



Intel[®] Rack Scale Design Pod Manager

Release Notes

Software Version 2.1.3

May 2017

Revision 003



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Revision History

Revision	Description	Date
003	Maintenance release 2.1.3.	May 12, 2017
002	Maintenance release 2.1.2.	March 21, 2017
001	Initial release.	February 9, 2017

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1 Introduction

These release notes are intended for the Intel® Rack Scale Design Pod Manager v2.1.3.43 May 2017 release of Intel® RSD.

1.1 Software package contents

Table 1 lists the contents of the release package.

Table 1 Software package

Title	Notes
Intel® Rack Scale Design Pod Manager Release Notes	This document
Intel® Rack Scale Design Pod Manager User Guide	User Guide
Intel® Rack Scale Design PSME REST API Specification	Pod Manager REST API specifications version 2.1
LICENSE.txt	Apache License, Version 2.0
podm-sources-X.tar.gz	PODM Source Code

Customers should check <https://github.com/01org/intelRSD> to download the latest available onboard device drivers, system firmware, and system software. For further assistance, please contact the Intel Field Representative.

1.2 References

Table 2 Reference documents

Doc ID	Title	Location
335451	Intel® Rack Scale Design Generic Assets Management Interface API Specification	Intel.com/intelrsd_resources
335452	Intel® Rack Scale Design BIOS & BMC Technical Guide	Intel.com/intelrsd_resources
335501	Intel® Rack Scale Design Architecture Specification	Intel.com/intelrsd_resources
335454	Intel® Rack Scale Design Software Reference Kit Getting Started Guide	Intel.com/intelrsd_resources
335455	Intel® Rack Scale Design Pod Manager API Specification	Intel.com/intelrsd_resources
335456	Intel® Rack Scale Design Pod Manager Release Notes	Intel.com/intelrsd_resources
335457	Intel® Rack Scale Design Pod Manager User Guide	Intel.com/intelrsd_resources
335458	Intel® Rack Scale Design PSME REST API Specification	Intel.com/intelrsd_resources
335459	Intel® Rack Scale Design PSME Release Notes	Intel.com/intelrsd_resources
335460	Intel® Rack Scale Design PSME User Guide	Intel.com/intelrsd_resources
335461	Intel® Rack Scale Design Storage Services API Specification	Intel.com/intelrsd_resources
335462	Intel® Rack Scale Design Rack Management Module (RMM) API Specification	Intel.com/intelrsd_resources
335463	Intel® Rack Scale Design RMM Release Notes	Intel.com/intelrsd_resources
335464	Intel® Rack Scale Design Software RMM User Guide	Intel.com/intelrsd_resources
DSP0266	Redfish Scalable Platform Management API Specification	http://dmtf.org/standards/redfish





2 New Features and Limitations

2.1 New features for 2.1.3 release

Intel® RSD Pod Manager 2.1.3 Release introduces the following features:

- PODM Eventing
- iSCSI OOB support
- FabricSwitch flag in allocation request

It also contains the following features from previous releases:

- Redfish* API – Intel® RSD Pod Manager API and Schema build on top of Redfish Schema 2016.3 and API Specification 1.1.0
- PNC Switch support – user is able to see Fabric model data exposed by PNC service on POD Manager north bound API interface
- Discovery service is based on both DHCP and/or SSDP
- CRUD operation on VLANS
- Discovery – user can discover compute, storage and network assets through Pod Manager REST API.
- Assembly – user is able to create server node which can be assembled based on a selected template (using JSON).
- Boot – Remote and local bare metal boot of logical node (iSCSI target or local boot with M.2, support iPXE boot).
- Security support for northbound REST API – HTTP basic authentication with HTTPS channel security.
- Deep Discovery using Linux* Utility Image – Intel® RSD Pod Manager has the ability to obtain additional data about the blade and its sub resources available only from the booted OS. User has the option to configure or disable this functionality. Be advised that this operation can take a considerable amount of time – it depends on the boot duration of BIOS / BMC and used hardware.
- VLAN support – user is able to add / remove VLANs on Network Interfaces.
- Link Aggregation Group support – user is able to add / modify / remove LAG on Switch Ports.
- Software update – user can upgrade Intel® RSD Pod Manager Software in the field using deb packages.
- Hot insertion / removal – support for insertions and removals of Rack assets (e.g. Power Supply Units, Fans, Drawers, Sleds, Disk Drives) provided by events sent by PSME, Storage Service and RMM.
- Security support for southbound REST API - using a trusted certificate signed by Certificate Authority to communicate with PSME, Storage Service and RMM.
- RMM integration with PODM – reading thermal and power data. It also provides rack and drawer information and sends update, insertion and removal events.
- Multirack support – user has the ability to discover and manage multiple racks.
- Separate Compute & Network Agents support – Pod Manager can now support PSME agents (Compute and Network) running on physically separate Hardware resources.
- Support for Racks exposed by PSME
- Setting Pod/Rack Location ID
- Improved responsiveness of REST API actions.

2.2 Limitations

The following list describes all the limitations for this Intel® RSD release (described limitations are targets for future releases):

- Code was tested for PSME version 2.1.3.59
- IP address of Composed Node is not exposed via REST API - it depends on booted OS, and is outside the scope of Pod Manager.
- While reading PSME REST API, PODM may omit values presented by BMC or PSME that are not allowed to be exposed (e.g bad enum value).
- The NVMe drives are visible on PSME/PODM REST APIs under two different assets, under Fabric's Endpoint and/or under System asset of PSME/PODM REST API. This is because BIOS, in the recommended version, can also serve information about those drives. Moreover, because of the nature of the BIOS discovery process, once detected asset will persist on the System until the next system reboot.
- After upgrade from Pod Manager 1.2 to this version all data stored in database will be lost, this implies that all Composed Node will be removed and need to be recreated.
- PODM does not support direct API to:
 - Create/Update/Remove LogicalDrive/RemoteTarget (creation is supported only during assembly action)





3 Known Issues

The 'Status' field can be one or more of the following.

Table 3 Status descriptions

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 4 presents problems and issues found during testing of this release.

Table 4 Known issues

Issue	Description
HSD115799	GET operation on Switch Port sporadically fails with 500 status code
Problem	GET operation on Switch Port sporadically fails with 500 status code
Implication	Properties of Switch Port cannot be obtained
Note	PODM
Workaround	
Status	Fixed

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4 Addendum – Intel® RSD Pod Manager Release Notes Software Version 2.1

4.1 Introduction

These release notes are intended for the Intel® Rack Scale Design Pod Manager v2.1.202.0 January 2017 release of Intel® RSD.

4.1.1 Software package contents

Table 5 lists the contents of the release package.

Table 5 Software package

Title	Notes
Intel® Rack Scale Design Pod Manager Release Notes	This document
Intel® Rack Scale Design Pod Manager User Guide	User Guide
Intel® Rack Scale Design PSME REST API Specification	Pod Manager REST API specifications version 2.1
LICENSE.txt	Apache License, Version 2.0
podm-sources-X.tar.gz	PODM Source Code

Customers should check <https://github.com/01org/intelRSD> to download the latest available onboard device drivers, system firmware, and system software. For further assistance, please contact the Intel Field Representative.

4.1.2 References

Table 6 Reference documents

Doc ID	Title
335451	Intel® Rack Scale Design Generic Assets Management Interface API Specification
335452	Intel® Rack Scale Design BIOS & BMC Technical Guide
335501	Intel® Rack Scale Design Architecture Specification
335454	Intel® Rack Scale Design Software Reference Kit Getting Started Guide
335455	Intel® Rack Scale Design Pod Manager API Specification
335456	Intel® Rack Scale Design Pod Manager Release Notes
335457	Intel® Rack Scale Design Pod Manager User Guide
335458	Intel® Rack Scale Design PSME REST API Specification
335459	Intel® Rack Scale Design PSME Release Notes
335460	Intel® Rack Scale Design PSME User Guide
335461	Intel® Rack Scale Design Storage Services API Specification
335462	Intel® Rack Scale Design Rack Management Module (RMM) API Specification
335463	Intel® Rack Scale Design RMM Release Notes
335464	Intel® Rack Scale Design Software RMM User Guide
n/a	Scalable Platforms Management API

4.2 New Features and Limitations

4.2.1 New features for 2.1 release

Intel® RSD Pod Manager 2.1 Release introduces the following features:



- Redfish API – Intel® RSD Pod Manager API and Schema build on top of Redfish API 2016.2
- PNC Switch support – user is able to see Fabric model data exposed by PNC service
- Discovery service is based on both DHCP and/or SSDP
- CRUD operation on VLANS

It also contains the following features from previous releases:

- Discovery – user can discover compute, storage and network assets through Pod Manager REST API.
- Assembly – user is able to create server node which can be assembled based on a selected template (using JSON).
- Boot – Remote and local bare metal boot of logical node (iSCSI target or local boot with M.2, support iPXE boot).
- Security support for northbound REST API – HTTP basic authentication with HTTPS channel security.
- Deep Discovery using Linux* Utility Image – Intel® RSD Pod Manager has the ability to obtain additional data about the blade and its sub resources available only from the booted OS. User has the possibility to configure or disable this functionality. Be advised that this operation can take a considerable amount of time – it depends on the boot duration of BIOS / BMC and used hardware.
- VLAN support – user is able to add / remove VLANs on Network Interfaces.
- Link Aggregation Group support – user is able to add / modify / remove LAG on Switch Ports.
- Software update – user can upgrade Intel® RSD Pod Manager Software in the field using deb packages.
- Hot insertion / removal – support for insertions and removals of Rack assets (e.g. Power Supply Units, Fans, Drawers, Sleds, Disk Drives) provided by events sent by PSME, Storage Service and RMM.
- Security support for southbound REST API - using a trusted certificate signed by Certificate Authority to communicate with PSME, Storage Service and RMM.
- RMM integration – reading thermal and power data. It also provides rack and drawer information and sends update, insertion and removal events.
- Multirack support – user has the ability to discover and manage multiple racks.
- Separate Compute & Network Agents support – Pod Manager can now support separate Compute and Network agents from PSME.
- Support for Racks exposed by PSME

4.2.2 Limitations

The following list describes all the limitations for this Intel® RSD release (described limitations are targets for future releases):

- The code was tested with PSME version 2.1.21.0
- Code is based on the RedFish API which is still in development (latest supported version: Redfish API 2016.2).
- IP address of Composed Node is not exposed via REST API - it depends on booted OS, and is outside the scope of Pod Manager.
- While reading PSME REST API, PODM may omit values presented by BMC or PSME that are not allowed to be exposed (e.g bad enum value).
- The NVMe drive can be visible on PSME/PODM REST APIs under two different assets, under Fabric's Endpoint and/or under System asset of PSME/PODM REST API. This is because BIOS, in the recommended version, can also serve information about those drives. Moreover, because of the nature of the BIOS discovery process, a once detected asset will persist on the System until the next system reboot.
- PODM does not support direct API to:
 - Create/Update/Remove LogicalDrive/RemoteTarget (creating is available only with assembly action)

- Set RackPUID (Location ID)

4.3 Known Issues

The 'Status' field can be one or more of the following.

Table 7 Status descriptions

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 8 presents problems and issues found during testing of this release.

Table 8 Known issues

Issue	Description
HSD80606	User is not able to recreate storage management and data center VLANs after adding LAG
Problem	After creating LAG, all VLANs on ports which were used for LAG are removed (this includes management VLANs needed for Intel® RSD).
Implication	Unable to recreate storage management and data center VLANs.
Note	PSME
Workaround	Two workarounds are available: <ul style="list-style-type: none"> • After LAG creation or removal, Admin has to login to the Drawer OS and add management VLANs to RRC manually via command line. • After LAG creation or removal, Admin has to go to PSME REST API and add management VLANs manually.
Status	Fixed
HSD87448	Existing assembled Nodes and Systems do not survive rack power cycle
Problem	After powering off and on whole rack, all existing systems are recreated and all nodes are powered off.
Implication	All assembled nodes are inoperational.
Note	PODM
Workaround	User should clear PODM database and recreate all previously assembled nodes manually.
Status	Fixed
HSD92343	Pod sometimes returns Target without link to logical drive
Problem	Sporadically PODM returns information about Target without link to Logical Drive
Implication	User will not be able obtain information about logical drive used in Target
Note	PODM
Workaround	User should retry his query on this asset
Status	Fixed
HSD92994	Pod throws 500 internal server error after querying valid resource
Problem	Sporadically PODM returns HTTP 500 Code on valid resource
Implication	User will not be able obtain information about valid resource
Note	PODM
Workaround	N/A
Status	Fixed
HSD93075	Pod returns 500 InternalServerError during LAG creation despite the fact the LAG was created
Problem	Sporadically after creation of LAG port PODM manager returns HTTP 500 Code even though LAG port was created successfully.
Implication	User may be confused by error message even though creation succeeded.
Note	PODM



Issue	Description
Workaround	User should check (after about 1 minute) if creation of LAG really failed.
Status	Fixed
HSD93231	Composed node goes into Failed state during assembly process
Problem	Sporadically as a result of assembly process, composed node can be in Failed state.
Implication	Composed Node is not usable.
Note	PSME
Workaround	N/A
Status	Fixed
HSD98444	Sporadic Internal Server Error while getting collection of Devices
Problem	Repeating Deep Discovery on a specified Computer System may sporadically cause the getting of a collection of Devices to fail with an Internal Server Error.
Implication	Cannot obtain properties of Local Drives.
Note	PODM
Workaround	N/A
Status	Fixed
HSD98075	LAG members do not change their AdministrativeState to Up after LAG creation
Problem	After creating LAG, members of new port are not updated immediately but during slow poll (10 minutes max by default)
Implication	It is not guaranteed that the state of new LAGs is up-to-date before configured time.
Note	PODM
Workaround	Try re-configuring slow poll frequency
Status	Fixed
HSD98017	Internal server error response code 500 during LAG creation
Problem	Creating LAG may sporadically fail with 500 status code.
Implication	LAG will not be created
Note	PODM
Workaround	This issue is sporadic in nature. Try LAG creation one more time.
Status	Fixed
HSD101075	Wrong properties name in PODM REST API
Problem	Following properties exposed in northbound PODM REST API are not compliant with metadata: <ul style="list-style-type: none"> Property PowerSupplies->Model in PowerZone, should be ModelNumber Property PowerSupplies->FirmwareVersion in PowerZone, should be FirmwareRevision Property VendorId in Memory, should be VendorID Property OperatingSpeedMHz in Memory, should be OperatingSpeedMhz Property DeviceId in Memory, should be DeviceID Unexpected key ManagerInChassis in property Links in Manager
Implication	Pod Manager northbound REST API is not compliant with metadata
Note	PODM
Workaround	N/A
Status	Fixed
HSD100150	Metadata is not compatible with the specification
Problem	Some properties should have an annotation about ReadWrite permission according to the API specification.
Implication	Metadata is not compatible with the specification
Note	PODM
Workaround	N/A
Status	Fixed
HSD111424	Invalid status code after trying detaching an already detached endpoint
Problem	Incorrect status code is being returned while trying to detach an already detached endpoint

Issue	Description
Implication	Status code returned from PODM is incorrect and can be misleading
Note	PODM
Workaround	N/A
Status	Root Cause Identified

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5 Addendum – Intel® RSD Pod Manager Release Notes Software Version 2.1.2

5.1 Introduction

These release notes are intended for the Intel® Rack Scale Design Pod Manager v2.1.2.18.0 March 2017 release of Intel® RSD.

5.1.1 Software package contents

Table 9 lists the contents of the release package.

Table 9 Software package

Title	Notes
Intel® Rack Scale Design Pod Manager Release Notes	This document
Intel® Rack Scale Design Pod Manager User Guide	User Guide
Intel® Rack Scale Design PSME REST API Specification	Pod Manager REST API specifications version 2.1
LICENSE.txt	Apache License, Version 2.0
podm-sources-X.tar.gz	PODM Source Code

Customers should check <https://github.com/01org/intelRSD> to download the latest available onboard device drivers, system firmware, and system software. For further assistance, please contact the Intel Field Representative.

5.1.2 References

Table 10 Reference documents

Doc ID	Title
335451	Intel® Rack Scale Design Generic Assets Management Interface API Specification
335452	Intel® Rack Scale Design BIOS & BMC Technical Guide
335501	Intel® Rack Scale Design Architecture Specification
335454	Intel® Rack Scale Design Software Reference Kit Getting Started Guide
335455	Intel® Rack Scale Design Pod Manager API Specification
335456	Intel® Rack Scale Design Pod Manager Release Notes
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335458	Intel® Rack Scale Design PSME REST API Specification
335459	Intel® Rack Scale Design PSME Release Notes
335460	Intel® Rack Scale Design PSME User Guide
335461	Intel® Rack Scale Design Storage Services API Specification
335462	Intel® Rack Scale Design Rack Management Module (RMM) API Specification
335463	Intel® Rack Scale Design RMM Release Notes
335464	Intel® Rack Scale Design Software RMM User Guide
n/a	Scalable Platforms Management API

5.2 New Features and Limitations

5.2.1 New features for 2.1.2 release

Intel® RSD Pod Manager 2.1.2 Release introduces the following features:

- Setting Pod/Rack Location ID
- Improved responsiveness of REST API actions.

It also contains the following features from previous releases:

- Redfish API – Intel® RSD Pod Manager API and Schema build on top of Redfish API 2016.2
- PNC Switch support – user is able to see Fabric model data exposed by PNC service
- Discovery service is based on both DHCP and/or SSDP
- CRUD operation on VLANS
- Discovery – user can discover compute, storage and network assets through Pod Manager REST API.
- Assembly – user is able to create server node which can be assembled based on a selected template (using JSON).
- Boot – Remote and local bare metal boot of logical node (iSCSI target or local boot with M.2, support iPXE boot).
- Security support for northbound REST API – HTTP basic authentication with HTTPS channel security.
- Deep Discovery using Linux* Utility Image – Intel® RSD Pod Manager has the ability to obtain additional data about the blade and its sub resources available only from the booted OS. User has the possibility to configure or disable this functionality. Be advised that this operation can take a considerable amount of time – it depends on the boot duration of BIOS / BMC and used hardware.
- VLAN support – user is able to add / remove VLANs on Network Interfaces.
- Link Aggregation Group support – user is able to add / modify / remove LAG on Switch Ports.
- Software update – user can upgrade Intel® RSD Pod Manager Software in the field using deb packages.
- Hot insertion / removal – support for insertions and removals of Rack assets (e.g. Power Supply Units, Fans, Drawers, Sleds, Disk Drives) provided by events sent by PSME, Storage Service and RMM.
- Security support for southbound REST API - using a trusted certificate signed by Certificate Authority to communicate with PSME, Storage Service and RMM.
- RMM integration – reading thermal and power data. It also provides rack and drawer information and sends update, insertion and removal events.
- Multirack support – user has the ability to discover and manage multiple racks.
- Separate Compute & Network Agents support – Pod Manager can now support separate Compute and Network agents from PSME.
- Support for Racks exposed by PSME

5.2.2 Limitations

The following list describes all the limitations for this Intel® RSD release (described limitations are targets for future releases):

- The code was tested with PSME version 2.1.2.25.0
- Code is based on the RedFish API which is still in development (latest supported version: Redfish API 2016.2).
- IP address of Composed Node is not exposed via REST API - it depends on booted OS, and is outside the scope of Pod Manager.
- While reading PSME REST API, PODM may omit values presented by BMC or PSME that are not allowed to be exposed (e.g bad enum value).
- The NVMe drive can be visible on PSME/PODM REST APIs under two different assets, under Fabric's Endpoint and/or under System asset of PSME/PODM REST API. This is because BIOS, in the



recommended version, can also serve information about those drives. Moreover, because of the nature of the BIOS discovery process, a once detected asset will persist on the System until the next system reboot.

- After upgrade from Pod Manager 1.2 to this version all data stored in database will be lost, what implies that all Composed Node will be removed and need to be recreated.
- PODM does not support direct API to:
 - Create/Update/Remove LogicalDrive/RemoteTarget (creating is available only with assembly action)

5.3 Known Issues

The 'Status' field can be one or more of the following.

Table 11 Status descriptions

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 12 presents problems and issues found during testing of this release.

Table 12 Known issues

Issue	Description
HSD111424	Invalid status code after trying detaching an already detached endpoint
Problem	Incorrect status code is being returned while trying to detach an already detached endpoint
Implication	Status code returned from PODM is incorrect and can be misleading
Note	PODM
Workaround	N/A
Status	Fixed
HSD115799	GET operation on Switch Port sporadically fails with 500 status code
Problem	GET operation on Switch Port sporadically fails with 500 status code
Implication	Properties of Switch Port cannot be obtained
Note	PODM
Workaround	Repeat operation
Status	Root Cause Identified

