Redfish Release 2024.1

DMTF Redfish Forum
May 2024
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- Redfish Specification v1.20.1 (errata release)
  - Clarified that privilege enforcement is required when sending events
  - Added "Transitionally 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 ProfileSpecification 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
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

  - 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
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](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](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](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
Redfish Schema Minor Revisions (1 of 5)

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

- **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`
Redfish Schema Minor Revisions (2 of 5)

- **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`, `PartNumber`, `SparePartNumber`, `UserLabel`, and `LifetimeStartDateTime`
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 `HttpContextApplyTime`