Network Set Up Using Cisco Optical Network Controller

This chapter describes how to Onboard devices, Import Planning data, and Monitor Connection Issues in Cisco Optical Network Controller.

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Cisco ONC Workflow

In Cisco ONC, you import the planning data from Cisco ONP and associate the hardware brought up using CLI or ZTP to the planned devices. For this, you must first onboard the devices in Cisco ONC. After associating actual devices to planned data, you can push the necessary configurations for planned passives, connections, and optical attributes on to the devices from the Cisco ONC web interface. The following sections describe the Cisco ONC workflow to onboard devices, import planning data, associate planned devices to actual devices, and push configurations on to the devices in bulk.

Onboard Devices in Cisco ONC

Before you begin

You need an XLSX file that contains the information required to onboard the devices in Cisco ONC. See Excel File for Onboarding Devices on Cisco ONC , on page 3

Step 1 Log in to Cisco ONC Web Interface.

Step 2 Click **Devices** in the left panel

Step 3 Click **Import Devices**.

Step 4 Select the spreadsheet which has all the device details and click Open.

Cisco ONC takes a few seconds to import each device. While the import is in progress, Cisco ONC displays **XLS import in progress**.

Note   You can manually add each device using by clicking +**New** from the **Devices** page and entering the device information.

Import Planning Data in Cisco ONC

Before you begin

You need the planning data JSON file generated using Cisco ONP.

Step 1   Log in to Cisco ONC web Interface.

Step 2   Hover over the **Import** icon in the left panel and click **Planning Data Import**.

Step 3   Click **Import**.

Step 4   Upload the JSON file from Cisco Optical Network Planner.
The Planning Data Import page displays the details of the imported devices.

Note   Map the planning data to actual data in the next step.

Import Planned Passives, Connections, Optical Attributes

Step 1   Log in to Cisco ONC web Interface.

Step 2   Hover over the **Import** icon in the left panel and click **Planning Data Import**.

Step 3   Click Edit.
The fields Actual Site Name and Actual Device Name become editable.

Step 4   From the drop-down boxes, select the actual device and Site names for each of the planned devices and click **Apply Changes**.

Step 5   Select all the planned devices in the table.

Step 6   Click **Bulk Push**.

Step 7   Select **Equipments**, **Internal Patch Cord**, and **Optical Attributes** and click **Push**.

Note   You can see the status of the push in the Last Push Status field for each device.

Connect Passives and Cables

Create port connections as seen in the topology diagram. For more information on port connections between the devices, see NCS 1010 Overview.

Monitor Connection Issues in Cisco ONC

You can monitor the following connection issues using the Cisco ONC web interface:

- **Passive slot mismatch due to USB connection issues**

  If a passive module is placed in an incorrect slot, it may cause errors. Connection Verification of all connections to the passive module in an incorrect slot fails.

  To identify a module in an incorrect slot, follow these steps:

  1. Log in to Cisco ONC Web Interface.

  2. Click **Sites** in the left panel.

  3. Click the target site.

  4. Click Inventory.

  5. In the inventory table, check if there are any entries where **Eqpt Type** and **Actual Eqpt Type** are different.

     If there is a mismatch between Eqpt Type and Actual Eqpt Type for a passive module, the module may be in an incorrect slot.

- **Wrong patch cord connections**

  To identify an incorrect patch cord connection, follow these steps:

  1. Log in to Cisco ONC web Interface.

  2. Click **Sites** in the left panel.

  3. Click the target site.

  4. Click **Optical Configurations**.

  5. Under **Internal Patch Cords**, select the patch cord you want to check and click **Verify Connection**.

     Cisco ONC performs connection verification. If the Forward CV Status or Reverse CV Status is **FAILED**, it may be an incorrect connection.

Excel File for Onboarding Devices on Cisco ONC

Use this Excel file to onboard devices on Cisco ONC. The information in this file is based on the sample topology and ZTP configuration discussed in previous sections of this document.

Host Name	Node IP	Password Type	User Name	Password	Product Type	Connectivity Type	Con Port
OLT-C-SITE-2	10.4.33.126	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830
OLT-C-SITE-3	10.4.33.121	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830
OLT-C-SITE-4	10.4.33.124	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830
OLT-C-SITE-5	10.4.33.123	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830
OLT-C-R-SITE-1	10.4.33.131	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830

OLT-C-R-SITE-7	10.4.33.127	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830
OLT-C-SITE-6	10.4.33.125	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830
OLT-C-SITE-8	10.4.33.129	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830
ILA-2R-C-SITE-1	10.4.33.128	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830
ILA-R-C-SITE-2	10.4.33.134	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830
ILA-C-SITE-3	10.4.33.122	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830
ILA-R-C-SITE-4	10.4.33.137	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830
ILA-C-SITE-5	10.4.33.135	USER_NETCONF	cisco	cisco123	NCS1010	NETCONF	830