Cisco ONP UI Reference

This appendix chapter describes the various options available in the Cisco ONP UI.

Table 1: Feature History

Feature Name	Release Information	Feature Description
Enhancements and Engineering Initiatives	Cisco ONP Release 25.1.1	This release includes several user experience and functionality enhancements to the application: • Added color indication at the circuit and network level in the network tree to represent optical feasibility and overall network performance. • Enhanced selection capabilities within the network tree for more efficient management. • Added version and timestamp information to exported reports to improve traceability and documentation. • Displayed edge labels directly on the map view for easier identification and understanding of network topology. • Provided users with the ability to unlock and modify entity properties within the entity editor. • Enabled users to edit the Effective Mode Area parameter for fibers, allowing for more accurate OSNR and power calculations.

Table 2: Feature History

Feature Name	Release Information	Feature Description

User Interface Enhancements	Cisco ONP Release 24.3.1	Cisco ONP improves the user experience with these user interface enhancements:
		• **Maps**:
		  • Providing an option to increase the workable area.
		  • Switching to zoom mode that automatically centers the map on the selected node.
		  • Highlighting nodes and fibers selected in the network tree on the map.
		• **Entity Editor**: Adding tooltips for some of the properties.
		• **Results**:
		  • Including Raman information in the Fiber Details that are exported from **Export**>**Fibers**.
		  • Introducing **Export Report** button to export Optical Reports/BOM differences between two networks in CONP.
		  • Maintaining the recent view in the **Results** tab view when switching to the **Map** or **BoM** tabs.
		• Enabling editing of EOL Aging Loss with **Aging Loss [dB]** property in both the entity editor and Properties pane.
		• Updating optical sources with minimum system release information for user visibility in the **Manage Optical Source** dialog box.
		• Adding an *OMNI* marker to identify the Omni-Directional sides in the NCS 2000 networks.
		• **Component Logs**: Streamlining log management, this **Logs** menu option provides direct access to critical component logs such as cnp Backend (BE), ODE, GENE, and PCE through the user interface.

Menu bar

This table lists all options available in your Cisco ONP GUI menu bar.

Table 3: Menu options and descriptions

Options	Description
File	Performs common file operations such as New, Open, Open Shared, Save, Save As, Share, and Delete
Network	Opens Entity Editor, analyzes the network, and converts non-SSON to SSON networks
Export	Exports reports of CPZ, sites, fibers, SRLGs, services, waves, media channels, optical results, service aggregation, BOM, and messages. Export allows you to download Excel and LNI templates
Import	Imports CPZ, Excel, LNI, and MPZ to design a network in Cisco ONP
Manage	Manages Layout Templates and Optical Sources
Logs	Displays log events initiated during a specific period, such as user login, user logout, password change, and LNI - start, failed, and completed
Job Monitor	Monitors background tasks
Control Panel	Manages users, user groups, user roles, permissions, system configuration, and dictionary
Preferences	Changes the default map view and personalizes the color code for spectrum utilization
Help	Displays the Cisco ONP version
Last Login	Shows the last date and time you logged in to Cisco ONP including the last login IP details
Username	Displays the name of the user who has currently logged in to Cisco ONP

File

The **File** menu includes common file options such as New, Open, and Delete.

Options	Description
New	Creates a new network. By default, NCS 1010 is created. To create NCS 2000 networks, change **L0 Network Platform** to *NCS2000*. You can check the **SSON Network** check box and select **System Release** for NCS 2K to create an SSON network.
Open	Opens a saved network. The network name in blue-colored font indicates that the network is in the Design mode, and the network name in green-colored font indicates that the network is in the Analyze mode. **Note** If you view a blank screen when you open a network, refresh the browser, or log in to Cisco ONP again.
Open Shared	Opens a shared network.
Save	Saves a network.
Save As	Saves the network with a new name.
Share	Shares a network or networks.

Options	Description
Delete	Deletes a network or networks.

Network

The **Network** menu includes options such as Entity Editor, Analyze, and SSON Convert in the design mode. It includes options such as Entity Editor, Design, Upgrade, and Enter Plan Mode in the Analyze mode.

Options	Description
Entity Editor	Use this option to edit various properties of an element in the network
Analyze	Analyzes the network after completing the design
SSON Convert	Converts a Non-SSON network to an SSON network
Design	Switches from Analyze mode to Design, Upgrade, or Release Upgrade mode
Upgrade	Upgrades an existing network that is in the Analyze mode
Release Upgrade	Upgrades the NCS 2K or NCS 1010 System Release of a network
Enter Plan Mode	Switches to the Plan mode
Exit Plan Mode	Exits the plan mode
Enter Link Rate Tuner Mode	Enters the link rate tuner mode
Open Tuner Input	Opens the tuner input table to add parameters for custom optical sources
Run Tuner	Runs the tuner input options to provide custom optical source results.
Start New	Starts fresh tuner analysis
Open Tuner Result	Opens the already analyzed tuner results
Exit Link Rate Tuner Mode	Exits the link rate tuner mode
Restore	Restores failed fibers and nodes
Open Failure Report	Expands the Failure Report from the bottom of the Map. Data is populated after Restore.
Open Feasibility Report	Expands the Feasibility Report from the bottom of the Map. The report displays the data regarding Auto Regen Suggestions for channel feasibility.

Export

The **Export** menu includes options to export reports of Sites, Fibers, Services, SRLG, Waves, Messages, and BOM.

Options	Description
CPZ	Export the .cpz design file of a network into your local system.
Sites	Exports site details such as x and y coordinates, grooming site flag, CLLI code, site address, site type, and site name.
Fibers	Exports fiber details such as length, loss to fiber, source and destination site, source and destination edge. From Release 24.3.1, the exported fiber details contains the Raman information.
Services	Exports service details such as name, type, path, quantity, and protection.
SRLGs	Exports details about created SRLGs.
Waves (Available for non-SSON network)	Exports wave details such as Label, Source and Destination sites, Card Type, Wavelength, Utilization, Source port, Destination port, Demands, OTN Hops, OSNR, OSNRMarginEOL, StatusEOL, Excluded Channels, and Path of Wave.
Media Channels (Available for SSON network)	Exports media channel details such as Media Channel Label, Media Carrier Label, Source and Destination sites, Card Type, Wavelength, Utilization, Source port, Destination port, Demands, OTN Hops, OSNR, OSNRMarginEOL, StatusEOL, Excluded Channels, and Path of Media channel.
Circuits (Available for NCS1010 network)	Exports circuits details such as Circuit Label, Carrier Label, Source and Destination sites, Card Type, Traffic Type, Wavelength, Utilization, Source port, Destination port, Demands, OTN Hops, OSNR, OSNRMarginEOL, StatusEOL, Excluded Circuits, and Path of Circuit.
Messages	Shows the complete log of the analysis, including critical errors.
Excel	Download sample Excel file that can be used as a reference for creating networks using the Import Excel feature.
LNI Template	Download sample LNI file that can be used as a reference for creating networks using the Import feature.
Optical Source Template	Download sample Optical Source Excel file that can be used as a reference for creating User Defined/custom Optical Source using the **Manage** > **Optical Sources** feature.
BOM	Exports details about pricing and quantity of the network equipment
Failure Groups	This option is available only in the plan mode. You can add failed fibers to a failure group.
Failure Report	This option is available only in the plan mode. It shows the failed fibers, total channels, failed channels, restored channels, and fiber hotzones.
Optical Results	Exports details such as protection type, SOL, EOL, source, and destination
Device Configuration	Exports the Device Netconf XML file and COSM Netconf file.

Import

The Import menu imports an Excel file, a CPZ file, or an MPZ file.

Options	Description
CPZ	Imports the .cpz network design files that are exported from another Cisco ONP instance
Excel	Imports an Excel file containing all the design parameters
Live	Imports a live deployed network by retrieving configurations of the nodes, provided in the LNI input Excel sheet
MPZ	Imports the .mpz network design files from CTP to Cisco ONP, to avoid recreating the networks that are already created in CTP

Manage

You can manage layout templates and optical sources.

Options	Description
Layout Templates	Imports reusable templates to design layout configurations for a network
Optical Sources	Imports an optical source from your local system
Look Up Table	Displays the optical feasability values for the gain ranges of each EDFA cards.

Logs

System Logs

The System Logs option allows an admin user, or user with USER MANAGEMENT, and NETWORK MANAGEMENT permissions to view at logs the events that are initiated during a specific time interval. Examples of events are user login, user logout, password change, Live Network Import (LNI)-start, failed, completed and analysis-start, and failed.

The **SYSTEM LOGS** page includes the following fields:

Field	Description
Time Stamp	Provides the date and time of the specific event
Event Type	Shows the type of event, which includes user login, user logout, password change, and so on
Description	Describes the event, which includes user login success, user logout success, and so on
Username	Shows the user who has initiated specific events
Event Source	Shows the IP address of the device from where the event is initiated

Events that are captured in the System Logs are:

Event	Description
SIGNUP	New user sign-up for Cisco ONP
LOGIN	User log in to Cisco ONP
USER STATE CHANGE	User state change from Active to Inactive and the converse
USER ROLE CHANGE	User role change, such as admin to planner, and so on
LOGOUT	User log out from Cisco ONP
USER DELETION	Deletion of a particular user
UNAUTHORIZED	User enters invalid login credentials
LNI_START	Successful initiation of Live Network Import
LNI_COMPLETE	Successful completion of live import of a network
LNI_CANCEL	Cancellation of Live Network Import
CONC_IMPORT_COMPLETE	Successful completion of live import of a network from Cisco ONC
ANALYZE_LNI_START	Analysis of LNI network started successfully
ANALYZE_LNI_END	Analysis of LNI network completed successfully
ANALYZE START	Starting of the network analysis
ANALYZE END	Completion of the network analysis
ANALYZE CANCEL	Cancellation of the network analysis
UPGRADE NETWORK	Entering the Upgrade mode
PLAN_INIT	Entering the Plan mode
PLAN_END	Exiting the Plan mode
PLAN_REROUTE	Checking for alternate paths to restore failed media channels or waves
PLAN_PROGRESS	Restoration of failed media channels or waves in progress
RELEASE_UPGRADE_NETWORK	Upgrading the system release of the network is in progress.

Component Logs

The Component Logs option allows you to access logs for multiple critical components such as cnp Backend (BE), ODE, GENE, and PCE, directly through the user interface. This streamlines the process, eliminating the need for server access and manual file navigation. This enhancement simplifies log management, aiding in performance monitoring, troubleshooting, and system insights.

The **Component Logs** page includes the fields:

Field	Description
Time Stamp	Provides the date and time of the specific event
Logs	Describes the events for the selected component
Component	Provides list of critical components to choose from. The available components are: • BE • ODE • GENE • PCE
Search	Locates specific log entries based in the entered value
Pages	Allows you to navigate through logs page by page

Job Monitor

The **Job Monitor** menu checks and manages tasks running in the background.

You can access this menu if you have ADMIN, NETWORK_MANAGEMENT, or NETWORK_PLANNING role.

The **JOB MONITOR** page has the following options:

Options	Description
Refresh	Refreshes the display information.
Filter	Applies one or more of the following filter options: Task Type: Filters the display information based on the task type. Select Start Date: Filters the display information based on the start date of the task. Select End Date: Filters the display information based on the end date of the task. Username: Filters the display information based on the username.
Created Date	The date on which the task is started by the user.
User Name	Name of the user who initiated the job.
Network Name	Name of the network on which the task is running.
Task Type	The type of background task: Valid values are ANALYZE and EPNM_IMPORT.
Messages	The current state of the task.

Options	Description
Cancel	Enables you to cancel or stop an ongoing background task: • The Admin can cancel any of the running background tasks. Other valid users can cancel only their own tasks. • If you want to cancel your ongoing network analysis, you can open Cisco ONP at the browser in incognito mode, or contact the Admin. • After a task is cancelled, it gets removed from the job monitor. You can check the status of a cancelled task from **System logs** page. Click **Logs** to open the **System logs** page.
Clear all Completed Tasks	Removes all the completed tasks from the **Job Monitor** page.

Control Panel

Apart from designing, analyzing, and creating BOM for a network, a user with admin rights can activate, manage, and delete users and their roles.

To navigate to the control panel page, click **Control Panel**.

The admin or any user with USER_MANAGEMENT role can lock, unlock an individual user account, and manually expire the individual user password. For more information, see Manage Users and Roles.

Preferences

This menu contains the General Settings option to customize Cisco ONP settings such as the default map view and spectrum utilization percentage.

Field	Description
General Settings	Allows choosing the default map view and applying color codes for spectrum usage percentage • **Default Map**: Choose the **Detailed** or **Minimal** map from the drop-down list. • **Spectrum Utilization Percentage**: Click and drag to change the color code to indicate spectrum usage.

Help

This menu provides information about the Cisco ONP version.

Field	Description
About	Provides the Cisco ONP version.

Network Tree

Table 4: Feature History

Feature Name	Release Information	Feature Description
Network Tree Enhancements	Cisco ONP Release 5.2	Now, you can use the Ellipsis icon at the right side of each element in the Network tree to perform various actions such as Expand All, Collapse All, Enable Multi-Select, and so on. Also, you have multiple entity-level options to filter the elements under the Network tree. These enhancements make the Network tree more intuitive.

The left pane of the Cisco ONP home page comprises a network tree. The network tree includes various network elements. When you click each element, the respective property is displayed under the network tree. You can edit the properties. For more information on editing the network properties, see Modify Network Properties.

From R25.1.1, the network tree provides the UI enhancements

- Default multi-select check boxes—network tree entities have the multi-select check boxes enabled by default. To disable the multi-select check boxes, click the ellipses icon and click the **Disable Multi-Select** option. To enable the multi-select option, follow the same navigation.
- Coloring indication on network tree—network tree entities display red, green, and yellow colors to indicate the optical feasibility of the circuits and overall network.

Table 5: Network Tree Elements

Network Tree Elements	Description
Network name	Displays the name of the network.
Sites	Customer premise equipment that is located in a rack within a building. When you click a site name in the network tree, the site will be highlighted in orange on the map. When multiselect is enabled, the network tree displays checkboxes for each site, fiber, and circuit. Selecting multiple sites from the network tree highlights the same sites on the map.
Fiber	Optical fiber connecting two sites.
Fiber Couple	A fiber couple consists of two different fibers (clockwise and counterclockwise), one for transmission and another for reception.

Network Tree Elements	Description
Services	Service is the circuit through which traffic flows between nodes. When you add services to the Traffic site (of the type 1K-2K-4K) in an SSON network, a DefaultGroup is created under the Services in the network tree. You can also create a new service group.
Waves or Medial Channel or Circuits	The wave or Media channel represents a DWDM channel. In a wave hierarchy, for each wave, there is a trail. When you expand a trail, there is a section under each trail. The trail is an optical path or a network section joining two traffic nodes. It can have more than one section depending on whether the trail has a regenerator site. For more information on regeneration, see #unique_290.
SRLG	Shared Risk Link Group (SRLG) is useful for routing the protected services. If there are Fiber 1 and Fiber 2 in the network, they are assumed to be diverse and are used as alternates for protection purposes. If Fiber 1 and Fiber 2 are in an SRLG, they are not true alternates, and they share the same risk of failure. Therefore, if Fiber1 fails, Fiber 2 also fails, and Fiber 2 cannot be used as a protected path.
Optical subnet	An optical subnet is a collection of spans with certain associated properties. When you create a new network, Cisco ONP automatically creates an optical subnet that is associated to the network. At least one optical subnet must exist for each network.

Use the Search box on top of the network tree to search for any specific site, fiber, or wave in the network tree panel. Click the Refresh icon to refresh your search.

Now, you can filter the elements available in the network tree using the Filter icon available next to the Search box. The following table explains the various filter options available.

Table 6: Network Tree Elements

Filters	Options Available Under Each Filter
Network Filter	Entity Type
Sites Filter	Site Type, and DWDM Site Type
Fibers Filter	Source Site, Destination Site, Source Edge, Destination Edge, and Raman
Services Filter	Protection Type, Source Site, Destination Site, Src Add-Drop Type, and Dst Add-Drop Type

Filters	Options Available Under Each Filter
Waves, Medial Channel, or Circuits Filter	Protection Type, Source Site, Destination Site, Src Add-Drop Type, and Dst Add-Drop Type

Design Palette

Table 7: Feature History

Feature Name	Release Information	Feature Description
Intuitive Map Display	Cisco ONP Release 5.2	The new intuitive map display allows you to virtually rearrange networks for a clutter-free view without impacting the original design. This display simplifies adding new nodes to complex networks. Save the last modified network in the new view to retain the latest rearrangement. The new icons in the Design Palette that enable the intuitive display are: • **Switch to Intuitive Arrangement**/**Switch to Coordinates Arrangement**—Toggles the map between the intuitive and original displays. • **Rearrange nodes**—Overrides node coordinates and rearranges the map in a presentable manner.

At the right of the Cisco ONP home page, there is the design palette. You can use this design palette to create a network design. It consists of the following six icons:

Icons	Description
Switch to Zoom Mode/ Switch to Normal Mode	Click this icon to toggle between Normal and Zoom modes. **Zoom Mode:** Highlights the selected node and automatically centers the map on the selected node. The size of labels, such as fiber and service names, adjusts according to the mode. **Normal Mode:** Highlights the selected node on the map. Autozoom is disabled. You need to manually move the map to view the selected node if it is not visible.
Zoom In	Click this icon to magnify the map.
Zoom Out	Click this icon to minimize the map.
Reset Zoom	Click this icon to reset the map to its original size.
Switch to Intuitive Arrangement/**Switch to Coordinates Arrangement**	Click this icon to toggle between the intuitive and coordinates display. Save the last modified network in the Intuitive view to retain the latest rearrangement. The saved networks retain the map designs when reopened or shared with others. When you export the network as CPZ or Excel files, the exported files include both original and modified or rearranged coordinate data.

Icons	Description
Rearrange nodes	Click this icon to rearrange the map in a presentable fashion.
Drawing Tool	The Drawing Tool consists of the following icons: • **Traffic Site**: Select this icon, and click the working area to create traffic sites in the network. • **ROADM Site**: Select this icon, and click the working area to create ROADM sites. • **OLA Site**: Select this icon, and click the working area to create OLA sites. • **Passthrough Site**: Select this icon, and click the working area to create passthrough sites. • **Link**: Click this icon, and drag and drop between sites to create a fiber link. • **OTN Service**: Click this icon to create OTN service between sites. • **DWDM channel**: Click this icon to add a wave or medial channel between sites. • **Select**: The **Select** icon looks similar to the cursor tool. Click this icon to select a node, link service, and so on.
Layers Window	Use this icon to view or hide layers such as fiber link, service, text, and channel. The following are the four toggle icons: • **Toggle Fiber**: Click this icon to view or hide fiber link details from the network. • **Toggle Service**: Click this icon to view or hide service details from the network. • **Toggle Wave**: Click this icon to view or hide the channel or wave details from the network. • **Toggle Text**: Click this icon to view or hide the text from the network. • **Toggle COSM associations**: Click this icon to remove or add COSM associations. • **Expand/Collapse All Demands**: Click this icon to expand the waves or media channels so that you can view them clearly. Click this icon again to collapse the waves and media channels to their original shape and position. The eye symbol in the icon indicates that you are currently viewing the respective details.

Icons	Description
Zoom Tool	The icon below the **Drawing Tool** is the **Zoom Tool**. You can change the display of the working area by using this function. Click the arrow to view two sliders. • **Map Fade**: Move the **Map Fade** slider from right to left to fade the map from the background. • **Zoom In/Out**: To magnify the map, move the Zoom in or out slider from left to right.
Zoom Elements	Click the **Zoom Elements** icon to view four sliders. • **Media Channel Width**: Move this slider from left to right to increase the channel width. • **Path Spread**: Move this slider from left to right to increase the space between the paths. • **Fiber Width**: Move this slider from left to right to increase the fiber width. • **Service Width**: Move this slider from left to right to increase the service width.
Show Failed (available only in plan mode)	This icon shows the failed media channels in the map. Failed ones are marked with a red cross mark.
Traffic Monitor (available only in plan mode)	This icon shows the total number of impacted media channels, demands, or services that are working or failed in the entire network.
Switch to Minimal Map/**Switch to Detailed Map**	Click this icon to toggle between Minimal Map and Detailed Map. **Switch to Minimal Map:** Focuses on Sites and Fibers, allowing you to view spectrum utilization, and supporting the spectrum and path finder. **Switch to Detailed Map:** Displays all network components for a comprehensive view.

Entity Editor

The **Entity Editor** allows you to edit various properties of an element in the network. Choose **Network** > **Entity Editor** to open the **Entity Editor** window.

The **Entity Editor** enhances some properties with descriptions in the form of tooltips.

The table lists the operations that you can perform in the **Entity Editor** window.

Options	Description
Left pane filter	Includes check boxes to filter the network elements displayed under each tab: • For the **SITE** tab, you can choose whether to display OTN (only traffic node), DWDM (ROADM, OLA, or pass-through) node, or both. • For the **FIBER** tab, you can choose the fiber connecting a particular source and destination sites. • For the **SERVICE** tab, you can choose to display either services, waves, or both.
Right pane properties	Displays all properties of the selected network element. You can modify the properties as required.
Search	Searches for a particular network element.
Refresh	Refreshes the list of network elements displayed under each tab.
Expand/Collapse	Expands or collapses the network elements available in the network tree under each tab.
Select Similar	Selects similar network elements available in the network tree. For example, select a ROADM site, and click the **Select Similar** icon. All ROADM sites are selected. You can change a property in all the selected sites at the same time. This option allows you to identify and compare the property difference. For example, if a property is different among the selected sites, that property is dimmed. You can select an option that is applied to all the selections.
Un-Select All	Deselects all selections that you make under the network tree.
Delete	Deletes the selected network elements.
Add Contentionless Sides (available only under the **Site** tab for the NCS 2000 network)	Adds contentionless sides to NCS 2000 networks. Contentionless functionality on a site refers to the contentionless add/drop ability of an N-degree ROADM node to accommodate N wavelengths of the same frequency from a single add/drop device. For a ROADM to be contentionless, the number of drop units have to be equal to ROADM degrees. • Click the ROADM site to add contentionless sides. • Click the **Add Contentionless Side** icon. • Enter an appropriate value in the **Enter number of contentionless sides** field. • Click **OK**. After adding the contentionless side, you can edit the contentionless port property of the side at the right pane. You can select any of the values ranging from 1 to16. The default value is 16.

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Options	Description
Add L-Band (available only under the **Site** tab for NCS 1010 site)	Adds L-Band sides to an NCS 1010 R7.9.1 site. To add L-Band sides, • Click the site or side to which you want to add L-band sides. • Click the **Add L-Band** icon.
Add Omni-Directional (available only under the **Site** tab for the NCS 1010 network)	Adds omnidirectional functionality on a site. Omnidirectional functionality on a site refers to the ability to route channels through any of the optical degrees in a multidegree topology during fiber cut without the need for physical fiber reconnections. To add omnidirectional functionality, • Click the ROADM site to which you want to add omnidirectional sides. • Click the **Omni-Directional** icon. • Enter the appropriate value in the **Enter number of Omni Directional sides** field. • Click **OK**.
Copy (available only under the **Service** tab)	Clones a service or wave that is connected between two sites. To clone a service, • Select a wave and click **Copy**. • Enter the quantity in the **Clone Service/DWDM Channel** dialog box, and click **OK**. –1 is added at the end of the label of the cloned wave. An example label of a cloned wave is Site-2-Site3-1-1. The original wave is Site-2-Site3-1. You can rename the label. You can also clone a service in a similar way.
Unlock	Unlocks the required entities in an analysed network for editing.