains devices for a particular subsystem or function
Component	A small chassis, card, or device which contains devices for a particular subsystem or function
Other	A chassis that does not fit any of these definitions
StorageEnclosure	A chassis which encloses storage.

2.12.1.3 Chassis Links Properties

Name	Type	ReadOnly	Description
ComputerSystems	Array	True	An array of references to the computer systems contained in this chassis.
ComputerSystems@odata.count	Number	False	An integer representing the number of items in a collection.
ManagedBy	String	True	An array of references to the Managers responsible for managing this chassis.
ManagedBy@odata.count	Number	True	An integer representing the number of items in a collection.

2.12.2 PATCH

Request

`https://{ip}/redfish/v1/Chassis/{chassis_instance}`

Content-Type: application/json

Example PATCH Request Body:

```
{
  "AssetTag": "abcd",
  "IndicatorLED": "Off"
}
```

Request Body

Please refer to Section 2.12.1.1 Chassis Properties for which ReadOnly is False that can be sent as Request body in json format.

Response

The response status is success with status code as 204 and no body.

2.12.3 POST

Request

`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"
}
```

Response

The response status is 202 with below body.

```
{
  "@odata.context": "/redfish/v1/$metadata#Task.Task(TaskState,Description,Name,Id)",
  "@odata.id": "/redfish/v1/TaskService/Tasks/1",
  "@odata.type": "#Task.v1_4_2.Task",
  "Description": "Task for Chassis Reset",
  "Id": "1",
  "Name": "Chassis Reset",
  "TaskState": "New"
}
```

2.13 Power

2.13.1 GET

Request

https://{ip}/redfish/v1/Chassis/{chassis_instance}/Power

Content-Type: application/json

Response

The response of the request will be in JSON format.

2.13.1.1 Power Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2
Id	String	True	Resource Identifier

Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
PowerSupplies	Array	True	Details of a power supplies associated with this system or device. Refer Section 2.13.1.4 PowerSupply Properties below.
PowerSupplies@odata.count	Number	True	An integer representing the number of items in a collection.
Actions	Object	True	It contains Oem Object under Oem attribute under this Actions.

2.13.1.2 PowerSupply Properties

Name	Type	ReadOnly	Description
Name	String	True	The name of the PowerSupply.
MemberId	String	True	This is the identifier for the member within the collection.
Model	String	True	The model number for this Power Supply.
SerialNumber	String	True	The serial number for this Power Supply.
PartNumber	String	True	The part number for this Power Supply.
Status	Object	True	Refer Section 2.2 for Status under Resource Complex Types.
Location	Array	True	Refer for Section 2.2.4 Resource.v1_8_1 schema properties
PowerInputWatts	Number	True	This property shall contain the value of the measured input power, in Watts, of the associated power supply.
PowerOutputWatts	Number	True	This property shall contain the value of the measured output power, in Watts, of the associated power supply.
RelatedItem	Array	True	The ID(s) of the resources associated with this Power Supply

2.13.2 PATCH

Request

https://{ip}/redfish/v1/Chassis/{chassis_instance}/Power

Content-Type: application/json

Request Body

Please refer to the properties that are patchable in Section 2.13.1.1 Power Properties for which ReadOnly is False that can be sent as Request body in json format.

Response

The response status is success with status code as 200 with GET response body.

2.14 Thermal

2.14.1 GET

Request

```
https://{{ip}}/redfish/v1/Chassis/{{chassis_instance}}/Thermal
```

Content-Type: application/json

Response

The response of the request will be in JSON format.

2.14.1.1 Thermal Properties

Name	Type	Read Only	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource.
Temperatures	Array of Objects	True	This is the definition for temperature sensors.
Fans	Array of Objects	True	This is the definition for fans.
Redundancy	Array	True	This structure is used to show redundancy for fans.
Actions	Object	True	It will contain actions under Oem attribute if any.

2.14.1.2 Temperature Properties

Name	Type	ReadOnly	Description
Name	String	True	The name of the Temperature sensor.
MemberId	String	True	This property shall uniquely identify the member within the collection.
SensorNumber	Number	True	A numerical identifier for this temperature sensor

			that is unique within this resource.
Status	Object	True	Refer Section 2.2 for Resource.Oem.
ReadingCelsius	Number	True	The current value of the temperature sensor's reading.
UpperThresholdNonCritical	Number	True	The current reading is above the normal range but is not critical. Units shall use the same units as the related ReadingCelsius property
UpperThresholdCritical	Number	True	The current reading is above the normal range but is not yet Fatal. Units shall use the same units as the related ReadingCelsius property
UpperThresholdFatal	Number	True	The current reading is above the normal range and is fatal. Units shall use the same units as the related ReadingCelsius property
LowerThresholdNonCritical	Number	True	The current reading is below the normal range but is not critical. Units shall use the same units as the related ReadingCelsius property
LowerThresholdCritical	Number	True	The current reading is below the normal range but is not yet fatal. Units shall use the same units as the related ReadingCelsius property
LowerThresholdFatal	Number	True	The value of this property shall indicate the present reading is below the normal range and is fatal. Units shall use the same units as the related ReadingCelsius property.
MinReadingRangeTemp	Number	True	The lowest possible value for CurrentReading. Units shall use the same units as the related ReadingCelsius property.
MaxReadingRangeTemp	Number	True	The highest possible value for CurrentReading. Units shall use the same units as the related ReadingCelsius property.
PhysicalContext	Object	True	The affected device or region within the chassis to which this Temperature measurement applies.Refer Section 2.14.1.3 ThermalPhysicalContextEnum Properties.
RelatedItem	Array	True	The ID(s) of the resources associated with this thermal sensor

2.14.1.3 ThermalPhysicalContextEnum Properties

Enum	Description
------	-------------

Room	The room
Intake	The intake point of the chassis
Exhaust	The exhaust point of the chassis
Front	The front of the chassis.
Back	The back of the chassis.
Upper	The upper portion of the chassis
Lower	The lower portion of the chassis
CPU	A Processor (CPU).
GPU	A Graphics Processor (GPU).
Backplane	A backplane within the chassis
SystemBoard	The system board (PCB).
PowerSupply	A power supply.
VoltageRegulator	A voltage regulator device
StorageDevice	A storage device
NetworkingDevice	A networking device.
ComputeBay	Within a compute bay
StorageBay	Within a storage bay.
NetworkBay	Within a networking bay.
ExpansionBay	Within an expansion bay
PowerSupplyBay	Within a power supply bay

2.14.1.4 Fan Properties

Name	Type	ReadOnly	Description
MemberId	String	True	This property shall uniquely identify the member within the collection.
Name	String	True	The name of the Fan.
PhysicalContext	Object	True	The affected device or region within the chassis to which this Temperature measurement applies. Refer Section 2.14.1.3 ThermalPhysicalContextEnum Properties.
Status	Object	True	Refer Section 2.2 for Resource.Oem.
Reading	Number	True	The current value of the fan sensor's reading.
UpperThresholdNonCritical(C)	Number	True	The current reading is above the normal range but is not critical. Units shall use the same units as the related Reading property
UpperThresholdCritical(C)	Number	True	The current reading is above the normal range but is not yet Fatal. Units shall use the same units as the

			related Reading property
UpperThresholdFatal	Number	True	The current reading is above the normal range and is fatal. Units shall use the same units as the related Reading property
LowerThresholdNonCritical	Number	True	The current reading is below the normal range but is not critical. Units shall use the same units as the related Reading property
LowerThresholdCritical	Number	True	The current reading is below the normal range but is not yet fatal. Units shall use the same units as the related Reading property
LowerThresholdFatal	Number	True	The value of this property shall indicate the present reading is below the normal range and is fatal. Units shall use the same units as the related Reading property.
MinReadingRange	Number	True	The lowest possible value for Reading. Units shall use the same units as the related Reading property.
MaxReadingRange	Number	True	The highest possible value for Reading. Units shall use the same units as the related Reading property.
RelatedItem	Array	True	The ID(s) of the resources serviced with this fan.
Redundancy	Array	True	Redundancy information for the power subsystem of this system or device..
HotPluggable	Boolean	True	The value of this property shall indicate whether the device can be inserted or removed while the underlying equipment otherwise remains in its current operational state. Devices indicated as hot-pluggable shall allow the device to become operable without altering the operational state of the underlying equipment. Devices that cannot be inserted or removed from equipment in operation, or devices that cannot become operable without affecting the operational state of that equipment, shall be indicated as not hot- pluggable.
Location	Array	True	Refer for 2.2.4 Resource.Location.
SensorNumebr	Number	True	A numerical identifier to represent the fan speed sensor.
OwnerLUN	Number	True	This is an OEM attribute and is a specific implementation of AMI.

2.15 Manager Collection

2.15.1 GET

Request

```
https://{{ip}}/redfish/v1/Managers
```

Content-Type: application/json

Response

Please refer [Section 2.4](#) for the JSON response properties.

2.16 Manager

2.16.1 GET

Request

```
https://{{ip}}/redfish/v1/Managers/{{manager_instance}}
```

Content-Type: application/json

Response

The response of the request will be in JSON format.

2.16.1.1 Manager Properties

Name	Type	ReadOnly	Description	
@odata.context	String	True	Refer Section 2.1	
@odata.id	String	True	Refer Section 2.1	
@odata.type	String	True	Refer Section 2.1	
@odata.etag	String	True	Refer Section 2.1	
Oem	Object		Refer Section 2.2 for Resource.Oem.	
Id	String	True	Resource Identifier	
Name	String	True	Name of the Resource	
Description	String	True	Provides description of the resource. Refer Section 2.2	
ManagerType	String	True	An enumeration property that represents the type of manager that this resource represents.	
			Enum	Description
			BMC	A controller which provides management functions for a single computer system.
Links	Object	True	The Links property, as described by the Redfish Specification, shall contain references to resources that are related to, but not contained by	

			(subordinate to), this resource. Refer Section 2.16.1.2
ServiceEntryPointUUID	String	True	The UUID of the Redfish Service provided by this manager. Refer Section 2.2.1 Resource Type Definitions.
UUID	String	True	The Universal Unique Identifier (UUID) for this Manager. Refer Section 2.2.1 Resource Type Definitions.
Model	String	True	Model number of this manager as defined by the manufacturer.
DateTime	String	False	The current DateTime (with offset) for the manager, used to set or read time.
DateTimeLocal Offset	String	False	The time offset from UTC that the DateTime property is set to in format: +06:00.
FirmwareVersion	String	True	The firmware version of this Manager.
SerialConsole	Object		Information about the Serial Console service provided by this manager. Refer Section 2.16.1.3 SerialConsole Properties.
CommandShell	Object		Information about the Command Shell service provided by this manager. Refer Section 2.16.1.4 CommandShell Properties.
GraphicalConsole	Object		The information about the Graphical Console (KVM-IP) service of this manager. Refer Section 2.16.1.5 GraphicalConsole Properties.
Actions	Object	True	Managers allows the user to perform Actions like Reset.
Status	Object	True	Refer Resource Complex Types under Section 2.2 .
EthernetInterfaces	Object	True	a reference to a collection of NICs that this manager uses for network communication. It is here that clients will find NIC configuration options and settings.
SerialInterfaces	Object	True	A reference to a collection of serial interfaces that this manager uses for serial and console communication. It is here that clients will find serial configuration options and settings.
NetworkProtocol	Object	True	A reference to the network services and their

			settings that the manager controls. It is here that clients will find network configuration options as well as network services.
LogServices	Object	True	A reference to a collection of Logs used by the manager.
VirtualMedia	Object	True	A reference to the Virtual Media services for this particular manager.
Redundancy	Array	True	Redundancy information for the managers of this system.
Redundancy@odata.count	Number	True	An integer representing the number of items in a collection.
PowerState	String	True	The value of this property shall contain the power state of the Manager.
Certificates	Object	True	A Reference to the collection of the Certificates

2.16.1.2 Links Properties

Name	Type	ReadOnly	Description
ManagerForServers	Array	True	An array of references to the systems that this manager has control over.
ManagerForServers@odata.count	Number	True	An integer representing the number of items in a collection.
ManagerForSwitches			An array of references to the switches that this manager has control over.
ManagerForSwitches@odata.count	Number	True	An integer representing the number of items in a collection.
ManagerForChassis@odata.count	Number	True	An integer representing the number of items in a collection.
ManagerForChassis	Array	True	An array of references to the chassis that this manager has control over.
ManagerInChassis	Array	True	This property shall contain a reference to the chassis that this manager is located in.
ActiveSoftwareImage	Array	True	This property shall contain a link to the SoftwareInventory Resource that represent the active firmware image for this manager.
SoftwareImages	Array	True	This property shall contain an array of links to the SoftwareInventory Resources that represent the firmware images that apply to this manager.

SoftwareImages@odata.count	Number	True	An integer representing the number of items in a collection.
----------------------------	--------	------	--

2.16.1.3 SerialConsole Properties

Name	Type	Read only	Description	
ServiceEnabled	Boolean	False	Indicates if the service is enabled for this manager.	
MaxConcurrentSessions	String	True	Indicates the maximum number of concurrent service sessions supported by the implementation regardless of protocol..Minimum Value:0.	
ConnectTypesSupported	Array	True	The value of ConnectTypesSupported shall be an array of the enumerations provided here.	
			Enum	Description
			Telnet	The controller supports a Serial Console connection using the Telnet protocol.
			IPMI	The controller supports a Serial Console connection using the IPMI Serial-over-LAN (SOL) protocol.
			Oem	The controller supports a Serial Console connection using an OEM-specific protocol.

2.16.1.4 CommandShell Properties

Name	Type	ReadOnly	Description	
ServiceEnabled	Boolean	False	Indicates if the service is enabled for this manager.	
MaxConcurrentSessions	String	True	Indicates the maximum number of concurrent service sessions supported by the implementation regardless of protocol..Minimum Value:0.	
ConnectTypesSupported	Array	True	The value of ConnectTypesSupported shall be an array of the enumerations provided here.	
			Enum	Description
			SSH	The controller supports a CommandShell connection using the SSH protocol.
			Telnet	The controller supports a CommandShell connection using the Telnet protocol.
			IPMI	The controller supports a CommandShell connection using the IPMI Serial-over-LAN (SOL) protocol.
			Oem	The controller supports a CommandShell

				connection using an OEM-specific protocol.
--	--	--	--	--

2.16.1.5 GraphicalConsole Properties

Name	Type	Read only	Description	
ServiceEnabled	Boolean	False	Indicates if the service is enabled for this manager.	
MaxConcurrentSessions	String	True	Indicates the maximum number of concurrent service sessions supported by the implementation regardless of protocol..Minimum Value:0.	
ConnectTypesSupported	Array	True	The value of ConnectTypesSupported shall be an array of the enumerations provided here.	
			Enum	Description
			KVMIP	The controller supports a Graphical Console connection using a KVM-IP (redirection of Keyboard, Video, Mouse over IP) protocol.
			Oem	The controller supports a Graphical Console connection using an OEM-specific protocol.

2.16.2 PATCH

Request

https://{ip}/redfish/v1/Managers/{manager_instance}

Content-Type: application/json

Request Body

Please refer to the properties that are patchable in Section 2.16.1.1 Manager Properties for which ReadOnly is False that can be sent as Request body in json format.

Response

The response status is success with status code as 204 and no body.

2.16.3 POST

Request

POST https://{ip}/redfish/v1/Managers/{manager_instance}/Actions/Manager.Reset

Content-Type: application/json

Request Body

The only valid value for ResetType is ForceRestart, which will do a cold reset of the BMC.

Example POST Request Body:


```
{
  "ResetType": "ForceRestart"
}
```

Response

The response status is 202 with below body. Check BMC restarting logs in BMC console, wait for few seconds for BMC restarting.

```
{
  "@odata.context": "/redfish/v1/$metadata#Task.Task(TaskState,Description,Name,Id)",
  "@odata.id": "/redfish/v1/TaskService/Tasks/1",
  "@odata.type": "#Task.v1_2_0.Task",
  "Description": "Task for Manager Reset",
  "Id": "1",
  "Name": "Manager Reset",
  "TaskState": "New"
}
```

2.17 Ethernet Interface Collection

2.17.1 GET

Request

```
https://{ip}/redfish/v1/Managers/{manager_instance}/EthernetInterfaces
Content-Type: application/json
```

Response

Please refer [Section 2.4](#) for the JSON response properties

2.18 Ethernet Interface

2.18.1 GET

Request

```
https://{ip}/redfish/v1/Managers/{manager_instance}/EthernetInterfaces/{system_ethifc_instance}
Content-Type: application/json
```

Response

The response of the request will be in JSON format.

2.18.1.1 Ethernet Interface Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1

@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Oem Section 2.2 .
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource.
Status	Object	True	Refer Section 2.2 for Status under Resource Complex Types.
InterfaceEnabled	Boolean	False	This indicates whether this interface is enabled.
PermanentMAC Address	String	True	The value of this property shall be the Permanent MAC Address of this interface (port). This value is typically programmed during the manufacturing time. This address is not assignable.
MACAddress	String	True	The value of this property shall be the effective current MAC Address of this interface. If an assignable MAC address is not supported, this is a read only alias of the PermanentMACAddress
SpeedMbps	Number	False	The current link speed of the interface in Mbps
StatelessAddressAutoConfig	Object	False	This object shall contain the IPv4 and IPv6 Stateless Address Automatic Configuration (SLAAC) properties for this interface. Refer Section 2.18.1.2
AutoNeg	Boolean	False	The value of this property shall be true if auto negotiation of speed and duplex is enabled on this interface and false if it is disabled.
FullDuplex	Boolean	False	The value of this property shall represent the duplex status of the Ethernet connection on this
MTUSize	Number	False	The value of this property shall be the size in bytes of largest Protocol Data Unit (PDU) that can be passed in an Ethernet (MAC) frame on this interface
HostName	String	False	DNS Hostname without any domain information.
FQDN	String	False	This is the complete, fully qualified domain name obtained by DNS for this interface.
MaxIPv6StaticAddresse	Number	True	This indicates the number of array items supported by Ipv6StaticAddresses

VLAN	Object	True	If this Network Interface supports more than one VLAN, this property will not be present and the client should lookfor VLANs collection in the link Section of this resource.Refer Section 2.18.1.3	
Ipv4Addresses	Array of Objects	True	Refer Section 2.18.1.4	
Ipv6Addresses	Array of Objects	True	Refer Section 2.18.1.5	
IPv6DefaultGateway	String	True	This is the Ipv6 default gateway address that is currently in use on this interface.	
StaticNameServers	Array	False	Statically-defined set of DNS server IPv4 and IPv6 addresses.	
VLANs	Object	True	This is a reference to a collection of VLANs and is only used if the interface supports more than one VLANs.VlanInterfaceCollection.	
LinkStatus	String	True	The value of this property shall be the link status of this interface (port).	
			Enum	Description
			LinkUp	The link is available for communication on this interface.
			NoLink	There is no link or connection detected on this interface.
			LinkDown	There is no link on this interface, but the interface is connected.
DHCPv4	Object	False	DHCPv4 Configuration Properties. Refer Section 2.18.1.6	
DHCPv6	Object	False	DHCPv6Configuration Properties. Refer Section 2.18.1.7	
IPv6StaticDefaultGateways	Array	False	The values in this array shall represent the IPv6 static default gateway addresses for this interface.	
IPv6StaticAddresses	Array of Objects	False	The value of this property shall be an array of objects used to represent the IPv6 static connection characteristics for this interface. Refer Section 2.18.1.8IPv6StaticAddresses Properties below	
IPv4StaticAddresses	Array of Objects	False	The value of this property shall be an array of objects used to represent all IPv4 static	

			addresses assigned (but not necessarily in use) to this interface. Addresses in use by this interface shall also appear in the IPv4Addresses property. Refer Section 2.18.1.8IPv6StaticAddresses Properties below
--	--	--	---

2.18.1.2 StatelessAddressAutoConfig

Name	Type	ReadOnly	Description
IPv4AutoConfigEnabled	Boolean	True	This property shall indicate whether IPv4 Stateless Address AutoConfiguration (SLAAC) is enabled for this interface.
IPv6AutoConfigEnabled	Boolean	True	This property shall indicate whether IPv6 Stateless Address AutoConfiguration (SLAAC) is enabled for this interface

2.18.1.3 VLAN properties

Name	Type	ReadOnly	Description
VLANEnable	Boolean	True	This indicates if this VLAN is enabled.
VLANId	Number	False	This indicates the VLAN identifier for this VLAN. Minimum value : 0 and Maximum value: 4094.

2.18.1.4 Ipv4Addresses Properties

Name	Type	ReadOnly	Description	
Address	String	False	This property lists an IPv4 address that is currently assigned on this interface	
SubnetMask	Object	False	This is the Ipv4 address. If DHCPv4 is enabled on the interface, this property becomes read-only. String with pattern " <code>^(?:[0-9]{1,3}\.){3}[0-9]{1,3}\$</code> "	
AddressOrigin	String	True	This is the Ipv4 address origin for this interface.	
			Enum	Description
			Static	A static address as configured by the user.
			DHCP	Address is provided by a DHCPv4 service
			BOOTP	Address is provided by a BOOTP service.
			Ipv4LinkLocal	Address is valid only for this network segment (link).
Gateway	String	False	This is the Ipv4 default gateway address for this interface. If DHCPv4 is enabled on the interface and is configured to set the Ipv4 default gateway address, this property becomes read-only.	

2.18.1.5 Ipv6Addresses Properties

Name	Type	ReadOnly	Description	
Address	String	False	This property lists an IPv6 address that is currently assigned on this interface	
PrefixLength	Number	True	Provides the Ipv6 network prefix length in bits for this address.Min:, Max:128	
AddressOrigin	String	True	This is the Ipv6 address origin for this interface.	
			Enum	Description
			Static	A static address as configured by the user
			DHCPv6	Address is provided by a DHCPv6 service.
			LinkLocal	Address is valid only for this network segment (link).
			SLAAC	Address is provided by a Stateless Address AutoConfiguration (SLAAC) service.

2.18.1.6 DHCPv4Properties

Name	Type	ReadOnly	Description
DHCPEnabled	Boolean	False	Determines whether DHCPv4 is enabled on this interface
UseDNSServers	Boolean	False	Determines whether to use DHCPv4-supplied DNS servers.
UseGateway	Boolean	False	Determines whether to use a DHCPv4-supplied gateway.
UseDomainName	boolean	False	Determines whether to use a DHCPv4-supplied domain name
UseNTPServers	boolean	False	Determines whether to use DHCPv4-supplied NTP servers
UseStaticRoutes	boolean	False	Determines whether to use DHCPv4-supplied static routes

2.18.1.7 DHCPv6Properties

Name	Type	ReadOnly	Description
OperatingMode	String	False	Determines the DHCPv6 operating mode for this interface
UseDNSServer	Boolean	False	When enabled, DNS server addresses supplied through DHCPv6 stateless mode will be used.
UseDomainName	Boolean	False	When enabled, the domain name supplied through DHCPv6 stateless mode will be used.
UseNTPServers	Boolean	False	When enabled, NTP server addresses supplied through DHCPv6 stateless mode will be used.
UseRapidCommit	Boolean	False	Determines whether to use DHCPv6 rapid commit mode for stateful mode address assignments. Do not enable in networks where more than one DHCPv6 server is

			configured to provide address assignments.
--	--	--	--

2.18.1.8 IPv6StaticAddresses Properties

Name	Type	ReadOnly	Description
Address	String	False	A static Ipv6 address that is currently assigned on a network interface.
PrefixLength	Number	False	Provides the Ipv6 network prefix length in bits for this address.Min:1,Max:128
Oem	Object	True	StaticIPAddressIndex under Ami.

2.19 ManagerNetworkProtocol

2.19.1 GET

Request

https://{ip}}/redfish/v1/Managers/Self/NetworkProtocol

Content-Type: application/json

Response

The response of the request will be in JSON format.

2.19.1.1 ManagerNetworkProtocol Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem			Refer Resource Complex Types under Section 2.2 .
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
HostName	String	True	The DNS Host Name of this manager, without any domain information.
FQDN	String	True	This is the fully qualified domain name for the manager obtained by DNS including the host name and top-level domain name.
HTTPS	Object		This object shall contain information for the HTTPS/SSL protocol settings for this manager. The default value of the Port property should be 443 for compatibility with established client implementations

SNMP	Object	True	This object shall contain information for the SNMP protocol settings for this manager. The default value of the Port property should be 161 for compatibility with established client implementations
SSDP	Object	False	This object shall contain information for the SSDP protocol settings for this manager. Simple Service Discovery Protocol (SSDP) is for network discovery of devices supporting the Redfish service. The default value of the Port property should be 1900 for compatibility with established client implementations
IPMI	Object	False	This object shall contain information for the IPMI over LAN protocol settings for the manager. The default value of the Port property should be 623 for compatibility with established client implementations
SSH	Object	False	This object shall contain information for the SSH protocol settings for the manager. The default value of the Port property should be 22 for compatibility with established client implementations
Status	Object	True	Refer Section 2.2 for Resource.Oem.
Actions	Object	True	This object will contain the actions for this resource under Oem property if any.
NTP	Object	False	This object shall contain information for the NTP protocol settings for the manager. Refer Section 2.17.1.2

2.19.1.2 NTP Properties

Name	Type	ReadOnly	Description
ProtocolEnabled	Boolean	False	Indicates if the protocol is enabled or disabled
Port	Number	True	Indicates the protocol port.
NTPServers	Array	False	Indicates to which NTP servers this manager is subscribed.

2.19.1.3 Protocol Properties

Name	Type	ReadOnly	Description
ProtocolEnabled	Boolean	False	Indicates if the protocol is enabled or disabled
Port	Number	False	Indicates the port assigned for the protocol.

2.19.1.4 SSDP Properties

Name	Type	ReadOnly	Description
ProtocolEnabled	Boolean	False	Indicates if the protocol is enabled or disabled.

Port	Number	False	Indicates the port assigned for the protocol. Minimum Value:0.
------	--------	-------	--

2.19.2 PATCH

Request

https://{{ip}}/redfish/v1/Managers/Self/NetworkProtocol

Content-Type: application/json

Request Body

Please refer to the properties that are patchable in Section 2.17.1.1 ManagerNetworkProtocol

Properties for which ReadOnly is False that can be sent as Request body in json format.

Response

The response status is success with status code as 202 and no body.

2.20 SerialInterfaceCollection

2.20.1 GET

Request

https://{{ip}}/redfish/v1/Managers/{{manager_instance}}/SerialInterfaces

Content-Type: application/json

Response

Please refer [Section 2.4](#) for the JSON response properties

2.20.1.1 Serial Interface Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2 .
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
Interface Enabled	Boolean	False only for IPMI-SOL	This indicates whether this interface is enabled
BitRate	String	False only for IPMI-SOL	The receive and transmit rate of data flow, typically in bitsper-second (bps), over the serial connection and can take any one of the following enum values.

			"enum": ["9600", "19200", "38400", "57600", "115200"]	
Parity	String	True	The type of parity used by the sender and receiver in order to detect errors over the serial connection. It can take any one of the following enum values : "enum": ["None", "Even", "Odd", "Mark", "Space"]	
DataBits	String	True	The number of data bits that will follow the start bit over the serial connection. "enum": ["5", "6", "7", "8"]	
StopBits	String	True	The period of time before the next start bit is transmitted. "enum": ["1", "2"]	
Actions	Object	True	This object will contain the actions for this resource under Oem property if any	
FlowControl	String	True	The type of flow control, if any, that will be imposed on the serial connection	
			Enum	Description
			None	No flow control imposed
			Software	XON/XOFF in-band flow control imposed
			Hardware	Out of band flow control imposed

2.20.2 PATCH

Request

PATCH

https://{ip}/redfish/v1/Managers/{manager_instance}/SerialInterfaces/{manager_serialifc_instance}

Content-Type: application/json

Request Body

Please refer to the properties that are patchable in Section 2.18.1.1 Serial Interface Property for which ReadOnly is False that can be sent as Request body in json format.

Example PATCH Request Body:

```
{
  "BitRate": "9600",
  "InterfaceEnabled": false
}
```

Response

The response status is success with status code as 204 and no body.

2.21 Account Service

2.21.1 GET

Request

https://{ip}/redfish/v1/AccountService

Content-Type: application/json

Response

The response of the request will be in JSON format.

2.21.1.1 Enum Properties for LocalAccountAuth

Name	Description
Enabled	This value shall be used to indicate that the service will never authenticate users based on the Accounts collection within this AccountService
Disabled	This value shall be used to indicate that the service will authenticate users based on the Accounts collection within this AccountService
Fallback	This value shall be used to indicate that the service will authenticate users based on the Accounts collection within this AccountService only if there are external account providers that are currently unreachable
LocalFirst	The service first authenticates users based on the Account Service-defined accounts collection. If authentication fails, the Service authenticates by using external account providers.

2.21.1.2 SearchSettings Properties

Name	Type	ReadOnly	Description
BaseDistinguishedNames	Array	False	The value of this property shall be a collection of base distinguished names to use when searching the LDAP service
GroupNameAttribute	String	False	The value of this property shall be the attribute name that contains the name of the Group
GroupsAttribute	String	False	The value of this property shall be the attribute name that contains the Groups for a user
UsernameAttribute	String	False	The value of this property shall be the attribute name that contains the Username

2.21.1.3 Account Service Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1

@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2 .
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
Status	Object	True	Refer Section 2.2 for Resource.Oem
ServiceEnabled	Boolean	False	This indicates whether this service is enabled. Default value for this property is True. If the value for this property is false, then service is disabled and Redfish Users cannot be created, deleted, or modified, and new sessions cannot be created. However, established sessions may still continue to run. This does not affect any Authentication connections
AuthFailureLoggingThreshold	Number	True	This is the number of authorization failures that need to occur before the failure attempt is logged to the manager log. This represents a modulo function value, thus the failure shall be logged every (n+1)th occurrence where n represents the value of this property. Default value is 3
MinPasswordLength	Number	True	This property shall reference the minimum password length that the implementation will allow a password to be set to. Default value is 8
MaxPasswordLength	Number	True	This property shall reference the maximum password length that the implementation will allow a password to be set to. Default value is 20
AccountLockoutThreshold	Number	False	The number of failed login attempts before a user account is locked for a specified duration. (0=never locked)Minimum Value : 0. Default value is 5
AccountLockoutDuration	Number	False	This property shall reference the period of time in seconds that an account is locked after the number of failed login attempts reaches the threshold referenced by Account Lockout Threshold, within the window of time referenced by Account Lockout Counter Reset After. The value shall be greater than or equal to the value of Account Lockout Reset After. If set to 0, no lockout shall occur. Minimum Value : 0. Default value is 30
AccountLockoutCounterResetAfter	Number	False	This property shall reference the threshold of time in seconds from the last failed login attempt at which point

			the Account Lockout Threshold counter (that counts number of failed login attempts) is reset back to zero (at which point Account Lockout Threshold failures would be required before the account is locked). This value shall be less than or equal to Account Lockout Duration. The threshold counter also resets to zero after each successful login. Minimum Value : 0. Default value is 30
Accounts	Object	True	This property shall contain the link to a collection of type ManagerAccountCollection
Roles	Object	True	This property shall contain the link to a collection of type RoleCollection
PrivilegeMap	Object	True	This property shall contain the link to the Privilege Registry property
Actions	Object	True	This object will contain the actions for this resource under Oem property if any
LocalAccountAuth	String	False	This property shall govern how the service uses the Accounts collection within this AccountService as part of authentication. Details about each of the modes are found in the description of the enum values
AccountLockoutCounterResetEnabled	Boolean	False	This property shall indicate whether the threshold counter will be reset after the AccountLockoutCounterResetAfter has expired. Setting the value to false shall indicate that only a successful login will reset the threshold counter. In addition, if the user reaches the limit specified in AccountLockoutThreshold, the account shall be locked out indefinitely and only a reset by administrator will clear the threshold counter. If this property is absent the value shall be assumed to be true
LDAP	Object	False	Refer Section 2.19.1.3.1
ActiveDirectory	Object	False	Refer Section 2.19.1.3.5
AdditionalExternalAccountProviders	Object	True	This property shall contain the additional external account providers that this Account Service uses.

2.21.1.3.1 LDAP Properties

Name	Type	ReadOnly	Description
Authentication	Object	False	LDAP properties containing authentication details Refer Section 2.19.1.3.2

LDAPService	Object	False	Refer Section 2.19.1.3.3
RemoteRoleMapping	Array	False	The mapping rules to convert the external account providers account information to the local Redfish Role Refer Section 2.19.1.3.4
ServiceAddresses	Array	False	The addresses of the user account providers to which this external account provider links. The format of this field depends on the type of external account provider.
ServiceEnabled	Boolean	True	An indication of whether this service is enabled.

2.21.1.3.2 Authentication Properties

Name	Type	ReadOnly	Description
AuthenticationType	String	True	The type of authentication used to connect to the external account provider
Oem		True	OEM extension object
Username	String	False	The user name for the Service
Password	String	False	The password for this Service. A PATCH request writes the password. This property is 'null' in responses

2.21.1.3.3 LDAPService Properties

Name	Type	ReadOnly	Description
SearchSettings	Object	False	The required settings to search an external LDAP service. Refer Section 2.19.1.2 SearchSetting Properties
Oem	Object	False	Refer Resource Complex Types under Section 2.2

2.21.1.3.4 RemoteRoleMapping Properties

Name	Type	ReadOnly	Description
LocalRole	String	False	The name of the local Redfish Role to which to map the remote user or group
RemoteGroup	String	False	The name of the remote group, or the remote role in the case of a Redfish Service, that maps to the local Redfish Role to which this entity links
RemoteUser	String	False	The name of the remote user that maps to the local Redfish Role to which this entity links

2.21.1.3.5 Active Directory Properties

Name	Type	ReadOnly	Description
Authentication	Object	False	Refer to 2.21.1.3.6
RemoteRoleMapping	Array	False	Refer to 2.21.1.3.7

ServiceEnabled	Boolean	True	An indication of whether this service is enabled.
----------------	---------	------	---

2.21.1.3.6 Active Directory properties containing authentication details

Name	Type	ReadOnly	Description
Username	String	False	The user name for the Service. Username should be String with Minimum length = 1 and Maximum length = 64 of alpha-numeric characters. Username must start with an alphabetical character. <i>Note: This property will not allow whitespaces and special characters.</i>
Password	String	False	The password for this Service. The password length must be at least 6 characters long and whitespaces are not allowed. A PATCH or PUT request writes the password. This property is `null` in responses. <i>Note: This property will not allow more than 127 characters.</i>
AuthenticationType	String	True	The type of authentication used to connect to the external account provider. Note: Value is "UsernameAndPassword" for Active Directory.
Oem	Object	False	OEM extension object

2.21.1.3.7 Remote Role Mapping Properties

Name	Type	ReadOnly	Description
LocalRole	String	False	The name of the local Redfish Role to which to map the remote user or group.
RemoteGroup	String	False	The name of the remote group, or the remote role in the case of a Redfish Service, that maps to the local Redfish Role to which this entity links. Remote Group is a string maximum 64 alphanumeric characters are allowed. Special symbols hyphen(-) and underscore(_) are allowed. <i>Note: The RemoteGroup name should be unique for each RoleGroup. Two RoleGroup cannot have same RemoteGroup(group name) in BMC.</i>
RemoteUser	String	False	The name of the remote user that maps to the local Redfish Role to which this entity links. Remote User is string with maximum 64 alphanumeric characters

			and special symbols hyphen(-),dot(.) and underscore(_) are allowed.
Oem	Object	False	OEM extension object

2.21.2 PATCH

Request

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

Request Body

Please refer to the properties that are patchable in Section 2.19.1.3 Account Service Property for which ReadOnly is False that can be sent as Request body in json format.

Example Request Body for Editing AccountService:

```
{
  "AccountLockoutCounterResetAfter": 853,
  "AccountLockoutDuration": 853,
  "AccountLockoutThreshold": 100,
  "AuthFailureLoggingThreshold": 3,
  "ServiceEnabled": true,
}
```

Response

Account Service attributes like LDAP and Active Directory involves IPMI operations whereas the remaining attributes involves RedisDB operations alone. The Response Status Code and the Response Body depends on the Request Body being patched and thus can be classified into the below mentioned scenarios:

Scenario 1:

Request Body with AccountService attributes only(No LDAP and AD attributes), will return Response Status Code as 204 No Content with no Response Body.

Scenario 2:

Request Body with attributes like LDAP and Active Directory will return the Response Status Code as 202 Accepted and the Response Body contains Response with Task Details as below:

```
{
  "@odata.context": "/redfish/v1/$metadata#Task.Task ",
  "@odata.id": "/redfish/v1/TaskService/Tasks/3",
  "@odata.type": "#Task.v1_4_2.Task",
  "Description": "Task for AccountService LDAP",
  "Id": "3",
  "Name": "AccountService LDAP",
  "TaskState": "New"
}
```

```
}
```

2.21.3 PATCH LDAP Configuration

Request

```
https://{ip}/redfish/v1/AccountService
```

```
Content-Type: application/json
```

Request Body

Please refer to the properties that are patchable in Section 2.19.1.3 Account Service Property for which ReadOnly is False that can be sent as Request body in json format

Example Request Body for Editing AccountService:

```
{
  "LDAP": {
    "Authentication": {
      "Username": "cn=admin, dc=testldap, dc=com",
      "Password": "ami"
    },
    "RemoteRoleMapping": [{
      "LocalRole": "Administrator",
      "RemoteGroup": "group1",
      "RemoteUser": "dc=coretesting,dc=com"
    }, {
      "LocalRole": "User",
      "RemoteGroup": "group2",
      "RemoteUser": "dc=coretesting,dc=com"
    }, {
      "LocalRole": "operator",
      "RemoteGroup": "group3",
      "RemoteUser": "dc=coretesting,dc=com"
    }
  ],
  "LDAPService": {
    "SearchSettings": {
      "BaseDistinguishedNames": [ "dc=testldap,dc=com" ],
      "GroupsAttribute": "cn"
    }
  },
  "ServiceAddresses": [ "10.0.125.48:389" ],
  "ServiceEnabled": true
}
```



```
}
```

Response

For a detailed information on both Success and Error Responses, refer Section 2.19.2.2

2.22 ManagerAccountCollection

2.22.1 GET

Request

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

Response

Please refer [Section 2.4](#) for the JSON response properties.

2.22.2 POST

Request [Creating new Account]

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

Example POST Request:

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

Request [Creating new SNMP Account]

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

Example POST Request:

```
{  
  "Name": "Test User Account",  
  "Description": "Test User Account",  
  "Enabled": true,  
  "Password": "superuser",  
  "UserName": "user_account",  
}
```

```

    "RoleId" : "Operator",
    "Locked" : false,
    "AccountTypes" : [ "Redfish", "SNMP" ],
    "Oem" : {
      "Ami" : {
        "SNMP" : {
          "AuthenticationProtocol" : "SHA256",
          "EncryptionProtocol" : "DES",
          "Access" : "ReadOnly"
        }
      }
    }
  }
}

```

Response

The response status is 201 and the response body is a GET Response with the properties of the newly created Account

2.23 Manager Account

2.23.1 GET

Request

```

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

```

Response

The response of the request will be in JSON format

2.23.1.1 Manager Account Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2 .
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2

Password	String	False	The value of this property shall be the password for this account.	
UserName	String	False	The value of this property shall be the user name for this	
RoleId	String	False	The value of this property shall be the ID of the Role resource that configured for this account	
Locked	Boolean	False	This property (when set to true) shall indicate that the account service has automatically locked the account due to the property accountLockoutThreshold having been exceeded.	
Enabled	Boolean	False	This property shall enable (if set to true) or disable (if set to false) the account for future logins. The value of Enable over-rides the locked property	
Actions	Object	True	This object will contain the actions for this resource under Oem property if any	
PasswordChangeRequired	Boolean	True	Indicates that the password for this account must be changed. The service requires the password to be changed before access is allowed.	
Certificates	Object	True	The link to a collection of certificates used for this account.	
Links	Object		The links object contains the links to other resources that are related to this resource.	
Account Types	Array	False	Contains various account types that apply to the account.	
			Enum	Description
			Redfish	Allow access to redfish Service
			SNMP	Allow access to SNMP Service

2.23.1.2 Links Properties

Name	Type	ReadOnly	Description
Role	Object	True	A reference to the Role object defining Privileges for this account--returned when the resource is read. The ID of the role is the same as property RoleId.

2.23.2 PATCH

- “UserName” and “Password” have to follow the rules:
 - “UserName” only allows special characters ‘-’(hyphen), ‘_’(underscore), ‘@’(at sign) in UserName.
 - “UserName” must be a string of 1 to 16 alpha-numeric characters.
 - “UserName” must start with an alphabetical character.
 - “Password” must be a string of 8 to 20 characters
 - Last password cannot be used to reset redfish account.

Request

PATCH https://{ip}/redfish/v1/AccountService/Accounts/{account_instance}

Content-Type: application/json

Request Body

Please refer to the properties that are patchable in Section 2.21.1.1 Manager Account

Property for which ReadOnly is False that can be sent as Request body in json format

Example Request Body for Editing an Account:

```
{
  "Enabled": true,
  "Password": "superuser",
  "UserName": "user_account",
  "RoleId": "ReadOnly",
  "Locked": false
}
```

Response

The response status is success with status code as 204 and no body

2.23.3 DELETE

Request

DELETE https://{ip}/redfish/v1/AccountService/Accounts/{account_instance}

Content-Type: application/json

Response

The response status is 204 and no response body.

2.24 Role Collection

2.24.1 GET

Request

https://{ip}/redfish/v1/AccountService/Roles

Content-Type: application/json

Response

Please refer [Section 2.4](#) for the JSON response properties

2.24.2 POST

Request

POST https://{ip}/redfish/v1/AccountService/Roles

Content-Type: application/json

Request Body

Creation of a custom Role requires that the RoleId and Name properties be in the request body. In addition to these properties, either AssignedPrivileges, OemPrivileges, or both AssignedPrivileges and OemPrivileges must be in the request body.

Example POST Request:

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

Response

The response status is 201 and the response body is a GET Response with the properties of the newly created Account.

2.25 Role

2.25.1 GET

Request

`https://{{ip}}/redfish/v1/AccountService/Roles/{{role_instance}}`

Content-Type: application/json

Response

The response of the request will be in JSON format.

2.25.1.1 Role Properties

Name	Type	ReadOnly	Description												
@odata.context	String	True	Refer Section 2.1												
@odata.id	String	True	Refer Section 2.1												
@odata.type	String	True	Refer Section 2.1												
@odata.etag	String	True	Refer Section 2.1												
Oem	Object		Refer Resource Complex Types under Section 2.2 .												
Id	String	True	Resource Identifier												
Name	String	True	Name of the Resource												
Description	String	True	Provides description of the resource. Refer Section 2.2												
IsPredefined	Boolean	True	This property is used to indicate if the Role is one of the Redfish Predefined Roles vs a Custom role.												
AssignedPrivileges	Array	False	The value of this property shall be the redfish privileges that the role includes. For pre-defined roles, this property shall be readOnly. For custom roles some implementations may not allow writing this property												
			<table><tr><th>Enum</th><th>Description</th></tr><tr><td>Login</td><td>Able to log into the service and read resources</td></tr><tr><td>ConfigureManager</td><td>Able to configure Manager resources</td></tr><tr><td>ConfigureUsers</td><td>Able to configure Users and their Accounts</td></tr><tr><td>ConfigureSelf</td><td>Able to change the password for the current user Account</td></tr><tr><td>ConfigureComponents</td><td>Able to configure components managed by this service</td></tr></table>	Enum	Description	Login	Able to log into the service and read resources	ConfigureManager	Able to configure Manager resources	ConfigureUsers	Able to configure Users and their Accounts	ConfigureSelf	Able to change the password for the current user Account	ConfigureComponents	Able to configure components managed by this service
			Enum	Description											
			Login	Able to log into the service and read resources											
			ConfigureManager	Able to configure Manager resources											
			ConfigureUsers	Able to configure Users and their Accounts											
			ConfigureSelf	Able to change the password for the current user Account											
ConfigureComponents	Able to configure components managed by this service														
OemPrivileges	Array	False	The value of this property shall be the OEM privileges that this role includes. For pre-defined roles, this property shall be readOnly. For custom roles some implementations may not allow writing this property												
Actions	Object	True	This object will contain the actions for this resource under												

			Oem property if any
RoleId	String	True	This property shall contain the string name of the Role. This property shall contain the same value as the Id property

2.25.2 PATCH

Request

PATCH https://{ip}/redfish/v1/AccountService/Roles/{role_instance}

Content-Type: application/json

Request Body

Please refer to the properties that are patchable in Section 2.23.1.1 Role Properties for which ReadOnly is False that can be sent as Request body in json format.

Example Request Body for Editing an Account:

```
{
  "AssignedPrivileges": [
    "ConfigureComponents",
    "Login",
    "ConfigureSelf"
  ]
}
```

Response

The response status is success with status code as 204 and the updated Role.

2.25.3 DELETE

Request

DELETE https://{ip}/redfish/v1/AccountService/Roles/{role_instance}

Content-Type: application/json

Response

The response status is 204 and no response body

2.26 Event Service

2.26.1 GET

Request

https://{ip}/redfish/v1/EventService

Content-Type: application/json

Response

The response of the request will be in JSON format

2.26.1.1 Event Service Properties

Name	Type	ReadOnly	Description	
@odata.context	String	True	Refer Section 2.1	
@odata.id	String	True	Refer Section 2.1	
@odata.type	String	True	Refer Section 2.1	
@odata.etag	String	True	Refer Section 2.1	
Oem	Object		Refer Resource Complex Types under Section 2.2 .	
Id	String	True	Resource Identifier	
Name	String	True	Name of the Resource	
Description	String	True	Provides description of the resource. Refer Section 2.2	
ServiceEnabled	Boolean	False	This indicates whether this service is enabled.	
DeliveryRetryAttempts	Number	False	The number of retrys attempted for any given event to the subscription destination	
DeliveryRetryIntervalSeconds	Number	False	The interval in seconds between the retry attempts for any given event to the subscription destination	
EventFormatTypes	Array	True	This object will contain the actions for this resource under Oem property if any	
			Enum	Description
			MetricReport	The Subscription destination will receive JSON bodies as MetricReport format only when the TelemetryService has generated a new Metric Report or updated an existing Metric Report

			Event	The Subscription destination will receive JSON bodies as Event format for all other types of Events
RegistryPrefixes	Array	True	Prefixes of Message Registries that shall be allowed for an Event Subscription	
ResourceTypes	Array	True	ResourceTypes values that shall be allowed for an Event Subscription.	
SubordinateResourcesSupported	Boolean	True	Indicated Support the SubordinateResource property on Event Subscription.	
Actions	Object	True	The Actions object contains the available custom actions on this resource like SubmitTestEvent or any Oem Action	
Status	Object	True	Refer Section 2.2 for Resource.Oem	
Subscriptions	Object	True	This is a reference to a collection of Event Destination resources. The value of this property shall contain the link to a collection of type EventDestinationCollection	
ServerSentEventUri	String	True	Indicates the link to a URI for receiving Server-Sent Event representation for the events.	
SSEFilterPropertiesSupported	Object	True	Set of properties that are supported in the \$filter query parameter for the ServerSentEventUri.	
			SSEFilterProperties	Supported
			EventFormat Type	true
			MessageId	true
			MetricReportDefinition	false
			OriginResource	true
			RegistryPrefix	true
			ResourceType	true
			SubordinateResources	false
SMTP	Object	True	Set of properties contain parameters for the SMTP (Simple Mail Transfer Protocol) service. Refer to 2.26.1.2	

2.26.1.2 SMTP Service Properties

Name	Type	ReadOnly	Description
Authentication	String	false	<p>Property will Contain Authentication methods for SMTP service. Plain and None are available as options. None is no Authentication and Plain is Basic Authentication with SMTP Server.</p> <p>Setting this to None does NOT delete Username and Password parameters.</p>
ConnectionProtocol	String	false	<p>Property Contains Connection Protocols for SMTP service. "None", "StartTLS", and "TLS_SSL" are possible options.</p> <p>"None" is for sending e-mail over non secure port.</p> <p>"TLS_SSL" is for sending e-mail over Secure Port and "StartTLS" is for sending e-mail over TLS.</p>
FromAddress	String	false	<p>Property Contains The Sender's Address for the SMTP service. This can be a valid email address.</p> <p>If FromAddress is set in Web, the FromAddress input will be set for both Primary and Secondary.</p> <p>If Primary OR Secondary FromAddress is set in Redfish, the Web entry will be updated.</p> <p>If Primary AND Secondary are set in Redfish, Primary FromAddress will be set to Web.</p>
Password	String	false	<p>Property Contains the password if "Authentication" property in SMTP service is "Plain".</p> <p>This will be displayed as "null" for security reasons, but the values will be saved in the backend. When Authentication is set to "None", the value will still exist in backend.</p>
Port	Number	false	<p>Property contains the Destination Port number for the SMTP service.</p> <p>Secureport and Smtpport, available in the IPMI/Web counterpart, are hidden following DMTF spec. By Default Secureport is 465 and Smtpport is 25. If a PATCH command is set with "ConnectionProtocol" as "TLS_SSL" then the SecurePort is changed when "Port" parameter is changed. If the PATCH is called when "ConnectionProtocol" is "StartTLS" or "None", the "Port"</p>

			parameter changes the Smtpport value.
ServerAddress	String	false	Property Contains the Server Address for the SMTP service. This can be in IPv4 or IPv6 format.
ServiceEnabled	Boolean	false	Property controls whether or not the SMTP service is enabled or disabled.

2.26.2 PATCH

Request

PATCH https://{ip}/redfish/v1/EventService

Content-Type: application/json

Request Body

Please refer to the properties that are patchable in Section 2.24.1.1 Event Service Property for which ReadOnly is False that can be sent as Request body in json format.

Example Request Body for Enabling or Disabling EventService :

```
{
  "ServiceEnabled": true,
}
```

Response

The response status is success with status code as 204 and no body.

2.26.3 POST

SubmitTestEvent

SubmitTestEvent Action can be test with below any one of the Request body options,

1. EventId, EventTimeStamp, OriginOfCondition, MessageId, MessageArgs and Severity.
2. MessageId

EventId - Id in String format

EventTimeStamp - Should not be past or more than 2 minutes of BMC date time. BMC date time available in /redfish/v1/Managers/{Managers_Instance} uri.

OriginOfCondition - any valid Redfish URI.

MessageId, MessageArgs and Severity - Can get these values from Registries URI

https://{ip}/redfish/v1/Registries/{Registry_instance.json}

Request

POST https://{ip}/redfish/v1/EventService/ctions/EventService.SubmitTestEvent

Content-Type: application/json

1. EventId, EventTimeStamp, OriginOfCondition, MessageId, MessageArgs and Severity

Examples:

Base:

MessageId : Base.1.12.PropertyValueNotInList

MessageArgs : ["Lit", "IndicatorLED"]

Severity : "Warning"

POST Request Body :

```
{  
  "EventTimestamp": "2019-09-20T23:04:09+02:00",  
  "EventId": "1",  
  "OriginOfCondition": "/redfish/v1/Chassis/Self",  
  "MessageId": "Base.1.12.PropertyValueNotInList",  
  "MessageArgs": ["Lit", "IndicatorLED"],  
  "Severity": "Warning"  
}
```

Security:

MessageId : Security.1.0.AccessDenied

MessageArgs : ["Test"]

Severity: "Critical"

POST Request Body :

```
{  
  "EventTimestamp": "2019-09-20T23:04:09+02:00",  
  "EventId": "2",  
  "OriginOfCondition": "/redfish/v1/Chassis/Self",  
  "MessageId": "Security.1.0.AccessDenied",  
  "MessageArgs": ["Test"],  
  "Severity": "Critical"  
}
```

2. Message Id

Examples:

EventLog:

MessageId : EventLog.1.0.ResourceAdded

POST Request Body :

```
{  
  "MessageId": "EventLog.1.0.ResourceAdded"  
}
```

IPMI:

MessageId : IPMI.1.0.CommandSpecific

POST Request Body :

```
{  
  "MessageId": "IPMI.1.0.CommandSpecific"
```

```
}
```

HttpStatus:

MessageId : HttpStatus.1.0.MethodNotAllowed

POST Request Body :

```
{  
  "MessageId": "HttpStatus.1.0.MethodNotAllowed"  
}
```

SyncAgent:

MessageId : SyncAgent.1.0.AddressOrigin

POST Request Body :

```
{  
  "MessageId": "SyncAgent.1.0.AddressOrigin"  
}
```

Task:

MessageId : Task.1.0.New

POST Request Body :

```
{  
  "MessageId": "Task.1.0.New"  
}
```

Response

The response status is 202 Accepted with the created Task Instance as the response body

2.27 Event SubscriptionCollection

2.27.1 GET

Request

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

Response

Please refer [Section 2.4](#) for the JSON response properties

2.27.2 POST

Request

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

Examples:

1. With EventFormatType, RegistryPrefixes and ResourceTypes:

User can check the list of supported EventFormatType, RegistryPrefixes and ResourceTypes values in <https://{{ip}}/redfish/v1/EventService>.

Request body:

```
{
  "Context": "ABCDEFGH",
  "Destination": "http://10.0.145.99:5000/event",
  "EventFormatType": "Event",
  "RegistryPrefixes": ["SyncAgent", "Base", "EventLog"],
  "ResourceTypes": ["Chassis", "AccountService", "Systems", "EventService"],
  "Protocol": "Redfish",
  "OriginResources": [
    { "@odata.id": "/redfish/v1/AccountService" }
  ]
}
```

Response Body:

```
{
  "@odata.context": "/redfish/v1/$metadata#EventDestination.EventDestination",
  "@odata.etag": "\"1583725738\"",
  "@odata.id": "/redfish/v1/EventService/Subscriptions",
  "@odata.type": "#EventDestination.v1_6_0.EventDestination",
  "Context": "ABCDEFGH",
  "DeliveryRetryPolicy": "TerminateAfterRetries",
  "Description": "Event Subscription",
  "Destination": "http://10.0.145.99:5000/event",
  "EventFormatType": "Event",
  "Id": 1,
  "Name": "Subscription 1",
  "OriginResources": [
    { "@odata.id": "/redfish/v1/AccountService" }
  ]
  "OriginResources@odata.count": 1,
  "Protocol": "Redfish",
  "RegistryPrefixes": [
    "SyncAgent",
    "EventLog",
    "Base"
  ],
}
```

```

    "ResourceTypes": [
        "EventService",
        "AccountService",
        "Chassis",
        "Systems"
    ],
    "Status": {
        "Health": "OK",
        "HealthRollup": "OK",
        "State": "Enabled"
    },
    "SubordinateResources": false
}

```

2. Without EventFormatType , RegistryPrefixes and ResourceTypes:

RegistryPrefixes, ResourceTypes values are empty or absent are accepted in POST call. In this case service shall sent events to destination with any ResourceTypes or any RegistryPrefixes.

If EventFormatType property was absent on POST call then default value will be Event.

Request Body:

- i) RegistryPrefixes & ResourceTypes are empty

```

{
    "Context": "ABCDEFGH",
    "Destination": "http://10.0.145.99:5000/event",
    "RegistryPrefixes": [],
    "ResourceTypes": [],
    "Protocol": "Redfish"
}

```

- ii) EventFormatType, RegistryPrefixes & ResourceTypes are absent

```

{
    "Context": "ABCDEFGH",
    "Destination": "http://10.0.145.99:5000/event",
    "Protocol": "Redfish"
}

```

Response Body:

```

{
    "@odata.context": "/redfish/v1/$metadata#EventDestination.EventDestination",
    "@odata.etag": "\" 1583726231\"",
    "@odata.id": "/redfish/v1/EventService/Subscriptions",
}

```

```

"@odata.type": "#EventDestination.v1_6_0.EventDestination",
"Context": "ABCDEFGH",
"DeliveryRetryPolicy": "TerminateAfterRetries",
"Description": "Event Subscription",
"Destination": "http://10.0.145.99:5000/event",
"EventFormatType": "Event",
"Id": 2,
"Name": "Subscription 2",
"Protocol": "Redfish",
"Status": {
  "Health": "OK",
  "HealthRollup": "OK",
  "State": "Enabled"
},
"SubordinateResources": false
}

```

3. With SubscriptionType As SNMPTrap :

Traps are used when the device needs to alert the Network Management software of an event without being polled. Traps ensure that the NMS gets the information if a certain event occurs on the device that needs to be recorded without being polled by the NMS first.

Syntax of Destination Property:

```

SNMPv3 : Destination : snmp:<snmp_bmc_username>//<destination_addr> ,
SNMPv1/ SNMPv2c : Destination : snmp://<destination_addr> ,

```

Notes:

For SNMPv3, the username with snmp access should be given in the destination.

In the above example, the snmp_bmc_username is a user with SNMP access, from whom the SNMPTrap will be triggered.

The destination_addr is the destination IP, to which the Trap will be sent.

For SNMPv1/ SNMPv2c , the username should not be passed in the Destination.

i) Request body of SNMPTrap version-1:

```

{
  "Context": "Event_Test",
  "Destination": "snmp://10.0.125.169",
  "EventFormatType": "Event",
  "RegistryPrefixes": [ "EventLog", "SyncAgent", "Security", "IPMI", "HttpStatus", "Base" ],
  "ResourceTypes": [ "Systems", "Chassis", "AccountService", "TelemetryService",
    "Managers", "EventService" ],
  "Protocol": "SNMPv1",

```



```
"SubscriptionType" : "SNMPTrap"
```

```
}
```

Response Body of SNMPTrap version-1:

```
{
```

```
"@odata.context" : "/redfish/v1/$metadata#EventDestination.EventDestination",
```

```
"@odata.etag" : "\" 1616755330\"",
```

```
"@odata.id" : "/redfish/v1/EventService/Subscriptions",
```

```
"@odata.type" : "#EventDestination.v1_7_0.EventDestination",
```

```
"Context" : "Event_Test",
```

```
"DeliveryRetryPolicy" : "TerminateAfterRetries",
```

```
"Description" : "Event Subscription",
```

```
"Destination" : "snmp://10.0.125.169",
```

```
"EventFormatType" : "Event",
```

```
"Id" : 2,
```

```
"Name" : "Subscription 2",
```

```
"Protocol" : "SNMPv1",
```

```
"RegistryPrefixes" : [
```

```
  "IPMI",
```

```
  "SyncAgent",
```

```
  "EventLog",
```

```
  "Base",
```

```
  "Security",
```

```
  "HttpStatus"
```

```
],
```

```
"ResourceTypes" : [
```

```
  "Systems",
```

```
  "TelemetryService",
```

```
  "Chassis",
```

```
  "EventService",
```

```
  "AccountService",
```

```
  "Managers"
```

```
],
```

```
"Status" : {
```

```
  "Health" : "OK",
```

```
  "HealthRollup" : "OK",
```

```
  "State" : "Enabled"
```

```
},
```

```
"SubordinateResources" : false,
```

```
"SubscriptionType" : "SNMPTrap"
```

```
}
```

ii) **Request body of SNMPTrap version-2:**

```
{  
  "Context" : "Event_Test",  
  "Destination" : "snmp://10.0.125.169",  
  "EventFormatType" : "Event",  
  "RegistryPrefixes" : [ "EventLog", "SyncAgent", "Security", "IPMI", "HttpStatus", "Base" ],  
  "ResourceTypes" : [ "Systems", "Chassis", "AccountService", "TelemetryService",  
    "Managers", "EventService" ],  
  "Protocol" : "SNMPv2c",  
  "SubscriptionType" : "SNMPTrap"  
}
```

Response Body of SNMPTrap version-2:

```
{  
  "@odata.context" : "/redfish/v1/$metadata#EventDestination.EventDestination",  
  "@odata.etag" : "\" 1616755368\"",  
  "@odata.id" : "/redfish/v1/EventService/Subscriptions",  
  "@odata.type" : "#EventDestination.v1_7_0.EventDestination",  
  "Context" : "Event_Test",  
  "DeliveryRetryPolicy" : "TerminateAfterRetries",  
  "Description" : "Event Subscription",  
  "Destination" : "snmp://10.0.125.169",  
  "EventFormatType" : "Event",  
  "Id" : 3,  
  "Name" : "Subscription 3",  
  "Protocol" : "SNMPv2c",  
  "RegistryPrefixes" : [  
    "IPMI",  
    "SyncAgent",  
    "EventLog",  
    "Base",  
    "Security",  
    "HttpStatus"  
  ],  
  "ResourceTypes" : [  
    "Systems",  
    "TelemetryService",  
    "Chassis",
```

```

    "EventService",
    "AccountService",
    "Managers"
  ],
  "Status": {
    "Health": "OK",
    "HealthRollup": "OK",
    "State": "Enabled"
  },
  "SubordinateResources": "false",
  "SubscriptionType": "SNMPTrap"
}

```

iii) **Request body of SNMPTrap version-3:**

```

{
  "Context": "Event_Test",
  "Destination": "snmp://admin@10.0.125.169",
  "EventFormatType": "Event",
  "RegistryPrefixes": [ "EventLog", "SyncAgent", "Security", "IPMI", "HttpStatus", "Base" ],
  "ResourceTypes": [ "Systems", "Chassis", "AccountService", "TelemetryService",
    "Managers", "EventService" ],
  "Protocol": "SNMPv3",
  "SubscriptionType": "SNMPTrap"
}

```

Response Body of SNMPTrap Version-3:

```

{
  "@odata.context": "/redfish/v1/$metadata#EventDestination.EventDestination",
  "@odata.etag": "\" 1616755368\"",
  "@odata.id": "/redfish/v1/EventService/Subscriptions",
  "@odata.type": "#EventDestination.v1_7_0.EventDestination",
  "Context": "Event_Test",
  "DeliveryRetryPolicy": "TerminateAfterRetries",
  "Description": "Event Subscription",
  "Destination": "snmp://10.0.125.169",
  "EventFormatType": "Event",
  "Id": 4,
  "Name": "Subscription 4",
  "Protocol": "SNMPv3",

```

```

    "RegistryPrefixes" : [
        "IPMI" ,
        "SyncAgent" ,
        "EventLog" ,
        "Base" ,
        "Security" ,
        "HttpStatus"
    ],
    "ResourceTypes" : [
        "Systems" ,
        "TelemetryService" ,
        "Chassis" ,
        "EventService" ,
        "AccountService" ,
        "Managers"
    ],
    "Status" : {
        "Health" : "OK" ,
        "HealthRollup" : "OK" ,
        "State" : "Enabled"
    },
    "SubordinateResources" : false,
    "SubscriptionType" : "SNMPTrap"
}

```

Response

The response status is 201 with no body.

2.28 Event Subscription

2.28.1 GET

Request

```

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

```

Response

The response of the request will be in JSON format

2.28.1.1 Event Subscription Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1

@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2 .
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
Destination	String	True	This property shall contain a URI to the destination where the events will be sent
Context	String	False	A client-supplied Description that is stored with the event destination subscription. This property shall contain a client supplied context that will remain with the connection through the connections lifetime
SubscriptionType	String	True	The value of this property shall indicate the type of subscription for events. If this property is not present, the SubscriptionType shall be assumed to be "RedfishEvent". "RedfishEvent" SubscriptionType indicates that the subscription follows the Redfish specification for event notifications, which is done by a service sending an HTTP POST to the subscriber's destination URI.
Protocol	String	True	The protocol type of the event connection. This property shall contain the protocol type that the event will use for sending the event to the destination. A value of Redfish shall be used to indicate that the event type shall adhere to that defined in the Redfish specification. "enum": ["Redfish"]
MessageIds	Array	True	A list of MessageIds that the service will only send. If this property is absent or the array is empty, then Events with any MessageId will be sent to the subscriber
OriginResources	Array	True	A list of resources for which the service will only send related events. If this property is absent or the array is empty, then Events originating from any resource will be sent to the subscriber
OriginResources@odata.count	Number	True	The number of items in a collection
Actions	Object	True	This object will contain the actions for this resource

			under Oem property if any	
SubordinateResources	Boolean	True	This property specifying OriginResources when set to true.	
EventFormatType	String	True	This property shall contain the types of message that will be sent to the Event destination.	
			Enum	Description
			MetricReport	The Subscription destination will receive JSON bodies as MetricReport format only when the TelemetryService has generated a new Metric Report or updated an existing Metric Report
			Event	The Subscription destination will receive JSON bodies as Event format for all other types of Events
RegistryPrefixes	Array	True	A list of Prefixes for the Message Registries that contain the MessageIds	
ResourceTypes	Array	True	A list of Resource type values that corresponds to the OriginOfCondition	
Status	Object	True	Refer Section 2.2 for Resource.Oem.	
MetricReportDefinitions	Array	True	<p>This property shall specify an array of metric report definitions that are the only allowable generators of metric reports for this subscription. Metric reports originating from metric report definitions not contained in this array shall not be sent to the subscriber. If this property is absent or the array is empty, the service shall send metric reports originating from any metric report definition to the subscriber.</p> <p><i>Note: This property will be allowed only if the EventFormatType is MetricReport. Also the Metric Report Definition must have the ReportAction as RedfishEvent.</i></p>	
DeliveryRetryPolicy	String	False	This property shall indicate the subscription delivery retry policy for events where the subscription type is RedfishEvent. If this property is not present, the policy shall be assumed to be TerminateAfterRetries.	
			Enum	Description
			RetryForever	The subscription is not

				suspended or terminated, and attempts at delivery of future events shall continue even after the after the maximum number of retries is reached.
			SuspendRetries	The subscription is suspended after the maximum number of retries is reached.
			TerminateAfterRetries	The subscription is terminated after the maximum number of retries is reached. The subscription will get deleted after the retry attempts.

2.28.2 PATCH

Request

PATCH https://{{ip}}/redfish/v1/EventService/Subscriptions/{{Subscriptions_instance}}
Content-Type: application/json

Request Body

Please refer to the properties that are patchable in Properties for which ReadOnly is False that can be sent as Request body parameters in json format.

Example Request Body:

```
{
  "Context": "Event_1"
}
```

Response

The response status is success with status code as 204 and no body.

2.28.3 DELETE

Request

DELETE https://{{ip}}/redfish/v1/EventService/Subscriptions/{{Subscriptions_instance}}
Content-Type: application/json

Response

The response status is 204 and no response body

2.28.4 POST

This action shall resume a suspended event subscription, which affects the subscription status.

This action link is shown in the subscriptions instance only when the subscription gets suspended.

Request

POST

https://{{ip}}/redfish/v1/EventService/Subscriptions/{{Subscriptions_instance}}/Actions/EventDestination.ResumeSubscription

Request Body

This action does not require any request body. Even if the request body is supplied, it will not be validated.

Response

The response status is success with status code as 204 and no body.

2.29 Task Service

2.29.1 GET

Request

https://{{ip}}/redfish/v1/TaskService

Content-Type: application/json

Response

The response of the request will be in JSON format

2.29.1.1 TaskService Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2 .
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
CompletedTaskOverWritePolicy	String	True	The value of this property shall indicate how completed tasks are handled should the task service need to track more tasks

			Enum	Description
			Manual	Completed tasks are not automatically overwritten.
			Oldest	Oldest completed tasks are overwritten.
DateTime	String	True	The current DateTime value for the TaskService, with offset from UTC, in Redfish Timestamp format	
LifeCycleEventOnTaskStateChange	Boolean	True	The value of this property, if set to true, shall indicate that the service shall send a Life Cycle event to Listener Destinations registered for such events upon change of task state	
ServiceEnabled	Boolean	True	This indicates whether this service is enabled.	
Status	Object	True	Refer Section 2.2 for Resource.Oem.	
Tasks	Object	True	The value of this property shall be a link to a resource of type Task Collection.	
Actions	Object	True	This object will contain the actions for this resource under Oem property if any.	

2.30 Task Collection

2.30.1 GET

Request

https://{ip}/redfish/v1/TaskService/Tasks

Content-Type: application/json

Response

Please refer [Section 2.4](#) for the JSON response properties.

2.31 Task

2.31.1 GET

Request

https://{ip}/redfish/v1/TaskService/Tasks/{task_instance}

Content-Type: application/json

Response

The Response Status Code will be 200 OK, irrespective of the Task State and the Response Body of the request will be in JSON format. The properties of the Response Body are mentioned in the following table:

2.31.1.1 Task Properties

Name	Type	ReadOnly	Description	
@odata.context	String	True	Refer Section 2.1	
@odata.id	String	True	Refer Section 2.1	
@odata.type	String	True	Refer Section 2.1	
@odata.etag	String	True	Refer Section 2.1	
Oem	Object		Refer Resource Complex Types under Section 2.2 .	
Id	String	True	Resource Identifier	
Name	String	True	Name of the Resource	
Description	String	True	Provides description of the resource. Refer Section 2.2	
TaskState	String	True	The value of this property shall indicate the state of the task	
			Enum	Description
			New	New shall be used to indicate that the task is a new task which has just been instantiated and is in the initial state and indicates it has never been started.
			Starting	Task is starting. Starting shall be used to indicate that the task is moving from the New, Suspended, or Service states into the Running state
			Running	Task is running normally. Running shall be used to indicate that the Task is running.
			Suspended	Task has been suspended. Suspended shall be used to indicate that the Task is stopped (e.g., by a user), but can be restarted in a seamless manner.
			Interrupted	Task has been interrupted. Interrupted shall be used to indicate that the Task was interrupted (e.g., by a server crash) in the middle of processing, and the user should either re-run/restart the Task
			Pending	Task is pending and has not started. Pending shall be used to indicate that the Task has been queued and will be scheduled for processing as soon as resources are available to handle the request
			Stopping	Task is in the process of stopping. Stopping shall be used to indicate that the Task is in the process of moving to a Completed, Killed, or

				Exception state.
			Completed	Task has completed. Completed shall be used to indicate that the task has completed normally
			Killed	Task was terminated. Killed shall be used to indicate that the task has been stopped by a Kill state change request (non-graceful shutdown).
			Exception	Task has stopped due to an exception condition. Exception shall be used to indicate that the Task is in an abnormal state that might be indicative of an error condition.
			Service	Task is running as a service. Service shall be used to indicate that the Task is in a state that supports problem discovery, or resolution, or both. This state is used when a corrective action is possible
			Cancelling	Task is in the process of being cancelled
			Cancelled	Task has been cancelled by an operator or internal process. It will show reason for cancellation.
StartTime	String	True	The date-time stamp that the task was last started. The value of this property shall indicate the time the task was started.	
EndTime	String	True	The value of this property shall indicate the time the task was completed	
TaskStatus	String	True	The value of this property shall be the completion status of the task, as defined in the Status Section of the Redfish specification and shall not be set until the task has completed	
Messages	Array	True	This is an array of messages associated with the task	
Actions	Object	True	This object will contain the actions for this resource under Oem property if any	
HidePayload	Boolean	True	If value of this property is true will hide the contents of the Payload otherwise the Payload contents can be returned normally	
PercentComplete	Interger	True	Completion percentage of this Task.	
Payload	Object	True	Refer Below table for Payload property details	

			Refer Section 2.29.1.2
--	--	--	------------------------

2.31.1.2 Payload Properties

Name	Type	ReadOnly	Description
HttpHeaders	Array	True	HTTP Headers used in the execution of this Task.
HttpOperation	String	True	HTTP Operation to execution for this Task.
JsonBody	String	True	JSON Payload used for this Task.
TargetUri	String	True	URI of the Target for this Task.

2.31.2 DELETE

Request

DELETE https://{ip}/redfish/v1/TaskService/Tasks/{task_instance}
Content-Type: application/json

Response

The response status is 204 and no response body

2.32 JSON Schema file collection

2.32.1 GET

Request

https://{ip}/redfish/v1/JsonSchemas
Content-Type: application/json

Response

Please refer [Section 2.4](#) for the JSON response propertie

2.33 JsonSchemaFile

2.33.1 GET

Request

https://{ip}/redfish/v1/JsonSchemas/{json_schema_name}
Content-Type: application/json

Response

The response of the request will be in JSON format

2.33.1.1 JSON Schema file Properties

Name	Type	ReadOnly	Description
------	------	----------	-------------

@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
Languages	Array	True	The value of this property shall be a Description consisting of an RFC 5646 language code
Schema	String	True	The value of this property shall be the value of the @odata.type property for that schema and shall conform to the syntax specified in the Redfish specification for the Type property
Location	Array	True	Location information for this schema file. Refer Section 2.31.1.2 JSON Schema File Location Property
Actions	Object	True	This object will contain the actions for this resource under Oem property if any

2.33.1.2 JSON Schema File Location Properties

Name	Type	ReadOnly	Description
Language	String	True	The language code for the file the schema is in.
Uri	String	True	Link to locally available URI for schema. The value of this property shall be a URI co-located with the Redfish service that specifies the location of the schema file. This property shall only be used for individual schema files. The file name portion of the URI shall conform to the format [SchemaType].[MajorVersion].[MinorVersion].json and be in conformance with the Redfish specification
ArchiveUri	String	True	If the schema is hosted on the service in an archive file, this is the link to the archive file. The value of this property shall be a URI co-located with the Redfish service that specifies the location of the schema file. This property shall only be used for archive files (zip or other formats). The value of ArchiveFile shall have the file name of the individual schema file within the archive file
PublicationUri	String	True	Link to publicly available (canonical) URI for schema. The value of this property shall be a URI not co-located with the Redfish service that specifies the canonical location of the schema file. This property shall only be used for individual schema files

ArchiveFile	String	True	If the schema is hosted on the service in an archive file, this is the name of the file within the archive. The value of this property shall be the file name of the individual schema file within the archive file specified by the ArchiveUri property. The file name shall conform to the format [SchemaType].[MajorVersion].[MinorVersion].json and be in conformance with the Redfish specification
-------------	--------	------	--

2.34 SessionCollection

2.34.1 GET

Request

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

Response

Please refer [Section 2.4](#) for the JSON response properties

2.34.2 POST [Creating new Session]

Request

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

Example POST Request:

```
{
  "UserName": "Administrator",
  "Password": "superuser"
}
```

Response

The response status is 201 and the response body is a GET Response with the properties of the newly created Session.

2.35 Session Service

2.35.1 GET

Request

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

Response

The response of the request will be in JSON format.

2.35.1.1 SessionService Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
Status	Object	True	Refer Section 2.2 for Resource.Oem.
ServiceEnabled	Boolean	False	This indicates whether this service is enabled.
SessionTimeout	Number	False	This is the number of seconds of inactivity that a session may have before the session service closes the session due to inactivity. Minimum Value :30 & Maximum Value : 86400
Sessions	Object	True	This property shall contain the link to a collection of Sessions
Actions	Object	True	This object will contain the actions for this resource under Oem property if any.

2.35.2 PATCH

Request

PATCH https://{ip}/redfish/v1/SessionService

Content-Type: application/json

Request Body

Please refer to the properties that are patchable in Session 2.33.1.1 SessionService Property for which ReadOnly is False that can be sent as Request body in json format.

Example Request Body for Enabling or Disabling SessionService and setting the session timeout:

```
{
  "ServiceEnabled": true,
  "SessionTimeout": 300
}
```

Response

The response status is success with status code as 204

2.36 Session

2.36.1 GET

Request

https://{ip}/redfish/v1/SessionService/Sessions/{session_id}

Content-Type: application/json

Response

The response of the request will be in JSON format

2.36.1.1 Session Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
UserName	String	True	The UserName for the account for this session. The value of this property shall be the UserName that matches a registered account identified by a ManagerAccount resource registered with the Account Service
Password	String	True	This property is used in a POST to specify a password when creating a new session. The value of this property shall be the password for this session.
Actions	Object	True	This object will contain the actions for this resource under Oem property if any

2.36.2 DELETE

Request

DELETE https://{ip}/redfish/v1/SessionService/Sessions/{session_id}

Content-Type: application/json

Response

The response status is 204 and no response body

2.37 Message Registry File Collection

2.37.1 GET

Request

https://{ip}/redfish/v1/Registries

Content-Type: application/json

Response

Please refer [Section 2.4](#) for the JSON response properties

2.38 MessageRegistry

2.38.1 GET

Request

https://{ip}/redfish/v1/Registries/{Registry_instance.json}

Content-Type: application/json

Response

The response of the request will be in JSON format

2.38.1.1 MessageRegistry Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
Language	String	True	This is the RFC 5646 compliant language code for the registry. The value of this property shall be a Description consisting of an RFC 5646 language code.
RegistryPrefix	String	True	This is the single word prefix used in messageIDs which uniquely identifies all of the messages in this registry as belonging to this registry.
RegistryVersion	String	True	This is the message registry version which is used in the middle portion of a messageID. The format of this Description shall be of the format majorversion.minorversion.errata in compliance with Protocol Version Section of the Redfish specification
OwningEntity	String	True	The value of this property shall be a Description that represents the publisher of this registry.
Messages	Object	True	The pattern property shall represent the suffix to be used in the MessageID and shall be unique within this message registry.

2.39 MessageRegistryFile

2.39.1 GET

Request

https://{ip}/redfish/v1/Registries/{Registry_instance}

Content-Type: application/json

Response

The response of the request will be in JSON format

2.39.1.1 Message Registry Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Languages	Array	True	Language codes for the schemas available. The value of this property shall be a Description consisting of an RFC 5646 language code..
Registry	String	True	The value of this property shall be the value of the Registry Name, Major and Minor version and shall conform to the syntax specified in the Redfish specification for the MessageId property without the MessageKey
Location	Array	True	Location information for this schema file. Refer Section 2.31.1.2 JSON Schema File Location Property

2.40 UpdateService

2.40.1 GET

Request

https://{ip}/redfish/v1/UpdateService

Content-Type: application/json

Response

The response of the request will be in JSON format

2.40.1.1 UpdateService Properties

Name	Type	ReadOnly	Description				
@odata.context	String	True	Refer Section 2.1				
@odata.id	String	True	Refer Section 2.1				
@odata.type	String	True	Refer Section 2.1				
@odata.etag	String	True	Refer Section 2.1				
Oem	Object		Refer Section 2.40.1.2				
Id	String	True	Resource Identifier				
Name	String	True	Name of the Resource				
Description	String	True	Provides description of the resource. Refer Section 2.2				
Status	Object	True	Refer Section 2.2 for Resource.Oem.				
ServiceEnabled	Boolean	False	This indicates whether this service is enabled.				
Actions	Object	True	UpdateService allows the user to perform UpdateService.SimpleUpdate Action. It can also contain an Oem Object Under Oem attribute under this Actions.				
			Enum		Description		
			UpdateService.BMCFwUpdate		Perform Single/Dual image BMCFwUpdate and HPMFwUpdate Action		
			UpdateService.UploadFirmwareImage		Upload FirmwareImage.		
			UpdateService.UploadCABundle		Upload CA Bundle.		
FirmwareInventory	Object	True	This property shall contain a link to a Resource of type SoftwareInventoryCollection.				
			Name		Type	Read Only	Description
			@odata.id		String	True	Refer Section 2.1
MaxImageSizeBytes	Integer	True	The maximum size in bytes of the software update image that this Service supports.				
MultipartHttpPushUri	String	True	The URI used to perform a Redfish Specification-defined Multipart HTTP or HTTPS push update to the Update Service.				

2.40.1.2 UpdateService Oem Object

Name	Type	ReadOnly	Description
AMIUpdateService	Object	True	Contains information related to AMI features supported by the Update Service Refer Section 2.40.1.3

BMC	Object	True	Contains the image configurations and preserve configurations.			
			Name	Type	Read Only	Description
			@odata.type	String	True	Refer Section 2.1
			DualImageConfiguration	Object	True	Refer to 2.40.1.5

2.40.1.3 AMIUpdateService Properties

Name	Type	ReadOnly	Description
@odata.type	String	True	Refer Section 2.1
FlashPercentage	String	True	Percentage of flash done
PreserveConfiguration	Object	True	The Preserve Configuration info. <i>Note: Please refer Refer 2.40.1.4</i>
UpdateStatus	String	True	Stage of UpdateService
UpdateTarget	String	True	Update Target

2.40.1.4 UpdateService - PreserveConfiguration

Name	Type	ReadOnly	Description
SDR	Boolean	False	To preserve SDR.
FRU	Boolean	False	To preserve FRU.
SEL	Boolean	False	To preserve SEL.
IPMI	Boolean	False	To preserve IPMI. It will preserve Network automatically if preserve IPMI
Network	Boolean	False	To preserve Network. It will preserve IPMI automatically if preserve Network.
NTP	Boolean	False	To preserve NTP.
SNMP	Boolean	False	To preserve SNMP.
SSH	Boolean	False	To preserve SSH.
KVM	Boolean	False	To preserve KVM.
Authentication	Boolean	False	To preserve Authentication.
Syslog	Boolean	False	To preserve Syslog.
CMX	Boolean	False	To preserve CMX.
WEB	Boolean	False	To preserve WEB.
EXTLOG	Boolean	False	To preserve SER.
REDFISH	Boolean	False	To preserve REDFISH.

AUTOMATION_ENGINE	Boolean	False	To preserve AUTOMATION_ENGINE.
-------------------	---------	-------	--------------------------------

2.40.1.5 UpdateService – DualImageConfiguration

Name	Type	ReadOnly	Description
ActiveImage	String	True	Active image in the BMC.
BootImage	String	True	Represent the image to which BMC boots to.
FirmwareImage1Name	String	True	The name of image #1.
FirmwareImage1Version	String	True	The version of image #1.
FirmwareImage2Name	String	True	The name of image #2.
FirmwareImage2Version	String	True	The version of image #2.

2.40.1.6 UpdateService - SimpleUpdateActionInfo

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
Parameters	Object		A parameter associate with the specified Redfish Action. Refer to 2.40.1.7.

2.40.1.7 UpdateService - SimpleUpdateActionInfo - Parameters Properties

Name	Type	ReadOnly	Description
Name	String	True	The name of the parameter for this Action.
Required	Boolean	True	Indicates whether the parameter is required to perform this Action
DataType	String	True	The JSON property type used for this parameter. Allowable Enums are "Boolean,Number,NumberArray,String,StringArray,Object,ObjectArray"
AllowableValues	Array	True	A list of values for this parameter supported by this Action target

2.40.1.8 UpdateService - Actions - SimpleUpdate Properties

Name	Type	ReadOnly	Description	
TransferProtocol	String	False	Enum	Description

			HTTP	HTTP protocol.
			FTP	File Transfer Protocol.
ImageURI	String	False	This action is used to update software components.	
User	String	False	User for FTP TransferProtocol.	
Password	String	False	Password for FTP TransferProtocol	

2.40.1.9 UpdateService - Response Properties

Name	Type	ReadOnly	Description
@odata.type	String	True	Refer Section 2.1
Messages	Array	True	This property shall contain an array of messages associated with the settings.

2.40.1.10 UpdateService - BMCFwUpdateActionInfo Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Parameters	Object		A parameter associated with the specified Redfish Action Refer Section 2.40.1.11

2.40.1.11 UpdateService - Action - BMCFwUpdateActionInfo –Parameters Properties

Name	Type	ReadOnly	Description
Name	String	True	The name of the parameter for this Action.
Required	Boolean	True	Indicates whether the parameter is required to perform this Action.
DataType	String	True	The JSON property type used for this parameter. Allowable Enums are "Boolean,Number,NumberArray,String,StringArray,Object,ObjectArray".
AllowableValues	Array	True	A list of values for this parameter supported by this Action target.

2.40.1.12 UpdateService – Action - UpdateService.BMCFwUpdate Properties

Name	Type	ReadOnly	Description	
FlashType	String	False	Enum	Description
			FULLFwUpdate	Perform Single image BMCFwUpdate Action.

UploadSelector	String	False	DUALIMAGEFwUpdate	Perform Dual image BMCFwUpdate Action.
			HPMFwUpdate	Perform HPMFwUpdate Action.
			Enum	Description
			AutoInactive	Updates only the inactive firmware image
			Image1	Updates BMC firmware image1
			Image2	Updates BMC firmware image2.
			ImageBoth	Updates both the firmware images
			Default	Updates BMC firmware image

2.40.1.13 UpdateService - Action – UpdateService.UploadFirmwareImage Properties

Name	Type	ReadOnly	Description	
image_file	String	False	Enum	Description
			image_file path	Perform Upload Firmware Image Action

2.40.1.14 UpdateService - Actions - MultipartHttpPush Properties

Name	Type	ReadOnly	Description
UpdateFile	File	False	Image binary for update
UpdateParameter	File	False	DMTF defined standard parameters in json format. Refer 2.40.1.15
OemParameters	File	False	AMI OEM parameters in json format. Refer 2.40.1.16

2.40.1.15 UpdateService - Actions - MultipartHttpPush UpdateParameters Properties

Name	Type	ReadOnly	Description	
Targets	Array	False	An array of URIs that indicate where to apply the update image. If this parameter is not present or contains no targets, the Service shall apply the software image to all applicable targets, as determined by the Service.	
			Enum	Description
			/redfish/v1/UpdateService/FirmwareInventory/BMC	Indicate to update BMC firmware
			/redfish/v1/UpdateService/FirmwareInventory/BMCImage1	Indicate to update BMC Image1 for dual image
			/redfish/v1/UpdateService/FirmwareInventory/BMCImage2	Indicate to update BMC Image2

			reInventory/BMCImage2	for dual image
			/redfish/v1/UpdateService/Firmwa reInventory/CPLD	Indicate to update CPLD component

2.40.1.16 UpdateService - Actions - MultipartHttpPush OemParameters Properties

Name	Type	ReadOnly	Description	
ImageType	String	False	Enum	Description
			BMC	Indicate uploaded file is a signed BMC image.
			HPM	Indicate uploaded file is an image in HPM format.

2.40.1.17 UpdateService - Actions - UpdateService.UploadCABundle Properties

Name	Type	ReadOnly	Description	
ca_bundle	file	False	Enum	Description
			CA bundle path	Provides CA bundle file in pem format which contains all required RootCA certificates and intermediate certificates for verifying SSL certificate on HTTPS server during SSL handshake.

2.40.2 PATCH

Request

https://{ip}/redfish/v1/UpdateService

Content-Type: application/json

Example PATCH Request Body:

```
{
  "ServiceEnabled" : true,
  "Oem" : {
    "AMUpdateService" : {
      "PreserveConfiguration" : {
        "IPMI" : true,
        "REDFISH" : true
      }
    }
  }
}
```

Response

The response status is 204 with no body

2.40.3 POST

2.40.3.1 SimpleUpdate

Request

The TransferProtocol can be one of the following values: " HTTP ", " HTTPS ", " FTP ".

```
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"}
```

```
{"TransferProtocol": "HTTPS", "ImageURI": "http://{HTTPS_server_IP}/{image_name}.ima"}
```

user account:

```
{"TransferProtocol": "FTP", "ImageURI": "ftp://{FTP_server_IP}/{image_name}.ima",
```

```
"User": "user_account", "Password": "user_password" }
```

Response

The response status is 202 with the response message.

2.40.3.2 UploadCABundle

Request

```
POST https://{ip}/redfish/v1/UpdateService/Actions/Oem/UpdateService.UploadCABundle
```

```
Content-Type: multipart/form-data; boundary=-----493918603359346570222237
```

Example POST Request Body:

```
-----493918603359346570222237
```

```
Content-Disposition: form-data; name= ca_bundle ; filename= ca.pem
```

```
Content-Type: application/x-x509-ca-cert
```

```
<ca bundle content>
```

```
-----493918603359346570222237—
```

Response

The response status is 204 with no body.

2.40.3.3 UploadFirmwareImage

Request

```
POST
```

```
https://{ip}/redfish/v1/UpdateService/Actions/Oem/UpdateService.UploadFirmwareImage
```

```
Content-Type: multipart/form-data; boundary=-----493918603359346570222237
```

Example POST Request Body:

```
-----493918603359346570222237
Content-Disposition: form-data; name= image_file ; filename= encrypted_rom.ima_enc
Content-Type: application/octet-stream
<image_binary>
-----493918603359346570222237--
```

Response

The response status is 204 with no body

2.40.3.4 BMCFwUpdate

Request

Prerequisites for action BMCFwUpdate : Upload FirmwareImage by POST action
UploadFirmwareImage.

The FlashType can be one of the following values: " **FULLFwUpdate**", "

DUALIMAGEFwUpdate", " **HPMFwUpdate**" and UploadSelector can be one of the following
values: " **Default** ", " **Autolnactive** ", " **Image1** ", " **Image2** ", " **ImageBoth**". (When FlashType
are FULLFwUpdate or HPMFwUpdate, UploadSelector need to be **Default**)

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

Example POST Request Body:

```
{"FlashType": "FULLFwUpdate", "UploadSelector": "Default"}
{"FlashType": "DUALIMAGEFwUpdate", "UploadSelector": "ImageBoth"}
```

Response

The response status is 202 with the response message.

2.40.3.5 MultipartHttpPush

Request

```
POST https://{ip}/redfish/v1/UpdateService/upload
Content-Type: multipart/form-data; boundary=-----493918603359346570222237
```

Example POST Request Body:

```
-----493918603359346570222237
Content-Disposition: form-data; name= UpdateFile ; filename= encrypted_rom.ima_enc
Content-Type: application/octet-stream
<image_binary>
-----493918603359346570222237
Content-Disposition: form-data; name= UpdateParameters ; filename= parameters.json
Content-Type: application/json
{
  "Targets": [
```

```

    "/redfish/v1/UpdateService/FirmwareInventory/BMC"
  ]
}
-----49391860335934657022237
Content-Disposition: form-data; name= OemParameters ; filename= oem_parameters.json
Content-Type: application/json
{
  "ImageType": "BMC"
}
-----49391860335934657022237--

```

Response

The response status is 202 with the response message.

2.40.4 FirmwareInventory Collection

GET

Request

```

https://{ip}/redfish/v1/UpdateService/FirmwareInventory
Content-Type: application/json

```

Response

Please refer [Section 2.4](#) for the JSON response properties

2.40.5 FirmwareInventory

GET

Request

```

https://{ip}/redfish/v1/UpdateService/FirmwareInventory /{{firmwareinventory_instance}}
Content-Type: application/json

```

Response

Please refer 2.40.5.1 for the JSON response properties

2.40.5.1 FirmwareInventory Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Updateable	Boolean	True	An indication of whether the Update Service can update this

			firmware.
Version	String	True	The version of this software. <i>Note: Only BMC version supported</i>

2.41 NetworkPort Collection

2.41.1 GET

Request

```
https://{ip}/redfish/v1/Chassis/Self/NetworkAdapters/{{NetworkAdapter_instance}}/NetworkPorts
Content-Type: application/json
```

Response

Please refer [Section 2.4](#) for the JSON response properties

2.42 NetworkPort

2.42.1 GET

Request

```
https://{ip}/redfish/v1/Chassis/Self/NetworkAdapters/{{NetworkAdapter_instance}}/NetworkPorts/{{NetworkPort_instance}}
Content-Type: application/json
```

Response

Please refer [Section 2.4](#) for the JSON response properties

2.42.1.1 Network Port Instance Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Oem	Object		Refer Resource Complex Types under Section 2.2
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
Status	Object	True	Refer Section 2.2 for Resource.Oem.
PhysicalPortNumber	String	True	The physical port number label for this port

LinkStatus	Object	True	The status of the link between this port and its link partner	
			Enum	Description
			Down	The port is enabled but link is down.
			Up	The port is enabled and link is good (up).
SupportedLinkCapabilities	Array of Objects	True	This object shall describe the static capabilities of the port, irrespective of transient conditions such as cabling, interface module presence, or remote link partner status or configuration. Refer Section 2.40.1.2	
ActiveLinkTechnology	String	True	Network Port Active Link Technology	
			Enum	Description
			Ethernet	The port is capable of connecting to an Ethernet network.
			InfiniBand	The port is capable of connecting to an InfiniBand network.
SupportedEthernetCapabilities	String	True	The value of this property shall be an array of zero or more Ethernet capabilities supported by this port	
			Enum	Description
			WakeOnLAN	Wake on LAN (WoL) is supported on this port
			EEE	IEEE 802.3az Energy Efficient Ethernet (EEE) is supported on this port
NetDevFuncMinBWAlloc	Array of Objects	True	The array of minimum bandwidth allocation percentages for the Network Device Functions associated with this port Refer Section 2.40.1.3	
NetDevFuncMaxBWAlloc	Object	True	The array of maximum bandwidth allocation	

			percentages for the Network Device Functions associated with this port. Refer Section 2.40.1.4	
AssociatedNetworkAddresses	Array	True	The array of configured network addresses (MAC or WWN) that are associated with this Network Port, including the programmed address of the lowest numbered Network Device Function, the configured but not active address if applicable, the address for hardware port teaming, or other network addresses	
EEEEnabled	Boolean	True	Whether IEEE 802.3az Energy Efficient Ethernet (EEE) is enabled for this network port.	
WakeOnLANEnabled	Boolean	True	Whether Wake on LAN (WoL) is enabled for this network port.	
PortMaximumMTU	Number	True	The value of this property shall be the largest maximum transmission unit (MTU) that can be configured for this network port	
FlowControlStatus	String	True	The value of this property shall be the 802.3x flow control behavior negotiated with the link partner for this network port (Ethernet-only). Enums are same as FlowControlConfiguration given below	
FlowControlConfiguration	String	True	The value of this property shall be the locally configured 802.3x flow control setting for this network port.	
			Enum	Description
			None	No IEEE 802.3x flow control is enabled on this port.
			TX	IEEE 802.3x flow control may be initiated by this station.
			RX	IEEE 802.3x flow control may be initiated by the link partner.
			TX_RX	IEEE 802.3x flow control

				may be initiated by this station or the link partner.
SignalDetected	Boolean	True	The value of this property shall be a boolean indicating whether the port has detected enough signal on enough lanes to establish link.	
CurrentLinkSpeedMbps	Number	True	The value of this property shall be the current configured link speed of this port.	
FCFabricName	String	True	The FC Fabric Name provided by the switch	
FCPortConnectionType	String	True	This is the connection type of this port	
			Enum	Description
			ExtenderFabric	This port connection type is an extender fabric port.
			Generic	This port connection type is a generic fabric port.
			NPort	This port connects via an N-Port to a switch.
			NotConnected	This port is not connected.
			PointToPoint	This port connects in a Point-to-point configuration.
			PrivateLoop	This port connects in a private loop configuration.
			PublicLoop	This port connects in a public configuration.
MaxFrameSize	Number	True	The maximum frame size supported by the port.	
NumberDiscoveredRemotePorts	Number	True	The number of ports not on this adapter that this port has discovered.	
VendorId	String	True	The Vendor Identification for this port.	
Actions	Object	True	This object will contain the actions for this resource under Oem property if any	

2.42.1.2 SupportedLinkCapabilities Properties

Name	Type	ReadOnly	Description	
LinkNetworkTechnology	String	True	The Self-described link network technology capabilities of this port.	
			Enum	Description
			Ethernet	The port is capable of connecting to an Ethernet network.
			InfiniBand	The port is capable of connecting to an InfiniBand network.
			GenZ	The port is capable of connecting to a Gen-Z fabric.
			FibreChannel	The port is capable of connecting to a Fibre Channel network.
CapableLinkSpeedMbps	Number	True	The set of link speed capabilities of this port.	
AutoSpeedNegotiation	Boolean	True	An indication of whether the port is capable of autonegotiating speed.	

2.42.1.3 NetDevFuncMinBWAlloc Properties

Name	Type	ReadOnly	Description
MinBWAllocPercent	Number	True	The minimum bandwidth allocation percentage allocated to the corresponding network device function instance
NetworkDeviceFunction	Object	True	Contains the members of this collection.

2.42.1.4 NetDevFuncMaxBWAlloc Properties

Name	Type	ReadOnly	Description
MaxBWAllocPercent	Number	True	The maximum bandwidth allocation percentage allocated to the corresponding network device function instance.
NetworkDeviceFunction	Object	True	Contains the members of this collection.

3 Redfish OEM Resource

3.1 Expander

3.1.1 GET

Request

https://{ip}/redfish/v1/Chassis/Self/Oem/Aic/Expander

Content-Type: application/json

Response

The response of the request will be in JSON format

3.1.1.1 Expander Properties

Name	Type	ReadOnly	Description
@odata.context	String	True	Refer Section 2.1
@odata.id	String	True	Refer Section 2.1
@odata.type	String	True	Refer Section 2.1
@odata.etag	String	True	Refer Section 2.1
Id	String	True	Resource Identifier
Name	String	True	Name of the Resource
Description	String	True	Provides description of the resource. Refer Section 2.2
Status	Object	True	Refer Resource Complex Types under Section 2.2 .
Manufacturer	String	True	The vendor or manufacturer associated with this Expander.
Model	String	True	Model number of this Expander
Actions	String	True	The Actions object contains the available custom actions on this resource.
FirmwareRev	String	True	The firmware reversion of this Expander.
MFGRev	String	True	The configuration reversion of this Expander.
SASAddress	String	True	The port identifiers of this Expander.
HDDStatus	Object	True	This object will contain the status of hard disk drive for each bay. Refer Section 3.1.1.2.

3.1.1.2 HDDStatus Properties

Name	Type	ReadOnly	Description	
Name	String	True	Name of the hard disk drive	
Status	String	True	Status of the hard disk drive.	
			Enum	Description
			Normal	This HDD is working normally.
			Abnormal	The HDD is working with an expected error.
			Absence	The HDD is not inserted or the device cannot be detected.
			Presence but Power-off	The HDD has been detected, but the slot is not powered.
			Bad HDD	An unexpected error occurred on this HDD.

3.1.2 POST

Request

The SlotNum needs to be filled with a **number**, and the value depends on the number of slots in the device. The PowerState can be one of the following values: **"On"**, **"Off"**.

POST

https://{ip}/redfish/v1/Chassis/Self/Oem/Aic/Expander/Actions/AICExpander.HDDControl

Content-Type: application/json

Example POST Request Body:

```
{  
  "SlotNum":3,  
  "PowerState":"On"  
}
```

Response

The response status is 204 with no body