Release Notes for Cisco Optical Network Planner, Release 4.2

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Hardware and Software Requirements

The hardware and software requirements for installing Cisco ONP are:

Hardware Requirements

You need UCS server or Linux VM with Ubuntu 18.04.3 and 20.04.3.

Recommended Server Configuration for Cisco ONP and LNI:

- 8 CPU, 48 GB RAM, and 500GB server free space after installation, for 3 concurrent Parallel ONP analysis with LNI of 500 devices
- 8 CPU, 64 GB RAM, and 500GB server free space after installation, for 6 concurrent Parallel ONP analysis with LNI of 500 devices
- 8 CPU, 96 GB RAM, and 500GB server free space after installation, for 10 concurrent Parallel ONP analysis with LNI of 500 devices

Software Requirements

- Clients require the latest version of the Google Chrome browser.
- Recommended version of the Google Chrome browser:
  - For Windows: Version 94.0.4606.61
  - For Mac: Version 93.0.4577.82

Note Minimum 100Mbps internet speed is recommended for better Cisco ONP user experience.

Supported Platforms and Releases

Cisco ONP supports the following platforms:

Table 1: Supported Platforms and Releases

Platforms	Recommended and Supported Releases
NCS 1000	7.0.1

Platforms	Recommended and Supported Releases
NCS 2000	11.0.0, 11.1.0, 12.1.0, 12.2.0
NCS 4000	6.5.28

What's New in Cisco ONP Release 4.2

Cisco is continuously enhancing the product with every release and this section covers a brief description of key features and enhancements. It also includes links to detailed documentation, where available.

<table>
<tr><th>Feature</th><th colspan="3">Description</th></tr>
<tr><td colspan="4">Cisco Optical Network Planner</td></tr>
<tr><td>NCS4K-1K-2K Multilayer Connection Trace</td><td colspan="3">You can define Multilayer Connections (MLC) such as cards and pluggables for NCS 4K-1K-2K and NCS 1K-2K aggregated nodes in an SSON network.

This new tab in the Layout page helps to view end-to-end MLC trace for OTN service starting from NCS4K IN until NCS2K Add/Drop for LNI network. Also, it helps to define new traces for the newly added service and maintain the network design and deployment.</td></tr>
<tr><td rowspan="4">Modify Properties of Add/Drop Multiplexer and Demultiplexer</td><td colspan="3">You can create and validate network designs by choosing colored and colorless add/drop multiplexers and demultiplexers, and interlever under C-Band > Add/Drop. The following options are supported in this release:</td></tr>
<tr><td>Type of Add/Drop</td><td>Options</td><td>Network Supported</td></tr>
<tr><td>Colorless</td><td>• Direct SMR
• MF-6AD-CFS</td><td>• SSON
• Non-SSON</td></tr>
<tr><td>Colored</td><td>• MD-64-C
• MD-48-ODD
• MD-48-EVEN
• MD-48-ODD + MD-48-EVEN</td><td>• SSON
• Non-SSON</td></tr>
<tr><td>Interlever</td><td>• MpoCable
• MD-48-CM</td><td>• Non-SSON</td></tr>
<tr><td>Inline Amplifier</td><td colspan="3">The Inline Amplifier option allows you to enable an inline amplifier in the network. You can simulate the optical feasibility of the network with and without an inline amplifier. Based on the colorless or colored add/drop type selected and the QSFP-DD pluggable status, a default inline amplifier is enabled for the network.</td></tr>
</table>

Feature	Description
Shared SMR Port	You can enable the **Colored Add/Drop** property. This feature supports the use of contentionless and colored demands connected to the same port of SMR card. With the **Shared SMR Port** enabled, you can create and validate the contentionless and colored configuration on a 16-degree SMR-20 node.
Support for Mixed Add/Drop Configuration	You can configure different functionalities in the network created in Cisco ONP. Mixed wavelengths such as colorless and contentionless, colored and contentionless, can be added/dropped on the same side or direction. The following mixed configurations are supported: • Colored (MD-48-ODD/MD-48-EVEN) and Contentionless (16-AD-CCOFS) without shared SMR port • Colored and Contentionless (MD-64-C and 16-AD-CCOFS) • Colored (MD-64-C) and Colorless (Direct SMR) • Colored (MD-48) and Contentionless (16-AD-CCOFS) with Shared SMR Port • Colorless and MD-48-ODD/MD-48-EVEN • Colorless and 16-AD-CCOFS
Support for NCS2K-MF-CL-SC (C and L-band combiner and splitter)	Cisco ONP supports the passive module, NCS2K-MF-CL-SC (C and L-band combiner and splitter), starting from the NCS 2000 system release 12.2 for SSON networks. This feature enables combining C and L band wavelengths.
New Optical Source and Pluggable Support	Optical Sources enable the user to simulate the optical feasibility of the network with the 400G and other interfaces that are not natively modeled in Cisco ONP. The following Optical Sources are introduced in this release: • ONS-CFP2D-400G-C-OpticalSources-V2.mxd • QDD-400G-ZRP-S-OpticalSources-V2.mxd
Support for New PIDs for SMR-20 Card	The following new licensed PIDs for the SMR-20 card are displayed on the BOM page so that you can view the price details and consider ordering. • NCS2K-FSSMR-2LIC= • E-NCS2K-1P-LIC= • E-NCS2K-5P-LIC= • E-NCS2K-10P-LIC=
Channel Attenuators	You can set up channel attenuators for QSFP-DD demands. You can choose different channel attenuators based on the specific configuration and check for the optical feasibility of the channel.

Feature	Description
Customizable Confidential Banner	The Confidential Banner string can be customized as required. An admin user can modify the banner string when the *confidentialBanner.enabled* field is set to true in the *feature.properties* file.

Caveats

Open Caveats

Table 2: Open Caveats

Caveat ID Number	Description
CSCvy84813	SMR full PID is changing to licensed PID after upgrade analysis of LNI network
CSCvz31675	non-SSON to SSON converted net fails analysis with colored demands (MD48 to MD64C convertion)
CSCvz65965	Analysis fails with RPT Unexpected critical error on adding MD64C for Colorless nodes
CSCvz65972	Design net with mix config having colorless port to max count fails with Unexpected Critical Error
CSCvz70850	"Internal server error" error msg is coming in non-sson net on downloading netconf in DB migation
CSCvz72256	Unable to reduce contentionless port from 16 to 8 on SMR-9 node
CSCvz52423	CONP Analysis fails when colored MCH is path forced and colorless MCH is auto
CSCvz85989	Network Analysis fails with Non-Quick Analysis and optically not feasible wave

Bug Search Tool

Cisco Bug Search Tool (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.

Other Important Information

- Upgrade from Cisco ONP Release 4.1 to Cisco ONP Release 4.2 is supported. Cisco recommends to clear the browser cache before installing Cisco ONP Release 4.2.



Note SVO software license PID changes are added in Cisco ONP Release 4.2. Recommended to re-analyze 12.1.0 release network to have updated SVO software PIDs in BoM. This is applicable only for 12.1.0 networks analysed using Cisco ONP Release 4.1.