Redfish API Schema Readme

Foreword

The following files are part of the Redfish Scalable Platforms Management API ("Redfish") development effort:

- DSP0226 - Redfish Specification - This file is the main Redfish Scalable Platforms Management API Specification.
- DSP2044 - Redfish Whitepaper - This is intended to be a non-normative document helping those new to Redfish understand how to interact with the Redfish Service and understand common functions and tasks.
- DSP2043 - Redfish Mockup - This is a mockup that can be used as sample of output from GETs from a Redfish Service. Informative in nature, it was used to develop the schema. A person can set up an NGINX or similar server and configure it to output JSON format and then use this directory for demonstration purposes.
- DSP8010 - Redfish Schema - This contains the Redfish Schema definitions. These files are normative in nature and are normatively referenced by the Redfish Specification. There are two Schema formats - CSDL (OData Common Schema Definition Language format, which is in XML) and JSON Schema. These Schema definitions should be functionally equivalent, thus specifying the schema in two different languages.

Redfish Schema Change log

Schema File	Version	Date	Description
(all files)	various	2016-8-28	Corrected Reference URI links to OData v4 (errata 3) and added Capabilities annotations to CSDL files.
ActionInfo	1.0.0	2016-8-12	Initial release. ActionInfo describes the parameters and other information necessary to perform a Redfish Action to a particular Action target.
Endpoint	1.0.0	2016-8-12	Initial release. An Endpoint is an entity that sends or receives protocol defined messages over a transport.
EndpointCollection	1.0.0	2016-8-12	Initial release. Collection of Endpoints.
Fabric	1.0.0	2016-8-12	Initial release. A Fabric consists of one or more Switches and may include Endpoints and Zones.
FabricCollection	1.0.0	2016-8-12	Initial release. Collection of Fabric resources.
MemoryChunks	1.0.0	2016-8-12	Initial release. Describes a Memory Chunk and memory Interleve Sets.
MemoryChunksCollection	1.0.0	2016-8-12	Initial release. Collection of Memory Chunks.
MemoryDomain	1.0.0	2016-8-12	Initial release. 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.

Schema File	Version	Date	Description
MemoryDomainCollection	1.0.0	2016-8-12	Initial release. Collection of Memory Domains.
PCIeDevice	1.0.0	2016-8-12	Initial release. Describes a PCIe Device attached to a system.
PCIeFunction	1.0.0	2016-8-12	Initial release. Describes a PCIe Function.
Port	1.0.0	2016-8-12	Initial release. Describes a Port of a Switch.
PortCollection	1.0.0	2016-8-12	Initial release. Collection of Ports.
SoftwareInventory	1.0.0	2016-8-12	Initial release. Describes an inventory of software components.
SoftwareInventoryCollection	1.0.0	2016-8-12	Initial release. Collection of Software components.
Switch	1.0.0	2016-8-12	Initial release. Describes a simple fabric Switch.
SwitchCollection	1.0.0	2016-8-12	Initial release. Collection of Switches.
UpdateService	1.0.0	2016-8-12	Initial release. Describes the Redfish Update Service.
VolumeCollection	1.0.0	2016-8-12	Initial release. Collection of Volumes.
Zone	1.0.0	2016-8-12	Initial release. Describes a simple fabric Zone.
ZoneCollection	1.0.0	2016-8-12	Initial release. Collection of Zones.
Chassis	1.3.0	2016-8-12	Added "IPBasedDrive" to "ChassisType" enumerations.
ComputerSystem	1.2.0	2016-8-12	Added "HostedServices" and "HostingRoles" properties. Added "MemoryDomains", "PCIeDevices", "PCIFunctions", and "Endpoints" links. Added "RemoteDrive" enumeration to "BootSourceOverrideTarget".

Schema File	Version	Date	Description
Drive	1.1.0	2016-8-12	Added "Operations" property and "Endpoints" link.
EthernetInterface	1.1.0	2016-8-12	Added "LinkStatus" property and "Endpoints" link.
EventDestination	1.1.0	2016-8-12	Added "OriginResources" and "MessageIds" properties.
LogEntry	1.1.0	2016-8-12	Added "EventType", "EventId", and "EventTimeStamp" properties.
Manager	1.2.0	2016-8-12	Added "PowerState" property.
MemoryMetrics	1.1.0	2016-8-12	Added "PredictedMediaLifeLeftPercent" property to the "HealthData" object.
Power	1.2.0	2016-8-12	Added "IndicatorLED" property to "PowerSupply" object.
Redundancy	1.1.0	2016-8-12	Added "RedundancyEnabled" property.
Resource	1.2.0	2016-8-12	Added "Deferring", "Quiesced", and "Updating" to "State" enumerations.
ServiceRoot	1.1.0	2016-8-12	Added links to "Fabrics", "StorageSystems", "StorageServices" and "UpdateService".
SessionService	1.1.0	2016-8-12	Added OEM Action capabilities.
Storage	1.1.0	2016-8-12	Added "Links" object and "Endpoints" link.
ComputerSystem	1.1.1	2016-8-12	Errata release. Clarified description of ComputerSystem and the "UUID" property.
ComputerSystem	1.0.3	2016-8-12	Errata release. Clarified description of ComputerSystem and the "UUID" property.

Schema File	Version	Date	Description
Drive	1.0.1	2016-8-12	Errata release. Added "Unencrypted" enumeration to EncryptionStatus and deprecated misspelled enumeration.
Event	1.1.1	2016-8-12	Errata release. Deprecated "Context" property in favor of the Event-specific "Context" contained within each Event.
Event	1.0.3	2016-8-12	Errata release. Deprecated "Context" property in favor of the Event-specific "Context" contained within each Event.
IPAddresses	1.0.3	2016-8-12	Errata release. Corrected validation patterns for "IPv4Address" and "SubnetMask". Added validation pattern for "Gateway".
Message	1.0.3	2016-8-12	Errata release. Corrected "MessageId" to mark it as a required property.
Resource	1.1.1	2016-8-12	Errata release. Removed errant "ReferenceableMember" entity type.
ServiceRoot	1.0.3	2016-8-12	Corrected validation pattern annotation for "RedfishVersion".
Storage	1.0.1	2016-8-12	Corrected type definition of the "Volumes" link.
Volume	1.0.1	2016-8-12	Corrected description of "VolumeType".
AttributeRegistry	1.0.0	2016-5-14	Initial release. An Attribute Registry is a set of key-value pairs that are specific to a particular implementation or product, such that creating standardized property names would be impractical. This schema describes the structure of a Registry, and also includes mechanisms for building user interfaces (menus) allowing consistent navigation of the contents.

Schema File	Version	Date	Description
Bios	1.0.0	2016-5-14	Initial release. Bios contains properties surrounding a BIOS Attribute Registry (where the system-specific BIOS attributes are described) and the Actions needed to perform changes to BIOS settings, which typically require a system reset to apply.
Drive	1.0.0	2016-5-14	Initial release. Drive contains properties describing a single physical disk drive for any system, along with links to associated Volumes.
Memory	1.0.0	2016-5-14	Initial release. Memory describes a memory module or similar memory device as part of a system.
MemoryCollection	1.0.0	2016-5-14	Initial release. A Collection of Memory resource instances.
MemoryMetrics	1.0.0	2016-5-14	Initial release. MemoryMetrics contains usage and health statistics for a single Memory module or device instance.
SecureBoot	1.0.0	2016-5-14	Initial release. This resource contains UEFI Secure Boot information. It represents properties for managing the UEFI Secure Boot functionality of a system.
Storage	1.0.0	2016-5-14	Initial release. Storage 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.
StorageCollection	1.0.0	2016-5-14	Initial release. A Collection of Storage resource instances.

Schema File	Version	Date	Description
Volume	1.0.0	2016-5-14	Initial release. Volume contains properties used to describe a volume, virtual disk, LUN, or other logical storage entity for any system.
(all files)	1.0.2	2016-3-31	Errata release of all schema files to adjust file naming conventions. CSDL schema files now have the major version appended to the end of the schema name (e.g., Chassis_v1), and json-schema files include the major/minor/errata version number (matching the namespace definitions in the schema as they did previously) in the filename, but are now prefaced with a 'v' and with underscore separators (e.g., Chassis.v1_0_2.json) to match the corrected namespace naming rules. Added LongDescriptions to 'Links' and 'Actions' objects throughout. Added 'Unit', 'Minimum', and 'Maximum' annotations throughout. Defined all unversioned resources in CSDL as 'abstract'. Corrected all string properties with enumerations to allow use of null (nullable). Marked all 'Links' and other NavigationProperties and embedded objects (ComplexTypes) as non-nullable. Improved schema description text, updated RFC references, and whitespace consistency throughout.
(all Collections)	n/a	2016-3-31	Corrected URI of the schema locations to the /schemas/v1 repository instead of the /schema location, which contains only the latest version of each schema. Corrected missing 'anyOf' structure to allow 'idref' references to collections.

Schema File	Version	Date	Description
(all files)	(various)	2016-3-31	Copies of all previously-released Redfish json-schema files have been created to follow the corrected json-schema filename format (v1_n_n instead of 1.n.n). The internal schema name references were updated to match this style, but otherwise the files are identical to their originally released content.
Chassis	1.2.0	2016-3-31	Added Links for ManagersInChassis, Drives, and Storage.
Chassis	1.1.2	2016-3-31	Errata release (see 1.0.2 errata description above). Corrected description for ManagedBy link. Deprecated 'Unknown' enumeration value for 'IndicatorLED'.
ComputerSystem	1.1.0	2016-3-31	Added Links for 'Bios', 'Memory', 'Storage', and 'SecureBoot'. Added 'MemoryMirroring' to the 'MemorySummary' object. Added 'TrustedModule' object. Added 'BootSourceOverrideMode' to 'Boot' object. Added 'SDCard' and 'UefiHttp' enumerations to 'BootSourceOverrideTarget' in 'Boot' object.
ComputerSystem	1.0.2	2016-3-31	Errata release (see 1.0.2 errata description above). Deprecated 'Unknown' enumeration value for 'IndicatorLED'.
Event	1.1.0	2016-3-31	Added 'Context' property.
EventService	1.0.2	2016-3-31	Errata release (see 1.0.2 errata description above). Corrected Unit annotations to use UCUM unit definitions.

Schema File	Version	Date	Description
JsonSchemaFile	1.0.2	2016-3-31	Errata release (see 1.0.2 errata description above). Corrected text in 'Schema' property descriptions to reference "@odata.type" instead of "Type".
Manager	1.1.0	2016-3-31	Added Link for 'ManagerInChassis'.
Manager	1.0.2	2016-3-31	Errata release (see 1.0.2 errata description above). Corrected descriptions for 'ServiceEntryPointUUID' to correctly match the intent of the property.
ManagerNetworkProtocol	1.0.2	2016-3-31	Errata release (see 1.0.2 errata description above). Corrected read-write permissions on all embedded objects. Corrected Unit annotations to use UCUM unit definitions.
Power	1.1.0	2016-3-31	Added 'InputRanges' array and 'Manufacturer' to 'PowerSupplies' object. Added enumerations to the 'LineInputVoltageType' property in 'PowerSupplies' that promote better interoperability and deprecated others whose terminology differs in meaning among vendors.
Power	1.0.2	2016-3-31	Errata release (see 1.0.2 errata description above). Corrected read-write permissions on all embedded objects. Corrected Unit annotations to use UCUM unit definitions.
Resource	1.1.0	2016-3-31	Added 'Identifier' object, 'Location' object and 'IndicatorLED' definitions for use throughout the Redfish data model. Added 'UnavailableOffline' enumeration to 'State' in 'Status' object.

Schema File	Version	Date	Description
Resource	1.0.2	2016-3-31	Errata release (see 1.0.2 errata description above). Corrected missing Required annotation on 'Id' property. Added 'Pattern' Redfish annotation for 'Oem' property names.
SessionService	1.0.2	2016-3-31	Errata release (see 1.0.2 errata description above). Added Unit annotations.
SimpleStorage	1.1.0	2016-3-31	Added 'CapacityBytes' to 'Devices' object.
SimpleStorage	1.0.2	2016-3-31	Errata release (see 1.0.2 errata description above). Corrected Unit annotations to use UCUM unit definitions.
Thermal	1.1.0	2016-3-31	Added 'Name' to 'Fan' object. Deprecated inconsistent 'FanName' in 'Fan'.
Thermal	1.0.2	2016-3-31	Errata release (see 1.0.2 errata description above). Corrected read-write permissions on all embedded objects. Corrected Unit annotations to use UCUM unit definitions.
Chassis	1.1.0	2015-11-25	Added 'PhysicalSecurity' object for Intrusion Detection sensor support.
Thermal	1.0.1	2015-9-17	Errata release. Renamed Fan 'ReadingRPM' property to 'Reading' as it was determined that the initial definition was too limiting. Added Fan property 'ReadingUnits' to allow for either RPM or percent-based fan readings. Corrected spelling errors throughout. Any future property name changes will result in a major version change to the schema file.

Schema File	Version	Date	Description
Chassis	1.0.1	2015-9-17	Errata release. Added missing 'PowerState' property intended for inclusion in v1.0.0. Corrected longDescription text of 'CooledBy'. Clarified longDescription of 'Reset' action.
ComputerSystem	1.0.1	2015-9-17	Errata release. Changed enumeration values of 'PowerState' to reflect a better set of real-world use cases. Corrected annotation name in longDescription of 'UefiTargetBootSourceOverride'.
Manager	1.0.1	2015-9-17	Errata release. Corrected longDescription text for both 'ManagerForChassis' and 'ManagerForSystem'.
Power	1.0.1	2015-9-17	Errata release. Corrected longDescription text for 'IntervalInMin'.
VLanNetworkInterface	1.0.1	2015-9-17	Errata release. Corrected maximum VLAN ID value.
(all files)	1.0.0	various	Initial release.