Redfish 2016 Release 1

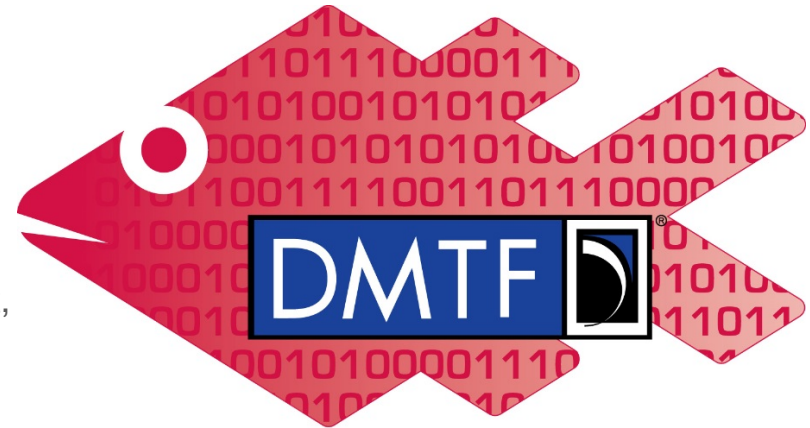**DMTF Scalable Platforms Management Forum**

May 2016

Information & Disclaimer

- The information in this presentation represents a snapshot of work in progress within the DMTF.

- This information is subject to change. The Standard Specifications remain the normative reference for all information.

- DMTF Specifications in progress are considered DMTF confidential and are being shown under existing work register agreements.

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- Non-member comments, feedback and submissions are subject to the DMTF Patent Policy statement

Redfish 2016 Release 1

- Redfish Specification v1.0.2 (errata)

- **NEW** Schemas v1.0.0
  - AttributeRegistry, Bios, Drive, Memory, MemoryCollection, MemoryMetrics, SecureBoot, Storage, StorageCollection, Volume

- Schemas v1.1.0 or v1.2.0 (minor revs)
  - Chassis, ComputerSystem, Event, Manager, Power, Resource, SimpleStorage, Thermal

- Schemas v1.x.2 (errata)

Schema Release Bundles (posted at http://www.dmtf.org/standards/redfish)

DSP8010_2016.1: All new, minor, and errata 2016.1 schemas

Individual file contents also posted on http://redfish.dmtf.org/schemas

DSP8010_2016.0.9a: Work in Progress

New schemas under development within SPMF

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Redfish Specification v1.0.2

- Errata release of the Specification (DSP0266)
  - No new features or functionality in this release (errata only)
  - Numerous clarifications and corrections, detailed in the Change Log
- Schema namespace rules were corrected
  - Schema versioning method conflicted with OData namespace definitions
  - Old: <schema name>.<major>.<minor>.<errata>
  - New: <schema name>.v<major>_<minor>_<errata>
  - Example: Chassis.v1_0_2 instead of Chassis.1.0.2
- OEM company-level property naming corrected
  - Use of colon ':' in JSON property names is problematic for some languages
  - Dot '.' separator also creates additional work for Javascript
  - Solution is to use underscore "_" instead for both of these cases
    - For compatibility, the colon and dot are allowed (but future use is discouraged)

New Redfish v1.0.0 Schemas (1 of 2)

- Bios
  - Allows viewing and changing System BIOS settings
  - Uses an AttributeRegistry to perform these functions

- AttributeRegistry
  - Adds ability to describe a large quantity of platform/vendor-specific properties ("attributes")
  - Can describe usage and menu structures for user interface displays

- SecureBoot
  - Properties for managing the UEFI Secure Boot functionality of a system

- Memory/MemoryCollection
  - Adds detailed DIMM Inventory and status

- Memory Metrics
  - Statistics and performance metrics for individual memory modules

New Redfish v1.0.0 Schemas (2 of 2)

- Storage/StorageCollection
  - This schema defines a storage subsystem and its respective properties
  - Includes storage controller/subsystem properties and links to the resources, such as volumes, that can be accessed from that subsystem
- Drive
  - Detailed hard drive and SSD inventory and status
- Volume
  - Contains properties used to describe a volume, virtual disk, LUN, or other logical storage entity for any system

Redfish Schema Minor Revisions (1 of 3)

- **Chassis v1.2.0**
  - Links entries for new Drive and Storage resources
  - Links entry for ManagersInChassis
    - Provides reference to the Manager(s) physically located in the chassis
- **ComputerSystem v1.1.0**
  - Links entries for new Bios, Memory, Storage and SecureBoot resources
  - MemoryMirroring in MemorySummary object
    - Reports system-level "memory mirroring" functionality
  - TrustedModule object
    - Reports status and configuration of a Trusted Platform Module (TPM)
  - BootSourceOverrideMode in Boot object
    - Allows switching between UEFI and "legacy" BIOS boot modes
  - New "*SDCard*" and "*UefiHttp*" enumerations to BootSourceOverrideTarget
    - Boot from SD Memory Card or use the UEFI boot from HTTP function

Redfish Schema Minor Revisions (2 of 3)

- **Event v1.1.0**
  - Context property
    - Information provided by the subscriber to be included with Event payloads
- **Manager v1.1.0**
  - Links entry for ManagerInChassis
    - Provides reference to the Chassis that physically contains the Manager
- **Power v1.1.0**
  - InputRanges, Manufacturer in PowerSupplies[]
    - Describes the range of input voltage(s) supported by the power supply
    - Manufacturer of the power supply
  - Improved enumerations in LineInputVoltageType in PowerSupplies
    - New values describe 'generic' input voltage ranges in place of terminology, which was used inconsistently among vendors.
    - Enumerations with inconsistently-used terminology have been deprecated.

Redfish Schema Minor Revisions (3 of 3)

- **Resource v1.1.0**
  - Identifier, Location, and IndicatorLED objects
    - Common functionality to apply across the data model
    - Allows specifying a standards-based device identification method
    - Provides structure for reporting physical location
    - Common functionality for a simple LED indicator light
  - "UnavailableOffline" enumeration added to State in Status
    - Shows a device in an invalid or incompatible configuration

- **SimpleStorage v1.1.0**
  - CapacityBytes added to Device
    - Reports the capacity of a storage device - missing from the v1.0.0 release

- **Thermal v1.1.0**
  - Name replaces FanName in Fan
    - Made usage of the "Name" property consistent with the data model

Errata Schema releases (1 of 2)

- All schemas revised to v1.x.2 for namespace convention corrections
  - CSDL (XML) files now follow <schema>_v1.xml filename format
  - json-schema files now follow <schema>.v1_x_x.json filename format
- All existing v1.x.x schemas were also re-published using the new json-schema filename structure. *Previously released schemas remain available and valid.*

- **Chassis v1.1.2**
  - Deprecates the "Unknown" value for IndicatorLED
- **ComputerSystem v1.0.2**
  - Deprecates the "Unknown" value for IndicatorLED
- **EventService v1.0.2**
  - Corrected Unit annotation(s) to match UCUM unit definitions
- **Manager v1.0.2**
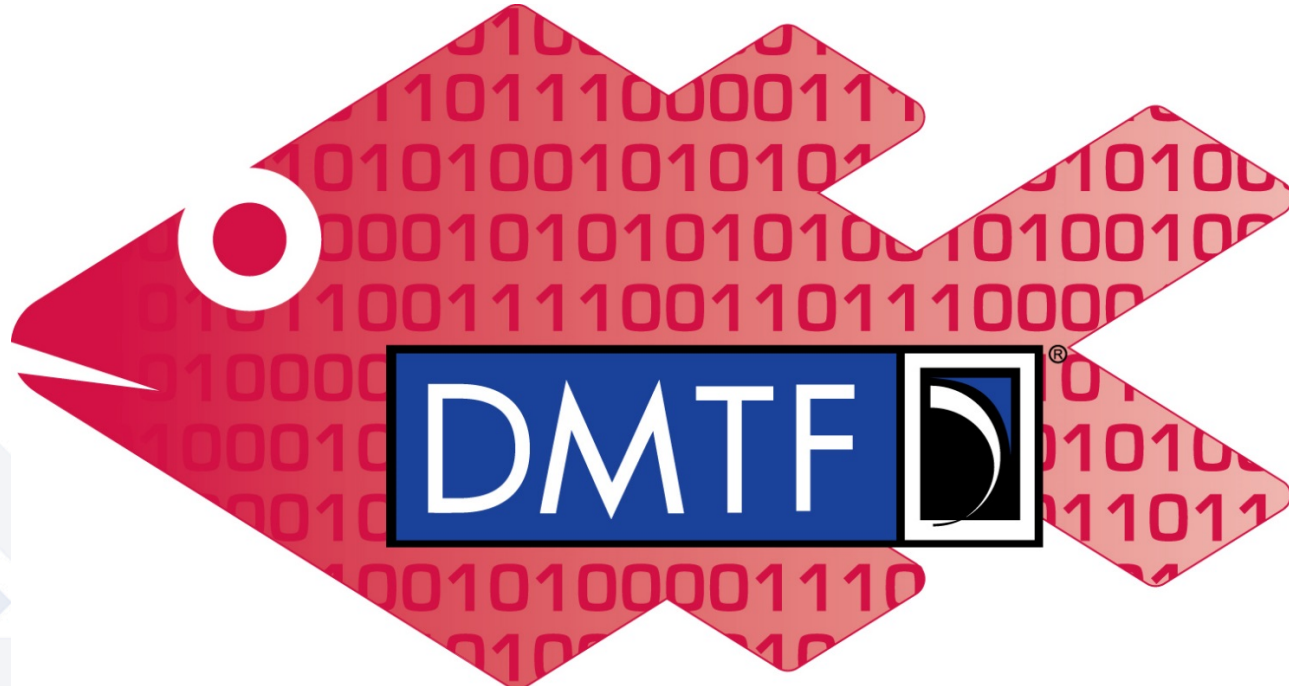 - Corrected description for ServiceEntryPointUUID to match intent

Errata Schema releases (2 of 2)

- **ManagerNetworkProtocol v1.0.2**
  - Corrected (confusing) read-write permissions on embedded objects
  - Corrected Unit annotation(s) to match UCUM unit definitions

- **Power v1.0.2**
  - Corrected (confusing) read-write permissions on embedded objects
  - Corrected Unit annotation(s) to match UCUM unit definitions

- **Resource v1.0.2**
  - Corrected missing Required annotation on 'Id' property
  - Added 'Pattern' Redfish annotation for 'Oem' property names

- **SessionService v1.0.2**
  - Added missing Unit annotation(s) to match UCUM unit definitions

- **SimpleStorage v1.0.2**
  - Corrected Unit annotation(s) to match UCUM unit definitions

- **Thermal v1.0.2**
  - Corrected (confusing) read-write permissions on embedded objects
  - Corrected Unit annotation(s) to match UCUM unit definitions

Q&A & Discussion