

## Quick Start Details

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Thank you for your purchase of Intel® Omni-Path products. This Quick Start Guide is your roadmap to Intel's comprehensive library of publications describing all aspects of the product family.

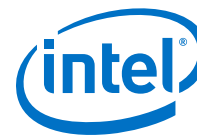
This guide outlines the most basic steps for getting your Intel® Omni-Path Architecture (Intel® OPA) cluster installed and operational. For complete descriptions of all scenarios and configuration options, refer to the [Intel® Omni-Path Documentation Library](#). Note that document references apply to Release 10.9 or later.

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### BEST PRACTICES

- Intel recommends that users update to the latest versions of Intel® Omni-Path firmware and software to obtain the most recent functional and security updates.
  - To improve security, the administrator should log out users and disable multi-user logins prior to performing provisioning and similar tasks.
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1. Review all release notes related to your version of Intel® OPA.
2. Install host fabric interfaces HFIs in servers; install externally-managed and managed switches in racks; and, connect cabling.  
*Details: Intel® Omni-Path Fabric Switches Hardware Installation Guide and Intel® Omni-Path Host Fabric Interface Installation Guide.*
3. Power up all fabric hardware and verify LEDs operate as expected.  
*Details: Intel® Omni-Path Fabric Switches Hardware Installation Guide and Intel® Omni-Path Host Fabric Interface Installation Guide.*
4. Download software: <https://www.intel.com/content/www/us/en/design/products-and-solutions/networking-and-io/fabric-products/omni-path/downloads.html>, Latest Release Library
  - a. Fabric Host Software: IFS package for management nodes.
  - b. Fabric Host Software: Basic package for compute nodes.
  - c. Switch Firmware \*.emfw: for externally-managed switches.
  - d. Switch Firmware \*.spkg: for managed switches.
  - e. Intel® Omni-Path Fabric Suite Fabric Manager GUI software.
  - f. Open Fabrics Interfaces (OFI) Software for Intel® Omni-Path.
5. Install software and drivers using INSTALL script.  
*Details: Intel® Omni-Path Fabric Software Installation Guide (for first time installers) or Intel® Omni-Path Fabric Setup Guide (for experienced installers).*
6. Confirm firmware version (and optionally, update firmware) on the switches.  
*Details: Intel® Omni-Path Fabric Switches GUI User Guide and Intel® Omni-Path Fabric Switches Command Line Interface Reference Guide.*



7. Configure the software by editing files for hosts, externally-managed switches (switches), and managed switches (chassis).  
Details: *Intel® Omni-Path Fabric Software Installation Guide*, Part 2 Configuring the Software.
8. Reboot all servers after the software installation and configuration is complete.
9. Start Fabric Manager on the designated management node.  
Details: *Intel® Omni-Path Fabric Suite Fabric Manager User Guide* and *Intel® Omni-Path Fabric Setup Guide*.
10. Use FastFabric commands to verify the fabric configuration.  
Details: *Intel® Omni-Path Fabric Setup Guide*, Performing Initial Fabric Verification, and *Intel® Omni-Path Fabric Suite FastFabric User Guide*.
11. You may need to update switch firmware, if the links are not active or the version is earlier than the current release. Reboot the switches after updating firmware.  
Details: *Intel® Omni-Path Fabric Software Installation Guide*, Configure the Externally-Managed Switches, and *Intel® Omni-Path Fabric Suite FastFabric User Guide*, Managing the Switch Configuration.
12. Use the FastFabric tools to configure your system and monitor performance.  
Details: *Intel® Omni-Path Fabric Suite FastFabric User Guide*.
13. To optimize system performance, refer to the *Intel® Omni-Path Fabric Performance Tuning User Guide*.

## Intel® Omni-Path Documentation Library

Intel® Omni-Path publications are available at the following URL, under *Latest Release Library*:

<https://www.intel.com/content/www/us/en/design/products-and-solutions/networking-and-io/fabric-products/omni-path/downloads.html>

Use the tasks listed in this table to find the corresponding Intel® Omni-Path document.

Task	Document Title	Description
Setting up an Intel® OPA cluster	<i>Intel® Omni-Path Fabric Setup Guide</i>	Provides a high level overview of the steps required to stage a customer-based installation of the Intel® Omni-Path Fabric. Procedures and key reference documents, such as Intel® Omni-Path user guides and installation guides, are provided to clarify the process. Additional commands and best known methods are defined to facilitate the installation process and troubleshooting.
Installing hardware	<i>Intel® Omni-Path Fabric Switches Hardware Installation Guide</i>	Describes the hardware installation and initial configuration tasks for the Intel® Omni-Path Switches 100 Series. This includes: Intel® Omni-Path Edge Switches 100 Series, 24 and 48-port configurable Edge switches, and Intel® Omni-Path Director Class Switches 100 Series.
	<i>Intel® Omni-Path Host Fabric Interface Installation Guide</i>	Contains instructions for installing the HFI in an Intel® OPA cluster.
Installing host software	<i>Intel® Omni-Path Fabric Software Installation Guide</i>	Describes using a Text-based User Interface (TUI) to guide you through the installation process. You have the option of using command line interface (CLI) commands to perform the installation or install using the Linux* distribution software.
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Task	Document Title	Description
Installing HFI firmware Installing switch firmware (externally-managed switches)		
Managing a switch using Chassis Viewer GUI Installing switch firmware (managed switches)	<i>Intel® Omni-Path Fabric Switches GUI User Guide</i>	Describes the graphical user interface (GUI) of the Intel® Omni-Path Fabric Chassis Viewer GUI. This document provides task-oriented procedures for configuring and managing the Intel® Omni-Path Switch family. Help: GUI embedded help files
Managing a switch using the CLI Installing switch firmware (managed switches)	<i>Intel® Omni-Path Fabric Switches Command Line Interface Reference Guide</i>	Describes the command line interface (CLI) task information for the Intel® Omni-Path Switch family. Help: -help for each CLI
Managing a fabric using FastFabric	<i>Intel® Omni-Path Fabric Suite FastFabric User Guide</i>	Provides instructions for using the set of fabric management tools designed to simplify and optimize common fabric management tasks. The management tools consist of Text-based User Interface (TUI) menus and command line interface (CLI) commands. Help: -help and man pages for each CLI. Also, all host CLI commands can be accessed as console help in the Fabric Manager GUI.
Managing a fabric using Fabric Manager	<i>Intel® Omni-Path Fabric Suite Fabric Manager User Guide</i>	The Fabric Manager uses a well defined management protocol to communicate with management agents in every Intel® Omni-Path Host Fabric Interface (HFI) and switch. Through these interfaces the Fabric Manager is able to discover, configure, and monitor the fabric.
	<i>Intel® Omni-Path Fabric Suite Fabric Manager GUI User Guide</i>	Provides an intuitive, scalable dashboard and set of analysis tools for graphically monitoring fabric status and configuration. This document is a user-friendly alternative to traditional command-line tools for day-to-day monitoring of fabric health. Help: Fabric Manager GUI embedded help files
Configuring and administering Intel® HFI and IPoIB driver Running MPI applications on Intel® OPA	<i>Intel® Omni-Path Fabric Host Software User Guide</i>	Describes how to set up and administer the Host Fabric Interface (HFI) after the software has been installed. The audience for this document includes cluster administrators and Message-Passing Interface (MPI) application programmers.
Writing and running middleware that uses Intel® OPA	<i>Intel® Performance Scaled Messaging 2 (PSM2) Programmer's Guide</i>	Provides a reference for programmers working with the Intel® PSM2 Application Programming Interface (API). The Performance Scaled Messaging 2 API (PSM2 API) is a low-level user-level communications interface.
Optimizing system performance	<i>Intel® Omni-Path Fabric Performance Tuning User Guide</i>	Describes BIOS settings and parameters that have been shown to ensure best performance, or make performance more consistent, on Intel® Omni-Path Architecture. If you are interested in benchmarking the performance of your system, these tips may help you obtain better performance.
Designing an IP or LNet router on Intel® OPA	<i>Intel® Omni-Path IP and LNet Router Design Guide</i>	Describes how to install, configure, and administer an IPoIB router solution (Linux* IP or LNet) for inter-operating between Intel® Omni-Path and a legacy InfiniBand* fabric.
Building Containers for Intel® OPA fabrics	<i>Building Containers for Intel® Omni-Path Fabrics using Docker* and Singularity* Application Note</i>	Provides basic information for building and running Docker* and Singularity* containers on Linux*-based computer platforms that incorporate Intel® Omni-Path networking technology.
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Task	Document Title	Description
Writing management applications that interface with Intel® OPA	<i>Intel® Omni-Path Management API Programmer's Guide</i>	Contains a reference for programmers working with the Intel® Omni-Path Architecture Management (Intel OPAMGT) Application Programming Interface (API). The Intel OPAMGT API is a C-API permitting in-band and out-of-band queries of the FM's Subnet Administrator and Performance Administrator.
Using NVMe* over Fabrics on Intel® OPA	<i>Configuring Non-Volatile Memory Express* (NVMe*) over Fabrics on Intel® Omni-Path Architecture Application Note</i>	Describes how to implement a simple Intel® Omni-Path Architecture-based point-to-point configuration with one target and one host server.
Learning about new release features, open issues, and resolved issues for a particular release	<i>Intel® Omni-Path Fabric Software Release Notes</i>	
	<i>Intel® Omni-Path Fabric Manager GUI Release Notes</i>	
	<i>Intel® Omni-Path Fabric Switches Release Notes</i> (includes managed and externally-managed switches)	
	<i>Intel® Omni-Path Fabric Unified Extensible Firmware Interface (UEFI) Release Notes</i>	
	<i>Intel® Omni-Path Fabric Thermal Management Microchip (TMM) Release Notes</i>	
	<i>Intel® Omni-Path Fabric Firmware Tools Release Notes</i>	

## How to Search the Intel® Omni-Path Documentation Set

Many PDF readers, such as Adobe\* Reader and Foxit\* Reader, allow you to search across multiple PDFs in a folder.

Follow these steps:

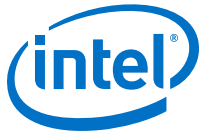
1. Download and unzip all the Intel® Omni-Path PDFs into a single folder.
2. Open your PDF reader and use **CTRL-SHIFT-F** to open the Advanced Search window.
3. Select **All PDF documents in...**
4. Select **Browse for Location** in the dropdown menu and navigate to the folder containing the PDFs.
5. Enter the string you are looking for and click **Search**.

Use advanced features to further refine your search criteria. Refer to your PDF reader Help for details.

## Training and Support

Intel offers training and support for Intel® Omni-Path products. For details, go to:

- Training: Contact [fabricttraining@intel.com](mailto:fabricttraining@intel.com)
- Support: <http://www.intel.com/omnipath/support>



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