Setup Cisco Optical Site Manager on NCS 1000

This chapter provides step-by-step instructions for enabling Cisco Optical Site Manager northbound interfaces and for activating or deactivating Cisco Optical Site Manager on NCS 1000 devices.

Enable or disable Cisco Optical Site Manager north-bound interfaces

Cisco Optical Site Manager provides three north-bound interfaces. By default, all these interfaces are enabled. If required, individual interfaces can be disabled.

- NETCONF
- RESTCONF
- Interactive Web-UI

Warning Disabling all the interfaces will make Cisco Optical Site Manager inaccessible!

This configuration is optional and must be completed before activating Cisco Optical Site Manager on the device. Use the device's CLI in COSM configuration mode to enable or disable interfaces individually. The default NETCONF port is *2022*. You may change this port during configuration.

Before you begin

Ensure that Cisco Optical Site Manager is configured Standalone or High Availability mode.

Follow these steps to enable or disable Cisco Optical Site Manager north-bound interfaces.

Procedure

Step 1 Enter IOS XR and COSM configuration modes using the **configure terminal** and **cosm** commands.

Example:

```
RP/0/RP0/CPU0:ios#configure terminal
RP/0/RSP0/CPU0:ios(config)# cosm
```

Step 2 (Optional) Configure the NETCONF port if you want to use a port other than 2022 using the **netconf port** *port-number* command

Example:

```
RP/0/RP0/CPU0:ios(config-cosm)#netconf port 2021
```

Configures the specified port for the NETCONF SSH server. If no port is specified, port 2022 is used by default.

Step 3 Enable or disable the Cisco Optical Site Manager interfaces using the <*interface-name*> **enable | disable** command.

Example:

```
RP/0/RP0/CPU0:ios(config-cosm)# netconf enable
RP/0/RP0/CPU0:ios(config-cosm)# restconf disable
RP/0/RP0/CPU0:ios(config-cosm)# webui enable
```

Enables or disables the specified Cisco Optical Site Manager interfaces.

Step 4 Commit the changes using the **commit** command.

After configuration changes are committed, the application operates with the specified interface availability. Only enabled interfaces are accessible for management and monitoring, and disabled interfaces do not accept connections.

What to do next

Activate Cisco Optical Site Manager, on page 2

Activate Cisco Optical Site Manager

After configuration is complete, activate Cisco Optical Site Manager to enable the application.

After configuring Cisco Optical Site Manager in standalone or high availability mode, including setting management interfaces, user credentials, and optional features like auto-onboarding, the application remains inactive until explicitly activated.

Cisco Optical Site Manager activation takes about 11 minutes on the NCS 1001 and about eight minutes on the NCS 1004 to initialize.

Important The configuration of interfaces used by Cisco Optical Site Manager should not be changed after activation.

Before you begin

- Before activating Cisco Optical Site Manager in HA mode, verify that these parameter values are same on both host devices, if configured.
  - *netconf (optional)*
  - *restconf (optional)*

- *webui (optional)*
- *user-name*
- *user-password*

Follow these steps to activate Cisco Optical Site Manager.

Procedure

Step 1 Activate Cisco Optical Site Manager using the **cosm activate** command.

Example:

```
RP/0/RP0/CPU0:ios# cosm activate
```

Step 2 Verify the status of the application using the **show cosm status** command.
It may take a few minutes to activate Cisco Optical Site Manager.

- After activating, wait for few minutes before logging in to the Cisco Optical Site Manager GUI.
- Upon successful activation, the application transitions to an active state. Status commands display APP_ACTIVATED and ACTIVATED states.

This example shows the status of Cisco Optical Site Manager configured in standalone mode.

```
RP/0/RP0/CPU0:OLT-2#show cosm status
Fri Oct 18 13:06:09.862 UTC
COSM state: APP_ACTIVATED
AppMgr app state: ACTIVATED
AppMgr container state: RUNNING
Container status: Up 3 weeks
Last error: No error
COSM version: 24.3.1.D0186
```

This example shows the status of Active instance of the Cisco Optical Site Manager configured in HA mode.

```
RP/0/RP0/CPU0:HAN-1#show cosm status
Thu Oct 30 10:21:25.374 UTC
COSM state: APP_ACTIVATED
AppMgr app state: ACTIVATED
AppMgr container state: RUNNING
Container status: Up 2 days
Last error: No error
COSM version: 25.1.1.R0366
Redundancy role: ACTIVE (connected standby 2.2.2.2-COSM)
```

This example shows the status of Standby instance of the Cisco Optical Site Manager configured in HA mode.

```
RP/0/RP0/CPU0:HAN-2#show cosm status
Thu Oct 30 10:23:01.366 UTC
COSM state: APP_ACTIVATED
AppMgr app state: ACTIVATED
AppMgr container state: RUNNING
Container status: Up 2 days
```

```
Last error: No error
COSM version: 25.1.1.R0366
Redundancy role: STANDBY (connected active 1.1.1.1-COSM)
```

What to do next

- Login to Cisco Optical Site Manager
- Auto onboarding of the NCS 1001 device hosting Cisco Optical Site Manager does not complete because the XR device communicates with the third-party docker through the east-west interface. To onboard a NCS 1001 device, manually add it in Cisco Optical Site Manager using the east-west interface. For more details, see Add a device.

Deactivate Cisco Optical Site Manager

Deactivating Cisco Optical Site Manager should be performed only when:

- A change in the IP address of the Cisco Optical Site Manager instance is required.
- The deployment is transitioning from a standalone setup to a high availability (HA) configuration.
- The device hosting Cisco Optical Site Manager is being decommissioned and needs to be relocated to another device within the same aggregation site.
- The Cisco Optical Site Manager installation is incomplete or corrupted and requires removal and reinstallation.

Note Deactivating Cisco Optical Site Manager for general debugging or troubleshooting is not recommended.

Warning Deactivating Cisco Optical Site Manager removes its database and the Disaster Recovery backup.

Before you begin

Before deactivating Cisco Optical Site Manager:

- Create a backup of Cisco Optical Site Manager database. For more details, see Backup and Download Database .
- Download the current diagnostic logs in case required for troubleshooting. For more details, see View Cisco Optical Site Manager Diagnostics .
- Ensure that all the devices are in sync completed state in Cisco Optical Site Manager. If multiple devices are managed in Cisco Optical Site Manager, prepare to delete all associated devices simultaneously.

Follow these steps to deactivate Cisco Optical System Manager from your host devices. This process is not traffic impacting.

Procedure

Step 1 Perform these steps from the Cisco Optical Site Manager WEB-UI.

a. Lock the devices.

b. Back up the device configuration.

c. Unlock the devices.

d. Wait for synchronization to complete for all devices.

e. Select all devices and delete them from the Cisco Optical Site Manager.

Step 2 Perform these steps from the IOS XR CLI.

a. Run the `no lldp system-description` command to remove the LLDP system description on each device deleted from the Cisco Optical Site Manager.

Example:

```
RP/0/RP0/CPU0:COSM_OLT-4_215#configure terminal
Thu Oct 23 16:34:24.928 +0530
RP/0/RP0/CPU0:COSM_OLT-4_215(config)#no lldp system-description
RP/0/RP0/CPU0:COSM_OLT-4_215(config)#commit
```

b. Run the **cosm deactivate** command to deactivate the Cisco Optical System Manager.

Example:

```
RP/0/RP0/CPU0:ios# cosm deactivate
```

c. Run the **show cosm status** command to verify the status of the Cisco Optical Site Manager instance.

Example:

```
RP/0/RP0/CPU0: ios#show cosm status
COSM state: APP DEACTIVATED
AppMgr app state: DEACTIVATED
AppMgr container state: UNKNOWN
Container status: Not present
Last error: No error
COSM version: 24.3.1.D0186
```