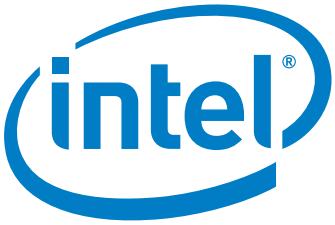
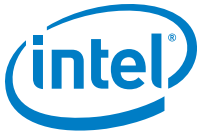


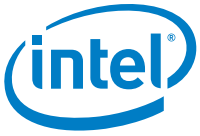
Intel® Omni-Path Fabric Switches

Version 10.3.1 Release Notes

February 2017

Order No.: J36083-1.0





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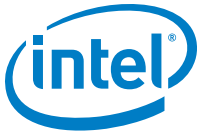


1.0 Overview of the Release

1.1 Introduction

These Release Notes provide a brief overview of the changes introduced into the Intel® Omni-Path Fabric Switches. References to more detailed information are provided where necessary. The information contained in this document is intended for supplemental use only; it should be used in conjunction with the documentation provided for each component.

These Release Notes list the new features, system issues closed since the previous release, as well as any known issues.

1.2 Audience

The information provided in this document is intended for installers, software support engineers, hardware engineers, and service personnel.

1.3 If You Need Help

If you need assistance while working with the Intel® Omni-Path Fabric Switches, contact your Intel representative.

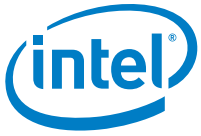
1.4 Supported in this Release

The following items are supported for this release:

- 24-port Intel® Omni-Path Edge Switch 100
- Externally-managed 24-port Intel® Omni-Path Edge Switch 100
- 48-port Intel® Omni-Path Edge Switch 100
- Externally-managed 48-port Intel® Omni-Path Edge Switch 100
- 6-slot Intel® Omni-Path Director Class Switch 100 Series
- 24-slot Intel® Omni-Path Director Class Switch 100 Series

1.5 Product Constraints

- The embedded version of the Intel® Fabric Manager supports up to a maximum of 100 nodes within a fabric. This is due to the limited memory and processing resources available in the embedded environment.
- For Director-class switches that use the embedded Fabric Manger, the maximum supported configuration is 2 leaf and 2 spine modules.



1.6 Installation Requirements

- The Intel® Omni-Path Fabric Suite FastFabric toolset needs to be installed to manage the externally-managed edge switch.

1.6.1 Changes to Firmware Components

The following firmware is supported in this release:

- Internally-managed switches:
  `STL1.q7.10.3.1.0.8.spkg`

and has been tested with the following externally-managed switch firmware:

- Externally-managed edge: `Intel_PRREdge_V1_firmware.10.3.1.0.8.emfw`

1.7 Miscellaneous

- Additional internal tracing has been added to the firmware to improve link error-related diagnostic capabilities.
- Intel recommends that all fabrics contain at least one managed switch.
- Chassis GUI port statistics error counters now have red background color.

1.8 Configurator

The Cluster Configurator for Intel® Omni-Path Fabrics is available at: http://www.intel.com/content/www/us/en/high-performance-computing-fabrics/omni-path-configurator.html.

This tool generates sample cluster configurations based on key cluster attributes, including a side-by-side comparison of up to four cluster configurations. The tool also generates parts lists and cluster diagrams.

1.9 Documentation

Table 1-1 lists the end user documentation for the current release.

Documents are available at the following URLs:

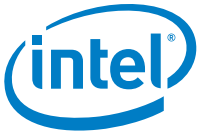
- Intel® Omni-Path Switches Installation, User, and Reference Guides
  www.intel.com/omnipath/SwitchPublications
- Intel® Omni-Path Fabric Software Installation, User, and Reference Guides
  www.intel.com/omnipath/FabricSoftwarePublications
- Drivers and Software (including Release Notes)
  www.intel.com/omnipath/downloads

Table 1-1. Related Documentation for this Release (Sheet 1 of 2)

Document Title
Hardware Documents
Intel® Omni-Path Fabric Switches Hardware Installation Guide
Intel® Omni-Path Fabric Switches GUI User Guide
Intel® Omni-Path Fabric Switches Command Line Interface Reference Guide

Table 1-1. Related Documentation for this Release (Sheet 2 of 2)

Document Title
Intel® Omni-Path Edge Switch Platform Configuration Reference Guide
Intel® Omni-Path Fabric Switches Release Notes (includes managed and externally-managed switches)
Intel® Omni-Path Host Fabric Interface Installation Guide
Fabric Software Documents
Intel® Omni-Path Fabric Software Installation Guide
Intel® Omni-Path Fabric Suite Fabric Manager User Guide
Intel® Omni-Path Fabric Suite FastFabric User Guide
Intel® Omni-Path Fabric Host Software User Guide
Intel® Omni-Path Fabric Suite Fabric Manager GUI Online Help
Intel® Omni-Path Fabric Suite Fabric Manager GUI User Guide
Intel® Omni-Path Fabric Suite FastFabric Command Line Interface Reference Guide
Intel® Performance Scaled Messaging 2 (PSM2) Programmer's Guide
Intel® Omni-Path Fabric Performance Tuning User Guide
Intel® Omni-Path Host Fabric Interface Platform Configuration Reference Guide
Intel® Omni-Path Fabric Software Release Notes
Intel® Omni-Path Fabric Manager GUI Release Notes
Intel® Omni-Path Storage Router Design Guide
Intel® Omni-Path Fabric Staging Guide
Building Lustre Servers with Intel® Omni-Path Architecture Application Note*



2.0 System Issues

This section lists the resolved and known issues for the Intel® Omni-Path Fabric Switches.

2.1 Resolved Issues

Table 2-1 lists the resolved issues for this release.

Table 2-1. Resolved Issues

ID	Description	Resolved in Release
136219	Stack-based buffer overflows in the send_dg and send_vc functions in the libresolv library may allow remote attackers to cause a denial of service (crash) via a crafted DNS response. This is a variation of CVE-2015-7547 vulnerability, see https://web.nvd.nist.gov/view/vuln/detail?vulnId=CVE-2015-7547 For customers using Omni-Path switches with DNS name service, install Omni-Path switch firmware version 10.3.1 (or later).	10.3.1

2.2 Open Issues

Table 2-2 lists the known open issues for this release by component, including the description and workaround.

Table 2-2. Open Issues (Sheet 1 of 3)

ID / Status	Product / Component / Ext Managed (E) Managed (M) All (A)	Description	Workaround
132341	Switch Hardware/ Director Chassis (M)	Spurious switch fan module I2C path error messages may be reported in the Command Line Interface (CLI) and diagnostic logs. These errors are caused by intermittent noise on the I2C signals going to fan modules.	Install firmware version 10.0.1 or later. Ignore spurious fan module I2C path error messages.
132786	Switch Software/ Chassis Management (M)	Downgrading from the production validated (PV) release to release 10.0.0.0.625 (or earlier) fails.	Do not downgrade the firmware from the PV release.
133536	Switch Software/ Chassis Management (M)	Cannot set default gateway for the IPv6 protocol in GUI	None.

Table 2-2. Open Issues (Sheet 2 of 3)

ID/ Status	Product/ Component/ Ext Managed (E) Managed (M) All (A)	Description	Workaround
134000	Switch Software (E)	When AOCs are connected to externally-managed switches, links may come up at widths less than 4x.	Use the CLI command **opaswitchadmin configure** and set the **LinkWidth.Enabled** to 4x only.
134353	Link Working Group	Very infrequently, when a link goes down, the logical link state can remain stuck in the 'Init' state.	The device containing the affected port must be rebooted in order to resolve the issue. Ports in this state have a logical link state of 'Init' but do NOT have a physical port state of 'LinkUp'.
135757	Switch Software/ Chassis Management (M)	Chassis Viewer fails to display Daylight Saving Time (DST).	Use the CLI to set DST.
135838	Switch Software/ Chassis Management (M)	Slow response to ssh or scp requests to a switch from a SLES 12.2 system.	Adding the following command to the ssh_config file on the SLES 12.2 host may improve response time: `# MACs hmac-md5,hmac-sha1,umac-64@openssh.com,hmac-ripemd160 MACs hmac-md5`
136382	Switch Software/ Chassis Management (M)	IPoIB does not work with IPv6 in Release 10.3.	None.
136482	Switch Hardware/ Director Chassis (M)	Due to high CPU utilization on the Management Module (MM) CPU, it has been observed that the Director Class switches may begin indicating thermal events. Customer network probing software may be associated with this high Management Module CPU utilization.	Enable authentication using **loginMode (0,1 or 3)**. Disable any site-specific network probing of the Management Module and Chassis IP addresses. If the condition persists, and the switch has a redundant management module, request a non-disruptive reboot of the switch using **reboot -m**.
136671	Switch Software/ Chassis Management (M)	It has been observed that the Director and Edge switch chassis can stop accepting new SSH CLI connections.	Enable authentication using loginMode (0,1 or 3). For an Edge, reboot the switch to release hung SSH sessions. For Director Class switches, use the serial connection to request a non-disruptive reboot of the switch using `reboot -m`; this recovers the SSH sessions without impacting traffic. Alternatively, you can also power cycle the switch—a disruptive action—to release SSH sessions.
136810	Switch Software/ Chassis Management (M)	On an Omni-Path Director chassis, it has been observed that the SSH/Telnet output of the CLI can slow down significantly over time. Intel is currently investigating this issue.	If the Director has redundant management, forcing a master management module reboot (**reboot -m**), should improve the situation for a period of time.
137026	Switch Software/ Chassis Management GUI (M)	Director Switch Home page online help calls the Edge Switch help page.	None.
137028	Switch Software/ Chassis Management GUI (M)	Logout button missing from Chassis Viewer Leaf Details screen.	None.

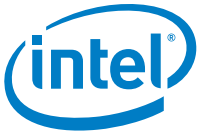


Table 2-2. Open Issues (Sheet 3 of 3)

ID/ Status	Product/ Component/ Ext Managed (E) Managed (M) All (A)	Description	Workaround
137035	Switch Software/ Chassis Viewer GUI Help (M)	Need to create a Leaf FRU Information help file.	None.
137038	Switch Software/ Chassis Viewer GUI Help (M)	Need to create a Spine-specific Main Status and Navigation help file.	None.
137053	Switch Hardware Director Chassis (M)	On an Omni-Path Director chassis, thermal events have been noted in some customer environments. The issue appears to be related to high CPU demand on the master Management Module (MM), leading to starvation of the thermal management threads.	It is highly advised to remove the three (3) IP addresses associated with the Director chassis and each MM from any IP probing tools that might be executing in the customer environment. It has been shown that servicing these invalid requests from these IP probing tools can lead to high CPU demand on a MM. If a master MM starts to exhibit these behaviors, and a slave MM is up and running in the same Director, then executing a "reboot -m" invokes a non-disruptive failover to the slave MM, that can temporarily relieve the situation.
137082	Switch Software/ Chassis Management (M)	On Director-class chassis that have redundant Management Modules (MM) running 10.2 firmware, messages may appear in the log indicating that files have failed to copy to the slave MM.	Issuing a `reboot -s` of the slave MM may resolve the issue.

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