



## **IP Address, Domain and Hostname for IM and Presence Service on Cisco Unified Communications Manager, Release 9.0(1)**

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*IP Address, Domain and Hostname for IM and Presence Service on Cisco Unified Communications Manager, Release 9.0(1)*

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# CHAPTER 1

## Readiness Checklist

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This document provides the steps to change the IP address or hostname on an IM and Presence server. You may want to change these values for a variety of reasons, including moving the server from one cluster to another or resolving a duplicate IP address problem.



### Warning

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**You must perform these procedures during a scheduled maintenance window.**

---

Perform the following tasks to ensure that your system is prepared for a successful IP address or hostname change.



### Caution

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If you do not receive the results that you expect when you perform these tasks, do not continue with this procedure until after you resolve any problems that you find.

---

### Procedure

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- Step 1** List all servers in the cluster and note whether the nodes are defined by using IP addresses or hostnames.
- From Cisco Unified CM IM and Presence Administration on the first node, navigate to **System > Cluster Topology**.
  - Check the list of available servers in the left frame of the Cluster Topology Details window.
  - Capture the list of available servers for later reference.
- Step 2** Ensure that you have saved a list of both the hostname and IP address of each node in your cluster.
- Step 3** Ensure that all servers in the cluster are running and available by checking for any active ServerDown alerts. You can do this by entering the following command on the publisher node:
- ```
file search activelog syslog/CiscoSyslog ServerDown
```
- Step 4** Check the DB replication status to ensure that all servers are replicating database changes successfully. Enter the following CLI command on the publisher node.
- ```
utils dbreplication runtimestate
```

Sample output is as follows:

```
DB and Replication Services: ALL RUNNING
```

```
Cluster Replication State: Replication status command started at: 2012-02-26-09-40
Replication status command COMPLETED 269 tables checked out of 269
No Errors or Mismatches found.
```

Use 'file view activelog cm/trace/dbl/sdi/ReplicationStatus.2012\_02\_26\_09\_40\_34.out' to see the details

```
DB Version: ccm8_6_3_10000_23
Number of replicated tables: 269
```

Cluster Detailed View from PUB (2 Servers):

SERVER-NAME	IP ADDRESS	PING (msec)	RPC?	REPLICATION STATUS	REPL. QUEUE	DBver& TABLES	REPL. LOOP?	REPLICATION SETUP (RTMT) & details
gwydla020218	10.53.46.130	0.038	Yes	Connected	0	match	Yes	(2) PUB Setup Completed
gwydla020220	10.53.46.133	0.248	Yes	Connected	128	match	Yes	(2) Setup Completed



**Note** It is important to verify that REPLICATION SETUP (RTMT) & details all report a state of 2. Anything other than 2 means that there is a problem with database replication.

**Step 5** Check network connectivity and DNS server configuration. To do this, enter the CLI command that is shown in the following example:

```
admin: utils diagnose module validate_network
Log file: /var/log/active/platform/log/diag1.log
```

```
Starting diagnostic test(s)
=====
test - validate_network      : Passed
```

```
Diagnostics Completed
admin:
```

**Step 6** If you are changing the IP address of a server and you use Domain Name System (DNS) in your network, ensure the following before you change the IP address:

- There is a forward and reverse lookup zone configured.
- The DNS is reachable and working.

**Step 7** Run a manual DRS backup and ensure that all nodes and active services are backed up successfully.

**Step 8** If High Availability (HA) was enabled before the hostname and IP address change, disable HA on all subclusters. Select **System > Cluster Topology** in Cisco Unified CM IM and Presence Administration. For more information on how to disable HA, see the *Deployment Guide for IM and Presence Service on Cisco Unified Communications Manager*.

**Step 9** For each cluster where the publisher/subscriber node being changed is an intercluster peer, remove the publisher's/subscriber's cluster from the list of intercluster peers.

For example, ClusterA, ClusterB and ClusterC are all intercluster peers. You want to change the hostname on the publisher node of ClusterA. You must first remove the ClusterA publisher node from the list of intercluster peers on both ClusterB and ClusterC.

**Step 10** Restart the Cisco Intercluster Sync Agent on the publisher and subscriber nodes of the first subcluster in each cluster.

- Step 11** If the notifications in the Cisco Unified CM IM and Presence Administration GUI indicate that a restart is needed, restart the Cisco XCP Router on all nodes in the clusters.
- Step 12** In IM and Presence Release 9.0 and later, the Single Sign-On (SSO) feature is available for IM and Presence interfaces, including the Real-Time Monitoring Tool (RTMT). The IM and Presence server hostname is a critical piece of information for SSO to function correctly. Cisco recommends that you disable SSO prior to changing the IM and Presence server hostname. After you change the hostname, you can re-enable SSO using the new hostname. For more information about SSO, see the “Single Sign-On Configuration” section of the *Deployment Guide for IM and Presence Service on Cisco Unified Communications Manager*.



---

**Note** Keep in mind that after you disable SSO, you will need to enter login credentials to access IM and Presence. Ensure that you remember your login credentials before disabling SSO, otherwise you may be locked out of IM and Presence applications.

---

- Step 13** Run the following CLI commands on all nodes in the cluster to stop the following IM and Presence services:
- `utils service stop Cisco Config Agent`
  - `utils service stop Cisco Intercluster Sync Agent`
  - `utils service stop Cisco Client Profile Agent`
  - `utils service stop Cisco Presence Engine`
  - `utils service stop Cisco OAM Agent`
  - `utils service stop Cisco SIP Proxy`
  - `utils service stop Cisco Sync Agent`
  - `utils service stop Cisco XCP Router`
  - `utils service stop Cisco Presence Datastore`
  - `utils service stop Cisco SIP Registration Datastore`
  - `utils service stop Cisco Login Datastore`
  - `utils service stop Cisco Route Datastore`
  - `utils service stop Cisco XCP Config Manager`

---

#### Troubleshooting Tip

Failure to properly shut down these services prior to changing the IP address or hostname could potentially trigger erroneous alerts and core dumps during the renaming process. If you inadvertently skip this step, and an alarm or core is generated as a result, you must manually clear it and remove the core with the following CLI command: **file delete activelog core**

#### Related Topic

*Deployment Guide for IM and Presence Service on Cisco Unified Communications Manager*  
*Disaster Recovery System Guide*







## CHAPTER 2

# Modify IP Addresses for Servers Defined by IP Address

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- [Modify IP Address of Publisher Server Defined by IP Address, page 2-1](#)
- [Modify IP Address of Subscriber Server Defined by IP Address, page 2-4](#)

This section describes how to change the IP addresses for servers that are defined by IP addresses.



### Caution

Changing the IP address on any node in a IM and Presence cluster can interrupt presence services and other system functions. Also, changing the IP address can cause the system to generate certain alarms and alerts, such as ServerDown and SDLLinkOSS, and automatic failover to a backup server may not operate. Because of this potential impact to the system, you must perform IP address changes during a planned maintenance window.

---

## Modify IP Address of Publisher Server Defined by IP Address

Use this procedure to change the IP address of a publisher server if your servers are defined by IP address.



### Note

You cannot use this procedure to change a publisher server of the subscriber host to another publisher server.

---

### Before You Begin

- Complete the [Readiness Checklist, page 1-1](#).
- Ensure that the IP addresses of subscriber nodes are changed (if required) prior to changing publisher IP address.



### Caution

If you need to change the gateway address, you must do so *before* you change the IP address. If you first change the IP address, the IM and Presence server will restart immediately and you will not be able to change the gateway.

---

**Procedure**

- Step 1** From Cisco Unified CM IM and Presence Administration, perform the following tasks on the publisher server:
- Navigate to **System > Cluster Topology**.
  - Select the publisher node from the Cluster Topology tree-view.
  - In the Node Configuration section, change the IP address of the IM and Presence server.
  - Select **Save**.
- Step 2** From Cisco Unified Communications Manager Administration, perform the following tasks to reflect the new IP address on the publisher server:
- Navigate to **System > Application Server**.
  - Select **Find** from the Find and List Servers window to display the subscriber server.
  - Verify that the new IP address exists in the application server list.




---

**Note** Do not proceed if the new IP address is not among the list of servers.

---

- Step 3** Ensure that the IP address change is replicated to all subscriber nodes in the cluster by entering the following command on each subscriber node:

```
run sql select name,nodeid from ProcessNode
```

The following example shows the command output:

```
admin: run sql select name,nodeid from ProcessNode
name                nodeid
=====
EnterpriseWideData 1
10.3.90.21          4
10.3.90.5           2
```




---

**Note** Do not proceed if the IP address has not been replicated to all nodes in the cluster.

---

- Step 4** Change the IP address of the publisher server on each subscriber server in the cluster by performing the following tasks in the CLI for each subscriber server:
- Enter the following command:  

```
set network cluster publisher ip new_ip_address
```
  - Enter **Yes** and press **Enter**. The server restarts automatically.

- Step 5** Change the IP address of the publisher server, and if necessary the default gateway, to the new address by performing the following tasks from the CLI:

- If you are moving the server to a different subnet that requires a new default gateway address, enter the CLI command `set network gateway`

The following output displays:

```
admin:set network gateway 10.53.56.1
```

```
WARNING: Changing this setting will invalidate software license
on this server. The license will have to be re-hosted.
```

Continue (y/n)?

b. Enter **yes** and press **Enter**.

c. To change the IP address of the publisher server, enter the CLI command `set network ip eth0 ip_address netmask gateway`

where *ip\_address* specifies the new server IP address and *netmask* specifies the new server network mask.

The following output displays:

```
admin:set network ip eth0 10.53.57.101 255.255.255.224 10.53.57.1
```

```
WARNING: Changing this setting will invalidate software license
on this server. The license will have to be re-hosted.
```

Continue (y/n)?

d. Enter **yes** and press **Enter**.



**Note**

If you changed switches in addition to changing the gateway and IP address for the IM and Presence server, complete the following steps while the server is automatically restarting. Otherwise, some of the IM and Presence scripts may fail network connectivity checks upon startup.

- watch the restart screen
- enter a `ping -t` on the old IP address
- when the pings are no longer successful, disconnect from the old switch and connect to the new switch

**Step 6** After the publisher node has restarted, restart all subscriber nodes with the following CLI command:  
`utils system restart`

**Step 7** After all nodes have restarted successfully, run the following CLI command on the publisher node to reset replication:

```
utils dbreplication reset all
```



**Note** This command may take up to 15 minutes to complete.

**Step 8** After the `utils dbreplication reset all` command is complete, restart the publisher node with the following CLI command:

```
utils system restart
```

**Step 9** After the publisher node has restarted, restart all the subscriber nodes in the cluster with the following CLI command:

```
utils system restart
```

**Note**


---

When changing the IP address of more than one server in a cluster, perform the following tasks:

- Change the IP address for one server.
- Reboot the cluster.
- Check the replication status.

If the changed IP address reflects properly, follow the same procedure on the next server. Otherwise, do not change the IP address of the other servers.

---

**What To Do Next**

Complete the [Post-Change Task List, page 5-1](#).

## Modify IP Address of Subscriber Server Defined by IP Address

Use this procedure to change the IP address of a subscriber server if your servers are defined by IP addresses. To successfully change the IP address, you must complete all steps in this procedure.

When changing the IP address of more than one subscriber server, we recommend that you:

- a. Change the IP address for one server at a time.
- b. Restart all other servers in the cluster (including the publisher server) to update the local name resolution files including database related configuration files.

**Caution**


---

**Caution!** Do not change the IP address of more than one server at the same time because it can cause local name resolution files to be out of sync in the cluster.

---

**Before You Begin**

Complete the [Readiness Checklist, page 1-1](#)

**Caution**


---

If you need to change the gateway address, you must do so *before* you change the IP address. If you change the IP address first, the IM and Presence server will restart immediately and you will not be able to change the gateway.

---

**Procedure****Step 1**


---

From Cisco Unified CM IM and Presence Administration, perform the following tasks on the subscriber server:

- a. Navigate to **System > Cluster Topology**.
- b. Select the publisher node from the Cluster Topology tree-view.
- c. In the Node Configuration section, change the IP address of the IM and Presence server.
- d. Select **Save**.

- Step 2** From Cisco Unified Communications Manager Administration, perform the following tasks to reflect the new IP address on the subscriber server:
- Navigate to **System > Application Server**.
  - Select **Find** from the Find and List Servers window to display the subscriber server.
  - Verify that the new IP address exists in the application server list.




---

**Note** Do not proceed if the new IP address is not among the list of servers.

---

- Step 3** Ensure that the IP address change is replicated to all the nodes in the cluster by entering the following CLI command:

```
run sql select name,nodeid from ProcessNode
```

The following example shows the command output:

```
admin: run sql select name,nodeid from ProcessNode
name          nodeid
=====
EnterpriseWideData 1
10.3.90.21     4
10.3.90.5      2
```




---

**Note** Do not proceed if the IP address has not been replicated to all nodes in the cluster.

---

- Step 4** Repeat Steps 1 to 3 on all subscriber nodes in the cluster, as required.

- Step 5** Change the IP address of the subscriber server, and if necessary the default gateway, to the new address by performing the following tasks:

- If you are moving the server to a different subnet that requires a new default gateway address, enter the CLI command **set network gateway**

The following output displays:

```
admin:set network gateway 10.53.56.2
```

```
WARNING: Changing this setting will invalidate software license
on this server. The license will have to be re-hosted.
```

```
Continue (y/n)?
```

- Enter **yes** and press **Enter**.

- To change the IP address of the subscriber server, enter the CLI command **set network ip eth0 ip\_address netmask gateway**

where *ip\_address* specifies the new server IP address and *netmask* specifies the new server network mask.

The following output displays:

```
admin:set network ip eth0 10.53.57.101 255.255.255.224 10.53.57.1
```

```
WARNING: Changing this setting will invalidate software license
on this server. The license will have to be re-hosted.
```

```
Continue (y/n)?
```

- d. Enter **yes** and press **Enter**.
- 

**Troubleshooting Tip**

If you changed switches in addition to changing the gateway and IP address for the IM and Presence server, complete these steps while the server is automatically restarting. Otherwise, some of the IM and Presence scripts may fail network connectivity checks upon startup.

- watch the restart screen
- enter a *ping -t* on the old IP address
- when the pings are no longer successful, disconnect from the old switch and connect to the new switch

**What To Do Next**

Complete the [Post-Change Task List, page 5-1](#).



## CHAPTER 3

# Modify IP Addresses for Servers Defined by Hostname/FQDN

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- [Modify IP Address of Publisher Server Defined by Hostname/FQDN, page 3-1](#)
- [Modify IP Address of Subscriber Server Defined by Hostname/FQDN, page 3-4](#)



### Caution

Be aware that when you take a DRS backup from a server with a particular hostname, it cannot be restored on a server (either a publisher or subscriber node) with a different hostname, even after you reinstall that node.

---

## Modify IP Address of Publisher Server Defined by Hostname/FQDN

Use this procedure to change the IP address of a publisher server if your servers are defined by hostname or FQDN. DNS servers comprise part of the network infrastructure. IM and Presence servers do not and cannot run DNS services.



### Note

You cannot use this procedure to change a publisher server of the subscriber host to another publisher server.

---

### Before you begin

Complete the [Readiness Checklist, page 1-1](#).

### Procedure

---

#### Step 1

Perform the following actions:

- a. Change the DNS record of the publisher server to point to the new IP address.
- b. Ensure that you correctly update both the forward (A) and reverse (PTR) records.

**Step 2** Change the IP address of the publisher server on each subscriber server in the cluster by performing the following tasks in the CLI for each subscriber server:

- a. Enter the following command:

```
set network cluster publisher ip new_ip_address
```

- b. Enter **Yes** and press **Enter**.

**Step 3** Change the IP address of the publisher server, and if necessary the default gateway, to the new address by performing the following tasks:

- a. If you are moving the server to a different subnet that requires a new default gateway address, enter the CLI command **set network gateway**

The following output displays:

```
admin:set network gateway 10.53.56.1
```

```
WARNING: Changing this setting will invalidate software license
on this server. The license will have to be re-hosted.
```

```
Continue (y/n)?
```

- b. Enter **yes** and press **Enter**.

- c. To change the IP address of the publisher server, enter the CLI command **set network ip eth0 ip\_address netmask gateway**

where *ip\_address* specifies the new server IP address, *netmask* specifies the new server network mask and *gateway* specifies the gateway.

The following output displays:

```
admin:set network ip eth0 10.53.57.101 255.255.255.224 10.53.57.1
```

```
WARNING: Changing this setting will invalidate software license
on this server. The license will have to be re-hosted.
```

```
Continue (y/n)?
```

- d. Enter **yes** and press **Enter**.

**Step 4** After the publisher server restarts automatically, restart all subscriber servers to update the local name resolution files including database related configuration files, and services.

**Step 5** Ensure that local resolution of the subscriber node also resolves to the new IP address by running the **utils network host** and **show tech network hosts** CLI commands:

```
admin:utils network host lg-sub-4
```

```
Hostname lg-sub-4 resolves to 14.86.13.11
```

```
admin:show tech network hosts
```

```
----- show platform network -----
```

```
/etc/hosts File:
```

```
#This file was generated by the /etc/hosts cluster manager.
```

```
#It is automatically updated as nodes are added, changed, removed from the cluster.
```

```
127.0.0.1 localhost
14.87.10.10 lg-pub-1.lindermangroup.cisco.com lg-pub-1
14.87.10.11 lg-tftp-1.lindermangroup.cisco.com lg-tftp-1
14.87.10.12 lg-tftp-2.lindermangroup.cisco.com lg-tftp-2
14.87.11.10 lg-sub-1.lindermangroup.cisco.com lg-sub-1
14.87.11.11 lg-sub-3.lindermangroup.cisco.com lg-sub-3
14.86.13.10 lg-sub-2.lindermangroup.cisco.com lg-sub-2
14.86.13.11 lg-sub-4.lindermangroup.cisco.com lg-sub-4
```



```

14.87.11.12 lg-sub-5.lindermangroup.cisco.com lg-sub-5
14.87.11.13 lg-sub-7.lindermangroup.cisco.com lg-sub-7
14.86.13.12 lg-tftp-3.lindermangroup.cisco.com lg-tftp-3
14.87.20.20 lg-cups1.heroes.com lg-cups1
14.86.13.13 lg-sub-6.lindermangroup.cisco.com lg-sub-6
admin:

```

**Note**

If you changed switches in addition to changing the gateway and IP address for the IM and Presence server, complete the following steps while the server is automatically restarting. Otherwise, some of the IM and Presence scripts may fail network connectivity checks upon startup.

- watch the restart screen
- enter a *ping -t* on the old IP address
- when the pings are no longer successful, disconnect from the old switch and connect to the new switch

**Step 6** After the publisher node has restarted, restart all subscriber nodes with the following CLI command:

```
utils system restart
```

**Step 7** After all nodes have restarted successfully, run the following CLI command on the publisher node to check replication:

```
utils dbreplication runtimestate
```

**Note**

Depending on the size of the database, it may take several minutes to over an hour for replication to be re-established.

Sample output is as follows:

```
DDB and Replication Services: ALL RUNNING
```

```
DB CLI Status: No other dbreplication CLI is running...
```

```
Cluster Replication State: BROADCAST SYNC Completed on 1 servers at: 2012-09-26-15-18
```

```
Last Sync Result: SYNC COMPLETED 257 tables sync'ed out of 257
```

```
Sync Errors: NO ERRORS
```

```
DB Version: ccm9_0_1_10000_9000
```

```
Number of replicated tables: 257
```

```
Repltimeout set to: 300s
```

```
Cluster Detailed View from gwydlvm020105 (2 Servers):
```

SERVER-NAME	IP ADDRESS	PING (msec)	RPC?	REPLICATION STATUS	REPL. QUEUE	DBver& TABLES	REPL. LOOP?	REPLICATION SETUP (RTMT) & details
gwydlvm020105	192.168.20.244	0.038	Yes	Connected	0	match	Yes	(2) PUB Setup Completed
gwydlvm020106	192.168.10.201	0.248	Yes	Connected	128	match	Yes	(2) Setup Completed

**Note**

It is important to verify that REPLICATION SETUP (RTMT) & details all report a state of 2. Anything other than 2 means that there is a problem with database replication and that you need to reset replication. Refer to [Reset Replication, page 3-4](#) for more information.

**Note**

When changing the IP address of more than one server in a cluster, perform the following tasks:

- Change the IP address for one server.
- Reboot the cluster.
- Check the replication status.

If the changed IP address reflects properly, follow the same procedure on the next server. Otherwise, do not change the IP address of the other servers.

**What To Do Next**

Complete the [Post-Change Task List, page 5-1](#).

## Reset Replication

If replication does not complete successfully, complete the following procedure.

**Procedure**

**Step 1** Run the following CLI command on the publisher node to reset replication:

```
utils dbreplication reset all
```



**Note** This command may take up to 15 minutes to complete.

**Step 2** After the `utils dbreplication reset all` command is complete, restart the publisher node with the following CLI command:

```
utils system restart
```

**Step 3** After the publisher node has restarted, restart all the subscriber nodes in the cluster with the following CLI command:

```
utils system restart
```

## Modify IP Address of Subscriber Server Defined by Hostname/FQDN

Use this procedure to change the IP address of a subscriber server if your servers are defined by hostname or FQDN. DNS servers comprise part of the network infrastructure. IM and Presence servers do not and cannot run DNS services.

When changing IP address of more than one subscriber server, we recommend that you:

- a. Change the IP address for one server at a time.
- b. Restart all other servers in the cluster (including the publisher server) to update local name resolution files including database related configuration files.

**Caution**

Do not change the IP address of more than one server at the same time because it can cause local name resolution files to be out of sync in the cluster.

**Before you begin**

Complete the [Readiness Checklist, page 1-1](#).

**Procedure**

- 
- Step 1** Perform the following actions:
- Change the DNS record of the subscriber server to point to the new IP address.
  - Ensure that you correctly update both the forward (A) and reverse (PTR) records.
  - Refresh your DNS cache to ensure that the records are correctly updated.
- Step 2** Change the IP address of the subscriber server, and if necessary the default gateway, to the new address by performing the following tasks:
- If you are moving the server to a different subnet that requires a new default gateway address, enter the CLI command `set network gateway`
- The following output displays:
- ```
admin:set network gateway 10.3.90.2
*** WARNING ***
This will cause the system to temporarily lose network connectivity

Do you want to continue ?
```
- Enter "yes" to continue or any other key to abort
  - Enter **yes** and press **Enter**.
  - To change the IP address of the subscriber server, enter the CLI command `set network ip eth0 ip_address netmask gateway`
- where *ip\_address* specifies the new server IP address and *netmask* specifies the new server network mask.
- The following output displays:
- ```
admin: set network ip eth0 10.53.57.101 255.255.255.224 10.53.57.1
*** WARNING ***
If there are IP addresses (not hostnames) configured in CallManager Administration
under System -> Servers then you must change the IP address there BEFORE changing it
here or call processing will fail. This will cause the system to restart
=====
Note: To recognize the new IP address all nodes within the cluster will have to be
manually rebooted.
=====
Do you want to continue?
Enter "yes" to continue and restart or any other key to abort
```
- Enter **yes** and press **Enter**.
- Step 3** Verify that the DNS change propagates to other nodes by using the `utils network host` and `show tech network hosts` CLI commands on all the cluster nodes:
- ```
admin:utils network host lg-sub-4
Hostname lg-sub-4 resolves to 14.86.13.11

admin:show tech network hosts
```

```

----- show platform network -----

/etc/hosts File:
#This file was generated by the /etc/hosts cluster manager.
#It is automatically updated as nodes are added, changed, removed from the cluster.

127.0.0.1 localhost
14.87.10.10 lg-pub-1.lindermangroup.cisco.com lg-pub-1
14.87.10.11 lg-tftp-1.lindermangroup.cisco.com lg-tftp-1
14.87.10.12 lg-tftp-2.lindermangroup.cisco.com lg-tftp-2
14.87.11.10 lg-sub-1.lindermangroup.cisco.com lg-sub-1
14.87.11.11 lg-sub-3.lindermangroup.cisco.com lg-sub-3
14.86.13.10 lg-sub-2.lindermangroup.cisco.com lg-sub-2
14.86.13.11 lg-sub-4.lindermangroup.cisco.com lg-sub-4
14.87.11.12 lg-sub-5.lindermangroup.cisco.com lg-sub-5
14.87.11.13 lg-sub-7.lindermangroup.cisco.com lg-sub-7
14.86.13.12 lg-tftp-3.lindermangroup.cisco.com lg-tftp-3
14.87.20.20 lg-cups1.heroes.com lg-cups1
14.86.13.13 lg-sub-6.lindermangroup.cisco.com lg-sub-6
admin:

```

- Step 4** Restart all other servers in the cluster (including the publisher server) to update the local name resolution files including database related configuration files.
- 

#### Troubleshooting Tip

If you changed switches in addition to changing the gateway and IP address for the IM and Presence server, complete these steps while the server is automatically restarting. Otherwise, some of the IM and Presence scripts may fail network connectivity checks upon startup.

- watch the restart screen
- enter a `ping -t` on the old IP address
- when the pings are no longer successful, disconnect from the old switch and connect to the new switch

#### What To Do Next

Complete the [Post-Change Task List, page 5-1](#).



## CHAPTER 4

# Modify Server Hostnames/FQDN

---

November 30, 2012

- [Modify Publisher Server Hostname, page 4-1](#)
- [Modify Subscriber Server Hostname, page 4-3](#)

## Modify Publisher Server Hostname

Use the following procedure to change the hostname of publisher servers in a cluster. DNS servers comprise part of the network infrastructure. IM and Presence servers do not and cannot run DNS services.

### Before You Begin

Complete the [Readiness Checklist, page 1-1](#).

### Procedure

---

- Step 1** Perform the following actions:
- Change the DNS record of the publisher server to point to the new hostname, for example, `newhost1` (For illustration purposes, `newhost1` is used in the CLI command examples in this procedure.)
  - Ensure that you correctly update both the forward (A) and reverse (PTR) records.
- Step 2** Verify that the DNS change propagates to other nodes by running the following CLI command on all the cluster nodes:
- ```
utils network host newhost1
```
- where `newhost1` is the new hostname
- The output of this command is as follows:
- ```
admin:utils network host newhost1
Hostname newhost1 resolves to 14.86.13.11
```
- Step 3** From Cisco Unified CM IM and Presence Administration, perform the following tasks on the publisher server:
- Navigate to **System > Cluster Topology**.
  - Select the publisher node from the Cluster Topology tree-view.

- c. In the Node Configuration section, update the node name to reflect the new hostname as follows:
  - If the server is defined by hostname, replace the old hostname with the new hostname. For example, update the Name from “old-host” to “new-host”.
  - If the server is defined by FQDN, update the FQDN value to reference the new hostname rather than the old hostname. For example, update the Name from “old-host.example.com” to “new-host.example.com”.
- d. Select **Save**.

**Step 4** From Cisco Unified Communications Manager Administration, perform the following tasks:

- a. Navigate to **System > Application Server**.
- b. Select **Find** from the Find and List Servers window to display the server.
- c. Verify that the new hostname is listed among the servers.




---

**Note** Do not proceed if the new hostname is not among the list of servers.

---

**Step 5** Ensure that the hostname change is replicated to all the nodes in the cluster. To do this, enter the following command from the CLI on all nodes in the cluster:

```
run sql select name,nodeid from ProcessNode
```




---

**Note** Do not proceed if the hostname has not been replicated to all nodes in the cluster.

---

**Step 6** Change the hostname of the publisher server on each subscriber server in the cluster by entering the following command in the CLI for each subscriber server:

```
set network cluster publisher hostname <new_hostname>
```

For example:

```
set network cluster publisher hostname newhost1
```

**Step 7** On the publisher server, change the hostname of the server as follows:

- a. Enter the CLI command `set network hostname newhost1` where `newhost1` is the new hostname
- b. Enter **Yes** and press **Enter**. This will automatically restart this server with the new hostname.




---

**Note** Changing the hostname triggers an automatic, self-signed Certificate Regeneration. After the server restarts automatically, secure connections to this server will fail until the CTL client is rerun and the CTL file is updated.

---

**Step 8** After the publisher node has restarted, restart all subscriber nodes with the following CLI command:

```
utils system restart
```

**Step 9** After all nodes have restarted successfully, run the following CLI command on the publisher node to reset replication:

```
utils dbreplication reset all
```



---

**Note** This command may take up to 15 minutes to complete.

---

**Step 10** After the `utils dbreplication reset all` command is complete, restart the publisher node with the following CLI command:

```
utils system restart
```

**Step 11** After the publisher node has restarted, restart all the subscriber nodes in the cluster with the following CLI command:

```
utils system restart
```

---

### What To Do Next

Complete the [Post-Change Task List, page 5-1](#)

## Modify Subscriber Server Hostname

Use the following procedure to change the hostname of subscriber servers in a cluster. DNS servers comprise part of the network infrastructure. IM and Presence servers do not and cannot run DNS services.

### Before You Begin

Complete the [Readiness Checklist, page 1-1](#).

### Procedure

---

**Step 1** Perform the following actions:

- a. Change the DNS record of the subscriber server to point to the new hostname, for example, `newhost1` (For illustration purposes, `newhost1` is used in the CLI command examples in this procedure.)
- b. Ensure that you correctly update both the forward (A) and reverse (PTR) records.

**Step 2** Verify that the DNS change propagates to other nodes by running the following CLI command on all the cluster nodes:

```
utils network host newhost1
```

where `newhost1` is the new hostname

The output of this command is as follows:

```
admin:utils network host newhost1
Hostname newhost1 resolves to 14.86.13.11
```

**Step 3** From Cisco Unified CM IM and Presence Administration, perform the following tasks on the publisher server:

- a. Navigate to **System > Cluster Topology**.
- b. Select the subscriber node from the Cluster Topology tree-view.
- c. In the Node Configuration section, update the node name to reflect the new hostname as follows:

- If the server is defined by hostname, replace the old hostname with the new hostname. For example, update the Name from “old-host” to “new-host”.
- If the server is defined by FQDN, update the FQDN value to reference the new hostname rather than the old hostname. For example, update the Name from “old-host.example.com” to “new-host.example.com”.

d. Select **Save**.

**Step 4** From Cisco Unified Communications Manager Administration, perform the following tasks:

- a. Navigate to **System > Application Server**.
- b. Select **Find** from the Find and List Servers window to display the server.
- c. Verify that the new hostname is listed among the servers.




---

**Note** Do not proceed if the new hostname is not among the list of servers.

---

**Step 5** Ensure that the hostname change is replicated to all the nodes in the cluster. To do this, enter the following command from the CLI on all nodes in the cluster:

```
run sql select name,nodeid from ProcessNode
```




---

**Note** Do not proceed if the hostname has not been replicated to all nodes in the cluster.

---

**Step 6** On the subscriber server, change the hostname of the server as follows:

- a. Enter the CLI command `set network hostname newhost1` where `newhost1` is the new hostname
- b. Enter **Yes** and press **Enter**. This will automatically restart this server with the new hostname.




---

**Note** Changing the hostname triggers an automatic, self-signed Certificate Regeneration. After the server restarts automatically, secure connections to this server will fail until the CTL client is rerun and the CTL file is updated.

---

**Step 7** Restart the publisher node in the cluster with the following command:

```
utils system restart
```

**Step 8** Restart all other subscriber nodes in the cluster with the following command:

```
utils system restart
```

**Step 9** After all nodes have restarted successfully, run the following CLI command on the publisher node to reset replication:

```
utils dbreplication reset all
```




---

**Note** This command may take up to 15 minutes to complete.

---

**Step 10** After the `utils dbreplication reset all` command is complete, restart the publisher node with the following CLI command:

```
utils system restart
```



- Step 11** After the publisher node has restarted, restart all the subscriber nodes in the cluster with the following CLI command:

```
utils system restart
```

---

**What To Do Next**

Complete the [Post-Change Task List, page 5-1](#).





# CHAPTER 5

## Post-Change Task List

---

November 30, 2012

Complete this procedure after you finish changing the IP address or hostname of your cluster.

### Procedure

---

- Step 1** Ensure that all servers in the cluster are running and available by checking for any active ServerDown alerts. You can check the application event log for ServerDown alerts by entering the following command in the Command Line Interface (CLI) on the publisher node:
- ```
file search activelog syslog/CiscoSyslog ServerDown
```
- Step 2** Check the DB replication status on all the IM and Presence nodes in the cluster to ensure all servers are replicating database changes successfully. You can check by using the following CLI command.

```
utils dbreplication runtimestate
```

**Step 3** If you completed Step 9 in the Readiness Checklist, add the cluster whose publisher/subscriber hostname/IP address was changed to each peer-cluster publisher node.

**Step 4** If you disabled SSO prior to performing a procedure, you can enable it now. For information about how to enable SSO, see the “Single Sign-On Configuration” section of the *Deployment Guide for IM and Presence Service on Cisco Unified Communications Manager*.

**Step 5** Run a manual DRS backup and ensure that all nodes and active services are backed up successfully.

**Step 6** If the IP address for the server has been changed, update RTMT custom alerts and saved profiles:

  - RTMT custom alerts that are derived from performance counters include the hard-coded server IP address. You must delete and reconfigure these custom alerts.
  - RTMT saved profiles that have performance counters include the hard-coded server IP address. You must delete and re-add these counters and then save the profile to update it to the new IP address.

**Step 7** Check and make any required configuration changes to other associated Cisco Unified Communications components, including the following ones:



---

**Note** The **REPLICATION SETUP (RTMT) & details** value for all nodes must be 2.

---



---

**Note** Consult the documentation for your product to determine how to make any required configuration changes.

---

- SIP trunks
- SFTP servers that are used for IM and Presence server trace collection or as a DRS backup destination
- Cisco Jabber
- Associated routers and gateways
- Third-party clients, such as IBM Lotus Sametime

**Step 8** On all nodes, verify that services are running. If you need to start services, use the following commands to start the IM and Presence services in the following order:

- `utils service start Cisco XCP Config Manager`
- `utils service start Cisco Route Datastore`
- `utils service start Cisco Login Datastore`
- `utils service start Cisco SIP Registration Datastore`
- `utils service start Cisco Presence Datastore`
- `utils service start Cisco XCP Router`
- `utils service start Cisco Sync Agent`
- `utils service start Cisco SIP Proxy`
- `utils service start Cisco OAM Agent`
- `utils service start Cisco Presence Engine`
- `utils service start Cisco Client Profile Agent`
- `utils service start Cisco Intercluster Sync Agent`
- `utils service start Cisco Config Agent`

**Step 9** If High Availability (HA) was disabled before the hostname or IP address change, enable HA on all subclusters. Select **System > Cluster Topology** in Cisco Unified CM IM and Presence Administration. For more information about how to enable HA, see the *Deployment Guide for IM and Presence Service on Cisco Unified Communications Manager*.

**Step 10** You must run a manual DRS backup after you change the IP address or hostname of a node, because you cannot restore a node with a DRS file that contains a different IP address or hostname. The post-change DRS file will include the new IP address or hostname.

---



## CHAPTER 6

# Modify the SIP Domain of an IM and Presence Cluster

---

November 30, 2012

- [Replace the Default Domain Value, page 6-1](#)
- [Change the Domain Value, page 6-2](#)

## Replace the Default Domain Value

The domain name specifies the DNS domain name of the IM and Presence server. IM and Presence automatically defaults to the domain name DOMAIN.NOT.SET. You must replace this default domain name with the DNS domain name in order for the SRM to initialize correctly in a High Availability deployment.

If you are not using DNS in your network, and you did not set the domain at install, you must replace this default value with the enterprise wide domain and ensure the node names are configured as IP addresses or IM and Presence will not function correctly.

Perform this configuration on all nodes in your IM and Presence cluster.

### Procedure

---

- Step 1** Perform the following steps to configure the new domain value:
- Select **IM and Presence Administration** > **System** > **Cluster Topology**.
  - In the right pane, select **Settings**.
  - Configure the Domain Name value with the new domain.
  - Select **IM and Presence Administration** > **System** > **Service Parameters**, and select the **Cisco SIP Proxy** service.
  - Configure the Federation Routing IM and Presence FQDN with the new domain.
  - You will be prompted to confirm these configuration changes. Select **OK** for both prompts, and then select **Save**.
- Step 2** Use this CLI command to set the new domain:
- ```
set network domain <new_domain>
```
- This CLI command invokes a reboot of the server.

**Step 3** Manually regenerate all certificates on the local IM and Presence server.

**Note**

When you regenerate the Tomcat certificate, you must restart Tomcat. You can restart Tomcat after you regenerate all of the certificates on the local server. Use this CLI command to restart Tomcat: **utils service restart Cisco Tomcat**

## Change the Domain Value

Follow this procedure if you want to change the domain value (from one valid domain value to another valid IP proxy domain value).

This procedure is applicable if you have a DNS or non-DNS deployment.

**Note**

It is highly recommended that you use a DNS deployment. In order to be considered valid, the domain value must match the DNS domain name. Using a valid domain name ensures that the SRM initializes correctly in a High Availability deployment.

### Procedure

- Step 1** Stop the Cisco SIP Proxy, Presence Engine and XCP Router services on IM and Presence on all nodes in your cluster.
- Step 2** On the publisher node, perform the following steps to configure the new domain value:
- a. Select **IM and Presence Administration > System > Cluster Topology**.
  - b. In the right pane, select **Settings**.
  - c. Configure the Domain Name value with the new domain.
  - a. Select **IM and Presence Administration > System > Service Parameters**, and select the **Cisco SIP Proxy** service.
  - b. Configure the Federation Routing IM and Presence FQDN with the new domain.
  - c. You will be prompted to confirm these configuration changes. Select **OK** for both prompts, and then select **Save**.
- Step 3** On all nodes in the cluster, use this CLI command to set the new domain:
- ```
set network domain <new_domain>
```
- This CLI command invokes a reboot of the servers.
- Step 4** On all nodes in the cluster, manually start the Cisco Presence Engine and Cisco XCP Router services after the reboot is complete (if required).
- Step 5** Manually regenerate all certificates on each node in the cluster.

**Note**

When you regenerate the Tomcat certificate, you must restart Tomcat. You can restart Tomcat after you regenerate all of the certificates on the local server. Use this CLI command to restart Tomcat: **utils service restart Cisco Tomcat**

- Step 6** If you use DNS in your network, update the DNS configuration for the new domain. Update any host records and any DNS SRV records that you require for the new domain.
- Step 7** Configure any XMPP clients with the new domain.
-







# CHAPTER 7

## Validating IM and Presence and MOC Interoperability after an IP Address Change

November 30, 2012

Perform the steps in this procedure only if you change the hostname or IP address on a IM and Presence server that was previously integrated with Microsoft LCS/OCS. You need to do this to ensure the Microsoft Office Communicator (MOC) server and clients reflect the correct IM and Presence IP address and hostname (after your changes) and the new FQDN.

### Before You Begin

Complete the Post-Change Task List.

### Procedure

- Step 1** Sign out of any existing MOC client session that you may have running.
- Step 2** Sign in to the OCS or LCS server.
- Step 3** Edit the Front End properties, in the following tabs on the OCS or LCS server:

Tab	Action
Routing Tab	<ol style="list-style-type: none"><li>Update the renamed IM and Presence server with its new FQDN and IP address.</li><li>Change the 'Next Hop' IP address of the wild carded IM and Presence domain to be the new IM and Presence IP address.</li></ol>
Host Authorization Tab	Ensure that the new IM and Presence IP address and new FQDN is listed as follows: <ul style="list-style-type: none"><li>Outbound only – N</li><li>Throttle As Server –Y</li><li>Treat As Authenticated - Y</li></ul>

- Step 4** Right-click on the LCS/OCS Users, and edit as follows:
- Change the 'Server URI' to be the new IM and Presence FQDN.
  - Select **OK**.
- Step 5** Stop the OCS/LCS Front End Service.

**Step 6** Restart the OCS/LCS Front End Service.

**Step 7** Sign in to the MOC client, and confirm control of a Cisco device.

---



## CHAPTER 8

# Obtaining Documentation, Obtaining Support, and Security Guidelines

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**November 30, 2012**

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

## Cisco Product Security Overview

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

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[http://www.access.gpo.gov/bis/ear/ear\\_data.html](http://www.access.gpo.gov/bis/ear/ear_data.html)

