

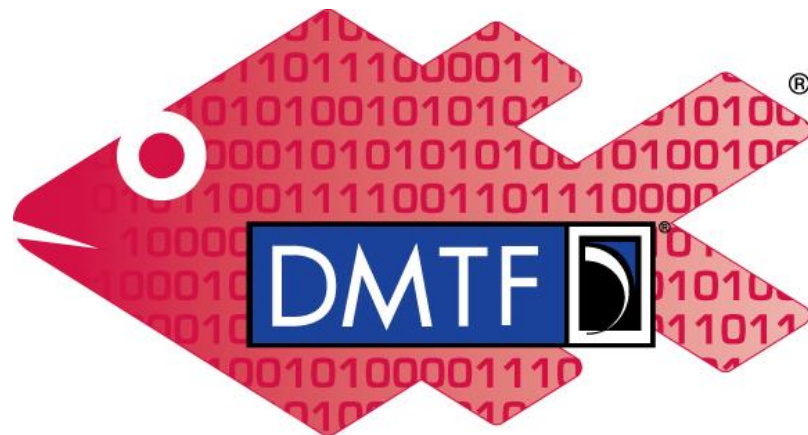


Redfish 2018 Release 3

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
 - Certificate, CertificateLocations, CertificateService (plus 3 Resource Collections)
- **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*



Redfish

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.

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

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 "CPUSubsystem", "GPUSubsystem", "FPGA", "Accelerator", "MemorySubsystem", "CoolingSubsystem", "Motor", "Transformer", "ACUtilityInput", "ACStaticBypassInput", "ACMaintenanceBypassInput", "DCBus", "ACOutput", and "ACInput" enumerations to *PhysicalContext* types.
 - 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

Errata Schema Revisions (2 of 2)

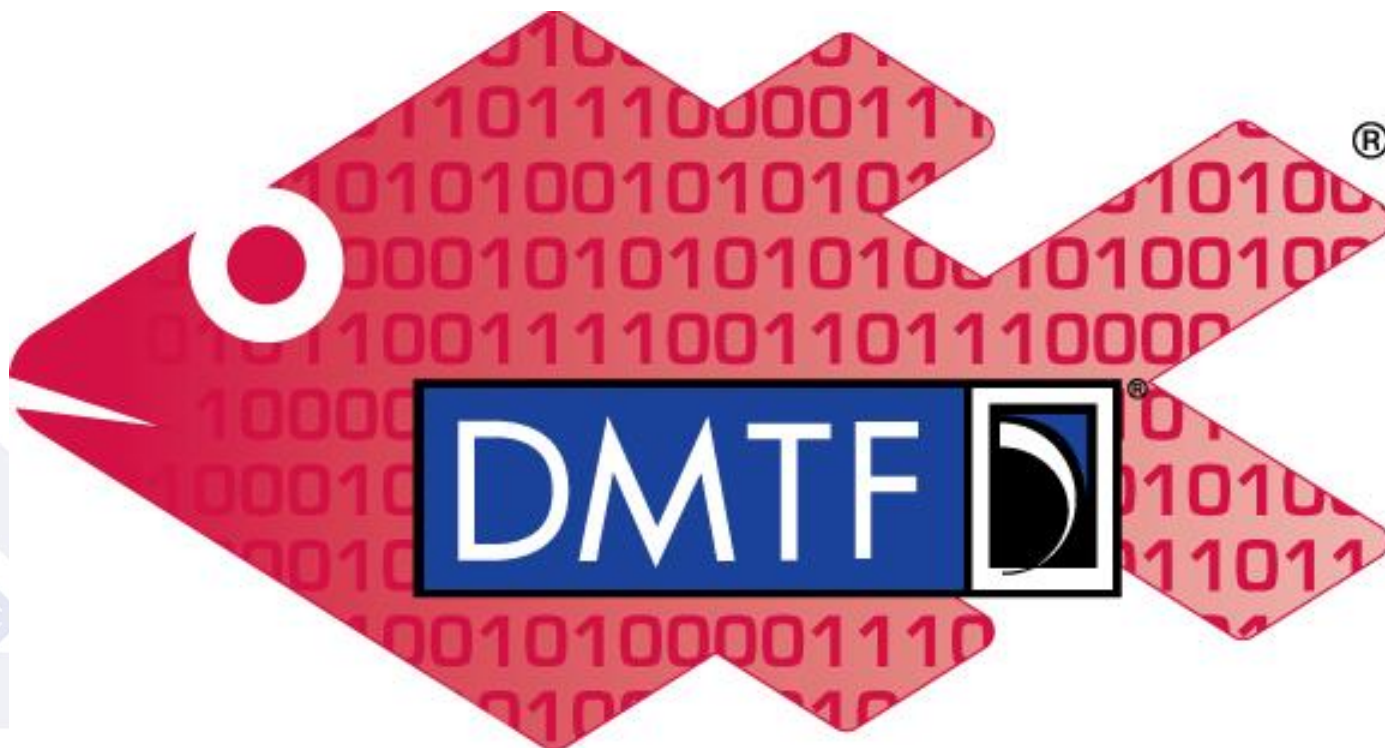
- Redundancy v1.x.x
 - Removed "Required" term on *MaxNumSupported*
- ServiceRoot v1.x.x
 - Allow *Product* property to be null
- Storage v1.x.x
 - Modified references to Volume to point to the Swordfish definition
- Triggers v1.0.1
 - Fixed description for the *RedfishEvent* enumeration
- UpdateService 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*



Redfish