View Network Reports

Table 1: Feature History

Feature Name	Release Information	Feature Description
Deployability and Debuggability Enhancements	Cisco ONP Release 24.3.1	

Feature Name	Release Information	Feature Description

		Cisco ONP enhances the debuggability and deployability of the network with the following improvements in Optical sources, and various reports available in the **Results** page:
		• **Optical Sources**: Including new optical parameters such as vendor name, vendor ID, and submode in the downloaded optical souce Excel file to improve inperoperability with Cisco Optical Network Controller.
		• **BOM**: The exported Excel file includes these updates:
		  • Sales BOM Sheet: Providing information tailored for sales personnel.
		  • Net BOM Sheet: Providing the site-wise BOM count and categories of elements such as Chassis, Controllers, Mux-Demux units, Line Cards, Fillers, and more, offering a comprehensive overview of all network elements in the analyzed network.
		• **IPC**:
		  • Consolidating the IPC Cabling Report and the IPC Patch Report into a unified view with additional columns, streamlining connection details and eliminating the need to access multiple sources.
		  • Highlighting patches when clicked.
		• **Optical Reports**: Filtering

Feature Name	Release Information	Feature Description
		results by any column available in the report for more precise data analysis. • **Elements > Messages**: Providing links to navigate to the respective object in the network tree, allowing users to take the necessary action to correct errors.

Table 2: Feature History

Feature Name	Release Information	Description

Simplified Navigation to Results Tab	Cisco ONP Release 5.1	Cisco ONP now provides a simplified approach to navigate to the **Results** tab to view reports for analyzed multinode network topologies with the following enhancements:
		• Click the **Ellipsis** icon available in the right side of a particular site in the network tree to view:
		  • BOM details
		  • Optical Reports
		• Click the **Ellipsis** icon available in the right side of a particular circuit/media/wave in the network tree to view:
		  • Optical Report
		  • Traffic Report
		• New **IPC** tab —The **IPC** tab is introduced in **Cabling Reports** to intuitively view the internal patch connections for a site.
		• Search Box—The **Results** tab is enhanced with a Search Box at the top. You can use this search box to find a particular site in the topology by entering the site name.

• Network reports, on page 4

Network reports

The Cisco ONP home page has multiple tabs to access the reports of the analyzed network. You can also view the reports for specific site, fiber, or wave properties by clicking the respective report in the Network Tree pane. The tabs are:

• Dashboard

- Elements
- Map
- BOM
- Layout
- Results

View reports in the Dashboard tab

Table 3: Feature History

Feature Name	Release Information	Feature Description
View sustainability report	Cisco ONP Release 25.1.1	The **Sustainability Insights** tab in the Cisco ONP **Dashboard** presents these sustainability metrics for a network designed in Cisco ONP: • Energy Consumption Distribution (kWh) • CO2 Emission (Kg) • Energy Efficiency (kWh/GHz) • CO2 Emission Equivalent: This shows the number of miles traveled by a car, bus, and airplane that would produce the same amount of CO2 emissions. • Number of Trees Needed: Indicates the number of trees that would need to be planted to absorb the network's carbon emissions. This report helps you understand the environmental impact of the optical networks you design.

From Release 25.1.1, Cisco ONP uses the Energy Management Capability (EMC) API to display sustainability reports. The EMC API calculates sustainability metrics by considering the power consumption and the geographical location of the site. See Formulas for sustainability calculation , on page 7 to know how the EMC API does the calculation.

Follow these steps to view various reports of an analyzed network under the **Dashboard** tab.

Before you begin

Log in to Cisco ONP web interface.

Enable Sustainability report, on page 6 to view the sustainability report.

Procedure

Step 1 Open the analyzed network for which you want to view the network summary.

Step 2 Click the **Dashboard** tab.

By default, the **Network Summary** tab will appear and display this information about the network:

- Total count of sites
- Total count of fibers
- Total count of SRLGs (Shared Risk Link Groups)
- Total count of services
- Total count of waves/media channels/circuits
- Total count of messages

Step 3 Click the **Sustainability Insights** tab to view the sustainability metrics for a network designed in Cisco ONP.

- Energy Consumption Distribution (kWh)
- CO2 Emission (Kg)
- Energy Efficiency (kWh/GHz)
- CO2 Emission Equivalent: This shows the number of miles traveled by a car, bus, and airplane that would produce the same amount of CO2 emissions.
- Number of Trees Needed: Indicates the number of trees that would need to be planted to absorb the network's carbon emissions.

a) Click the **Bypass EMC API** radio button to display default values for the metrics regardless of the site's location or its power consumption.

Enable Sustainability report

Use this task to enable the **Sustainability Insights** tab under the **Cisco ONP** Dashboard.

Procedure

Step 1 Log in to the server where Cisco ONP is installed.

Step 2 Use the cd command to go to the cnp directory and then to the conf directory.

Example:

```
root#cd /opt /cnp / conf
```

Step 3 use the **vi feature.properties** command to open the feature.properties file in the vi editor.

Example:

```
root:/opt/cnp/conf# vi feature.properties
```

Step 4 Edit the file.

a) Change SustainabilityInsights.enabled=false to SustainabilityInsights.enabled=true.

b) Press the w and q keys to save and exit the vi editor.

Example:

```
:wq
```

What to do next

View reports in the Dashboard tab, on page 5

Formulas for sustainability calculation

The EMC API calculates sustainability metrics using these formulas:

1. Energy Consumed (kWh)

   Formula:

   EnergyConsumed = PowerUtilizedByNode * ObservationPeriodicity / 60

   PowerUtilizedByNode: The total power consumed by the optical node (in Watts).

   ObservationPeriodicity: The observation duration, fixed at 300 seconds (approximately 5 minutes).

2. Carbon Emission (kg)

   Formula:

   CarbonEmission = EnergyConsumed * CarbonIntensity

   CarbonIntensity: The value obtained from the EMC API. If the EMC API does not return a value, a default constant value of 442 is used.

3. Energy Efficiency (kWh/GHz)

   Formula:

   EnergyEfficiency = EnergyConsumed / TrafficServed

   EnergyConsumed: The result from the first formula.

   TrafficServed: The total traffic passing or reserved in the network

View reports in the Elements tab

The **Elements** tab provides comprehensive reports of network elements and any associated messages.

Follow these steps to view the network elements report and messages.

Before you begin

Log in to Cisco ONP web interface.

Procedure

Step 1 Open the analyzed network for which you want to view the network summary.

Step 2 Click the **Elements** tab.

You can view the reports described in this table.

Table 4: Reports under Elements

Report	Description
Sites	Shows the site information, which consists of the name of the sites, their types, and their X and Y coordinate values.
Fibers	Shows the information about the fiber length between the source and the destination for the corresponding sites. You can sort and filter the fiber details available in each column of the table.
Services	Shows the service type, source and destination sites for particular service, quantity, protection type, and status. For each service, the report shows the primary path, secondary path, and their status.
Waves	The Waves report shows the number of waves available in the network and the wave utilization. Click each wave to view the following details: • Wave: Consists of a wave UID and its source and destination sites. • Wave Details: Provides details of wave OSNR, channel path, OTN services associated to wave and excluded channels. • Channels: Port details of the source and destination cards, the wavelength that is used, and its utilization demands. • Optical Results: Provides details of optical parameters such as OSNR, SOL, EOL, power margin, CD, and PMD.
SRLGs	Lists the names of created SRLGs and their fiber details. Click **Export** at the bottom to export the report in .xlsx format.
Messages	Shows messages that relate to errors that occurred while analyzing the network. By default, only critical messages for the analyzed network are listed here. You can disable the **Critical Only** toggle button to view all messages. Click the link in the Target column to navigate to the respective object in the network tree and take the necessary action to correct the error.

Step 3 Click each tab to view the respective report.

Step 4 Click the Pop-up icon to view the reports in a larger, resizable window.

View details of the BOM report

Table 5: Feature History

Feature Name	Release Information	Feature Description
MLP Brownfield with Diff BOM	Cisco ONP Release 4.1	This feature allows you to perform the following: • Compare the BOMs of two or more LNI imported networks. • Upgrade brownfield network. • Upgrade the Cisco ONP network with traffic sites.

The Bill of Materials (BOM) report includes these components:

- Detailed price lists for each site.
- Categories of elements such as Chassis, Controller, Mux-Demux, Line Card, Filler, and more.
- The overall BOM for the entire network.

Follow these steps to view the BOM report for an analyzed network.

Before you begin

Log in to Cisco ONP web interface.

Procedure

Step 1 Open the analyzed network for which you want to view the BOM.

Step 2 Click the **BOM** tab.

The BOM details are displayed.

To view the BOM details for OTN and DWDM separately, click each site. See Licensed PIDs available in the BOM report, on page 10for the list of licensed PIDs added into the BOM report.

See for the list of licensed PIDs added into the BOM report.

Step 3 View the BOM details for any particular site.

a) In the network tree, expand **Site** and click the **Ellipsis** icon available in the right side of the required site.

b) Click **Open BOM**

Cisco ONP opens the **BoM** tab and provides the BoM details of the selected site.

c) Expand the Site to view the PID information.

Step 4 Click **Export** to export the BOM details in the form of a spreadsheet, and save it into your local system.

We recommend that you export the BOM report only in analyze mode. Exporting the reports in the upgrade and release upgrade modes may lead to inaccuracies..

From Release 24.3.1, the exported Excel file includes these updates:

- **Sales BOM Sheet**: Contains information tailored for sales representatives.
- **Net BOM Sheet**: Now includes the sitewide BOM count, providing a comprehensive overview of all network elements in the analyzed network.

Step 5 Compare the BOM of the existing network with other networks:

a) Click **Compare with: Other Networks**.
b) From the **Other Networks** dialog box, choose the network that you want to be compared with.

You can view both BOM reports displayed on the same page for comparison.

Step 6 Use the Search box on top of the BOM reports to search for any specific site or wave in the reports.

a) Enter the name of the specific site or wave in the Search box.
b) Choose **equals** or **contains** from the drop-down list.
c) Click the Search icon to search for the required site or wave.

Licensed PIDs available in the BOM report

Table 6: Feature History

Feature Name	Release Information	Feature Description
Support for New PIDs for SMR-20 Card	Cisco ONP Release 4.2	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=

Cisco ONP introduces new licensing PIDs with each platform release to incorporate the latest updates and features.

This table lists the licensed PIDs included in the BOM report for different Cisco ONP releases.

Table 7: Licensed PIDs added to BOM report

Cisco ONP release supported from	Platform	PIDs and description
4.2	NCS 2000	• **NCS2K-FSSMR-2-LIC=** : 20-port FS-SMR licensed to enable two ports • **E-NCS2K-1P-LIC=** : Software license to enable one port on licensed 20-port FS-SMR • **E-NCS2K-5P-LIC=** : Software license to enable five ports on licensed 20-port FS-SMR • **E-NCS2K-10P-LIC=** : Software license to enable ten ports on licensed 20-port FS-SMR
5.2	NCS 1010 from Release 7.11.1	• **NCS1K10-ATO=** : NCS 1010 ATO • **SF-NCS1K10-7111K9S=** : Software license to download the COSM NETCONF XML file for the COSM UI. • **NCS1K4-CCMD-C=** : 16-port, C-Band Colorless Coherent Multiplexer/Demultiplexer with an EDFA • **NCS1K4-CCMD-L=** : 16-port, L-Band Colorless Coherent Multiplexer/Demultiplexer with an EDFA

Cisco ONP release supported from	Platform	PIDs and description
	NCS 1020 from Release 24.3.1 NCS 1001 from Release 7.10.1	• **NCS1020-SA=** : NCS 1020 Shelf Assembly • **NCS1020-FAN=** : NCS 1020 Fan for NCS 1014 Slots • **NCS1020-FAN-BLANK=** : NCS 1020 Fan Blank • **CWDM-SFP-1510=**: CWDM 1510 NM SFP Gigabit Ethernet and 1G/2G FC • **CWDM-SFP-1610=**: CWDM 1610 NM SFP Gigabit Ethernet and 1G/2G FC • **ONS-SC-Z3-1510=**: SFP - OC48/STM16/GE, CWDM, 1510 nm, Commercial Temp • **ONS-SC-Z3-1610=**: SFP - OC48/STM16/GE, CWDM, 1610 nm, Commercial Temp • **ONS-SE-155-1510=** : SFP - OC3/STM1 CWDM, 1510 nm, EXT
	NCS 1014 transponder cards from Release 24.3.1.	

Cisco ONP release supported from	Platform	PIDs and description
		• **S-NCS1K14-L-100U=** : NCS 1014 100G Client Capacity Smart License - 400-600 • S-NCS1K14-L-100L= : NCS 1014 100G Client Capacity Smart License - 700-900 • S-NCS1K14-L-100M= : NCS 1014 100G Client Capacity Smart License - 1T-1.2T • NCS1K14-2.4T-K9= : Network Convergence System 1014 2.4T Line Card • **NCS1K14-2.4T-X-K9=** : Network Convergence System 1014 2.4T-X Line Card • **NCS1K4-QXP-K9=** : NCS1004 3.2T QSFP-DD DCO Transponder • **ESS-TXP-SIA3** : Essential Coherent DWDM interface SIA 36-59 months • **ESS-TXP-SIA5** : Essential Coherent DWDM interface SIA 60-120 months • **ESS-TXP-RTU** : Essential Coherent line card interface RTU • **ADV-TXP-SIA3** : Advance Coherent DWDM interface SIA 36-59 months • **ADV-TXP-SIA5** : Advance Coherent DWDM interface SIA 60-120 months • **ADV-TXP-RTU** : Advance Coherent line card interface RTU **Note** This is applicable only for the newly designed and upgraded networks.

Cisco ONP release supported from	Platform	PIDs and description
25.1.1	NCS 2000 with chassis models M6, M15, M2 NCS 1004 NCS 1014 NCS 1010 NCS 1020	**OAS-COSM-MLCL** One COSM PID is added for each active card present in the chassis. If a chassis slot is occupied with any active card such as SMR, 16-AD, EDFA, RAMAN, TXP, PSM cards, OLT, ILA, NCS1K14-2.4T-K9, NCS1K14-2.4T-X-K9, and NCS1K4-QXP-K9, one license is added for each occupied slot.

View details of layout and internal connections

Follow these steps to obtain the layout details and internal connections of an analyzed network.

Before you begin

Log in to Cisco ONP web interface.

Procedure

Step 1 Click the **Layout** tab on the Cisco ONP homepage.

Step 2 Type the site name in the search box, or select a site from the **Sites** drop-down list.

The site layout is displayed with its racks and cards.

a) Hover the mouse pointer over the transponder card to view the details of the slot, the PID of the card, and the ports.
b) Expand the Ports to view details, such as wavelength and trunk mode.
c) Hover the mouse pointer over the chassis to view the total power consumption.

COSM supports up to 50 UIDs; beyond which, the site layout displays incorrect UID for the chassis.

Step 3 Click the **IPC** tab to view the internal patch connections of the selected site.

Export Internal connections

Cisco ONP allows you to export internal fiber connections in two ways: either at site-level or network-level.

Follow these steps to export internal fiber connections.

Before you begin

Log in to Cisco ONP web interface.

View details of layout and internal connections, on page 14

Procedure

Step 1 Click the **Ellipsis** icon available in the right side of the internal fiber connection or site.

Step 2 Click **Export**.

View end-to-end OCH connections

Table 8: Feature History

Feature Name	Release Information	Feature Description
View the End-to-End Optical Channel (OCH) Connectivity from Source to Destination	Cisco ONP Release 24.3.1	You can now view the end-to-end OCH connection details in the graphical form for the analyzed NCS 1010 networks. The new **OCH** tab in **Layout** displays all the OCH connectivity from source to destination in: • **Degree Connection View**: Displays the source and destination site's connectivity. • **Functional View**: Displays the end-to-end port and card connections from source to destination through the fiber.

You can now view the end-to-end OCH connection details in the graphical form in Degree Connection and Functional views for the analyzed NCS 1010 networks.

Follow these steps to view the end-to-end OCH connectivity from source to destination.

Before you begin

Log in to Cisco ONP web interface.

Procedure

Step 1 Open the analyzed NCS 1010 network for which you want to view the end-to-end OCH connectivity./

Step 2 Click the **Layout** tab on the Cisco ONP homepage.

Step 3 Click the **OCH** tab.

The **OCH Pipes** pane appears to display the sites and sections in the circuits tree.

Step 4 Click the ellipsis icon next to the **Circuits**.

A pop-up list displays the view options.

Table 9: Option Descriptions

Options	Descriptions
Expand All	Expands all the items in the circuits tree.
Collapse All	Collapses all the items in the circuits tree.

Step 5 Use the search bar or filter icon to select the required source and destination sites.

Icon/Field	Description
Search	Locates the site based on the typed-in site name.
Filter	Filters the circuit based on **Source Site** and **Destination Site**.
Reset	Resets the filter conditions.

Based on the unit that you select in the circuit tree, you can see the site connectivity or the detailed end-to-end OCH connectivity.

If you click the...	Then you can see the...
circuit in the OCH tree	source and destination site connectivity only.
sections in the OCH tree	end-to-end OCH connectivity, including intermediate nodes and cards connectivity.

Step 6 In the graphical area, use the action icons to view the source and destination sites connectivity.

Table 10: Action icons

Icons	Description
Zoom In	Zooms in for a closer view of a specific connection
Zoom Out	Zooms out for a larger view of the entire connection
Fit View	Resets the zoom-in/zoom-out view to the default view
Lock/Unlock	Locks the view at a specific area Unlocks the view
Download PNG	Downloads the end-to-end circuit connection as a PNG image
Switch to Degree Connection View / Switch to Functional View	• **Degree Connection View**: Displays the source and destination site's connectivity • **Functional View**: Displays the end-to-end port and card connections from source to destination through the fiber

Icons	Description
Reset All Nodes Position	Reverts the nodes to the default position

Export end-to-end OCH connections

Follow these steps to view the end-to-end OCH connectivity from source to destination.

Before you begin

Log in to Cisco ONP web interface

View end-to-end OCH connections, on page 15

Procedure

Step 1 In the graphical area, click the download icon.

The **Export** pop-up list displays the circuit options.

Table 11: Option descriptions

Options	Descriptions
Current Circuit	Provides details of the end-to-end OCH connectivity for the circuit that you selected.
All Circuits	Provides details of the end-to-end OCH connectivity for all the circuits.

Step 2 Click the required option to export the end-to-end OCH connectivity details to an Excel sheet.

View power consumption and unit weight report

Table 12: Feature History

Feature Name	Release Information	Feature Description
Power Consumption and Unit Weight Report	Cisco ONP Release 5.2	Now, you can generate the power consumption and unit weight report for each product ID (PID). In the layout tab, you can see the power consumption and unit weight values and export them into Excel as a report for a single site or all sites. With prior knowledge of power consumption and weight details for each PID, you can plan and design an energy-efficient network. The new options that allow you to view and export the reports are: • **Show Typical Power Consumption** • **Show Max Power Consumption** • **Show Unit Weight** • **Power Consumption & Weight**

The Power Consumption and Unit Weight report includes power consumption and weight details of cards and shelves at each site.

Remember The power consumption of the Power Supply Unit (PSU) is not included in the total power consumption for NCS 1001, NCS 1010, NCS 1014, and NCS 1020 chassis. Determine the total power consumption for these chassis by adding 8 percent of the aggregated power consumption of all the cards inside the chassis to account for the PSU power consumption.

Note To view the power consumption and weight report, upgrade and analyze the LNI network.

Follow these steps to view the power consumption and unit weight report for each site.

Before you begin

Log in to Cisco ONP web interface.

Procedure

Step 1 Open the analyzed network for which you want to view the power consumption and weight report.

Step 2 Click the **Layout** tab on the Cisco ONP homepage.

Step 3 Click the ellipsis icon next to **Sites**.

A pop-up list displays these options.

Table 13: Option descriptions

Options	Description
Expand All	Expands all the items in the layout tree.
Collapse All	Collapses all the items in the layout tree.
Show Typical Power Consumption	Check the **Show Typical Power Consumption** check box to view typical power consumption values of each card and shelf in watts.
Show Max Power Consumption	Check the **Show Max Power Consumption** check box to view the power consumption values of each card and shelf in watts. Max Power Consumption for a shelf is the sum of cards and modules. **Note** The total power consumption of an NCS 2000, NCS 4000, or NCS 1000 shelf changes based on AC or DC power supply. • For DC power supply, total power consumption of the shelf includes all Cards, DC power module, and fan tray. • For AC power supply in NCS 2000 M6 only, total power consumption of the shelf includes all cards, fan tray, 10% of power consumed by all cards, and 5W of Cooling Unit power consumption.
Show Unit Weight	Check the **Show Unit Weight** check box to view the weight of each card and shelf in kilograms. The unit weight for a shelf is the sum of cards and modules.

Step 4 Select the options as you require.

Export power consumption and unit weight report

Follow these steps to export the power consumption and weight report of each shelf and card.

Before you begin

Log in to Cisco ONP web interface

View power consumption and unit weight report , on page 18.

Procedure

Step 1 In the graphical area, click the download icon.

The **Export** pop-up list displays these options.

Table 14: Option Descriptions

Options	
Current site	Provides details of the site that you selected.
All Sites	Provides details of all the sites.

Step 2 Click the option as you require.

Step 3 Click **Power Consumption & Weight** to export the optical reports details in an Excel sheet.

We recommend that you export the power consumption and weight report only in the analyze mode. Exporting the reports in the upgrade and release upgrade modes may be inaccurate.

View the results of analyzed network

Note You can refer to the optical results data to check and correct the optically not feasible channels. You can modify the network properties in the Upgrade and Release Upgrade modes. After making the necessary corrections, analyze again to update the optical results based on the new modifications.

Follow these steps to view the details of optical reports, installation parameters, traffic reports, and cabling reports.

Before you begin

Log in to Cisco ONP web interface.

Procedure

Step 1 Open the analyzed network for which you want to view the optical results.

Step 2 Click the **Results** tab on the Cisco ONP home page.

By default, the **Optical Report** tab appears. Each row in the tab shows the performance of one optical path. See Optical Report, on page 23.

Note
From Release 24.1.1, you can view the multicarrier sites highlighted in the **Optical Report** tab, and organized in the I**nstallation Report** tab.

To view the optical report for any particular optical path:

a) In the network tree, expand **Circuits/Waves/Media Channels** and click the **Ellipsis** icon available in the right side of the required optical path.

b) Click **Open Results**.

The Cisco ONP opens the **Optical Report** tab and provides the details of the selected optical path.

c) Expand the optical path to view the wave and aggregated wave information for a selected circuit.

Step 3 From the **OSNR RBW** drop-down list, select the OSNR Resolution bandwidth between 0.5 nm and 0.1 nm.

The default value is 0.5 nm. You can change it in Design mode, Analyzed mode, Upgrade mode, and Release upgrade mode. When set to 0.1 nm, the SOL G-OSNR and EOL G-OSNR values increase to 7 dB.

Step 4 Click the **Installation Parameters** tab.

The Installation Parameters report specifies the values to be provisioned at installation for each site in the network.

To view the installation parameters for Automatic Node Setup (ANS) and Automatic Node Provisioning (ANP), click the respective tabs. See Installation parameters, on page 25

Step 5 Click the **Traffic Report** tab.

You can view the aggregated demand channel data in the form of the traffic reports. See Traffic reports, on page 26.

In Release 5.1, you can view the traffic report for all imported networks except the imported .mpz networks. To view the traffic report for individual optical path in imported .mpz networks, you must manually search in the Search box.

To view the traffic report for any particular optical path:

a) In the network tree, expand **Circuit** and click the **Ellipsis** icon available in the right side of the required optical path.
b) Click **Open Results**.

The Cisco ONP displays the traffic report for the selected optical path.

Note
By default, **Optical Result** appears under the **Results** tab. Click **Traffic Report** to view traffic reports.

c) Expand the optical path to view the wave information.

Step 6 Click the **Cabling Report** tab. See Cabling report , on page 27

You can view the patch cord connections related to internal patch connections and multishelf management. This report is available for the networks starting from NCS 2000 system Release 12.1.0.

To view the internal patch connections for any particular site:

a) In the network tree, expand **Site** and click the **Ellipsis** icon available in the right side of the required site.
b) Click **Open Cabling Report**.

The Cisco ONP opens the **Cabling Report** tab. By default, the **IPC** tab appears and provides the IPC details of the selected site.

c) To view the internal patch connections, expand the Site.

Step 7 Use the Search box on top of the reports to search for any specific site or wave in the reports

a) Enter the name of the specific site or wave in the Search box.
b) Choose **equals** or **contains** from the drop-down list.
c) Click the Search icon to search for the required site or wave.

Step 8 Click **Export Report** to export the optical reports details in an Excel sheet.

We recommend exporting the optical report only in analyze mode. Exporting reports in upgrade and release upgrade modes may be inaccurate.

Compare installation parameters of two networks

Table 15: Feature History

Feature Name	Release Information	Feature Description
UI Revamp of Optical Reports	Cisco ONP Release 4.1	This feature improves the user experience while comparing the installation parameters and optical reports of two networks.

Use this task to compare the installation parameters of two networks.

Before you begin

Log in to Cisco ONP web interface.

Procedure

Step 1 Click the **Results** tab on the Cisco ONP home page.
Step 2 Click **Installation Parameters**.
Step 3 Click **Other Networks**.
Step 4 From the list of networks, select the network with which to compare.

FInd a new parameter called **diffBy**.

Step 5 To stop comparing the two networks, click **Clear**.
Step 6 Click **Export Report** to export the comparison report.

Compare the optical reports of two networks

Follow these steps to compare the optical reports of two networks.

Before you begin

Log in to Cisco ONP web interface.

Procedure

Step 1 Click the **Results** tab on the Cisco ONP home page.
Step 2 Click **Optical Report**.
Step 3 Click **Other Networks**.
Step 4 From the list of networks, select the network with which to compare.

The optical parameters display two values.

Step 5 To stop comparing the two networks, click **Clear**.

Step 6 Click **Export Report** to export the comparison report.

Optical Report

From Release 24.3.1, you can filter the results by any column available in the report for more precise data analysis. For reports represented as colored icons, you can use the first letter of the color (e.g., "g" for green) to filter the results.

Table 16: Optical Report

Optical Parameter	
Name	Displays the ID number of the wave and aggregated waves. ID is automatically generated based on the site name.
Protection	Displays the protection type of the wave.
Protection Type	Displays whether the path type is Protected or Working path for NCS 1001.
SOL	Displays an icon indicating the results summary of the analysis that is run with Start of Life (SOL) fiber loss values: • Green indicates success. • Yellow indicates success with a marginal failure risk. • Orange indicates that the channel has a higher risk of failure. • Red indicates failure.
EOL	Displays an icon indicating the results summary of the analysis that is run with End of Life (EOL) fiber loss values. The indicator shows the optical performance for the path at the end of the fiber life: • Green indicates success. • Yellow indicates success with a marginal failure risk. • Orange indicates that the channel has a higher risk of failure. • Red indicates failure.
SE	Indicates a system-related error that may impact the analysis of the design. If the indicator is red, review the messages that are reported at the end of the analysis or determine which units or sites have a problem.
P/F	Displays the present or forecast services indication.
Source	Displays the name of the source site and side; for example, Site 1-E.
Src Colorless	Displays whether the colorless functionality is enabled on source ports.
Src Contentionless	Displays whether the contentionless functionality is enabled on source ports.
Destination	Displays the name of the destination site and side; for example, Site 1-E.
Dst Colorless	Displays whether the colorless functionality is enabled on destination ports.

Optical Parameter	
Dst Contentionless	Displays whether the contentionless functionality is enabled on destination ports.
Wavelength	Displays the wavelength of the optical channel.
Band Type	Displays the band type of the optical path.
Src Tx Type	Displays the type of DWDM unit or pluggable port module that is used at the source of the specific Optical Channel (OCH) trail. The class of the DWDM unit is also displayed.
Dst Tx type	Displays the type of DWDM unit or pluggable port module that is used at the destination of the specific OCH Trail. The class of the DWDM unit is also displayed.
Span	Displays the total span length (source to destination) for this path in kilometers.
Suggested Regen Locations	Displays the regeneration locations.
BER Target	Displays the bit error rate (BER) target for this channel, based on the capability of the channel's optical interface. It is 1.0E-15 for the interfaces using forward error correction (FEC) and 1.0E-12 for interfaces without FEC.
SOL OSNR	Displays the start of life average Optical Signal to Noise Ratio (OSNR) value at the receiver.
EOL OSNR	Displays the end of life average OSNR value at the receiver.
SOL OSNR margin	Displays the SOL OSNR margin calculation. It is the difference between the OSNR value at certain power of the working point of the receiver client and the working area boundary.
EOL OSNR margin	Displays the EOL OSNR margin calculation, which is the difference between the OSNR value at a certain power of the working point of the receiver client and the working area boundary.
SOL RX	Displays the SOL average power that is received at the destination site in dBm.
EOL RX	Displays the EOL average power that is received at the destination site in dBm.
SOL Power Margin	Displays the SOL power budget margin at the receiver in decibels. It is defined as the offset between the receiver working point and the BER curve with margin. A positive value indicates that there are no power problems.
EOL Power Margin	Displays the EOL power budget margin at the receiver in decibels. It is defined as the offset between the receiver working point and the BER curve with margin. A positive value indicates that there are no power problems.
SOL Overload	Displays the SOL overload margin at the receiver in decibels. A positive value indicates that there are no overload problems.
EOL Overload	Displays the EOL overload margin at the receiver in decibels. A positive value indicates that there are no overload problems.
Residual CD	Displays the chromatic dispersion (CD) margin of the demand.
CD robustness	Displays the robustness to chromatic dispersion of the receiver.

Optical Parameter	
Single-Channel NLE Status	Displays the status of alarms if any nonlinear effect (NLE) is present in the demand.
Multi-Channel NLE Status	Provides the status of the nonlinear effect (NLE) on a particular channel or demand due to other channels or demands.
Min GB	Displays the minimum Guard Band (GB) requirement between channels on the 40G CP-DQPSK MXP and 40G CP-DQPSK ME MXP cards, and other transponders in a mixed any-to-any connectivity.
Filtering Penalty	Displays the value of the penalties that are caused by different filter types (OADM, ROADM, and arrayed waveguide grating (AWG)).
PMD	Displays the calculated total Polarization Mode dispersion (PMD) for each circuit. If the overall PMD for the link overcomes the maximum that is allowed, the PMD value is displayed in a red-colored font. The maximum allowed value depends on the client interface. For these special cases, the network must be manually resolved by contacting a Cisco TAC team.
RX Atten	Displays the attenuation at the input of the receiver.
TX Atten	Displays the attenuation at the output of the receiver.
Encryption	Displays the encryption type of the channel. Possible values are N/A, Yes, No.

Installation parameters

This table outlines the installation parameters for the ANS component.

Table 17: ANS Parameters

Parameter	Description
Name	Displays the name of the site
Side	Displays the line side
Position	Displays the rack number, shelf number, and slot position of the card where the patch cord originates.
Unit	Displays the name of the card.
Port	Displays the port number where the patch cord originates.
Port ID	Displays the port ID.
Port Label	Displays the name of the port.
Parameter	Displays the name of the parameter to be set, such as RX Power Low, PSDShape, PSD, Gain, AmpliGainRange, AddAttenuation, DropAttenuation, Control Mode, MinExpSpanLoss, MaxExpSpanLoss, and so on. For the CCMD-16 LC card connected to the ports of the OLT-E-C, the PSD is set using a specific formula and the VOA drop attenuation is set to 0dB to have optimal RX power for the circuits.

Parameter	Description
Value	Displays the name of the value to be set for the parameter.
Measurement Unit	Displays the measurement unit for the related installation parameter value, such as dBm.
Manual Set	Indicates with a Yes or No which parameters must be manually set using the Cisco Transport Controller (CTC) interface.

This table outlines the installation parameters for the ANP component.

Table 18: ANP Parameters

Parameter	Description
Name	Displays the name of the site.
Unit ID	Displays the unit (slot number) of the passive units in the shelf.
Shelf ID	Displays the shelf identifier.
Rack Number	Displays the rack number.
Rack Position	Displays the rack position in the shelf.
Slot Position	Displays the slot position in the shelf for the card.
Equipment Type	Displays the card type.
Description	Displays the details of the card type.

Traffic reports

This table displays the aggregated data of demand channel in the traffic report for the analyzed network.

Table 19: Traffic Reports

Traffic report	Description
Demand	Categorizes each demand type. Each demand is further categorized into service, trails, and sections.
Section	Displays the sections under every service.
Src Site	Displays the site name for the optical channel source.
Band Type	Displays the band type for the optical path.
Src Position	Displays the rack, shelf ID, and slot identifiers for the source of the optical channel.
Src Card	Displays the unit name for the optical channel source.

Traffic report	Description
Dst Site	Displays the site name for the optical channel destination.
Dst Position	Displays the rack, shelf ID, and slot identifiers for the destination of the optical channel.
Dst Card	Displays the unit name for the optical channel destination.
Client Service Type	Displays the client service type of the demand; for example, OC-48.
Protection Type	Displays the protection type of the demand
Encryption	Displays whether the demand is encrypted with values: NA, Yes, or No.
Wavelength	Displays the wavelength value of the optical channel, and the serial number of the wavelength in the wavelength band.
Max Latency (for NCS 2000 network)	Displays the latency time for the current circuit. This value includes all the latency components for the circuit, including fiber and DWDM units on the path.
Fiber Latency (for NCS 1010 and NCS 1001)	Displays the latency time for the fiber.

Cabling report

The IPC Cabling and Patch reports are consolidated into a single view with additional columns. This streamlines connection details and eliminates the need to access multiple sources.

This table shows patch cord connections related to internal patch connections and multishelf management.

Table 20: IPC

Parameter	Description
Name	Displays the name of the site.
Src Unit Type	Displays the source unit.
Src Position	Displays the rack, shelf, and slot position of the card from which the patch cord originates.
Src Port Label	Displays the name of the port.
SrcFicBay	Displays the assigned rack number.
SrcShelfName	Displays the type of shelf or the shelf name.
SrcShelfNumber	Displays the type of shelf or the shelf name.

Parameter	Description
SrcShelfUniqueId	Displays the unique ID assigned to the shelf. The unique ID will be used in COSM XML to push the configuration to the device.
SrcRUPosition	Displays the rack unit position in layout.
SrcCardNumber	Displays the card slot number within the shelf .
Cable	Displays the type of cable.
Dst Unit Type	Displays the source unit.
Dst Position	Displays the rack, shelf, and slot position of the card from which the patch cord terminated.
Dst Port Label	Displays the name of the port.
DstFicBay	Displays the assigned rack number.
DstShelfName	Displays the type of shelf or the shelf name.
DstShelfNumber	Displays the assigned shelf number.
DstShelfUniqueId	Displays the unique ID assigned to the shelf, which is used in COSM XML to push the configuration to the device.
DstRUPosition	Displays the rack unit position in layout.
DstCardNumber	Displays the card slot number within the shelf .
ManuallySet/AutomaticallySet	Indicates whether a cable connection will be automatically generated or requires manual configuration for NCS 2000 networks.

Table 21: MSM

Parameter	Description
Name	Displays the name of the site.
Src Unit Type	Displays the source unit.
Src Position	Displays the rack, shelf, and slot position of the card from which the patch cord originates.
Src ID	Displays the source unit ID.
Src Port Label	Displays the name of the port.
Cable Type	Displays the type of cable.
Dst Unit Type	Displays the source unit.

Parameter	Description
Dst Position	Displays the rack, shelf, and slot position of the card from which the patch cord terminated.
Dst ID	Displays the destination unit ID.
Dst Port Label	Displays the name of the port.
W/P	Indicates whether the connection relates to a present or forecast circuit.

Confidential banner in exported reports

Table 22: Feature History

Feature Name	Release Information	Feature Description
Confidential Banner	Cisco ONP Release 4.1	This feature indicates the confidentiality of the reports or results generated by Cisco ONP for a network. The CONFIDENTIAL banner is placed in all the exported reports. It is placed in the first row and first cell of the Excel sheet, followed by a blank row and the contents of the exported report.

Table 23: Feature History

Feature Name	Release Information	Feature Description
Customizable Confidential Banner	Cisco ONP Release 4.2	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.

The "CONFIDENTIAL" banner appears in all exported reports. In Excel files (.xlsx), it is located in the first cell of the first row, followed by a blank row, and then the report contents. If the .xlsx file contains multiple sheets, the banner is included on each sheet.

The "CONFIDENTIAL" banner is updated only when reports are exported in .xlsx format.

Server administrators can customize the "CONFIDENTIAL" banner text by modifying the `confidentialBanner.content` field. To enable banner customization, the `confidentialBanner.enabled` field must be set to `true` in the `feature.properties` file. By default, this field is set to `false`.