# **Install CUCM Cluster Using Data Export and Import Feature**

## **Contents**

**Introduction** 

**Prerequisites** 

Requirements

Components Used

#### **Configure**

Configurations

Export Data from the Source Cluster Publisher to the SFTP Server

Export Data from the Source Cluster Subscriber to the SFTP Server

Shutdown the Source Cluster Publisher

Install New Publisher Using Exported Data

Shutdown the Source Cluster Subscriber

Install New Subscriber Using Exported Data

#### **Verify**

**Related Information** 

# **Introduction**

This document describes the procedure of CUCM installation using Data Export and Import feature.

# **Prerequisites**

### Requirements

Cisco recommends that you have knowledge of these topics.

- CUCM
- IP Phone

## **Components Used**

The information in this document is based on these software versions.

- Source CUCM cluster versions 12.5.1.15900-66.
- Destination CUCM cluster versions 15.0.1.11900-23.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

# Configure

## **Configurations**

Data export is done on the old source CUCM cluster and data import is done on the new destination cluster. Your source cluster version must be Release 10.5 or higher. If your source cluster version is not Release 12.5(1) SU5 or higher, you must install the latest version of the <a href="mailto:ciscocom.DataExport">ciscocom.DataExport</a> COP file on each node of the source system.

Steps included for CUCM installation using data export and import feature:

- Export data from the source cluster Publisher to the SFTP server.
- Export data from the source cluster Subscriber to the SFTP server.
- Shutdown the source cluster Publisher.
- Shutdown the source cluster Subscriber.
- Install new Publisher using exported data.
- Install new Subscriber using exported data.

## **Export Data from the Source Cluster Publisher to the SFTP Server**

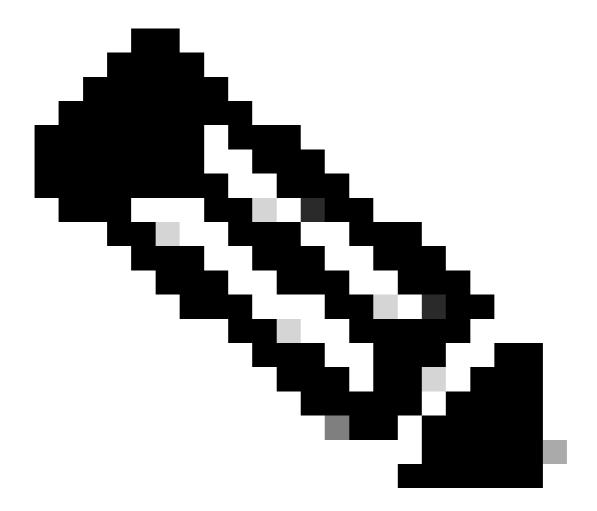
Source cluster version is 12.5.1.15900-66.

Log in to the **command line interface** of the **CUCM Publisher** and run the command **utils system upgrade dataexport initiate**.

```
10.201.251.172 - PuTTY
                                                                                                            PUBLISHER
admin:show myself
Machine Name
                : cucmpublisher
account name
privilege level : 4
command count : disabled
logging setting : disabled
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
::1 localhost
10.201.251.175 cucmsubscriber1.CiscoHttsTAC.com cucmsubscriber1
10.201.251.172 cucmpublisher.CiscoHttsTAC.com cucmpublisher
admin:
admin:show version active
Active Master Version: 12.5.1.15900-66
Active Version Installed Software Options:
No Installed Software Options Found.
admin
admin utils system upgrade dataexport initiate
```

Data Export Command

Provide the **SFTP server** details, the destination **Publisher hostname** and the **IP Address**.

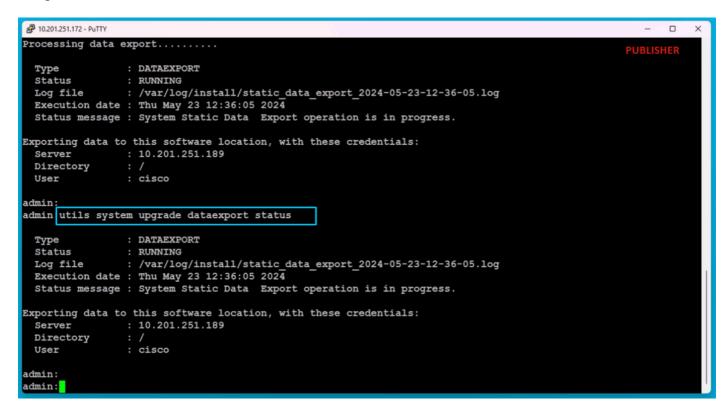


Note: Here, Iyou use the same hostname and IP address of the Publisher.

```
₽ 10.201.251.172 - PuTTY
                                                                                                           10.201.251.175 cucmsubscriber1.CiscoHttsTAC.com cucmsubscriber1
                                                                                                     PUBLISHER
10.201.251.172 cucmpublisher.CiscoHttsTAC.com cucmpublisher
admin:
admin:
admin:show version active
Active Master Version: 12.5.1.15900-66
Active Version Installed Software Options:
No Installed Software Options Found.
admin:
admin utils system upgrade dataexport initiate
Warning: Before upgrading the cluster Cisco recommends installing the latest Upgrade Readiness COP file. Refer
to the Upgrade Guide on cisco.com for details.
Warning: The data export process would take anywhere between a few minutes to about 30 minutes to complete. Thi
s export time depends on the data configuration and network speed. Do not close this window without first cance
ling the system migrate export operation.
Export Data Directory [/]: /
Remote Server Name or IP [10.201.251.189]: 10.201.251.189
Remote Server Login ID [cisco]: cisco
Remote Server Password: *****
Enter details of the destination node that will import the current node's exported data :
New Hostname []: cucmpublisher
New IPAddress []: 10.201.251.172
Would you like to proceed with export (yes/no): yes
Processing data export.....
```

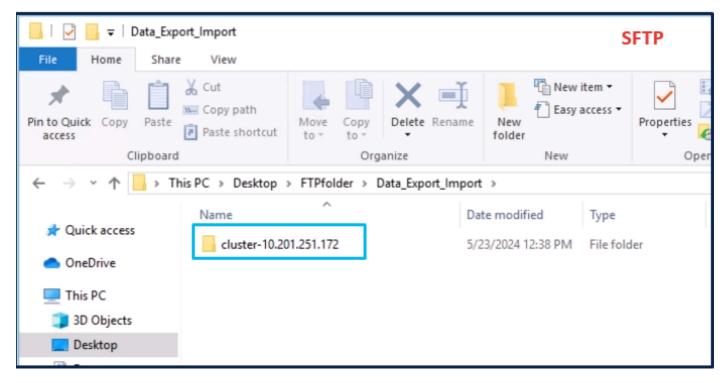
Processing Data Export

Run the command **utils system upgrade dataexport status** for checking whether the data export process is completed or not.



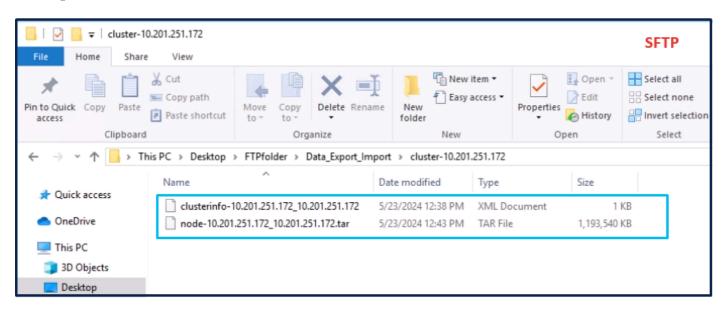
Data Export Progress Check

In the SFTP server, a new folder is automatically created with name like **cluster-Publisher IP Address** and the exported data is downloaded into it.



Exported Data Location in the SFTP Server

After export is done for the Publisher, the status shows **completed** from the output of **utils system upgrade dataexport status**.



Data Export is Completed for the Publisher

```
# 10.201.251.172 - PuTT\
admin:utils system upgrade dataexport status
                 : DATAEXPORT
                 : RUNNING
 Log file
                 : /var/log/install/static_data_export_2024-05-23-12-36-05.log
 Execution date : Thu May 23 12:36:05 2024
  Status message: System Static Data Export operation is in progress.
Exporting data to this software location, with these credentials:
                 : 10.201.251.189
 Directory
 User
                 : cisco
admin:
admin
admin utils system upgrade dataexport status
  Type
                  : DATAEXPORT
 Status
                 : COMPLETED
 Log file : /var/log/install/static_data_export_2024-05-23-12-36-05.log
Execution date : Thu May 23 12:36:05 2024
 Status message : Migrate export completed successfully.
Exporting data to this software location, with these credentials:
                : 10.201.251.189
 Server
 Directory
 User
                 : cisco
admin:
```

Data Export is Completed for the Publisher

#### **Export Data from the Source Cluster Subscriber to the SFTP Server**

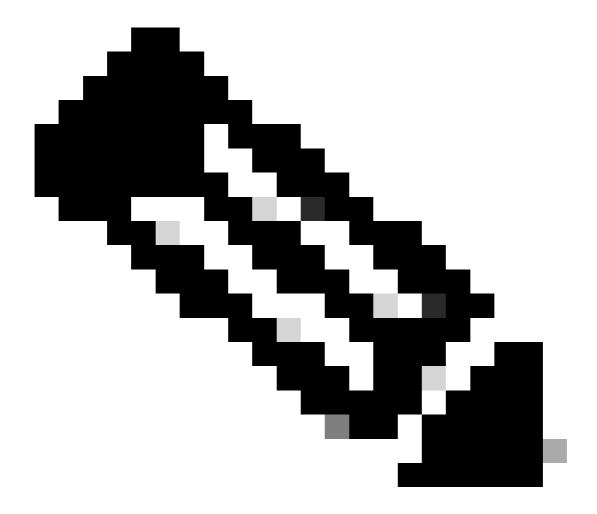
The steps are same as you did for the Publisher.

Run the command utils system upgrade dataexport initiate.

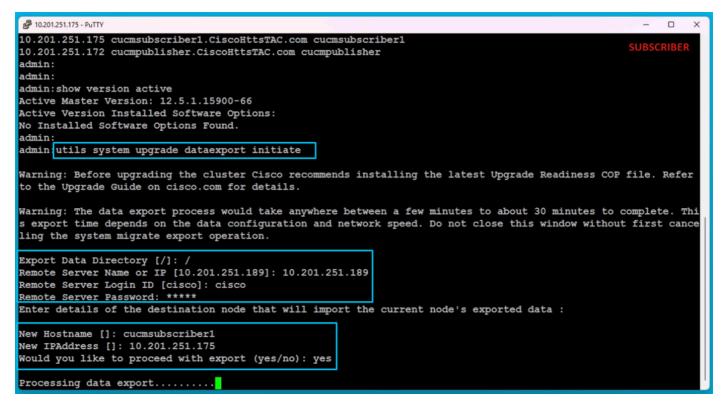
```
₽ 10.201.251.175 - PuTTY
admin:show myself
Machine Name : cucmsubscriber1
account name
               : admin
privilege level : 4
command count : disabled
logging setting : disabled
admin:
admin:show tech network hosts
           ----- show platform network ------
/etc/hosts File:
#This file was 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
::1 localhost
10.201.251.175 cucmsubscriber1.CiscoHttsTAC.com cucmsubscriber1
10.201.251.172 cucmpublisher.CiscoHttsTAC.com cucmpublisher
admin:
admin:
admin:show version active
Active Master Version: 12.5.1.15900-66
Active Version Installed Software Options:
No Installed Software Options Found
admin
admin:utils system upgrade dataexport initiate
```

Data Export on the Subscriber

Provide the SFTP server details, the destination Subscriber hostname and IP Address.

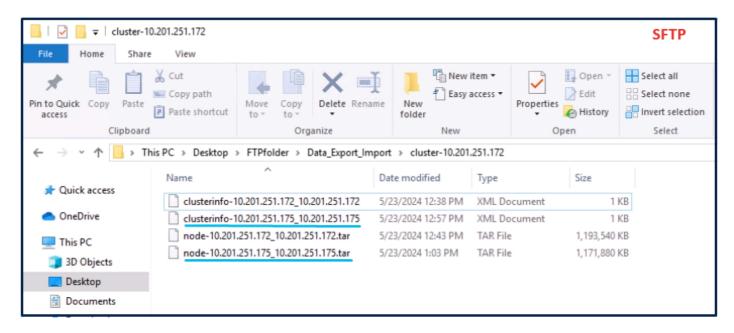


Note: In this lab, you use the same source cluster Subscriber hostname and IP Address.



Processing Data Export

In the same folder location (**cluster-Publisher IP Address**) of the SFTP, the Subscriber exported data exists.



Data Export is Completed for Subscriber

After export is done for the Subscriber, the status shows **completed** from the output of **utils system upgrade dataexport status**.

```
# 10.201.251.175 - PuTTY
                                                                                                            DATAEXPORT
 Status
                 : RUNNING
 Log file
                : /var/log/install/static data export 2024-05-23-12-56-10.log
 Execution date : Thu May 23 12:56:10 2024
 Status message : System Static Data Export operation is in progress.
Exporting data to this software location, with these credentials:
                : 10.201.251.189
 Server
 Directory
 User
                 : cisco
admin:
admin
admin utils system upgrade dataexport status
                 : DATAEXPORT
 Type
  Status
                : COMPLETED
 Log file
                : /var/log/install/static_data_export_2024-05-23-12-56-10.log
 Execution date : Thu May 23 12:56:10 2024
 Status message : Migrate export completed successfully.
Exporting data to this software location, with these credentials:
                : 10.201.251.189
 Server
 Directory
 User
                 : cisco
admin:
admin:
admin:
```

Data Export is Completed for Subscriber

#### **Shutdown the Source Cluster Publisher**

Shutdown the **Publisher** by executing the command **utils system shutdown**.

```
₽ PuTTY (inactive)
                                                                                                  PUBLISHER
admin:show myself
Machine Name : cucmpublisher
account name
                : admin
privilege level : 4
command count : disabled
logging setting : disabled
admin:
admin:show version active
Active Master Version: 12.5.1.15900-66
Active Version Installed Software Options:
No Installed Software Options Found.
admin:
admin:
admin utils system shutdown
Do you really want to shutdown ?
Enter (yes/no)? yes
Appliance is being Powered - Off ...
Warning: Shutdown could take up to 5 minutes.
Stopping Service Manager...
  Service Manager shutting down services... Please Wait Waiting
```

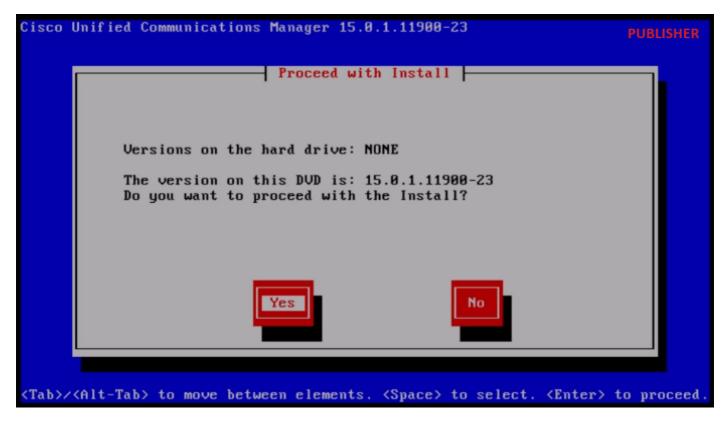
Shutdown the Publisher

Build a Virtual Machine for the Publisher using appropriate OVA Template.

Mount 15.0.1.11900-23 version bootable image to the Virtual Machine (VM) and turn ON the VM. Press **OK** button after the media check is success.

Choose Cisco Unified Communication Manager and click OK button.

Press **Yes** button to proceed with installation of 15.0.1.11900-23 version.



Proceed with Install

Click Import button in the Platform Installation Wizard.



Platform Installation Wizard

After reading the displayed information, click **OK** button in the **Import Upgrade Configuration** information.



Import Upgrade Configuration Information

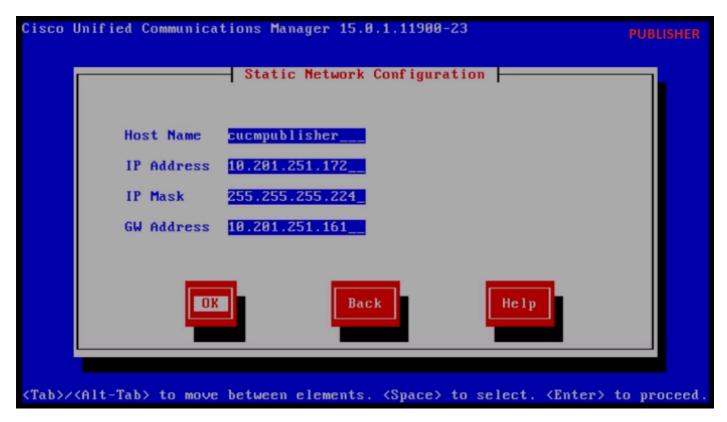
Choose **appropriate timezone** and then click **OK** button.

Click Continue button in the Auto Negotiation Configuration.

Click **No** button to have the default value in **MTU Configuration**.

Press No button under the DHCP Configuration.

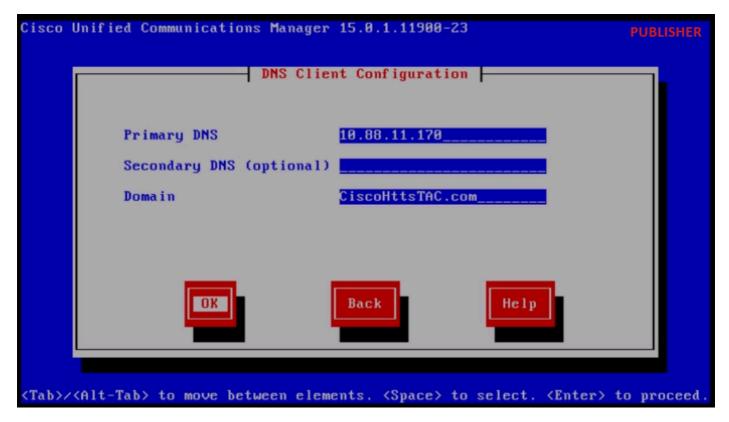
Provide the Host Name, IP Address, IP Mask and Gateway (GW) Address and then press OK button.



Static Network Configuration

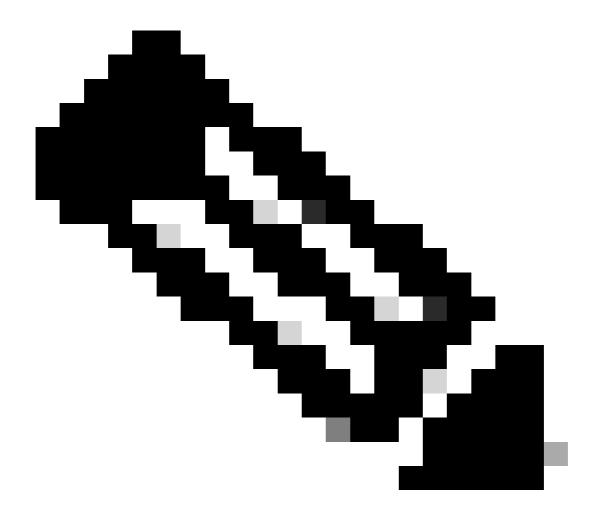
Click Yes button under the DNS Client Configuration.

Provide the Primary DNS server IP Address and Domain and then click OK button.

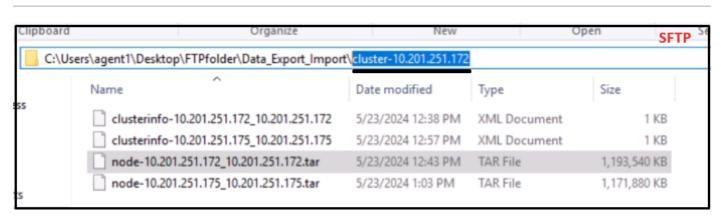


DNS Client Configuration

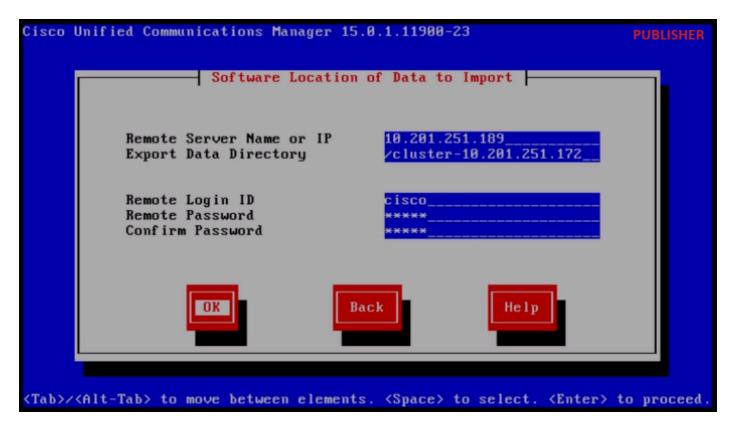
Provide the **SFTP server information** (IP, directory, login ID and Password) where you have the exported data of the source cluster and then press  $\mathbf{OK}$  button.



**Note**: Location of the Publisher exported data is present in the folder **cluster-Publisher\_IP\_Address** as shown in the screenshot.



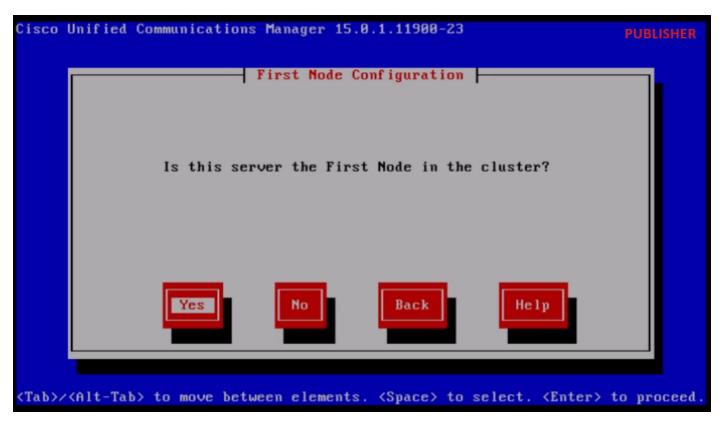
Exported Data Location in the SFTP Server



Software Location of Data to Import

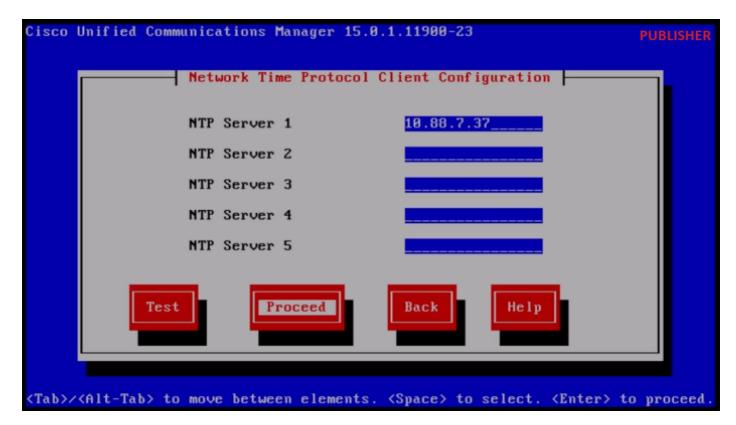
Provide the **Certificate information** and click **OK** button.

Press Yes button under First Node Configuration.



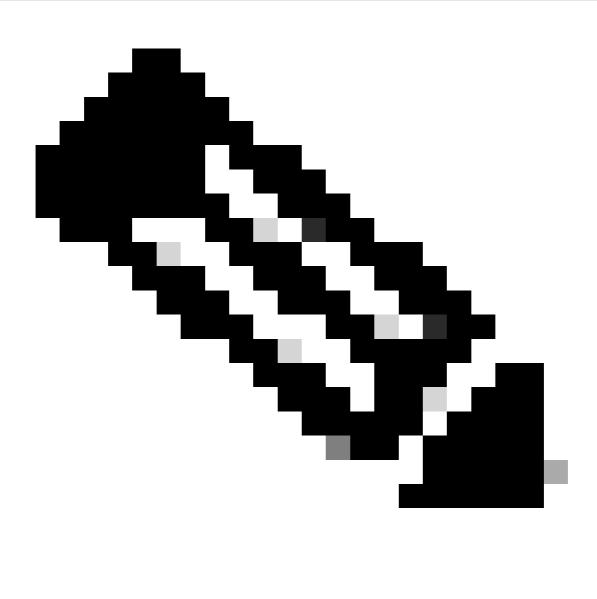
First Node Configuration

Configure the Network Time Protocol (NTP) server and then click Proceed button.



NTP Client Configuration

Click No button for SMTP Host Configuration.



Note: If want to configure SMTP, then press Yes button and configure the SMTP host.

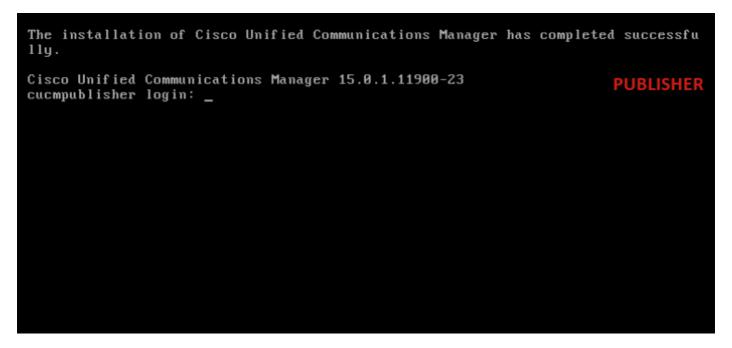
Choose appropriate option under Smart Call Home Enable Page and click OK button.

Click **OK** button under **Platform Configuration Confirmation page** to proceed with installation.



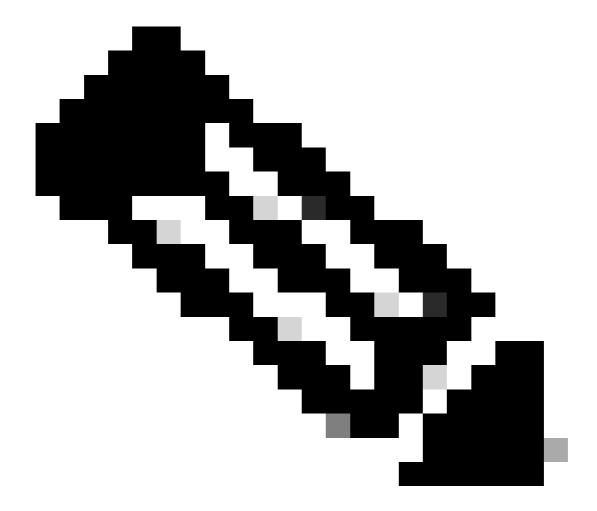
Platfrom Configuration Confirmation

After few minutes, the installation of the Publisher is finished using the import feature.



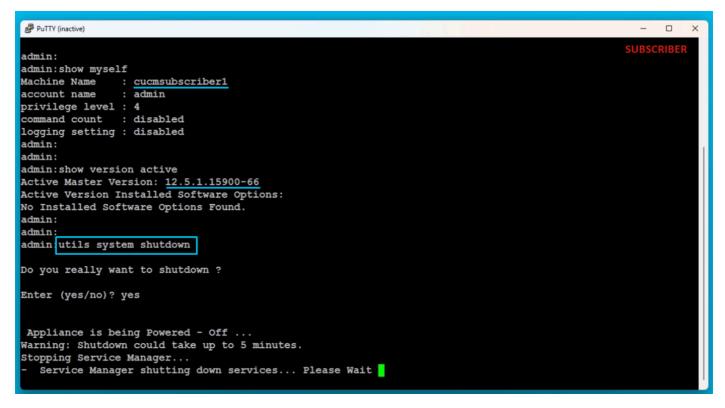
Publisher Installation is Completed Successfully

**Shutdown the Source Cluster Subscriber** 



**Note**: There is no need to shut down all the subscriber nodes in the cluster in one go. You can shut down only the specific subscriber to which you are performing the import operation.

Shutdown the **Subscriber** by executing the command **utils system shutdown**.



Shutdown the Subscriber

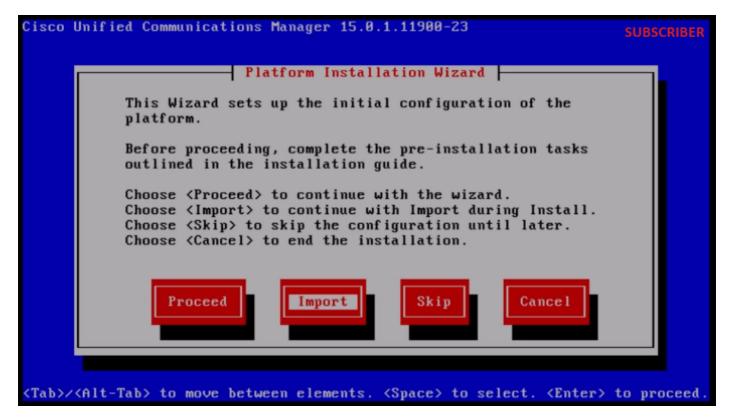
#### **Install New Subscriber Using Exported Data**

Build a Virtual Machine for the Subscriber using appropriate OVA Template. Mount 15.0.1.11900-23 version bootable image to the Virtual Machine (VM) and turn ON the VM. Press **OK** button after the media check is success.

Choose Cisco Unified Communication Manager and click OK button.

Press **Yes** button to proceed with installation of 15.0.1.11900-23 version.

Click **Import** button in the **Platform Installation Wizard**.



Platform Installation Wizard

After reading the displayed information, click **OK** button in the Import Upgrade Configuration information.

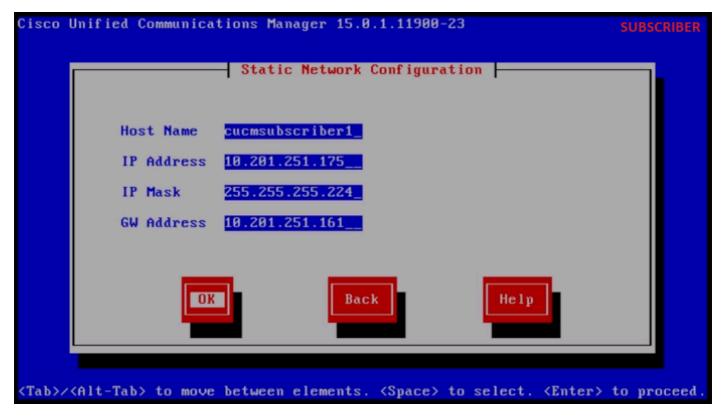
Choose appropriate timezone and then click **OK** button.

Click Continue button in the Auto Negotiation Configuration.

Click **No** button to have the default value in MTU Configuration.

Press No button under the DHCP Configuration.

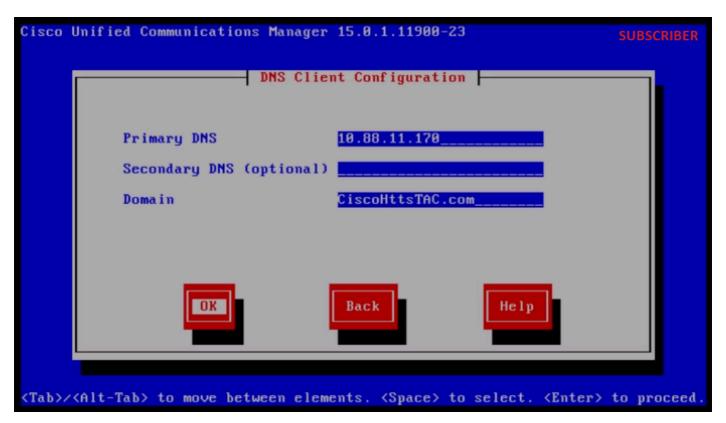
Provide the **Host Name**, **IP Address**, **IP Mask** and **Gateway** (**GW**) **Address** for the Subscriber server and then press **OK** button.



Static Network Configuration

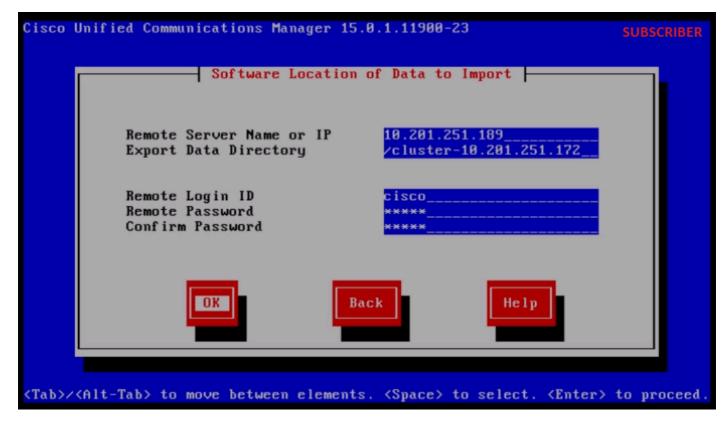
Click Yes button under the DNS Client Configuration.

Provide the **Primary DNS** and **Domain** and then click **OK** button.

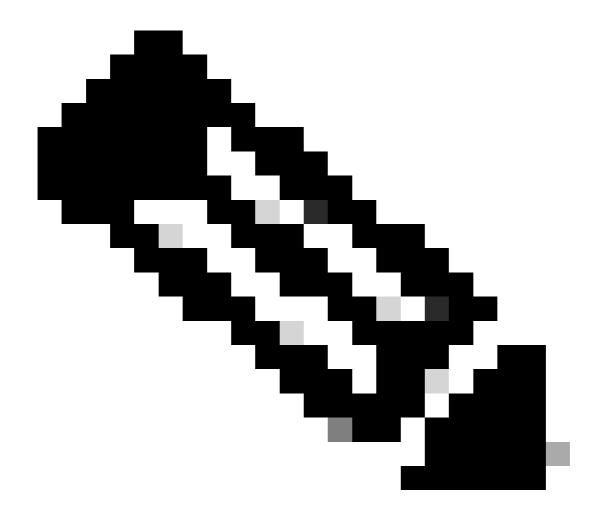


DNS Client Configuration

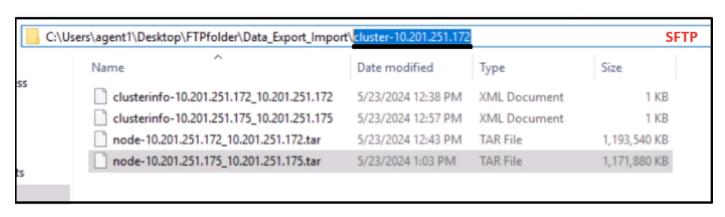
Provide the **SFTP server information** (IP, directory, login ID and Password) where you have the exported data of the source cluster and then press **OK** button.



Software Location of Data to Import



**Note**: Location of the Subscriber exported data is present in the folder **cluster-Publisher\_IP\_Address** as shown in the screenshot.



Subscriber Exported Data Location in SFTP Server

Provide the **Certificate information** and click **OK** button.

Press No button under First Node Configuration.

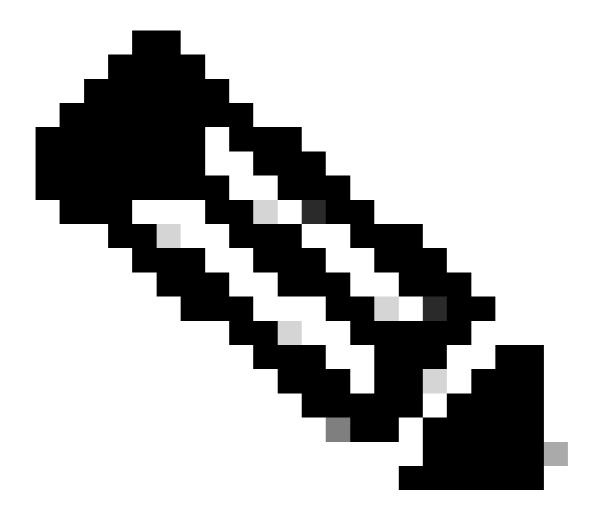


First Node Configuration

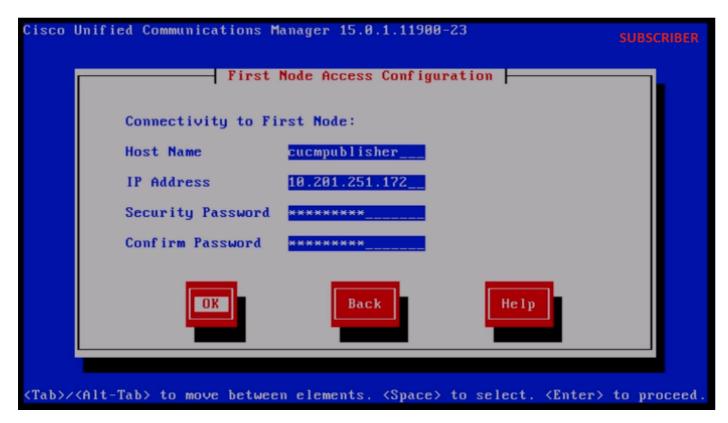
Press **OK** button on the **First Node Configuration** page.

Click No button under Network Connectivity Test Configuration page.

Provide the **Publisher host name** and **IP Address** in the **First Node Access Configuration page** and click **OK** button.

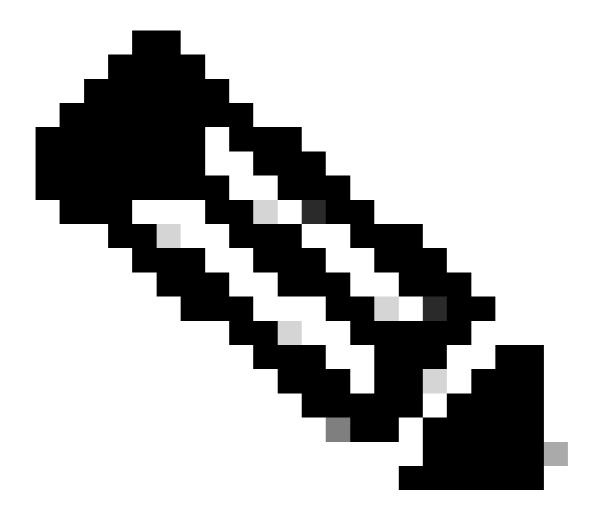


Note: The Security Password is auto-populated via imported data in this page.



First Node Access Configuration

Click No button for SMTP Host Configuration.



Note: If want to configure SMTP, then press Yes button and configure the SMTP host.

Click **OK** button under **Platform Configuration Confirmation** page to proceed with installation.



Platform Configuration Confirmation

After few minutes, the installation of the Subscriber is successful using import feature.



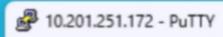
Subscriber Installation is Successful

# Verify

After successful installation of the Publisher and Subscriber, run the commands to validate.

show myself show version active utils dbreplication runtimestate file view install system-history.log

**PUBLISHER** 



admin:show myself

Machine Name : cucmpublisher

account name : admin

privilege level : 4

command count : disabled
logging setting : disabled

admin:

admin:

admin:show version active

Active Master Version: 15.0.1.11900-23

Active Version Installed Software Options:

No Installed Software Options Found.

admin:

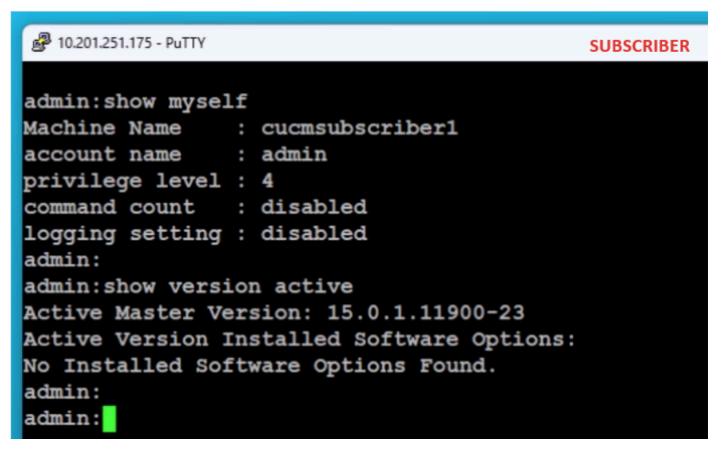
Publisher Verification

```
10.201.251.172 - PuTTY
                                                                                                                admin:utils dbreplication runtimestate
Server Time: Sat Jun 1 08:05:05 PDT 2024
Cluster Replication State: BROADCAST SYNC ended at: 2024-05-26-11-13
     Sync Result: SYNC COMPLETED on 753 tables out of 753
     Sync Status: All Tables are in sync
Use CLI to see detail: 'file view activelog cm/trace/dbl/20240526_111231_dbl_repl_output_Broadcast.log'
DB Version: ccm15 0 1 11900 23
Repltimeout set to: 300s
PROCESS option set to: 40
Cluster Detailed View from cucmpublisher (2 Servers):
                                              PING
                                                        DB/RPC/
                                                                   REPL.
                                                                             Replication
                                                                                             REPLICATION SETUP
SERVER-NAME
                          IP ADDRESS
                                             (msec)
                                                        DbMon?
                                                                   QUEUE
                                                                             Group ID
                                                                                             (RTMT) & Details
cucmpublisher
                          10.201.251.172
                                             0.019
                                                        Y/Y/Y
                                                                             (g_2)
                                                                                             (2) Setup Completed
cucmsubscriber1
                          10.201.251.175
                                              0.233
                                                        Y/Y/Y
                                                                   0
                                                                                             (2) Setup Completed
                                                                             (g_3)
admin:
```

```
# 10.201.251.172 - PuTTY
admin:
admin:file view install system-history.log
Product Name -
                   Cisco Unified Communications Manager
Product Version - 15.0.1.11900-23
Kernel Image -
                   4.18.0-372.16.1.el8_6.x86_64
05/26/2024 06:40:55 | root: Install 15.0.1.11900-23 Start
05/26/2024 06:53:00 | root: Boot 15.0.1.11900-23 start
05/26/2024 09:18:27 | root: Import during Install 12.5.1.15900-66-to-15.0.1.11900-23 Success
05/26/2024 09:18:27 | root: Product Version 15.0.1.11900-23
05/26/2024 09:18:27 | root: Kernel Image 4.18.0-372.16.1.el8_6.x86_64
05/27/2024 00:00:08 | root: DRS Backup UCMVersion:15.0.1.11900-23 Start
05/27/2024 00:22:01 | root: DRS Backup UCMVersion:15.0.1.11900-23 Success
05/28/2024 00:00:04 | root: DRS Backup UCMVersion:15.0.1.11900-23 Start
05/28/2024 00:22:07 | root: DRS Backup UCMVersion:15.0.1.11900-23 Success
05/29/2024 00:00:02 | root: DRS Backup UCMVersion:15.0.1.11900-23 Start
05/29/2024 00:22:15 | root: DRS Backup UCMVersion:15.0.1.11900-23 Success 05/30/2024 00:00:02 | root: DRS Backup UCMVersion:15.0.1.11900-23 Start
05/30/2024 00:22:06 | root: DRS Backup UCMVersion:15.0.1.11900-23 Success
05/31/2024 00:00:03 | root: DRS Backup UCMVersion:15.0.1.11900-23 Start
05/31/2024 00:22:01 | root: DRS Backup UCMVersion:15.0.1.11900-23 Success
options: q=quit, n=next, p=prev, b=begin, e=end (lines 1 - 20 of 22) :
admin:
admin:
```

Publisher Verification

#### **SUBSCRIBER**



```
# 10.201.251.175 - PuTTY
                                                                                                              No Installed Software Options Found.
admin:
admin:utils dbreplication runtimestate
Server Time: Sat Jun 1 08:07:21 PDT 2024
Cluster Replication State: Only available on the PUB
DB Version: ccm15 0 1 11900 23
Repltimeout: Only available on the PUB
PROCESS option: Only available on the PUB
Cluster Detailed View from cucmsubscriber1 (2 Servers):
                                                                           Replication
                                                       DB/RPC/
                                                                  REPL.
                                                                                           REPLICATION SETUP
SERVER-NAME
                          IP ADDRESS
                                             (msec)
                                                       DbMon?
                                                                  QUEUE
                                                                           Group ID
                                                                                           (RTMT) & DB Status
                          10.201.251.172
cucmpublisher
                                             0.202
                                                       Y/Y/Y
                                                                  0
                                                                            (g_2)
                                                                                           (2) Setup Completed
cucmsubscriber1
                          10.201.251.175
                                             0.018
                                                                                           (2) Setup Completed
                                                       Y/Y/Y
                                                                            (g_3)
```

Subscriber Verification

```
10.201.251.175 - PuTTY
PROCESS option: Only available on the PUB
Cluster Detailed View from cucmsubscriber1 (2 Servers):
                                            PING
                                                      DB/RPC/
                                                                 REPL.
                                                                          Replication
                                                                                          REPLICAT
SERVER-NAME
                         IP ADDRESS
                                            (msec)
                                                      DbMon?
                                                                 QUEUE
                                                                          Group ID
                                                                                          (RTMT) &
cucmpublisher
                         10.201.251.172
                                            0.202
                                                      Y/Y/Y
                                                                 0
                                                                          (g 2)
                                                                                          (2) Setur
                         10.201.251.175
                                            0.018
cucmsubscriber1
                                                                 0
                                                      Y/Y/Y
                                                                          (g_3)
                                                                                          (2) Setur
admin:
admin:
admin:file view install system-history.log
Product Name -
                  Cisco Unified Communications Manager
Product Version - 15.0.1.11900-23
Kernel Image -
                  4.18.0-372.16.1.el8_6.x86_64
05/26/2024 10:09:55 | root: Install 15.0.1.11900-23 Start
05/26/2024 10:21:39 | root: Boot 15.0.1.11900-23 Start
05/26/2024 11:03:57 | root: Import during Install 12.5.1.15900-66-to-15.0.1.11900-23 Success
05/26/2024 11:03:57 | root: Product Version 15.0.1.11900-23
05/26/2024 11:03:57 | root: Kernel Image 4.18.0-372.16.1.el8 6.x86 64
end of the file reached
options: q=quit, n=next, p=prev, b=begin, e=end (lines 1 - 10 of 10) :
```

Subscriber Verification

# **Related Information**

• <u>Installation Guide for Cisco Unified Communications Manager and the IM and Presence Service</u>, Release 14