



**Redfish**

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# Redfish Resource and Schema Guide

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# Overview

The Redfish standard comprises a set of specifications maintained by the Distributed Management Task Force (DMTF). The standard defines a protocol that uses RESTful interfaces to provide access to data and operations associated with the management of systems and networks. One of the strengths of the Redfish protocol is that it works with a wide range of servers: from stand-alone servers to rack-mount and bladed environments to large-scale data centers and cloud environments.

The Redfish standard addresses several key issues for infrastructures that require scalability. Large infrastructures often consist of many simple servers of different makes and types. This hyperscale usage model requires a new approach to systems management. The Redfish Scalable Platforms Management ("Redfish") protocol addresses these needs by providing a standard protocol based on out-of-band systems management.

With the above goals in mind, the Redfish protocol was designed as an open industry standard to meet scalability requirements in multivendor deployments. It easily integrates with commonly used tools, using RESTful interfaces to perform operations and using JSON and OData formats for data payloads.

## Who should read this document?

This document is useful to people who want to understand how to use the Redfish API. This includes application developers who want to create client-side software to communicate with a Redfish service, and other consumers of the API.

## Where can I find more information?

The following web sites provide more information about the Redfish standard:

- **Redfish Developer Hub:** <http://redfish.dmtf.org> Resources for developers building applications using Redfish. Contains an interactive schema explorer, hosted schema and other links.
- **Redfish User Forum:** <http://www.redfishforum.com> User forum monitored by DMTF Redfish personnel to answer questions about any Redfish-related topics:
- **DMTF Github Repositories:** <http://www.github.com/DMTF> Open source tools and libraries for working with the Redfish API.
- **Redfish Standards:** <http://www.dmtf.org/standards/redfish> Schemas, specs, mockups, white papers, FAQ, educational material and more.
- **DMTF Redfish Forum** (Working group that maintains the Redfish standard): <http://www.dmtf.org/standards/spmf> Companies involved, upcoming schedules and future work, charter, and information about joining.

## Using this guide

Every Redfish API response consists of a JSON payload containing properties that are strictly defined by a schema for that resource. The schema defining a particular resource can be determined from the value of the "@odata.type" property returned in every Redfish response. This guide details the definitions for every Redfish standard schema. Each schema section contains a table defining each property, additional details for those properties when needed, details for the available Actions defined for the schema, and an example payload for a resource using the schema.

The property-level details include:

Column	Purpose
Property Name	The name of the JSON property as it will appear (case sensitive) in the JSON payload. For properties added to the schema after the initial release (v1.0.0), the version that the property was added will be shown in parenthesis. Properties that have been deprecated will also be indicated (along with the version where the deprecation occurred).
Type	The JSON data type(s) for the property. This can include boolean, number, string or object. String types that use defined enumerations will state "(enum)". Number types will state their units where used.
Attributes	Designates whether the property is read-only or read-write (if supported by the implementation), and whether a 'null' value may be returned by the Service if the value of the property is temporarily unavailable.
Description	The description of the property, as copied directly from the schema 'Description' definition.

## Common properties

The following properties are defined for inclusion in every Redfish schema, and therefore may be encountered in any Response payload. They are documented here to avoid repetition in the Reference Guide property tables.

<b>@odata.context</b>	string	read-only	The @odata.context property is a URL to a metadata document with a fragment describing the data (typically rooted at the top-level singleton or collection). Technically the metadata document only has to define, or reference, any of the types that it directly uses, and different payloads could reference different metadata documents. However, since the @odata.context provides a root URL for resolving relative references (such as @odata.id's), we return the canonical metadata document.
<b>@odata.etag</b>	string	read-only	The current ETag for the resource.
<b>@odata.id</b>	string	read-only	The @odata.id property is a string that indicates the unique identifier of a resource.
<b>@odata.type</b>	string	read-only	The type of a resource.
<b>Description</b>	string	read-only	The Description property is used to convey a human-readable description of the resource.
<b>Id</b>	string	read-only	The Id property of a resource uniquely identifies the resource within the Resource Collection that contains it. The value of Id is unique within a Resource Collection.
<b>Name</b>	string	read-only	The Name property is used to convey a human-readable moniker for a resource. The type of the Name property is a string. The value of Name is NOT necessarily unique across resource instances within a Resource Collection.
<b>Oem { }</b>	object	read-write	This is the manufacturer/provider specific extension moniker

			used to divide the Oem object into sections.
--	--	--	--

In addition, the following properties are frequently defined in Redfish schemas. Their definition and usage is the same throughout the Redfish data model.

<b>Actions { }</b>	object	read-write	This object contains definitions for the Redfish Actions available for this resource.
<b>Links { }</b>	object	read-write	The Links property represents the links associated with the resource, as defined by that resource's schema definition. All associated reference properties defined for a resource are nested under the Links property. All directly referenced (subordinate) properties defined for a resource can be found from the root of the resource.
<b>RelatedItem [ { }</b>	array	read-only	The RelatedItem property is represented as a set of links. The links point to a resource, or part of a resource, as defined by that resource's schema definition. This representation is not intended to be a strong linking methodology like other references. Instead it is used to show a relationship between elements or sub-elements in disparate parts of the service. For example, Fans may be in one area of the system and Processors in another area of the system. It could be that the relationship between the two is not obvious. The RelatedItem property can be used to show that one is related to the other. In this example, it might indicate that a specific fan is cooling a specific processor.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
<b>}]</b>			

## Status object

The 'Status' object and its properties is common to many Redfish schema.

<b>Health</b>	string (enum)	read-only (null)	This represents the health state of this resource in the absence of its dependent resources. <i>See <a href="#">Health</a> in Property Details, below, for the possible values of this property.</i>
<b>HealthRollup</b>	string (enum)	read-only (null)	This represents the overall health state from the view of this resource. <i>See <a href="#">HealthRollup</a> in Property Details, below, for the possible values of this property.</i>
<b>Oem { }</b>	object	read-write	Oem extension object.
<b>State</b>	string (enum)	read-only (null)	This indicates the known state of the resource, such as if it is enabled. <i>See <a href="#">State</a> in Property Details, below, for the possible values of this property.</i>

## Property Details

---

### Health:

This represents the health state of this resource in the absence of its dependent resources.

string	Description
Critical	A critical condition exists that requires immediate attention.
OK	Normal.
Warning	A condition exists that requires attention.

### HealthRollup:

This represents the overall health state from the view of this resource.

string	Description
Critical	A critical condition exists that requires immediate attention.
OK	Normal.
Warning	A condition exists that requires attention.

### State:

This indicates the known state of the resource, such as if it is enabled.

string	Description
Absent	This function or resource is not present or not detected.
Deferring	The element will not process any commands but will queue new requests.
Disabled	This function or resource has been disabled.
Enabled	This function or resource has been enabled.
InTest	This function or resource is undergoing testing.
Quiesced	The element is enabled but only processes a restricted set of commands.
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.
Starting	This function or resource is starting.
UnavailableOffline	This function or resource is present but cannot be used.
Updating	The element is updating and may be unavailable or degraded.

# Location object

The 'Location' object and its properties is common to many Redfish schema.

<b>AltitudeMeters</b>	number (m)	read-only (null)	The altitude of the resource in meters.
<b>Info</b>	string	read-only (null)	This indicates the location of the resource.
<b>InfoFormat</b>	string	read-only (null)	This represents the format of the Info property.
<b>Latitude</b>	number (deg)	read-only (null)	The latitude resource.
<b>Longitude</b>	number (deg)	read-only (null)	The longitude resource in degrees.
<b>Oem { }</b>	object	read-write	Oem extension object.
<b>PartLocation {</b>	object	read-write (null)	Postal address of the addressed resource.
<b>LocationOrdinalValue</b>	number	read-only (null)	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.
<b>LocationType</b>	string (enum)	read-only (null)	The type of location of the part, such as slot, bay, socket and slot. <i>See <a href="#">LocationType</a> in Property Details, below, for the possible values of this property.</i>
<b>Orientation</b>	string (enum)	read-only (null)	The orientation for the ordering of the slot enumeration used by the LocationOrdinalValue property. <i>See <a href="#">Orientation</a> in Property Details, below, for the possible values of this property.</i>
<b>Reference</b>	string (enum)	read-only (null)	The reference point for the part location. This is used to give guidance as to the general location of the part. <i>See <a href="#">Reference</a> in Property Details, below, for the possible values of this property.</i>
<b>ServiceLabel }</b>	string	read-only (null)	This is the label of the part location, such as a silk screened name or a printed label.
<b>Placement {</b>	object	read-write (null)	A place within the addressed location.
<b>Rack</b>	string	read-write (null)	Name of a rack location within a row.
<b>RackOffset</b>	number	read-write (null)	Vertical location of the item in terms of RackOffsetUnits.
<b>RackOffsetUnits</b>	string (enum)	read-write (null)	The type of Rack Units in use. <i>See <a href="#">RackOffsetUnits</a> in Property Details, below,</i>



			<i>for the possible values of this property.</i>
<b>Row</b> }	string	read-write (null)	Name of row.
<b>PostalAddress</b> {	object	read-write (null)	Postal address of the addressed resource.
<b>AdditionalCode</b>	string	read-write (null)	Additional code.
<b>Building</b>	string	read-write (null)	Name of the building.
<b>City</b>	string	read-write (null)	City, township, or shi (JP).
<b>Community</b>	string	read-write (null)	Postal community name.
<b>Country</b>	string	read-write (null)	Country.
<b>District</b>	string	read-write (null)	A county, parish, gun (JP), or district (IN).
<b>Division</b>	string	read-write (null)	City division, borough, dity district, ward, chou (JP).
<b>Floor</b>	string	read-write (null)	Floor.
<b>GPSCoords</b>	string	read-write (null)	The GPS coordinates of the part.
<b>HouseNumber</b>	number	read-write (null)	Numeric portion of house number.
<b>HouseNumberSuffix</b>	string	read-write (null)	House number suffix.
<b>Landmark</b>	string	read-write (null)	Landmark.
<b>LeadingStreetDirection</b>	string	read-write (null)	A leading street direction.
<b>Location</b>	string	read-write (null)	Room designation or other additional info.
<b>Name</b>	string	read-write (null)	Name.
<b>Neighborhood</b>	string	read-write (null)	Neighborhood or block.
<b>POBox</b>	string	read-write (null)	Post office box (P.O. box).

<b>PlaceType</b>	string	read-write (null)	A description of the type of place that is addressed.
<b>PostalCode</b>	string	read-write (null)	Postal code (or zip code).
<b>Road</b>	string	read-write (null)	A primary road or street.
<b>RoadBranch</b>	string	read-write (null)	Road branch.
<b>RoadPostModifier</b>	string	read-write (null)	Road post-modifier.
<b>RoadPreModifier</b>	string	read-write (null)	Road pre-modifier.
<b>RoadSection</b>	string	read-write (null)	Road Section.
<b>RoadSubBranch</b>	string	read-write (null)	Road sub branch.
<b>Room</b>	string	read-write (null)	Name or number of the room.
<b>Seat</b>	string	read-write (null)	Seat (desk, cubicle, workstation).
<b>Street</b>	string	read-write (null)	Street name.
<b>StreetSuffix</b>	string	read-write (null)	Avenue, Platz, Street, Circle.
<b>Territory</b>	string	read-write (null)	A top-level subdivision within a country.
<b>TrailingStreetSuffix</b>	string	read-write (null)	A trailing street suffix.
<b>Unit</b> }	string	read-write (null)	Name or number of the unit (apartment, suite).

## Property Details

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### LocationType:

The type of location of the part, such as slot, bay, socket and slot.

string	Description
Bay	Defines a bay as the type of location.
Connector	Defines a connector as the type of location.
Slot	Defines a slot as the type of location.

<b>string</b>	<b>Description</b>
Socket	Defines a socket as the type of location.

### **Orientation:**

The orientation for the ordering of the slot enumeration used by the LocationOrdinalValue property.

<b>string</b>	<b>Description</b>
BackToFront	Defines the ordering for the LocationOrdinalValue is back to front.
BottomToTop	Defines the ordering for the LocationOrdinalValue is bottom to top.
FrontToBack	Defines the ordering for the LocationOrdinalValue is front to back.
LeftToRight	Defines the ordering for the LocationOrdinalValue is left to right.
RightToLeft	Defines the ordering for the LocationOrdinalValue is right to left.
TopToBottom	Defines the ordering for the LocationOrdinalValue is top to bottom.

### **RackOffsetUnits:**

The type of Rack Units in use.

<b>string</b>	<b>Description</b>
EIA_310	Defines a rack unit as being equal to 1.75 in (44.45 mm).
OpenU	Defines a rack unit as being equal to 48 mm (1.89 in).

### **Reference:**

The reference point for the part location. This is used to give guidance as to the general location of the part.

<b>string</b>	<b>Description</b>
Bottom	Defines the part as being in the bottom of the unit.
Front	Defines the part as being in the front of the unit.
Left	Defines the part as being in the left of the unit.
Middle	Defines the part as being in the middle of the unit.
Rear	Defines the part as being in the rear of the unit.
Right	Defines the part as being in the right of the unit.
Top	Defines the part as being in the top of the unit.

# Identifier object

Properties used to identify a particular instance of a device.

<b>DurableName</b>	string	read-only (null)	This indicates the world wide, persistent name of the resource.
<b>DurableNameFormat</b>	string (enum)	read-only (null)	This represents the format of the DurableName property. See <a href="#">DurableNameFormat</a> in Property Details, below, for the possible values of this property.

## Property Details

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### DurableNameFormat:

This represents the format of the DurableName property.

string	Description
EUI	IEEE-defined 64-bit Extended Unique Identifier.
FC_WWN	Fibre Channel World Wide Name.
NAA	Name Address Authority Format.
NQN	NVMe Qualified Name.
NSID	NVM Namespace Identifier.
UUID	Universally Unique Identifier.
iQN	iSCSI Qualified Name.

# IP address objects

IP address objects appear in several areas of the data model.

## IPv4 addresses

---

<b>Address</b>	string	read-write (null)	This is the IPv4 Address.
<b>AddressOrigin</b>	string (enum)	read-only (null)	This indicates how the address was determined. See <a href="#">AddressOrigin</a> in Property Details, below, for the possible values of this property.
<b>Gateway</b>	string	read-write (null)	This is the IPv4 gateway for this address.
<b>Oem { }</b>	object	read-write	Oem extension object.
<b>SubnetMask</b>	string	read-write	This is the IPv4 Subnet mask.

		(null)	
--	--	--------	--

## Property Details

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### AddressOrigin:

This indicates how the address was determined.

string	Description
BOOTP	Address is provided by a BOOTP service.
DHCP	Address is provided by a DHCPv4 service.
IPv4LinkLocal	Address is valid only for this network segment (link).
Static	A static address as configured by the user.

## IPv6 addresses

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<b>Address</b>	string	read-write (null)	This is the IPv6 Address.
<b>AddressOrigin</b>	string (enum)	read-only (null)	This indicates how the address was determined. See <a href="#">AddressOrigin</a> in Property Details, below, for the possible values of this property.
<b>AddressState</b>	string (enum)	read-only (null)	The current state of this address as defined in RFC 4862. See <a href="#">AddressState</a> in Property Details, below, for the possible values of this property.
<b>Oem { }</b>	object	read-write	Oem extension object.
<b>PrefixLength</b>	number	read-only (null)	This is the IPv6 Address Prefix Length.

## Property Details

---

### AddressOrigin:

This indicates how the address was determined.

string	Description
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.
Static	A static address as configured by the user.

### AddressState:

The current state of this address as defined in RFC 4862.

string	Description
Deprecated	This address is currently within its valid lifetime, but is now outside of its preferred lifetime as defined in RFC 4862.
Failed	This address has failed Duplicate Address Detection testing as defined in RFC 4862 section 5.4 and is not currently in use.
Preferred	This address is currently within both its valid and preferred lifetimes as defined in RFC 4862.
Tentative	This address is currently undergoing Duplicate Address Detection testing as defined in RFC 4862 section 5.4.

## Resource collections

A core concept in Redfish is a Collection of resources. A Collection is a group of like resources where the number of instances in the group can shrink or grow depending on the scope of the Redfish Service or the configuration of the devices being managed. Every Resource Collection resource has the same set of supported properties, and all contain "Collection" in the name of their schema. Every resource linked in the "Members" array within a Resource Collection will have the same resource type (same schema with the same major version, but can vary in minor or errata schema versions, which are all compatible).

The properties of a Resource Collection are as follows:

<b>@odata.context</b>	string	read-only	The OData description of a payload.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
<b>@odata.type</b>	string	read-only	The type of a resource.
<b>Description</b>	string	read-only (null)	Provides a description of this resource and is used for commonality in the schema definitions.
<b>Members [ {</b>	array	read-only	Contains the members of this collection.
<b>@odata.id</b>	string	read-only	A link to a resource instance which is a member of this collection.
<b>}]</b>			
<b>Members@odata.count</b>	number	read-only	The number of items in a collection.
<b>Members@odata.navigationLink</b>	string	read-write	
<b>Name</b>	string	read-only	The name of the resource or array element.
<b>Oem { }</b>	object	read-write	This is the manufacturer/provider specific extension moniker used to divide the Oem object into sections.

As shown in the example below, a Redfish Service may provide management functionality for several Computer Systems, and therefore a ComputerSystemCollection resource is provided. This example shows a Service with four ComputerSystem instances ("Members").

```

{
  "@odata.type": "#ComputerSystemCollection.ComputerSystemCollection",
  "Name": "Computer System Collection",
  "Members@odata.count": 4,
  "Members": [
    {
      "@odata.id": "/redfish/v1/Systems/529QB9450R6"
    },
    {
      "@odata.id": "/redfish/v1/Systems/529QB9451R6"
    },
    {
      "@odata.id": "/redfish/v1/Systems/529QB9452R6"
    },
    {
      "@odata.id": "/redfish/v1/Systems/529QB9453R6"
    }
  ],
  "@odata.context": "/redfish/v1/$metadata#ComputerSystemCollection.ComputerSystemCollect
  "@odata.id": "/redfish/v1/Systems"
}

```

## Reference Guide

This guide was produced using the contents of the schema files from DMTF Redfish Schema bundle DSP8010 version 2018.1 and merged with supplemental text using the DMTF's [Redfish Documentation Generator](#).

### AccountService 1.3.0

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

<b>AccountLockoutCounterResetAfter</b>	number (seconds)	read-write	The interval of time in seconds between the last failed login attempt and reset of the lockout threshold counter. This value must be less than or equal to AccountLockoutDuration. Reset sets the counter to zero.
<b>AccountLockoutDuration</b>	number (seconds)	read-write (null)	The time in seconds an account is locked out. The value must be greater than or equal to the value of the AccountLockoutCounterResetAfter property. If set to 0, no lockout occurs.
<b>AccountLockoutThreshold</b>	number	read-write (null)	The number of failed login attempts allowed before a user account is locked for a specified

			duration. A value of 0 means it is never locked.
<b>Accounts</b> {	object	read-only	A link to a collection of Manager Accounts. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">ManagerAccount</a> . See the ManagerAccount schema for details.
<b>Actions</b> (v1.2.2+) { }	object	read-write	The available actions for this resource.
<b>ActiveDirectory</b> (v1.3+) {	object	read-write	The first ActiveDirectory external account provider this AccountService supports.
<b>AccountProviderType</b> (v1.3+)	string (enum)	read-only (null)	This property contains the type of external account provider this resource references. See <a href="#">AccountProviderType</a> in <i>Property Details, below, for the possible values of this property.</i>
<b>Authentication</b> (v1.3+) {	object	read-write (null)	This property contains the authentication information for the external account provider.
<b>AuthenticationType</b>	string (enum)	read-write (null)	This property contains the type of authentication used to connect to the external account provider. See <a href="#">AuthenticationType</a> in <i>Property Details, below, for the possible values of this property.</i>
<b>KerberosKeytab</b>	string	read-write (null)	This property is used with a PATCH or PUT to write a base64 encoded version of the kerberos keytab for the account. This property is null on a GET.
<b>Oem</b> { }	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Password</b>	string	read-write (null)	This property is used with a PATCH or PUT to write the password for the account service. This property is null on a GET.
<b>Token</b>	string	read-write (null)	This property is used with a PATCH or PUT to write the token for the account. This property is null on a GET.
<b>Username</b> }	string	read-write	This property contains the user name for the account service.



<b>LDAPService (v1.3+) {</b>	object	read-write (null)	This property contains additional mapping information needed to parse a generic LDAP service.
<b>Oem { }</b>	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>SearchSettings {</b>	object	read-write (null)	This property contains the settings needed to search an external LDAP service.
<b>BaseDistinguishedNames [ ]</b>	array (string, null)	read-write	The base distinguished names to use when searching the LDAP service.
<b>GroupNameAttribute</b>	string	read-write (null)	The attribute name that contains the name of the Group.
<b>GroupsAttribute</b>	string	read-write (null)	The attribute name that contains the Groups for a user.
<b>UsernameAttribute } }</b>	string	read-write (null)	The attribute name that contains the Username.
<b>RemoteRoleMapping (v1.3+) [ {</b>	array	read-write	This property contains a collection of the mapping rules to convert the external account providers account information to the local Redfish Role.
<b>LocalRole</b>	string	read-write (null)	The name of the local role in which to map the remote user or group.
<b>Oem { }</b>	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>RemoteGroup</b>	string	read-write (null)	This property is the name of the remote group (or in the case of a Redfish Service, remote role) that will be mapped to the local role referenced by this entity.
<b>RemoteUser</b>	string	read-write (null)	This property is the name of the remote user that will be mapped to the local role referenced by this entity.
<b>}]</b>			
<b>ServiceAddresses (v1.3+) [ ]</b>	array (string, null)	read-write	This property contains the addresses of the user account providers this resource references. The format of this field depends on the Type.
<b>ServiceEnabled (v1.3+)</b>	boolean	read-write	This indicates whether this service

}		(null)	is enabled.
<b>AdditionalExternalAccountProviders</b> {	object	read-only	The additional external account providers this AccountService is using. Contains a link to a resource.
@odata.id	string	read-only	Link to Collection of <a href="#">ExternalAccountProvider</a> . See the ExternalAccountProvider schema for details.
<b>AuthFailureLoggingThreshold</b>	number	read-write	The number of authorization failures allowed before the failure attempt is logged to the manager log.
<b>LDAP (v1.3+)</b> {	object	read-write	The first LDAP external account provider this AccountService supports.
<b>AccountProviderType</b>	string (enum)	read-only (null)	This property contains the type of external account provider this resource references. See <a href="#">AccountProviderType</a> in <i>Property Details, below, for the possible values of this property.</i>
<b>Authentication</b> {	object	read-write (null)	This property contains the authentication information for the external account provider.
<b>AuthenticationType</b>	string (enum)	read-write (null)	This property contains the type of authentication used to connect to the external account provider. See <a href="#">AuthenticationType</a> in <i>Property Details, below, for the possible values of this property.</i>
<b>KerberosKeytab</b>	string	read-write (null)	This property is used with a PATCH or PUT to write a base64 encoded version of the kerberos keytab for the account. This property is null on a GET.
<b>Oem</b> { }	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Password</b>	string	read-write (null)	This property is used with a PATCH or PUT to write the password for the account service. This property is null on a GET.
<b>Token</b>	string	read-write (null)	This property is used with a PATCH or PUT to write the token for the account. This property is null on a GET.

<b>Username</b> }	string	read-write	This property contains the user name for the account service.
<b>LDAPService</b> {	object	read-write (null)	This property contains additional mapping information needed to parse a generic LDAP service.
<b>Oem</b> { }	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>SearchSettings</b> {	object	read-write (null)	This property contains the settings needed to search an external LDAP service.
<b>BaseDistinguishedNames</b> [ ]	array (string, null)	read-write	The base distinguished names to use when searching the LDAP service.
<b>GroupNameAttribute</b>	string	read-write (null)	The attribute name that contains the name of the Group.
<b>GroupsAttribute</b>	string	read-write (null)	The attribute name that contains the Groups for a user.
<b>UsernameAttribute</b> } }	string	read-write (null)	The attribute name that contains the Username.
<b>RemoteRoleMapping</b> [ {	array	read-write	This property contains a collection of the mapping rules to convert the external account providers account information to the local Redfish Role.
<b>LocalRole</b>	string	read-write (null)	The name of the local role in which to map the remote user or group.
<b>Oem</b> { }	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>RemoteGroup</b>	string	read-write (null)	This property is the name of the remote group (or in the case of a Redfish Service, remote role) that will be mapped to the local role referenced by this entity.
<b>RemoteUser</b>	string	read-write (null)	This property is the name of the remote user that will be mapped to the local role referenced by this entity.
} ]			
<b>ServiceAddresses</b> [ ]	array (string, null)	read-write	This property contains the addresses of the user account providers this resource references. The format of this field depends

			on the Type.
<b>ServiceEnabled</b> }	boolean	read-write (null)	This indicates whether this service is enabled.
<b>LocalAccountAuth</b> (v1.3+)	string (enum)	read-write	Controls when this service will use the accounts defined withing this AccountService as part of authentication. <i>See <a href="#">LocalAccountAuth</a> in Property Details, below, for the possible values of this property.</i>
<b>MaxPasswordLength</b>	number	read-only	The maximum password length for this service.
<b>MinPasswordLength</b>	number	read-only	The minimum password length for this service.
<b>PrivilegeMap</b> {	object	read-only	A reference to the Privilege mapping that defines the privileges needed to perform a requested operation on a URI associated with this service. See the <a href="#">PrivilegeRegistry</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a PrivilegeRegistry resource. See the Links section and the <a href="#">PrivilegeRegistry</a> schema for details.
<b>Roles</b> {	object	read-only	A link to a collection of Roles. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Role</a> . See the Role schema for details.
<b>ServiceEnabled</b>	boolean	read-write (null)	Indicates whether this service is enabled. If set to false, the AccountService is disabled. This means no users can be created, deleted or modified. Any service attempting to access the AccountService resource (for example, the Session Service) will fail. New sessions cannot be started when the service is disabled. However, established sessions may still continue operating. This does not affect Basic AUTH connections.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

## Property Details

---

### AccountProviderType:

This property contains the type of external account provider this resource references.

string	Description
ActiveDirectoryService	An external Active Directory Service.
LDAPService	A generic external LDAP Service.
OEM	An OEM specific external authentication or directory service.
RedfishService	An external Redfish Service.

### AuthenticationType:

This property contains the type of authentication used to connect to the external account provider.

string	Description
KerberosKeytab	A kerberos keytab.
OEM	An OEM specific authentication mechanism.
Token	An opaque authentication token.
UsernameAndPassword	Username and password combination.

### LocalAccountAuth:

Controls when this service will use the accounts defined withing this AccountService as part of authentication.

string	Description
Disabled	Authentication via accounts defined in this AccountService is disabled.
Enabled	Authentication via accounts defined in this AccountService is enabled.
Fallback	Authentication via accounts defined in this AccountService is only used if there are external account providers that are currently unreachable.

## Example Response

---

```
{
  "@odata.type": "#AccountService.v1_3_0.AccountService",
  "Id": "AccountService",
  "Name": "Account Service",
  "Description": "Local Manager Account Service",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "ServiceEnabled": true,
  "AuthFailureLoggingThreshold": 3,
}
```

```

"MinPasswordLength": 8,
"AccountLockoutThreshold": 5,
"AccountLockoutDuration": 30,
"AccountLockoutCounterResetAfter": 30,
"Accounts": {
  "@odata.id": "/redfish/v1/AccountService/Accounts"
},
"Roles": {
  "@odata.id": "/redfish/v1/AccountService/Roles"
},
"LocalAccountAuth": "Enabled",
"LDAP": {
  "AccountProviderType": "LDAPService",
  "ServiceEnabled": false,
  "ServiceAddresses": [
    "ldaps://ldap.example.org:636"
  ],
  "Authentication": {
    "AuthenticationType": "UsernameAndPassword",
    "Username": "cn=Manager,dc=example,dc=org",
    "Password": null
  },
  "LDAPService": {
    "SearchSettings": {
      "BaseDistinguishedNames": [
        "dc=example,dc=org"
      ],
      "UsernameAttribute": "uid",
      "GroupsAttribute": "memberof"
    }
  },
  "RemoteRoleMapping": [
    {
      "RemoteUser": "cn=Manager,dc=example,dc=org",
      "LocalRole": "Admin"
    },
    {
      "RemoteGroup": "cn=Admins,ou=Groups,dc=example,dc=org",
      "LocalRole": "Admin"
    },
    {
      "RemoteGroup": "cn=PowerUsers,ou=Groups,dc=example,dc=org",
      "LocalRole": "Operator"
    },
    {
      "RemoteGroup": "(cn=*)",
      "LocalRole": "ReadOnlyUser"
    }
  ]
},
"ActiveDirectory": {
  "AccountProviderType": "ActiveDirectoryService",
  "ServiceEnabled": true,
  "ServiceAddresses": [
    "ad1.example.org",
    "ad2.example.org",
    null,
    null
  ]
}

```

```

    ],
    "Authentication": {
        "AuthenticationType": "KerberosKeytab",
        "KerberosKeytab": null
    },
    "RemoteRoleMapping": [
        {
            "RemoteGroup": "Administrators",
            "LocalRole": "Admin"
        },
        {
            "RemoteUser": "DOMAIN\\Bob",
            "LocalRole": "Operator"
        },
        {
            "RemoteGroup": "PowerUsers",
            "LocalRole": "Operator"
        },
        {
            "RemoteGroup": "Everybody",
            "LocalRole": "ReadOnlyUser"
        }
    ]
},
"AdditionalExternalAccountProviders": {
    "@odata.id": "/redfish/v1/AccountService/ExternalAccountProviders"
},
"@odata.context": "/redfish/v1/$metadata#AccountService.AccountService",
"@odata.id": "/redfish/v1/AccountService"
}

```

## ActionInfo 1.0.3

The ActionInfo schema describes the parameters and other information necessary to perform a Redfish Action on a particular Action target. Parameter support can differ between vendors and even between instances of a resource. This data can be used to ensure Action requests from applications contain supported parameters.

Parameters [ {	array	read-write	The parameters associated with the specified Redfish Action.
<b>AllowableValues</b> [ ]	array (string, null)	read-only	A list of values for this parameter supported by this Action target.
<b>DataType</b>	string (enum)	read-only (null)	The JSON property type used for this parameter. See <a href="#">DataType</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>Name</b>	string	read-only	The name of the parameter for this Action.
<b>ObjectType</b>	string	read-only (null)	The OData Type of an object-based parameter.
<b>Required</b>	boolean	read-only	Indicates whether the parameter is required to

			perform this Action.
}]			

## Property Details

---

### Data Type:

The JSON property type used for this parameter.

string	Description
Boolean	A boolean (true or false).
Number	A number.
NumberArray	An array of numbers.
Object	An embedded JSON object.
ObjectArray	An array of JSON objects.
String	A string.
StringArray	An array of strings.

## Example Response

---

```
{
  "@odata.type": "#ActionInfo.v1_0_3.ActionInfo",
  "Id": "ResetActionInfo",
  "Name": "Reset Action Info",
  "Parameters": [
    {
      "Name": "ResetType",
      "Required": true,
      "DataType": "String",
      "AllowableValues": [
        "On",
        "ForceOff",
        "GracefulShutdown",
        "GracefulRestart",
        "ForceRestart",
        "Nmi",
        "ForceOn",
        "PushPowerButton"
      ]
    }
  ],
  "Oem": {},
  "@odata.context": "/redfish/v1/$metadata#ActionInfo.ActionInfo",
  "@odata.id": "/redfish/v1/Systems/1/ResetActionInfo"
}
```



# Assembly 1.1.0

This is the schema definition for the Assembly properties.

<b>Actions</b> { }	object	read-write	The available actions for this resource.
<b>Assemblies</b> [ {	array	read-write	This is the definition for an assembly information record.
<b>Actions</b> { }	object	read-write	The available actions for this resource.
<b>BinaryDataURI</b>	string	read-only (null)	URI that provides the ability to access an image of the assembly information.
<b>Description</b>	string	read-only (null)	Description of the Assembly.
<b>EngineeringChangeLevel</b>	string	read-only (null)	Engineering change level of the Assembly.
<b>MemberId</b>	string	read-only	This is the identifier for the member within the collection.
<b>Model</b>	string	read-only (null)	Model number of the Assembly.
<b>Name</b>	string	read-only (null)	Name of the Assembly.
<b>Oem</b> { }	object	read-write	This is the manufacturer/provider specific extension moniker used to divide the Oem object into sections. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PartNumber</b>	string	read-only (null)	Part number of the Assembly.
<b>Producer</b>	string	read-only (null)	Producer or manufacturer of the Assembly.
<b>ProductionDate</b>	string	read-only (null)	Production date of the Assembly.
<b>SKU</b>	string	read-only (null)	SKU of the Assembly.
<b>SparePartNumber</b>	string	read-only (null)	Spare part number of the Assembly.
<b>Status</b> (v1.1+) { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>Vendor</b>	string	read-only (null)	Vendor of the Assembly.
<b>Version</b>	string	read-only (null)	Version of the Assembly.
} ]			

## Example Response

```
{
  "@odata.type": "#Assembly.v1_1_0.Assembly",
  "Assemblies": [
    {
      "Name": "System Board",
      "Description": "PCA System Board",
      "Model": "345TTT",
      "PartNumber": "923943",
      "SparePartNumber": "55-434",
      "SKU": "55ZZATR",
      "SerialNumber": "345394834",
      "Vendor": "Contoso",
      "ProductionDate": "2017-04-01T14:55:33+03:00",
      "Producer": "Contoso Supply Co.",
      "Version": "1.44B",
      "EngineeringChangeLevel": "9",
      "BinaryDataURI": "/dumpster/434",
      "Oem": {
        "Contoso": {
          "Region": "C",
          "Packaging": "Retail"
        }
      }
    },
    {
      "Name": "Fan Controller",
      "Description": "PCA Fan Controller",
      "Model": "F58AS",
      "PartNumber": "3434-149",
      "Vendor": "Contoso",
      "Version": "2.4.481",
      "BinaryDataURI": "/dumpster/422",
      "Status": {
        "State": "Enabled",
        "Health": "Warning"
      }
    }
  ],
  "@odata.context": "/redfish/v1/$metadata#Assembly.Assembly",
  "@odata.id": "/redfish/v1/Chassis/1/Assembly"
}
```

## AttributeRegistry 1.2.0

The AttributeRegistry schema contains a set of key-value pairs that represents the structure of a Registry. It includes mechanisms for building user interfaces (menus), allowing consistent navigation of the contents. The Attribute Registry is specific to a particular implementation or product. The attributes and property names are not standardized.

<b>Actions</b> (v1.1.1+) {}	object	read-write	The available actions for this resource.
<b>Language</b>	string	read-only	This is the RFC 5646 compliant language code for the registry.

<b>OwningEntity</b>	string	read-only	This is the organization or company that publishes this registry.
<b>RegistryEntries</b> {	object	read-write	List of all attributes and their metadata for this component.
<b>Attributes</b> [ {	array	read-write	The array containing the attributes and their possible values.
<b>AttributeName</b>	string	read-only	The unique name of the attribute.
<b>CurrentValue</b>	string, boolean, number	read-only (null)	Placeholder of the current value of the attribute.
<b>DefaultValue</b>	string, boolean, number	read-only (null)	The default current value of the attribute.
<b>DisplayName</b>	string	read-only (null)	The user-readable display string of the attribute in the defined 'Language'.
<b>DisplayOrder</b>	number	read-only (null)	The numeric value describing the ascending order that the attribute is displayed relative to other attributes.
<b>GrayOut</b>	boolean	read-only (null)	The gray-out state of this attribute.
<b>HelpText</b>	string	read-only (null)	The help text for the attribute.
<b>Hidden</b>	boolean	read-only (null)	The hidden state of this attribute.
<b>Immutable</b>	boolean	read-only (null)	Defines whether this attribute is immutable or not.
<b>IsSystemUniqueProperty</b>	boolean	read-only (null)	Defines whether this attribute is unique for this system and should not be replicated.
<b>LowerBound</b>	number	read-only (null)	The lower limit of the value of an attribute of type 'Integer'.
<b>MaxLength</b>	number	read-only (null)	The maximum character length of the value of an attribute of type 'String'.
<b>MenuPath</b>	string	read-only (null)	A path that describes the menu hierarchy of this attribute.
<b>MinLength</b>	number	read-only (null)	The minimum character length of the value of an attribute of type 'String'.
<b>ReadOnly</b>	boolean	read-only (null)	The read-only state of this attribute.
<b>ResetRequired</b> (v1.2+)	boolean	read-only (null)	True if changing the value of this attribute requires a system or device

			reset in order to take effect.
<b>ScalarIncrement</b>	number	read-only (null)	The amount to increment or decrement the value of an attribute of type 'Integer' each time a user requests a value change.
<b>Type</b>	string (enum)	read-only	The type of the attribute. <i>See <a href="#">Type</a> in Property Details, below, for the possible values of this property.</i>
<b>UefiDevicePath</b> (v1.2+)	string	read-only (null)	The UEFI device path that qualifies this attribute.
<b>UefiKeywordName</b> (v1.2+)	string	read-only	The UEFI KeywordString of the attribute.
<b>UefiNamespaceId</b> (v1.2+)	string	read-only	The UEFI NamespaceId of the attribute.
<b>UpperBound</b>	number	read-only (null)	The upper limit of the value of an attribute of type 'Integer'.
<b>Value</b> [ {	array	read-write	The array containing possible values for attributes of type 'Enumeration'.
<b>ValueDisplayName</b>	string	read-only (null)	A user-readable display string of the value of the attribute in the defined 'Language'.
<b>ValueName</b>	string	read-only (null)	The value name of the attribute.
}]			
<b>ValueExpression</b>	string	read-only (null)	A regular expression that is used to validate the value of the attribute. This is only applicable to attributes of type 'String' or 'Integer'.
<b>WarningText</b>	string	read-only (null)	The warning text for changing the attribute.
<b>WriteOnly</b>	boolean	read-only (null)	Defines whether this attribute is write-only. Such attributes revert back to their initial value after settings are applied.
}]			
<b>Dependencies</b> [ {	array	read-write	The array containing a list of dependencies of attributes on this component.
<b>Dependency</b> {	object	read-write	The dependency expression for one or more Attributes in this Attribute Registry.
<b>MapFrom</b> [ {	array	read-write	Array of the map-from conditions for mapping dependency.
<b>MapFromAttribute</b>	string	read-only	The attribute that is used to evaluate this dependency expression.

<b>MapFromCondition</b>	string (enum)	read-only	The condition that is used to evaluate this dependency expression. <i>See <a href="#">MapFromCondition</a> in Property Details, below, for the possible values of this property.</i>
<b>MapFromProperty</b>	string (enum)	read-only	The meta-data property of the attribute specified in MapFromAttribute that is used to evaluate this dependency expression. <i>See <a href="#">MapFromProperty</a> in Property Details, below, for the possible values of this property.</i>
<b>MapFromValue</b>	string, boolean, number	read-only (null)	The value that the is used property specified in MapFromProperty that is used to evaluate this dependency expression.
<b>MapTerms</b>	string (enum)	read-only	The logical term used to combine two or more MapFrom conditions in this dependency expression. <i>See <a href="#">MapTerms</a> in Property Details, below, for the possible values of this property.</i>
}]			
<b>MapToAttribute</b>	string	read-only	The Name of the attribute that is affected by this dependency expression.
<b>MapToProperty</b>	string (enum)	read-only	The meta-data property of the attribute specified in MapFromAttribute that is used to evaluate this dependency expression. <i>See <a href="#">MapToProperty</a> in Property Details, below, for the possible values of this property.</i>
<b>MapToValue</b> }	string, boolean, number	read-only (null)	The value that MapToProperty is changed to if the dependency expression evaluates to true.
<b>DependencyFor</b>	string	read-only	The AttributeName of the attribute whose change triggers the evaluation of this dependency expression.
<b>Type</b>	string (enum)	read-only	The type of the dependency structure. <i>See <a href="#">Type</a> in Property Details, below, for the possible values of this property.</i>
}]			
<b>Menus</b> [ {	array	read-write	The array containing the attributes menus and their hierarchy.
<b>DisplayName</b>	string	read-only (null)	The user-readable display string of this menu in the defined 'Language'.

<b>DisplayOrder</b>	number	read-only (null)	The numeric value describing the ascending order in which this menu is displayed relative to other menus.
<b>GrayOut</b>	boolean	read-only (null)	The gray-out state of this menu. A grayed-only menu is not accessible in user interfaces.
<b>MenuName</b>	string	read-only	The unique name string of this menu.
<b>MenuPath</b>	string	read-only (null)	A path that describes this menu hierarchy relative to other menus.
<b>ReadOnly</b>	boolean	read-only (null)	The read-only state of this menu.
}] }			
<b>RegistryVersion</b>	string	read-only	This is the attribute registry version which is used in the middle portion of a AttributeRegistry.
<b>SupportedSystems</b> [ {	array	read-write	Array of systems supported by this attribute registry.
<b>FirmwareVersion</b> ( <i>v1.1+</i> )	string	read-only (null)	Firmware version.
<b>ProductName</b>	string	read-only (null)	The product name of the system.
<b>SystemId</b>	string	read-only (null)	The system ID of the system.
}]			

## Property Details

---

### MapFromCondition:

The condition that is used to evaluate this dependency expression.

string	Description
EQU	The logical operation for 'Equal'.
GEQ	The logical operation for 'Greater than or Equal'.
GTR	The logical operation for 'Greater than'.
LEQ	The logical operation for 'Less than or Equal'.
LSS	The logical operation for 'Less than'.
NEQ	The logical operation for 'Not Equal'.

## MapFromProperty:

The meta-data property of the attribute specified in MapFromAttribute that is used to evaluate this dependency expression.

string	Description
CurrentValue	The dependency on an attribute's CurrentValue.
DefaultValue	The dependency on an attribute's DefaultValue.
GrayOut	The dependency on an attribute's GrayOut state.
Hidden	The dependency on an attribute's Hidden state.
LowerBound	The dependency on an attribute's LowerBound.
MaxLength	The dependency on an attribute's MaxLength.
MinLength	The dependency on an attribute's MinLength.
ReadOnly	The dependency on an attribute's ReadOnly state.
ScalarIncrement	The dependency on an attribute's ScalarIncrement.
UpperBound	The dependency on an attribute's UpperBound.
WriteOnly	The dependency on an attribute's WriteOnly state.

## MapTerms:

The logical term used to combine two or more MapFrom conditions in this dependency expression.

string	Description
AND	The operation used for logical 'AND' of dependency terms.
OR	The operation used for logical 'OR' of dependency terms.

## MapToProperty:

The meta-data property of the attribute specified in MapFromAttribute that is used to evaluate this dependency expression.

string	Description
CurrentValue	The dependency that affects an attribute's CurrentValue.
DefaultValue	The dependency that affects an attribute's DefaultValue.
DisplayName	The dependency that affects an attribute's DisplayName.
DisplayOrder	The dependency that affects an attribute's DisplayName.
GrayOut	The dependency that affects an attribute's GrayOut state.
HelpText	The dependency that affects an attribute's HelpText.
Hidden	The dependency that affects an attribute's Hidden state.

string	Description
Immutable	The dependency that affects an attribute's Immutable state.
LowerBound	The dependency that affects an attribute's LowerBound.
MaxLength	The dependency that affects an attribute's MaxLength.
MinLength	The dependency that affects an attribute's MinLength.
ReadOnly	The dependency that affects an attribute's ReadOnly state.
ScalarIncrement	The dependency that affects an attribute's ScalarIncrement.
UpperBound	The dependency that affects an attribute's UpperBound.
ValueExpression	The dependency that affects an attribute's ValueExpression.
WarningText	The dependency that affects an attribute's WarningText.
WriteOnly	The dependency that affects an attribute's WriteOnly state.

### Type:

The type of the dependency structure.

string	Description
Map	A simple mapping dependency. The attribute value or state is changed to the mapped value if the condition evaluates to true.

## Bios 1.0.3

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

<b>Actions</b> (v1.0.3+) {	object	read-write	The available actions for this resource.
<b>#Bios.ChangePassword</b> { }	object	read-write	This action is used to change the BIOS passwords. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>#Bios.ResetBios</b> { }	object	read-write	This action is used to reset the BIOS attributes to default. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>AttributeRegistry</b>	string	read-only (null)	The Resource ID of the Attribute Registry that has the system-specific information about a BIOS resource.
<b>Attributes</b> { }	object	read-write	The list of BIOS attributes specific to the manufacturer or provider.



## Action Details

---

### ChangePassword

This action is used to change the BIOS passwords.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
<b>NewPassword</b>	string	read-write	The value of the new BIOS password.
<b>OldPassword</b>	string	read-write	The value of the existing password.
<b>PasswordName</b>	string	read-write	The name of the BIOS password to change.
}			

### ResetBios

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

(This action takes no parameters.)

## Example Response

---

```
{
  "@odata.type": "#Bios.v1_0_3.Bios",
  "Id": "BIOS",
  "Name": "BIOS Configuration Current Settings",
  "AttributeRegistry": "BiosAttributeRegistryP89.v1_0_0",
  "Attributes": {
    "AdminPhone": "",
    "BootMode": "Uefi",
    "EmbeddedSata": "Raid",
    "NicBoot1": "NetworkBoot",
    "NicBoot2": "Disabled",
    "PowerProfile": "MaxPerf",
    "ProcCoreDisable": 0,
    "ProcHyperthreading": "Enabled",
    "ProcTurboMode": "Enabled",
    "UsbControl": "UsbEnabled"
  },
  "@Redfish.Settings": {
    "@odata.type": "#Settings.v1_0_0.Settings",
    "ETag": "9234ac83b9700123cc32",
    "Messages": [
      {
        "MessageId": "Base.1.0.SettingsFailed",
        "RelatedProperties": [
          "#/Attributes/ProcTurboMode"
        ]
      }
    ]
  },
  "SettingsObject": {
    "@odata.id": "/redfish/v1/Systems/437XR1138R2/BIOS/Settings"
  },
  "Time": "2016-03-07T14:44.30-05:00"
},
```

```

"Actions": {
  "#Bios.ResetBios": {
    "target": "/redfish/v1/Systems/437XR1138R2/BIOS/Actions/Bios.ResetBios"
  },
  "#Bios.ChangePassword": {
    "target": "/redfish/v1/Systems/437XR1138R2/BIOS/Actions/Bios.ChangePassword"
  }
},
"@odata.context": "/redfish/v1/$metadata#Bios.Bios",
"@odata.id": "/redfish/v1/Systems/437XR1138R2/BIOS"
}

```

## BootOption 1.0.0

This is the schema definition for the BootOption resource. It represents the properties of a bootable device available in the System.

<b>Actions {}</b>	object	read-write	The available actions for this resource.
<b>Alias</b>	string (enum)	read-only (null)	The alias of this Boot Source when described in the BootSourceOverrideTarget property in the Computersystem resource. <i>See <a href="#">Alias</a> in Property Details, below, for the possible values of this property.</i>
<b>BootOptionEnabled</b>	boolean	read-write (null)	A flag that shows if the Boot Option is enabled.
<b>BootOptionReference</b>	string	read-only (null)	The unique boot option string that is referenced in the BootOrder.
<b>DisplayName</b>	string	read-only (null)	The user-readable display string of the Boot Option.
<b>RelatedItem [ {</b>	array	read-only	The ID(s) of the resources associated with this Boot Option.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
<b>}]</b>			
<b>UefiDevicePath</b>	string	read-only (null)	The UEFI device path used to access this UEFI Boot Option.

## Property Details

### Alias:

The alias of this Boot Source when described in the BootSourceOverrideTarget property in the Computersystem resource.

string	Description
BiosSetup	Boot to the BIOS Setup Utility.

string	Description
Cd	Boot from the CD/DVD disc.
Diags	Boot the manufacturer's Diagnostics program.
Floppy	Boot from the floppy disk drive.
Hdd	Boot from a hard drive.
None	Boot from the normal boot device.
Pxe	Boot from the Pre-Boot EXecution (PXE) environment.
RemoteDrive (v1.0.3+)	Boot from a remote drive (e.g. iSCSI).
SDCard	Boot from an SD Card.
UefiBootNext (v1.0.7+)	Boot to the UEFI Device specified in the BootNext property.
UefiHttp	Boot from a UEFI HTTP network location.
UefiShell	Boot to the UEFI Shell.
UefiTarget	Boot to the UEFI Device specified in the UefiTargetBootSourceOverride property.
Usb	Boot from a USB device as specified by the system BIOS.
Utilities	Boot the manufacturer's Utilities program(s).

## Chassis 1.7.0

The Chassis schema represents the physical components of a system. This resource represents the sheet-metal confined spaces and logical zones such as racks, enclosures, chassis and all other containers. Subsystems (like sensors) that operate outside of a system's data plane (meaning the resources are not accessible to software running on the system) are linked either directly or indirectly through this resource.

<b>Actions</b> (v1.0.6+) {	object	read-write	The available actions for this resource.
<b>#Chassis.Reset</b> { } }	object	read-write	This action is used to reset the chassis. This action resets the chassis, not Systems or other contained resources, although side effects may occur which affect those resources. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>Assembly</b> {	object	read-only	A reference to the Assembly resource associated with this chassis. See the <a href="#">Assembly</a> schema for details on this property.

<b>@odata.id</b> }	string	read-only	Link to a Assembly resource. See the Links section and the <a href="#">Assembly</a> schema for details.
<b>AssetTag</b>	string	read-write (null)	The user assigned asset tag of this chassis.
<b>ChassisType</b>	string (enum)	read-only	The type of physical form factor of the chassis. <i>See <a href="#">ChassisType</a> in Property Details, below, for the possible values of this property.</i>
<b>DepthMm</b> (v1.4+)	number (mm)	read-only (null)	The depth of the chassis.
<b>HeightMm</b> (v1.4+)	number (mm)	read-only (null)	The height of the chassis.
<b>IndicatorLED</b>	string (enum)	read-write (null)	The state of the indicator LED, used to identify the chassis. <i>See <a href="#">IndicatorLED</a> in Property Details, below, for the possible values of this property.</i>
<b>Links</b> (v1.0.6+) {	object	read-write	Contains references to other resources that are related to this resource.
<b>ComputerSystems</b> (v1.0.6+) [ {	array	read-only	An array of references to the computer systems contained in this chassis. This will only reference ComputerSystems that are directly and wholly contained in this chassis.
<b>@odata.id</b>	string	read-only	Link to a ComputerSystem resource. See the Links section and the <a href="#">ComputerSystem</a> schema for details.
}]			
<b>ContainedBy</b> (v1.0.6+) {	object	read-only	A reference to the chassis that this chassis is contained by.
<b>@odata.id</b> }	string	read-only	Link to another Chassis resource.
<b>Contains</b> (v1.0.6+) [ {	array	read-only	An array of references to any other chassis that this chassis has in it.
<b>@odata.id</b>	string	read-only	Link to another Chassis resource.
}]			
<b>CooledBy</b> (v1.0.6+) [ {	array	read-only	An array of ID[s] of resources that cool this chassis. Normally the ID will be a chassis or a specific set of fans.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.

}}			
<b>Drives</b> (v1.2.4+) [{	array	read-only	An array of references to the disk drives located in this Chassis.
<b>@odata.id</b>	string	read-only	Link to a Drive resource. See the Links section and the <a href="#">Drive</a> schema for details.
}]			
<b>ManagedBy</b> (v1.0.6+) [{	array	read-only	An array of references to the Managers responsible for managing this chassis.
<b>@odata.id</b>	string	read-only	Link to a Manager resource. See the Links section and the <a href="#">Manager</a> schema for details.
}]			
<b>ManagersInChassis</b> (v1.2.4+) [{	array	read-only	An array of references to the managers located in this Chassis.
<b>@odata.id</b>	string	read-only	Link to a Manager resource. See the Links section and the <a href="#">Manager</a> schema for details.
}]			
<b>Oem</b> (v1.0.6+) { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PCleDevices</b> (v1.4.3+) [{	array	read-only	An array of references to the PCIe Devices located in this Chassis.
<b>@odata.id</b>	string	read-only	Link to a PCIeDevice resource. See the Links section and the <a href="#">PCleDevice</a> schema for details.
}]			
<b>PoweredBy</b> (v1.0.6+) [{	array	read-only	An array of ID[s] of resources that power this chassis. Normally the ID will be a chassis or a specific set of Power Supplies.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>ResourceBlocks</b> (v1.5.2+) [{	array	read-only	An array of references to the Resource Blocks located in this Chassis.
<b>@odata.id</b>	string	read-only	Link to a ResourceBlock resource. See the Links section and the <a href="#">ResourceBlock</a> schema for details.
}]			

<b>Storage</b> (v1.2.4+) [{	array	read-only	An array of references to the storage subsystems connected to or inside this Chassis.
<b>@odata.id</b>	string	read-only	Link to a Storage resource. See the Links section and the <a href="#">Storage</a> schema for details.
}]			
<b>Switches</b> (v1.7+) [{	array	read-only	An array of references to the Switches located in this Chassis.
<b>@odata.id</b>	string	read-only	Link to a Switch resource. See the Links section and the <a href="#">Switch</a> schema for details.
}]			
}]			
<b>Location</b>		read-write	See the <a href="#">Location object</a> definition in the <a href="#">Common Properties</a> section.
<b>LogServices</b> {	object	read-only	A reference to the logs for this chassis. Contains a link to a resource.
<b>@odata.id</b>	string	read-only	Link to Collection of <a href="#">LogService</a> . See the LogService schema for details.
}			
<b>Manufacturer</b>	string	read-only (null)	The manufacturer of this chassis.
<b>Model</b>	string	read-only (null)	The model number of the chassis.
<b>NetworkAdapters</b> {	object	read-only	A reference to the collection of Network Adapters associated with this chassis. Contains a link to a resource.
<b>@odata.id</b>	string	read-only	Link to Collection of <a href="#">NetworkAdapter</a> . See the NetworkAdapter schema for details.
}			
<b>PartNumber</b>	string	read-only (null)	The part number of the chassis.
<b>PhysicalSecurity</b> (v1.1+) {	object	read-write	The state of the physical security sensor.
<b>IntrusionSensor</b>	string (enum)	read-write (null)	This indicates the known state of the physical security sensor, such as if it is hardware intrusion detected. See <a href="#">IntrusionSensor</a> in Property Details, below, for the possible values of this property.
<b>IntrusionSensorNumber</b>	number	read-only (null)	A numerical identifier to represent the physical security sensor.

<b>IntrusionSensorReArm</b> }	string (enum)	read-only (null)	This indicates how the Normal state to be restored. See <a href="#">IntrusionSensorReArm</a> in <i>Property Details, below</i> , for the possible values of this property.
<b>Power</b> {	object	read-only	A reference to the power properties (power supplies, power policies, sensors) of this chassis. See the <a href="#">Power</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a Power resource. See the Links section and the <a href="#">Power</a> schema for details.
<b>PowerState</b> (v1.0.1+)	string (enum)	read-only (null)	The current power state of the chassis. See <a href="#">PowerState</a> in <i>Property Details, below</i> , for the possible values of this property.
<b>SKU</b>	string	read-only (null)	The SKU of the chassis.
<b>SerialNumber</b>	string	read-only (null)	The serial number of the chassis.
<b>Status</b> {}	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>Thermal</b> {	object	read-only	A reference to the thermal properties (fans, cooling, sensors) of this chassis. See the <a href="#">Thermal</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a Thermal resource. See the Links section and the <a href="#">Thermal</a> schema for details.
<b>UUID</b>	string	read-only (null)	The Universal Unique Identifier (UUID) for this Chassis.
<b>WeightKg</b> (v1.4+)	number (kg)	read-only (null)	The weight of the chassis.
<b>WidthMm</b> (v1.4+)	number (mm)	read-only (null)	The width of the chassis.

## Action Details

---

### Reset

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

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
---	--	--	--

<b>ResetType</b> }	string (enum)	read-write	The type of reset to be performed. See <a href="#">ResetType</a> in <i>Property Details</i> , below, for the possible values of this property.
-----------------------	------------------	------------	---

## Property Details

---

### ChassisType:

The type of physical form factor of the chassis.

string	Description
Blade	An enclosed or semi-enclosed, typically vertically-oriented, system chassis which must be plugged into a multi-system chassis to function normally.
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.
Component	A small chassis, card, or device which contains devices for a particular subsystem or function.
Drawer	An enclosed or semi-enclosed, typically horizontally-oriented, system chassis which may be slid into a multi-system chassis.
Enclosure	A generic term for a chassis that does not fit any other description.
Expansion	A chassis which expands the capabilities or capacity of another chassis.
IPBasedDrive (v1.0.3+)	A chassis in a drive form factor with IP-based network connections.
Module	A small, typically removable, chassis or card which contains devices for a particular subsystem or function.
Other	A chassis that does not fit any of these definitions.
Pod	A collection of equipment racks in a large, likely transportable, container.
Rack	An equipment rack, typically a 19-inch wide freestanding unit.
RackGroup (v1.0.3+)	A group of racks which form a single entity or share infrastructure.
RackMount	A single system chassis designed specifically for mounting in an equipment rack.
Row	A collection of equipment racks.
Shelf	An enclosed or semi-enclosed, typically horizontally-oriented, system chassis which must be plugged into a multi-system chassis to function normally.



<b>string</b>	<b>Description</b>
Sidecar	A chassis that mates mechanically with another chassis to expand its capabilities or capacity.
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.
StandAlone	A single, free-standing system, commonly called a tower or desktop chassis.
StorageEnclosure (v1.0.6+)	A chassis which encloses storage.
Zone	A logical division or portion of a physical chassis that contains multiple devices or systems that cannot be physically separated.

### **IndicatorLED:**

The state of the indicator LED, used to identify the chassis.

<b>string</b>	<b>Description</b>
Blinking	The Indicator LED is blinking.
Lit	The Indicator LED is lit.
Off	The Indicator LED is off.
Unknown	The state of the Indicator LED cannot be determined.

### **IntrusionSensor:**

This indicates the known state of the physical security sensor, such as if it is hardware intrusion detected.

<b>string</b>	<b>Description</b>
HardwareIntrusion	A door, lock, or other mechanism protecting the internal system hardware from being accessed is detected as being in an insecure state.
Normal	No abnormal physical security conditions are detected at this time.
TamperingDetected	Physical tampering of the monitored entity is detected.

### **IntrusionSensorReArm:**

This indicates how the Normal state to be restored.

<b>string</b>	<b>Description</b>
Automatic	This sensor would be restored to the Normal state automatically as no abnormal physical security conditions are detected.
Manual	This sensor would be restored to the Normal state by a manual re-arm.

## PowerState:

The current power state of the chassis.

string	Description
Off	The components within the chassis has no power, except some components may continue to have AUX power such as management controller.
On	The components within the chassis has power on.
PoweringOff	A temporary state between On and Off. The components within the chassis can take time to process the power off action.
PoweringOn	A temporary state between Off and On. The components within the chassis can take time to process the power on action.

## ResetType:

The type of reset to be performed.

string	Description
ForceOff	Turn the unit off immediately (non-graceful shutdown).
ForceOn	Turn the unit on immediately.
ForceRestart	Perform an immediate (non-graceful) shutdown, followed by a restart.
GracefulRestart	Perform a graceful shutdown followed by a restart of the system.
GracefulShutdown	Perform a graceful shutdown and power off.
Nmi	Generate a Diagnostic Interrupt (usually an NMI on x86 systems) to cease normal operations, perform diagnostic actions and typically halt the system.
On	Turn the unit on.
PowerCycle	Perform a power cycle of the unit.
PushPowerButton	Simulate the pressing of the physical power button on this unit.

## Example Response

---

```
{
  "@odata.type": "#Chassis.v1_7_0.Chassis",
  "Id": "1U",
  "Name": "Computer System Chassis",
  "ChassisType": "RackMount",
  "AssetTag": "Chicago-45Z-2381",
  "Manufacturer": "Contoso",
  "Model": "3500RX",
  "SKU": "8675309",
  "SerialNumber": "437XR1138R2",
  "PartNumber": "224071-J23",
  "PowerState": "On",
  "IndicatorLED": "Lit",
  "HeightMm": 44.45,
```

```
"WidthMm": 431.8,
"DepthMm": 711,
"WeightKg": 15.31,
"Location": {
  "PostalAddress": {
    "Country": "US",
    "Territory": "OR",
    "City": "Portland",
    "Street": "1001 SW 5th Avenue",
    "HouseNumber": 1100,
    "Name": "Distributed Management Task Force, Inc.",
    "PostalCode": "97204"
  },
  "Placement": {
    "Row": "North",
    "Rack": "WEB43",
    "RackOffsetUnits": "EIA_310",
    "RackOffset": 12
  }
},
"Status": {
  "State": "Enabled",
  "Health": "OK"
},
"Thermal": {
  "@odata.id": "/redfish/v1/Chassis/1U/Thermal"
},
"Power": {
  "@odata.id": "/redfish/v1/Chassis/1U/Power"
},
"Assembly": {
  "@odata.id": "/redfish/v1/Chassis/1U/Assembly"
},
"Links": {
  "ComputerSystems": [
    {
      "@odata.id": "/redfish/v1/Systems/437XR1138R2"
    }
  ],
  "ManagedBy": [
    {
      "@odata.id": "/redfish/v1/Managers/BMC"
    }
  ],
  "ManagersInChassis": [
    {
      "@odata.id": "/redfish/v1/Managers/BMC"
    }
  ]
},
"@odata.context": "/redfish/v1/$metadata#Chassis.Chassis",
"@odata.id": "/redfish/v1/Chassis/1U"
}
```

# CompositionService 1.0.1

The CompositionService schema defines a Composition Service which represents the properties for the service and links to the resources available for composition.

<b>Actions</b> (v1.0.1+) {}	object	read-write	The available actions for this resource.
<b>ResourceBlocks</b> {	object	read-only	The resource blocks available on the service. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">ResourceBlock</a> . See the ResourceBlock schema for details.
<b>ResourceZones</b> {	object	read-only	The resource zones available on the service. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Zone</a> . See the Zone schema for details.
<b>ServiceEnabled</b>	boolean	read-write (null)	This indicates whether this service is enabled.
<b>Status</b> {}	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

## Example Response

```
{
  "@odata.type": "#CompositionService.v1_0_1.CompositionService",
  "Id": "CompositionService",
  "Name": "Composition Service",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "ServiceEnabled": true,
  "ResourceBlocks": {
    "@odata.id": "/redfish/v1/CompositionService/ResourceBlocks"
  },
  "ResourceZones": {
    "@odata.id": "/redfish/v1/CompositionService/ResourceZones"
  },
  "Oem": {},
  "@odata.context": "/redfish/v1/$metadata#CompositionService.CompositionService",
  "@odata.id": "/redfish/v1/CompositionService"
}
```

# ComputerSystem 1.5.0

This schema defines a computer system and its respective properties. A computer system represents a machine (physical or virtual) and the local resources such as memory, cpu and other devices that can be accessed from that machine.

<b>Actions</b> (v1.0.7+) {	object	read-write	The available actions for this
----------------------------	--------	------------	--------------------------------

			resource.
<b>#ComputerSystem.Reset { }</b>	object	read-write	This action is used to reset the system. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>#ComputerSystem.SetDefaultBootOrder { }</b>	object	read-write	This action is used to set the Boot Order to the default settings. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>AssetTag</b>	string	read-write (null)	The user definable tag that can be used to track this computer system for inventory or other client purposes.
<b>Bios {</b>	object	read-only	A reference to the BIOS settings associated with this system. See the <a href="#">Bios</a> schema for details on this property.
<b>    @odata.id</b> <b>}</b>	string	read-only	Link to a Bios resource. See the Links section and the <a href="#">Bios</a> schema for details.
<b>BiosVersion</b>	string	read-only (null)	The version of the system BIOS or primary system firmware.
<b>Boot {</b>	object	read-write	Information about the boot settings for this system.
<b>    BootNext (v1.5+)</b>	string	read-write (null)	This property is the BootOptionReference of the Boot Option to perform a one time boot from when BootSourceOverrideTarget is UefiBootNext.
<b>    BootOptions (v1.5+) {</b>	object	read-only	A reference to the collection of the UEFI Boot Options associated with this Computer System. Contains a link to a resource.
<b>        @odata.id</b> <b>    }</b>	string	read-only	Link to Collection of <a href="#">BootOption</a> . See the BootOption schema for details.
<b>    BootOrder (v1.5+) [ ]</b>	array (string,	read-write	Ordered array of BootOptionReference

	null)		strings representing the persistent Boot Order associated with this computer system.
<b>BootSourceOverrideEnabled</b>	string (enum)	read-write (null)	Describes the state of the Boot Source Override feature. See <a href="#">BootSourceOverrideEnabled</a> in Property Details, below, for the possible values of this property.
<b>BootSourceOverrideMode</b> (v1.1+)	string (enum)	read-write (null)	The BIOS Boot Mode (either Legacy or UEFI) to be used when BootSourceOverrideTarget boot source is booted from. See <a href="#">BootSourceOverrideMode</a> in Property Details, below, for the possible values of this property.
<b>BootSourceOverrideTarget</b>	string (enum)	read-write (null)	The current boot source to be used at next boot instead of the normal boot device, if BootSourceOverrideEnabled is true. See <a href="#">BootSourceOverrideTarget</a> in Property Details, below, for the possible values of this property.
<b>UefiTargetBootSourceOverride</b> }	string	read-write (null)	This property is the UEFI Device Path of the device to boot from when BootSourceOverrideTarget is UefiTarget.
<b>EthernetInterfaces</b> {	object	read-only	A reference to the collection of Ethernet interfaces associated with this system. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">EthernetInterface</a> . See the EthernetInterface schema for details.
<b>HostName</b>	string	read-write (null)	The DNS Host Name, without any domain information.
<b>HostWatchdogTimer</b> (v1.5+) {	object	read-write	This object describes the

			Host Watchdog Timer functionality for this system.
<b>FunctionEnabled</b>	boolean	read-write (null)	This indicates if the Host Watchdog Timer functionality has been enabled. Additional host-based software is necessary to activate the timer function.
<b>Oem { }</b>	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Status { }</b>	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>TimeoutAction</b>	string (enum)	read-write (null)	This property indicates the action to perform when the Watchdog Timer reaches its timeout value. <i>See <a href="#">TimeoutAction</a> in Property Details, below, for the possible values of this property.</i>
<b>WarningAction</b> }	string (enum)	read-write (null)	This property indicates the action to perform when the Watchdog Timer is close (typically 3-10 seconds) to reaching its timeout value. <i>See <a href="#">WarningAction</a> in Property Details, below, for the possible values of this property.</i>
<b>HostedServices (v1.2+) {</b>	object	read-write	The services that this computer system supports.
<b>Oem { }</b>	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>StorageServices</b> }		read-only	A reference to a collection of storage services supported by this computer system.
<b>HostingRoles (v1.2+) [ ]</b>	array (string (enum))	read-only	The hosing roles that this computer system supports. The enumerations of HostingRoles specify different features that the hosting ComputerSystem supports. <i>See <a href="#">HostingRoles</a> in Property Details, below, for</i>

			<i>the possible values of this property.</i>
<b>IndicatorLED</b>	string (enum)	read-write (null)	The state of the indicator LED, used to identify the system. See <a href="#">IndicatorLED</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>Links</b> (v1.0.7+) {	object	read-write	Contains references to other resources that are related to this resource.
<b>Chassis</b> (v1.0.7+) [{	array	read-only	An array of references to the chassis in which this system is contained.
<b>@odata.id</b>	string	read-only	Link to a Chassis resource. See the Links section and the <a href="#">Chassis</a> schema for details.
}]			
<b>ConsumingComputerSystems</b> (v1.5+) [{	array	read-only	An array of references to ComputerSystems that are realized, in whole or in part, from this ComputerSystem.
<b>@odata.id</b>	string	read-only	Link to another ComputerSystem resource.
}]			
<b>CooledBy</b> (v1.0.7+) [{	array	read-only	An array of ID[s] of resources that cool this computer system. Normally the ID will be a chassis or a specific set of fans.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>Endpoints</b> (v1.2.4+) [{	array	read-only	An array of references to the endpoints that connect to this system.
<b>@odata.id</b>	string	read-only	Link to a Endpoint resource. See the Links section and the <a href="#">Endpoint</a> schema for details.
}]			
<b>ManagedBy</b> (v1.0.7+) [{	array	read-only	An array of references to the



			Managers responsible for this system.
<b>@odata.id</b>	string	read-only	Link to a Manager resource. See the Links section and the <a href="#">Manager</a> schema for details.
}}			
<b>Oem (v1.0.7+) {</b>	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PoweredBy (v1.0.7+) [ {</b>	array	read-only	An array of ID[s] of resources that power this computer system. Normally the ID will be a chassis or a specific set of Power Supplies.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}}			
<b>ResourceBlocks (v1.4.2+) [ {</b>	array	read-write	An array of references to the Resource Blocks that are used in this Computer System.
<b>@odata.id</b>	string	read-only	Link to a ResourceBlock resource. See the Links section and the <a href="#">ResourceBlock</a> schema for details.
}}			
<b>SupplyingComputerSystems (v1.5+) [ {</b>	array	read-only	An array of references to ComputerSystems that contribute, in whole or in part, to the implementation of this ComputerSystem.
<b>@odata.id</b>	string	read-only	Link to another ComputerSystem resource.
}} }			
<b>LogServices {</b>	object	read-only	A reference to the collection of Log Services associated with this system. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">LogService</a> . See the

			LogService schema for details.
<b>Manufacturer</b>	string	read-only (null)	The manufacturer or OEM of this system.
<b>Memory {</b>	object	read-only	A reference to the collection of Memory associated with this system. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Memory</a> . See the Memory schema for details.
<b>MemoryDomains {</b>	object	read-only (null)	A reference to the collection of Memory Domains associated with this system. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">MemoryDomain</a> . See the MemoryDomain schema for details.
<b>MemorySummary {</b>	object	read-write	This object describes the central memory of the system in general detail.
<b>MemoryMirroring (v1.1+)</b>	string (enum)	read-only (null)	The ability and type of memory mirroring supported by this system. <i>See <a href="#">MemoryMirroring</a> in Property Details, below, for the possible values of this property.</i>
<b>Status { }</b>	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>TotalSystemMemoryGiB</b>	number	read-only (null)	The total configured operating system-accessible memory (RAM), measured in GiB.
<b>TotalSystemPersistentMemoryGiB (v1.4+)</b> }	number	read-only (null)	The total configured, system-accessible persistent memory, measured in GiB.
<b>Model</b>	string	read-only (null)	The product name for this system, without the manufacturer name.
<b>NetworkInterfaces {</b>	object	read-only	A reference to the collection of Network Interfaces

			associated with this system. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">NetworkInterface</a> . See the NetworkInterface schema for details.
<b>PCleDevices (v1.2+)</b> [{	array	read-only	A reference to a collection of PCIe Devices used by this computer system.
<b>@odata.id</b>	string	read-only	Link to a PCIeDevice resource. See the Links section and the <a href="#">PCleDevice</a> schema for details.
}]			
<b>PCleFunctions (v1.2+)</b> [{	array	read-only	A reference to a collection of PCIe Functions used by this computer system.
<b>@odata.id</b>	string	read-only	Link to a PCIeFunction resource. See the Links section and the <a href="#">PCleFunction</a> schema for details.
}]			
<b>PartNumber</b>	string	read-only (null)	The part number for this system.
<b>PowerState</b>	string (enum)	read-only (null)	This is the current power state of the system. See <a href="#">PowerState</a> in Property Details, below, for the possible values of this property.
<b>ProcessorSummary</b> {	object	read-write	This object describes the central processors of the system in general detail.
<b>Count</b>	number	read-only (null)	The number of physical processors in the system.
<b>LogicalProcessorCount (v1.5+)</b>	number	read-only (null)	The number of logical processors in the system.
<b>Model</b>	string	read-only (null)	The processor model for the primary or majority of processors in this system.
<b>Status</b> {} }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this</a>

			<a href="#">guide</a> section.
<b>Processors</b> {	object	read-only	A reference to the collection of Processors associated with this system. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Processor</a> . See the Processor schema for details.
<b>Redundancy (v1.5+)</b> [{	array	read-only	A reference to a collection of Redundancy entities that each name a set of computer systems that provide redundancy for this ComputerSystem.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>SKU</b>	string	read-only (null)	The manufacturer SKU for this system.
<b>SecureBoot</b> {	object	read-only	A reference to the UEFI SecureBoot resource associated with this system. See the <a href="#">SecureBoot</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a SecureBoot resource. See the Links section and the <a href="#">SecureBoot</a> schema for details.
<b>SerialNumber</b>	string	read-only (null)	The serial number for this system.
<b>SimpleStorage</b> {	object	read-only	A reference to the collection of storage devices associated with this system. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">SimpleStorage</a> . See the SimpleStorage schema for details.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>Storage</b> {	object	read-only	A reference to the collection of storage devices

			associated with this system. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Storage</a> . See the Storage schema for details.
<b>SubModel (v1.5+)</b>	string	read-only (null)	The sub-model for this system.
<b>SystemType</b>	string (enum)	read-only	The type of computer system represented by this resource. <i>See <a href="#">SystemType</a> in Property Details, below, for the possible values of this property.</i>
<b>TrustedModules (v1.1+) [ {</b>	array	read-write	This object describes the array of Trusted Modules in the system.
<b>FirmwareVersion (v1.1+)</b>	string	read-only (null)	The firmware version of this Trusted Module.
<b>FirmwareVersion2 (v1.3+)</b>	string	read-only (null)	The 2nd firmware version of this Trusted Module, if applicable.
<b>InterfaceType (v1.1+)</b>	string (enum)	read-only (null)	This property indicates the interface type of the Trusted Module. <i>See <a href="#">InterfaceType</a> in Property Details, below, for the possible values of this property.</i>
<b>InterfaceTypeSelection (v1.3+)</b>	string (enum)	read-only (null)	The Interface Type selection supported by this Trusted Module. <i>See <a href="#">InterfaceTypeSelection</a> in Property Details, below, for the possible values of this property.</i>
<b>Oem (v1.1+) { }</b>	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Status (v1.1+) { }</b>	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>}]</b>			
<b>UUID</b>	string	read-only (null)	The universal unique identifier (UUID) for this

			system. See <i>Property Details</i> , below, for more information about this property.
--	--	--	---

## Action Details

---

### Reset

This action is used to reset the system.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
ResetType	string (enum)	read-write	The type of reset to be performed. See <a href="#">ResetType</a> in <i>Property Details</i> , below, for the possible values of this property.
}			

### SetDefaultBootOrder

This action is used to set the Boot Order to the default settings.

(This action takes no parameters.)

## Property Details

---

### BootSourceOverrideEnabled:

Describes the state of the Boot Source Override feature.

string	Description
Continuous	The system will boot to the target specified in the BootSourceOverrideTarget until this property is set to Disabled.
Disabled	The system will boot normally.
Once	On its next boot cycle, the system will boot (one time) to the Boot Source Override Target. The value of BootSourceOverrideEnabled is then reset back to Disabled.

### BootSourceOverrideMode:

The BIOS Boot Mode (either Legacy or UEFI) to be used when BootSourceOverrideTarget boot source is booted from.

string	Description
Legacy	The system will boot in non-UEFI boot mode to the Boot Source Override Target.
UEFI	The system will boot in UEFI boot mode to the Boot Source Override Target.

### BootSourceOverrideTarget:

The current boot source to be used at next boot instead of the normal boot device, if

BootSourceOverrideEnabled is true.

<b>string</b>	<b>Description</b>
BiosSetup	Boot to the BIOS Setup Utility.
Cd	Boot from the CD/DVD disc.
Diags	Boot the manufacturer's Diagnostics program.
Floppy	Boot from the floppy disk drive.
Hdd	Boot from a hard drive.
None	Boot from the normal boot device.
Pxe	Boot from the Pre-Boot EXecution (PXE) environment.
RemoteDrive (v1.0.3+)	Boot from a remote drive (e.g. iSCSI).
SDCard	Boot from an SD Card.
UefiBootNext (v1.0.7+)	Boot to the UEFI Device specified in the BootNext property.
UefiHttp	Boot from a UEFI HTTP network location.
UefiShell	Boot to the UEFI Shell.
UefiTarget	Boot to the UEFI Device specified in the UefiTargetBootSourceOverride property.
Usb	Boot from a USB device as specified by the system BIOS.
Utilities	Boot the manufacturer's Utilities program(s).

### HostingRoles:

The hosing roles that this computer system supports. The enumerations of HostingRoles specify different features that the hosting ComputerSystem supports.

<b>string</b>	<b>Description</b>
ApplicationServer	The system hosts functionality that supports general purpose applications.
StorageServer	The system hosts functionality that supports the system acting as a storage server.
Switch	The system hosts functionality that supports the system acting as a switch.

### IndicatorLED:

The state of the indicator LED, used to identify the system.

<b>string</b>	<b>Description</b>
Blinking	The Indicator LED is blinking.
Lit	The Indicator LED is lit.
Off	The Indicator LED is off.
Unknown	The state of the Indicator LED cannot be determined.

### **InterfaceType:**

This property indicates the interface type of the Trusted Module.

<b>string</b>	<b>Description</b>
TCM1_0	Trusted Cryptography Module (TCM) 1.0.
TPM1_2	Trusted Platform Module (TPM) 1.2.
TPM2_0	Trusted Platform Module (TPM) 2.0.

### **InterfaceTypeSelection:**

The Interface Type selection supported by this Trusted Module.

<b>string</b>	<b>Description</b>
BiosSetting	The TrustedModule supports switching InterfaceType via platform software, such as a BIOS configuration Attribute.
FirmwareUpdate	The TrustedModule supports switching InterfaceType via a firmware update.
None	The TrustedModule does not support switching the InterfaceType.
OemMethod	The TrustedModule supports switching InterfaceType via an OEM proprietary mechanism.

### **MemoryMirroring:**

The ability and type of memory mirroring supported by this system.

<b>string</b>	<b>Description</b>
DIMM	The system supports DIMM mirroring at the DIMM level. Individual DIMMs can be mirrored.
Hybrid	The system supports a hybrid mirroring at the system and DIMM levels. Individual DIMMs can be mirrored.
None	The system does not support DIMM mirroring.
System	The system supports DIMM mirroring at the System level. Individual DIMMs are not paired for mirroring in this mode.



## PowerState:

This is the current power state of the system.

string	Description
Off	The system is powered off, although some components may continue to have AUX power such as management controller.
On	The system is powered on.
PoweringOff	A temporary state between On and Off. The power off action can take time while the OS is in the shutdown process.
PoweringOn	A temporary state between Off and On. This temporary state can be very short.

## ResetType:

The type of reset to be performed.

string	Description
ForceOff	Turn the unit off immediately (non-graceful shutdown).
ForceOn	Turn the unit on immediately.
ForceRestart	Perform an immediate (non-graceful) shutdown, followed by a restart.
GracefulRestart	Perform a graceful shutdown followed by a restart of the system.
GracefulShutdown	Perform a graceful shutdown and power off.
Nmi	Generate a Diagnostic Interrupt (usually an NMI on x86 systems) to cease normal operations, perform diagnostic actions and typically halt the system.
On	Turn the unit on.
PowerCycle	Perform a power cycle of the unit.
PushPowerButton	Simulate the pressing of the physical power button on this unit.

## SystemType:

The type of computer system represented by this resource.

string	Description
Composed (v1.0.5+)	A computer system that has been created by binding resource blocks together.
OS	An operating system instance.
Physical	A computer system.
PhysicallyPartitioned	A hardware-based partition of a computer system.
Virtual	A virtual machine instance running on this system.

string	Description
VirtuallyPartitioned	A virtual or software-based partition of a computer system.

### TimeoutAction:

This property indicates the action to perform when the Watchdog Timer reaches its timeout value.

string	Description
None	No action taken.
OEM	Perform an OEM-defined action.
PowerCycle	Power cycle the system.
PowerDown	Power down the system.
ResetSystem	Reset the system.

### UUID:

The universal unique identifier (UUID) for this system.

The UUID property contains a value that represents the universal unique identifier number (UUID) of a system.

The UUID property is a string data type. The format of the string is the 35-character string format specified in RFC4122: "xxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx". Each x represents a hexadecimal digit (0-f).

Regarding the case of the hex values, RFC4122 specifies that the hex values should be lowercase characters. Most modern scripting languages typically also represent hex values in lowercase characters following the RFC. However, dmidecode, WMI and some Redfish implementations currently use uppercase characters for UUID on output.

### WarningAction:

This property indicates the action to perform when the Watchdog Timer is close (typically 3-10 seconds) to reaching its timeout value.

string	Description
DiagnosticInterrupt	Raise a (typically non-maskable) Diagnostic Interrupt.
MessagingInterrupt	Raise a legacy IPMI messaging interrupt.
None	No action taken.
OEM	Perform an OEM-defined action.
SCI	Raise an interrupt using the ACPI System Control Interrupt (SCI).
SMI	Raise a Systems Management Interrupt (SMI).

## Example Response

```
{
  "@odata.type": "#ComputerSystem.v1_5_0.ComputerSystem",
```

```
"Id": "437XR1138R2",
>Name": "WebFrontEnd483",
>SystemType": "Physical",
>AssetTag": "Chicago-45Z-2381",
>Manufacturer": "Contoso",
>Model": "3500RX",
>SKU": "8675309",
>SerialNumber": "437XR1138R2",
>PartNumber": "224071-J23",
>Description": "Web Front End node",
>UUID": "38947555-7742-3448-3784-823347823834",
>HostName": "web483",
>Status": {
  State": "Enabled",
  Health": "OK",
  HealthRollup": "OK"
},
>HostingRoles": [
  "ApplicationServer"
],
>IndicatorLED": "Off",
>PowerState": "On",
>Boot": {
  "BootSourceOverrideEnabled": "Once",
  "BootSourceOverrideTarget": "Pxe",
  "BootSourceOverrideTarget@Redfish.AllowableValues": [
    "None",
    "Pxe",
    "Cd",
    "Usb",
    "Hdd",
    "BiosSetup",
    "Utilities",
    "Diags",
    "SDCard",
    "UefiTarget"
  ],
  "BootSourceOverrideMode": "UEFI",
  "UefiTargetBootSourceOverride": "/0x31/0x33/0x01/0x01"
},
>TrustedModules": [
  {
    "FirmwareVersion": "1.13b",
    "InterfaceType": "TPM1_2",
    "Status": {
      State": "Enabled",
      Health": "OK"
    }
  }
],
>Oem": {
  "Contoso": {
    "@odata.type": "#Contoso.ComputerSystem",
    "ProductionLocation": {
      "FacilityName": "PacWest Production Facility",
      "Country": "USA"
    }
  }
},
```

```
    "Chipwise": {
      "@odata.type": "#Chipwise.ComputerSystem",
      "Style": "Executive"
    },
    "BiosVersion": "P79 v1.33 (02/28/2015)",
    "ProcessorSummary": {
      "Count": 2,
      "Model": "Multi-Core Intel(R) Xeon(R) processor 7xxx Series",
      "Status": {
        "State": "Enabled",
        "Health": "OK",
        "HealthRollup": "OK"
      }
    },
    "MemorySummary": {
      "TotalSystemMemoryGiB": 96,
      "TotalSystemPersistentMemoryGiB": 0,
      "MemoryMirroring": "None",
      "Status": {
        "State": "Enabled",
        "Health": "OK",
        "HealthRollup": "OK"
      }
    },
    "Bios": {
      "@odata.id": "/redfish/v1/Systems/437XR1138R2/BIOS"
    },
    "Processors": {
      "@odata.id": "/redfish/v1/Systems/437XR1138R2/Processors"
    },
    "Memory": {
      "@odata.id": "/redfish/v1/Systems/437XR1138R2/Memory"
    },
    "EthernetInterfaces": {
      "@odata.id": "/redfish/v1/Systems/437XR1138R2/EthernetInterfaces"
    },
    "SimpleStorage": {
      "@odata.id": "/redfish/v1/Systems/437XR1138R2/SimpleStorage"
    },
    "LogServices": {
      "@odata.id": "/redfish/v1/Systems/437XR1138R2/LogServices"
    },
    "Links": {
      "Chassis": [
        {
          "@odata.id": "/redfish/v1/Chassis/1U"
        }
      ],
      "ManagedBy": [
        {
          "@odata.id": "/redfish/v1/Managers/BMC"
        }
      ]
    },
    "Actions": {
      "#ComputerSystem.Reset": {
        "target": "/redfish/v1/Systems/437XR1138R2/Actions/ComputerSystem.Reset",

```

```

        "ResetType@Redfish.AllowableValues": [
            "On",
            "ForceOff",
            "GracefulShutdown",
            "GracefulRestart",
            "ForceRestart",
            "Nmi",
            "ForceOn",
            "PushPowerButton"
        ]
    },
    "Oem": {
        "#Contoso.Reset": {
            "target": "/redfish/v1/Systems/437XR1138R2/Oem/Contoso/Actions/Contoso.Reset"
        }
    }
},
"@odata.context": "/redfish/v1/$metadata#ComputerSystem.ComputerSystem",
"@odata.id": "/redfish/v1/Systems/437XR1138R2"
}

```

## Drive 1.4.0

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

<b>Actions</b> (v1.0.4+) {	object	read-write	The available actions for this resource.
<b>#Drive.SecureErase</b> { }	object	read-write	This action is used to securely erase the contents of the drive. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>Assembly</b> {	object	read-only	A reference to the Assembly resource associated with this drive. See the <a href="#">Assembly</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a Assembly resource. See the Links section and the <a href="#">Assembly</a> schema for details.
<b>AssetTag</b>	string	read-write (null)	The user assigned asset tag for this drive.
<b>BlockSizeBytes</b>	number (bytes)	read-only (null)	The size of the smallest addressable unit (Block) of this drive in bytes.
<b>CapableSpeedGbs</b>	number (Gbit/s)	read-only (null)	The speed which this drive can communicate to a storage controller in ideal conditions in Gigabits per second.
<b>CapacityBytes</b>	number (bytes)	read-only (null)	The size in bytes of this Drive.
<b>EncryptionAbility</b>	string	read-only	The encryption abilities of this drive.

	(enum)	(null)	See <a href="#">EncryptionAbility</a> in Property Details, below, for the possible values of this property.
<b>EncryptionStatus</b>	string (enum)	read-only (null)	The status of the encryption of this drive. See <a href="#">EncryptionStatus</a> in Property Details, below, for the possible values of this property.
<b>FailurePredicted</b>	boolean	read-only (null)	Is this drive currently predicting a failure in the near future.
<b>HotspareType</b>	string (enum)	read-only (null)	The type of hotspare this drive is currently serving as. See <a href="#">HotspareType</a> in Property Details, below, for the possible values of this property.
<b>Identifiers []</b>	array ()	read-write	The Durable names for the drive. See the <a href="#">Identifier object</a> definition in the <a href="#">Common Properties</a> section.
<b>IndicatorLED</b>	string (enum)	read-write (null)	The state of the indicator LED, used to identify the drive. See <a href="#">IndicatorLED</a> in Property Details, below, for the possible values of this property.
<b>Links (v1.0.4+) {</b>	object	read-write	Contains references to other resources that are related to this resource.
<b>Chassis (v1.2.1+) {</b>	object	read-only	A reference to the Chassis which contains this Drive. See the <a href="#">Chassis</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a Chassis resource. See the Links section and the <a href="#">Chassis</a> schema for details.
<b>Endpoints (v1.1.3+) [{</b>	array	read-only	An array of references to the endpoints that connect to this drive.
<b>@odata.id</b>	string	read-only	Link to a Endpoint resource. See the Links section and the <a href="#">Endpoint</a> schema for details.
}]			
<b>Oem { }</b>	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Volumes [ {</b>	array	read-only	An array of references to the volumes contained in this drive. This will reference Volumes that are either wholly or only partly contained by this drive.
<b>@odata.id</b>	string	read-only	Link to a Volume resource. See the Links

			section and the <a href="#">Volume</a> schema for details.
}} }			
<b>Location</b> [ ]( <i>deprecated v1.4.0</i> )	array ()	read-write	See the <a href="#">Location object</a> definition in the <a href="#">Common Properties</a> section. <i>This property has been Deprecated in favor of the singular property PhysicalLocation found in Drive.v1_4_0.</i>
<b>Manufacturer</b>	string	read-only (null)	This is the manufacturer of this drive.
<b>MediaType</b>	string (enum)	read-only (null)	The type of media contained in this drive. See <a href="#">MediaType</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>Model</b>	string	read-only (null)	This is the model number for the drive.
<b>NegotiatedSpeedGbs</b>	number (Gbit/s)	read-only (null)	The speed which this drive is currently communicating to the storage controller in Gigabits per second.
<b>Operations</b> (v1.1+) [ {	array	read-write	The operations currently running on the Drive.
<b>AssociatedTask</b> (v1.1.3+) {	object	read-only	A reference to the task associated with the operation if any. See the <a href="#">Task</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a Task resource. See the Links section and the <a href="#">Task</a> schema for details.
<b>OperationName</b> (v1.1.3+)	string	read-only (null)	The name of the operation.
<b>PercentageComplete</b> (v1.1.3+)	number	read-only (null)	The percentage of the operation that has been completed.
}}			
<b>PartNumber</b>	string	read-only (null)	The part number for this drive.
<b>PhysicalLocation</b>		read-write	See the <a href="#">Location object</a> definition in the <a href="#">Common Properties</a> section.
<b>PredictedMediaLifeLeftPercent</b>	number	read-only (null)	The percentage of reads and writes that are predicted to still be available for the media.
<b>Protocol</b>	string (enum)	read-only (null)	The protocol this drive is using to communicate to the storage controller. See <a href="#">Protocol</a> in <i>Property Details</i> , below, for the possible values of this property.

<b>Revision</b>	string	read-only (null)	The revision of this Drive. This is typically the firmware/hardware version of the drive.
<b>RotationSpeedRPM</b>	number (RPM)	read-only (null)	The rotation speed of this Drive in Revolutions per Minute (RPM).
<b>SKU</b>	string	read-only (null)	This is the SKU for this drive.
<b>SerialNumber</b>	string	read-only (null)	The serial number for this drive.
<b>Status { }</b>	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>StatusIndicator</b>	string (enum)	read-write (null)	The state of the status indicator, used to communicate status information about this drive. See <a href="#">StatusIndicator</a> in <i>Property Details</i> , below, for the possible values of this property.

## Action Details

---

### SecureErase

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

(This action takes no parameters.)

## Property Details

---

### EncryptionAbility:

The encryption abilities of this drive.

string	Description
None	The drive is not capable of self encryption.
Other	The drive is capable of self encryption through some other means.
SelfEncryptingDrive	The drive is capable of self encryption per the Trusted Computing Group's Self Encrypting Drive Standard.

### EncryptionStatus:

The status of the encryption of this drive.

string	Description
Foreign	The drive is currently encrypted, the data is not accessible to the user, and the system requires user intervention to expose the data.
Locked	The drive is currently encrypted and the data is not accessible to the user, however the system has the ability to unlock the drive automatically.



<b>string</b>	<b>Description</b>
Unencrypted	The drive is not currently encrypted.
Unencrypted (v1.0.1+)	The drive is not currently encrypted.
Unlocked	The drive is currently encrypted but the data is accessible to the user unencrypted.

### HotspareType:

The type of hotspare this drive is currently serving as.

<b>string</b>	<b>Description</b>
Chassis	The drive is currently serving as a hotspare for all other drives in the chassis.
Dedicated	The drive is currently serving as a hotspare for a user defined set of drives.
Global	The drive is currently serving as a hotspare for all other drives in the storage system.
None	The drive is not currently a hotspare.

### IndicatorLED:

The state of the indicator LED, used to identify the drive.

<b>string</b>	<b>Description</b>
Blinking	The Indicator LED is blinking.
Lit	The Indicator LED is lit.
Off	The Indicator LED is off.

### MediaType:

The type of media contained in this drive.

<b>string</b>	<b>Description</b>
HDD	The drive media type is traditional magnetic platters.
SMR	The drive media type is shingled magnetic recording.
SSD	The drive media type is solid state or flash memory.

### Protocol:

The protocol this drive is using to communicate to the storage controller.

<b>string</b>	<b>Description</b>
AHCI	Advanced Host Controller Interface.
FC	Fibre Channel.

<b>string</b>	<b>Description</b>
FCP	Fibre Channel Protocol for SCSI.
FCoE	Fibre Channel over Ethernet.
FICON	Fibre CONnection (FICON).
FTP	File Transfer Protocol.
HTTP	Hypertext Transport Protocol.
HTTPS	Secure Hypertext Transport Protocol.
NFSv3	Network File System version 3.
NFSv4	Network File System version 4.
NVMe	Non-Volatile Memory Express.
NVMeOverFabrics	NVMe over Fabrics.
OEM	OEM specific.
PCIe	PCI Express (Vendor Proprietary).
RoCE	RDMA over Converged Ethernet Protocol.
RoCEv2	RDMA over Converged Ethernet Protocol Version 2.
SAS	Serial Attached SCSI.
SATA	Serial AT Attachment.
SFTP	Secure File Transfer Protocol.
SMB	Server Message Block (aka CIFS Common Internet File System).
UHCI	Universal Host Controller Interface.
USB	Universal Serial Bus.
iSCSI	Internet SCSI.
iWARP	Internet Wide Area Remote Direct Memory Access Protocol.

### **StatusIndicator:**

The state of the status indicator, used to communicate status information about this drive.

<b>string</b>	<b>Description</b>
Fail	The drive has failed.
Hotspare	The drive is marked to be automatically rebuilt and used as a replacement for a failed drive.
InACriticalArray	The array that this drive is a part of is degraded.
InAFailedArray	The array that this drive is a part of is failed.

string	Description
OK	The drive is OK.
PredictiveFailureAnalysis	The drive is still working but predicted to fail soon.
Rebuild	The drive is being rebuilt.

## Example Response

```
{
  "@odata.type": "#Drive.v1_4_0.Drive",
  "Id": "3D58ECBC375FD9F2",
  "Name": "Drive Sample",
  "IndicatorLED": "Lit",
  "Model": "C123",
  "Revision": "100A",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "CapacityBytes": 899527000000,
  "FailurePredicted": false,
  "Protocol": "SAS",
  "MediaType": "HDD",
  "Manufacturer": "Contoso",
  "SerialNumber": "1234568",
  "PartNumber": "C123-1111",
  "Identifiers": [
    {
      "DurableNameFormat": "NAA",
      "DurableName": "32ADF365C6C1B7BD"
    }
  ],
  "HotspareType": "None",
  "EncryptionAbility": "SelfEncryptingDrive",
  "EncryptionStatus": "Unlocked",
  "RotationSpeedRPM": 15000,
  "BlockSizeBytes": 512,
  "CapableSpeedGbs": 12,
  "NegotiatedSpeedGbs": 12,
  "Links": {
    "Volumes": [
      {
        "@odata.id": "/redfish/v1/Systems/437XR1138R2/Storage/1/Volumes/2"
      },
      {
        "@odata.id": "/redfish/v1/Systems/437XR1138R2/Storage/1/Volumes/3"
      }
    ]
  },
  "Actions": {
    "#Drive.SecureErase": {
      "target": "/redfish/v1/Systems/437XR1138R2/Storage/1/Drives/3D58ECBC375FD9F2/Actions/SecureErase"
    }
  },
  "@odata.context": "/redfish/v1/$metadata#Drive.Drive",
}
```

```

"@odata.id": "/redfish/v1/Systems/437XR1138R2/Storage/1/Drives/3D58ECBC375FD9F2"
}

```

## Endpoint 1.1.0

This is the schema definition for the Endpoint resource. It represents the properties of an entity that sends or receives protocol defined messages over a transport.

<b>Actions</b> (v1.0.3+) { }	object	read-write	The Actions object contains the available custom actions on this resource.
<b>ConnectedEntities</b> [ { }	array	read-write	All the entities connected to this endpoint.
<b>EntityLink</b>		read-only (null)	A link to the associated entity.
<b>EntityPcild</b> { }	object	read-write (null)	The PCI ID of the connected entity.
<b>DeviceId</b>	string	read-only (null)	The Device ID of this PCIe function.
<b>SubsystemId</b>	string	read-only (null)	The Subsystem ID of this PCIe function.
<b>SubsystemVendorId</b>	string	read-only (null)	The Subsystem Vendor ID of this PCIe function.
<b>VendorId</b> }	string	read-only (null)	The Vendor ID of this PCIe function.
<b>EntityRole</b>	string (enum)	read-only (null)	The role of the connected entity. See <a href="#">EntityRole</a> in Property Details, below, for the possible values of this property.
<b>EntityType</b>	string (enum)	read-only (null)	The type of the connected entity. See <a href="#">EntityType</a> in Property Details, below, for the possible values of this property.
<b>Identifiers</b> [ ]	array ( )	read-write (null)	Identifiers for the remote entity. See the <a href="#">Identifier object</a> definition in the <a href="#">Common Properties</a> section.
<b>Oem</b> { }	object	read-write (null)	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PciClassCode</b>	string	read-only (null)	The Class Code, Subclass code, and Programming Interface code of this PCIe function.
<b>PciFunctionNumber</b>	number	read-only (null)	The PCI ID of the connected entity.

}]			
<b>EndpointProtocol</b>	string (enum)	read-only (null)	The protocol supported by this endpoint. See <a href="#">EndpointProtocol</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>HostReservationMemoryBytes</b>	number (bytes)	read-only (null)	The amount of memory in Bytes that the Host should allocate to connect to this endpoint.
<b>IPTransportDetails</b> (v1.1+) [ {	array	read-write	This array contains details for each IP transport supported by this endpoint. The array structure can be used to model multiple IP addresses for this endpoint.
<b>IPv4Address</b>		read-write	See the <a href="#">IPAddress</a> object definition in the <a href="#">Common Properties</a> section.
<b>IPv6Address</b>		read-write	See the <a href="#">IPAddress</a> object definition in the <a href="#">Common Properties</a> section.
<b>Port</b>	number	read-only	The UDP or TCP port number used by the Endpoint.
<b>TransportProtocol</b>	string (enum)	read-only	The protocol used by the connection entity. See <a href="#">TransportProtocol</a> in <i>Property Details</i> , below, for the possible values of this property.
}]			
<b>Identifiers</b> [ ]	array ( )	read-write (null)	Identifiers for this endpoint. See the <a href="#">Identifier</a> object definition in the <a href="#">Common Properties</a> section.
<b>Links</b> (v1.0.3+) {	object	read-write	The links object contains the links to other resources that are related to this resource.
<b>MutuallyExclusiveEndpoints</b> [ {	array	read-only	An array of references to the endpoints that may not be used in zones if this endpoint is used in a zone.
<b>@odata.id</b>	string	read-only	Link to another Endpoint resource.
}]			
<b>NetworkDeviceFunction</b> (v1.1+) [ {	array	read-only	When NetworkDeviceFunction resources are present, this array contains references to the network device function that connect to this endpoint.
<b>@odata.id</b>	string	read-only	Link to a NetworkDeviceFunction

			resource. See the Links section and the <a href="#">NetworkDeviceFunction</a> schema for details.
}}			
<b>Oem</b> {}	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Ports</b> [{	array	read-only	An array of references to the the physical ports associated with this endpoint.
<b>@odata.id</b>	string	read-only	Link to a Port resource. See the Links section and the <a href="#">Port</a> schema for details.
}]			
<b>Pcild</b> {	object	read-write (null)	The PCI ID of the endpoint.
<b>DeviceId</b>	string	read-only (null)	The Device ID of this PCIe function.
<b>SubsystemId</b>	string	read-only (null)	The Subsystem ID of this PCIe function.
<b>SubsystemVendorId</b>	string	read-only (null)	The Subsystem Vendor ID of this PCIe function.
<b>VendorId</b> }	string	read-only (null)	The Vendor ID of this PCIe function.
<b>Redundancy</b> [{	array	read-write	Redundancy information for the lower level endpoints supporting this endpoint.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>Status</b> {}	object	read-write (null)	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

## Property Details

---

### EndpointProtocol:

The protocol supported by this endpoint.

string	Description
AHCI	Advanced Host Controller Interface.
FC	Fibre Channel.

<b>string</b>	<b>Description</b>
FCP	Fibre Channel Protocol for SCSI.
FCoE	Fibre Channel over Ethernet.
FICON	Fibre CONnection (FICON).
FTP	File Transfer Protocol.
HTTP	Hypertext Transport Protocol.
HTTPS	Secure Hypertext Transport Protocol.
NFSv3	Network File System version 3.
NFSv4	Network File System version 4.
NVMe	Non-Volatile Memory Express.
NVMeOverFabrics	NVMe over Fabrics.
OEM	OEM specific.
PCIe	PCI Express (Vendor Proprietary).
RoCE	RDMA over Converged Ethernet Protocol.
RoCEv2	RDMA over Converged Ethernet Protocol Version 2.
SAS	Serial Attached SCSI.
SATA	Serial AT Attachment.
SFTP	Secure File Transfer Protocol.
SMB	Server Message Block (aka CIFS Common Internet File System).
UHCI	Universal Host Controller Interface.
USB	Universal Serial Bus.
iSCSI	Internet SCSI.
iWARP	Internet Wide Area Remote Direct Memory Access Protocol.

### **EntityRole:**

The role of the connected entity.

<b>string</b>	<b>Description</b>
Both	The entity is acting as both an initiator and a target.
Initiator	The entity is acting as an initiator.
Target	The entity is acting as a target.

## EntityType:

The type of the connected entity.

string	Description
Bridge	The entity is a PCI(e) bridge.
DisplayController	The entity is a display controller.
Drive	The entity is a disk drive. The EntityLink property (if present) should be a Drive.Drive entity.
NetworkController	The entity is a network controller. The EntityLink property (if present) should be an EthernetInterface.EthernetInterface entity.
Processor	The entity is a processor device.
RootComplex	The entity is a PCI(e) root complex. The EntityLink property (if present) should be a ComputerSystem.ComputerSystem entity.
StorageExpander	The entity is a storage expander. The EntityLink property (if present) should be a Chassis.Chassis entity.
StorageInitiator	The entity is a storage initiator. The EntityLink property (if present) should be a Storage.StorageController entity.
Volume (v1.0.3+)	The entity is a volume. The EntityLink property (if present) should be a Volume.Volume entity.

## TransportProtocol:

The protocol used by the connection entity.

string	Description
AHCI	Advanced Host Controller Interface.
FC	Fibre Channel.
FCP	Fibre Channel Protocol for SCSI.
FCoE	Fibre Channel over Ethernet.
FICON	Fibre CONnection (FICON).
FTP	File Transfer Protocol.
HTTP	Hypertext Transport Protocol.
HTTPS	Secure Hypertext Transport Protocol.
NFSv3	Network File System version 3.
NFSv4	Network File System version 4.
NVMe	Non-Volatile Memory Express.
NVMeOverFabrics	NVMe over Fabrics.



string	Description
OEM	OEM specific.
PCIe	PCI Express (Vendor Proprietary).
RoCE	RDMA over Converged Ethernet Protocol.
RoCEv2	RDMA over Converged Ethernet Protocol Version 2.
SAS	Serial Attached SCSI.
SATA	Serial AT Attachment.
SFTP	Secure File Transfer Protocol.
SMB	Server Message Block (aka CIFS Common Internet File System).
UHCI	Universal Host Controller Interface.
USB	Universal Serial Bus.
iSCSI	Internet SCSI.
iWARP	Internet Wide Area Remote Direct Memory Access Protocol.

## Example Response

```
{
  "@odata.type": "#Endpoint.v1_1_0.Endpoint",
  "Id": "Drive1",
  "Name": "SAS Drive",
  "Description": "The SAS Drive in Enclosure 2 Bay 0",
  "EndpointProtocol": "SAS",
  "ConnectedEntities": [
    {
      "EntityType": "Drive",
      "EntityRole": "Target",
      "Identifiers": [
        {
          "DurableNameFormat": "NAA",
          "DurableName": "32ADF365C6C1B7C3"
        }
      ],
      "Oem": {}
    }
  ],
  "Links": {
    "MutuallyExclusiveEndpoints": [
      {
        "@odata.id": "/redfish/v1/Fabrics/SAS/Endpoints/Enclosure2"
      }
    ],
    "Ports": [
      {
        "@odata.id": "/redfish/v1/Fabrics/SAS/Switches/Switch1/Ports/8"
      }
    ]
  }
}
```

```

        "Oem": {},
        "Oem": {},
        "@odata.context": "/redfish/v1/$metadata#Endpoint.Endpoint",
        "@odata.id": "/redfish/v1/Fabrics/SAS/Endpoints/Drive1"
    }
}

```

## EthernetInterface 1.4.0

The EthernetInterface schema represents a single, logical ethernet interface or network interface controller (NIC).

<b>Actions</b> (v1.3.1+) {}	object	read-write	The available actions for this resource.
<b>AutoNeg</b>	boolean	read-write (null)	This indicates if the speed and duplex are automatically negotiated and configured on this interface.
<b>DHCPv4</b> (v1.4+) {	object	read-write (null)	DHCPv4 configuration for this interface.
<b>DHCPEnabled</b> (v1.4+)	boolean	read-write (null)	Determines whether DHCPv4 is enabled on this interface.
<b>UseDNSServers</b> (v1.4+)	boolean	read-write (null)	Determines whether to use DHCPv4-supplied DNS servers.
<b>UseDomainName</b> (v1.4+)	boolean	read-write (null)	Determines whether to use a DHCPv4-supplied domain name.
<b>UseGateway</b> (v1.4+)	boolean	read-write (null)	Determines whether to use a DHCPv4-supplied gateway.
<b>UseNTPServers</b> (v1.4+)	boolean	read-write (null)	Determines whether to use DHCPv4-supplied NTP servers.
<b>UseStaticRoutes</b> (v1.4+) }	boolean	read-write (null)	Determines whether to use DHCPv4-supplied static routes.
<b>DHCPv6</b> (v1.4+) {	object	read-write (null)	DHCPv6 configuration for this interface.
<b>OperatingMode</b>	string (enum)	read-write (null)	Determines the DHCPv6 operating mode for this interface. <i>See <a href="#">OperatingMode</a> in Property Details, below, for the possible values of this property.</i>
<b>UseDNSServers</b>	boolean	read-write (null)	When enabled, DNS server addresses supplied through DHCPv6 stateless mode will be used.

<b>UseDomainName</b>	boolean	read-write (null)	When enabled, the domain name supplied through DHCPv6 stateless mode will be used.
<b>UseNTPServers</b>	boolean	read-write (null)	When enabled, NTP server addresses supplied through DHCPv6 stateless mode will be used.
<b>UseRapidCommit</b> }	boolean	read-write (null)	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.
<b>FQDN</b>	string	read-write (null)	This is the complete, fully qualified domain name obtained by DNS for this interface.
<b>FullDuplex</b>	boolean	read-write (null)	This indicates if the interface is in Full Duplex mode or not.
<b>HostName</b>	string	read-write (null)	The DNS Host Name, without any domain information.
<b>IPv4Addresses [ ]</b>	array ( )	read-write	The IPv4 addresses currently assigned to this interface. See the <a href="#">IPAddress object</a> definition in the <a href="#">Common Properties</a> section.
<b>IPv4StaticAddresses [ ]</b>	array ( )	read-write	The IPv4 static addresses assigned to this interface. See the <a href="#">IPAddress object</a> definition in the <a href="#">Common Properties</a> section
<b>IPv6AddressPolicyTable [ {</b>	array	read-write	An array representing the RFC 6724 Address Selection Policy Table.
<b>Label</b>	number	read-write (null)	The IPv6 Label (as defined in RFC 6724 section 2.1).
<b>Precedence</b>	number	read-write (null)	The IPv6 Precedence (as defined in RFC 6724 section 2.1).
<b>Prefix</b>	string	read-write (null)	The IPv6 Address Prefix (as defined in RFC 6724 section 2.1).
<b>}]</b>			
<b>IPv6Addresses [ ]</b>	array ( )	read-write	Enumerates in an array all of the currently assigned IPv6 addresses on this interface. See the <a href="#">IPAddress object</a> definition in the <a href="#">Common Properties</a> section.
<b>IPv6DefaultGateway</b>	string	read-only (null)	This is the IPv6 default gateway address that is currently in use on

			this interface.
<b>IPv6StaticAddresses</b> [ ]	array ( )	read-write	Represents in an array all of the IPv6 static addresses to be assigned on this interface. See the <a href="#">IPAddress object</a> definition in the <a href="#">Common Properties</a> section.
<b>IPv6StaticDefaultGateways</b> [ ]	array ( )	read-write	The IPv6 static default gateways for this interface. See the <a href="#">IPAddress object</a> definition in the <a href="#">Common Properties</a> section.
<b>InterfaceEnabled</b>	boolean	read-write (null)	This indicates whether this interface is enabled.
<b>LinkStatus</b> (v1.1+)	string (enum)	read-only (null)	The link status of this interface (port). See <a href="#">LinkStatus</a> in Property Details, below, for the possible values of this property.
<b>Links</b> (v1.1.3+) {	object	read-write	Contains references to other resources that are related to this resource.
<b>Chassis</b> (v1.3.1+) {	object	read-only	A reference to the Chassis which contains this Ethernet Interface. See the <a href="#">Chassis</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a Chassis resource. See the Links section and the <a href="#">Chassis</a> schema for details.
<b>Endpoints</b> (v1.1.3+) [ {	array	read-only	An array of references to the endpoints that connect to this ethernet interface.
<b>@odata.id</b>	string	read-only	Link to a Endpoint resource. See the Links section and the <a href="#">Endpoint</a> schema for details.
}]			
<b>HostInterface</b> (v1.2.2+) {	object	read-only	This is a reference to a Host Interface that is associated with this Ethernet Interface. See the <a href="#">HostInterface</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a HostInterface resource. See the Links section and the <a href="#">HostInterface</a> schema for details.
<b>Oem</b> (v1.1.3+) { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.

<b>MACAddress</b>	string	read-write (null)	This is the currently configured MAC address of the (logical port) interface.
<b>MTUSize</b>	number	read-write (null)	This is the currently configured Maximum Transmission Unit (MTU) in bytes on this interface.
<b>MaxIPv6StaticAddresses</b>	number	read-only (null)	This indicates the maximum number of Static IPv6 addresses that can be configured on this interface.
<b>NameServers [ ]</b>	array (string)	read-only	This represents DNS name servers that are currently in use on this interface.
<b>PermanentMACAddress</b>	string	read-only (null)	This is the permanent MAC address assigned to this interface (port).
<b>SpeedMbps</b>	number (Mbit/s)	read-write (null)	This is the current speed in Mbps of this interface.
<b>StatelessAddressAutoConfig (v1.4+) {</b>	object	read-write (null)	Stateless Address Automatic Configuration (SLAAC) parameters for this interface.
<b>IPv4AutoConfigEnabled</b>	boolean	read-write (null)	Indicates whether IPv4 SLAAC is enabled for this interface.
<b>IPv6AutoConfigEnabled</b> }	boolean	read-write (null)	Indicates whether IPv6 SLAAC is enabled for this interface.
<b>StaticNameServers (v1.4+) [ ]</b>	array (string)	read-write	A statically defined set of DNS server IP addresses (both IPv4 and IPv6).
<b>Status { }</b>	object	read-write (null)	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>UefiDevicePath</b>	string	read-only (null)	The UEFI device path for this interface.
<b>VLAN {</b>	object	read-write (null)	If this Network Interface supports more than one VLAN, this property is not present. VLANs collections appear in the Link section of this resource. See the <a href="#">VlanNetworkInterface</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a VLAN resource. See the Links section and the <a href="#">VlanNetworkInterface</a> schema for details.
<b>VLANs {</b>	object	read-only	This is a reference to a collection of VLANs and is only used if the interface supports more than one

			VLANs. Contains a link to a resource.
@odata.id }	string	read-only	Link to Collection of <a href="#">VlanNetworkInterface</a> . See the VlanNetworkInterface schema for details.

## Property Details

### LinkStatus:

The link status of this interface (port).

string	Description
LinkDown	There is no link on this interface, but the interface is connected.
LinkUp	The link is available for communication on this interface.
NoLink	There is no link or connection detected on this interface.

### OperatingMode:

Determines the DHCPv6 operating mode for this interface.

string	Description
Disabled	DHCPv6 is disabled.
Stateful	DHCPv6 stateful mode.
Stateless	DHCPv6 stateless mode.

## Example Response

```
{
  "@odata.type": "#EthernetInterface.v1_4_0.EthernetInterface",
  "Id": "1",
  "Name": "Ethernet Interface",
  "Description": "Manager NIC 1",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "LinkStatus": "LinkUp",
  "PermanentMACAddress": "12:44:6A:3B:04:11",
  "MACAddress": "12:44:6A:3B:04:11",
  "SpeedMbps": 1000,
  "AutoNeg": true,
  "FullDuplex": true,
  "MTUSize": 1500,
  "HostName": "web483",
  "FQDN": "web483.contoso.com",
  "NameServers": [
    "names.contoso.com"
  ]
}
```

```

],
"IPv4Addresses": [
  {
    "Address": "192.168.0.10",
    "SubnetMask": "255.255.252.0",
    "AddressOrigin": "DHCP",
    "Gateway": "192.168.0.1"
  }
],
"DHCPv4": {
  "DHCPEnabled": true,
  "UseDNSServers": true,
  "UseGateway": true,
  "UseNTPServers": false,
  "UseStaticRoutes": true,
  "UseDomainName": true
},
"DHCPv6": {
  "OperatingMode": "Stateful",
  "UseDNSServers": true,
  "UseDomainName": false,
  "UseNTPServers": false,
  "UseRapidCommit": false
},
"StatelessAddressAutoConfig": {
  "IPv4AutoConfigEnabled": false,
  "IPv6AutoConfigEnabled": true
},
"IPv4StaticAddresses": [
  {
    "Address": "192.168.88.130",
    "SubnetMask": "255.255.0.0",
    "Gateway": "192.168.0.1"
  }
],
"IPv6AddressPolicyTable": [
  {
    "Prefix": "::1/128",
    "Precedence": 50,
    "Label": 0
  }
],
"MaxIPv6StaticAddresses": 1,
"IPv6StaticAddresses": [
  {
    "Address": "fc00:1234::a:b:c:d",
    "PrefixLength": 64
  }
],
"IPv6StaticDefaultGateways": [
  {
    "Address": "fe80::fe15:b4ff:fe97:90cd",
    "PrefixLength": 64
  }
],
"IPv6DefaultGateway": "fe80::214:c1ff:fe4c:5c4d",
"IPv6Addresses": [
  {

```

```

    "Address": "fe80::1ec1:deff:fe6f:1e24",
    "PrefixLength": 64,
    "AddressOrigin": "SLAAC",
    "AddressState": "Preferred",
    "Oem": {}
  },
  {
    "Address": "fc00:1234::a:b:c:d",
    "PrefixLength": 64,
    "AddressOrigin": "Static",
    "AddressState": "Preferred",
    "Oem": {}
  },
  {
    "Address": "2001:1:3:5::100",
    "PrefixLength": 64,
    "AddressOrigin": "DHCPv6",
    "AddressState": "Preferred",
    "Oem": {}
  },
  {
    "Address": "2002:2:5::1ec1:deff:fe6f:1e24",
    "PrefixLength": 64,
    "AddressOrigin": "SLAAC",
    "AddressState": "Preferred",
    "Oem": {}
  }
],
"StaticNameServers": [
  "192.168.150.1",
  "fc00:1234:200:2500"
],
"VLAN": {
  "VLANEnable": true,
  "VLANId": 101
},
"@odata.context": "/redfish/v1/$metadata#EthernetInterface.EthernetInterface",
"@odata.id": "/redfish/v1/Systems/437XR1138R2/EthernetInterfaces/12446A3B0411"
}

```

## Event 1.2.1

The Event schema describes the JSON payload received by an Event Destination (which has subscribed to event notification) when events occurs. This resource contains data about event(s), including descriptions, severity and MessageId reference to a Message Registry that can be accessed for further information.

<b>Actions</b> (v1.2.1+) {}	object	read-write	The available actions for this resource.
<b>Context</b> (v1.1+)	string	read-only	A context can be supplied at subscription time. This property is the context value supplied by the subscriber.
<b>Events</b> [{	array	read-write	Each event in this array has a set of properties that describe the event. Since this



			is an array, more than one event can be sent simultaneously.
<b>Actions</b> (v1.2+) { }	object	read-write	The available actions for this resource.
<b>Context</b> (deprecated v1.0.3)	string	read-only	A context can be supplied at subscription time. This property is the context value supplied by the subscriber. <i>Deprecated v1.0.3+. Events are triggered independently from subscriptions to those events. This property has been Deprecated in favor of Event.v1_0_2.Event.Context</i>
<b>EventId</b>	string	read-only	This is a unique instance identifier of an event.
<b>EventTimestamp</b>	string	read-only	This is time the event occurred.
<b>EventType</b>	string (enum)	read-only	This indicates the type of event sent, according to the definitions in the EventService. <i>See <a href="#">EventType</a> in Property Details, below, for the possible values of this property.</i>
<b>MemberId</b>	string	read-only	This is the identifier for the member within the collection.
<b>Message</b>	string	read-only	This is the human readable message, if provided.
<b>MessageArgs</b> [ ]	array (string)	read-only	This array of message arguments are substituted for the arguments in the message when looked up in the message registry.
<b>MessageId</b>	string	read-only	This is the key for this message which can be used to look up the message in a message registry.
<b>Oem</b> { }	object	read-write	This is the manufacturer/provider specific extension moniker used to divide the Oem object into sections. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>OriginOfCondition</b> { }	object	read-only	This indicates the resource that originated the condition that caused the event to be generated.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
<b>Severity</b>	string	read-only	This is the severity of the event.
}]			

## Property Details

---

### EventType:

This indicates the type of event sent, according to the definitions in the EventService.

string	Description
Alert	A condition exists which requires attention.
ResourceAdded	A resource has been added.
ResourceRemoved	A resource has been removed.
ResourceUpdated	The value of this resource has been updated.
StatusChange	The status of this resource has changed.

## EventDestination 1.3.0

An Event Destination describes the target of an event subscription, including the types of events subscribed and context to provide to the target in the Event payload.

<b>Actions</b> (v1.2.2+) { }	object	read-write	The available actions for this resource.
<b>Context</b>	string	read-write (null)	A client-supplied string that is stored with the event destination subscription.
<b>Destination</b>	string	read-only	The URI of the destination Event Service.
<b>EventTypes</b> [ ]	array (string (enum))	read-only	This property shall contain the types of events that shall be sent to the destination. See <a href="#">EventTypes</a> in Property Details, below, for the possible values of this property.
<b>HttpHeaders</b> [ { } ]	array	read-write	This is for setting HTTP headers, such as authorization information. This object will be null on a GET.
<b>MessageIds</b> (v1.1+) [ ]	array (string, null)	read-only	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.
<b>OriginResources</b> (v1.1+) [ { }	array	read-only	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.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
} ]			
<b>Protocol</b>	string (enum)	read-only	The protocol type of the event connection. See <a href="#">Protocol</a> in Property Details, below, for the possible values of this property.

<b>SubscriptionType</b> (v1.3+)	string (enum)	read-only (null)	Indicates the subscription type for events. See <a href="#">SubscriptionType</a> in <i>Property Details</i> , below, for the possible values of this property.
---------------------------------	------------------	---------------------	--

## Property Details

---

### EventTypes:

This property shall contain the types of events that shall be sent to the desination.

string	Description
Alert	A condition exists which requires attention.
ResourceAdded	A resource has been added.
ResourceRemoved	A resource has been removed.
ResourceUpdated	The value of this resource has been updated.
StatusChange	The status of this resource has changed.

### Protocol:

The protocol type of the event connection.

string	Description
Redfish	The destination follows the Redfish specification for event notifications.

### SubscriptionType:

Indicates the subscription type for events.

string	Description
RedfishEvent	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.
SSE	The subscription follows the HTML5 Server-Sent Event definition for event notifications.

## Example Response

---

```
{
  "@odata.type": "#EventDestination.v1_3_0.EventDestination",
  "Id": "1",
  "Name": "EventSubscription 1",
  "Destination": "http://www.dnsname.com/Destination1",
  "SubscriptionType": "RedfishEvent",
  "EventTypes": [
    "Alert"
  ],
  "Context": "WebUser3",
  "Protocol": "Redfish",
}
```

```

"@odata.context": "/redfish/v1/$metadata#EventDestination.EventDestination",
"@odata.id": "/redfish/v1/EventService/Subscriptions/1"
}

```

## EventService 1.1.0

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

<b>Actions</b> (v1.0.6+) {	object	read-write	The available actions for this resource.
<b>#EventService.SubmitTestEvent</b> { }	object	read-write	This action is used to generate a test event. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>DeliveryRetryAttempts</b>	number	read-write	This is the number of attempts an event posting is retried before the subscription is terminated. This retry is at the service level, meaning the HTTP POST to the Event Destination was returned by the HTTP operation as unsuccessful (4xx or 5xx return code) or an HTTP timeout occurred this many times before the Event Destination subscription is terminated.
<b>DeliveryRetryIntervalSeconds</b>	number (seconds)	read-write	This represents the number of seconds between retry attempts for sending any given Event.
<b>EventTypesForSubscription</b> [ ]	array (string (enum))	read-only	This is the types of Events that can be subscribed to. <i>See <a href="#">EventTypesForSubscription</a> in Property Details, below, for the possible values of this property.</i>
<b>ServerSentEventUri</b> (v1.1+)	string	read-only	Link to a URI for receiving Sever Sent Event representations of the events generated by this service.
<b>ServiceEnabled</b>	boolean	read-write (null)	This indicates whether this service is enabled.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>Subscriptions</b> {	object	read-only	This is a reference to a collection of Event Destination resources. Contains a link to a resource.
<b>@odata.id</b>	string	read-only	Link to Collection of

}		<a href="#">EventDestination</a> . See the EventDestination schema for details.
---	--	---

## Action Details

---

### SubmitTestEvent

This action is used to generate a test event.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
<b>EventId</b>	string	read-write	This is the ID of event to be added.
<b>EventTimestamp</b>	string	read-write	This is the time stamp of event to be added.
<b>EventType</b>	string (enum)	read-write	This is the type of event to be added. See <a href="#">EventType</a> in Property Details, below, for the possible values of this property.
<b>Message</b>	string	read-write	This is the human readable message of event to be added.
<b>MessageArgs [ ]</b>	array (string)	read-write	This is the array of message arguments of the event to be added.
<b>MessageId</b>	string	read-write	This is the message ID of event to be added.
<b>OriginOfCondition</b>	string	read-write	This is the OriginOfCondition property of event to be added.
<b>Severity</b>	string	read-write	This is the Severity of event to be added.
}			

## Property Details

---

### EventType:

This is the type of event to be added.

string	Description
Alert	A condition exists which requires attention.
ResourceAdded	A resource has been added.
ResourceRemoved	A resource has been removed.
ResourceUpdated	The value of this resource has been updated.
StatusChange	The status of this resource has changed.

## EventTypesForSubscription:

This is the types of Events that can be subscribed to.

string	Description
Alert	A condition exists which requires attention.
ResourceAdded	A resource has been added.
ResourceRemoved	A resource has been removed.
ResourceUpdated	The value of this resource has been updated.
StatusChange	The status of this resource has changed.

## Example Response

```
{
  "@odata.type": "#EventService.v1_1_0.EventService",
  "Id": "EventService",
  "Name": "Event Service",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "ServiceEnabled": true,
  "DeliveryRetryAttempts": 3,
  "DeliveryRetryIntervalSeconds": 60,
  "ServerSentEventUri": "/redfish/v1/EventService/SSE",
  "EventTypesForSubscription": [
    "StatusChange",
    "ResourceUpdated",
    "ResourceAdded",
    "ResourceRemoved",
    "Alert"
  ],
  "Subscriptions": {
    "@odata.id": "/redfish/v1/EventService/Subscriptions"
  },
  "Actions": {
    "#EventService.SubmitTestEvent": {
      "target": "/redfish/v1/EventService/Actions/EventService.SubmitTestEvent",
      "EventType@Redfish.AllowableValues": [
        "StatusChange",
        "ResourceUpdated",
        "ResourceAdded",
        "ResourceRemoved",
        "Alert"
      ]
    }
  },
  "Oem": {}
},
"Oem": {},
"@odata.context": "/redfish/v1/$metadata#EventService.EventService",
"@odata.id": "/redfish/v1/EventService"
}
```

# ExternalAccountProvider 1.0.0

A remote service that can provide accounts for this manager to utilize for authentication.

<b>AccountProviderType</b>	string (enum)	read-only (null)	This property contains the type of external account provider this resource references. <i>See <a href="#">AccountProviderType</a> in Property Details, below, for the possible values of this property.</i>
<b>Actions { }</b>	object	read-write	The available actions for this resource.
<b>Authentication {</b>	object	read-write (null)	This property contains the authentication information for the external account provider.
<b>AuthenticationType</b>	string (enum)	read-write (null)	This property contains the type of authentication used to connect to the external account provider. <i>See <a href="#">AuthenticationType</a> in Property Details, below, for the possible values of this property.</i>
<b>KerberosKeytab</b>	string	read-write (null)	This property is used with a PATCH or PUT to write a base64 encoded version of the kerberos keytab for the account. This property is null on a GET.
<b>Oem { }</b>	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Password</b>	string	read-write (null)	This property is used with a PATCH or PUT to write the password for the account service. This property is null on a GET.
<b>Token</b>	string	read-write (null)	This property is used with a PATCH or PUT to write the token for the account. This property is null on a GET.
<b>Username }</b>	string	read-write	This property contains the user name for the account service.
<b>LDAPService {</b>	object	read-write (null)	This property contains additional mapping information needed to parse a generic LDAP service.
<b>Oem { }</b>	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>SearchSettings {</b>	object	read-write (null)	This property contains the settings needed to search an external LDAP service.
<b>BaseDistinguishedNames [ ]</b>	array (string,	read-write	The base distinguished names to use when searching the LDAP service.

	null)		
<b>GroupNameAttribute</b>	string	read-write (null)	The attribute name that contains the name of the Group.
<b>GroupsAttribute</b>	string	read-write (null)	The attribute name that contains the Groups for a user.
<b>UsernameAttribute</b> } }	string	read-write (null)	The attribute name that contains the Username.
<b>Links {</b>	object	read-write	Contains references to other resources that are related to this resource.
<b>Oem { }</b>	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>RemoteRoleMapping [ {</b>	array	read-write	This property contains a collection of the mapping rules to convert the external account providers account information to the local Redfish Role.
<b>LocalRole</b>	string	read-write (null)	The name of the local role in which to map the remote user or group.
<b>Oem { }</b>	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>RemoteGroup</b>	string	read-write (null)	This property is the name of the remote group (or in the case of a Redfish Service, remote role) that will be mapped to the local role referenced by this entity.
<b>RemoteUser</b>	string	read-write (null)	This property is the name of the remote user that will be mapped to the local role referenced by this entity.
<b>ServiceAddresses [ ]</b>	array (string, null)	read-write	This property contains the addresses of the user account providers this resource references. The format of this field depends on the Type.
<b>ServiceEnabled</b>	boolean	read-write (null)	This indicates whether this service is enabled.

## Property Details

---

### AccountProviderType:

This property contains the type of external account provider this resource references.



string	Description
ActiveDirectoryService	An external Active Directory Service.
LDAPService	A generic external LDAP Service.
OEM	An OEM specific external authentication or directory service.
RedfishService	An external Redfish Service.

### AuthenticationType:

This property contains the type of authentication used to connect to the external account provider.

string	Description
KerberosKeytab	A kerberos keytab.
OEM	An OEM specific authentication mechanism.
Token	An opaque authentication token.
UsernameAndPassword	Username and password combination.

## Example Response

```
{
  "@odata.context": "/redfish/v1/$metadata#ExternalAccountProvider.ExternalAccountProvider",
  "@odata.id": "/redfish/v1/AccountService/ExternalAccountProviders/ExternalRedfishService",
  "@odata.type": "#ExternalAccountProvider.v1_0_0.ExternalAccountProvider",
  "Id": "ExternalRedfishService",
  "Name": "Remote Redfish Service",
  "Description": "Remote Redfish Service providing additional Accounts to this Redfish Service",
  "AccountProviderType": "RedfishService",
  "ServiceAddresses": [
    "http://redfish.dmtf.org/redfish/v1/AccountService"
  ],
  "Authentication": {
    "AuthenticationType": "Token",
    "Token": null
  },
  "RemoteRoleMapping": [
    {
      "RemoteGroup": "Admin",
      "LocalRole": "Admin"
    },
    {
      "RemoteGroup": "Operator",
      "LocalRole": "Operator"
    },
    {
      "RemoteGroup": "ReadOnlyUser",
      "LocalRole": "ReadOnlyUser"
    }
  ]
}
```

# Fabric 1.0.3

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

<b>Actions</b> (v1.0.3+) { }	object	read-write	The available actions for this resource.
<b>Endpoints</b> { }	object	read-only	A collection of references to the endpoints contained in this fabric. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Endpoint</a> . See the Endpoint schema for details.
<b>FabricType</b>	string (enum)	read-only (null)	The protocol being sent over this fabric. See <a href="#">FabricType</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>Links</b> (v1.0.3+) { }	object	read-write	Contains references to other resources that are related to this resource.
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>MaxZones</b>	number	read-only (null)	The value of this property shall contain the maximum number of zones the switch can currently configure.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>Switches</b> { }	object	read-only	A collection of references to the switches contained in this fabric. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Switch</a> . See the Switch schema for details.
<b>Zones</b> { }	object	read-only	A collection of references to the zones contained in this fabric. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Zone</a> . See the Zone schema for details.

## Property Details

---

### FabricType:

The protocol being sent over this fabric.

string	Description
AHCI	Advanced Host Controller Interface.
FC	Fibre Channel.
FCP	Fibre Channel Protocol for SCSI.
FCoE	Fibre Channel over Ethernet.
FICON	Fibre CONnection (FICON).

string	Description
FTP	File Transfer Protocol.
HTTP	Hypertext Transport Protocol.
HTTPS	Secure Hypertext Transport Protocol.
NFSv3	Network File System version 3.
NFSv4	Network File System version 4.
NVMe	Non-Volatile Memory Express.
NVMeOverFabrics	NVMe over Fabrics.
OEM	OEM specific.
PCIe	PCI Express (Vendor Proprietary).
RoCE	RDMA over Converged Ethernet Protocol.
RoCEv2	RDMA over Converged Ethernet Protocol Version 2.
SAS	Serial Attached SCSI.
SATA	Serial AT Attachment.
SFTP	Secure File Transfer Protocol.
SMB	Server Message Block (aka CIFS Common Internet File System).
UHCI	Universal Host Controller Interface.
USB	Universal Serial Bus.
iSCSI	Internet SCSI.
iWARP	Internet Wide Area Remote Direct Memory Access Protocol.

## Example Response

```
{
  "@odata.type": "#Fabric.v1_0_3.Fabric",
  "Id": "SAS",
  "Name": "SAS Fabric",
  "FabricType": "SAS",
  "Description": "A SAS Fabric with redundant switches connected to two initiators",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "Zones": {
    "@odata.id": "/redfish/v1/Fabrics/SAS/Zones"
  },
  "Endpoints": {
    "@odata.id": "/redfish/v1/Fabrics/SAS/Endpoints"
  },
  "Switches": {
```

```

    "@odata.id": "/redfish/v1/Fabrics/SAS/Switches"
  },
  "Links": {
    "Oem": {}
  },
  "Actions": {
    "Oem": {}
  },
  "Oem": {},
  "@odata.context": "/redfish/v1/$metadata#Fabric.Fabric",
  "@odata.id": "/redfish/v1/Fabrics/SAS"
}

```

## HostInterface 1.1.2

This schema defines a single Host Interface resource.

<b>Actions</b> (v1.1.1+) {}	object	read-write	The available actions for this resource.
<b>AuthenticationModes</b> []	array (string (enum))	read-write	Indicates the authentication modes available on this interface. <i>See <a href="#">AuthenticationModes</a> in Property Details, below, for the possible values of this property.</i>
<b>ExternallyAccessible</b>	boolean	read-only (null)	Indicates whether this interface is accessible by external entities.
<b>FirmwareAuthEnabled</b>	boolean	read-write (null)	Indicates whether this firmware authentication is enabled for this interface.
<b>FirmwareAuthRoleId</b>	string	read-write	The Role used for firmware authentication on this interface.
<b>HostEthernetInterfaces</b> {	object	read-only	The Redfish link to the collection of network interface controllers or cards (NICs) that a Computer System uses to communicate with this Host Interface. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">EthernetInterface</a> . See the EthernetInterface schema for details.
<b>HostInterfaceType</b>	string (enum)	read-only (null)	Indicates the Host Interface type for this interface. <i>See <a href="#">HostInterfaceType</a> in Property Details, below, for the possible values of this property.</i>
<b>InterfaceEnabled</b>	boolean	read-write (null)	Indicates whether this interface is enabled.
<b>KernelAuthEnabled</b>	boolean	read-write (null)	Indicates whether this kernel authentication is enabled for this interface.
<b>KernelAuthRoleId</b>	string	read-write	The Role used for kernel authentication on this interface.

<b>Links</b> (v1.0.2+) {	object	read-write	Contains references to other resources that are related to this resource.
<b>ComputerSystems</b> [ {	array	read-only	An array of references to the Computer Systems connected to this Host Interface.
<b>@odata.id</b>	string	read-only	Link to a ComputerSystem resource. See the Links section and the <a href="#">ComputerSystem</a> schema for details.
}]			
<b>FirmwareAuthRole</b> {	object	read-only	A reference to the Role that has firmware authentication privileges on this Host Interface. See the <a href="#">Role</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a Role resource. See the Links section and the <a href="#">Role</a> schema for details.
}			
<b>KernelAuthRole</b> {	object	read-only	A reference to the Role object defining Privileges for this Host Interface when using kernel authentication. See the <a href="#">Role</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a Role resource. See the Links section and the <a href="#">Role</a> schema for details.
}			
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>ManagerEthernetInterface</b> {	object	read-only	The Redfish link to a single network interface controllers or cards (NIC) that this Manager uses for network communication with this Host Interface. See the <a href="#">EthernetInterface</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a EthernetInterface resource. See the Links section and the <a href="#">EthernetInterface</a> schema for details.
}			
<b>NetworkProtocol</b> {	object	read-only	The Redfish link 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. See the <a href="#">ManagerNetworkProtocol</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a ManagerNetworkProtocol resource. See the Links section and the <a href="#">ManagerNetworkProtocol</a> schema for details.
}			
<b>Status</b> { }	object	read-write (null)	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

## Property Details

---

### AuthenticationModes:

Indicates the authentication modes available on this interface.

string	Description
AuthNone	Requests without any sort of authentication are allowed.
BasicAuth	Requests using HTTP Basic Authentication are allowed.
OemAuth	Requests using OEM authentication mechanisms are allowed.
RedfishSessionAuth	Requests using Redfish Session Authentication are allowed.

### HostInterfaceType:

Indicates the Host Interface type for this interface.

string	Description
NetworkHostInterface	This interface is a Network Host Interface.

## JsonSchemaFile 1.1.0

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

<b>Actions</b> (v1.1+) { }	object	read-write	The available actions for this resource.
<b>Languages</b> [ ]	array (string)	read-only	Language codes for the schemas available.
<b>Location</b> [ {	array	read-write	Location information for a schema file.
<b>ArchiveFile</b>	string	read-only	If the schema is hosted on the service in an archive file, this is the name of the file within the archive.
<b>ArchiveUri</b>	string	read-only	If the schema is hosted on the service in an archive file, this is the link to the archive file.
<b>Language</b>	string	read-only	The language code for the file the schema is in.
<b>PublicationUri</b>	string	read-only	Link to publicly available (canonical) URI for schema.
<b>Uri</b>	string	read-only	Link to locally available URI for schema.
}]			
<b>Schema</b>	string	read-only	The @odata.type name this schema describes.

# LogEntry 1.3.0

This resource defines the record format for a log. It is designed to be used for SEL logs (from IPMI) as well as Event Logs and OEM-specific log formats. The EntryType field indicates the type of log and the resource includes several additional properties dependent on the EntryType.

<b>Actions</b> (v1.2.1+) { }	object	read-write	The available actions for this resource.
<b>Created</b>	string	read-only	The time the log entry was created.
<b>EntryCode</b>	string (enum)	read-only (null)	If the EntryType is SEL, this will have the entry code for the log entry. <i>See <a href="#">EntryCode</a> in Property Details, below, for the possible values of this property.</i>
<b>EntryType</b>	string (enum)	read-only	This is the type of log entry. <i>See <a href="#">EntryType</a> in Property Details, below, for the possible values of this property.</i>
<b>EventId</b> (v1.1+)	string	read-only	This is a unique instance identifier of an event.
<b>EventTimestamp</b> (v1.1+)	string	read-only	This is time the event occurred.
<b>EventType</b>	string (enum)	read-only	This indicates the type of an event recorded in this log. <i>See <a href="#">EventType</a> in Property Details, below, for the possible values of this property.</i>
<b>Links</b> (v1.0.5+) { }	object	read-write	Contains references to other resources that are related to this resource.
<b>Oem</b> (v1.0.5+) { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>OriginOfCondition</b> (v1.0.5+) { }	object	read-only	This is the URI of the resource that caused the log entry.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
<b>Message</b>	string	read-only (null)	This property decodes from EntryType: If it is Event then it is a message string. Otherwise, it is SEL or Oem specific. In most cases, this will be the actual Log Entry.
<b>MessageArgs</b> [ ]	array (string)	read-only	The values of this property shall be any arguments for the message.
<b>MessageId</b>	string	read-only	This property decodes from EntryType: If it is Event then it is a message id. Otherwise, it is SEL or Oem specific. This value is only used for registries - for more information, see the specification.

<b>OemLogEntryCode</b> (v1.3+)	string	read-only (null)	If the LogEntryCode type is OEM, this will contain the OEM-specific entry code.
<b>OemRecordFormat</b>	string	read-only (null)	If the entry type is Oem, this will contain more information about the record format from the Oem.
<b>OemSensorType</b> (v1.3+)	string	read-only (null)	If the Sensor Type is OEM, this will contain the OEM-specific sensor type.
<b>SensorNumber</b>	number	read-only (null)	This property decodes from EntryType: If it is SEL, it is the sensor number; if Event then the count of events. Otherwise, it is Oem specific.
<b>SensorType</b>	string (enum)	read-only (null)	If the EntryType is SEL, this will have the sensor type that the log entry pertains to. See <a href="#">SensorType</a> in Property Details, below, for the possible values of this property.
<b>Severity</b>	string (enum)	read-only (null)	This is the severity of the log entry. See <a href="#">Severity</a> in Property Details, below, for the possible values of this property.

## Property Details

---

### EntryCode:

If the EntryType is SEL, this will have the entry code for the log entry.

string	Description
Assert	The condition has been asserted.
D0 Power State	The ACPI defined D0 Power State.
D1 Power State	The ACPI defined D1 Power State.
D2 Power State	The ACPI defined D2 Power State.
D3 Power State	The ACPI defined D3 Power State.
Deassert	The condition has been deasserted.
Device Disabled	A device has been disabled.
Device Enabled	A device has been enabled.
Device Inserted / Device Present	A device has been inserted or is now present.
Device Removed / Device Absent	A device has been removed or is now absent.
Fully Redundant	Indicates that full redundancy has been regained.
Informational	An Informational event.
Install Error	An Install Error has been detected.



<b>string</b>	<b>Description</b>
Limit Exceeded	A limit has been exceeded.
Limit Not Exceeded	A limit has not been exceeded.
Lower Critical - going high	The reading crossed the Lower Critical threshold while going high.
Lower Critical - going low	The reading crossed the Lower Critical threshold while going low.
Lower Non-critical - going high	The reading crossed the Lower Non-critical threshold while going high.
Lower Non-critical - going low	The reading crossed the Lower Non-critical threshold while going low.
Lower Non-recoverable - going high	The reading crossed the Lower Non-recoverable threshold while going high.
Lower Non-recoverable - going low	The reading crossed the Lower Non-recoverable threshold while going low.
Monitor	A Monitor event.
Non-redundant:Insufficient Resources	Unit is non-redundant and has insufficient resource to maintain normal operation.
Non-redundant:Sufficient Resources from Insufficient Resources	Unit has regained minimum resources needed for normal operation.
Non-redundant:Sufficient Resources from Redundant	Redundancy has been lost but unit is functioning with minimum resources needed for normal operation.
OEM (v1.0.5+)	An OEM defined event.
Performance Lags	Performance does not meet expectations.
Performance Met	Performance meets expectations.
Predictive Failure asserted	A Predictive Failure has been detected.
Predictive Failure deasserted	A Predictive Failure is no longer present.
Redundancy Degraded	Redundancy still exists, but at less than full level.
Redundancy Degraded from Fully Redundant	Unit has lost some redundant resource(s) but is still in a redundant state.
Redundancy Degraded from Non-redundant	Unit has regained some resource(s) and is redundant but not fully redundant.
Redundancy Lost	Entered any non-redundant state, including Non-redundant: Insufficient Resources.
State Asserted	The state has been asserted.

<b>string</b>	<b>Description</b>
State Deasserted	The state has been deasserted.
Transition to Active	The state transitioned to active.
Transition to Busy	The state transitioned to busy.
Transition to Critical from Non-recoverable	A state has changed to Critical from Non-recoverable.
Transition to Critical from less severe	A state has changed to Critical from less severe.
Transition to Degraded	A state has transitioned to Degraded.
Transition to Idle	The state transitioned to idle.
Transition to In Test	A state has transitioned to In Test.
Transition to Non-Critical from OK	A state has changed to Non-Critical from OK.
Transition to Non-Critical from more severe	A state has changed to Non-Critical from more severe.
Transition to Non-recoverable	A state has changed to Non-recoverable.
Transition to Non-recoverable from less severe	A state has changed to Non-recoverable from less severe.
Transition to OK	A state has changed to OK.
Transition to Off Duty	A state has transitioned to Off Duty.
Transition to Off Line	A state has transitioned to Off Line.
Transition to On Line	A state has transitioned to On Line.
Transition to Power Off	A state has transitioned to Power Off.
Transition to Power Save	A state has transitioned to Power Save.
Transition to Running	A state has transitioned to Running.
Upper Critical - going high	The reading crossed the Upper Critical threshold while going high.
Upper Critical - going low	The reading crossed the Upper Critical threshold while going low.
Upper Non-critical - going high	The reading crossed the Upper Non-critical threshold while going high.
Upper Non-critical - going low	The reading crossed the Upper Non-critical threshold while going low.
Upper Non-recoverable - going high	The reading crossed the Upper Non-recoverable threshold while going high.
Upper Non-recoverable - going	The reading crossed the Upper Non-recoverable

string	Description
low	threshold while going low.

### EntryType:

This is the type of log entry.

string	Description
Event	Contains a Redfish-defined message (event).
Oem	Contains an entry in an OEM-defined format.
SEL	Contains a legacy IPMI System Event Log (SEL) entry.

### EventType:

This indicates the type of an event recorded in this log.

string	Description
Alert	A condition exists which requires attention.
ResourceAdded	A resource has been added.
ResourceRemoved	A resource has been removed.
ResourceUpdated	The value of this resource has been updated.
StatusChange	The status of this resource has changed.

### SensorType:

If the EntryType is SEL, this will have the sensor type that the log entry pertains to.

string	Description
Add-in Card	A sensor for an add-in card.
BaseOSBoot/InstallationStatus	A sensor for a base OS boot or installation status event.
Battery	A sensor for a battery.
Boot Error	A sensor for a boot error event.
Button/Switch	A sensor for a button or switch.
Cable/Interconnect	A sensor for a cable or interconnect type of device.
Chassis	A sensor for a chassis.
ChipSet	A sensor for a chipset.
CoolingDevice	A sensor for a cooling device.
Critical Interrupt	A sensor for a critical interrupt event.

<b>string</b>	<b>Description</b>
Current	A current sensor.
Drive Slot/Bay	A sensor for a drive slot or bay.
Entity Presence	A sensor for an entity presence event.
Event Logging Disabled	A sensor for the event log.
FRUState	A sensor for a FRU state event.
Fan	A fan sensor.
LAN	A sensor for a LAN device.
Management Subsystem Health	A sensor for a management subsystem health event.
Memory	A sensor for a memory device.
Microcontroller/Coprocessor	A sensor for a microcontroller or coprocessor.
Module/Board	A sensor for a module or board.
Monitor ASIC/IC	A sensor for a monitor ASIC or IC.
OEM (v1.0.5+)	An OEM defined sensor.
OS Stop/Shutdown	A sensor for an OS stop or shutdown event
Other FRU	A sensor for an other type of FRU.
Other Units-based Sensor	A sensor for a miscellaneous analog sensor.
POST Memory Resize	A sensor for a POST memory resize event.
Physical Chassis Security	A physical security sensor.
Platform Alert	A sensor for a platform alert event.
Platform Security Violation Attempt	A platform security sensor.
Power Supply / Converter	A sensor for a power supply or DC-to-DC converter.
PowerUnit	A sensor for a power unit.
Processor	A sensor for a processor.
Session Audit	A sensor for a session audit event.
Slot/Connector	A sensor for a slot or connector.
System ACPI PowerState	A sensor for an ACPI power state event.
System Event	A sensor for a system event.
System Firmware Progress	A sensor for a system firmware progress event.
SystemBoot/Restart	A sensor for a system boot or restart event.

string	Description
Temperature	A temperature sensor.
Terminator	A sensor for a terminator.
Version Change	A sensor for a version change event.
Voltage	A voltage sensor.
Watchdog	A sensor for a watchdog event.

### Severity:

This is the severity of the log entry.

string	Description
Critical	A critical condition requiring immediate attention.
OK	Informational or operating normally.
Warning	A condition requiring attention.

## Example Response

```
{
  "@odata.type": "#LogEntry.v1_3_0.LogEntry",
  "Id": "1",
  "Name": "Log Entry 1",
  "EntryType": "SEL",
  "OemRecordFormat": "Contoso",
  "Severity": "Critical",
  "Created": "2012-03-07T14:44:00Z",
  "EntryCode": "Assert",
  "SensorType": "Temperature",
  "SensorNumber": 1,
  "Message": "Temperature threshold exceeded",
  "MessageId": "Contoso.1.0.TempAssert",
  "MessageArgs": [
    "42"
  ],
  "Links": {
    "OriginOfCondition": {
      "@odata.id": "/redfish/v1/Chassis/1U/Thermal"
    },
    "Oem": {}
  },
  "Oem": {},
  "@odata.context": "/redfish/v1/$metadata#LogEntry.LogEntry",
  "@odata.id": "/redfish/v1/Systems/437XR1138R2/LogServices/Log1/Entries/1"
}
```

# LogService 1.1.0

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

<b>Actions</b> (v1.0.5+) {	object	read-write	The available actions for this resource.
<b>#LogService.ClearLog</b> { }	object	read-write	This action is used to clear the log for this Log Service. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>DateTime</b>	string	read-write (null)	The current DateTime (with offset) for the log service, used to set or read time.
<b>DateTimeLocalOffset</b>	string	read-write (null)	The time offset from UTC that the DateTime property is set to in format: +06:00 .
<b>Entries</b> {	object	read-only	References to the log entry collection. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">LogEntry</a> . See the LogEntry schema for details.
<b>LogEntryType</b> (v1.1+)	string (enum)	read-only (null)	The format of the Entries of this log. <i>See <a href="#">LogEntryType</a> in Property Details, below, for the possible values of this property.</i>
<b>MaxNumberOfRecords</b>	number	read-only	The maximum number of log entries this service can have.
<b>OverWritePolicy</b>	string (enum)	read-only	The overwrite policy for this service that takes place when the log is full. <i>See <a href="#">OverWritePolicy</a> in Property Details, below, for the possible values of this property.</i>
<b>ServiceEnabled</b>	boolean	read-write (null)	This indicates whether this service is enabled.
<b>Status</b> { }	object	read-write (null)	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

## Action Details

---

### ClearLog

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

(This action takes no parameters.)

## Property Details

---

### LogEntryType:

The format of the Entries of this log.

string	Description
Event	The log contains Redfish-defined messages (events).
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 OEM-defined format.
SEL	The log contains legacy IPMI System Event Log (SEL) entries.

### OverWritePolicy:

The overwrite policy for this service that takes place when the log is full.

string	Description
NeverOverWrites	When full, new entries to the Log will be discarded.
Unknown	The overwrite policy is not known or is undefined.
WrapsWhenFull	When full, new entries to the Log will overwrite previous entries.

## Example Response

```
{
  "@odata.type": "#LogService.v1_1_0.LogService",
  "Id": "Log1",
  "Name": "System Log Service",
  "Description": "This log contains entries related to the operation of the host Computer",
  "MaxNumberOfRecords": 1000,
  "OverWritePolicy": "WrapsWhenFull",
  "DateTime": "2015-03-13T04:14:33+06:00",
  "DateTimeLocalOffset": "+06:00",
  "ServiceEnabled": true,
  "LogEntryType": "Event",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "Oem": {},
  "Actions": {
    "#LogService.ClearLog": {
      "target": "/redfish/v1/Managers/1/LogServices/Log1/Actions/LogService.ClearLog"
    },
    "Oem": {}
  },
  "Entries": {
    "@odata.id": "/redfish/v1/Managers/1/LogServices/Log1/Entries"
  },
  "@odata.context": "/redfish/v1/$metadata#LogService.LogService",
  "@odata.id": "/redfish/v1/Managers/1/LogServices/Log1"
}
```

# Manager 1.4.0

This is the schema definition for a Manager. Examples of managers are BMCs, Enclosure Managers, Management Controllers and other subsystems assigned managability functions.

<b>Actions</b> (v1.0.6+) {	object	read-write	The available actions for this resource.
<b>#Manager.ForceFailover</b> { }	object	read-write	The ForceFailover action forces a failover of this manager to the manager used in the parameter. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>#Manager.ModifyRedundancySet</b> { }	object	read-write	The ModifyRedundancySet operation is used to add or remove members to a redundant group of manager. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>#Manager.Reset</b> { }	object	read-write	The reset action resets/reboots the manager. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>AutoDSTEnabled</b> (v1.4+)	boolean	read-write	Indicates whether the manager is configured for automatic DST adjustment.
<b>CommandShell</b> {	object	read-write	Information about the Command Shell service provided by this manager.
<b>ConnectTypesSupported</b> [ ]	array (string (enum))	read-only	This object is used to enumerate the Command Shell connection types allowed by the implementation. <i>See <a href="#">ConnectTypesSupported</a> in Property Details, below, for the possible values of this property.</i>
<b>MaxConcurrentSessions</b>	number	read-only	Indicates the maximum number of service sessions, regardless of protocol, this manager is able to support.
<b>ServiceEnabled</b> }	boolean	read-write	Indicates if the service is enabled for this manager.
<b>DateTime</b>	string	read-write (null)	The current DateTime (with offset) for the manager, used to set or read time.
<b>DateTimeLocalOffset</b>	string	read-write (null)	The time offset from UTC that the DateTime property is set to in format: +06:00 .



<b>EthernetInterfaces</b> {	object	read-only	This is 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. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">EthernetInterface</a> . See the EthernetInterface schema for details.
<b>FirmwareVersion</b>	string	read-only (null)	The firmware version of this Manager.
<b>GraphicalConsole</b> {	object	read-write	The value of this property shall contain the information about the Graphical Console (KVM-IP) service of this manager.
<b>ConnectTypesSupported</b> [ ]	array (string (enum))	read-only	This object is used to enumerate the Graphical Console connection types allowed by the implementation. See <a href="#">ConnectTypesSupported in Property Details</a> , below, for the possible values of this property.
<b>MaxConcurrentSessions</b>	number	read-only	Indicates the maximum number of service sessions, regardless of protocol, this manager is able to support.
<b>ServiceEnabled</b> }	boolean	read-write	Indicates if the service is enabled for this manager.
<b>HostInterfaces</b> {	object	read-only	This is a reference to a collection of Host Interfaces that this manager uses for local host communication. It is here that clients will find Host Interface configuration options and settings. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">HostInterface</a> . See the HostInterface schema for details.
<b>Links</b> (v1.0.6+) {	object	read-write	Contains references to other resources that are related to this resource.
<b>ManagerForChassis</b> [ {	array	read-only	This property is an array of references to the chassis that this manager has control over.
<b>@odata.id</b>	string	read-only	Link to a Chassis resource. See the Links section and the <a href="#">Chassis</a>

			schema for details.
}]			
<b>ManagerForServers</b> [ {	array	read-only	This property is an array of references to the systems that this manager has control over.
<b>@odata.id</b>	string	read-only	Link to a ComputerSystem resource. See the Links section and the <a href="#">ComputerSystem</a> schema for details.
}]			
<b>ManagerForSwitches</b> (v1.4+) [ {	array	read-only	This property is an array of references to the switches that this manager has control over.
<b>@odata.id</b>	string	read-only	Link to a Switch resource. See the Links section and the <a href="#">Switch</a> schema for details.
}]			
<b>ManagerInChassis</b> (v1.1.4+) {	object	read-only	This property is a reference to the chassis that this manager is located in. See the <a href="#">Chassis</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a Chassis resource. See the Links section and the <a href="#">Chassis</a> schema for details.
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>LogServices</b> {	object	read-only	This is a reference to a collection of Logs used by the manager. Contains a link to a resource.
<b>@odata.id</b>	string	read-only	Link to Collection of <a href="#">LogService</a> . See the LogService schema for details.
<b>ManagerType</b>	string (enum)	read-only	This property represents the type of manager that this resource represents. <i>See <a href="#">ManagerType</a> in Property Details, below, for the possible values of this property.</i>
<b>Model</b>	string (null)	read-only	The model information of this Manager as defined by the manufacturer.
<b>NetworkProtocol</b> {	object	read-only	This is 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. See the <a href="#">ManagerNetworkProtocol</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a ManagerNetworkProtocol resource. See the Links section and the <a href="#">ManagerNetworkProtocol</a> schema for details.
<b>PowerState</b>	string (enum)	read-only (null)	This is the current power state of the Manager. See <a href="#">PowerState</a> in Property Details, below, for the possible values of this property.
<b>Redundancy</b> [ {	array	read-write	Redundancy information for the managers of this system.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>SerialConsole</b> {	object	read-write	Information about the Serial Console service provided by this manager.
<b>ConnectTypesSupported</b> [ ]	array (string (enum))	read-only	This object is used to enumerate the Serial Console connection types allowed by the implementation. See <a href="#">ConnectTypesSupported</a> in Property Details, below, for the possible values of this property.
<b>MaxConcurrentSessions</b>	number	read-only	Indicates the maximum number of service sessions, regardless of protocol, this manager is able to support.
<b>ServiceEnabled</b> }	boolean	read-write	Indicates if the service is enabled for this manager.
<b>SerialInterfaces</b> {	object	read-only	This is 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. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">SerialInterface</a> . See the SerialInterface schema for details.

<b>ServiceEntryPointUUID</b>	string	read-only (null)	The UUID of the Redfish Service provided by this manager.
<b>Status {}</b>	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>UUID</b>	string	read-only (null)	The Universal Unique Identifier (UUID) for this Manager.
<b>VirtualMedia {</b>	object	read-only	This is a reference to the Virtual Media services for this particular manager. Contains a link to a resource.
<b>    @odata.id</b> <b>}</b>	string	read-only	Link to Collection of <a href="#">VirtualMedia</a> . See the VirtualMedia schema for details.

## Action Details

---

### ForceFailover

The ForceFailover action forces a failover of this manager to the manager used in the parameter.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

<b>{</b>			
<b>    NewManager {</b>	object	read-write	This parameter specifies the Manager in which to fail over. In this case, a valid reference is supported.
<b>        @odata.id</b>	string	read-only	Link to another Manager resource.
<b>    }</b>			
<b>}</b>			

### ModifyRedundancySet

The ModifyRedundancySet operation is used to add or remove members to a redundant group of manager.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

<b>{</b>			
<b>    Add [ {</b>	array	read-write	This array defines the Managers to add to the redundancy set. In this case, a valid reference is supported.
<b>        @odata.id</b>	string	read-only	Link to another Manager resource.
<b>    }]</b>			
<b>    Remove [ {</b>	array	read-write	This array defines the Managers to remove from the redundancy set. In this case, a valid reference

			is supported.
<b>@odata.id</b>	string	read-only	Link to another Manager resource.
}]			
}			

## Reset

The reset action resets/reboots the manager.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
<b>ResetType</b>	string (enum)	read-write	This is the type of reset to be performed. See <a href="#">ResetType</a> in <i>Property Details</i> , below, for the possible values of this property.
}			

## Property Details

---

### ConnectTypesSupported:

This object is used to enumerate the Serial Console connection types allowed by the implementation.

string	Description
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.
SSH	The controller supports a Serial Console connection using the SSH protocol.
Telnet	The controller supports a Serial Console connection using the Telnet protocol.

### ManagerType:

This property represents the type of manager that this resource represents.

string	Description
AuxiliaryController	A controller which provides management functions for a particular subsystem or group of devices.
BMC	A controller which provides management functions for a single computer system.
EnclosureManager	A controller which provides management functions for a chassis or group of devices or systems.
ManagementController	A controller used primarily to monitor or manage the operation of a device or system.
RackManager	A controller which provides management functions for a whole or

string	Description
	part of a rack.
Service (v1.4+)	A software-based service which provides management functions.

### PowerState:

This is the current power state of the Manager.

string	Description
Off	The state is powered Off.
On	The state is powered On.
PoweringOff	A temporary state between On and Off.
PoweringOn	A temporary state between Off and On.

### ResetType:

This is the type of reset to be performed.

string	Description
ForceOff	Turn the unit off immediately (non-graceful shutdown).
ForceOn	Turn the unit on immediately.
ForceRestart	Perform an immediate (non-graceful) shutdown, followed by a restart.
GracefulRestart	Perform a graceful shutdown followed by a restart of the system.
GracefulShutdown	Perform a graceful shutdown and power off.
Nmi	Generate a Diagnostic Interrupt (usually an NMI on x86 systems) to cease normal operations, perform diagnostic actions and typically halt the system.
On	Turn the unit on.
PowerCycle	Perform a power cycle of the unit.
PushPowerButton	Simulate the pressing of the physical power button on this unit.

## Example Response

```
{
  "@odata.type": "#Manager.v1_4_0.Manager",
  "Id": "BMC",
  "Name": "Manager",
  "ManagerType": "BMC",
  "Description": "Contoso BMC",
  "ServiceEntryPointUUID": "92384634-2938-2342-8820-489239905423",
  "UUID": "58893887-8974-2487-2389-841168418919",
  "Model": "Joo Janta 200",
  "FirmwareVersion": "4.4.6521",
}
```

```
"DateTime": "2015-03-13T04:14:33+06:00",
"DateTimeLocalOffset": "+06:00",
"Status": {
  "State": "Enabled",
  "Health": "OK"
},
"PowerState": "On",
"GraphicalConsole": {
  "ServiceEnabled": true,
  "MaxConcurrentSessions": 2,
  "ConnectTypesSupported": [
    "KVMIP"
  ]
},
"SerialConsole": {
  "ServiceEnabled": true,
  "MaxConcurrentSessions": 1,
  "ConnectTypesSupported": [
    "Telnet",
    "SSH",
    "IPMI"
  ]
},
"CommandShell": {
  "ServiceEnabled": true,
  "MaxConcurrentSessions": 4,
  "ConnectTypesSupported": [
    "Telnet",
    "SSH"
  ]
},
"HostInterfaces": {
  "@odata.id": "/redfish/v1/Managers/9/HostInterfaces"
},
"NetworkProtocol": {
  "@odata.id": "/redfish/v1/Managers/BMC/NetworkProtocol"
},
"EthernetInterfaces": {
  "@odata.id": "/redfish/v1/Managers/BMC/NICs"
},
"SerialInterfaces": {
  "@odata.id": "/redfish/v1/Managers/BMC/SerialInterfaces"
},
"LogServices": {
  "@odata.id": "/redfish/v1/Managers/BMC/LogServices"
},
"VirtualMedia": {
  "@odata.id": "/redfish/v1/Managers/BMC/VirtualMedia"
},
"Links": {
  "ManagerForServers": [
    {
      "@odata.id": "/redfish/v1/Systems/437XR1138R2"
    }
  ],
  "ManagerForChassis": [
    {
      "@odata.id": "/redfish/v1/Chassis/1U"
    }
  ]
}
```

```

    },
    "ManagerInChassis": {
        "@odata.id": "/redfish/v1/Chassis/1U"
    },
    "Oem": {}
},
"Actions": {
    "#Manager.Reset": {
        "target": "/redfish/v1/Managers/BMC/Actions/Manager.Reset",
        "ResetType@Redfish.AllowableValues": [
            "ForceRestart",
            "GracefulRestart"
        ]
    },
    "Oem": {}
},
"Oem": {},
"@odata.context": "/redfish/v1/$metadata#Manager.Manager",
"@odata.id": "/redfish/v1/Managers/BMC"
}

```

## ManagerAccount 1.1.2

The user accounts, owned by a Manager, are defined in this resource. Changes to a Manager Account may affect the current Redfish service connection if this manager is responsible for the Redfish service.

<b>Actions</b> (v1.1.2+) {}	object	read-write	The available actions for this resource.
<b>Enabled</b>	boolean	read-write	This property is used by a User Administrator to disable an account w/o having to delete the user information. When set to true, the user can login. When set to false, the account is administratively disabled and the user cannot login.
<b>Links</b> (v1.0.6+) {	object	read-write	Contains references to other resources that are related to this resource.
<b>Oem</b> (v1.0.6+) {}	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Role</b> (v1.0.6+) {	object	read-only	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. See the <a href="#">Role</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a Role resource. See the Links section and the <a href="#">Role</a> schema for details.
<b>Locked</b>	boolean	read-write	This property indicates that the account has been auto-locked by the account service because the lockout threshold has been exceeded. When set to true, the account is locked. A user admin can write the property to false to manually unlock, or the account service will unlock it once the lockout duration period has passed.



<b>Password</b>	string	read-write (null)	This property is used with a PATCH or PUT to write the password for the account. This property is null on a GET.
<b>RoleId</b>	string	read-write	This property contains the Role for this account.
<b>UserName</b>	string	read-write	This property contains the user name for the account.

## Example Response

```
{
  "@odata.type": "#ManagerAccount.v1_1_2.ManagerAccount",
  "Id": "1",
  "Name": "User Account",
  "Description": "User Account",
  "Enabled": true,
  "Password": null,
  "UserName": "Administrator",
  "RoleId": "Administrator",
  "Locked": false,
  "Links": {
    "Role": {
      "@odata.id": "/redfish/v1/AccountService/Roles/Admin"
    }
  },
  "@odata.context": "/redfish/v1/$metadata#ManagerAccount.ManagerAccount",
  "@odata.id": "/redfish/v1/AccountService/Accounts/1"
}
```

## ManagerNetworkProtocol 1.2.0

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

<b>Actions</b> (v1.2+) {}	object	read-write	The available actions for this resource.
<b>DHCP</b> {	object	read-write	Settings for this Manager's DHCP protocol support.
<b>Port</b>	number	read-write (null)	Indicates the protocol port.
<b>ProtocolEnabled</b> }	boolean	read-write (null)	Indicates if the protocol is enabled or disabled.
<b>FQDN</b>	string	read-only (null)	This is the fully qualified domain name for the manager obtained by DNS including the host name and top-level domain name.
<b>HTTP</b> {	object	read-write	Settings for this Manager's HTTP protocol support.
<b>Port</b>	number	read-write (null)	Indicates the protocol port.

<b>ProtocolEnabled</b> }	boolean	read-write (null)	Indicates if the protocol is enabled or disabled.
<b>HTTPS</b> {	object	read-write	Settings for this Manager's HTTPS protocol support.
<b>Port</b>	number	read-write (null)	Indicates the protocol port.
<b>ProtocolEnabled</b> }	boolean	read-write (null)	Indicates if the protocol is enabled or disabled.
<b>HostName</b>	string	read-only (null)	The DNS Host Name of this manager, without any domain information.
<b>IPMI</b> {	object	read-write	Settings for this Manager's IPMI-over-LAN protocol support.
<b>Port</b>	number	read-write (null)	Indicates the protocol port.
<b>ProtocolEnabled</b> }	boolean	read-write (null)	Indicates if the protocol is enabled or disabled.
<b>KVMIP</b> {	object	read-write	Settings for this Manager's KVM-IP protocol support.
<b>Port</b>	number	read-write (null)	Indicates the protocol port.
<b>ProtocolEnabled</b> }	boolean	read-write (null)	Indicates if the protocol is enabled or disabled.
<b>NTP (v1.2+)</b> {	object	read-write	Settings for this Manager's NTP protocol support.
<b>NTPServers</b> [ ]	array (string, null)	read-write	Indicates to which NTP servers this manager is subscribed.
<b>Port</b>	number	read-write (null)	Indicates the protocol port.
<b>ProtocolEnabled</b> }	boolean	read-write (null)	Indicates if the protocol is enabled or disabled.
<b>SNMP</b> {	object	read-write	Settings for this Manager's SNMP support.
<b>Port</b>	number	read-write (null)	Indicates the protocol port.
<b>ProtocolEnabled</b> }	boolean	read-write (null)	Indicates if the protocol is enabled or disabled.
<b>SSDP</b> {	object	read-write	Settings for this Manager's SSDP support.
<b>NotifyIPv6Scope</b>	string	read-write	Indicates the scope for the IPv6 Notify

	(enum)	(null)	messages for SSDP. See <a href="#">NotifyIPv6Scope</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>NotifyMulticastIntervalSeconds</b>	number (s)	read-write (null)	Indicates how often the Multicast is done from this service for SSDP.
<b>NotifyTTL</b>	number	read-write (null)	Indicates the time to live hop count for SSDPs Notify messages.
<b>Port</b>	number	read-write (null)	Indicates the protocol port.
<b>ProtocolEnabled</b> }	boolean	read-write (null)	Indicates if the protocol is enabled or disabled.
<b>SSH</b> {	object	read-write	Settings for this Manager's SSH (Secure Shell) protocol support.
<b>Port</b>	number	read-write (null)	Indicates the protocol port.
<b>ProtocolEnabled</b> }	boolean	read-write (null)	Indicates if the protocol is enabled or disabled.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>Telnet</b> {	object	read-write	Settings for this Manager's Telnet protocol support.
<b>Port</b>	number	read-write (null)	Indicates the protocol port.
<b>ProtocolEnabled</b> }	boolean	read-write (null)	Indicates if the protocol is enabled or disabled.
<b>VirtualMedia</b> {	object	read-write	Settings for this Manager's Virtual Media support.
<b>Port</b>	number	read-write (null)	Indicates the protocol port.
<b>ProtocolEnabled</b> }	boolean	read-write (null)	Indicates if the protocol is enabled or disabled.

## Property Details

---

### NotifyIPv6Scope:

Indicates the scope for the IPv6 Notify messages for SSDP.

string	Description
Link	SSDP Notify messages are sent to addresses in the IPv6 Local Link scope.
Organization	SSDP Notify messages are sent to addresses in the IPv6 Local

string	<b>Description</b> Organization scope.
Site	SSDP Notify messages are sent to addresses in the IPv6 Local Site scope.

## Example Response

```
{
  "@odata.type": "#ManagerNetworkProtocol.v1_2_0.ManagerNetworkProtocol",
  "Id": "NetworkProtocol",
  "Name": "Manager Network Protocol",
  "Description": "Manager Network Service",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "HostName": "web483-bmc",
  "FQDN": "web483-bmc.dmtf.org",
  "HTTP": {
    "ProtocolEnabled": true,
    "Port": 80
  },
  "HTTPS": {
    "ProtocolEnabled": true,
    "Port": 443
  },
  "IPMI": {
    "ProtocolEnabled": true,
    "Port": 623
  },
  "SSH": {
    "ProtocolEnabled": true,
    "Port": 22
  },
  "SNMP": {
    "ProtocolEnabled": true,
    "Port": 161
  },
  "VirtualMedia": {
    "ProtocolEnabled": true,
    "Port": 17988
  },
  "SSDP": {
    "ProtocolEnabled": true,
    "Port": 1900,
    "NotifyMulticastIntervalSeconds": 600,
    "NotifyTTL": 5,
    "NotifyIPv6Scope": "Site"
  },
  "Telnet": {
    "ProtocolEnabled": true,
    "Port": 23
  },
  "KVMIP": {
    "ProtocolEnabled": true,
    "Port": 5288
  }
}
```

```

    },
    "@odata.context": "/redfish/v1/$metadata#ManagerNetworkProtocol.ManagerNetworkProtocol",
    "@odata.id": "/redfish/v1/Managers/BMC/NetworkProtocol"
}

```

## Memory 1.5.0

This is the schema definition for definition of a Memory and its configuration.

<b>Actions</b> (v1.0.3+) {	object	read-write	The available actions for this resource.
<b>#Memory.DisablePassphrase</b> { }	object	read-write	Disable passphrase for given regions. <i>For more information, see the <a href="#">Action</a>.</i>
<b>#Memory.SecureEraseUnit</b> { }	object	read-write	This defines the action for securely erasing memory. <i>For more information, see the <a href="#">Action</a>.</i>
<b>#Memory.SetPassphrase</b> { }	object	read-write	Set passphrase for the given regions. <i>For more information, see the <a href="#">Action</a>.</i>
<b>#Memory.UnlockUnit</b> { }	object	read-write	This defines the action for unlocking memory. <i>For more information, see the <a href="#">Action</a>.</i>
<b>AllocationAlignmentMiB</b> (v1.2+)	number	read-only (null)	The boundary which memory regions are aligned to, measured in mebibytes (MiB).
<b>AllocationIncrementMiB</b> (v1.2+)	number	read-only (null)	The size of the smallest unit of allocation, measured in mebibytes (MiB).
<b>AllowedSpeedsMHz</b> [ ]	array (number)	read-only	Speed bins supported by this Memory.
<b>Assembly</b> {	object	read-only	A reference to the Assembly resource that contains this memory. See the <a href="#">Assembly</a> schema for details.
<b>@odata.id</b>	string	read-only	Link to a Assembly resource. See the <a href="#">Assembly</a> schema for details.
<b>BaseModuleType</b>	string (enum)	read-only (null)	The base module type of Memory. See <a href="#">BaseModuleType</a> in <i>Property Definition</i> for possible values of this property.
<b>BusWidthBits</b>	number	read-only (null)	Bus Width in bits.
<b>CacheSizeMiB</b> (v1.4+)	number (mebibytes)	read-only (null)	Total size of the cache portion memory.
<b>CapacityMiB</b>	number (mebibytes)	read-only (null)	Memory Capacity in mebibytes (MiB).
<b>DataWidthBits</b>	number	read-only (null)	Data Width in bits.
<b>DeviceID</b> (deprecated v1.0.3)	string	read-only	Device ID. <i>Deprecated v1.0.3+. This property is deprecated.</i>



<b>MemoryController</b>	number	read-only (null)	Memory controller number in which M
<b>Slot</b>	number	read-only (null)	Slot number in which Memory is conn
<b>Socket</b> }	number	read-only (null)	Socket number in which Memory is co
<b>MemoryMedia</b> [ ]	array (string (enum))	read-only	Media of this Memory. See <a href="#">MemoryMedia</a> in <i>Property Details</i> for possible values of this property.
<b>MemorySubsystemControllerManufacturerID</b> (v1.3+)	string	read-only (null)	The manufacturer ID of the memory s this memory module.
<b>MemorySubsystemControllerProductID</b> (v1.3+)	string	read-only (null)	The product ID of the memory subsys memory module.
<b>MemoryType</b>	string (enum)	read-only (null)	The type of Memory. See <a href="#">MemoryType</a> in <i>Property Details</i> for values of this property.
<b>Metrics</b> {	object	read-only	A reference to the Metrics associated the <a href="#">MemoryMetrics</a> schema for detail
<b>@odata.id</b> }	string	read-only	Link to a MemoryMetrics resource. See the <a href="#">MemoryMetrics</a> schema for detail
<b>ModuleManufacturerID</b> (v1.3+)	string	read-only (null)	The manufacturer ID of this memory r
<b>ModuleProductID</b> (v1.3+)	string	read-only (null)	The product ID of this memory modul
<b>NonVolatileSizeMiB</b> (v1.4+)	number (mebibytes)	read-only (null)	Total size of the non-volatile portion m
<b>OperatingMemoryModes</b> [ ]	array (string (enum))	read-only	Memory modes supported by the Mem See <a href="#">OperatingMemoryModes</a> in <i>Prop</i> the possible values of this property.
<b>OperatingSpeedMhz</b>	number	read-only (null)	Operating speed of Memory in MHz o
<b>PartNumber</b>	string	read-only (null)	The product part number of this devic
<b>PersistentRegionNumberLimit</b> (v1.2+)	number	read-only (null)	Total number of persistent regions thi
<b>PersistentRegionSizeLimitMiB</b>	number	read-only (null)	Total size of persistent regions in meb
<b>PersistentRegionSizeMaxMiB</b> (v1.2+)	number	read-only (null)	Maximum size of a single persistent r (MiB).
<b>PowerManagementPolicy</b> {	object	read-write	Power management policy informatio

<b>AveragePowerBudgetMilliWatts</b>	number (mW)	read-only (null)	Average power budget in milli watts.
<b>MaxTDPMilliWatts</b>	number (mW)	read-only (null)	Maximum TDP in milli watts.
<b>PeakPowerBudgetMilliWatts</b>	number (mW)	read-only (null)	Peak power budget in milli watts.
<b>PolicyEnabled</b>	boolean	read-only (null)	Power management policy enabled status.
<b>RankCount</b>	number	read-only (null)	Number of ranks available in the Memory.
<b>Regions</b> [ {	array	read-write	Memory regions information within the Memory.
<b>MemoryClassification</b>	string (enum)	read-only (null)	Classification of memory occupied by this region. See <a href="#">MemoryClassification</a> in Property Detail for possible values of this property.
<b>OffsetMiB</b>	number (MiBy)	read-only (null)	Offset within the Memory that corresponds to this memory region in mebibytes (MiB).
<b>PassphraseEnabled</b> (v1.5+)	boolean	read-only (null)	Indicates if the passphrase is enabled for this region.
<b>PassphraseState</b> (deprecated v1.4.1)	boolean	read-only (null)	State of the passphrase for this region. <i>This property has been Deprecated in Memory.v1_5_0.Memory.RegionSet.Firmware.</i>
<b>RegionId</b>	string	read-only (null)	Unique region ID representing a specific Memory.
<b>SizeMiB</b>	number (MiBy)	read-only (null)	Size of this memory region in mebibytes.
}]			
<b>SecurityCapabilities</b> {	object	read-write	This object contains security capabilities for the Memory.
<b>MaxPassphraseCount</b>	number	read-only (null)	Maximum number of passphrases supported by the Memory.
<b>PassphraseCapable</b>	boolean	read-only (null)	Memory passphrase set capability.
<b>SecurityStates</b> [ ]	array (string (enum))	read-only	Security states supported by the Memory. See <a href="#">SecurityStates</a> in Property Detail for possible values of this property.
<b>SerialNumber</b>	string	read-only (null)	The product serial number of this device.
<b>SpareDeviceCount</b>	number	read-only (null)	Number of unused spare devices available.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the Status object.



			section.
<b>SubsystemDeviceID</b> <i>(deprecated v1.0.3)</i>	string	read-only (null)	Subsystem Device ID. <i>Deprecated v1.0.3+ has been Deprecatd in favor of Memory.v1_3_0.MemorySubsystemC</i>
<b>SubsystemVendorID</b> <i>(deprecated v1.0.3)</i>	string	read-only (null)	SubSystem Vendor ID. <i>Deprecated v1.0.3+ has been Deprecatd in favor of Memory.v1_3_0.MemorySubsystemC</i>
<b>VendorID</b> <i>(deprecated v1.0.3)</i>	string	read-only (null)	Vendor ID. <i>Deprecated v1.0.3+. This has been Deprecatd in favor of Memory.v1_3_0.ModuleManufacture</i>
<b>VolatileRegionNumberLimit</b> <i>(v1.2+)</i>	number	read-only (null)	Total number of volatile regions this M
<b>VolatileRegionSizeLimitMiB</b>	number	read-only (null)	Total size of volatile regions in mebiby
<b>VolatileRegionSizeMaxMiB</b> <i>(v1.2+)</i>	number	read-only (null)	Maximum size of a single volatile regi
<b>VolatileSizeMiB</b> <i>(v1.4+)</i>	number (mebibytes)	read-only (null)	Total size of the volitile portion mem

## Action Details

---

### DisablePassphrase

Disable passphrase for given regions.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
<b>Passphrase</b>	string	read-write	Passphrase for doing the operation.
<b>RegionId</b>	string	read-write	Memory region ID for which this action to be applied.
}			

### SecureEraseUnit

This defines the action for securely erasing given regions.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
<b>Passphrase</b>	string	read-write	Passphrase for doing the operation.
<b>RegionId</b>	string	read-write	Memory region ID for which this action to be applied.
}			

### SetPassphrase

Set passphrase for the given regions.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
<b>Passphrase</b>	string	read-write	Passphrase for doing the operation.
<b>RegionId</b>	string	read-write	Memory region ID for which this action to be applied.
}			

## UnlockUnit

This defines the action for unlocking given regions.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
<b>Passphrase</b>	string	read-write	Passphrase for doing the operation.
<b>RegionId</b>	string	read-write	Memory region ID for which this action to be applied.
}			

## Property Details

---

### BaseModuleType:

The base module type of Memory.

string	Description
LRDIMM	Load Reduced.
Mini_RDIMM	Mini_RDIMM.
Mini_UDIMM	Mini_UDIMM.
RDIMM	Registered DIMM.
SO_DIMM	SO_DIMM.
SO_DIMM_16b	SO_DIMM_16b.
SO_DIMM_32b	SO_DIMM_32b.
SO_RDIMM_72b	SO_RDIMM_72b.
SO_UDIMM_72b	SO_UDIMM_72b.
UDIMM	UDIMM.

### ErrorCorrection:

Error correction scheme supported for this memory.

string	Description
AddressParity	Address Parity errors can be corrected.

string	Description
MultiBitECC	Multi-bit Data errors can be corrected by ECC.
NoECC	No ECC available.
SingleBitECC	Single bit Data error can be corrected by ECC.

### MemoryClassification:

Classification of memory occupied by the given memory region.

string	Description
Block	Block accesible memory.
ByteAccessiblePersistent	Byte accessible persistent memory.
Volatile	Volatile memory.

### MemoryDeviceType:

Type details of the Memory.

string	Description
DDR	DDR.
DDR2	DDR2.
DDR2_SDRAM	DDR2 SDRAM.
DDR2_SDRAM_FB_DIMM	DDR2 SDRAM FB_DIMM.
DDR2_SDRAM_FB_DIMM_PROBE	DDR2 SDRAM FB_DIMM PROBE.
DDR3	DDR3.
DDR3_SDRAM	DDR3 SDRAM.
DDR4	DDR4.
DDR4E_SDRAM	DDR4E SDRAM.
DDR4_SDRAM	DDR4 SDRAM.
DDR_SDRAM	DDR SDRAM.
DDR_SGRAM	DDR SGRAM.
EDO	EDO.
FastPageMode	Fast Page Mode.
LPDDR3_SDRAM	LPDDR3 SDRAM.
LPDDR4_SDRAM	LPDDR4 SDRAM.
Logical (v1.0.3+)	Logical Non-volatile device.

<b>string</b>	<b>Description</b>
PipelinedNibble	Pipelined Nibble.
ROM	ROM.
SDRAM	SDRAM.

### **MemoryMedia:**

Media of this Memory.

<b>string</b>	<b>Description</b>
DRAM	DRAM media.
NAND	NAND media.
Proprietary	Proprietary media.

### **MemoryType:**

The type of Memory.

<b>string</b>	<b>Description</b>
DRAM	The memory module is composed of volatile memory.
NVDIMM_F	The memory module is composed of non-volatile memory.
NVDIMM_N	The memory module is composed of volatile memory backed by non-volatile memory.
NVDIMM_P	The memory module is composed of a combination of non-volatile and volatile memory.

### **OperatingMemoryModes:**

Memory modes supported by the Memory.

<b>string</b>	<b>Description</b>
Block	Block accessible system memory.
PMEM	Persistent memory, byte accesible through system address space.
Volatile	Volatile memory.

### **SecurityStates:**

Security states supported by the Memory.

<b>string</b>	<b>Description</b>
Disabled	Secure mode is disabled.
Enabled	Secure mode is enabled.

string	Description
Frozen	Secure state is frozen and can not be modified until reset.
Locked	Secure mode is enabled and access to the data is locked.
Passphraselimit	Number of attempts to unlock the Memory exceeded limit.
Unlocked	Secure mode is enabled and access to the data is unlocked.

## Example Response

```
{
  "@odata.type": "#Memory.v1_5_0.Memory",
  "Id": "DIMM1",
  "Name": "DIMM Slot 1",
  "RankCount": 2,
  "MaxTDPMilliWatts": [
    12000
  ],
  "CapacityMiB": 32768,
  "DataWidthBits": 64,
  "BusWidthBits": 72,
  "ErrorCorrection": "MultiBitECC",
  "MemoryLocation": {
    "Socket": 1,
    "MemoryController": 1,
    "Channel": 1,
    "Slot": 1
  },
  "MemoryType": "DRAM",
  "MemoryDeviceType": "DDR4",
  "BaseModuleType": "RDIMM",
  "MemoryMedia": [
    "DRAM"
  ],
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "@odata.context": "/redfish/v1/$metadata#Memory.Memory",
  "@odata.id": "/redfish/v1/Systems/437XR1138R2/Memory/DIMM1"
}
```

## MemoryChunks 1.2.1

This is the schema definition of a Memory Chunk and its configuration.

<b>Actions</b> (v1.2+) {}	object	read-write	The available actions for this resource.
<b>AddressRangeType</b>	string (enum)	read-only (null)	Memory type of this memory chunk. See <a href="#">AddressRangeType</a> in Property Details, below, for the possible values of this property.

<b>InterleaveSets</b> [ {	array	read-write	This is the interleave sets for the memory chunk.
<b>Memory</b> {	object	read-only	Describes a memory device of the interleave set.
@odata.id	string	read-only	The unique identifier for a resource.
}			
<b>MemoryLevel</b>	number	read-only (null)	Level of the interleave set for multi-level tiered memory.
<b>OffsetMiB</b>	number	read-only (null)	Offset within the DIMM that corresponds to the start of this memory region, measured in mebibytes (MiB).
<b>RegionId</b>	string	read-only (null)	DIMM region identifier.
<b>SizeMiB</b>	number	read-only (null)	Size of this memory region measured in mebibytes (MiB).
}]			
<b>IsMirrorEnabled</b>	boolean	read-only (null)	Mirror Enabled status.
<b>IsSpare</b>	boolean	read-only (null)	Spare enabled status.
<b>MemoryChunkSizeMiB</b>	number	read-only (null)	Size of the memory chunk measured in mebibytes (MiB).
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

## Property Details

### AddressRangeType:

Memory type of this memory chunk.

string	Description
Block	Block accesible memory.
PMEM	Byte accessible persistent memory.
Volatile	Volatile memory.

## MemoryDomain 1.2.0

This is the schema definition of a Memory Domain and its configuration. Memory Domains are used to indicate to the client which Memory (DIMMs) can be grouped together in Memory Chunks to form interleave sets or otherwise grouped together.

<b>Actions</b> (v1.2+) { }	object	read-write	The available actions for this resource.
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<b>AllowsBlockProvisioning</b>	boolean	read-only (null)	Indicates if this Memory Domain supports the provisioning of blocks of memory.
<b>AllowsMemoryChunkCreation</b>	boolean	read-only (null)	Indicates if this Memory Domain supports the creation of Memory Chunks.
<b>AllowsMirroring</b> (v1.1+)	boolean	read-only (null)	Indicates if this Memory Domain supports the creation of Memory Chunks with mirroring enabled.
<b>AllowsSparing</b> (v1.1+)	boolean	read-only (null)	Indicates if this Memory Domain supports the creation of Memory Chunks with sparing enabled.
<b>InterleavableMemorySets</b> [ {	array	read-write	This is the interleave sets for the memory chunk.
<b>MemorySet</b> [ {	array	read-only	This is the collection of memory for a particular interleave set.
@odata.id	string	read-only	Link to a Memory resource. See the Links section and the <a href="#">Memory</a> schema for details.
}]			
}]			
<b>MemoryChunks</b> {	object	read-only (null)	A reference to the collection of Memory Chunks associated with this Memory Domain. Contains a link to a resource.
@odata.id	string	read-only	Link to Collection of <a href="#">MemoryChunks</a> . See the MemoryChunks schema for details.
}			

## MemoryMetrics 1.1.3

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

<b>Actions</b> (v1.0.3+) {	object	read-write	The available actions for this resource.
#MemoryMetrics.ClearCurrentPeriod { }	object	read-write	This sets the CurrentPeriod object values to zero. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>BlockSizeBytes</b>	number (bytes)	read-only (null)	Block size in bytes.
<b>CurrentPeriod</b> {	object	read-write	This object contains the Memory metrics since last reset or ClearCurrentPeriod action.
<b>BlocksRead</b>	number	read-only	Number of blocks read since

		(null)	reset.
<b>BlocksWritten</b> }	number	read-only (null)	Number of blocks written since reset.
<b>HealthData</b> {	object	read-write	This object describes the health information of the memory.
<b>AlarmTrips</b> {	object	read-write	Alarm trip information about the memory.
<b>AddressParityError</b>	boolean	read-only (null)	Address parity error detected status.
<b>CorrectableECCError</b>	boolean	read-only (null)	Correctable data error threshold crossing alarm trip detected status.
<b>SpareBlock</b>	boolean	read-only (null)	Spare block capacity crossing alarm trip detected status.
<b>Temperature</b>	boolean	read-only (null)	Temperature threshold crossing alarm trip detected status.
<b>UncorrectableECCError</b> }	boolean	read-only (null)	Uncorrectable data error threshold crossing alarm trip detected status.
<b>DataLossDetected</b>	boolean	read-only (null)	Data loss detection status.
<b>LastShutdownSuccess</b>	boolean	read-only (null)	Status of last shutdown.
<b>PerformanceDegraded</b>	boolean	read-only (null)	Performance degraded mode status.
<b>PredictedMediaLifeLeftPercent</b> (v1.1+)	number	read-only (null)	The percentage of reads and writes that are predicted to still be available for the media.
<b>RemainingSpareBlockPercentage</b> }	number	read-only (null)	Remaining spare blocks in percentage.
<b>LifeTime</b> {	object	read-write	This object contains the Memory metrics for the lifetime of the Memory.
<b>BlocksRead</b>	number	read-only (null)	Number of blocks read for the lifetime of the Memory.
<b>BlocksWritten</b> }	number	read-only (null)	Number of blocks written for the lifetime of the Memory.



## Action Details

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### ClearCurrentPeriod

This sets the CurrentPeriod object values to zero.

(This action takes no parameters.)

## MessageRegistry 1.1.1

This is the schema definition for all Message Registries. It represents the properties for the registries themselves. The MessageId is formed per the Redfish specification. It consists of the RegistryPrefix concatenated with the version concatenated with the unique identifier for the message registry entry.

<b>Actions</b> (v1.1.1+) { }	object	read-write	The available actions for this resource.
<b>Language</b>	string	read-only	This is the RFC 5646 compliant language code for the registry.
<b>Messages</b> { }	object	read-write	The pattern property indicates that a free-form string is the unique identifier for the message within the registry.
<b>OwningEntity</b>	string	read-only	This is the organization or company that publishes this registry.
<b>RegistryPrefix</b>	string	read-only	This is the single word prefix used to form a messageID structure.
<b>RegistryVersion</b>	string	read-only	This is the message registry version which is used in the middle portion of a messageID.

## MessageRegistryFile 1.1.0

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

<b>Actions</b> (v1.1+) { }	object	read-write	The available actions for this resource.
<b>Languages</b> [ ]	array (string)	read-only	Language codes for the schemas available.
<b>Location</b> [ {	array	read-write	Location information for a schema file.
<b>ArchiveFile</b>	string	read-only	If the schema is hosted on the service in an archive file, this is the name of the file within the archive.
<b>ArchiveUri</b>	string	read-only	If the schema is hosted on the service in an archive file, this is the link to the archive file.
<b>Language</b>	string	read-only	The language code for the file the schema is in.
<b>PublicationUri</b>	string	read-only	Link to publicly available (canonical) URI for schema.
<b>Uri</b>	string	read-only	Link to locally available URI for schema.

}]			
<b>Registry</b>	string	read-only	The Registry Name, Major and Minor version used in MessageID construction.

## NetworkAdapter 1.1.0

A NetworkAdapter represents the physical network adapter capable of connecting to a computer network. Examples include but are not limited to Ethernet, Fibre Channel, and converged network adapters.

<b>Actions</b> (v1.1+) {	object	read-write	The available actions for this resource.
<b>#NetworkAdapter.ResetSettingsToDefault</b> { }	object	read-write	This action is to clear the settings back to factory defaults. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>Assembly</b> {	object	read-only	A reference to the Assembly resource associated with this adapter. See the <a href="#">Assembly</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a Assembly resource. See the Links section and the <a href="#">Assembly</a> schema for details.
<b>Controllers</b> [ {	array	read-write	The set of network controllers ASICs that make up this NetworkAdapter.
<b>ControllerCapabilities</b> {	object	read-write (null)	The capabilities of this controller.
<b>DataCenterBridging</b> {	object	read-write (null)	Data Center Bridging (DCB) for this controller.
<b>Capable</b>	boolean	read-only (null)	Whether this controller is capable of Data Center Bridging (DCB).
<b>NPIV</b> {	object	read-write (null)	N_Port ID Virtualization (NPIV) capabilities for this controller.
<b>MaxDeviceLogins</b>	number	read-only (null)	The maximum number of N_Port ID Virtualization (NPIV) logins allowed

			simultaneously from all ports on this controller.
<b>MaxPortLogins</b> }	number	read-only (null)	The maximum number of N_Port ID Virtualization (NPIV) logins allowed per physical port on this controller.
<b>NetworkDeviceFunctionCount</b>	number	read-only (null)	The maximum number of physical functions available on this controller.
<b>NetworkPortCount</b>	number	read-only (null)	The number of physical ports on this controller.
<b>VirtualizationOffload</b> {	object	read-write (null)	Virtualization offload for this controller.
<b>SRIOV</b> {	object	read-write (null)	Single-Root Input/Output Virtualization (SR-IOV) capabilities.
<b>SRIOVVEPACapable</b> }	boolean	read-only (null)	Whether this controller supports Single Root Input/Output Virtualization (SR-IOV) in Virtual Ethernet Port Aggregator (VEPA) mode.
<b>VirtualFunction</b> {	object	read-write (null)	A virtual function of a controller.
<b>DeviceMaxCount</b>	number	read-only (null)	The maximum number of Virtual Functions (VFs) supported by this controller.
<b>MinAssignmentGroupSize</b>	number	read-only (null)	The minimum number of Virtual Functions (VFs) that can be allocated or moved between physical functions for this controller.
<b>NetworkPortMaxCount</b> } } }	number	read-only (null)	The maximum number of Virtual Functions (VFs) supported per network port for this controller.
<b>FirmwarePackageVersion</b>	string	read-only (null)	The version of the user-facing firmware package.
<b>Links</b> (v1.1+) {	object	read-write	Links.
<b>NetworkDeviceFunctions</b> [ {	array	read-only	Contains the members of this collection.

<b>@odata.id</b>	string	read-only	Link to a NetworkDeviceFunction resource. See the Links section and the <a href="#">NetworkDeviceFunction</a> schema for details.
}]			
<b>NetworkPorts</b> [{	array	read-only	Contains the members of this collection.
<b>@odata.id</b>	string	read-only	Link to a NetworkPort resource. See the Links section and the <a href="#">NetworkPort</a> schema for details.
}]			
<b>Oem</b> {}	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PCleDevices</b> [{	array	read-only	Contains the members of this collection.
<b>@odata.id</b>	string	read-only	Link to a PCIeDevice resource. See the Links section and the <a href="#">PCIeDevice</a> schema for details.
}] }			
<b>Location</b> (v1.1+)		read-write	See the <a href="#">Location object</a> definition in the <a href="#">Common Properties</a> section.
}]			
<b>Manufacturer</b>	string	read-only (null)	The manufacturer or OEM of this network adapter.
<b>Model</b>	string	read-only (null)	The model string for this network adapter.
<b>NetworkDeviceFunctions</b> {	object	read-only	Contains the members of this collection. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">NetworkDeviceFunction</a> . See the NetworkDeviceFunction

			schema for details.
<b>NetworkPorts</b> {	object	read-only	Contains the members of this collection. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">NetworkPort</a> . See the NetworkPort schema for details.
<b>PartNumber</b>	string	read-only (null)	Part number for this network adapter.
<b>SKU</b>	string	read-only (null)	The manufacturer SKU for this network adapter.
<b>SerialNumber</b>	string	read-only (null)	The serial number for this network adapter.
<b>Status</b> { }	object	read-write (null)	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

## Action Details

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### ResetSettingsToDefault

This action is to clear the settings back to factory defaults.

(This action takes no parameters.)

## NetworkDeviceFunction 1.2.1

A Network Device Function represents a logical interface exposed by the network adapter.

<b>Actions</b> (v1.1.1+) { }	object	read-write	The available actions for this resource.
<b>AssignablePhysicalPorts</b> [ {	array	read-only	The array of physical port references that this network device function may be assigned to.
<b>@odata.id</b>	string	read-only	Link to a NetworkPort resource. See the Links section and the <a href="#">NetworkPort</a> schema for details.
}]			
<b>BootMode</b>	string (enum)	read-write (null)	The boot mode configured for this network device function. <i>See <a href="#">BootMode</a> in Property Details, below, for the possible values of this property.</i>
<b>DeviceEnabled</b>	boolean	read-write	Whether the network device function is

		(null)	enabled.
<b>Ethernet {</b>	object	read-write (null)	Ethernet.
<b>MACAddress</b>	string	read-write (null)	This is the currently configured MAC address of the (logical port) network device function.
<b>MTUSize</b>	number	read-write (null)	The Maximum Transmission Unit (MTU) configured for this network device function.
<b>PermanentMACAddress</b> }	string	read-only (null)	This is the permanent MAC address assigned to this network device function (physical function).
<b>FibreChannel {</b>	object	read-write (null)	Fibre Channel.
<b>AllowFIPVLANDiscovery</b>	boolean	read-write (null)	Whether the FCoE Initialization Protocol (FIP) is used for populating the FCoE VLAN Id.
<b>BootTargets [ {</b>	array	read-write	An array of Fibre Channel boot targets configured for this network device function.
<b>BootPriority</b>	number	read-write (null)	The relative priority for this entry in the boot targets array.
<b>LUNID</b>	string	read-write (null)	The Logical Unit Number (LUN) ID to boot from on the device referred to by the corresponding WWPN.
<b>WWPN</b>	string	read-write (null)	The World-Wide Port Name to boot from.
<b>}]</b>			
<b>FCoEActiveVLANId</b>	number	read-only (null)	The active FCoE VLAN ID.
<b>FCoELocalVLANId</b>	number	read-write (null)	The locally configured FCoE VLAN ID.
<b>PermanentWWNN</b>	string	read-only (null)	This is the permanent WWNN address assigned to this network device function (physical function).
<b>PermanentWWPN</b>	string	read-only (null)	This is the permanent WWPN address assigned to this network device function (physical function).
<b>WWNN</b>	string	read-write (null)	This is the currently configured WWNN address of the network device function (physical function).
<b>WWNSource</b>	string	read-write	The configuration source of the WWNs

	(enum)	(null)	for this connection (WWPN and WWNN). See <a href="#">WWNSource</a> in Property Details, below, for the possible values of this property.
<b>WWPN</b> }	string	read-write (null)	This is the currently configured WWPN address of the network device function (physical function).
<b>Links</b> {	object	read-write	Links.
<b>Endpoints</b> (v1.2+) [{	array	read-only	An array of references to endpoints associated with this network device function.
<b>@odata.id</b>	string	read-only	Link to a Endpoint resource. See the Links section and the <a href="#">Endpoint</a> schema for details.
}]			
<b>PCleFunction</b> {	object	read-only	Contains the members of this collection. See the <a href="#">PCleFunction</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a PCleFunction resource. See the Links section and the <a href="#">PCleFunction</a> schema for details.
<b>MaxVirtualFunctions</b>	number	read-only (null)	The number of virtual functions (VFs) that are available for this Network Device Function.
<b>NetDevFuncCapabilities</b> (v1.0.2+) []	array (string (enum))	read-only (null)	Capabilities of this network device function. See <a href="#">NetDevFuncCapabilities</a> in Property Details, below, for the possible values of this property.
<b>NetDevFuncType</b> (v1.0.2+)	string (enum)	read-write (null)	The configured capability of this network device function. See <a href="#">NetDevFuncType</a> in Property Details, below, for the possible values of this property.
<b>PhysicalPortAssignment</b> {	object	read-only	The physical port that this network device function is currently assigned to. See the <a href="#">NetworkPort</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a NetworkPort resource. See the Links section and the <a href="#">NetworkPort</a> schema for details.
<b>Status</b> { }	object	read-write (null)	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

<b>VirtualFunctionsEnabled</b>	boolean	read-only (null)	Whether Single Root I/O Virtualization (SR-IOV) Virtual Functions (VFs) are enabled for this Network Device Function.
<b>iSCSIBoot {</b>	object	read-write (null)	iSCSI Boot.
<b>AuthenticationMethod</b>	string (enum)	read-write (null)	The iSCSI boot authentication method for this network device function. <i>See <a href="#">AuthenticationMethod</a> in Property Details, below, for the possible values of this property.</i>
<b>CHAPSecret</b>	string	read-write (null)	The shared secret for CHAP authentication.
<b>CHAPUsername</b>	string	read-write (null)	The username for CHAP authentication.
<b>IPAddressType</b>	string (enum)	read-write (null)	The type of IP address (IPv6 or IPv4) being populated in the iSCSIBoot IP address fields. <i>See <a href="#">IPAddressType</a> in Property Details, below, for the possible values of this property.</i>
<b>IPMaskDNSViaDHCP</b>	boolean	read-write (null)	Whether the iSCSI boot initiator uses DHCP to obtain the initiator name, IP address, and netmask.
<b>InitiatorDefaultGateway</b>	string	read-write (null)	The IPv6 or IPv4 iSCSI boot default gateway.
<b>InitiatorIPAddress</b>	string	read-write (null)	The IPv6 or IPv4 address of the iSCSI initiator.
<b>InitiatorName</b>	string	read-write (null)	The iSCSI initiator name.
<b>InitiatorNetmask</b>	string	read-write (null)	The IPv6 or IPv4 netmask of the iSCSI boot initiator.
<b>MutualCHAPSecret</b>	string	read-write (null)	The CHAP Secret for 2-way CHAP authentication.
<b>MutualCHAPUsername</b>	string	read-write (null)	The CHAP Username for 2-way CHAP authentication.
<b>PrimaryDNS</b>	string	read-write (null)	The IPv6 or IPv4 address of the primary DNS server for the iSCSI boot initiator.
<b>PrimaryLUN</b>	number	read-write (null)	The logical unit number (LUN) for the primary iSCSI boot target.
<b>PrimaryTargetIPAddress</b>	string	read-write (null)	The IP address (IPv6 or IPv4) for the primary iSCSI boot target.



<b>PrimaryTargetName</b>	string	read-write (null)	The name of the iSCSI primary boot target.
<b>PrimaryTargetTCPPort</b>	number	read-write (null)	The TCP port for the primary iSCSI boot target.
<b>PrimaryVLANEnable</b>	boolean	read-write (null)	This indicates if the primary VLAN is enabled.
<b>PrimaryVLANId</b>	number	read-write (null)	The 802.1q VLAN ID to use for iSCSI boot from the primary target.
<b>RouterAdvertisementEnabled</b>	boolean	read-write (null)	Whether IPv6 router advertisement is enabled for the iSCSI boot target.
<b>SecondaryDNS</b>	string	read-write (null)	The IPv6 or IPv4 address of the secondary DNS server for the iSCSI boot initiator.
<b>SecondaryLUN</b>	number	read-write (null)	The logical unit number (LUN) for the secondary iSCSI boot target.
<b>SecondaryTargetIPAddress</b>	string	read-write (null)	The IP address (IPv6 or IPv4) for the secondary iSCSI boot target.
<b>SecondaryTargetName</b>	string	read-write (null)	The name of the iSCSI secondary boot target.
<b>SecondaryTargetTCPPort</b>	number	read-write (null)	The TCP port for the secondary iSCSI boot target.
<b>SecondaryVLANEnable</b>	boolean	read-write (null)	This indicates if the secondary VLAN is enabled.
<b>SecondaryVLANId</b>	number	read-write (null)	The 802.1q VLAN ID to use for iSCSI boot from the secondary target.
<b>TargetInfoViaDHCP</b> }	boolean	read-write (null)	Whether the iSCSI boot target name, LUN, IP address, and netmask should be obtained from DHCP.

## Property Details

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### AuthenticationMethod:

The iSCSI boot authentication method for this network device function.

string	Description
CHAP	iSCSI Challenge Handshake Authentication Protocol (CHAP) authentication is used.
MutualCHAP	iSCSI Mutual Challenge Handshake Authentication Protocol (CHAP) authentication is used.
None	No iSCSI authentication is used.

## BootMode:

The boot mode configured for this network device function.

string	Description
Disabled	Do not indicate to UEFI/BIOS that this device is bootable.
FibreChannel	Boot this device using the embedded Fibre Channel support and configuration. Only applicable if the NetworkDeviceFunctionType is set to FibreChannel.
FibreChannelOverEthernet	Boot this device using the embedded Fibre Channel over Ethernet (FCoE) boot support and configuration. Only applicable if the NetworkDeviceFunctionType is set to FibreChannelOverEthernet.
PXE	Boot this device using the embedded PXE support. Only applicable if the NetworkDeviceFunctionType is set to Ethernet.
iSCSI	Boot this device using the embedded iSCSI boot support and configuration. Only applicable if the NetworkDeviceFunctionType is set to iSCSI.

## IPAddressType:

The type of IP address (IPv6 or IPv4) being populated in the iSCSIBoot IP address fields.

string	Description
IPv4	IPv4 addressing is used for all IP-fields in this object.
IPv6	IPv6 addressing is used for all IP-fields in this object.

## NetDevFuncCapabilities:

Capabilities of this network device function.

string	Description
Disabled	Neither enumerated nor visible to the operating system.
Ethernet	Appears to the operating system as an Ethernet device.
FibreChannel	Appears to the operating system as a Fibre Channel device.
FibreChannelOverEthernet	Appears to the operating system as an FCoE device.
iSCSI	Appears to the operating system as an iSCSI device.

## NetDevFuncType:

The configured capability of this network device function.

string	Description
Disabled	Neither enumerated nor visible to the operating system.

string	Description
Ethernet	Appears to the operating system as an Ethernet device.
FibreChannel	Appears to the operating system as a Fibre Channel device.
FibreChannelOverEthernet	Appears to the operating system as an FCoE device.
iSCSI	Appears to the operating system as an iSCSI device.

### WWNSource:

The configuration source of the WWNs for this connection (WWPN and WWNN).

string	Description
ConfiguredLocally	The set of FC/FCoE boot targets was applied locally through API or UI.
ProvidedByFabric	The set of FC/FCoE boot targets was applied by the Fibre Channel fabric.

## NetworkInterface 1.1.0

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

<b>Actions</b> (v1.1+) { }	object	read-write	The available actions for this resource.
<b>Links</b> { }	object	read-write	Links.
<b>NetworkAdapter</b> { }	object	read-only	Contains the members of this collection. See the <a href="#">NetworkAdapter</a> schema for details on this property.
<b>@odata.id</b> { }	string	read-only	Link to a NetworkAdapter resource. See the Links section and the <a href="#">NetworkAdapter</a> schema for details.
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>NetworkDeviceFunctions</b> { }	object	read-only	Contains the members of this collection. Contains a link to a resource.
<b>@odata.id</b> { }	string	read-only	Link to Collection of <a href="#">NetworkDeviceFunction</a> . See the NetworkDeviceFunction schema for details.
<b>NetworkPorts</b> { }	object	read-only	Contains the members of this collection. Contains a link to a resource.
<b>@odata.id</b> { }	string	read-only	Link to Collection of <a href="#">NetworkPort</a> . See the NetworkPort schema for details.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this</a>

		(null)	<a href="#">guide</a> section.
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## NetworkPort 1.1.0

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

<b>Actions</b> (v1.1+) { }	object	read-write	The available actions for this resource.
<b>ActiveLinkTechnology</b>	string (enum)	read-write (null)	Network Port Active Link Technology. See <a href="#">ActiveLinkTechnology</a> in Property Details, below, for the possible values of this property.
<b>AssociatedNetworkAddresses</b> [ ]	array (string, null)	read-only	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.
<b>EEEEnabled</b>	boolean	read-write (null)	Whether IEEE 802.3az Energy Efficient Ethernet (EEE) is enabled for this network port.
<b>FlowControlConfiguration</b>	string (enum)	read-write (null)	The locally configured 802.3x flow control setting for this network port. See <a href="#">FlowControlConfiguration</a> in Property Details, below, for the possible values of this property.
<b>FlowControlStatus</b>	string (enum)	read-only (null)	The 802.3x flow control behavior negotiated with the link partner for this network port (Ethernet-only). See <a href="#">FlowControlStatus</a> in Property Details, below, for the possible values of this property.
<b>LinkStatus</b>	string (enum)	read-only (null)	The status of the link between this port and its link partner. See <a href="#">LinkStatus</a> in Property Details, below, for the possible values of this property.
<b>NetDevFuncMaxBWAlloc</b> [ {	array	read-write	The array of maximum bandwidth allocation percentages for the Network Device Functions associated with this port.
<b>MaxBWAllocPercent</b>	number	read-write (null)	The maximum bandwidth allocation percentage allocated to the corresponding network device function instance.

<b>NetworkDeviceFunction</b> {	object	read-only	Contains the members of this collection. See the <a href="#">NetworkDeviceFunction</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a NetworkDeviceFunction resource. See the Links section and the <a href="#">NetworkDeviceFunction</a> schema for details.
}			
}]			
<b>NetDevFuncMinBWAlloc</b> [ {	array	read-write	The array of minimum bandwidth allocation percentages for the Network Device Functions associated with this port.
<b>MinBWAllocPercent</b>	number	read-write (null)	The minimum bandwidth allocation percentage allocated to the corresponding network device function instance.
<b>NetworkDeviceFunction</b> {	object	read-only	Contains the members of this collection. See the <a href="#">NetworkDeviceFunction</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a NetworkDeviceFunction resource. See the Links section and the <a href="#">NetworkDeviceFunction</a> schema for details.
}			
}]			
<b>PhysicalPortNumber</b>	string	read-only (null)	The physical port number label for this port.
<b>PortMaximumMTU</b>	number	read-only (null)	The largest maximum transmission unit (MTU) that can be configured for this network port.
<b>SignalDetected</b>	boolean	read-only (null)	Whether or not the port has detected enough signal on enough lanes to establish link.
<b>Status</b> { }	object	read-write (null)	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>SupportedEthernetCapabilities</b> [ ]	array (string (enum))	read-only (null)	The set of Ethernet capabilities that this port supports. See <a href="#">SupportedEthernetCapabilities in Property Details</a> , below, for the possible values of this property.
<b>SupportedLinkCapabilities</b> [ {	array	read-write	The self-described link capabilities of this port.
<b>LinkNetworkTechnology</b>	string (enum)	read-only (null)	The self-described link network technology capabilities of this port. See <a href="#">LinkNetworkTechnology in Property</a>

			<i>Details, below, for the possible values of this property.</i>
<b>LinkSpeedMbps</b>	number	read-only (null)	The speed of the link in Mbps when this link network technology is active.
}]			
<b>WakeOnLANEnabled</b>	boolean	read-write (null)	Whether Wake on LAN (WoL) is enabled for this network port.

## Property Details

---

### ActiveLinkTechnology:

Network Port Active Link Technology.

string	Description
Ethernet	The port is capable of connecting to an Ethernet network.
FibreChannel	The port is capable of connecting to a Fibre Channel network.
InfiniBand	The port is capable of connecting to an InfiniBand network.

### FlowControlConfiguration:

The locally configured 802.3x flow control setting for this network port.

string	Description
None	No IEEE 802.3x flow control is enabled on this port.
RX	IEEE 802.3x flow control may be initiated by the link partner.
TX	IEEE 802.3x flow control may be initiated by this station.
TX_RX	IEEE 802.3x flow control may be initiated by this station or the link partner.

### FlowControlStatus:

The 802.3x flow control behavior negotiated with the link partner for this network port (Ethernet-only).

string	Description
None	No IEEE 802.3x flow control is enabled on this port.
RX	IEEE 802.3x flow control may be initiated by the link partner.
TX	IEEE 802.3x flow control may be initiated by this station.
TX_RX	IEEE 802.3x flow control may be initiated by this station or the link partner.

### LinkNetworkTechnology:

The self-described link network technology capabilities of this port.

string	Description
Ethernet	The port is capable of connecting to an Ethernet network.
FibreChannel	The port is capable of connecting to a Fibre Channel network.
InfiniBand	The port is capable of connecting to an InfiniBand network.

### LinkStatus:

The status of the link between this port and its link partner.

string	Description
Down	The port is enabled but link is down.
Up	The port is enabled and link is good (up).

### SupportedEthernetCapabilities:

The set of Ethernet capabilities that this port supports.

string	Description
EEE	IEEE 802.3az Energy Efficient Ethernet (EEE) is supported on this port.
WakeOnLAN	Wake on LAN (WoL) is supported on this port.

## PCIeDevice 1.2.0

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

<b>Actions</b> (v1.2+) { }	object	read-write	The available actions for this resource.
<b>Assembly</b> {	object	read-only	A reference to the Assembly resource associated with this PCIe device. See the <a href="#">Assembly</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a Assembly resource. See the Links section and the <a href="#">Assembly</a> schema for details.
<b>AssetTag</b>	string	read-write (null)	The user assigned asset tag for this PCIe device.
<b>DeviceType</b>	string (enum)	read-only	The device type for this PCIe device. See <a href="#">DeviceType</a> in Property Details, below, for the possible values of this property.
<b>FirmwareVersion</b>	string	read-only (null)	The version of firmware for this PCIe device.
<b>Links</b> (v1.2+) {	object	read-write	The links object contains the links to other resources that are related to this resource.

<b>Chassis</b> [ {	array	read-only	An array of references to the chassis in which the PCIe device is contained.
<b>@odata.id</b>	string	read-only	Link to a Chassis resource. See the Links section and the <a href="#">Chassis</a> schema for details.
}]			
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PCleFunctions</b> [ {	array	read-only	An array of references to PCIeFunctions exposed by this device.
<b>@odata.id</b>	string	read-only	Link to a PCIeFunction resource. See the Links section and the <a href="#">PCleFunction</a> schema for details.
}]			
}			
<b>Manufacturer</b>	string	read-only (null)	This is the manufacturer of this PCIe device.
<b>Model</b>	string	read-only (null)	This is the model number for the PCIe device.
<b>PartNumber</b>	string	read-only (null)	The part number for this PCIe device.
<b>SKU</b>	string	read-only (null)	This is the SKU for this PCIe device.
<b>SerialNumber</b>	string	read-only (null)	The serial number for this PCIe device.
<b>Status</b> { }	object	read-write (null)	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

## Property Details

---

### DeviceType:

The device type for this PCIe device.

string	Description
MultiFunction	A multi-function PCIe device.
Simulated	A PCIe device which is not currently physically present, but is being simulated by the PCIe infrastructure.
SingleFunction	A single-function PCIe device.



# PCIeFunction 1.2.0

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

<b>Actions</b> (v1.1.1+) { }	object	read-write	The available actions for this resource.
<b>ClassCode</b>	string	read-only (null)	The Class Code of this PCIe function.
<b>DeviceClass</b>	string (enum)	read-only	The class for this PCIe Function. See <a href="#">DeviceClass</a> in Property Details, below, for the possible values of this property.
<b>DeviceId</b>	string	read-only (null)	The Device ID of this PCIe function.
<b>FunctionId</b>	number	read-only (null)	The the PCIe Function identifier.
<b>FunctionType</b>	string (enum)	read-only	The type of the PCIe Function. See <a href="#">FunctionType</a> in Property Details, below, for the possible values of this property.
<b>Links</b> (v1.0.3+) {	object	read-write	The links object contains the links to other resources that are related to this resource.
<b>Drives</b> (v1.0.3+) [ {	array	read-only	An array of references to the drives which the PCIe device produces.
<b>@odata.id</b>	string	read-only	Link to a Drive resource. See the Links section and the <a href="#">Drive</a> schema for details.
} ]			
<b>EthernetInterfaces</b> (v1.0.3+) [ {	array	read-only	An array of references to the ethernet interfaces which the PCIe device produces.
<b>@odata.id</b>	string	read-only	Link to a EthernetInterface resource. See the Links section and the <a href="#">EthernetInterface</a> schema for details.
} ]			
<b>NetworkDeviceFunctions</b> (v1.2+) [ {	array	read-only	An array of references to the Network Device Functions which the PCIe device produces.
<b>@odata.id</b>	string	read-only	Link to a NetworkDeviceFunction resource. See the Links section and the <a href="#">NetworkDeviceFunction</a> schema

			for details.
}]			
<b>Oem</b> (v1.0.3+) {}	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PCleDevice</b> (v1.0.3+) {	object	read-only (null)	A reference to the PCleDevice on which this function resides. See the <a href="#">PCleDevice</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a PCleDevice resource. See the Links section and the <a href="#">PCleDevice</a> schema for details.
<b>StorageControllers</b> (v1.0.3+) [{	array	read-only	An array of references to the storage controllers which the PCle device produces.
<b>@odata.id</b>	string	read-only	Link to a StorageController resource. See the Links section and the <a href="#">Storage</a> schema for details.
}] }			
<b>RevisionId</b>	string	read-only (null)	The Revision ID of this PCle function.
<b>Status</b> {}	object	read-write (null)	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>SubsystemId</b>	string	read-only (null)	The Subsystem ID of this PCle function.
<b>SubsystemVendorId</b>	string	read-only (null)	The Subsystem Vendor ID of this PCle function.
<b>VendorId</b>	string	read-only (null)	The Vendor ID of this PCle function.

## Property Details

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### DeviceClass:

The class for this PCle Function.

string	Description
Bridge	A bridge.
CommunicationController	A communication controller.
Coprocessor	A coprocessor.
DisplayController	A display controller.

string	Description
DockingStation	A docking station.
EncryptionController	An encryption controller.
GenericSystemPeripheral	A generic system peripheral.
InputDeviceController	An input device controller.
IntelligentController	An intelligent controller.
MassStorageController	A mass storage controller.
MemoryController	A memory controller.
MultimediaController	A multimedia controller.
NetworkController	A network controller.
NonEssentialInstrumentation	A non-essential instrumentation.
Other	A other class. The function Device Class Id needs to be verified.
ProcessingAccelerators	A processing accelerators.
Processor	A processor.
SatelliteCommunicationsController	A satellite communications controller.
SerialBusController	A serial bus controller.
SignalProcessingController	A signal processing controller.
UnassignedClass	An unassigned class.
UnclassifiedDevice	An unclassified device.
WirelessController	A wireless controller.

### FunctionType:

The type of the PCIe Function.

string	Description
Physical	A physical PCIe function.
Virtual	A virtual PCIe function.

## Port 1.1.0

Port contains properties describing a port of a switch.

<b>Actions</b> (v1.0.3+) {	object	read-write	The available actions for this resource.
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<b>#Port.Reset</b> { }	object	read-write	This action is used to reset this port. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>CurrentSpeedGbps</b>	number (Gbit/s)	read-only (null)	The current speed of this port.
<b>Links</b> (v1.0.3+) { }	object	read-write	Contains references to other resources that are related to this resource.
<b>AssociatedEndpoints</b> [ { }	array	read-only	An array of references to the endpoints that connect to the switch through this port.
<b>@odata.id</b>	string	read-only	Link to a Endpoint resource. See the Links section and the <a href="#">Endpoint</a> schema for details.
}]			
<b>ConnectedSwitchPorts</b> [ { }	array	read-only	An array of references to the ports that connect to the switch through this port.
<b>@odata.id</b>	string	read-only	Link to another Port resource.
}]			
<b>ConnectedSwitches</b> [ { }	array	read-only	An array of references to the switches that connect to the switch through this port.
<b>@odata.id</b>	string	read-only	Link to a Switch resource. See the Links section and the <a href="#">Switch</a> schema for details.
}]			
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Location</b>		read-write	See the <a href="#">Location object</a> definition in the <a href="#">Common Properties</a> section.
<b>MaxSpeedGbps</b>	number (Gbit/s)	read-only (null)	The maximum speed of this port as currently configured.
<b>PortId</b>	string	read-only (null)	This is the label of this port on the physical switch package.
<b>PortProtocol</b>	string (enum)	read-only (null)	The protocol being sent over this port. <i>See <a href="#">PortProtocol</a> in Property Details, below, for the possible values of this property.</i>
<b>PortType</b>	string (enum)	read-only (null)	This is the type of this port. <i>See <a href="#">PortType</a> in Property Details, below, for the possible values of this property.</i>
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>Width</b>	number	read-only (null)	The number of lanes, phys, or other physical transport links that this port contains.

## Action Details

---

### Reset

This action is used to reset this port.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
<b>ResetType</b>	string (enum)	read-write	The type of reset to be performed. See <a href="#">ResetType</a> in Property Details, below, for the possible values of this property.
}			

## Property Details

---

### PortProtocol:

The protocol being sent over this port.

string	Description
AHCI	Advanced Host Controller Interface.
FC	Fibre Channel.
FCP	Fibre Channel Protocol for SCSI.
FCoE	Fibre Channel over Ethernet.
FICON	Fibre CONnection (FICON).
FTP	File Transfer Protocol.
HTTP	Hypertext Transport Protocol.
HTTPS	Secure Hypertext Transport Protocol.
NFSv3	Network File System version 3.
NFSv4	Network File System version 4.
NVMe	Non-Volatile Memory Express.
NVMeOverFabrics	NVMe over Fabrics.
OEM	OEM specific.
PCIe	PCI Express (Vendor Proprietary).
RoCE	RDMA over Converged Ethernet Protocol.
RoCEv2	RDMA over Converged Ethernet Protocol Version 2.
SAS	Serial Attached SCSI.
SATA	Serial AT Attachment.

<b>string</b>	<b>Description</b>
SFTP	Secure File Transfer Protocol.
SMB	Server Message Block (aka CIFS Common Internet File System).
UHCI	Universal Host Controller Interface.
USB	Universal Serial Bus.
iSCSI	Internet SCSI.
iWARP	Internet Wide Area Remote Direct Memory Access Protocol.

### PortType:

This is the type of this port.

<b>string</b>	<b>Description</b>
BidirectionalPort	This port connects to any type of device.
DownstreamPort	This port connects to a target device.
InterswitchPort	This port connects to another switch.
ManagementPort	This port connects to a switch manager.
UnconfiguredPort	This port has not yet been configured.
UpstreamPort	This port connects to a host device.

### ResetType:

The type of reset to be performed.

<b>string</b>	<b>Description</b>
ForceOff	Turn the unit off immediately (non-graceful shutdown).
ForceOn	Turn the unit on immediately.
ForceRestart	Perform an immediate (non-graceful) shutdown, followed by a restart.
GracefulRestart	Perform a graceful shutdown followed by a restart of the system.
GracefulShutdown	Perform a graceful shutdown and power off.
Nmi	Generate a Diagnostic Interrupt (usually an NMI on x86 systems) to cease normal operations, perform diagnostic actions and typically halt the system.
On	Turn the unit on.
PowerCycle	Perform a power cycle of the unit.
PushPowerButton	Simulate the pressing of the physical power button on this unit.

## Example Response

```
{
  "@odata.type": "#Port.v1_1_0.Port",
  "Id": "1",
  "Name": "SAS Port 1",
  "Description": "SAS Port 1",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "PortId": "1",
  "PortProtocol": "SAS",
  "PortType": "BidirectionalPort",
  "CurrentSpeedGbps": 48,
  "Width": 4,
  "MaxSpeedGbps": 48,
  "Actions": {
    "Oem": {}
  },
  "Links": {
    "AssociatedEndpoints": [
      {
        "@odata.id": "/redfish/v1/Fabrics/SAS/Endpoints/Initiator1"
      }
    ]
  },
  "Oem": {},
  "@odata.context": "/redfish/v1/$metadata#Port.Port",
  "@odata.id": "/redfish/v1/Fabrics/SAS/Switches/Switch1/Ports/1"
}
```

## Power 1.5.0

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

<b>Actions</b> (v1.3.2+) { }	object	read-write	The available actions for this resource.
<b>PowerControl</b> [ {	array	read-write	This is the definition for power control function (power reading/limiting).
<b>Actions</b> (v1.3+) { }	object	read-write	The available actions for this resource.
<b>MemberId</b>	string	read-only	This is the identifier for the member within the collection.
<b>Name</b>	string	read-only (null)	Power Control Function name.
<b>Oem</b> { }	object	read-write	This is the manufacturer/provider specific extension moniker used to

			divide the Oem object into sections. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PhysicalContext</b> (v1.4+)	string (enum)	read-only	Describes the area, device, or set of devices to which this power control applies. See <a href="#">PhysicalContext</a> in Property Details, below, for the possible values of this property.
<b>PowerAllocatedWatts</b>	number (W)	read-only (null)	The total amount of power that has been allocated (or budgeted) to chassis resources.
<b>PowerAvailableWatts</b>	number (W)	read-only (null)	The amount of power not already budgeted and therefore available for additional allocation. (powerCapacity - powerAllocated). This indicates how much reserve power capacity is left.
<b>PowerCapacityWatts</b>	number (W)	read-only (null)	The total amount of power available to the chassis for allocation. This may be the power supply capacity, or power budget assigned to the chassis from an up-stream chassis.
<b>PowerConsumedWatts</b>	number (W)	read-only (null)	The actual power being consumed by the chassis.
<b>PowerLimit</b> {	object	read-write	Power limit status and configuration information for this chassis.
<b>CorrectionInMs</b>	number (ms)	read-write (null)	The time required for the limiting process to reduce power consumption to below the limit.
<b>LimitException</b>	string (enum)	read-write (null)	The action that is taken if the power cannot be maintained below the LimitInWatts. See <a href="#">LimitException</a> in Property Details, below, for the possible values of this property.
<b>LimitInWatts</b> }	number (W)	read-write (null)	The Power limit in watts. Set to null to disable power capping.
<b>PowerMetrics</b> {	object	read-write	Power readings for this chassis.
<b>AverageConsumedWatts</b>	number (W)	read-only (null)	The average power level over the measurement window (the last IntervalInMin minutes).
<b>IntervalInMin</b>	number (min)	read-only (null)	The time interval (or window) in which the PowerMetrics are measured over.



<b>MaxConsumedWatts</b>	number (W)	read-only (null)	The highest power consumption level that has occurred over the measurement window (the last IntervallInMin minutes).
<b>MinConsumedWatts</b> }	number (W)	read-only (null)	The lowest power consumption level over the measurement window (the last IntervallInMin minutes).
<b>PowerRequestedWatts</b>	number (W)	read-only (null)	The potential power that the chassis resources are requesting which may be higher than the current level being consumed since requested power includes budget that the chassis resource wants for future use.
<b>RelatedItem</b> [ {	array	read-only	The ID(s) of the resources associated with this Power Limit.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
}]			
<b>PowerSupplies</b> [ {	array	read-write	Details of the power supplies associated with this system or device.
<b>Actions</b> (v1.3+) { }	object	read-write	The available actions for this resource.
<b>Assembly</b> (v1.5+) {	object	read-only	A reference to the Assembly resource associated with this power supply. See the <a href="#">Assembly</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a Assembly resource. See the Links section and the <a href="#">Assembly</a> schema for details.
<b>EfficiencyPercent</b> (v1.5+)	number (%)	read-only (null)	The measured efficiency of this Power Supply as a percentage.
<b>FirmwareVersion</b>	string	read-only (null)	The firmware version for this Power Supply.
<b>HotPluggable</b> (v1.5+)	boolean	read-only (null)	Indicates if this device can be inserted or removed while the equipment is in operation.
<b>IndicatorLED</b> (v1.2+)	string (enum)	read-write (null)	The state of the indicator LED, used to identify the power supply. See <a href="#">IndicatorLED</a> in Property Details, below, for the possible

			<i>values of this property.</i>
<b>InputRanges</b> (v1.1+) [ {	array	read-write	This is the input ranges that the power supply can use.
<b>InputType</b> (v1.1+)	string (enum)	read-only (null)	The Input type (AC or DC). See <a href="#">InputType</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>MaximumFrequencyHz</b> (v1.1+)	number (Hz)	read-only (null)	The maximum line input frequency at which this power supply input range is effective.
<b>MaximumVoltage</b> (v1.1+)	number (V)	read-only (null)	The maximum line input voltage at which this power supply input range is effective.
<b>MinimumFrequencyHz</b> (v1.1+)	number (Hz)	read-only (null)	The minimum line input frequency at which this power supply input range is effective.
<b>MinimumVoltage</b> (v1.1+)	number (V)	read-only (null)	The minimum line input voltage at which this power supply input range is effective.
<b>Oem</b> (v1.1+) { }	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>OutputWattage</b> (v1.1+)	number (W)	read-only (null)	The maximum capacity of this Power Supply when operating in this input range.
} ]			
<b>LastPowerOutputWatts</b>	number (W)	read-only (null)	The average power output of this Power Supply.
<b>LineInputVoltage</b>	number (V)	read-only (null)	The line input voltage at which the Power Supply is operating.
<b>LineInputVoltageType</b>	string (enum)	read-only (null)	The line voltage type supported as an input to this Power Supply. See <a href="#">LineInputVoltageType</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>Location</b> (v1.5+)		read-write	See the <a href="#">Location object</a> definition in the <a href="#">Common Properties</a> section.
<b>Manufacturer</b> (v1.1+)	string	read-only (null)	This is the manufacturer of this power supply.
<b>MemberId</b>	string	read-only	This is the identifier for the member within the collection.
<b>Model</b>	string	read-only (null)	The model number for this Power Supply.

<b>Name</b>	string	read-only (null)	The name of the Power Supply.
<b>Oem { }</b>	object	read-write	This is the manufacturer/provider specific extension moniker used to divide the Oem object into sections. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PartNumber</b>	string	read-only (null)	The part number for this Power Supply.
<b>PowerCapacityWatts</b>	number (W)	read-only (null)	The maximum capacity of this Power Supply.
<b>PowerInputWatts (v1.5+)</b>	number (W)	read-only (null)	The measured input power of this Power Supply.
<b>PowerOutputWatts (v1.5+)</b>	number (W)	read-only (null)	The measured output power of this Power Supply.
<b>PowerSupplyType</b>	string (enum)	read-only (null)	The Power Supply type (AC or DC). See <a href="#">PowerSupplyType</a> in <i>Property Details, below, for the possible values of this property.</i>
<b>Redundancy [ {</b>	array	read-write	This structure is used to show redundancy for power supplies. The Component ids will reference the members of the redundancy groups.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
<b>}]</b>			
<b>RelatedItem [ {</b>	array	read-write	The ID(s) of the resources associated with this Power Limit.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
<b>}]</b>			
<b>SerialNumber</b>	string	read-only (null)	The serial number for this Power Supply.
<b>SparePartNumber</b>	string	read-only (null)	The spare part number for this Power Supply.
<b>Status { }</b>	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>}]</b>			
<b>Redundancy [ {</b>	array	read-write	Redundancy information for the power subsystem of this system or device.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.

}]			
<b>Voltages</b> [ {	array	read-write	This is the definition for voltage sensors.
<b>Actions</b> (v1.3+) { }	object	read-write	The available actions for this resource.
<b>LowerThresholdCritical</b>	number (V)	read-only (null)	Below normal range but not yet fatal.
<b>LowerThresholdFatal</b>	number (V)	read-only (null)	Below normal range and is fatal.
<b>LowerThresholdNonCritical</b>	number (V)	read-only (null)	Below normal range.
<b>MaxReadingRange</b>	number (V)	read-only (null)	Maximum value for this Voltage sensor.
<b>MemberId</b>	string	read-only	This is the identifier for the member within the collection.
<b>MinReadingRange</b>	number (V)	read-only (null)	Minimum value for this Voltage sensor.
<b>Name</b>	string	read-only (null)	Voltage sensor name.
<b>Oem</b> { }	object	read-write	This is the manufacturer/provider specific extension moniker used to divide the Oem object into sections. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PhysicalContext</b>	string (enum)	read-only	Describes the area or device to which this voltage measurement applies. See <a href="#">PhysicalContext</a> in Property Details, below, for the possible values of this property.
<b>ReadingVolts</b>	number (V)	read-only (null)	The present reading of the voltage sensor.
<b>RelatedItem</b> [ {	array	read-only	Describes the areas or devices to which this voltage measurement applies.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>SensorNumber</b>	number	read-only (null)	A numerical identifier to represent the voltage sensor.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

<b>UpperThresholdCritical</b>	number (V)	read-only (null)	Above normal range but not yet fatal.
<b>UpperThresholdFatal</b>	number (V)	read-only (null)	Above normal range and is fatal.
<b>UpperThresholdNonCritical</b>	number (V)	read-only (null)	Above normal range.
} ]			

## Property Details

---

### IndicatorLED:

The state of the indicator LED, used to identify the power supply.

string	Description
Blinking	The Indicator LED is blinking.
Lit	The Indicator LED is lit.
Off	The Indicator LED is off.

### InputType:

The Input type (AC or DC).

string	Description
AC	Alternating Current (AC) input range.
DC	Direct Current (DC) input range.

### LimitException:

The action that is taken if the power cannot be maintained below the LimitInWatts.

string	Description
HardPowerOff	Turn the power off immediately when the limit is exceeded.
LogEventOnly	Log an event when the limit is exceeded, but take no further action.
NoAction	Take no action when the limit is exceeded.
Oem	Take an OEM-defined action.

### LineInputVoltageType:

The line voltage type supported as an input to this Power Supply.

string	Description
AC120V	AC 120V nominal input.

<b>string</b>	<b>Description</b>
AC240V	AC 240V nominal input.
AC277V	AC 277V nominal input.
ACHighLine	277V AC input.
ACLowLine	100-127V AC input.
ACMidLine	200-240V AC input.
ACWideRange	Wide range AC input.
ACandDCWideRange	Wide range AC or DC input.
DC240V	DC 240V nominal input.
DC380V	High Voltage DC input (380V).
DCNeg48V	-48V DC input.
Unknown	The power supply line input voltage type cannot be determined.

### **PhysicalContext:**

Describes the area or device to which this voltage measurement applies.

<b>string</b>	<b>Description</b>
ASIC	An ASIC device, such as an FPGA or a GPGPU.
Back	The back of the chassis.
Backplane	A backplane within the chassis.
CPU	A Processor (CPU).
Chassis	The entire chassis.
ComputeBay	Within a compute bay.
Exhaust	The air exhaust point of the chassis.
ExpansionBay	Within an expansion bay.
Fan	A fan.
Front	The front of the chassis.
GPU	A Graphics Processor (GPU).
Intake	The air intake point of the chassis.
LiquidInlet	The liquid inlet point of the chassis.
LiquidOutlet	The liquid outlet point of the chassis.
Lower	The lower portion of the chassis.

string	Description
Memory	A memory device.
NetworkBay	Within a networking bay.
NetworkingDevice	A networking device.
PowerSupply	A power supply.
PowerSupplyBay	Within a power supply bay.
Room	The room.
StorageBay	Within a storage bay.
StorageDevice	A storage device.
SystemBoard	The system board (PCB).
Upper	The upper portion of the chassis.
VoltageRegulator	A voltage regulator device.

### PowerSupplyType:

The Power Supply type (AC or DC).

string	Description
AC	Alternating Current (AC) power supply.
ACorDC	Power Supply supports both DC or AC.
DC	Direct Current (DC) power supply.
Unknown	The power supply type cannot be determined.

## Example Response

```
{
  "@odata.type": "#Power.v1_5_0.Power",
  "Id": "Power",
  "Name": "Power",
  "PowerControl": [
    {
      "@odata.id": "/redfish/v1/Chassis/1U/Power#/PowerControl/0",
      "MemberId": "0",
      "Name": "Server Power Control",
      "PowerConsumedWatts": 344,
      "PowerRequestedWatts": 800,
      "PowerAvailableWatts": 0,
      "PowerCapacityWatts": 800,
      "PowerAllocatedWatts": 800,
      "PowerMetrics": {
        "IntervalInMin": 30,
        "MinConsumedWatts": 271,
        "MaxConsumedWatts": 489,

```

```

        "AverageConsumedWatts": 319
    },
    "PowerLimit": {
        "LimitInWatts": 500,
        "LimitException": "LogEventOnly",
        "CorrectionInMs": 50
    },
    "RelatedItem": [
        {
            "@odata.id": "/redfish/v1/Systems/437XR1138R2"
        },
        {
            "@odata.id": "/redfish/v1/Chassis/1U"
        }
    ],
    "Status": {
        "State": "Enabled",
        "Health": "OK"
    },
    "Oem": {}
},
],
"Voltages": [
    {
        "@odata.id": "/redfish/v1/Chassis/1U/Power#/Voltages/0",
        "MemberId": "0",
        "Name": "VRM1 Voltage",
        "SensorNumber": 11,
        "Status": {
            "State": "Enabled",
            "Health": "OK"
        },
        "ReadingVolts": 12,
        "UpperThresholdNonCritical": 12.5,
        "UpperThresholdCritical": 13,
        "UpperThresholdFatal": 15,
        "LowerThresholdNonCritical": 11.5,
        "LowerThresholdCritical": 11,
        "LowerThresholdFatal": 10,
        "MinReadingRange": 0,
        "MaxReadingRange": 20,
        "PhysicalContext": "VoltageRegulator",
        "RelatedItem": [
            {
                "@odata.id": "/redfish/v1/Systems/437XR1138R2"
            },
            {
                "@odata.id": "/redfish/v1/Chassis/1U"
            }
        ]
    },
    {
        "@odata.id": "/redfish/v1/Chassis/1U/Power#/Voltages/1",
        "MemberId": "1",
        "Name": "VRM2 Voltage",
        "SensorNumber": 12,
        "Status": {
            "State": "Enabled",

```



```
    "Health": "OK"
  },
  "ReadingVolts": 5,
  "UpperThresholdNonCritical": 5.5,
  "UpperThresholdCritical": 7,
  "LowerThresholdNonCritical": 4.75,
  "LowerThresholdCritical": 4.5,
  "MinReadingRange": 0,
  "MaxReadingRange": 20,
  "PhysicalContext": "VoltageRegulator",
  "RelatedItem": [
    {
      "@odata.id": "/redfish/v1/Systems/437XR1138R2"
    },
    {
      "@odata.id": "/redfish/v1/Chassis/1U"
    }
  ]
},
],
"PowerSupplies": [
  {
    "@odata.id": "/redfish/v1/Chassis/1U/Power#/PowerSupplies/0",
    "MemberId": "0",
    "Name": "Power Supply Bay",
    "Status": {
      "State": "Enabled",
      "Health": "Warning"
    },
    "Oem": {},
    "PowerSupplyType": "AC",
    "LineInputVoltageType": "ACWideRange",
    "LineInputVoltage": 120,
    "PowerCapacityWatts": 800,
    "LastPowerOutputWatts": 325,
    "Model": "499253-B21",
    "Manufacturer": "ManufacturerName",
    "FirmwareVersion": "1.00",
    "SerialNumber": "1Z0000001",
    "PartNumber": "0000001A3A",
    "SparePartNumber": "0000001A3A",
    "InputRanges": [
      {
        "InputType": "AC",
        "MinimumVoltage": 100,
        "MaximumVoltage": 120,
        "OutputWattage": 800
      },
      {
        "InputType": "AC",
        "MinimumVoltage": 200,
        "MaximumVoltage": 240,
        "OutputWattage": 1300
      }
    ],
    "RelatedItem": [
      {
        "@odata.id": "/redfish/v1/Chassis/1U"
      }
    ]
  }
]
```

```

    }
  ]
},
"Oem": {},
"@odata.context": "/redfish/v1/$metadata#Power.Power",
"@odata.id": "/redfish/v1/Chassis/1U/Power"
}

```

## PrivilegeRegistry 1.1.1

This is the schema definition for Operation to Privilege mapping.

<b>Actions</b> (v1.1.1+) {}	object	read-write	The available actions for this resource.
<b>Mappings</b> [ {	array	read-write	
<b>Entity</b>	string	read-only	Indicates entity name. e.g., Manager.
<b>OperationMap</b> {	object	read-write	List mapping between HTTP method and privilege required for entity.
<b>DELETE</b> [ {	array	read-write	Indicates privilege required for HTTP DELETE operation.
<b>Privilege</b> [ ]	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
} ]			
<b>GET</b> [ {	array	read-write	Indicates privilege required for HTTP GET operation.
<b>Privilege</b> [ ]	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
} ]			
<b>HEAD</b> [ {	array	read-write	Indicates privilege required for HTTP HEAD operation.
<b>Privilege</b> [ ]	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
} ]			
<b>PATCH</b> [ {	array	read-write	Indicates privilege required for HTTP PATCH operation.
<b>Privilege</b> [ ]	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.

}}			
<b>POST</b> [{	array	read-write	Indicates privilege required for HTTP POST operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}}			
<b>PUT</b> [{	array	read-write	Indicates privilege required for HTTP PUT operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}}			
}			
<b>PropertyOverrides</b> [{	array	read-write	Indicates privilege overrides of property or element within a entity.
<b>OperationMap</b> {	object	read-write (null)	List mapping between HTTP operation and privilege needed to perform operation.
<b>DELETE</b> [{	array	read-write	Indicates privilege required for HTTP DELETE operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}}			
<b>GET</b> [{	array	read-write	Indicates privilege required for HTTP GET operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}}			
<b>HEAD</b> [{	array	read-write	Indicates privilege required for HTTP HEAD operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}}			
<b>PATCH</b> [{	array	read-write	Indicates privilege required for HTTP PATCH operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity

			type.
}]			
<b>POST</b> [{	array	read-write	Indicates privilege required for HTTP POST operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			
<b>PUT</b> [{	array	read-write	Indicates privilege required for HTTP PUT operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			
<b>Targets</b> []	array (string, null)	read-only	Indicates the URI or Entity.
}]			
<b>ResourceURIOverrides</b> [{	array	read-write	Indicates privilege overrides of Resource URI.
<b>OperationMap</b> {	object	read-write (null)	List mapping between HTTP operation and privilege needed to perform operation.
<b>DELETE</b> [{	array	read-write	Indicates privilege required for HTTP DELETE operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			
<b>GET</b> [{	array	read-write	Indicates privilege required for HTTP GET operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			
<b>HEAD</b> [{	array	read-write	Indicates privilege required for HTTP HEAD operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.

}]			
<b>PATCH</b> [{	array	read-write	Indicates privilege required for HTTP PATCH operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			
<b>POST</b> [{	array	read-write	Indicates privilege required for HTTP POST operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			
<b>PUT</b> [{	array	read-write	Indicates privilege required for HTTP PUT operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			
} }]			
<b>Targets</b> []	array (string, null)	read-only	Indicates the URI or Entity.
}]			
<b>SubordinateOverrides</b> [{	array	read-write	Indicates privilege overrides of subordinate resource.
<b>OperationMap</b> {	object	read-write (null)	List mapping between HTTP operation and privilege needed to perform operation.
<b>DELETE</b> [{	array	read-write	Indicates privilege required for HTTP DELETE operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			
<b>GET</b> [{	array	read-write	Indicates privilege required for HTTP GET operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			

<b>HEAD</b> [{	array	read-write	Indicates privilege required for HTTP HEAD operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			
<b>PATCH</b> [{	array	read-write	Indicates privilege required for HTTP PATCH operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			
<b>POST</b> [{	array	read-write	Indicates privilege required for HTTP POST operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			
<b>PUT</b> [{	array	read-write	Indicates privilege required for HTTP PUT operation.
<b>Privilege</b> []	array (string)	read-only	Lists the privileges that are allowed to perform the given type of HTTP operation on the entity type.
}]			
}]			
<b>Targets</b> []	array (string, null)	read-only	Indicates the URI or Entity.
}]			
}]			
<b>OEMPrivilegesUsed</b> []	array (string)	read-only	Lists the set of OEM Privileges used in building this mapping.
<b>PrivilegesUsed</b> []	array (string (enum))	read-only	Lists the set of Redfish standard privileges used in building this mapping. See <a href="#">PrivilegesUsed</a> in Property Details, below, for the possible values of this property.

## Property Details

### PrivilegesUsed:

Lists the set of Redfish standard privileges used in building this mapping.

string	Description
ConfigureComponents	Able to configure components managed by this service.
ConfigureManager	Able to configure Manager resources.
ConfigureSelf	Able to change the password for the current user Account.
ConfigureUsers	Able to configure Users and their Accounts.
Login	Able to log into the service and read resources.

## Processor 1.3.0

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

<b>Actions</b> (v1.2+) { }	object	read-write	The available actions for this resource.
<b>Assembly</b> {	object	read-only	A reference to the Assembly resource associated with this processor. See the <a href="#">Assembly</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a Assembly resource. See the Links section and the <a href="#">Assembly</a> schema for details.
<b>InstructionSet</b>	string (enum)	read-only (null)	The instruction set of the processor. See <a href="#">InstructionSet</a> in Property Details, below, for the possible values of this property.
<b>Links</b> (v1.2+) {	object	read-write	Contains references to other resources that are related to this resource.
<b>Chassis</b> {	object	read-only	A reference to the Chassis which contains this Processor. See the <a href="#">Chassis</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a Chassis resource. See the Links section and the <a href="#">Chassis</a> schema for details.
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Location</b>		read-write	See the <a href="#">Location object</a> definition in the <a href="#">Common Properties</a> section.
<b>Manufacturer</b>	string	read-only (null)	The processor manufacturer.
<b>MaxSpeedMHz</b>	number	read-only (null)	The maximum clock speed of the processor.
<b>Model</b>	string	read-only (null)	The product model number of this device.
<b>ProcessorArchitecture</b>	string	read-only	The architecture of the processor.

	(enum)	(null)	See <a href="#">ProcessorArchitecture</a> in Property Details, below, for the possible values of this property.
<b>ProcessorId</b> {	object	read-write	Identification information for this processor.
<b>EffectiveFamily</b>	string	read-only (null)	The effective Family for this processor.
<b>EffectiveModel</b>	string	read-only (null)	The effective Model for this processor.
<b>IdentificationRegisters</b>	string	read-only (null)	The contents of the Identification Registers (CPUID) for this processor.
<b>MicrocodeInfo</b>	string	read-only (null)	The Microcode Information for this processor.
<b>Step</b>	string	read-only (null)	The Step value for this processor.
<b>VendorId</b> }	string	read-only (null)	The Vendor Identification for this processor.
<b>ProcessorType</b>	string (enum)	read-only (null)	The type of processor. See <a href="#">ProcessorType</a> in Property Details, below, for the possible values of this property.
<b>Socket</b>	string	read-only (null)	The socket or location of the processor.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>SubProcessors</b> {	object	read-only	A reference to the collection of Sub-Processors associated with this system, such as cores or threads that are part of a processor. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Processor</a> . See the Processor schema for details.
<b>TotalCores</b>	number	read-only (null)	The total number of cores contained in this processor.
<b>TotalThreads</b>	number	read-only (null)	The total number of execution threads supported by this processor.

## Property Details

---

### InstructionSet:

The instruction set of the processor.

string	Description
ARM-A32	ARM 32-bit.
ARM-A64	ARM 64-bit.



string	Description
IA-64	Intel IA-64.
MIPS32	MIPS 32-bit.
MIPS64	MIPS 64-bit.
OEM	OEM-defined.
x86	x86 32-bit.
x86-64	x86 64-bit.

### ProcessorArchitecture:

The architecture of the processor.

string	Description
ARM	ARM.
IA-64	Intel Itanium.
MIPS	MIPS.
OEM	OEM-defined.
x86	x86 or x86-64.

### ProcessorType:

The type of processor.

string	Description
Accelerator	An Accelerator.
CPU	A Central Processing Unit.
Core (v1.3+)	A Core in a Processor.
DSP	A Digital Signal Processor.
FPGA	A Field Programmable Gate Array.
GPU	A Graphics Processing Unit.
OEM	An OEM-defined Processing Unit.
Thread (v1.3+)	A Thread in a Processor.

## Example Response

---

```
{
  "@odata.type": "#Processor.v1_3_0.Processor",
  "Id": "CPU1",
  "Name": "Processor",
}
```

```

"Socket": "CPU 1",
"ProcessorType": "CPU",
"ProcessorArchitecture": "x86",
"InstructionSet": "x86-64",
"Manufacturer": "Intel(R) Corporation",
"Model": "Multi-Core Intel(R) Xeon(R) processor 7xxx Series",
"ProcessorId": {
  "VendorId": "GenuineIntel",
  "IdentificationRegisters": "0x34AC34DC8901274A",
  "EffectiveFamily": "0x42",
  "EffectiveModel": "0x61",
  "Step": "0x1",
  "MicrocodeInfo": "0x429943"
},
"MaxSpeedMHz": 3700,
"TotalCores": 8,
"TotalThreads": 16,
"Status": {
  "State": "Enabled",
  "Health": "OK"
},
"@odata.context": "/redfish/v1/$metadata#Processor.Processor",
"@odata.id": "/redfish/v1/Systems/437XR1138R2/Processors/CPU1",
}

```

## ResourceBlock 1.1.0

This schema defines a Resource Block resource.

<b>Actions</b> (v1.1+) { }	object	read-write	The available actions for this resource.
<b>CompositionStatus</b> {	object	read-write	This property describes the composition status details for this Resource Block.
<b>CompositionState</b>	string (enum)	read-only (null)	This property represents the current state of the Resource Block from a composition perspective. <i>See <a href="#">CompositionState</a> in Property Details, below, for the possible values of this property.</i>
<b>MaxCompositions</b>	number	read-only (null)	The maximum number of compositions in which this Resource Block is capable of participating simultaneously.
<b>NumberOfCompositions</b>	number	read-only (null)	The number of compositions in which this Resource Block is currently participating.
<b>Reserved</b>	boolean	read-write (null)	This represents if the Resource Block is reserved by any client.
<b>SharingCapable</b>	boolean	read-only (null)	Indicates if this Resource Block is capable of participating in multiple compositions simultaneously.
<b>SharingEnabled</b> }	boolean	read-write (null)	Indicates if this Resource Block is allowed to participate in multiple compositions

			simultaneously.
<b>ComputerSystems</b> [ {	array	read-only	An array of references to the Computer Systems available in this Resource Block.
<b>@odata.id</b>	string	read-only	Link to a ComputerSystem resource. See the Links section and the <a href="#">ComputerSystem</a> schema for details.
}]			
<b>EthernetInterfaces</b> [ {	array	read-only	An array of references to the Ethernet Interfaces available in this Resource Block.
<b>@odata.id</b>	string	read-only	Link to a EthernetInterface resource. See the Links section and the <a href="#">EthernetInterface</a> schema for details.
}]			
<b>Links</b> (v1.1+) {	object	read-write	Contains references to other resources that are related to this resource.
<b>Chassis</b> [ {	array	read-only	An array of references to the Chassis in which this Resource Block is contained.
<b>@odata.id</b>	string	read-only	Link to a Chassis resource. See the Links section and the <a href="#">Chassis</a> schema for details.
}]			
<b>ComputerSystems</b> [ {	array	read-only	An array of references to the Computer Systems that are composed from this Resource Block.
<b>@odata.id</b>	string	read-only	Link to a ComputerSystem resource. See the Links section and the <a href="#">ComputerSystem</a> schema for details.
}]			
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Zones</b> [ {	array	read-only	An array of references to the Zones in which this Resource Block is bound.
<b>@odata.id</b>	string	read-only	Link to a Zone resource. See the Links section and the <a href="#">Zone</a> schema for details.
}]			
}			
<b>Memory</b> [ {	array	read-only	An array of references to the Memory available in this Resource Block.
<b>@odata.id</b>	string	read-only	Link to a Memory resource. See the Links section and the <a href="#">Memory</a> schema for details.

}]			
<b>NetworkInterfaces</b> [{	array	read-only	An array of references to the Network Interfaces available in this Resource Block.
@odata.id	string	read-only	Link to a NetworkInterface resource. See the Links section and the <a href="#">NetworkInterface</a> schema for details.
}]			
<b>Processors</b> [{	array	read-only	An array of references to the Processors available in this Resource Block.
@odata.id	string	read-only	Link to a Processor resource. See the Links section and the <a href="#">Processor</a> schema for details.
}]			
<b>ResourceBlockType</b> []	array (string (enum))	read-only	This property represents the types of resources available on this Resource Block. See <a href="#">ResourceBlockType</a> in Property Details, below, for the possible values of this property.
<b>SimpleStorage</b> [{	array	read-only	An array of references to the Simple Storage available in this Resource Block.
@odata.id	string	read-only	Link to a SimpleStorage resource. See the Links section and the <a href="#">SimpleStorage</a> schema for details.
}]			
<b>Status</b> {}	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>Storage</b> [{	array	read-only	An array of references to the Storage available in this Resource Block.
@odata.id	string	read-only	Link to a Storage resource. See the Links section and the <a href="#">Storage</a> schema for details.
}]			

## Property Details

### CompositionState:

This property represents the current state of the Resource Block from a composition perspective.

string	Description
Composed	Final successful state of a Resource Block which has participated in composition.
ComposedAndAvailable (v1.1+)	Indicates the Resource Block is currently participating in one or more compositions, and is available to be used in more

string	Description
	compositions.
Composing	Intermediate state indicating composition is in progress.
Failed	The final composition resulted in failure and manual intervention may be required to fix it.
Unused	Indicates the Resource Block is free and can participate in composition.

### ResourceBlockType:

This property represents the types of resources available on this Resource Block.

string	Description
Compute	This Resource Block contains both Processor and Memory resources in a manner that creates a compute complex.
ComputerSystem	This Resource Block contains ComputerSystem resources.
Memory	This Resource Block contains Memory resources.
Network	This Resource Block contains Network resources, such as Ethernet Interfaces.
Processor	This Resource Block contains Processor resources.
Storage	This Resource Block contains Storage resources, such as Storage and Simple Storage.

### Example Response

```
{
  "@odata.type": "#ResourceBlock.v1_1_0.ResourceBlock",
  "Id": "ComputeBlock1",
  "Name": "Compute Block 1",
  "ResourceBlockType": [
    "Compute"
  ],
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "CompositionStatus": {
    "Reserved": false,
    "CompositionState": "Composed",
    "SharingCapable": false,
    "MaxCompositions": 1,
    "NumberOfCompositions": 1
  },
  "Processors": [
    {
      "@odata.id": "/redfish/v1/CompositionService/ResourceBlocks/ComputeBlock1/Proce
    },
    {

```

```

        "@odata.id": "/redfish/v1/CompositionService/ResourceBlocks/ComputeBlock1/Proce
    },
    ],
    "Memory": [
        {
            "@odata.id": "/redfish/v1/CompositionService/ResourceBlocks/ComputeBlock1/Memor
        },
        {
            "@odata.id": "/redfish/v1/CompositionService/ResourceBlocks/ComputeBlock1/Memor
        },
        {
            "@odata.id": "/redfish/v1/CompositionService/ResourceBlocks/ComputeBlock1/Memor
        },
        {
            "@odata.id": "/redfish/v1/CompositionService/ResourceBlocks/ComputeBlock1/Memor
        }
    ],
    "Storage": [],
    "SimpleStorage": [],
    "EthernetInterfaces": [
        {
            "@odata.id": "/redfish/v1/CompositionService/ResourceBlocks/ComputeBlock1/Ether
        }
    ],
    "ComputerSystems": [],
    "Links": {
        "ComputerSystems": [
            {
                "@odata.id": "/redfish/v1/Systems/ComposedSystem"
            }
        ],
        "Chassis": [
            {
                "@odata.id": "/redfish/v1/Chassis/ComposableModule1"
            }
        ],
        "Zones": [
            {
                "@odata.id": "/redfish/v1/CompositionService/ResourceZones/1"
            }
        ]
    },
    "Oem": {},
    "@odata.context": "/redfish/v1/$metadata#ResourceBlock.ResourceBlock",
    "@odata.id": "/redfish/v1/CompositionService/ResourceBlocks/ComputeBlock1"
}

```

## Role 1.2.1

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

<b>Actions</b> (v1.1.1+) {}	object	read-write	The available actions for this resource.
<b>AssignedPrivileges</b> []	array (string)	read-write	The redfish privileges that this role includes. See <a href="#">AssignedPrivileges</a> in <i>Property Details</i> , below, for

	(enum))		<i>the possible values of this property.</i>
<b>IsPredefined</b>	boolean	read-only	This property is used to indicate if the Role is one of the Redfish Predefined Roles vs a Custom role.
<b>OemPrivileges []</b>	array (string)	read-write	The OEM privileges that this role includes.
<b>RoleId (v1.2+)</b>	string	read-only	This property contains the name of the Role.

## Property Details

### AssignedPrivileges:

The redfish privileges that this role includes.

string	Description
ConfigureComponents	Able to configure components managed by this service.
ConfigureManager	Able to configure Manager resources.
ConfigureSelf	Able to change the password for the current user Account.
ConfigureUsers	Able to configure Users and their Accounts.
Login	Able to log into the service and read resources.

## Example Response

```
{
  "@odata.type": "#Role.v1_2_1.Role",
  "Id": "Administrator",
  "Name": "User Role",
  "Description": "Admin User Role",
  "IsPredefined": true,
  "AssignedPrivileges": [
    "Login",
    "ConfigureManager",
    "ConfigureUsers",
    "ConfigureSelf",
    "ConfigureComponents"
  ],
  "OemPrivileges": [
    "OemClearLog",
    "OemPowerControl"
  ],
  "@odata.context": "/redfish/v1/$metadata#Role.Role",
  "@odata.id": "/redfish/v1/AccountService/Roles/Admin"
}
```

## SecureBoot 1.0.3

This resource contains UEFI Secure Boot information. It represents properties for managing the UEFI

Secure Boot functionality of a system.

<b>Actions</b> (v1.0.3+) {	object	read-write	The available actions for this resource.
<b>#SecureBoot.ResetKeys</b> { }	object	read-write	This action is used to reset the Secure Boot keys. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>SecureBootCurrentBoot</b>	string (enum)	read-only (null)	Secure Boot state during the current boot cycle. <i>See <a href="#">SecureBootCurrentBoot</a> in Property Details, below, for the possible values of this property.</i>
<b>SecureBootEnable</b>	boolean	read-write (null)	Enable or disable UEFI Secure Boot (takes effect on next boot).
<b>SecureBootMode</b>	string (enum)	read-only (null)	Current Secure Boot Mode. <i>See <a href="#">SecureBootMode</a> in Property Details, below, for the possible values of this property.</i>

## Action Details

---

### ResetKeys

This action is used to reset the Secure Boot keys.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
<b>ResetKeyType</b>	string (enum)	read-write	The type of keys to reset or delete. <i>See <a href="#">ResetKeyType</a> in Property Details, below, for the possible values of this property.</i>
}			

## Property Details

---

### ResetKeyType:

The type of keys to reset or delete.

string	Description
DeleteAllKeys	Delete the content of all UEFI Secure Boot key databases (PK, KEK, DB, DBX). This puts the system in Setup Mode.
DeletePK	Delete the content of the PK UEFI Secure Boot database. This puts the system in Setup Mode.
ResetAllKeysToDefault	Reset the content of all UEFI Secure Boot key databases (PK, KEK, DB, DBX) to their default values.

### SecureBootCurrentBoot:

Secure Boot state during the current boot cycle.



string	Description
Disabled	Secure Boot is currently disabled.
Enabled	Secure Boot is currently enabled.

### SecureBootMode:

Current Secure Boot Mode.

string	Description
AuditMode	Secure Boot is currently in Audit Mode.
DeployedMode	Secure Boot is currently in Deployed Mode.
SetupMode	Secure Boot is currently in Setup Mode.
UserMode	Secure Boot is currently in User Mode.

## SerialInterface 1.1.2

This schema defines an asynchronous serial interface resource.

<b>Actions</b> (v1.1.2+) { }	object	read-write	The available actions for this resource.
<b>BitRate</b>	string (enum)	read-write	The receive and transmit rate of data flow, typically in bits-per-second (bps), over the serial connection. <i>See <a href="#">BitRate</a> in Property Details, below, for the possible values of this property.</i>
<b>ConnectorType</b>	string (enum)	read-only	The type of connector used for this interface. <i>See <a href="#">ConnectorType</a> in Property Details, below, for the possible values of this property.</i>
<b>DataBits</b>	string (enum)	read-write	The number of data bits that will follow the start bit over the serial connection. <i>See <a href="#">DataBits</a> in Property Details, below, for the possible values of this property.</i>
<b>FlowControl</b>	string (enum)	read-write	The type of flow control, if any, that will be imposed on the serial connection. <i>See <a href="#">FlowControl</a> in Property Details, below, for the possible values of this property.</i>
<b>InterfaceEnabled</b>	boolean	read-write (null)	This indicates whether this interface is enabled.
<b>Parity</b>	string (enum)	read-write	The type of parity used by the sender and receiver in order to detect errors over the serial connection. <i>See <a href="#">Parity</a> in Property Details, below, for the possible values of this property.</i>
<b>PinOut</b>	string (enum)	read-only (null)	The physical pin configuration needed for a serial connector.

			See <a href="#">PinOut</a> in Property Details, below, for the possible values of this property.
<b>SignalType</b>	string (enum)	read-only	The type of signal used for the communication connection - RS232 or RS485. See <a href="#">SignalType</a> in Property Details, below, for the possible values of this property.
<b>StopBits</b>	string (enum)	read-write	The period of time before the next start bit is transmitted. See <a href="#">StopBits</a> in Property Details, below, for the possible values of this property.

## Property Details

---

### BitRate:

The receive and transmit rate of data flow, typically in bits-per-second (bps), over the serial connection.

string	Description
115200	A bit rate of 115200bps.
1200	A bit rate of 1200bps.
19200	A bit rate of 19200bps.
230400	A bit rate of 230400bps.
2400	A bit rate of 2400bps.
38400	A bit rate of 38400bps.
4800	A bit rate of 4800bps.
57600	A bit rate of 57600bps.
9600	A bit rate of 9600bps.

### ConnectorType:

The type of connector used for this interface.

string	Description
DB25 Female	A DB25 Female connector.
DB25 Male	A DB25 Male connector.
DB9 Female	A DB9 Female connector.
DB9 Male	A DB9 Male connector.
RJ11	An RJ11 connector.
RJ45	An RJ45 connector.

string	Description
USB	A USB connector.
mUSB	A mUSB connector.
uUSB	A uUSB connector.

### DataBits:

The number of data bits that will follow the start bit over the serial connection.

string	Description
5	5 bits of data following the start bit.
6	6 bits of data following the start bit.
7	7 bits of data following the start bit.
8	8 bits of data following the start bit.

### FlowControl:

The type of flow control, if any, that will be imposed on the serial connection.

string	Description
Hardware	Out of band flow control imposed.
None	No flow control imposed.
Software	XON/XOFF in-band flow control imposed.

### Parity:

The type of parity used by the sender and receiver in order to detect errors over the serial connection.

string	Description
Even	An even parity bit.
Mark	A mark parity bit.
None	No parity bit.
Odd	An odd parity bit.
Space	A space parity bit.

### PinOut:

The physical pin configuration needed for a serial connector.

string	Description
Cisco	The Cisco pin configuration.

string	Description
Cyclades	The Cyclades pin configuration.
Digi	The Digi pin configuration.

### SignalType:

The type of signal used for the communication connection - RS232 or RS485.

string	Description
Rs232	The serial interface follows RS232.
Rs485	The serial interface follows RS485.

### StopBits:

The period of time before the next start bit is transmitted.

string	Description
1	1 stop bit following the data bits.
2	2 stop bits following the data bits.

## Example Response

```
{
  "@odata.type": "#SerialInterface.v1_1_2.SerialInterface",
  "Id": "TTY0",
  "Name": "Manager Serial Interface 1",
  "Description": "Management for Serial Interface",
  "InterfaceEnabled": true,
  "SignalType": "Rs232",
  "BitRate": "115200",
  "Parity": "None",
  "DataBits": "8",
  "StopBits": "1",
  "FlowControl": "None",
  "ConnectorType": "RJ45",
  "PinOut": "Cyclades",
  "@odata.context": "/redfish/v1/$metadata#SerialInterface.SerialInterface",
  "@odata.id": "/redfish/v1/Managers/BMC/SerialInterfaces/TTY0"
}
```

## ServiceRoot 1.3.1

This object represents the root Redfish service.

AccountService {	object	read-only	This is a link to the Account Service. See the <a href="#">AccountService</a> schema for details on this property.
------------------	--------	-----------	--

<b>@odata.id</b> }	string	read-only	Link to a AccountService resource. See the Links section and the <a href="#">AccountService</a> schema for details.
<b>Chassis</b> {	object	read-only	This is a link to a collection of Chassis. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Chassis</a> . See the Chassis schema for details.
<b>CompositionService</b> {	object	read-only	This is a link to the CompositionService. See the <a href="#">CompositionService</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a CompositionService resource. See the Links section and the <a href="#">CompositionService</a> schema for details.
<b>EventService</b> {	object	read-only	This is a link to the EventService. See the <a href="#">EventService</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a EventService resource. See the Links section and the <a href="#">EventService</a> schema for details.
<b>Fabrics</b> {	object	read-only	A link to a collection of all fabric entities. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Fabric</a> . See the Fabric schema for details.
<b>JsonSchemas</b> {	object	read-only	This is a link to a collection of Json-Schema files. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">JsonSchemaFile</a> . See the JsonSchemaFile schema for details.
<b>Links (v1.0.6+)</b> {	object	read-write	Contains references to other resources that are related to this resource.
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Sessions</b> {	object	read-only	Link to a collection of Sessions. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Session</a> . See the Session schema for details.
<b>Managers</b> {	object	read-only	This is a link to a collection of

			Managers. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Manager</a> . See the Manager schema for details.
<b>Product</b> (v1.3+)	string	read-only	The product associated with this Redfish service.
<b>ProtocolFeaturesSupported</b> (v1.3+) {	object	read-write	Contains information about protocol features supported by the service.
<b>ExpandQuery</b> {	object	read-write	Contains information about the use of \$expand in the service.
<b>ExpandAll</b>	boolean	read-only	This indicates whether the expand support of asterisk (expand all entries) is supported.
<b>Levels</b>	boolean	read-only	This indicates whether the expand support of the \$levels qualifier is supported by the service.
<b>Links</b>	boolean	read-only	This indicates whether the expand support of tilde (expand only entries in the Links section) is supported.
<b>MaxLevels</b>	number	read-only	This indicates the maximum number value of the \$levels qualifier in expand operations.
<b>NoLinks</b> }	boolean	read-only	This indicates whether the expand support of period (expand only entries not in the Links section) is supported.
<b>FilterQuery</b>	boolean	read-only	This indicates whether the filter query parameter is supported.
<b>SelectQuery</b> }	boolean	read-only	This indicates whether the select query parameter is supported.
<b>RedfishVersion</b>	string	read-only	The version of the Redfish service.
<b>Registries</b> {	object	read-only	This is a link to a collection of Registries. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">MessageRegistryFile</a> . See the MessageRegistryFile schema for details.
<b>SessionService</b> {	object	read-only	This is a link to the Sessions Service. See the <a href="#">SessionService</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a SessionService resource. See the Links section and the <a href="#">SessionService</a> schema for details.

<b>StorageServices</b> (v1.1+)		read-only	A link to a collection of all storage service entities.
<b>StorageSystems</b> (v1.1+)		read-only	This is a link to a collection of storage systems.
<b>Systems</b> {	object	read-only	This is a link to a collection of Systems. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">ComputerSystem</a> . See the ComputerSystem schema for details.
<b>Tasks</b> {	object	read-only	This is a link to the Task Service. See the <a href="#">TaskService</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a TaskService resource. See the Links section and the <a href="#">TaskService</a> schema for details.
<b>UUID</b>	string	read-only (null)	Unique identifier for a service instance. When SSDP is used, this value should be an exact match of the UUID value returned in a 200OK from an SSDP M-SEARCH request during discovery.
<b>UpdateService</b> {	object	read-only	This is a link to the UpdateService. See the <a href="#">UpdateService</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a UpdateService resource. See the Links section and the <a href="#">UpdateService</a> schema for details.

## Example Response

```
{
  "@odata.type": "#ServiceRoot.v1_3_1.ServiceRoot",
  "Id": "RootService",
  "Name": "Root Service",
  "RedfishVersion": "1.5.0",
  "UUID": "92384634-2938-2342-8820-489239905423",
  "Product": "Contoso 1U Server",
  "ProtocolFeaturesSupported": {
    "ExpandQuery": {
      "ExpandAll": true,
      "Levels": true,
      "MaxLevels": 2,
      "Links": true,
      "NoLinks": true
    },
    "SelectQuery": false,
    "FilterQuery": false
  },
  "Systems": {
```

```

    "@odata.id": "/redfish/v1/Systems"
  },
  "Chassis": {
    "@odata.id": "/redfish/v1/Chassis"
  },
  "Managers": {
    "@odata.id": "/redfish/v1/Managers"
  },
  "UpdateService": {
    "@odata.id": "/redfish/v1/UpdateService"
  },
  "CompositionService": {
    "@odata.id": "/redfish/v1/CompositionService"
  },
  "Tasks": {
    "@odata.id": "/redfish/v1/TaskService"
  },
  "SessionService": {
    "@odata.id": "/redfish/v1/SessionService"
  },
  "AccountService": {
    "@odata.id": "/redfish/v1/AccountService"
  },
  "EventService": {
    "@odata.id": "/redfish/v1/EventService"
  },
  "Links": {
    "Sessions": {
      "@odata.id": "/redfish/v1/SessionService/Sessions"
    }
  },
  "Oem": {},
  "@odata.context": "/redfish/v1/$metadata#ServiceRoot.ServiceRoot",
  "@odata.id": "/redfish/v1/"
}

```

## Session 1.1.0

The Session resource describes a single connection (session) between a client and a Redfish service instance.

<b>Actions (v1.1+) {}</b>	object	read-write	The available actions for this resource.
<b>Password</b>	string	read-only (null)	This property is used in a POST to specify a password when creating a new session. This property is null on a GET.
<b>UserName</b>	string	read-only (null)	The UserName for the account for this session.

## Example Response

```

{
  "@odata.type": "#Session.v1_1_0.Session",
  "Id": "1234567890ABCDEF",

```



```

    "Name": "User Session",
    "Description": "Manager User Session",
    "UserName": "Administrator",
    "Oem": {},
    "@odata.context": "/redfish/v1/$metadata#Session.Session",
    "@odata.id": "/redfish/v1/SessionService/Sessions/1234567890ABCDEF"
}

```

## SessionService 1.1.3

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

<b>Actions</b> (v1.1+) {}	object	read-write	The Actions object contains the available custom actions on this resource.
<b>ServiceEnabled</b>	boolean	read-write (null)	This indicates whether this service is enabled. If set to false, the Session Service is disabled and any attempt to access it will fail. This means new sessions cannot be created, old sessions cannot be deleted though established sessions may continue operating.
<b>SessionTimeout</b>	number (seconds)	read-write	This is the number of seconds of inactivity that a session may have before the session service closes the session due to inactivity.
<b>Sessions</b> {	object	read-only	Link to a collection of Sessions. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Session</a> . See the Session schema for details.
<b>Status</b> {}	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

## Example Response

```

{
  "@odata.type": "#SessionService.v1_1_3.SessionService",
  "Id": "SessionService",
  "Name": "Session Service",
  "Description": "Session Service",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "ServiceEnabled": true,
  "SessionTimeout": 30,
  "Sessions": {
    "@odata.id": "/redfish/v1/SessionService/Sessions"
  },
  "@odata.context": "/redfish/v1/$metadata#SessionService.SessionService",
  "@odata.id": "/redfish/v1/SessionService"
}

```

# SimpleStorage 1.2.0

This is the schema definition for the Simple Storage resource. It represents the properties of a storage controller and its directly-attached devices.

<b>Actions</b> (v1.2+) { }	object	read-write	The available actions for this resource.
<b>Devices</b> [ {	array	read-write	The storage devices associated with this resource.
<b>CapacityBytes</b> (v1.1+)	number (By)	read-only (null)	The size of the storage device.
<b>Manufacturer</b>	string	read-only (null)	The name of the manufacturer of this device.
<b>Model</b>	string	read-only (null)	The product model number of this device.
<b>Name</b>	string	read-only	The name of the resource or array element.
<b>Oem</b> { }	object	read-write	See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
} ]			
<b>Links</b> (v1.2+) {	object	read-write	Contains references to other resources that are related to this resource.
<b>Chassis</b> {	object	read-only	A reference to the Chassis which contains this Simple Storage. See the <a href="#">Chassis</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a Chassis resource. See the Links section and the <a href="#">Chassis</a> schema for details.
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>UefiDevicePath</b>	string	read-only (null)	The UEFI device path used to access this storage controller.

## Example Response

```
{
  "@odata.type": "#SimpleStorage.v1_2_0.SimpleStorage",
  "Id": "1",
  "Name": "Simple Storage Controller",
  "Description": "System SATA",
  "UefiDevicePath": "Acpi(PNP0A03,0)/Pci(1F|1)/Ata(Primary,Master)/HD(Part3, Sig00110011)",
  "Status": {
    "State": "Enabled",
```

```

    "Health": "OK",
    "HealthRollup": "Warning"
  },
  "Devices": [
    {
      "Name": "SATA Bay 1",
      "Manufacturer": "Contoso",
      "Model": "3000GT8",
      "CapacityBytes": 8000000000000,
      "Status": {
        "State": "Enabled",
        "Health": "OK"
      }
    },
    {
      "Name": "SATA Bay 2",
      "Manufacturer": "Contoso",
      "Model": "3000GT7",
      "CapacityBytes": 4000000000000,
      "Status": {
        "State": "Enabled",
        "Health": "Degraded"
      }
    },
    {
      "Name": "SATA Bay 3",
      "Status": {
        "State": "Absent"
      }
    },
    {
      "Name": "SATA Bay 4",
      "Status": {
        "State": "Absent"
      }
    }
  ],
  "@odata.context": "/redfish/v1/$metadata#SimpleStorage.SimpleStorage",
  "@odata.id": "/redfish/v1/Systems/437XR1138R2/SimpleStorage/1"
}

```

## SoftwareInventory 1.2.0

This schema defines an inventory of software components.

<b>Actions</b> (v1.2+) {}	object	read-write	The Actions object contains the available custom actions on this resource.
<b>LowestSupportedVersion</b> (v1.1+)	string	read-only (null)	A string representing the lowest supported version of this software.
<b>Manufacturer</b> (v1.2+)	string	read-only (null)	A string representing the manufacturer/producer of this software.
<b>RelatedItem</b> (v1.1+) [{}]	array	read-only	The ID(s) of the resources associated

			with this software inventory item.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>ReleaseDate</b> (v1.2+)	string	read-only (null)	Release date of this software.
<b>SoftwareId</b> (v1.1+)	string	read-only	A string representing the implementation-specific ID for identifying this software.
<b>Status</b> {}	object	read-write (null)	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>UefiDevicePaths</b> (v1.1+) []	array (string, null)	read-only	A list of strings representing the UEFI Device Path(s) of the component(s) associated with this software inventory item.
<b>Updateable</b>	boolean	read-only (null)	Indicates whether this software can be updated by the update service.
<b>Version</b>	string	read-only (null)	A string representing the version of this software.

## Example Response

```
{
  "@odata.type": "#SoftwareInventory.v1_2_0.SoftwareInventory",
  "Id": "BMC",
  "Name": "Contoso BMC Firmware",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "Updateable": true,
  "Manufacturer": "Contoso",
  "ReleaseDate": "2017-08-22T12:00:00",
  "Version": "1.45.455b66-rev4",
  "SoftwareId": "1624A9DF-5E13-47FC-874A-DF3AFF143089",
  "LowestSupportedVersion": "1.30.367a12-rev1",
  "UefiDevicePaths": [
    "BMC(0x1,0x0ABCDEF)"
  ],
  "RelatedItem": [
    {
      "@odata.id": "/redfish/v1/Managers/1"
    }
  ],
  "Actions": {
    "Oem": {}
  },
  "Oem": {},
  "@odata.context": "/redfish/v1/$metadata#SoftwareInventory.SoftwareInventory",
  "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/BMC"
}
```

# Storage 1.4.0

This schema defines a storage subsystem and its respective properties. A storage subsystem represents a set of storage controllers (physical or virtual) and the resources such as volumes that can be accessed from that subsystem.

<b>Actions</b> (v1.0.4+) {	object	read-write	The available actions for this resource.
<b>#Storage.SetEncryptionKey</b> { }	object	read-write	This action is used to set the encryption key for the storage subsystem. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>Drives</b> [ {	array	read-only	The set of drives attached to the storage controllers represented by this resource.
<b>@odata.id</b>	string	read-only	Link to a Drive resource. See the Links section and the <a href="#">Drive</a> schema for details.
}]			
<b>Links</b> (v1.0.4+) {	object	read-write	Contains references to other resources that are related to this resource.
<b>Enclosures</b> [ {	array	read-only	An array of references to the chassis to which this storage subsystem is attached.
<b>@odata.id</b>	string	read-only	Link to a Chassis resource. See the Links section and the <a href="#">Chassis</a> schema for details.
}]			
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Redundancy</b> [ {	array	read-write	Redundancy information for the storage subsystem.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>StorageControllers</b> [ {	array	read-only	The set of storage controllers represented by this resource.
<b>Actions</b> (v1.2+) { }	object	read-write	The available actions for this resource.

<b>Assembly</b> (v1.4+) {	object	read-only	A reference to the Assembly resource associated with this Storage Controller. See the <a href="#">Assembly</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a Assembly resource. See the Links section and the <a href="#">Assembly</a> schema for details.
<b>AssetTag</b> (v1.0.1+)	string	read-write (null)	The user assigned asset tag for this storage controller.
<b>FirmwareVersion</b> (v1.0.1+)	string	read-only (null)	The firmware version of this storage Controller.
<b>Identifiers</b> []	array ()	read-write	The Durable names for the storage controller. See the <a href="#">Identifier object</a> definition in the <a href="#">Common Properties</a> section.
<b>Links</b> (v1.1+) {	object	read-write	Contains references to other resources that are related to this resource.
<b>Endpoints</b> (v1.1.3+) [{	array	read-write	An array of references to the endpoints that connect to this controller.
<b>@odata.id</b>	string	read-only	Link to a Endpoint resource. See the Links section and the <a href="#">Endpoint</a> schema for details.
}]			
<b>Oem</b> (v1.1.3+) {}	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>StorageServices</b> (v1.4+) [{	array	read-write	An array of references to the StorageServices that connect to this controller.
}		read-write	
}]			
<b>Location</b> (v1.4+)		read-write	See the <a href="#">Location object</a> definition in the <a href="#">Common Properties</a> section.
<b>Manufacturer</b> (v1.0.1+)	string	read-only (null)	This is the manufacturer of this storage controller.
<b>MemberId</b> (v1.0.1+)	string	read-only	This is the identifier for the member within the collection.
<b>Model</b> (v1.0.1+)	string	read-only (null)	This is the model number for the storage controller.

<b>Name</b> (v1.3+)	string	read-only (null)	The name of the Storage Controller.
<b>Oem</b> (v1.0.1+) { }	object	read-write	This is the manufacturer/provider specific extension moniker used to divide the Oem object into sections. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PartNumber</b> (v1.0.1+)	string	read-only (null)	The part number for this storage controller.
<b>SKU</b> (v1.0.1+)	string	read-only (null)	This is the SKU for this storage controller.
<b>SerialNumber</b> (v1.0.1+)	string	read-only (null)	The serial number for this storage controller.
<b>SpeedGbps</b> (v1.0.1+)	number (Gbit/s)	read-only (null)	The speed of the storage controller interface.
<b>Status</b> (v1.0.1+) { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>SupportedControllerProtocols</b> [ ]	array (string (enum))	read-only	This represents the protocols by which this storage controller can be communicated to. See <a href="#">SupportedControllerProtocols</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>SupportedDeviceProtocols</b> [ ]	array (string (enum))	read-only	This represents the protocols which the storage controller can use to communicate with attached devices. See <a href="#">SupportedDeviceProtocols</a> in <i>Property Details</i> , below, for the possible values of this property.
}]			
<b>Volumes</b> {	object	read-only	The set of volumes produced by the storage controllers represented by this resource. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Volume</a> . See the Volume schema for details.

## Action Details

### SetEncryptionKey

This action is used to set the encryption key for the storage subsystem.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
---	--	--	--

<b>EncryptionKey</b>	string	read-write	The encryption key to set on the storage subsystem.
----------------------	--------	------------	---

## Property Details

---

### SupportedControllerProtocols:

This represents the protocols by which this storage controller can be communicated to.

string	Description
AHCI	Advanced Host Controller Interface.
FC	Fibre Channel.
FCP	Fibre Channel Protocol for SCSI.
FCoE	Fibre Channel over Ethernet.
FICON	Fibre CONnection (FICON).
FTP	File Transfer Protocol.
HTTP	Hypertext Transport Protocol.
HTTPS	Secure Hypertext Transport Protocol.
NFSv3	Network File System version 3.
NFSv4	Network File System version 4.
NVMe	Non-Volatile Memory Express.
NVMeOverFabrics	NVMe over Fabrics.
OEM	OEM specific.
PCIe	PCI Express (Vendor Proprietary).
RoCE	RDMA over Converged Ethernet Protocol.
RoCEv2	RDMA over Converged Ethernet Protocol Version 2.
SAS	Serial Attached SCSI.
SATA	Serial AT Attachment.
SFTP	Secure File Transfer Protocol.
SMB	Server Message Block (aka CIFS Common Internet File System).
UHCI	Universal Host Controller Interface.
USB	Universal Serial Bus.
iSCSI	Internet SCSI.
iWARP	Internet Wide Area Remote Direct Memory Access Protocol.



## SupportedDeviceProtocols:

This represents the protocols which the storage controller can use to communicate with attached devices.

string	Description
AHCI	Advanced Host Controller Interface.
FC	Fibre Channel.
FCP	Fibre Channel Protocol for SCSI.
FCoE	Fibre Channel over Ethernet.
FICON	Fibre CONnection (FICON).
FTP	File Transfer Protocol.
HTTP	Hypertext Transport Protocol.
HTTPS	Secure Hypertext Transport Protocol.
NFSv3	Network File System version 3.
NFSv4	Network File System version 4.
NVMe	Non-Volatile Memory Express.
NVMeOverFabrics	NVMe over Fabrics.
OEM	OEM specific.
PCIe	PCI Express (Vendor Proprietary).
RoCE	RDMA over Converged Ethernet Protocol.
RoCEv2	RDMA over Converged Ethernet Protocol Version 2.
SAS	Serial Attached SCSI.
SATA	Serial AT Attachment.
SFTP	Secure File Transfer Protocol.
SMB	Server Message Block (aka CIFS Common Internet File System).
UHCI	Universal Host Controller Interface.
USB	Universal Serial Bus.
iSCSI	Internet SCSI.
iWARP	Internet Wide Area Remote Direct Memory Access Protocol.

## Example Response

---

```
{  
  "@odata.type": "#Storage.v1_4_0.Storage",  
  "Id": "1",  
}
```

```
"Name": "Local Storage Controller",
>Description": "Integrated RAID Controller",
>Status": {
  "State": "Enabled",
  "Health": "OK",
  "HealthRollup": "OK"
},
StorageControllers": [
  {
    "@odata.id": "/redfish/v1/Systems/437XR1138R2/Storage/1#/StorageControllers/0",
    MemberId": "0",
    Name": "Contoso Integrated RAID",
    Status": {
      "State": "Enabled",
      "Health": "OK"
    },
    Identifiers": [
      {
        "DurableNameFormat": "NAA",
        "DurableName": "345C59DBD970859C"
      }
    ],
    Manufacturer": "Contoso",
    Model": "12Gbs Integrated RAID",
    SerialNumber": "2M220100SL",
    PartNumber": "CT18754",
    SpeedGbps": 12,
    FirmwareVersion": "1.0.0.7",
    SupportedControllerProtocols": [
      "PCIe"
    ],
    SupportedDeviceProtocols": [
      "SAS",
      "SATA"
    ]
  }
],
Drives": [
  {
    "@odata.id": "/redfish/v1/Systems/437XR1138R2/Storage/1/Drives/35D38F11ACEF7BD3"
  },
  {
    "@odata.id": "/redfish/v1/Systems/437XR1138R2/Storage/1/Drives/3F5A8C54207B7233"
  },
  {
    "@odata.id": "/redfish/v1/Systems/437XR1138R2/Storage/1/Drives/32ADF365C6C1B7BD"
  },
  {
    "@odata.id": "/redfish/v1/Systems/437XR1138R2/Storage/1/Drives/3D58ECBC375FD9F2"
  }
],
Volumes": {
  "@odata.id": "/redfish/v1/Systems/437XR1138R2/Storage/1/Volumes"
},
Links": {},
Actions": {
  "#Storage.SetEncryptionKey": {
    "target": "/redfish/v1/Systems/437XR1138R2/Storage/1/Actions/Storage.SetEncrypt
```

```

    },
    "@odata.context": "/redfish/v1/$metadata#Storage.Storage",
    "@odata.id": "/redfish/v1/Systems/437XR1138R2/Storage/1"
}

```

## Switch 1.1.0

Switch contains properties describing a simple fabric switch.

<b>Actions</b> (v1.0.3+) {	object	read-write	The available actions for this resource.
<b>#Switch.Reset</b> { }	object	read-write	This action is used to reset this switch. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>AssetTag</b>	string	read-write (null)	The user assigned asset tag for this switch.
<b>DomainID</b>	number	read-only (null)	The Domain ID for this switch.
<b>IndicatorLED</b>	string (enum)	read-write (null)	The state of the indicator LED, used to identify the switch. <i>See <a href="#">IndicatorLED</a> in Property Details, below, for the possible values of this property.</i>
<b>IsManaged</b>	boolean	read-write (null)	This indicates whether the switch is in a managed or unmanaged state.
<b>Links</b> (v1.0.3+) {	object	read-write	Contains references to other resources that are related to this resource.
<b>Chassis</b> {	object	read-only	A reference to the chassis which contains this switch. See the <a href="#">Chassis</a> schema for details on this property.
<b>@odata.id</b>	string	read-only	Link to a Chassis resource. See the Links section and the <a href="#">Chassis</a> schema for details.
<b>ManagedBy</b> [ {	array	read-only	An array of references to the managers that manage this switch.
<b>@odata.id</b>	string	read-only	Link to a Manager resource. See the Links section and the <a href="#">Manager</a> schema for details.
}			
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Location</b>		read-write	See the <a href="#">Location object</a> definition in the <a href="#">Common Properties</a> section.
<b>LogServices</b> {	object	read-only (null)	A reference to the collection of Log Services associated with this system. Contains a link to a resource.

<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">LogService</a> . See the LogService schema for details.
<b>Manufacturer</b>	string	read-only (null)	This is the manufacturer of this switch.
<b>Model</b>	string	read-only (null)	The product model number of this switch.
<b>PartNumber</b>	string	read-only (null)	The part number for this switch.
<b>Ports {</b>	object	read-only	A collection of references to the ports for this switch. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Port</a> . See the Port schema for details.
<b>PowerState</b>	string (enum)	read-only (null)	This is the current power state of the switch. See <a href="#">PowerState</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>Redundancy [ {</b>	array	read-write	Redundancy information for the switches.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
<b>}]</b>			
<b>SKU</b>	string	read-only (null)	This is the SKU for this switch.
<b>SerialNumber</b>	string	read-only (null)	The serial number for this switch.
<b>Status { }</b>	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>SwitchType</b>	string (enum)	read-only (null)	The protocol being sent over this switch. See <a href="#">SwitchType</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>TotalSwitchWidth</b>	number	read-only (null)	The total number of lanes, phys, or other physical transport links that this switch contains.

## Action Details

---

### Reset

This action is used to reset this switch.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
<b>ResetType</b>	string (enum)	read-write	The type of reset to be performed. See <a href="#">ResetType</a> in <i>Property Details</i> , below, for the possible values of this property.
}			

## Property Details

---

### IndicatorLED:

The state of the indicator LED, used to identify the switch.

string	Description
Blinking	The Indicator LED is blinking.
Lit	The Indicator LED is lit.
Off	The Indicator LED is off.

### PowerState:

This is the current power state of the switch.

string	Description
Off	The state is powered Off.
On	The state is powered On.
PoweringOff	A temporary state between On and Off.
PoweringOn	A temporary state between Off and On.

### ResetType:

The type of reset to be performed.

string	Description
ForceOff	Turn the unit off immediately (non-graceful shutdown).
ForceOn	Turn the unit on immediately.
ForceRestart	Perform an immediate (non-graceful) shutdown, followed by a restart.
GracefulRestart	Perform a graceful shutdown followed by a restart of the system.
GracefulShutdown	Perform a graceful shutdown and power off.
Nmi	Generate a Diagnostic Interrupt (usually an NMI on x86 systems) to cease normal operations, perform diagnostic actions and typically halt the system.
On	Turn the unit on.
PowerCycle	Perform a power cycle of the unit.
PushPowerButton	Simulate the pressing of the physical power button on this unit.

### SwitchType:

The protocol being sent over this switch.

string	Description
AHCI	Advanced Host Controller Interface.
FC	Fibre Channel.
FCP	Fibre Channel Protocol for SCSI.
FCoE	Fibre Channel over Ethernet.
FICON	Fibre CONnection (FICON).
FTP	File Transfer Protocol.
HTTP	Hypertext Transport Protocol.
HTTPS	Secure Hypertext Transport Protocol.
NFSv3	Network File System version 3.
NFSv4	Network File System version 4.
NVMe	Non-Volatile Memory Express.
NVMeOverFabrics	NVMe over Fabrics.
OEM	OEM specific.
PCIe	PCI Express (Vendor Proprietary).
RoCE	RDMA over Converged Ethernet Protocol.
RoCEv2	RDMA over Converged Ethernet Protocol Version 2.
SAS	Serial Attached SCSI.
SATA	Serial AT Attachment.
SFTP	Secure File Transfer Protocol.
SMB	Server Message Block (aka CIFS Common Internet File System).
UHCI	Universal Host Controller Interface.
USB	Universal Serial Bus.
iSCSI	Internet SCSI.
iWARP	Internet Wide Area Remote Direct Memory Access Protocol.

## Example Response

---

```
{
  "@odata.type": "#Switch.v1_1_0.Switch",
  "Id": "Switch1",
  "Name": "SAS Switch",
  "SwitchType": "SAS",
  "Manufacturer": "Contoso",
  "Model": "SAS1000",
```

```

"SKU": "67B",
"SerialNumber": "2M220100SL",
"PartNumber": "76-88883",
"Ports": {
  "@odata.id": "/redfish/v1/Fabrics/SAS/Switches/Switch1/Ports"
},
"Redundancy": [
  {
    "@odata.id": "/redfish/v1/Fabrics/SAS/Switches/Switch1#/Redundancy/0",
    "MemberId": "Redundancy",
    "Mode": "Sharing",
    "MaxNumSupported": 2,
    "MinNumNeeded": 1,
    "Status": {
      "State": "Enabled",
      "Health": "OK"
    },
    "RedundancySet": [
      {
        "@odata.id": "/redfish/v1/Fabrics/SAS/Switches/Switch1"
      },
      {
        "@odata.id": "/redfish/v1/Fabrics/SAS/Switches/Switch2"
      }
    ]
  }
],
"Links": {
  "Chassis": {
    "@odata.id": "/redfish/v1/Chassis/Switch1"
  },
  "ManagedBy": [
    {
      "@odata.id": "/redfish/v1/Managers/Switch1"
    },
    {
      "@odata.id": "/redfish/v1/Managers/Switch2"
    }
  ],
  "Oem": {}
},
"Actions": {
  "#Switch.Reset": {
    "target": "/redfish/v1/Fabrics/SAS/Switches/Switch1/Actions/Switch.Reset",
    "ResetType@Redfish.AllowableValues": [
      "ForceRestart",
      "GracefulRestart"
    ]
  },
  "Oem": {}
},
"Oem": {},
"@odata.context": "/redfish/v1/$metadata#Switch.Switch",
"@odata.id": "/redfish/v1/Fabrics/SAS/Switches/Switch1"
}

```

## Task 1.2.0

This resource contains information about a specific Task scheduled by or being executed by a Redfish service's Task Service.

<b>Actions</b> (v1.1.1+) { }	object	read-write	The available actions for this resource.
<b>EndTime</b>	string	read-only	The date-time stamp that the task was last completed.
<b>Messages</b> [ ]	array ( )	read-write	This is an array of messages associated with the task. See the <a href="http://redfish.dmtf.org/schemas/v1/Message.json#/definitions/Message">http://redfish.dmtf.org/schemas/v1/Message.json#/definitions/Message</a> schema for details.
<b>StartTime</b>	string	read-only	The date-time stamp that the task was last started.
<b>TaskMonitor</b> (v1.2+)	string	read-only	The URI of the Task Monitor for this task.
<b>TaskState</b>	string (enum)	read-only	The state of the task. See <a href="#">TaskState</a> in Property Details, below, for the possible values of this property.
<b>TaskStatus</b>	string (enum)	read-only	This is the completion status of the task. See <a href="#">TaskStatus</a> in Property Details, below, for the possible values of this property.

## Property Details

---

### TaskState:

The state of the task.

string	Description
Cancelled (v1.2+)	Task has been cancelled by an operator or internal process.
Cancelling (v1.2+)	Task is in the process of being cancelled.
Completed	Task has completed.
Exception	Task has stopped due to an exception condition.
Interrupted	Task has been interrupted.
Killed	Task was terminated.
New	A new task.
Pending	Task is pending and has not started.
Running	Task is running normally.
Service	Task is running as a service.
Starting	Task is starting.
Stopping	Task is in the process of stopping.
Suspended	Task has been suspended.



## TaskStatus:

This is the completion status of the task.

string	Description
Critical	A critical condition exists that requires immediate attention.
OK	Normal.
Warning	A condition exists that requires attention.

## Example Response

```
{
  "@odata.type": "#Task.v1_2_0.Task",
  "Id": "545",
  "Name": "Task 545",
  "TaskMonitor": "/taskmon/545",
  "TaskState": "Completed",
  "StartTime": "2012-03-07T14:44+06:00",
  "EndTime": "2012-03-07T14:45+06:00",
  "TaskStatus": "OK",
  "Messages": [
    {
      "MessageId": "Base.1.0.PropertyNotWriteable",
      "RelatedProperties": [
        "SKU"
      ],
      "Message": "The property SKU is a read only property and cannot be assigned a v",
      "MessageArgs": [
        "SKU"
      ],
      "Severity": "Warning"
    }
  ],
  "@odata.context": "/redfish/v1/$metadata#Task.Task",
  "@odata.id": "/redfish/v1/TaskService/Tasks/545"
}
```

## TaskService 1.1.1

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

<b>Actions</b> (v1.1.1+) {}	object	read-write	The available actions for this resource.
<b>CompletedTaskOverWritePolicy</b>	string (enum)	read-only	Overwrite policy of completed tasks. See <a href="#">CompletedTaskOverWritePolicy</a> in <i>Property Details, below, for the possible values of this property.</i>
<b>DateTime</b>	string	read-only (null)	The current DateTime (with offset) setting that the task service is using.

<b>LifeCycleEventOnTaskStateChange</b>	boolean	read-only	Send an Event upon Task State Change.
<b>ServiceEnabled</b>	boolean	read-write (null)	This indicates whether this service is enabled.
<b>Status {}</b>	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>Tasks {</b>	object	read-only	References to the Tasks collection. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">Task</a> . See the Task schema for details.

## Property Details

### CompletedTaskOverWritePolicy:

Overwrite policy of completed tasks.

string	Description
Manual	Completed tasks are not automatically overwritten.
Oldest	Oldest completed tasks are overwritten.

## Example Response

```
{
  "@odata.type": "#TaskService.v1_1_1.TaskService",
  "Id": "TaskService",
  "Name": "Tasks Service",
  "DateTime": "2015-03-13T04:14:33+06:00",
  "CompletedTaskOverWritePolicy": "Manual",
  "LifeCycleEventOnTaskStateChange": true,
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "ServiceEnabled": true,
  "Tasks": {
    "@odata.id": "/redfish/v1/TaskService/Tasks"
  },
  "Oem": {},
  "@odata.context": "/redfish/v1/$metadata#TaskService.TaskService",
  "@odata.id": "/redfish/v1/TaskService"
}
```

## Thermal 1.4.0

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

<b>Actions</b> (v1.3+) { }	object	read-write	The available actions for this resource.
<b>Fans</b> [ {	array	read-write	This is the definition for fans.
<b>Actions</b> { }	object	read-write	The available actions for this resource.
<b>Assembly</b> (v1.4+) {	object	read-only	A reference to the Assembly resource associated with this fan. See the <a href="#">Assembly</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a Assembly resource. See the Links section and the <a href="#">Assembly</a> schema for details.
<b>FanName</b> (deprecated v1.0.3)	string	read-only (null)	Name of the fan. <i>Deprecated v1.0.3+. This property has been Deprecated in favor of Thermal.v1_1_0.Thermal.Fan.Name</i>
<b>HotPluggable</b> (v1.4+)	boolean	read-only (null)	Indicates if this device can be inserted or removed while the equipment is in operation.
<b>IndicatorLED</b> (v1.2+)	string (enum)	read-write (null)	The state of the indicator LED, used to identify this Fan. See <a href="#">IndicatorLED</a> in Property Details, below, for the possible values of this property.
<b>Location</b> (v1.4+)		read-write	See the <a href="#">Location object</a> definition in the <a href="#">Common Properties</a> section.
<b>LowerThresholdCritical</b>	number	read-only (null)	Below normal range but not yet fatal.
<b>LowerThresholdFatal</b>	number	read-only (null)	Below normal range and is fatal.
<b>LowerThresholdNonCritical</b>	number	read-only (null)	Below normal range.
<b>Manufacturer</b> (v1.2+)	string	read-only (null)	This is the manufacturer of this Fan.
<b>MaxReadingRange</b>	number	read-only (null)	Maximum value for Reading.
<b>MemberId</b>	string	read-only	This is the identifier for the member within the collection.
<b>MinReadingRange</b>	number	read-only (null)	Minimum value for Reading.
<b>Model</b> (v1.2+)	string	read-only (null)	The model number for this Fan.

<b>Name</b> (v1.1+)	string	read-only (null)	Name of the fan.
<b>Oem</b> { }	object	read-write	This is the manufacturer/provider specific extension moniker used to divide the Oem object into sections. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PartNumber</b> (v1.2+)	string	read-only (null)	The part number for this Fan.
<b>PhysicalContext</b>	string (enum)	read-only	Describes the area or device associated with this fan. See <a href="#">PhysicalContext</a> in Property Details, below, for the possible values of this property.
<b>Reading</b>	number	read-only (null)	Current fan speed.
<b>ReadingUnits</b> (v1.0.1+)	string (enum)	read-only (null)	Units in which the reading and thresholds are measured. See <a href="#">ReadingUnits</a> in Property Details, below, for the possible values of this property.
<b>Redundancy</b> [ {	array	read-write	This structure is used to show redundancy for fans. The Component ids will reference the members of the redundancy groups.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>RelatedItem</b> [ {	array	read-only	The ID(s) of the resources serviced with this fan.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>SerialNumber</b> (v1.2+)	string	read-only (null)	The serial number for this Fan.
<b>SparePartNumber</b> (v1.2+)	string	read-only (null)	The spare part number for this Fan.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>UpperThresholdCritical</b>	number	read-only (null)	Above normal range but not yet fatal.
<b>UpperThresholdFatal</b>	number	read-only (null)	Above normal range and is fatal.
<b>UpperThresholdNonCritical</b>	number	read-only	Above normal range.

		(null)	
}]			
<b>Redundancy</b> [ {	array	read-write	This structure is used to show redundancy for fans. The Component ids will reference the members of the redundancy groups.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>Temperatures</b> [ {	array	read-write	This is the definition for temperature sensors.
<b>Actions</b> (v1.3+) { }	object	read-write	The available actions for this resource.
<b>AdjustedMaxAllowableOperatingValue</b> (v1.4+)	number (Cel)	read-only (null)	Adjusted maximum allowable operating temperature for this equipment based on the current environmental conditions present.
<b>AdjustedMinAllowableOperatingValue</b> (v1.4+)	number (Cel)	read-only (null)	Adjusted minimum allowable operating temperature for this equipment based on the current environmental conditions present.
<b>DeltaPhysicalContext</b> (v1.4+)	string (enum)	read-only	Describes the area or device to which the DeltaReadingCelsius temperature measurement applies, relative to PhysicalContext. See <a href="#">DeltaPhysicalContext</a> in <i>Property Details, below, for the possible values of this property.</i>
<b>DeltaReadingCelsius</b> (v1.4+)	number (Cel)	read-only (null)	Delta Temperature reading.
<b>LowerThresholdCritical</b>	number (Cel)	read-only (null)	Below normal range but not yet fatal.
<b>LowerThresholdFatal</b>	number (Cel)	read-only (null)	Below normal range and is fatal.
<b>LowerThresholdNonCritical</b>	number (Cel)	read-only (null)	Below normal range.
<b>MaxAllowableOperatingValue</b> (v1.4+)	number (Cel)	read-only (null)	Maximum allowable operating temperature for this equipment.
<b>MaxReadingRangeTemp</b>	number (Cel)	read-only (null)	Maximum value for ReadingCelsius.
<b>MemberId</b>	string	read-only	This is the identifier for the member

			within the collection.
<b>MinAllowableOperatingValue</b> (v1.4+)	number (Cel)	read-only (null)	Minimum allowable operating temperature for this equipment.
<b>MinReadingRangeTemp</b>	number (Cel)	read-only (null)	Minimum value for ReadingCelsius.
<b>Name</b>	string	read-only (null)	Temperature sensor name.
<b>Oem</b> { }	object	read-write	This is the manufacturer/provider specific extension moniker used to divide the Oem object into sections. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>PhysicalContext</b>	string (enum)	read-only	Describes the area or device to which this temperature measurement applies. See <a href="#">PhysicalContext</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>ReadingCelsius</b>	number (Cel)	read-only (null)	Temperature.
<b>RelatedItem</b> [ {	array	read-only	Describes the areas or devices to which this temperature measurement applies.
<b>@odata.id</b>	string	read-only	The unique identifier for a resource.
}]			
<b>SensorNumber</b>	number	read-only (null)	A numerical identifier to represent the temperature sensor.
<b>Status</b> { }	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>UpperThresholdCritical</b>	number (Cel)	read-only (null)	Above normal range but not yet fatal.
<b>UpperThresholdFatal</b>	number (Cel)	read-only (null)	Above normal range and is fatal.
<b>UpperThresholdNonCritical</b>	number (Cel)	read-only (null)	Above normal range.
}]			

## Property Details

---

### **DeltaPhysicalContext:**

Describes the area or device to which the DeltaReadingCelsius temperature measurement applies, relative to PhysicalContext.

<b>string</b>	<b>Description</b>
ASIC	An ASIC device, such as an FPGA or a GPGPU.
Back	The back of the chassis.
Backplane	A backplane within the chassis.
CPU	A Processor (CPU).
Chassis	The entire chassis.
ComputeBay	Within a compute bay.
Exhaust	The air exhaust point of the chassis.
ExpansionBay	Within an expansion bay.
Fan	A fan.
Front	The front of the chassis.
GPU	A Graphics Processor (GPU).
Intake	The air intake point of the chassis.
LiquidInlet	The liquid inlet point of the chassis.
LiquidOutlet	The liquid outlet point of the chassis.
Lower	The lower portion of the chassis.
Memory	A memory device.
NetworkBay	Within a networking bay.
NetworkingDevice	A networking device.
PowerSupply	A power supply.
PowerSupplyBay	Within a power supply bay.
Room	The room.
StorageBay	Within a storage bay.
StorageDevice	A storage device.
SystemBoard	The system board (PCB).
Upper	The upper portion of the chassis.
VoltageRegulator	A voltage regulator device.

### **IndicatorLED:**

The state of the indicator LED, used to identify this Fan.

<b>string</b>	<b>Description</b>
Blinking	The Indicator LED is blinking.
Lit	The Indicator LED is lit.
Off	The Indicator LED is off.

### **PhysicalContext:**

Describes the area or device to which this temperature measurement applies.

<b>string</b>	<b>Description</b>
ASIC	An ASIC device, such as an FPGA or a GPGPU.
Back	The back of the chassis.
Backplane	A backplane within the chassis.
CPU	A Processor (CPU).
Chassis	The entire chassis.
ComputeBay	Within a compute bay.
Exhaust	The air exhaust point of the chassis.
ExpansionBay	Within an expansion bay.
Fan	A fan.
Front	The front of the chassis.
GPU	A Graphics Processor (GPU).
Intake	The air intake point of the chassis.
LiquidInlet	The liquid inlet point of the chassis.
LiquidOutlet	The liquid outlet point of the chassis.
Lower	The lower portion of the chassis.
Memory	A memory device.
NetworkBay	Within a networking bay.
NetworkingDevice	A networking device.
PowerSupply	A power supply.
PowerSupplyBay	Within a power supply bay.
Room	The room.
StorageBay	Within a storage bay.
StorageDevice	A storage device.



string	Description
SystemBoard	The system board (PCB).
Upper	The upper portion of the chassis.
VoltageRegulator	A voltage regulator device.

### ReadingUnits:

Units in which the reading and thresholds are measured.

string	Description
Percent	Indicates that the fan reading and thresholds are measured in percentage.
RPM	Indicates that the fan reading and thresholds are measured in rotations per minute.

## Example Response

```
{
  "@odata.type": "#Thermal.v1_4_0.Thermal",
  "Id": "Thermal",
  "Name": "Thermal",
  "Temperatures": [
    {
      "@odata.id": "/redfish/v1/Chassis/1U/Thermal#/Temperatures/0",
      "MemberId": "0",
      "Name": "CPU1 Temp",
      "SensorNumber": 5,
      "Status": {
        "State": "Enabled",
        "Health": "OK"
      },
      "ReadingCelsius": 41,
      "UpperThresholdNonCritical": 42,
      "UpperThresholdCritical": 45,
      "UpperThresholdFatal": 48,
      "MinReadingRangeTemp": 0,
      "MaxReadingRangeTemp": 60,
      "PhysicalContext": "CPU",
      "RelatedItem": [
        {
          "@odata.id": "/redfish/v1/Systems/437XR1138R2/Processors/CPU1"
        }
      ]
    },
    {
      "@odata.id": "/redfish/v1/Chassis/1U/Thermal#/Temperatures/1",
      "MemberId": "1",
      "Name": "CPU2 Temp",
      "SensorNumber": 6,
      "Status": {
        "State": "Disabled"
      },
      "UpperThresholdNonCritical": 42,
```

```

    "UpperThresholdCritical": 45,
    "UpperThresholdFatal": 48,
    "MinReadingRangeTemp": 0,
    "MaxReadingRangeTemp": 60,
    "PhysicalContext": "CPU",
    "RelatedItem": [
      {
        "@odata.id": "/redfish/v1/Systems/437XR1138R2/Processors/CPU2"
      }
    ]
  },
  {
    "@odata.id": "/redfish/v1/Chassis/1U/Thermal#/Temperatures/2",
    "MemberId": "2",
    "Name": "Chassis Intake Temp",
    "SensorNumber": 9,
    "Status": {
      "State": "Enabled",
      "Health": "OK"
    },
    "ReadingCelsius": 25,
    "UpperThresholdNonCritical": 30,
    "UpperThresholdCritical": 40,
    "UpperThresholdFatal": 50,
    "LowerThresholdNonCritical": 10,
    "LowerThresholdCritical": 5,
    "LowerThresholdFatal": 0,
    "MinReadingRangeTemp": 0,
    "MaxReadingRangeTemp": 60,
    "PhysicalContext": "Intake",
    "RelatedItem": [
      {
        "@odata.id": "/redfish/v1/Chassis/1U"
      },
      {
        "@odata.id": "/redfish/v1/Systems/437XR1138R2"
      }
    ]
  }
],
"Fans": [
  {
    "@odata.id": "/redfish/v1/Chassis/1U/Thermal#/Fans/0",
    "MemberId": "0",
    "Name": "BaseBoard System Fan",
    "PhysicalContext": "Backplane",
    "Status": {
      "State": "Enabled",
      "Health": "OK"
    },
    "Reading": 2100,
    "ReadingUnits": "RPM",
    "LowerThresholdFatal": 0,
    "MinReadingRange": 0,
    "MaxReadingRange": 5000,
    "Redundancy": [
      {
        "@odata.id": "/redfish/v1/Chassis/1U/Thermal#/Redundancy/0"
      }
    ]
  }
]

```

```

    }
  ],
  "RelatedItem": [
    {
      "@odata.id": "/redfish/v1/Systems/437XR1138R2"
    },
    {
      "@odata.id": "/redfish/v1/Chassis/1U"
    }
  ]
},
{
  "@odata.id": "/redfish/v1/Chassis/1U/Thermal#/Fans/1",
  "MemberId": "1",
  "Name": "BaseBoard System Fan Backup",
  "PhysicalContext": "Backplane",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "Reading": 2050,
  "ReadingUnits": "RPM",
  "LowerThresholdFatal": 0,
  "MinReadingRange": 0,
  "MaxReadingRange": 5000,
  "Redundancy": [
    {
      "@odata.id": "/redfish/v1/Chassis/1U/Thermal#/Redundancy/0"
    }
  ],
  "RelatedItem": [
    {
      "@odata.id": "/redfish/v1/Systems/437XR1138R2"
    },
    {
      "@odata.id": "/redfish/v1/Chassis/1U"
    }
  ]
},
{
  "Redundancy": [
    {
      "@odata.id": "/redfish/v1/Chassis/1U/Thermal#/Redundancy/0",
      "MemberId": "0",
      "Name": "BaseBoard System Fans",
      "RedundancySet": [
        {
          "@odata.id": "/redfish/v1/Chassis/1U/Thermal#/Fans/0"
        },
        {
          "@odata.id": "/redfish/v1/Chassis/1U/Thermal#/Fans/1"
        }
      ],
      "Mode": "N+m",
      "Status": {
        "State": "Enabled",
        "Health": "OK"
      }
    }
  ],

```

```

        "MinNumNeeded": 1,
        "MaxNumSupported": 2
    },
    ],
    "@odata.context": "/redfish/v1/$metadata#Thermal.Thermal",
    "@odata.id": "/redfish/v1/Chassis/1U/Thermal"
}

```

## UpdateService 1.2.1

This is the schema definition for the Update Service. It represents the properties for the service itself and has links to collections of firmware and software inventory.

<b>Actions</b> (v1.0.3+) {	object	read-write	The Actions object contains the available custom actions on this resource.
<b>#UpdateService.SimpleUpdate</b> { }	object	read-write	This action is used to update software components. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>FirmwareInventory</b> {	object	read-only (null)	An inventory of firmware. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">SoftwareInventory</a> . See the SoftwareInventory schema for details.
<b>HttpPushUri</b> (v1.1+)	string	read-only	The URI used to perform an HTTP or HTTPS push update to the Update Service.
<b>HttpPushUriTargets</b> (v1.2+) [ ]	array (string, null)	read-write	The array of URIs indicating the target for applying the update image.
<b>HttpPushUriTargetsBusy</b> (v1.2+)	boolean	read-write (null)	This represents if the HttpPushUriTargets property is reserved by any client.
<b>ServiceEnabled</b>	boolean	read-write (null)	This indicates whether this service is enabled.
<b>SoftwareInventory</b> {	object	read-only (null)	An inventory of software. Contains a link to a resource.
<b>@odata.id</b> }	string	read-only	Link to Collection of <a href="#">SoftwareInventory</a> . See the SoftwareInventory schema for details.
<b>Status</b> { }	object	read-write (null)	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

## Action Details

---

### SimpleUpdate

This action is used to update software components.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
<b>ImageURI</b>	string	read-write	The URI of the software image to be installed.
<b>Targets []</b>	array (string)	read-write	The array of URIs indicating where the update image is to be applied.
<b>TransferProtocol</b>	string (enum)	read-write	The network protocol used by the Update Service to retrieve the software image file located at the URI provided in ImageURI, if the URI does not contain a scheme. See <a href="#">TransferProtocol</a> in Property Details, below, for the possible values of this property.
}			

## Property Details

---

### TransferProtocol:

The network protocol used by the Update Service to retrieve the software image file located at the URI provided in ImageURI, if the URI does not contain a scheme.

string	Description
CIFS	Common Internet File System protocol.
FTP	File Transfer Protocol.
HTTP	Hypertext Transfer Protocol.
HTTPS	HTTP Secure protocol.
NSF	Network File System protocol.
OEM	A protocol defined by the manufacturer.
SCP	Secure File Copy protocol.
SFTP (v1.0.1+)	Secure File Transfer Protocol.
TFTP	Trivial File Transfer Protocol.

## Example Response

---

```
{  
  "@odata.type": "#UpdateService.v1_2_1.UpdateService",  
  "Id": "UpdateService",  
  "Name": "Update service",  
}
```

```

"Status": {
  "State": "Enabled",
  "Health": "OK",
  "HealthRollup": "OK"
},
"ServiceEnabled": true,
"HttpPushUri": "/FWUpdate",
"FirmwareInventory": {
  "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory"
},
"SoftwareInventory": {
  "@odata.id": "/redfish/v1/UpdateService/SoftwareInventory"
},
"Actions": {
  "#UpdateService.SimpleUpdate": {
    "target": "/redfish/v1/UpdateService/Actions/SimpleUpdate",
    "@Redfish.ActionInfo": "/redfish/v1/UpdateService/SimpleUpdateActionInfo"
  },
  "Oem": {}
},
"Oem": {},
"@odata.context": "/redfish/v1/$metadata#UpdateService.UpdateService",
"@odata.id": "/redfish/v1/UpdateService"
}

```

## VLANNetworkInterface 1.1.1

This resource describes the attributes of a Virtual LAN.

<b>Actions (v1.1.1+) {}</b>	object	read-write	The available actions for this resource.
<b>VLANEnable</b>	boolean	read-write (null)	This indicates if this VLAN is enabled.
<b>VLANId</b>	number	read-write (null)	This indicates the VLAN identifier for this VLAN.

### Example Response

```

{
  "@odata.type": "#VLANNetworkInterface.v1_1_1.VLANNetworkInterface",
  "Id": "1",
  "Name": "VLAN Network Interface",
  "Description": "System NIC 1 VLAN",
  "VLANEnable": true,
  "VLANId": 101,
  "@odata.context": "/redfish/v1/$metadata#VLANNetworkInterface.VLANNetworkInterface",
  "@odata.id": "/redfish/v1/Systems/437XR1138R2/EthernetInterfaces/12446A3B0411/VLANs/1"
}

```

## VirtualMedia 1.2.0

The VirtualMedia schema contains properties related to monitoring and control of an instance of virtual media such as a remote CD, DVD, or USB device. Virtual media functionality is provided by a Manager

for a system or device.

<b>Actions</b> (v1.1.1+) {	object	read-write	The available actions for this resource.
<b>#VirtualMedia.EjectMedia</b> { }	object	read-write	This action is used to detach remote media from virtual media. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>#VirtualMedia.InsertMedia</b> { }	object	read-write	This action is used to attach remote media to virtual media. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>ConnectedVia</b>	string (enum)	read-only (null)	Current virtual media connection methods. See <a href="#">ConnectedVia</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>Image</b>	string	read-write (null)	A URI providing the location of the selected image.
<b>ImageName</b>	string	read-only (null)	The current image name.
<b>Inserted</b>	boolean	read-write (null)	Indicates if virtual media is inserted in the virtual device.
<b>MediaTypes</b> [ ]	array (string (enum))	read-only	This is the media types supported as virtual media. See <a href="#">MediaTypes</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>WriteProtected</b>	boolean	read-write (null)	Indicates the media is write protected.

## Action Details

---

### EjectMedia

This action is used to detach remote media from virtual media.

(This action takes no parameters.)

### InsertMedia

This action is used to attach remote media to virtual media.

The following table shows the parameters for the action which are included in the POST body to the URI shown in the "target" property of the Action.

{			
<b>Image</b>	string	read-write	The URI of the remote media to attach to the virtual media.
<b>Inserted</b>	boolean	read-write	Indicates if the image is to be treated as inserted upon completion of the action.

<b>WriteProtected</b>	boolean	read-write	Indicates if the remote media is supposed to be treated as write protected.
-----------------------	---------	------------	---

## Property Details

---

### ConnectedVia:

Current virtual media connection methods.

string	Description
Applet	Connected to a client application.
NotConnected	No current connection.
Oem	Connected via an OEM-defined method.
URI	Connected to a URI location.

### MediaTypes:

This is the media types supported as virtual media.

string	Description
CD	A CD-ROM format (ISO) image.
DVD	A DVD-ROM format image.
Floppy	A floppy disk image.
USBStick	An emulation of a USB storage device.

## Example Response

---

```
{
  "@odata.type": "#VirtualMedia.v1_2_0.VirtualMedia",
  "Id": "CD1",
  "Name": "Virtual CD",
  "MediaTypes": [
    "CD",
    "DVD"
  ],
  "Image": "redfish.dmtf.org/freeImages/freeOS.1.1.iso",
  "ImageName": "mymedia-read-only",
  "ConnectedVia": "Applet",
  "Inserted": true,
  "WriteProtected": false,
  "@odata.context": "/redfish/v1/$metadata#VirtualMedia.VirtualMedia",
  "@odata.id": "/redfish/v1/Managers/BMC/VirtualMedia/CD1"
}
```



## Volume 1.0.3

Volume contains properties used to describe a volume, virtual disk, LUN, or other logical storage entity for any system.

<b>Actions</b> {	object	read-write	The available actions for this resource.
<b>#Volume.Initialize</b> { }	object	read-write	This action is used to prepare the contents of the volume for use by the system. <i>For more information, see the <a href="#">Action Details</a> section below.</i>
<b>BlockSizeBytes</b>	number (bytes)	read-only (null)	The size of the smallest addressable unit (Block) of this volume in bytes.
<b>CapacityBytes</b>	number (bytes)	read-only (null)	The size in bytes of this Volume.
<b>Encrypted</b>	boolean	read-write (null)	Is this Volume encrypted.
<b>EncryptionTypes</b> [ ]	array (string (enum))	read-write	The types of encryption used by this Volume. See <a href="#">EncryptionTypes</a> in <i>Property Details</i> , below, for the possible values of this property.
<b>Identifiers</b> { } [ ]	array (object)	read-write	The Durable names for the volume. See the <a href="#">Identifier object</a> definition in the <a href="#">Common Properties</a> section.
<b>Links</b> {	object	read-write	Contains references to other resources that are related to this resource.
<b>Drives</b> [ {	array	read-only	An array of references to the drives which contain this volume. This will reference Drives that either wholly or only partly contain this volume.
<b>@odata.id</b>	string	read-only	Link to a Drive resource. See the Links section and the <a href="#">Drive</a> schema for details.
} ]			
<b>Oem</b> { }	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>Operations</b> [ {	array	read-write	The operations currently running on the Volume.
<b>AssociatedTask</b> {	object	read-only	A reference to the task associated with the operation if any. See the <a href="#">Task</a> schema for details on this property.
<b>@odata.id</b> }	string	read-only	Link to a Task resource. See the Links section and the <a href="#">Task</a> schema for details.
<b>OperationName</b>	string	read-only (null)	The name of the operation.
<b>PercentageComplete</b>	number	read-only (null)	The percentage of the operation that has been completed.

}]			
<b>OptimumIOSizeBytes</b>	number (bytes)	read-only (null)	The size in bytes of this Volume's optimum IO size.
<b>Status { }</b>	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.
<b>VolumeType</b>	string (enum)	read-only (null)	The type of this volume. See <a href="#">VolumeType</a> in <i>Property Details</i> , below, for the possible values of this property.

## Action Details

---

### Initialize

This action is used to prepare the contents of the volume for use by the system.

(This action takes no parameters.)

## Property Details

---

### EncryptionTypes:

The types of encryption used by this Volume.

string	Description
ControllerAssisted	The volume is being encrypted by the storage controller entity.
NativeDriveEncryption	The volume is utilizing the native drive encryption capabilities of the drive hardware.
SoftwareAssisted	The volume is being encrypted by software running on the system or the operating system.

### VolumeType:

The type of this volume.

string	Description
Mirrored	The volume is a mirrored device.
NonRedundant	The volume is a non-redundant storage device.
RawDevice	The volume is a raw physical device without any RAID or other virtualization applied.
SpannedMirrors	The volume is a spanned set of mirrored devices.
SpannedStripesWithParity	The volume is a spanned set of devices which uses parity to retain redundant information.
StripedWithParity	The volume is a device which uses parity to retain redundant information.

## Example Response

```
{
  "@odata.type": "#Volume.v1_0_3.Volume",
  "Id": "2",
  "Name": "Virtual Disk 2",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "Encrypted": false,
  "VolumeType": "NonRedundant",
  "CapacityBytes": 107374182400,
  "Identifiers": [
    {
      "DurableNameFormat": "UUID",
      "DurableName": "0324c96c-8031-4f5e-886c-50cd90aca854"
    }
  ],
  "Links": {
    "Drives": [
      {
        "@odata.id": "/redfish/v1/Systems/437XR1138R2/Storage/1/Drives/3D58ECBC375F"
      }
    ]
  },
  "Actions": {
    "#Volume.Initialize": {
      "target": "/redfish/v1/Systems/3/Storage/RAIDIntegrated/Volumes/1/Actions/VolumeInitialize",
      "InitializeType@Redfish.AllowableValues": [
        "Fast",
        "Slow"
      ]
    }
  },
  "@odata.context": "/redfish/v1/$metadata#Volume.Volume",
  "@odata.id": "/redfish/v1/Systems/437XR1138R2/Storage/1/Volumes/2"
}
```

## Zone 1.2.0

The Zone schema represents a fabric zone.

<b>Actions</b> (v1.1.1+) {}	object	read-write	The available actions for this resource.
<b>Identifiers</b> []	array ( )	read-write (null)	Identifiers for this zone. See the <a href="#">Identifier object</a> definition in the <a href="#">Common Properties</a> section.
<b>Links</b> (v1.1.1+) {}	object	read-write	Contains references to other resources that are related to this resource.
<b>Endpoints</b> [ {}	array	read-only	Represents an array of references to the endpoints that are contained in this zone.
<b>@odata.id</b>	string	read-only	Link to a Endpoint resource. See the Links section

			and the <a href="#">Endpoint</a> schema for details.
}]			
<b>InvolvedSwitches</b> [{	array	read-only	Represents an array of references to the switches in this zone.
<b>@odata.id</b>	string	read-only	Link to a Switch resource. See the Links section and the <a href="#">Switch</a> schema for details.
}]			
<b>Oem</b> {}	object	read-write	Oem extension object. See the OEM object definition in the <a href="#">Using this guide</a> section.
<b>ResourceBlocks</b> [{	array	read-only	An array of references to the Resource Blocks that are used in this Zone.
<b>@odata.id</b>	string	read-only	Link to a ResourceBlock resource. See the Links section and the <a href="#">ResourceBlock</a> schema for details.
}]			
}			
<b>Status</b> {}	object	read-write	See the <a href="#">Status object</a> definition in the <a href="#">Using this guide</a> section.

## Example Response

```
{
  "@odata.type": "#Zone.v1_2_0.Zone",
  "Id": "1",
  "Name": "SAS Zone 1",
  "Description": "SAS Zone 1",
  "Status": {
    "State": "Enabled",
    "Health": "OK"
  },
  "Links": {
    "Endpoints": [
      {
        "@odata.id": "/redfish/v1/Fabrics/SAS/Endpoints/Initiator1"
      },
      {
        "@odata.id": "/redfish/v1/Fabrics/SAS/Endpoints/Initiator2"
      },
      {
        "@odata.id": "/redfish/v1/Fabrics/SAS/Endpoints/Drive1"
      },
      {
        "@odata.id": "/redfish/v1/Fabrics/SAS/Endpoints/Drive3"
      }
    ]
  },
  "Oem": {},
  "@odata.context": "/redfish/v1/$metadata#Zone.Zone",
  "@odata.id": "/redfish/v1/Fabrics/SAS/Zones/1"
}
```

# Redfish documentation generator

This document was created using the Redfish Documentation Generator utility, which uses the contents of the Redfish schema files (in JSON schema format) to automatically generate the bulk of the text. The source code for the utility is available for download at the DMTF's Github repository located at <http://www.github.com/DMTF/Redfish-Tools>.

## ANNEX A

### Change log

Version	Date	Description
2018.1	2018-05-01	Initial release. Built from Redfish schemas released in DSP8010 version 2018.1
2017.0a	2017-05-19	Work in progress release to gather feedback on content and format.