Redfish 2018 Release 3

DMTF Redfish Forum
December 2018
Redfish 2018 Release 3

- Redfish Specification v1.6.1
  - Errata release with numerous clarifications
- Redfish Schema Bundle 2018.3
  - DSP8010_2018.3.ZIP
  - Bundle contains all released Redfish schemas
- Redfish Registries 2018.2
  - Errata release of ‘Task’, ‘Resource’ registries
- Redfish Interoperability Profiles 2018.2
  - Errata releases of RedfishInteroperabilityProfile schema
- 10 NEW Schemas v1.0.0
  - AccelerationFunction, ProcessorMetrics, Sensor, RedfishError
- 20 Updated Schemas (highlights)
  - AccountService, ExternalAccountProvider, ManagerAccount – Added support for Certificates
  - ComputerSystem v1.6.0 – Added AliasBootOrder to allow for more usable Boot Order selection
  - Memory v1.7.0 – Replaced SecurityStates property with more usable properties
  - UpdateService v1.4.0 – Added Username and Password parameters to SimpleUpdate
  - Storage v1.6.0 – Added SupportedRAIDTypes to StorageControllers

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NEW Redfish Schemas for 2018.3

- CertificateService – Managing Security Certificates
  - CertificateService – Properties and Actions to manage security certificates
  - CertificateLocations – Location of all certificates within the resource tree
  - Certificate – Description of each security certificate
- Sensor
  - Core resource for defining a “sensor” in the Redfish data model
  - Expected usage throughout future DCIM and IoT resources
- AccelerationFunction – FPGAs and Programmable silicon
  - AccelerationFunction – Describes acceleration functions within a processor
  - ProcessorMetrics – Performance metrics (CPU, GPU, FPGA)
- Three Resource Collection schemas to support all the above
- RedfishError
  - Supporting schema definition useful for validating error response payloads
Certificate Management

- **NEW** Frequently-requested desire to manage certificates via the Redfish interface in an interoperable fashion
- **NEW** *CertificateService* resource off the Service Root
  - Contains service level Actions
    - GenerateCSR: Manage certificate signing requests from a user
    - ReplaceCertificate: Provide an atomic approach for deleting and adding a certificate
- **NEW** *CertificateCollection*
  - Perform standard Create and Delete operations for managing certificates
  - Collections added to resources that can have certificates installed to it
    - The location of the collection will inform the client about the relationship between the certificate and other resources in the data model
    - Able to control access to different certificate collections; some examples:
      - ConfigureSelf: Able to manage the certificates related to your account
      - ConfigureManager: Able to manage the certificates within the Manager tree
      - ConfigureComponents: Able to manage the certificates within the ComputerSystem tree
- **NEW** *CertificateLocations* resource contains links to all the certificates so administrators and auditors can easily obtain a complete set
Sensor

- **NEW** Sensor and SensorCollection is an architectural foundation for future Redfish resource definitions
  - Expect datacenter environmental equipment (e.g. power and HVAC) and IoT devices to take advantage of this model
- **A Redfish Sensor** is a monitoring device which produces a single reading
  - May include other related, time-coherent readings (e.g. Power, ReactiveVAR, etc.)
  - Reports physical context and other identification properties to describe its purpose
  - Metadata describing accuracy, sampling frequency, etc.
- **Sensor resource includes:**
  - *ReadingType* – The sensor type (temperature, voltage, etc.)
  - *Reading* – Value of the sensor (no Units in name to allow for generic software use)
  - *ReadingUnits* – Applies to all values in sensor (thresholds, reading)
    - Units shall be explicitly defined for each ReadingType to avoid mis-identification
    - Large-scale difference in magnitude handled by separate ReadingTypes (e.g. mW, kW)
  - *Thresholds* – Structured set of thresholds with a common definition
    - Severity, hysteresis, etc.

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Redfish Schema Minor Revisions (1 of 5)

- **AccountService v1.4.0**
  - Added *Certificates* property to *LDAP* and *ActiveDirectory* objects
- **AttributeRegistry v1.3.0**
  - Added *Oem* property to *Attributes* and *Menus*.
  - Added *Hidden* property to *Menus*
- **Chassis v1.9.0**
  - Added *Sensors* and *EnvironmentalClass* properties
- **ComputerSystem v1.6.0**
  - Added *AliasBootOrder*, *BootOrderPropertySelection*, and *PowerRestorePolicy* properties
  - Added *AddResourceBlock* and *RemoveResourceBlock* actions
- **Endpoint v1.3.0**
  - Added *AccelerationFunction* to the *EntityType* enumeration
Redfish Schema Minor Revisions (2 of 5)

- **Endpoint v1.2.0**
  - Added `AccelerationFunction` to the `EntityType` enumeration
- **ExternalAccountProvider v1.1.0**
  - Added `Certificates` property
- **ManagerAccount v1.2.0**
  - Added `Certificates` property
- **Memory v1.7.0**
  - Added "Intel3DXPoint" to the `MemoryMedia` enumeration
  - Added "HBM" and "HBM2" to the `MemoryDeviceType` enumeration
  - Added "Die" to the `BaseModuleType` enumeration
  - Deprecated "Unlocked" and "Frozen" enumerations in `SecurityStates`, as well as the `SecurityStates` property in favor of the new `SecurityState`, `ConfigurationLocked`, `ConfigurationLockCapable`, `DataLockCapable`, and `PassphraseLockLimit` properties

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Redfish Schema Minor Revisions (3 of 5)

- **MetricReport v1.1.0**
  - Added *Timestamp* property for the overall MetricReport

- **MetricReportDefinition v1.1.0**
  - Deprecated *Keys* property within *Wildcards* in favor of *Values* property to align with other schemas

- **PhysicalContext (unversioned)**
  - Added *PhysicalSubContext* property to allow for further differentiation within a particular context
  - Updated "Intake" and "Exhaust" descriptions to allow for calculated values over a region
Redfish Schema Minor Revisions (4 of 5)

- **Processor v1.4.0**
  - Added `TDPWatts`, `MaxTDPWatts`, `AccelerationFunctions`, and `Metrics`
  - Added various properties to support reporting and management of FPGAs
  - Added "Power" to `ProcessorArchitecture` enumerations
  - Added "PowerISA" to `InstructionSet` enumerations

- **ResourceBlock v1.3.0**
  - Added `ResourceBlockLimits` term
  - Added `Drives` property

- **ServiceRoot v1.5.0**
  - Added `Vendor`, `ResourceBlocks`, and `CertificateService` properties

- **Storage v1.6.0**
  - Added `SupportedRAIDTypes` to `StorageControllers`
Redfish Schema Minor Revisions (5 of 5)

- **Task v1.4.0**
  - Added *PercentComplete* property

- **TelemetryService v1.1.0**
  - Deprecated *MetricReportValues* parameter in *SubmitTestMetricReport* action in favor of the *GeneratedMetricReportValues* parameter in order to match the *MetricValues* definition of a MetricReport.

- **UpdateService v1.4.0**
  - Added *Username* and *Password* parameters to *SimpleUpdate*
  - Added *HttpPushUriOptions* and *HttpPushUriOptionsBusy* properties

- **VirtualMedia v1.3.0**
  - Added *UserName*, *Password*, *TransferProtocolType*, and *TransferMethod* properties
  - Added *UserName*, *Password*, *TransferProtocolType*, and *TransferMethod* parameters to *InsertMedia* action
Errata Schema Revisions (1 of 2)

- All schemas
  - Added *Revisions* annotation to describe additions, changes, and deprecations to allow each schema file to contain a free-standing history
  - Added *Release* annotation to enable documentation generator to include Redfish release bundle information
  - Various typographical corrections and improvements to descriptions
- Complete errata details shown in the Change Log within DSP8010
- AttributeRegistry v1.x.x
  - Clarified the description for *ValueName*. Added missing Required terms for *AttributeName* and *ValueName*
- Drive v1.x.x
  - Modified references to *Volume* to point to the Swordfish definition
- JsonSchemaFile v1.x.x
  - Removed strict normative wording about the format of the schema file name in favor of pointing to the specification for the acceptable format

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Errata Schema Revisions (2 of 2)

- **Redundancy v1.x.x**
  - Removed "Required" term on *MaxNumSupported*

- **ServiceRoot v1.x.x**
  - Allow *Product* property to be null

- **Storage v1.x.x**
  - Modified references to Volume to point to the Swordfish definition

- **Triggers v1.0.1**
  - Fixed description for the *RedfishEvent* enumeration

- **UpdateService v1.x.x**
  - Clarified *HttpPushUri* to indicate a client requires the same privileges as if performing operations on the UpdateService
Redfish Registries

- Released as DSP8011_2018.2.ZIP
- ResourceEvent Message Registry v1.0.1
  - Corrected `@odata.type` and `Id` property formats
  - Corrected invalid `ParamType` of “value” to use “number” or “string” as appropriate
- TaskEvent Message Registry v1.0.1
  - Corrected `@odata.type` and `Id` property formats.
  - Fixed spelling of the `TaskProgressChanged` event
  - Corrected invalid `ParamType` of “value” to use “number” or “string” as appropriate
Redfish Interoperability Profiles

- Released as DSP8013_2018.2.ZIP
- RedfishInteroperabilityProfile v1.0.3
  - Errata release. Corrected the type for CompareType to allow for booleans, numbers, and strings
- RedfishInteroperabilityProfile v1.0.2
  - Errata release. Corrected the depth of additionalProperties found in Parameters for ActionProfile

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