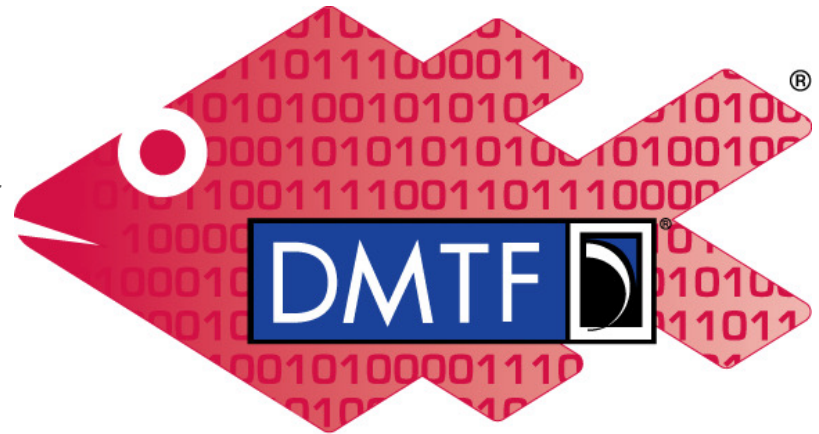# Redfish Release 2024.1

DMTF Redfish Forum

May 2024

Redfish Release 2024.1

- ## Redfish Specification v1.20.1 (errata release)
  - Clarified that privilege enforcement is required when sending events
  - Added "Transiently unavailable resources" clause to describe best practices for showing status of devices in an unavailable state
  - Clarified $expand query parameter to show HTTP 200 as the proper response code when a resource collection is partially expanded

- ## Redfish Schema Bundle 2024.1
  - DSP8010 contains all released Redfish schemas

- ## Redfish Message Registry Bundle 2024.1
  - DSP8011 contains all released Redfish registries
  - Added *NVRAMClearAsserted* and *SecurityBypassAsserted* to Platform v1.1.0
  - Added *PropertyValueModifiedByClient* to ResourceEvent v1.4.0
  - Added *NoTargetsDetermined* to Update v1.1.0

- ## Redfish Interoperability Profile Specification v1.8.0
  - Added *ChassisType, DriveProtocol, MemoryType, PortProtocol,* and *ProcessorType* as additional UseCaseType methods to allow selection of resources based on type information from a parent or related resource in the tree

- ## 29 Updated schemas (highlights)
  - See release notes in DSP8010 for errata details
  - Deprecated and replaced *ThroughputReductionSupport* with *TemporaryThroughputReductionSupported* for CXL devices
  - Added part identification (*Manufacturer, Model, SKU, SerialNumber, PartNumber, SparePartNumber, UserLabel) to* **Sensor**
  - Added *ResetMetrics* to **PortMetrics**, **NetworkAdapterMetrics***,* and **NetworkDeviceFunctionMetrics**

- ## Download all published material at: http://www.dmtf.org/standards/redfish

Redfish Interoperability Profile Specification v1.8

- Created additional *UseCaseType* values for selecting resources based on a subset of parent resources in the tree

    - ChassisType – Compare value of *ChassisType* in the parent **Chassis**

    - DriveProtocol – Compare value of *Protocol* in the parent **Drive**

    - MemoryType – Compare value of *MemoryType* in the parent **Memory**

    - PortProtocol – Compare value of *Protocol* in the parent **Port**

    - ProcessorType – Compare value of *ProcessorType* in the parent **Processor**

- This allows for use cases where the "device type" is determined in a parent resource, for example:

    - Set **MemoryMetrics** requirements for NV-DIMM memory devices

        - *MemoryType* != "DRAM" in the parent **Memory** resource

    - Require **PowerSupply** resource support, but only for rack-mount servers

        - *ChassisType* = "RackMount" in the parent **Chassis** resource

    - Set **DriveMetrics** requirements for NVMe drives

        - *DriveProtocol* = "NVMe" in the parent **Drive** resource

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Schema and Registry Guide documents

- Redfish Data Model Specification (DSP0268)
    - Document was previous titled "Redfish Schema Supplement"
    - Now includes normative statements ("LongDescription") and informative description details from schema in a single document
    - Intended for both Redfish Service and client-side developers
- Redfish Resource and Schema Guide (DSP2046)
    - Presents schema (data model) contents in a more friendly format for end users
    - Includes example payloads for each resource type
- Redfish Message Registry Guide (DSP2065)
    - Presents message registry definitions in a more human-readable format
    - Includes summary table and individual message details
- Redfish Property Guide (DSP2053)
    - Provides an alphabetical list of all properties defined in Redfish schema
    - Useful for schema writers to locate existing definitions or properties
    - Helps avoid re-defining property names already in use

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Available Redfish conformance testing tools

- DMTF Redfish Forum provides open source tools for service developers to validate their conformance with the Redfish protocol, data model, and profiles
- **Redfish Protocol Validator**
  - Tests a live service for conformance to the Redfish HTTP protocol, including response headers and status codes
  - https://github.com/DMTF/Redfish-Protocol-Validator
- **Redfish Service Validator**
  - Tests a live service for conformance with Redfish schemas, ensuring the returned JSON payloads validate against the standard data models
  - Recommend that developers run this tool first, as errors in payload are more likely to cause issues for end users and interoperability
  - https://github.com/DMTF/Redfish-Service-Validator
- **Redfish Interop Validator**
  - Tests a service against a Redfish interoperability profile
  - https://github.com/DMTF/Redfish-Interop-Validator

Redfish-Publications repository

- Public GitHub repository contains an official read-only copy of the Redfish schemas and standard message registries
  - https://github.com/DMTF/Redfish-Publications
  - Creates public, durable locations for referencing specific schema or registry items in issue reports, forum postings, or other online references
  - Allows developers to automatically synchronize with new Redfish releases using normal GitHub tools and processes
- Repository will be updated as each Redfish release become public
- Contains materials published as DSP8010 and DSP8011
  - **/csdl** – Redfish schemas in OData CSDL XML format
  - **/json-schema** – Redfish schemas in JSON Schema format
  - **/openapi** – Redfish schemas in OpenAPI YAML format
  - **/dictionaries** – RDE dictionaries
  - **/registries** – Redfish standard message registries

Redfish Schema

MINOR REVISION DETAILS

- AddressPool v1.3.0
  - Deprecated *ARPSupressionEnabled* and *NDPSupressionEnabled* in favor of *ARPSuppressionEnabled* and *NDPSuppressionEnabled*

- Battery v1.3.0
  - Added *NominalOutputVoltage*

- Circuit v1.8.0
  - Added *NominalFrequencyHz*

- CXLLogicalDevice v1.2.0
  - Deprecated *TemporaryThroughputReductionSupported* in favor of *TemporaryThroughputReductionSupported* in **PCIeDevice**

- Drive v1.19.0
  - Added *SparePartNumber* and *ConfigurationLock*

- Endpoint v1.x.0
  - Deprecated URIs subordinate to `Storage` resources

- LeakDetector v1.1.0
  - Added *UserLabel*

- LogService v1.7.0
  - Added *DiagnosticDataDetails* and *AutoClearResolvedEntries*
- Memory v1.20.0
  - Added *PowerManagementICManufacturerID*, *PowerManagementICRevisionID*, and *CacheLevel*
  - Added "Cache" to *MemoryType*
- NetworkAdapter v1.11.0
  - Added *Reset* action
- NetworkAdapterMetrics v1.1.0
  - Added *ResetMetrics* action
- NetworkDeviceFunctionMetrics v1.2.0
  - Added *ResetMetrics* action
- OutletGroup v1.2.0
  - Added *OutletGroupType*
  - Added *OutletGroups* to *Links*

Redfish Schema Minor Revisions (3 of 5)

- **Protocol**
  - Added "eMMC" to the list of protocols
- **PCIeDevice v1.14.0**
  - Added *TemporaryThroughputReductionSupported* and *TemporaryThroughputReductionEnabled* to *CXLDevice*
  - Deprecated *ThroughputReductionSupport* in *CXLDevice* in favor of *TemporaryThroughputReductionSupported*
- **PCIeFunction v1.6.0**
  - Added *SegmentNumber, BusNumber, DeviceNumber,* and *FunctionNumber*
- **Port v1.12.0**
  - Deprecated *TemporaryThroughputReductionEnabled* and *TemporaryThroughputReductionSupported* in favor of *TemporaryThroughputReductionSupported* and *TemporaryThroughputReductionEnabled* in **PCIeDevice**
  - Deprecated *PortId* in favor of *ServiceLabel* in *Location*
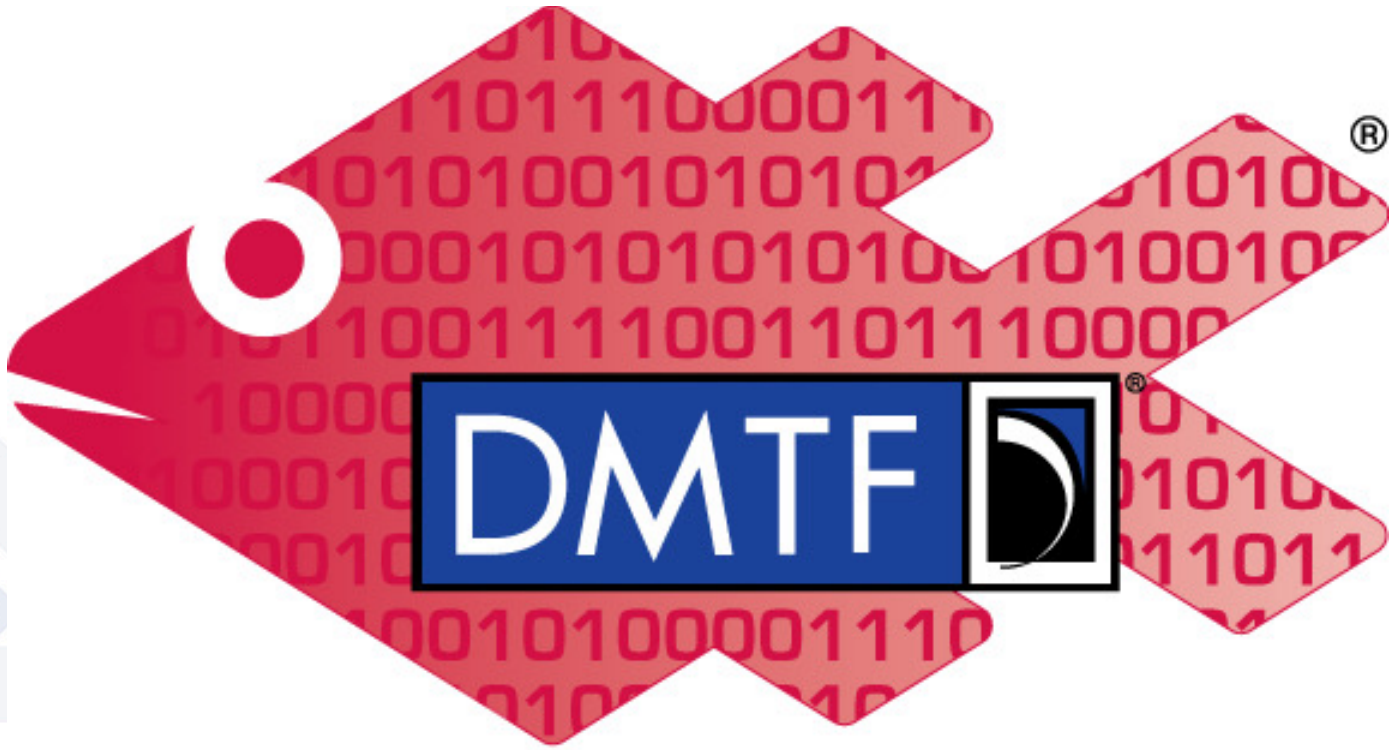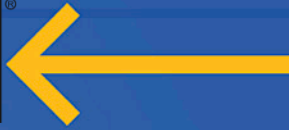- **PortMetrics v1.6.0**
  - Added *ResetMetrics* action

Redfish Schema Minor Revisions (4 of 5)

- PowerDistribution v1.4.0
  - Added the *PowerCapacityVA*
- PowerSupply v1.6.0
  - Added *Certificates*
- Processor v1.20.0
  - Added *CacheMemory*
- Pump v1.1.0
  - Added *SpeedControlPercent*
- Resource v1.19.0
  - Deprecated "Qualified" in *State* in favor of *StandbySpare*
  - Added "Degraded" to *State*
- Sensor v1.9.0
  - Added *Manufacturer, Model, SKU, SerialNumber, PartNumber, SparePartNumber, UserLabel*, and *LifetimeStartDateTime*

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Redfish Schema Minor Revisions (5 of 5)

- ## ServiceRoot v1.17.0
  - Added *TopSkipQuery, FilterQueryComparisonOperations*, and *FilterQueryCompoundOperations* to *ProtocolFeaturesSupported*

- ## Settings v1.4.0
  - Added "OnTargetReset" to *OperationApplyTime*

- ## Storage v1.16.0
  - Added *RekeyExternalKey* action
  - Added *NVMeSubsystemProperties* and *ConfigurationLock*

- ## Triggers v1.4.0
  - Added *TriggerEnabled* and *TriggerActionMessage*

- ## UpdateService v1.14.0
  - Added "OnTargetReset" to *ApplyTime* in *HttpPushUriApplyTime*

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