



Change IP addresses

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Cisco Optical Site Manager IP address changes

Cisco Optical Site Manager IP address changes are maintenance actions that update the management, redundancy, or peer address used by Cisco Optical Site Manager and the devices that Cisco Optical Site Manager manages.

Cisco Optical Site Manager IP address changes help you

- change the management interface IP address used to access Cisco Optical Site Manager, and
- change the device IP address used to onboard a device into Cisco Optical Site Manager.

Table 1: Feature History

Feature Name	Release Information	Feature Description
Cisco Optical Site Manager - Change of IP	Cisco IOS XR Release 26.3.1	Cisco Optical Site Manager can now support IPv4 address changes for the Cisco Optical Site Manager management IP and Cisco Optical Site Manager host-device IP through IOS XR CLI or the NETCONF <code>reconfigure-ip-addresses</code> action. This allows the user to update the management, active-device, and standby-device IP details, including prefix and gateway values, in Cisco Optical Site Manager. Cisco Optical Site Manager is reconfigured with the updated IP address information while maintaining its database. The workflow supports both standalone and high-availability deployments.

Standalone behavior

In standalone mode, ensure that the device IP address matches the Cisco Optical Site Manager management IP address. If you change the management IP address and the old address is still displayed, update the onboarded device address in the Cisco Optical Site Manager web UI.

In standalone mode, the device IP address and the Cisco Optical Site Manager management IP address must be the same for NCS 1010. For NCS 1001 and NCS 1004, these IP addresses differ, and the device is onboarded using the IP address of a Loopback interface configured as East-West interface in Linux networking.

High availability behavior

In high availability mode, change the devices one at a time. Start with the standby Cisco Optical Site Manager device when possible. After the first device returns to the standby role and reconnects to the active device, repeat the management IP address procedure on the other device.

Before you begin the configuration, ensure that both nodes run the same IOS XR and Cisco Optical Site Manager versions and have matching Cisco Optical Site Manager NBI port and enable and disable settings.

**Caution**

Changing the redundancy interface IP address or the redundancy peer IP address can interrupt HA communication. Deactivate the standby Cisco Optical Site Manager instance before you change HA device IP settings to avoid an active/active condition.

Cisco Optical Site Manager IP address change scenarios

Use this reference to choose the correct Cisco Optical Site Manager IP address change workflow for your deployment mode.

Table 2: Cisco Optical Site Manager IP address change scenarios

Scenario	Mode	Affected configuration	Required action
Change Cisco Optical Site Manager management IP address	SA or HA	cosm mgmt-interface-name referenced interface	Change the interface IP address, delete the web certificate, run cosm reconfigure , and update the onboarded device address if required.
Change device IP address in SA mode	SA	Onboarded device address	Keep the device IP address aligned with the Cisco Optical Site Manager management IP address and update the device record in the Cisco Optical Site Manager web UI.
Change redundancy interface IP address	HA	cosm redundancy interface-name referenced interface on the first device	Deactivate the standby Cisco Optical Site Manager instance, change the interface IP address, delete the HA certificate folder, and run cosm reconfigure .

Scenario	Mode	Affected configuration	Required action
Change redundancy peer IP address	HA	cosm redundancy peer-ip on the second device	Update the peer address so the second device points to the new redundancy interface IP address of the first device.

Change the Cisco Optical Site Manager management IP address

Change the Cisco Optical Site Manager management IP address when the interface used by Cisco Optical Site Manager for management access must move to a new IP address.

In HA mode, complete this procedure on both devices that host Cisco Optical Site Manager, one device at a time. Start with the standby device when possible. Before you begin the configuration in HA mode, ensure that both nodes run the same IOS XR and Cisco Optical Site Manager versions and have matching Cisco Optical Site Manager NBI port and enable and disable settings.



Note After the first device returns to the standby role and reconnects to the active device, repeat this procedure on the other device.

Before you begin

- Verify Cisco Optical Site Manager health using the **show cosm status** command.
- Check for active core dumps.
- Verify telemetry status.
- Identify the interface referenced by the **cosm mgmt-interface-name** configuration.

Procedure

Step 1 Display the current Cisco Optical Site Manager configuration.

Example:

```
RP/0/RP0/CPU0:ios# show running-config cosm
Mon Feb  2 10:51:46.660 UTC
cosm
  redundancy peer-ip 192.0.2.20
  redundancy gateway-ip 192.0.2.254
  redundancy interface-name Loopback0
  mgmt-interface-name Loopback1
!
```

Step 2 Change the IP address of the management interface and commit the change.

Example:

```
RP/0/RP0/CPU0:ios# configure
Mon Feb  2 10:51:53.305 UTC
RP/0/RP0/CPU0:ios(config)# interface Loopback1
RP/0/RP0/CPU0:ios(config-if)# ip address 192.0.2.30/32
```

```
RP/0/RP0/CPU0:ios(config-if)# commit
RP/0/RP0/CPU0:ios(config-if)# end
```

Step 3 Verify that the XR configuration change is committed but not yet applied to the running Cisco Optical Site Manager application.

Example:

```
RP/0/RP0/CPU0:ios# show cosm status
Mon Feb  2 10:52:23.327 UTC
COSM state: APP_ACTIVATED
AppMgr app state: ACTIVATED
AppMgr container state: RUNNING
Container status: Up 3 days
Last error: No error
COSM version: 26.1.1.P1D0108
Role: ACTIVE (connected standby 192.0.2.20-COSM)
```

Configuration changes:

```
interface Loopback1
- ipv4 address 192.0.2.50/32
+ ipv4 address 192.0.2.30/32
!
```

Step 4 Delete the existing Cisco Optical Site Manager web certificate and confirm the operation.

Example:

```
RP/0/RP0/CPU0:ios# dir harddisk:/data/COSM/certs/
Thu Feb  5 16:02:40.683 UTC
Directory of harddisk:/data/COSM/certs/
6553677 -rw-----. 1 1445 Feb  5 16:02 host.cert
6553671 -rw-----. 1 1679 Feb  5 16:02 root.key
6553672 -rw-r--r--. 1 1330 Feb  5 16:02 ca.cert
6553673 -rw-----. 1 1828 Feb  5 16:02 host.key
6553639 drwxr-xr-x. 2 4096 Feb  5 16:02 192.0.2.20-COSM
6553674 -rw-r--r--. 1 989 Feb  5 16:02 host.csr
6553675 -rw-r--r--. 1 1208 Feb  5 16:02 host.pem
6553670 -rw-r--r--. 1 69 Feb  5 16:02 server.ext
```

```
RP/0/RP0/CPU0:ios# delete harddisk:/data/COSM/certs/host.cert
Thu Feb  5 16:02:55.688 UTC
Delete harddisk:/data/COSM/certs/host.cert[confirm]
```

Step 5 Apply the XR configuration change to Cisco Optical Site Manager.

Example:

```
RP/0/RP0/CPU0:ios# cosm reconfigure
Mon Feb  2 10:57:11.173 UTC
Deactivating : execute 'show cosm status' to monitor the progress
```

Cisco Optical Site Manager is reinitialized with the new configuration. Data is preserved during the deactivation and activation process.

Step 6 Verify that Cisco Optical Site Manager returns to the activated state.

Example:

```
RP/0/RP0/CPU0:ios# show cosm status
Mon Feb  2 11:08:07.616 UTC
COSM state: APP_ACTIVATED
AppMgr app state: ACTIVATED
AppMgr container state: RUNNING
Container status: Up 9 minutes
```

```
Last error: No error
COSM version: 26.1.1.PlD0108
Role: ACTIVE (connected standby 192.0.2.20-COSM)
```

- Step 7** In SA mode, edit the onboarded device IP address using the **Edit** button from the **Devices** tab in the Cisco Optical Site Manager web UI.

Use this step only if the onboarded device is still referenced by the old IP address.

Cisco Optical Site Manager uses the new management IP address, and the running application reflects the committed XR configuration.

What to do next

In HA mode, repeat this procedure on the peer device after the first device reconnects in the expected role.

Deactivate standby Cisco Optical Site Manager

Deactivate the standby Cisco Optical Site Manager instance before you change HA redundancy IP settings.



Caution Changing the redundancy interface IP address or redundancy peer IP address can break communication between HA peers. If both peers promote themselves to active, the deployment enters an active/active condition.

Before you begin

Verify that the Cisco Optical Site Manager HA configuration includes the management interface, redundancy interface, peer IP address, and gateway IP address.

```
cosm mgmt-interface-name type number
cosm redundancy interface-name type number
cosm redundancy peer-ip ip-address
cosm redundancy gateway-ip ip-address
```

Procedure

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- Step 1** Verify the Cisco Optical Site Manager status on the active device.

Example:

```
RP/0/RP0/CPU0:ios# show cosm status
Fri Jan 23 14:38:55.979 UTC
COSM state: APP_ACTIVATED
AppMgr app state: ACTIVATED
AppMgr container state: RUNNING
Container status: Up 3 hours
Last error: No error
COSM version: 26.2.1.PlD0108
Role: ACTIVE (connected standby 192.0.2.20-COSM)
```

- Step 2** Verify the Cisco Optical Site Manager status on the standby device.

Example:

```
RP/0/RP0/CPU0:ios# show cosm status
Fri Jan 23 15:43:01.117 UTC
COSM state: APP_ACTIVATED
AppMgr app state: ACTIVATED
AppMgr container state: RUNNING
Container status: Up 3 minutes
Last error: No error
COSM version: 26.2.1.P1D0108
Role: STANDBY (connected active 192.0.2.10-COSM)
```

Step 3 If the Cisco Optical Site Manager instance that you plan to deactivate is active, run a switchover before deactivation.

Example:

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

Step 4 Deactivate Cisco Optical Site Manager on the standby device and confirm the operation.

Example:

```
RP/0/RP0/CPU0:ios# cosm deactivate
Tue Jan 27 10:00:09.479 UTC
All COSM data will be deleted, do you want to proceed? [y/N]: y
Deactivating : execute 'show cosm status' to monitor the progress
```

Step 5 Monitor the deactivation progress.

Example:

```
RP/0/RP0/CPU0:ios# show cosm status
```

The standby Cisco Optical Site Manager instance is deactivated, and you can safely change the HA device IP configuration.

Change the redundancy interface IP address

Change the redundancy interface IP address when the HA address used by the peer device must move to a new interface address.

The example changes the redundancy interface on the device where Cisco Optical Site Manager is still running. The flow is the same if Cisco Optical Site Manager is running on the other HA device.

Before you begin

Deactivate the standby Cisco Optical Site Manager instance before you start this procedure.

Procedure

Step 1 Display the current Cisco Optical Site Manager configuration on the first device.

Example:

```
RP/0/RP0/CPU0:ios# show running-config cosm
Wed Feb 4 10:26:59.324 UTC
cosm
  redundancy peer-ip 192.0.2.20
  redundancy gateway-ip 192.0.2.254
```

```

redundancy interface-name Loopback0
mgmt-interface-name Loopback1
!
```

- Step 2** Change the IP address on the interface referenced by the Cisco Optical Site Manager redundancy interface configuration.

Example:

```

RP/0/RP0/CPU0:ios# configure
Wed Feb  4 10:27:01.913 UTC
RP/0/RP0/CPU0:ios(config)# interface Loopback0
RP/0/RP0/CPU0:ios(config-if)# ip address 192.0.2.30/32
RP/0/RP0/CPU0:ios(config-if)# commit
RP/0/RP0/CPU0:ios(config-if)# end
```

- Step 3** Verify that the XR configuration change is committed but not yet applied to the running Cisco Optical Site Manager application.

Example:

```

RP/0/RP0/CPU0:ios# show cosm status
Wed Feb  4 10:27:39.267 UTC
COSM state: APP_ACTIVATED
AppMgr app state: ACTIVATED
AppMgr container state: RUNNING
Container status: Up 47 hours
Last error: No error
COSM version: 26.1.1.P1D0108
Role: ACTIVE (standby not connected)
```

Configuration changes:

```

interface Loopback0
- ipv4 address 192.0.2.10/32
+ ipv4 address 192.0.2.30/32
!
```

- Step 4** Delete the HA certificate folder for the old redundancy interface IP address and confirm the operation.

Example:

```

RP/0/RP0/CPU0:ios# rmdir harddisk:/data/COSM/certs/192.0.2.10-COSM/
Wed Feb  4 10:29:31.264 UTC
Do you want to delete directory : harddisk:/data/COSM/certs/192.0.2.10-COSM/ [y|n][y] ?
```

- Step 5** Apply the new redundancy interface configuration to Cisco Optical Site Manager.

Example:

```

RP/0/RP0/CPU0:ios# cosm reconfigure
Wed Feb  4 10:31:02.607 UTC
Deactivating : execute 'show cosm status' to monitor the progress
```

- Step 6** Verify that Cisco Optical Site Manager returns to the activated state.

Example:

```

RP/0/RP0/CPU0:ios# show cosm status
Wed Feb  4 10:35:22.672 UTC
COSM state: APP_ACTIVATED
AppMgr app state: ACTIVATED
AppMgr container state: RUNNING
Container status: Up 2 minutes
Last error: No error
```

```
COSM version: 26.1.1.P1D0108
Role: ACTIVE (standby not connected)
```

The first HA device uses the new redundancy interface IP address, and Cisco Optical Site Manager is active without a connected standby peer until the second device is updated.

What to do next

Update the redundancy peer IP address on the second HA device.

Change the redundancy peer IP address

Update the peer IP address so the second HA device points to the new redundancy interface IP address of the first device.

Before you begin

Complete the redundancy interface IP address change on the first HA device.

Procedure

Step 1 Display the current Cisco Optical Site Manager configuration on the second device.

Example:

```
RP/0/RP0/CPU0:ios# show running-config cosm
Wed Feb  4 10:39:18.710 UTC
cosm
 redundancy peer-ip 192.0.2.10
 redundancy gateway-ip 192.0.2.254
 redundancy interface-name Loopback0
 mgmt-interface-name Loopback1
!
```

Step 2 Configure the new redundancy peer IP address and commit the change.

Example:

```
RP/0/RP0/CPU0:ios# configure
Wed Feb  4 10:39:22.747 UTC
RP/0/RP0/CPU0:ios(config)# cosm redundancy peer-ip 192.0.2.30
RP/0/RP0/CPU0:ios(config)# commit
RP/0/RP0/CPU0:ios(config)# end
```

The second HA device references the updated peer IP address.

What to do next

Activate Cisco Optical Site Manager on the second HA device to restore high availability.

Activate Cisco Optical Site Manager for high availability

Activate Cisco Optical Site Manager after you update the redundancy peer IP address on the second HA device.

Before you begin

Confirm that the redundancy interface IP address on the first device and the redundancy peer IP address on the second device use the same updated address.

Procedure

- Step 1** Activate Cisco Optical Site Manager on the second HA device.

Example:

```
RP/0/RP0/CPU0:ios# cosm activate
Wed Feb  4 10:39:38.598 UTC
Activating : execute 'show cosm status' to monitor the progress
```

- Step 2** Monitor the Cisco Optical Site Manager status until the second device reaches the standby role and reconnects to the active device.

Example:

```
RP/0/RP0/CPU0:ios# show cosm status
Wed Feb  4 10:51:08.917 UTC
COSM state: APP_ACTIVATED
AppMgr app state: ACTIVATED
AppMgr container state: RUNNING
Container status: Up 10 minutes
Last error: No error
COSM version: 26.1.1.P1D0108
Role: STANDBY (connected active 192.0.2.30-COSM)
```

Cisco Optical Site Manager HA is restored, and the second device is connected to the active device with the updated peer address.

What to do next

Update the onboarded device IP address if the device record still uses the old address.

Edit the onboarded device IP address

Update the onboarded device record when Cisco Optical Site Manager still displays the old device IP address.

Use this procedure after a management IP address change in SA mode or after a device IP address change in HA mode.

Before you begin

Verify that Cisco Optical Site Manager is activated and that you can access the Cisco Optical Site Manager web UI.

Procedure

- Step 1** Click **Devices** in the left panel.
The Device Configuration page appears.
- Step 2** In the **Devices** tab, click the **Devices** section to expand it.
A table appears that lists all the devices that are configured.
- Step 3** Select the onboarded device that uses the old IP address.
- Step 4** Click **Edit**.
- Step 5** Change the device IP address to the new address.
- Step 6** Apply the change.
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The onboarded device record uses the updated IP address.