# Cornelis™ Omni-Path™ Fabric Firmware Tools

*Release Notes for 10.11.1*

# Table of Contents

# 1. Overview of the Release

This document provides a brief overview of the changes introduced into the Firmware Tools (FW Tools) by this release. Cornelis Omni-Path FW Tools is used for the hardware listed in Section 1.7 "Supported Hardware".

The information contained in this document is intended as supplemental information only; it should be used in conjunction with the documentation provided for each component.

These Release Notes list the features supported in this release, open issues, and issues that were resolved during release development.

## 1.1. Audience

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

## 1.2. Document Versions

The following table lists the end user document versions supported by this release.

**Table 1. Supported Document Versions**

| Title | Doc. Number | Revision |
|---|---|---|
| *Cornelis Omni-Path Fabric Quick Start Guide* | J57479 | 9.0 |
| *Cornelis Omni-Path Fabric Setup Guide* | J27600 | 14.0 |
| *Cornelis Omni-Path Fabric Switches Hardware Installation Guide* | H76456 | 15.0 |
| *Cornelis Omni-Path Host Fabric Interface Installation Guide* | H76466 | 9.0 |
| *Cornelis Omni-Path Fabric Software Installation Guide* | H76467 | 20.0 |
| *Cornelis Omni-Path Fabric Switches GUI User Guide* | H76457 | 14.0 |
| *Cornelis Omni-Path Fabric Switches Command Line Interface Reference Guide* | H76458 | 14.0 |
| *Cornelis Omni-Path Fabric Suite FastFabric User Guide* | H76469 | 20.0 |
| *Cornelis Omni-Path Fabric Suite Fabric Manager User Guide* | H76468 | 18.0 |
| *Cornelis Omni-Path Fabric Suite Fabric Manager GUI User Guide* | H76471 | 17.0 |
| *Cornelis Omni-Path Fabric Host Software User Guide* | H76470 | 18.0 |
| *Cornelis Performance Scaled Messaging 2 (PSM2) Programmer's Guide* | H76473 | 17.0 |
| *Cornelis Omni-Path Fabric Performance Tuning User Guide* | H93143 | 22.0 |
| *Cornelis Omni-Path IP and LNet Router Design Guide* | H99668 | 12.0 |
| *Building Containers for Cornelis Omni-Path Fabrics using Docker\* and Singularity\* Application Note* | J57474 | 10.0 |
| *Cornelis Omni-Path Management API Programmer's Guide* | J68876 | 9.0 |
| *Cornelis Omni-Path Fabric Software Release Notes* | A00014 | 1.0 |
| *Cornelis Omni-Path Fabric Manager GUI Software Release Notes* | K59649 | 2.0 |
| *Cornelis Omni-Path Fabric Switches Release Notes (includes managed and externally- managed switches)* | A00025 | 1.0 |
| *Cornelis Omni-Path Fabric Unified Extensible Firmware Interface (UEFI) Release Notes* | A00015 | 1.0 |
| *Cornelis Omni-Path Fabric Thermal Management Microchip (TMM) Release Notes* | K38341 | 3.0 |
| *Cornelis Omni-Path Fabric Firmware Tools Release Notes* | A00027 | 1.0 |

## 1.3. Software License Agreement

This software is provided under license agreements and may contain third-party software under separate third-party licensing. Please refer to the license files provided with the software for specific details.

## 1.4. If You Need Help

Technical support for Cornelis Omni-Path products is available 24 hours a day, 365 days a year. For additional details, contact Cornelis Networks Customer Support at support@cornelisnetworks.com.

## 1.5. Supported Features

- The list of supported hardware is in Section 1.7 "Supported Hardware"

- Contains tools to manage and update UEFI and TMM firmware

- New packaging: the Firmware Tools file is now delivered in a single RPM that is compatible with all supported operating systems

## 1.6. Firmware Files

This release contains the firmware files listed in the table below.

**Table 2. Firmware Files**

| Description | File Name | Version |
|---|---|---|
| Firmware Tools | hfi1-firmware-tools-10.11.1.0-7.x86_64.rpm | 10.11.1.0 |

## 1.7. Supported Hardware

The following table lists the hardware supported in this release. The table does not include OEM-specific hardware, such as custom adapters and switches.

> **NOTE**
>
> The PSM2 implementation has a limit of four (4) HFIs per server.

**Table 3. Supported Hardware**

| Hardware | Description |
|---|---|
| 2nd Gen AMD EPYC Processor | Rome Zen 2 microarchitecture |
| 3rd Gen AMD EPYC Processor | Milan Zen 3 microarchitecture |
| Intel Xeon Processor E5-2600 v3 product family | Haswell CPU-based servers |
| Intel Xeon Processor E5-2600 v4 product family | Broadwell CPU-based servers |
| Intel Xeon Scalable Processor | Skylake CPU-based servers |
| 2nd Generation Intel Xeon Scalable Processor | Cascade Lake CPU-based servers |
| Intel Xeon Phi x200 Product Family | Knights Landing CPU-based servers |
| 3rd Generation Intel Xeon Scalable Processor (i3, i5, i7) | Ice Lake CPU-based servers |
| Cornelis Omni-Path Host Fabric Interface 100HFA016 (x16) | Single Port Host Fabric Interface (HFI) |
| Cornelis Omni-Path Host Fabric Interface 100HFA018 (x8) | Single Port Host Fabric Interface (HFI) |

## 1.8. Installation Requirements

This section provides installation requirements for this release.

## 1.8.1. Best Practices

Note the following Cornelis Omni-Path recommendations:

- Cornelis recommends that users update to the latest versions of Cornelis 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.

- To improve security, Cornelis recommends updating the default HTTPS certificate. Refer to the *Cornelis Omni-Path Fabric Switches GUI User Guide*, "Updating the Certificate" for details.

- To improve security, Cornelis recommends configuring the `MgmtAllowed` setting and consider limiting access to port configuration changes by limiting access to Userspace Management Datagrams (UMADs). Refer to the *Cornelis Omni-Path Fabric Software Installation Guide*, "About User Queries Settings" for more information.

## 1.8.2. Installation Instructions

For installation details, refer to the *Cornelis Omni-Path Fabric Software Installation Guide*.

### 1.8.2.1. Download the Firmware

Download the firmware using the following procedures.

1. Using a web browser, Log in to the Cornelis Customer Center.

2. Log in and select the Release Library.

3. Filter on Software/Firmware to locate the files you need.

   Or, use the search box above the table to enter your search criteria.

   The results are displayed.

4. Select your target firmware and click the **Download** icon.

5. Review the Software License Agreement.

6. Click **Accept**.

   The zipped firmware is saved to your computer.

### 1.8.2.2. Installing and Upgrading rpms

This section provides information for installing or upgrading firmware rpms.

- To install the rpms, use `rpm -ivh <rpm name>`.

- To upgrade the rpms, use `rpm -Uvh <rpm name>`.

**CORNELIS**
NETWORKS

> ⓘ **IMPORTANT**
>
> When updating the UEFI driver to 1.11, it is recommended to also update the EPROM format to version 2. The EPROM Version 2 format addresses a possible issue with the UEFI not loading properly on some platforms.
>
> Run the `hfi1_eprom` tool using the `-N` option which will convert the EPROM from the version 1 format to the version 2 format. *You only need to do this one time. Once the format has been updated, it will remain in that format.*
>
> Example:
>
> ```
> hfi1_eprom -N -d all -S -w -o /usr/share/opa/bios_images/
> HfiPcieGen3Loader_1.11.0.0.0.rom -b /usr/share/opa/bios_images/
> HfiPcieGen3_1.11.0.0.0.efi -y
> ```

### 1.8.2.2.1. Important Information for Firmware Tools

- When trying to install `hfi1-firmware-tools.rpm` on OPA-IFS prior to V10.7, the installation fails due to an existing version of these firmware tools owned by other rpms.

  To resolve this issue, you can safely force the installation of the rpm using the following command:

  ```
  rpm -ivh --force hfi1-firmware-tools-<version>.rpm
  ```

- When trying to install a pre-10.7 version of OPA-IFS on systems where the `hfi1-firmware-tools.rpm` is already installed, the `hfi1-diagtools-sw` and `opa-basic-tools` will fail to install due to existing versions owned by the `hfi1-firmware-tools`.

  To resolve this issue, you can

  – Uninstall the existing `hfi1-firmware-tools.rpm` prior to the OPA-IFS installation.

  – If desired, you can safely force the installation of the rpm using the following command:

  ```
  rpm -ivh --force hfi1-firmware-tools-<version>.rpm
  ```

## 1.9. Product Constraints

- None.

## 1.10. Product Limitations

- None.

# 2. Issues

This section lists the resolved and open issues in the Cornelis Omni-Path FW Tools.

## 2.1. Resolved Issues

The following table lists issues that are resolved in this release.

**Table 4. Issues Resolved in this Release**

| ID | Description | Resolved in Release |
|---|---|---|
| STL-61241<br>STL-61299 | On some platforms, the hfi1 device may not show up in BIOS/UEFI boot menus and may not be available as a PXE boot device. This is caused by the platform not loading the UEFI driver for the hfi1 adapter. | 10.11.1 |

## 2.2. Open Issues

None.