



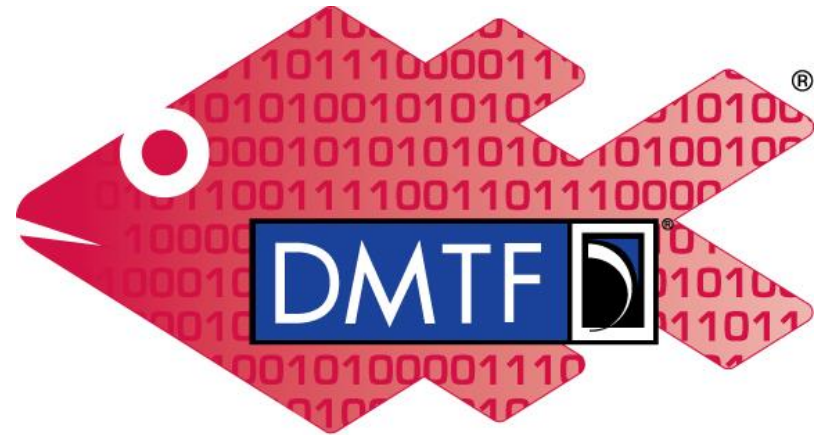
Redfish 2017 Release 3

DMTF Scalable Platforms Management Forum
December 2017



Redfish 2017 Release 3

- Redfish Specification v1.4.0
 - **NEW** query parameters: \$expand, \$filter, \$select
 - Clarified usage of HTTP response codes
 - Clarified HTTP header usage and requirements
 - Numerous other clarifications
- **NEW** Redfish Interoperability Profiles
 - New specification DSP0272 v1.0.0
 - New profile bundle DSP8013 v2017.1
 - Allows creation of property-level support checklist
- Redfish Schema Bundle 2017.3
 - **DSP8010_2017.3.ZIP** - contains current versions of all Redfish schema
- **NEW** Schemas v1.0.0
 - Assembly (manufacturing details), Boot Option (configure boot order)
- Updated schemas
 - Added multiple objects to EthernetInterface allowing complete DHCP configuration
 - Added properties to Power and Thermal to address feedback from ASHRAE and TGG
 - Numerous minor additions, errata and description clarifications throughout the schema



Redfish



Redfish Specification v1.4.0

- Minor release of the Specification (DSP0266)
 - Numerous clarifications and corrections, detailed in the Change Log
- Adds support for query parameters on GET requests
 - \$expand – Includes data from subordinate resources (especially collections) to allow highly-efficient data retrieval
 - \$select – Include only specified properties
 - \$filter – Include only members of a collection that match an expression
- Clarifications to HTTP header requirements and Status Code usage
 - Clarified HTTP status and payload responses after successful processing of data modification (POST, PATCH or PUT) requests
 - Added HTTP status code entries for 428 and 507 to clarify the proper response to certain error conditions
 - Detailed client's and service's HTTP header requirements and usage



Redfish Interoperability Profile Specification v1.0.0

- An “Interoperability Profile” provides a common ground for Service implementers, client software developers, and users
 - A profile applies to a particular category or class of product (e.g. “Front-end web server”, “NAS”, “Enterprise-class database server”)
 - It specifies Redfish implementation requirements, but *is not* intended to mandate underlying hardware/software features of a product
 - Provides a target for implementers to meet customer requirements and a baseline of schema and property-level support for software developers utilizing Redfish
 - Enable customers to easily specify Redfish functionality / conformance in RFQs
- Specification (DSP0272) defines a machine-readable Profile definition
 - JSON document designed to be human-readable and easy to create
- Profiles will be created by DMTF, partner organizations, and others
 - DMTF will provide re-publication via the Redfish Developer Hub
 - Published profiles will be included in a bundle for download (DSP8013)
- DMTF open source utility available to test conformance to a Profile
 - <https://github.com/DMTF/Redfish-Interop-Validator>



New Redfish Schemas

- **BootOption v1.0.0**
 - Describes a single, bootable target device for a Computer System
 - The BootOption Collection allows for configuration of boot order
 - Does not replace the temporary *BootSourceOverride* function
 - Boot Option describes the permanent boot order
 - Override is used for temporary (usually one-time) changes to the boot order
- **Assembly v1.0.0**
 - Describes manufacturing data useful for service personnel
 - Data usually stored in EEPROMs and heavily binary-encoded
 - Does not replace product identification properties (part #, serial #, etc.)
 - Single resource allows for multiple assembly descriptions
 - Adds mechanism to extract a binary image for service/support analysis
- **Protocol**
 - Supporting schema file to contain the common *Protocol* property



Redfish Schema Minor Revisions (1 of 6)

- Chassis v1.6.0
 - Added *Assembly* resource link
 - Added *StorageEnclosure* enumeration to *ChassisType*
- ComputerSystem v1.5.0
 - Added *BootOrder* and *Assembly* resource links
 - New *SetDefaultBootOrder* Action
 - Added links to *ConsumingComputerSystems* and *SupplyingComputerSystems* for describing aggregated systems
 - Added *SubModel* to describe product model variations
 - Added *LogicalProcessorCount* to *ProcessorSummary*
- Drive v1.3.0
 - Added *Assembly* resource link
- Endpoint v1.1.0
 - Added *IPTransportDetails* object

Redfish Schema Minor Revisions (2 of 6)

- EthernetInterface v1.4.0
 - New objects to allow for full configuration of DHCP and SLAAC support
 - Configuration objects to support both *DHCPv4* and *DHCPv6* added
 - Separate *StatelessAddressAutoConfig* object added
 - New objects create a consistent configuration pattern
 - Separate objects or properties for the desired configuration vs. actual “in use”
 - New *IPv4StaticAddresses* allows for Static IP address configuration regardless of DHCP configuration or usage
 - New *IPv6StaticDefaultGateways* and *StaticNameServers* arrays
- LogEntry v1.3.0
 - Added *OemLogEntryCode* and *OemSensorType* properties to allow for legacy IPMI OEM definitions
- LogService v1.1.0
 - Added *LogEntryType* to describe the content type of a log



Redfish Schema Minor Revisions (3 of 6)

- **Memory v1.4.0**
 - Added *VolatileSizeMib*, *NonVolatileSizeMiB*, *CacheSizeMiB*, *LogicalSizeMiB* properties to provide discrete memory size for each type
 - Added *Location* object
- **MemoryChunks v1.2.0**
 - Added *Status* object
- **NetworkAdapter v1.1.0**
 - Added *Assembly* resource link
 - Added *Location* object to *Controllers* object
- **NetworkDeviceFunction v1.2.0**
 - Added *Endpoints* resource link
- **PCIeDevice v1.2.0**
 - Added *Assembly* resource link



Redfish Schema Minor Revisions (4 of 6)

- PhysicalContext v1.3.0
 - Added additional enumerations to *PhysicalContext*
- Port v1.1.0
 - Added *Location* object
- Power v1.5.0
 - Several additions to *PowerSupplies* object array
 - Based on feedback from **ASHRAE** and **The Green Grid** industry groups
 - *PowerInputWatts*, *PowerOutputWatts*, and *EfficiencyPercent* properties
 - *Assembly* resource link
 - *Location* object
- Processor v1.2.0
 - Added *Assembly* resource link
- Redundancy v1.3.0
 - Added *NotRedundant* enumeration to *Mode* (now a read-write property)



Redfish Schema Minor Revisions (5 of 6)

- Resource v1.6.0
 - Added *Latitude*, *Longitude* and *AltitudeMeters* to *Location* object
- ServiceRoot v1.3.0
 - Added *Product* property for general product identification
 - Added *ProtocolFeaturesSupported* object to allow for discovery of supported optional Redfish protocol features
- Storage v1.4.0
 - Added *Assembly* resource link
- Switch v1.1.0
 - Added *Location* object



Redfish Schema Minor Revisions (6 of 6)

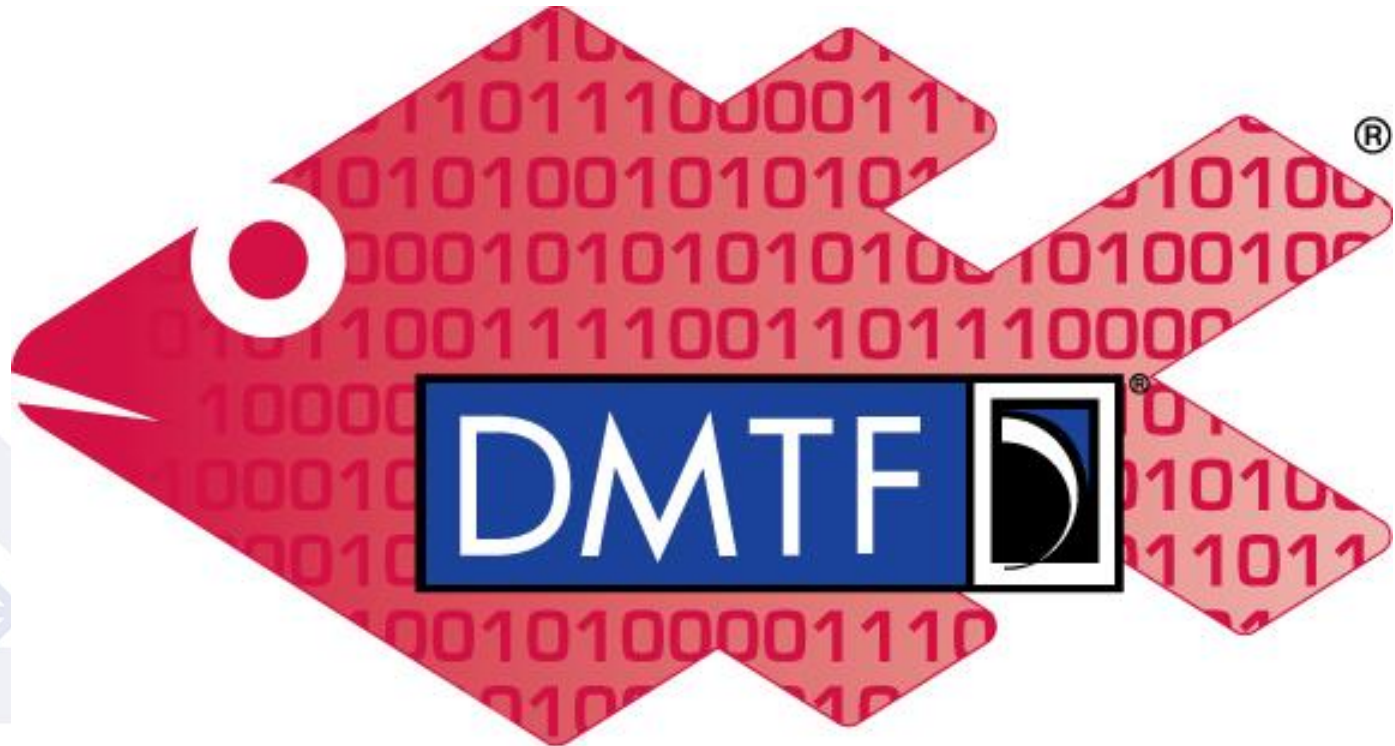
- Thermal v1.4.0
 - Added *Assembly* resource link to *Fan* object
 - Several additions to *Temperatures* object array
 - Based on feedback from **ASHRAE** and **The Green Grid** industry groups
 - *DeltaReadingCelsius* and *DeltaPhysicalContext* for describing a temperature change rather than an absolute temperature reading
 - *MaxAllowableOperatingValue*, *MinAllowableOperatingValue*, *AdjustedMaxAllowableOperatingValue*, and *AdjustedMinAllowableOperatingValue* for reporting the range of allowable operating temperatures for a given piece of equipment
- VirtualMedia v1.2.0
 - New *InsertMedia* and *EjectMedia* Actions to control virtual media usage
 - *Image*, *Inserted* and *WriteProtected* are now read-write properties
- Zone v1.2.0
 - Added *Identifiers* property

Errata Schema Revisions

- Added or corrected parameter descriptions in Action definitions throughout the schema
- Action Parameters are now described in JSON schema
- Changed internal schema location several properties to allow those commonly-defined properties to be referenced externally
- IPAddresses v1.0.6
 - Corrected *PrefixLength* in *IPv6StaticAddresses* to be a read-write property
- Memory v1.x.x
 - Corrected description of *OperatingSpeedMHz* to reflect changes in memory device reporting (value may be in MHz or MT/s, but will match published specifications in either case)
- Complete errata details shown in the Change Log within DSP8010



Q&A & Discussion



Redfish