

## October 2021

### Issue Highlights

- Redfish Releases 2021.2
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## Redfish Releases 2021.2

DMTF's [Redfish](#)®. Release 2021.2 is now available for public download. Designed to deliver simple and secure management for hybrid IT and the Software Defined Data Center (SDDC), the latest release of the Redfish standard includes 8 new schemas, 42 schema updates and additional developer resources.



The new release includes the **OAuth 2.0 Authorization Framework** allowing for authorization to be performed by an external entity – no usernames or passwords need to be provided by the client. Additionally, there are several new additions to the support modeling use cases for **SmartNICs** including the AllowDenyCollection, which was added to NetworkDeviceFunction to show firewalling configurations; the ProcessorCollection was added to NetworkAdapter to show offload processors dedicated to a **SmartNIC**; and a DPU Value was added to SystemType in ComputerSystem to showcase a system-view of an SoC on a SmartNIC. Key provisioning via Redfish was also added to support **NVMe-oF** boot use cases where UEFI and the OS need key information to connect to remote NVMe-oF targets.

These latest enhancements are driven by the growth of Redfish and interoperability feedback received from implementers. Some of the items in the new Redfish 2021.2 update include:

- [Redfish Specification v1.14.0](#) – Adds OAuth 2.0 as a method of authorization and a new clause describing OEM-defined query parameters.
- [2021.2 Redfish Schema Bundle](#) – This .zip file contains the current versions of all Redfish schemas. The bundle includes 8 new schemas, 42 schema updates and additional developer resources.
  - Addition of AllowDeny, Battery, BatteryMetrics, Cable, Control, Key, KeyPolicy, KeyService schemas
  - Support for "power shelf" products (requested by Open Compute Project members) added to the PowerDistribution schema
  - New PowerLimitWatts and OperatingSpeedRangeMhz properties complete transition from Power and Thermal schemas
  - Added metrics for Fibre Channel devices to PortMetrics and NetworkDeviceFunctionMetrics
  - Includes Redfish Interoperability Profiles v1.4.0 – Adds support for documenting License and ContributedBy information within a Profile document. Updated both DSP0272 and DSP8013.
- [Redfish Message Registry Bundle 2021.2](#) – The Message Registry Bundle (DSP8011) contains all released Redfish message registries. The 2021.2 release adds a new HeartbeatEvent message registry for clients desiring periodic notifications.
- [Redfish Release 2021.2 Overview](#) – This presentation provides detailed descriptions of each revision in Redfish 2021.2.
- [Redfish Resource and Schema Guide](#) – Updated for 2021.2, this human-readable guide to the Redfish Schema is designed to help educate users of Redfish. Application developers and DevOps personnel creating client-side software to communicate with a Redfish service, as well as other consumers of the standard, will benefit from the explanations in this resource.
- [Redfish Property Guide](#) – Intended primarily for schema authors, this newly revised reference helps with locating existing property definitions within the Redfish schema.
- [Redfish Release History](#) – Updated with each new release, this presentation offers a comprehensive view of each revision to Redfish since 2016.

To learn more about Redfish, click [here](#). The [Redfish Developer Hub](#) is a one-stop, in-depth technical resource and provides all the files, tools, community support, tutorials and other advanced education you may need to help you use Redfish.

## DMTF Shares Wide-Spread Industry Support for Its Standards

[DMTF](#) recently announced that its Platform Level Data Model (PLDM) specifications have garnered industry-wide support and are actively helping to solve end-user concerns in a common, standardized way. DMTF's [Platform Management Communications Infrastructure \(PMCI\) Working Group](#) defines specifications that address customer needs through a simple standardized way. By using solutions based on PMCI standards, customers can anticipate reduced downtime, a secure and reliable platform, lower total cost of ownership, and interoperability at both the system and component levels. These widely used standards include PLDM for Firmware Update and PLDM for Redfish® Device Enablement (RDE).

The PLDM Firmware Update specification supports firmware updates of devices by using a standard method for obtaining current firmware version details, transferring a new code image to the device, and a consistent packaging format regardless of what type of device is being updated.

The PLDM for RDE specification enables a management controller to present [Redfish](#)-conformant management of I/O adapters in a server, without the need for code specific to each adapter family/vendor/model.

Both specifications can also be used in conjunction with other PMCI standards to provide a comprehensive, common architecture for improved communication between management subsystem components.

"DMTF standards provide common management infrastructure components for instrumentation, control and communication in a platform-independent and technology neutral way," said Jeff Hilland, president of DMTF. "These two specifications are examples of delivering value to our members, customers and the industry by building an ecosystem that is truly interoperable and will ultimately improve efficiencies and provide areas for cost reduction."

Several key industry leaders are solving end user concerns in a common way by utilizing DMTF standards. [Click here to read](#) the entire press release and supporting quotes.

## DMTF Releases SMBIOS 3.5

DMTF has released [Version 3.5 of the System Management BIOS \(SMBIOS\) Reference Specification](#), the premier standard for delivering management information via system firmware. Since its first release in 1995, the widely implemented SMBIOS standard has simplified the management of more than two billion client and server systems.

For OS-present, OS-absent, and pre-OS environments, SMBIOS offers motherboard and system vendors a standard format to present management information about their products. By extending the system firmware interface, SMBIOS can be used with management applications and eliminates the need for error-prone operations, such as probing system hardware for presence detection.

Version 3.5 of SMBIOS adds support or updates for current technologies, including:

- a new Firmware Inventory Information structure, allowing SMBIOS to report device firmware information for use by Redfish or other agents
- reporting manufacturing mode status
- explicit adoption of UTF-8 for all strings
- updates to pointing device interfaces, onboard device types, and processor sockets

To learn more about SMBIOS and to download Version 3.5, please visit <http://www.dmtf.org/standards/smbios>.

### In Case You Missed It

## DMTF Alliance Program Unifying Management Initiatives

DMTF values working with affiliated industry organizations, and its [Alliance Partner program](#) is a way for the organization to formalize synergistic relationships with other standards groups. DMTF has recently worked on several standards that will help unify management initiatives across several industries. By utilizing the knowledge and expertise of each group, DMTF delivers standards work in a rapid timeframe.

Recent work within the [Platform Management Communications Infrastructure \(PMCI\) Working Group](#) in close collaboration with alliance partners includes new specifications that add to the growing list of Management Component Transport Protocol (MCTP) bindings available from DMTF.

The [CXL™ Fabric Manager API over MCTP Binding Specification \(DSP0233\)](#) defines the bindings between CXL Fabric Manager API protocol elements and MCTP. The specific Fabric Manager API message contents will be documented outside of DMTF directly by the [CXL™ Consortium](#).

The [Management Component Transport Protocol \(MCTP\) I3C Transport Binding Specification \(DSP0233\)](#) developed in close cooperation with the [MPI Alliance I3C Working Group](#), defines a transport binding for facilitating communication between platform management subsystem components (e.g., management controllers, managed devices) over I3C. The MCTP over I3C transport binding definition in this specification includes a packet format, physical address format, message routing, and discovery mechanisms for MCTP over I3C communications.

## DMTF on YouTube

Check out the latest videos and be sure to subscribe to the [DMTF YouTube Channel](#) to stay up-to-date with our current and upcoming webinars.

## Newsletter Feedback

We welcome your input on what you'd like to see included here – just [Contact Us](#) online and share your suggestions!

Information about DMTF's leadership, technologies, and how to participate can be found at [www.dmtf.org](http://www.dmtf.org). Contact us online or reach us at <http://www.dmtf.org/contact>.

## DMTF and Trusted Computing Group Establish Work Register

As part of DMTF's [Alliance Partner program](#), the organization and the [Trusted Computing Group \(TCG\)](#) have agreed to a new [work register](#), which outlines areas of technical collaboration between the two organizations. As part of its agreement with DMTF, the TCG and DMTF's PMCI Work Group will align the work of both bodies at an unprecedented level of cooperation. This will benefit not only DMTF's Security Protocol and Data Model Specification but also implementers of standards developed by both organizations.

The work register detailing this Alliance Partner relationship is available [here](#). To read the news flash in full click [here](#).

## Need a DMTF Logo for your Marketing Materials?

We've got you covered! Email [press@dmft.org](mailto:press@dmft.org) for the DMTF and/or Redfish logo files as well as the most current Logo Usage Guidelines and Graphic Standards. We've recently updated the usage guidelines to include the use of the Redfish logo on a dark background.

## Upcoming DMTF Meetings

- 10/21 Board Meeting
- 11/18 Board Meeting
- 12/16 Board Meeting

## Recent DMTF Specifications

- [DSP0134\\_3.5.0 - SMBIOS Specification](#)
- [DSP0266\\_1.14.0 - Redfish Specification](#)
- [DSP0268\\_2021.2 - Redfish Schema Supplement](#)
- [DSP0272\\_1.4.0 - Redfish Interoperability Profiles](#)
- [DSP8013\\_2021.2 - Redfish Interoperability Profiles Bundle](#)
- [DSP8010\\_2021.2 - Redfish Schema](#)
- [DSP8011\\_2021.2 - Redfish Standard Messages](#)
- [DSP2046\\_2021.2 - Redfish Resource and Schema Guide](#)
- [DSP2053\\_2021.2 - Redfish Property Guide](#)
- [DSP2043\\_2021.2 - Redfish Mockups Bundle](#)

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## About DMTF

The DMTF creates open manageability standards spanning diverse emerging and traditional IT infrastructures including cloud, virtualization, network, servers and storage. Member companies and alliance partners worldwide collaborate on standards to improve the interoperable management of information technologies. The organization is led by a diverse board of directors from Broadcom Inc.; Cisco; Dell Technologies; Hewlett Packard Enterprise; Intel Corporation; Lenovo; NetApp; Positivo Tecnologia S.A.; and Verizon.

