

Intel[®] Rack Scale Design PSME

Release Notes
Software v2.2

December 19, 2017

Revision 001



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Revision History

Revision	Description	Date
001	Initial Release.	December 19, 2017

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1 Introduction

These release notes are intended for the Intel® Rack Scale Design (Intel® RSD) PSME v 2.2.0.304.0 release of Intel® RSD.

1.1 Intended audience

The intended audiences for this document include:

- Software Vendors (xSVs) of pod management software, who make use of PODM to discover, compose, and manage drawers, regardless of the hardware vendor, and/or manage drawers in a multivendor environment.
- Software Vendors (OxMs) of PSME firmware who would like to provide Intel® RSD PODM API on top of their hardware platform.

1.2 Conventions

The key words/phrases "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119, [Table 4](#).

1.3 Software package contents

[Table 1](#) lists the contents of the release package.

Table 1. Software package for Intel® RSD v2.2

Title	Description
Intel® Rack Scale Design Version 2.2 PSME Release Notes	This document
Intel® Rack Scale Design Version 2.2 PSME User Guide	User Guide
Intel® Rack Scale Design Version 2.2 Generic Asset Management Interface (GAMI)	JSON-RPC API specifications to communicate with GAMI Modules
Intel® Rack Scale Design Version 2.2 PSME REST API Specification	PSME REST API Specifications
Intel® Rack Scale Design Rack Management Module (RMM) API Specification	RMM API Specification
Intel® Rack Scale Design Version 2.2 Storage Service REST-API Specification	Storage Service REST API Specifications
License.txt	Apache License, Version 2.0

Customers should check <http://www.intel.com/intelRSD> to download the latest available onboard device drivers, system firmware, and system software. For further assistance, please contact the Intel Field Representative.

1.4 Revision numbers of package components

Table 2. Revision numbers of Beta release components

Subproject (component)	Revision
Intel® Rack Scale Design PSME	RSD_PSME_2.2.0.304.0

1.5 Terminology

Table 3. Terminology

Term	Definition
BDC	Bulldog Creek
RRC	Red Rock Canyon



Term	Definition
OOB	Out of Band Booting

1.6 References

Table 4. Reference documents

Doc ID	Title	Location
336811	Intel® Rack Scale Design (RSD) Conformance and Software Reference Kit Getting Started Guide v2.2, Revision 001	http://www.intel.com/intelRSD
336814	Intel® Rack Scale Design Pod Manager (PDOM) Release Notes, Software v2.2, Revision 001	
336815	Intel® Rack Scale Design Pod Manager (PDOM) User Guide, Software v2.2, Revision 001	
336810	Intel® Rack Scale Design PSME User Guide, Software v2.2, Revision 001	
336855	Intel® Rack Scale Design PSME REST API Specification, Software v2.2, Revision 001	
336856	Intel® Rack Scale Design Storage Services API Specification, Software v2.2, Revision 001	
336857	Intel® Rack Scale Design Pod Manager REST API Specification, Software v2.2, Revision 001	
336858	Intel® Rack Scale Design Rack Management Module (RMM) API Specification, Software v2.2, Revision 001	
336859	Intel® Rack Scale Design Generic Assets Management Interface API Specification, Software v2.2, Revision 001	
336860	Intel® Rack Scale Design Firmware Extension Specification, Software v2.2, Revision 001	
336861	Intel® Rack Scale Design Architecture Specification, Software v2.2, Revision 001	
336862	Intel® RSD v2.2 Solid State Drive (SSD) Technical Advisory	
RFC2119	Key words for use in RFCs to Indicate Requirement Levels, March 1997	https://www.ietf.org/rfc/rfc2119.txt
SDP0266	Scalable Platforms Management API Specification v1.1.0	https://www.dmtf.org/sites/default/files/standards/documents/DSP0266_1.1.0.pdf
DSP8010	Redfish Schema v2016.3	https://www.dmtf.org/sites/default/files/standards/documents/DSP8010_2016.3.zip





2 New Features

2.1 New features for v2.2 release

In addition to stability improvements, the Intel® RSD v2.2 (PSME_2.2.0.304.0) release introduces the following features:

1. Out of band Telemetry (OOB) – Discovering, monitoring and reporting Telemetry metrics, Health Status of RSD assets through the OOB interface (like IPMI).
2. Intel®Xeon® Processor Scalable family support – Intel®Xeon® Processor Scalable family is the next server platform from Intel with lots of improved capabilities around performance, memory architecture and security. The platform is based on cutting-edge technology and provides compelling benefits across a broad variety of usage models including big data, artificial intelligence, high-performance computing, enterprise-class IT, cloud, storage, communication, and Internet of Things (IoT).
3. Digital Signature - For a more secure design, component firmware should be digitally signed and verified at startup. This includes the PSME and PODM components. This is to prevent tampering of the components which could lead to a security attack.
4. Arista* TOR switch support - Currently the PSME Networking agent in RackScale SW 1.2 and 2.1 is designed to manage Red Rock Canyon (RRC) switch. For 2.2, the PSME supports the Arista DCS-7060CX-32S-R ToR. RSD 2.2 will not support RRC switches.

2.2 Limitations

The following list describes all the limitations for this release. Described limitations are targeted for future releases:

- The code was verified with Bulldog Creek (BDC) and Arista switch hardware. For details on BDC and Arista firmware versions, contact your Intel representative.
- In order to refresh data in SMBIOS (like after unbinding drive) user needs to perform the platform restart.
- REST API
 - Some of the information on the REST API is not discovered from hardware, but instead is read from configuration files which the user must set up according to the User Guide.
- Network Limitations

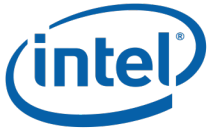
In Section 10.1.2 of the Intel® RSD 2.2 Architectural Specifications, refer to [Table 4](#), the PSME APIs are required to support specific network services, but the below features were not implemented in the Intel reference code:

- LAG configuration using a number of port
- ACL configuration
- MAC Address - view and configure switch MAC address tables for the purpose of defining rules about which packets are forwarded or discarded
- Telemetry Limitations

The following Intel® RSD 2.2 PSME APIs are defined in the documentation, but are not implemented in the Intel reference code:

- Baseboard Ambient Temperature
- PSU Temperature
- Fan Speed RPM
- InputACPowerWatts





3 Known Issues

This section presents known issues found during the testing of Intel® RSD PSME release v2.2. [Table 5](#) provides a detailed description of the status of the known issues.

Table 5. Status definitions

Status	Description
Under investigation	The sighting is being investigated.
Root cause identified	The root cause of the defect is identified.
Workaround available	A temporary solution to the defect is provided until the bug is fixed.
As designed	The issue reported is not a defect and the behavior will not be modified.
Closed no repro	The situation is not observed anymore and no further investigation is scheduled.
Fixed	The defect has been fixed.

[Table 6](#) presents problems and issues found during testing of this release.

Table 6. Known issues

Issue	Description
HSD110545	Patching only with any non base Endpoints creates two tasks.
Problem	Accepts PATCHes on the Zone endpoints that simultaneously add and delete ports
Implication	This creates two tasks (instead of one, as specified in the PSME REST specification) and may lead to data inconsistency and service failure
Note	N/A
Workaround	Instead of sending only one PATCH, request should be divided into two PATCH requests, one for all endpoints to be added to the zone, and the second for all to be removed from the zone
Status	Workaround available
HSD110651	Actions field missing in Managers API of PSME
Problem	Inconsistency in DMTF Redfish specification
Implication	Fields are not available on API
Note	Need also fix in DMTF Redfish specification
Workaround	N/A
Status	Fixed
HSD-1805119374	Mandatory fields missing in Managers API of PSME
Problem	Inconsistency in DMTF Redfish specification
Implication	Fields are not available on API
Note	Need also fix in DMTF Redfish specification
Workaround	N/A
Status	Root cause identified
HSD106204	After deep discovery PSME REST API shows less PciDevices than expected
Problem	DeepDiscovery feature shows more of PCI devices than Basic Discovery
Implication	Inconsistency in devices numbers on API
Note	N/A
Workaround	N/A
Status	Fixed
HSD110396	ClassCode attribute in Functions API is incorrect
Problem	Defect in DMTF Redfish specification
Implication	Language typo in API. PSME client must be aware
Note	API is consistent with DMTF Redfish specification
Workaround	N/A



Issue	Description
Status	Root cause identified
HSD110281	Pod does not detect Storage
Problem	Network interface driver has an issue
Implication	Network interface of Storage Service does not get IP
Note	N/A
Workaround	Wait about 10 min: Assemble and disassemble one more time
Status	Fixed
HSD111437	PATCHing null on DriveErased returns Bad request
Problem	PATCHing null on DriveErased returns Bad request
Implication	PATCHing null on DriveErased returns Bad request
Note	N/A
Workaround	N/A
Status	Fixed
HSD-ES180511937	Cannot PATCH System Boot to Disable or None
Problem	PSME will change both fields (BootSourceOverrideEnabled to Disabled and BootSourceOverrideTarget to None) on REST API if user send value (Disabled or None) for only one field.
Implication	Sending PATCH for one field (BootSourceOverrideEnabled or BootSourceOverrideTarget) will change both on REST API.
Note	This does not affect functionality. Set values will be respected.
Workaround	PATCH both fields in a single request.
Status	Root cause identified
HSD111471	PSME PNC configuration file has wrong default value
Problem	PSME PNC configuration file has wrong default value
Implication	PSME REST Server exposes service name as Storage Services instead of PNC. PODM does not properly connect rack chassis' (contendBy property will be null)
Note	This has no implication on hardware.
Workaround	Change to proper value in config file after installation
Status	Fixed
HSD110608	Detach with EOD "true" does not erase nvme drive content
Problem	Drives that have a secure erase setting (SES) limit cannot be reformatted upon reaching a permitted number of reformatting cycles
Implication	Once the drive reaches its format limit, further attempts to format the drive with either option SES=1 or SES=2 will return an error and the drive will not be reformatted
Note	Contact your Intel account representative for details
Workaround	N/A
Status	Fixed
HSD115767	PSME Rest returned 500 error when deleting ACL (3-10)
Problem	During stress tests deleting 3 out of 10 previously created ACLs, PSME REST server returns error code.
Implication	User is unable to remove ACLs from the REST API
Note	Seen sporadically. 'acl show' reported no ACLs on the HW. Probably ONPSS or HW/RRC issue. RSD 2.2 PSME does not support RRC Switch and ACL on Arista Switch
Workaround	N/A
Status	Not applicable
HSD115628	There is no TargetLUN in master target
Problem	TargetLUN API field is empty while it shouldn't.
Implication	User cannot use the remote target.
Note	Seen sporadically. Storage Service reads LUNs from TGT.



Issue	Description
Workaround	Restart tgt service
Status	Fixed
HSD115650	Name is not set during creating new Logical Drive
Problem	When creating new logical drive user can give a unique name to the drive, but that name is not stored. Get operation always returns default name "Logical Drive".
Implication	User cannot identify created Logical Drive by the name it was used during drive creation.
Note	LVM limitation (3rd party component), cannot be fixed in PSME
Workaround	N/A
Status	Root cause identified
HSD116770	Allocation and assembly of Node to local mSATA results in failed Node state
Problem	Node assembly fails sporadically.
Implication	Seen sporadically: Fail to assemble node.
Note	Sleds may momentarily disappear when SMBIOS data is updated, resulting in assembly failure.
Workaround	Delete and again assemble node
Status	Fixed
HSD116940	Node deletion fails with http 500
Problem	Running allocation/deletion of nodes in a loop test failed to delete node.
Implication	Seen sporadically: Fail to delete node after 227 iterations
Note	May be related to HSD116770.
Workaround	Repeat delete action
Status	Fixed
HSD116901	Storage: 503 ServiceUnavailable while creating logical drive
Problem	The storage service was unavailable.
Implication	Unable to create logical drive
Note	Waiting for debug logs, environment information for reproduction. Possible duplicate of HSD110281.
Workaround	Check connection/restart storage service.
Status	Fixed
HSD116918	No information about spaces in Initiator and Target from NetworkDeviceFunction in metadata
Problem	Clarification of naming rules for Initiator and Target JSON properties.
Implication	Initiator and Target JSON properties naming rules.
Note	Waiting for DMTF resolution of issue: https://github.com/DMTF/spmf/issues/2029
Workaround	Do not use spaces in mentioned JSON properties.
Status	Root cause identified
HSD116921	Wrong annotation term in few properties in NetworkDeviceFunction.xml in metadata
Problem	Typo in metadata definition of NetworkDeviceFunction in validation annotation.
Implication	Maximum allowed value for some properties is not defined in metadata.
Note	N/A
Workaround	Use maximum RFC defined values for TCP Port and VLAN Id.
Status	Root cause identified
HSD-ES 1805738755	Limited support for ISO8601 interval
Problem	PSME provides limited support for ISO8601 time duration pattern
Implication	PSME REST API accepts only the time duration expressed in seconds.
Note	According to ISO8601 standards user can express duration using different patterns like "PT1M,P2Y,P3Y,6M55S..." however PSME accepts duration provided in seconds only.
Workaround	User needs to recalculate and provide the duration in XYZS format, where XYZ represents the value in seconds.
Status	As designed
HSD-ES 1805800999	Deep Discovery process fails if system is in power on state



Issue	Description
Problem	Too fast sending of Power On and Power Off commands can be ignored
Implication	If user will send Power Off and then Power On command before first command is applied platform will shut down but will not bring up.
Note	BMC will ignore Power On command if previous Power Off command has not been applied.
Workaround	User should send Power command and check power status of the platform before performing next one.
Status	Root cause identified
HSD-ES 2201225313	Too many tasks will slow down performance of PSME
Problem	Too many tasks can slow down Assemble and Delete Node operation.
Implication	If user will send Power Off and then Power On command before first command is applied platform will shut down but will not bring up.
Note	N/A
Workaround	Control number of tasks by performing DELETE action on unnecessary task on PSME REST API.
Status	Root cause identified
HSD-ES 1805820930	Wrong HTTP Status Code when patching PrimaryLUN Value with invalid number
Problem	Too many tasks can slow down Assemble and Delete Node operation.
Implication	PSME REST returns 200 OK when user is trying to patch PrimaryLUN with invalid number. The proper response should be 400 (Bad Request).
Note	PSME will accept the wrong parameter, but the value will not be set.
Workaround	User can check on REST API if the value has been set.
Status	Root cause identified

3.1 API changes

The Telemetry implementation requires changes in the REST API. Please refer to REST API Specification for more details.

