Redfish Release 2021.4

DMTF Redfish Forum
December 2021
Redfish Release 2021.4

- Redfish Specification v1.15.0
  - Updated Operation apply time and Multipart HTTP push updates to expand usage of OperationApplyTimeSupport
- Redfish Specification v1.14.2
  - Errata release
- Redfish Schema Bundle 2021.4
  - DSP8010 contains all released Redfish schemas
- Redfish Message Registry Bundle 2021.4
  - DSP8011 contains all released Redfish registries
  - StorageDevice v1.1.0 adds new messages for controller and battery-related conditions
  - ResourceEvent v1.2 adds AggregationSourceDiscovered
- Redfish Interoperability Profile v1.5.0
  - Added JSON Pointer support for property-level comparisons
- 4 NEW Schemas, 29 updated schemas
  - Addition of ComponentIntegrity, ManagerDiagnosticData, RegisteredClient, and ServiceConditions schemas
  - See release notes in DSP8010 for errata details
- Download all published material at: http://www.dmtf.org/standards/redfish

- Guide documents are updated for each schema (DSP8010) release
  - Description text for properties taken directly from schema files
  - DMTF documentation generator creates these guide documents
- Redfish Resource and Schema Guide (DSP2046)
  - Presents schema definition contents in a more human-readable format
  - Includes example payloads for each schema
- 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
- Redfish Schema Supplement (DSP0268)
  - Presents normative (“LongDescription”) schema definition contents
  - Useful for Redfish Service developers to ensure conformance
NEW Component Integrity Model

- New **ComponentIntegrity** resource to represent security related information between two entities (typically a BMC and end device)
  - Measurement information
  - Secure channel information
  - Health of the channel between the devices
  - Action to return signed measurements from the end device
- **ComponentIntegrity** resources located in a collection off service root
  - Provides a single location for a client to discover all internal secure channels and their status
- Model aligns with SPDM and TPM types of devices
  - Additional technologies can be added over time as needed
NEW RegisteredClient and ServiceConditions

- **RegisteredClient** resource collection enables clients to be aware of other clients to limit configuration from a single client when desired
  - Intended as a cooperative approach from clients, no enforcement required (or expected) from Manager
  - Clients may check for other registered clients to inform users of other configuration tools to limit “collisions”
  - Allows clients to register for configuration of collections and down to individual resources if necessary

- **ServiceConditions** resource provides a roll up of all active, non-normal status conditions that require attention
  - Located at /redfish/v1/ServiceConditions
  - Uses the common object definition for Conditions[] within Status
  - Allows clients to retrieve a “status dashboard” with a single operation
Redfish Schema Minor Revisions (1 of 6)

- **Cable v1.2.0**
  - Added “CDFP” and “OSFP” to `CableType`
- **Chassis v1.19.0**
  - Deprecated `Measurements` in favor of reporting measurements in the `ComponentIntegrity` resource
- **Circuit v1.4.0**
  - Added `UnbalancedVoltagePercent`, `UnbalancedCurrentPercent`, `PowerControlLocked`, `ConfigurationLocked`, and `PowerStateInTransition`
  - Added “PowerCycle” to `PowerState` parameter for `PowerControl`
- **ComputerSystem v1.17.0**
  - Added `OffloadedNetworkDeviceFunctions` to `Links`
  - Deprecated `Measurements` in favor of reporting measurements in the `ComponentIntegrity` resource
- **Control v1.1.0**
  - Added “Pressure” and “FrequencyMHz” to `ControlType`
Redfish Schema Minor Revisions (2 of 6)

- Drive v1.14.0
  - Added `NetworkDeviceFunctions` to `Links`
  - Deprecated `Measurements` in favor of reporting measurements in the `ComponentIntegrity` resource

- EnvironmentMetrics v1.2.0
  - Added `AbsoluteHumidity` and `EnergyJoules`

- EthernetInterface v1.8.0
  - Deprecated “Stateful” and “Stateless” for `OperatingMode` in `DHCPv6` in favor of “Enabled”

- Fabric v.3.0
  - Added `UUID`

- LogEntry v1.10.0
  - Added `Originator` and `OriginatorType`
Redfish Schema Minor Revisions (3 of 6)

- **Manager v1.14.0**
  - Added *ManagerDiagnosticData*
  - Deprecated *Measurements* in favor of reporting measurements in the *ComponentIntegrity* resource

- **Memory v1.14.0**
  - Deprecated *Measurements* in favor of reporting measurements in the *ComponentIntegrity* resource

- **NetworkAdapter v1.9.0**
  - Deprecated *Measurements* in favor of reporting measurements in the *ComponentIntegrity* resource

- **NetworkDeviceFunction v1.8.0**
  - Deprecated *PhysicalNetworkPortAssignment* in favor of *PhysicalNetworkPortAssignment* in *Links*

- **Outlet v1.4.0**
  - Added *PowerControlLocked*, *ConfigurationLocked*, and *PowerStateInTransition*
  - Added “PowerCycle” to *PowerState* parameter for *PowerControl*
Redfish Schema Minor Revisions (4 of 6)

- **OutletGroup v1.1.0**
  - Added `PowerControlLocked`, `ConfigurationLocked`, and `PowerStateInTransition`
  - Added “PowerCycle” to `PowerState` parameter for `PowerControl`
- **PCIeDevice v1.9.0**
  - Added `Slot` to describe slot capabilities
- **Port v1.6.0**
  - Added `InfiniBand` property with `AssociatedPortGUIDs`, `AssociatedNodeGUIDs`, and `AssociatedSystemGUIDs`
- **PowerDistributionMetrics v1.3.0**
  - Added `AbsoluteHumidity`
- **PowerSupply v1.3.0**
  - Added `LineInputStatus`
- **Processor v1.14.0**
  - Deprecated `Measurements` in favor of reporting measurements in the `ComponentIntegrity` resource
Redfish Schema Minor Revisions (5 of 6)

- **Resource v1.14.0**
  - Added *Resolution* to *Conditions*
  - Added *MACAddress* to *DurableNameFormat*

- **Sensor v1.5.0**
  - Added “*AbsoluteHumidity*” and “*PressurekPa*” to *ReadingType*
  - Added *ApparentkVAh*, *ReactivekVARh*, and *PhaseAngleDegrees* to *ReadingType*

- **ServiceRoot v1.13.0**
  - Added *ComponentIntegrity*, *RegisteredClients*, and *ServiceConditions* to *ServiceRoot*

- **SoftwareInventory v1.6.0**
  - Deprecated *Measurements* in favor of reporting measurements in the *ComponentIntegrity* resource

- **Storage v1.12.0**
  - Deprecated *Measurements* in favor of reporting measurements in the *ComponentIntegrity* resource
Redfish Schema Minor Revisions (6 of 6)

- **StorageController v1.5.0**
  - Deprecated *Measurements* in favor of reporting measurements in the *ComponentIntegrity* resource

- **Switch v1.8.0**
  - Deprecated *Measurements* in favor of reporting measurements in the *ComponentIntegrity* resource

- **UpdateService v1.11.0**
  - Added *ForceUpdate* to *SimpleUpdate*, multipart HTTP push updates, and *HttpPushUriOptions*
  - Added “*OnStartUpdateRequest*” to *ApplyTime* in *HttpPushUriApplyTime*
Redfish Schema Errata Revisions

- **Control v1.x.x**
  - Corrected usage of units in various descriptions for `ControlType`

- **Sensor v1.x.x**
  - Clarified “Altitude” is the elevation above sea level
  - Corrected usage of units in various descriptions for `ReadingType`
  - Corrected the minimum value for `PowerFactor`

- **Settings v1.x.x**
  - Clarified the behavior of the `MaintenanceWindowStartTime` property when not initialized by a user

- **(various schema and versions)**
  - Clarified default behavior of `VerifyCertificate`
  - Added normative ties to sensor and control excerpts to include requirements for the resource referenced by `DataSourceUri`