

使用資料導出和導入功能安裝CUCM集群

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簡介

本文檔介紹使用資料導出和導入功能安裝CUCM的過程。

必要條件

需求

思科建議您瞭解以下主題。

- CUCM
- IP電話

採用元件

本檔案中的資訊是根據這些軟體版本。

- 源CUCM集群版本- 12.5.1.15900-66。
- 目標CUCM集群版本- 15.0.1.11900-23。

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除 (預設) 的組態來啟動。如果您的網路運作中，請確保您瞭解任何指令可能造成的影響。

設定

組態

資料導出在舊源CUCM集群上完成，資料導入在新目標集群上完成。您的來源叢集版本必須是10.5或更新的版本。如果您的源集群版本不是12.5(1) SU5版或更高版本，則必須在源系統的每個節點上安裝最新版本的[ciscocm.DataExport](#) COP檔案。

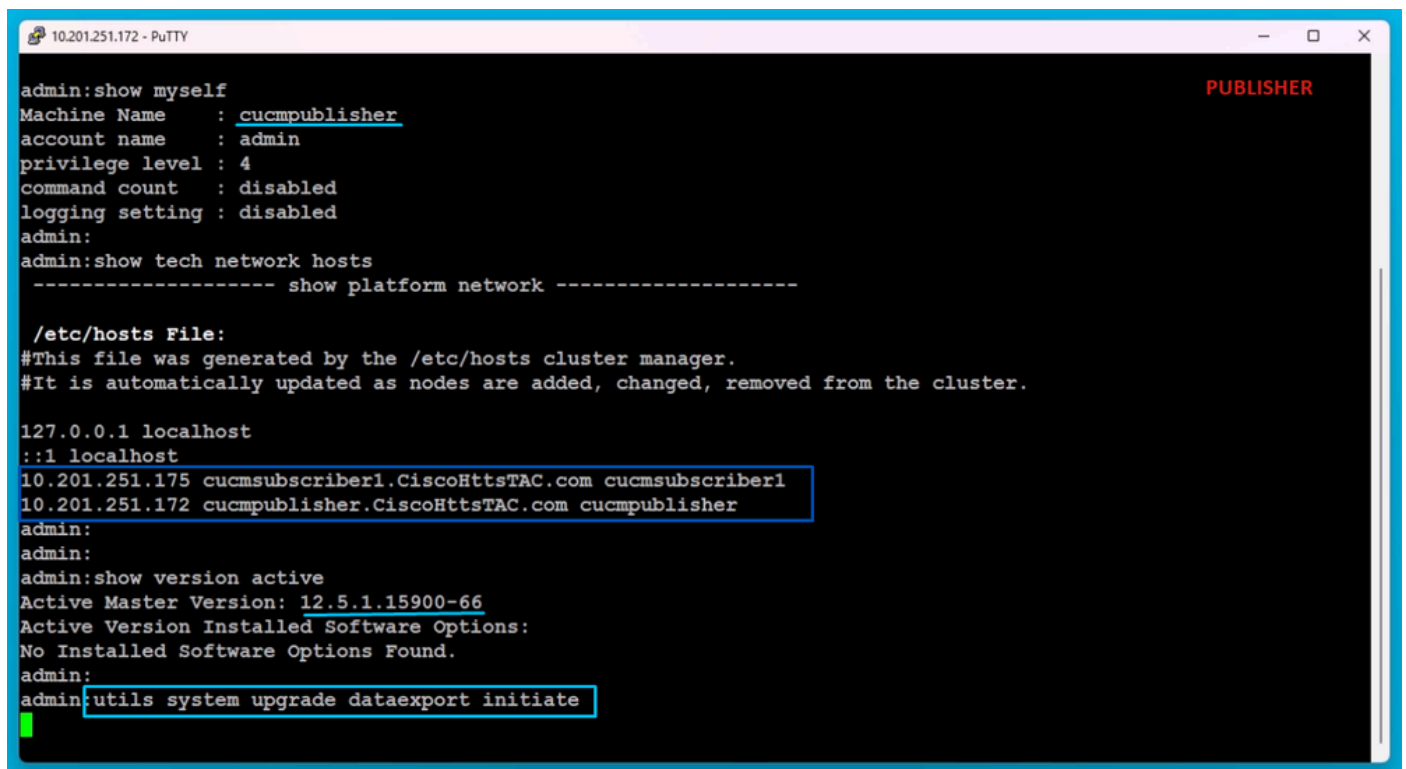
使用資料導出和導入功能安裝CUCM的步驟：

- 將資料從源群集發佈伺服器導出到SFTP伺服器。
- 將資料從源群集訂閱伺服器導出到SFTP伺服器。
- 關閉來源叢集發行者。
- 關閉來源叢集訂閱者。
- 使用匯出的資料安裝新的發行者。
- 使用匯出的資料安裝新訂戶。

將資料從來源叢集發行者匯出至SFTP伺服器

來源叢集版本為12.5.1.15900-66。

登入CUCM發佈伺服器的命令列介面，然後運行utils system upgrade dataexport initiate命令。



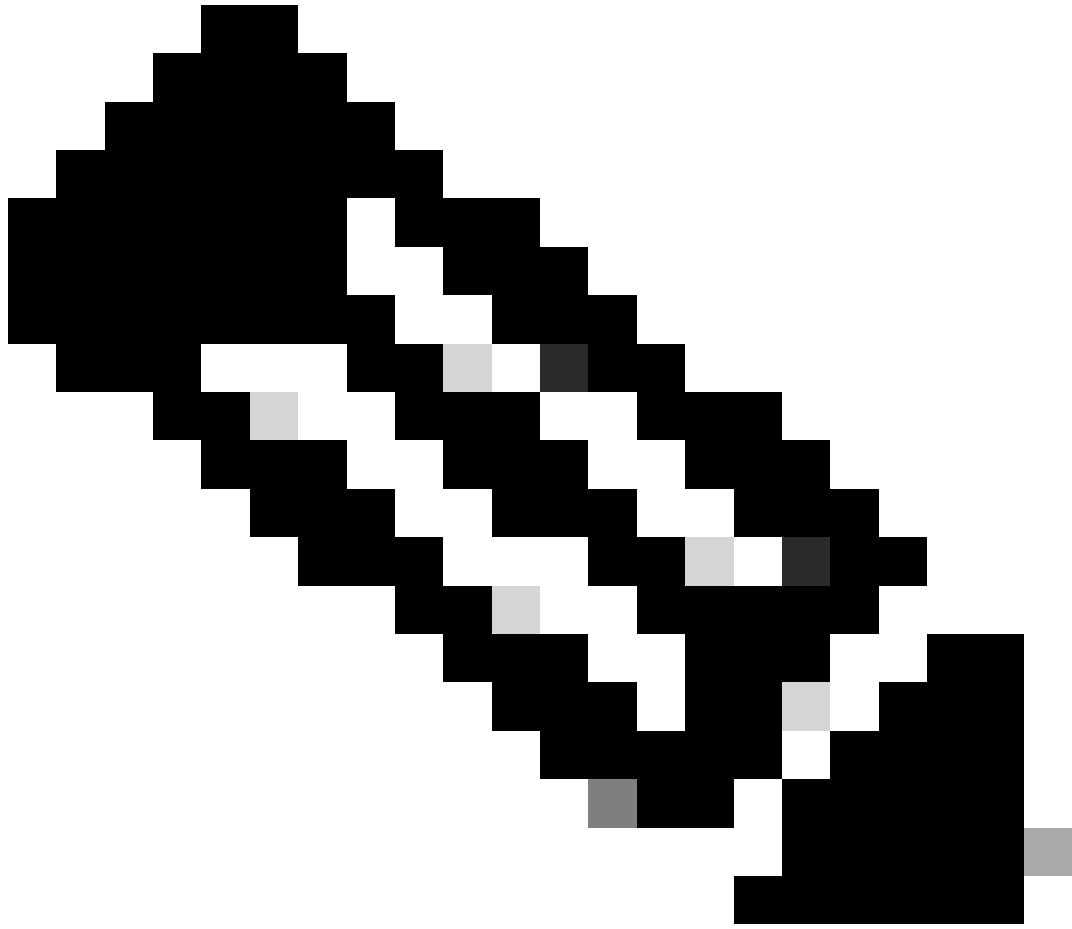
```
10.201.251.172 - PuTTY
admin:show myself
Machine Name      : cucmpublisher
account name     : admin
privilege level  : 4
command count    : disabled
logging setting  : disabled
admin:
admin:show tech network hosts
----- show platform network -----

/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
```

資料匯出指令

提供SFTP伺服器詳細資訊、目標發佈伺服器主機名和IP地址。



注意：在此，我使用了發佈伺服器的相同主機名和IP地址。

```
10.201.251.172 - PuTTY
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

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 cancel
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.....
```

處理資料匯出

運行utils system upgrade dataexport status命令以檢查資料導出過程是否完成。

```
10.201.251.172 - PuTTY
Processing data export.....
Type          : DATAEXPORT
Status        : 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:
Server       : 10.201.251.189
Directory    : /
User         : cisco

admin:
admin:utils system upgrade dataexport status

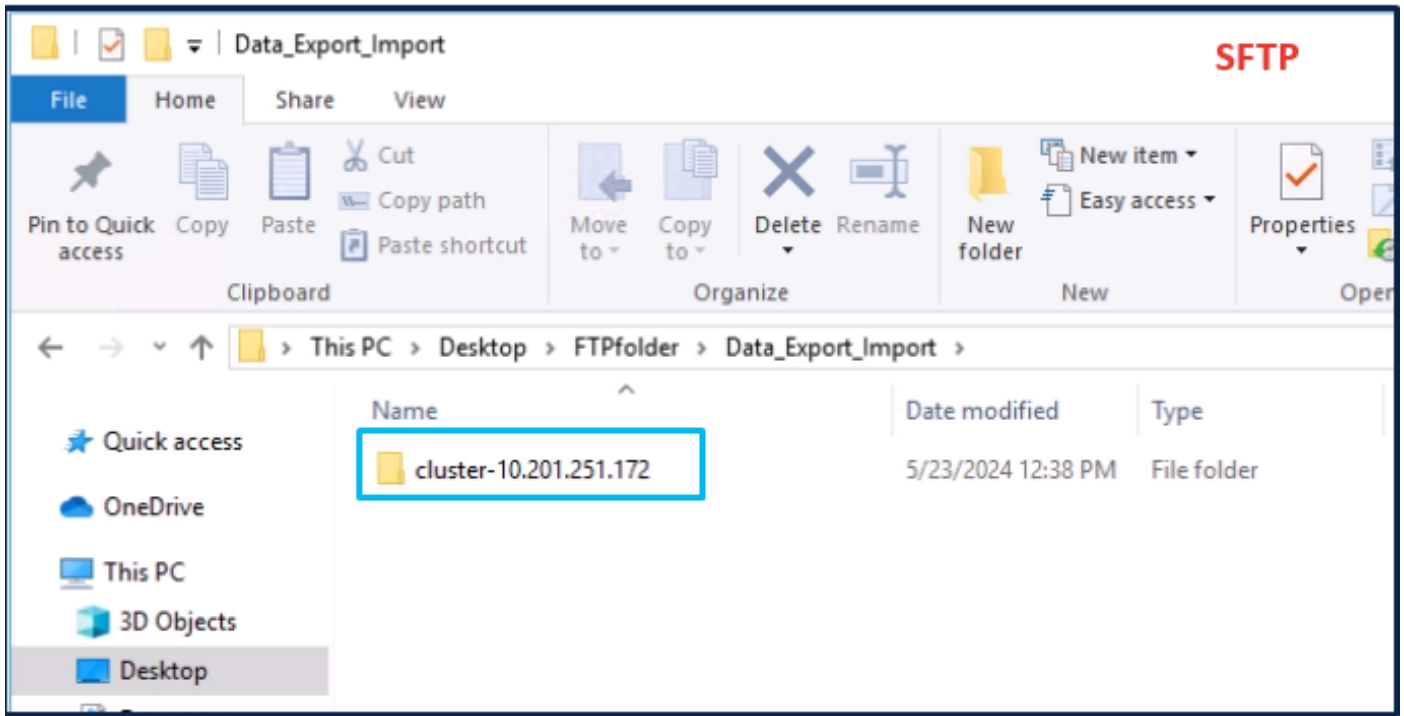
Type          : DATAEXPORT
Status        : RUNNING
Log file      : /var/log/install/static_data_export_2024-05-23-12-36-05.log
Execution date : Thu May 23 12:36:05 2024
Status message : System Static Data Export operation is in progress.

Exporting data to this software location, with these credentials:
Server       : 10.201.251.189
Directory    : /
User         : cisco

admin:
admin:
```

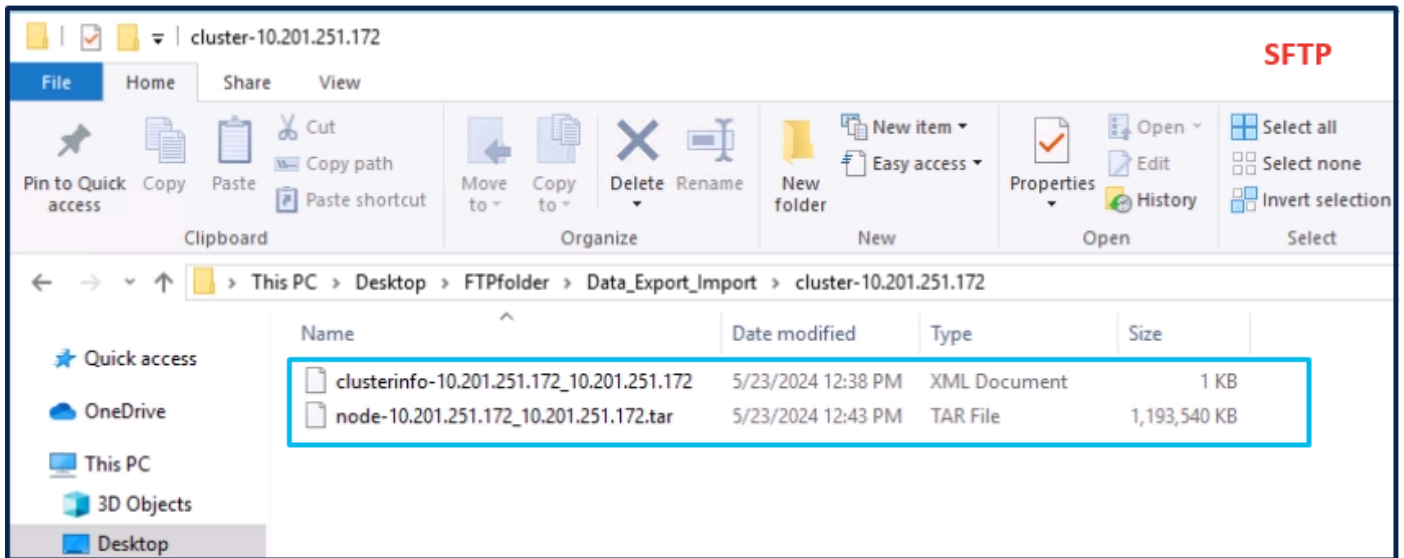
資料匯出進度檢查

在SFTP伺服器中，將自動建立一個名為cluster-Publisher IP Address的新資料夾，並將導出的資料下載到其中。



SFTP伺服器中的導出資料位置

完成對發佈伺服器的導出後，utils system upgrade dataexport status的輸出中的狀態將顯示 completed。



發行者的資料匯出已完成

```
10.201.251.172 - PuTTY
admin:utils system upgrade dataexport status
PUBLISHER

Type      : DATAEXPORT
Status    : 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:
Server    : 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:
Server    : 10.201.251.189
Directory : /
User      : cisco

admin:
```

發行者的資料匯出已完成

將資料從來源叢集訂閱者匯出至SFTP伺服器

步驟與我們為發行者所做的步驟相同。

運行utils system upgrade dataexport initiate命令。

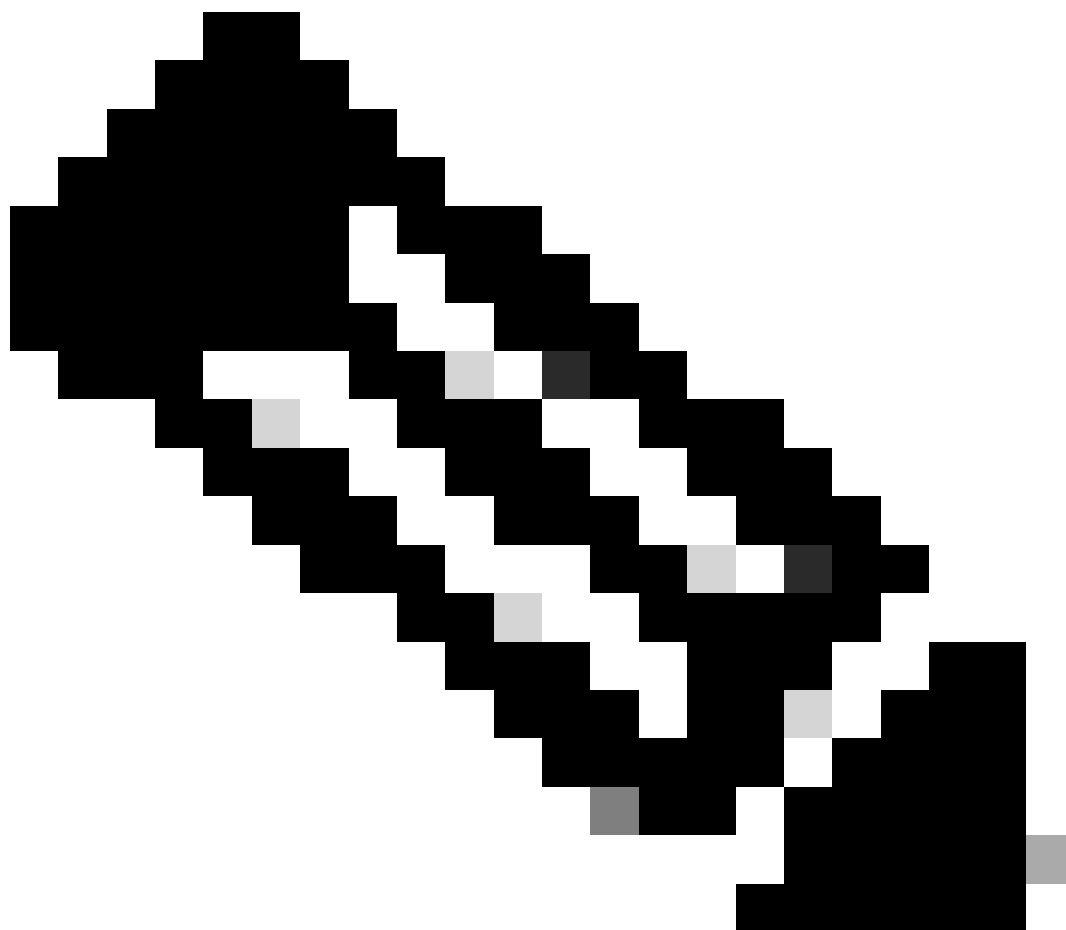
```
10.201.251.175 - PuTTY
admin:show myself
SUBSCRIBER
Machine Name   : cucmssubscriber1
account name   : admin
privilege level : 4
command count  : disabled
logging setting : disabled
admin:
admin:show tech network hosts
----- show platform network -----

/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 cucmssubscriber1.CiscoHtsTAC.com cucmssubscriber1
10.201.251.172 cucmpublisher.CiscoHtsTAC.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
```

在訂閱伺服器上導出資料

提供SFTP伺服器詳細資訊、目標使用者主機名和IP地址。



注意：在本實驗中，我們使用了相同的源集群使用者主機名和IP地址。

```
10.201.251.175 - PuTTY
10.201.251.175 cucmsubscriber1.CiscoHttstTAC.com cucmsubscriber1
10.201.251.172 cucmpublisher.CiscoHttstTAC.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 cancell
ing the system migrate export operation.

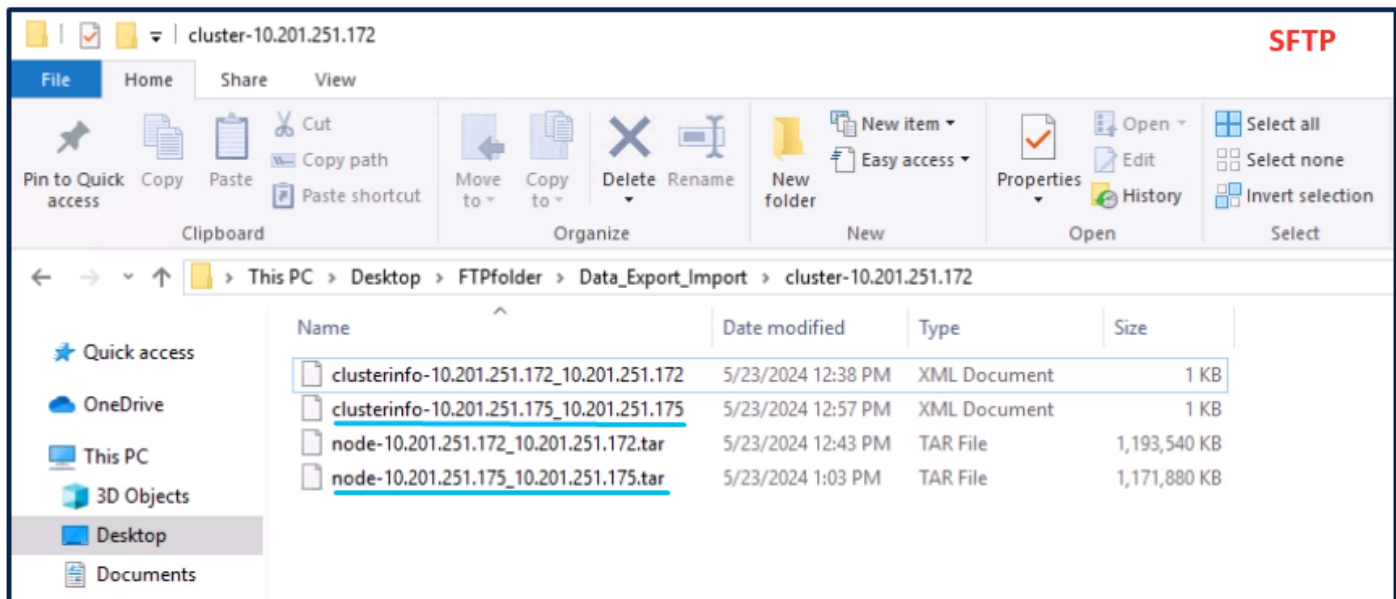
Export Data Directory [/]: /
Remote Server Name or IP [10.201.251.189]: 10.201.251.189
Remote Server Login ID [cisco]: cisco
Remote Server Password: *****
Enter details of the destination node that will import the current node's exported data :

New Hostname []: cucmsubscriber1
New IPAddress []: 10.201.251.175
Would you like to proceed with export (yes/no): yes

Processing data export.....
```

處理資料匯出

在SFTP的相同資料夾位置(cluster-Publisher IP Address)中，使用者導出的資料存在。



已完成訂閱者的資料匯出

完成訂閱伺服器的導出後，utils system upgrade dataexport status的輸出中顯示的狀態是 completed。


```
10.201.251.175 - PuTTY
Type : 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:
Server : 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_2024-05-23-12-56-10.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:
Server : 10.201.251.189
Directory : /
User : cisco

admin:
admin:
admin:
```

已完成訂閱者的資料匯出

關閉來源叢集發行者

透過執行utils system shutdown命令關閉發佈伺服器。

```
PuTTY (inactive)
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 ?

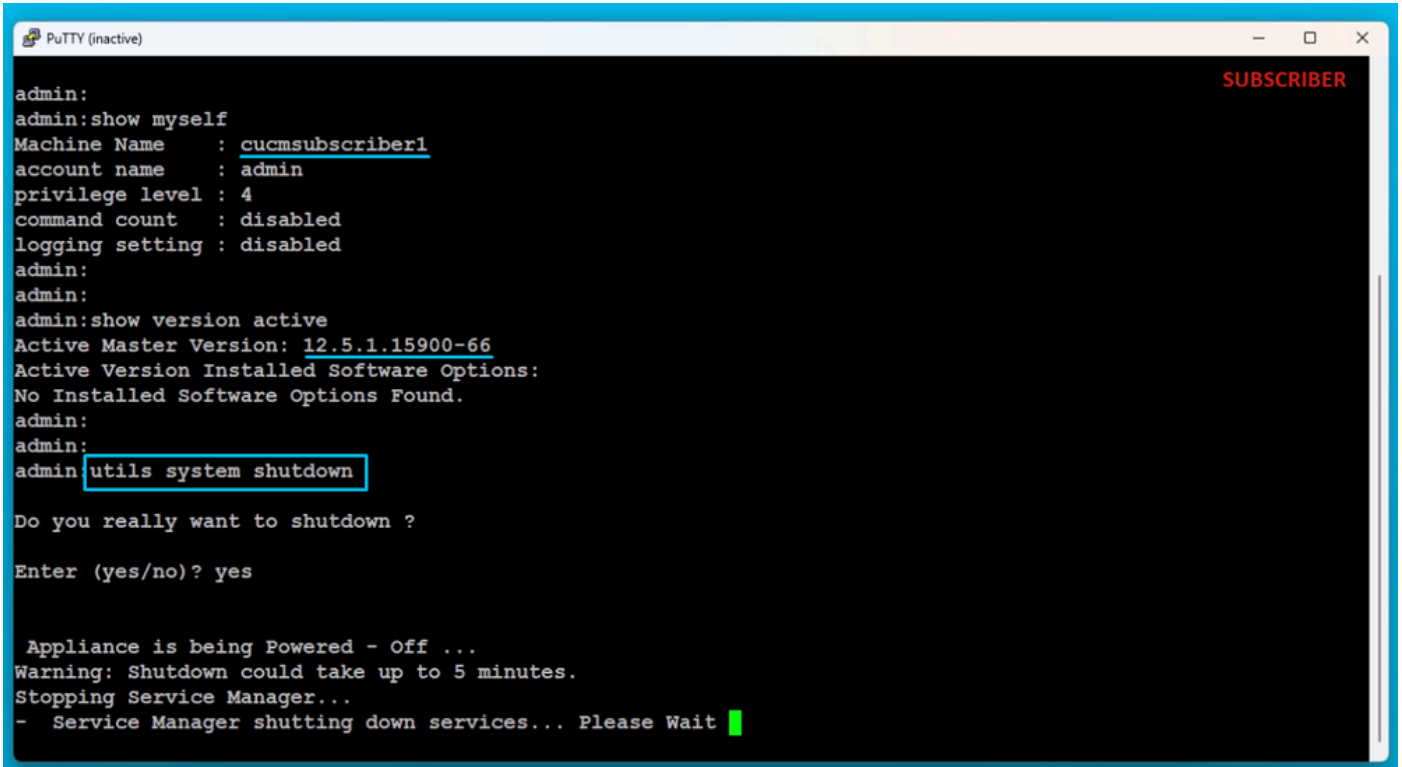
Enter (yes/no)? yes

Appliance is being Powered - Off ...
Warning: Shutdown could take up to 5 minutes.
Stopping Service Manager...
- Service Manager shutting down services... Please Wait Waiting
```

關閉發佈程式

關閉來源叢集訂閱者

透過執行utils system shutdown命令關閉訂戶。



```
admin:
admin:show myself
Machine Name      : cucmssubscriber1
account name     : admin
privilege level  : 4
command count    : disabled
logging setting  : disabled
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:
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 █
```

關閉訂戶

使用匯出的資料安裝新的發行者

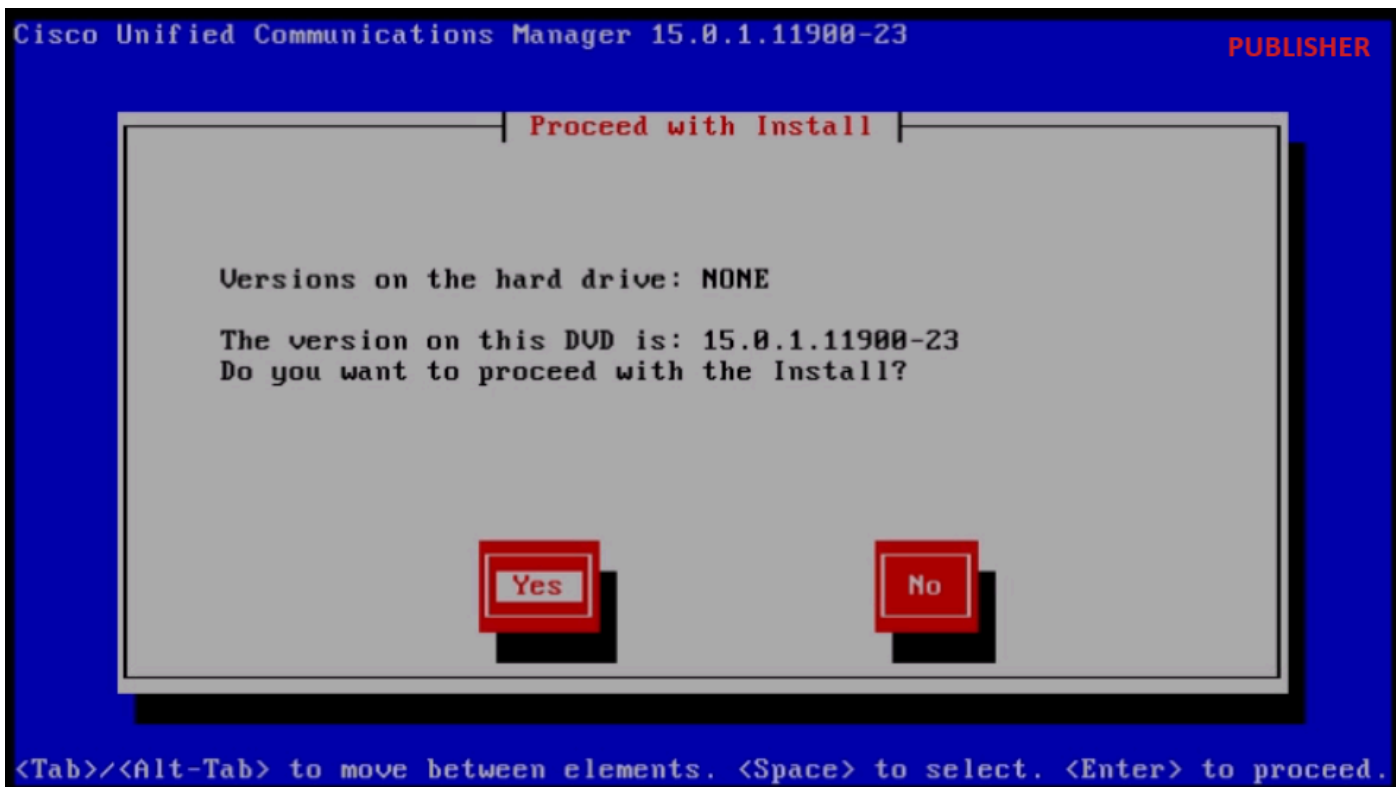
使用適當的OVA模板為發佈伺服器構建虛擬機器。

將15.0.1.11900-23版本的可啟動映像裝載到虛擬機器(VM)並打開虛擬機器。

在介質檢查成功之後，請按確定按鈕。

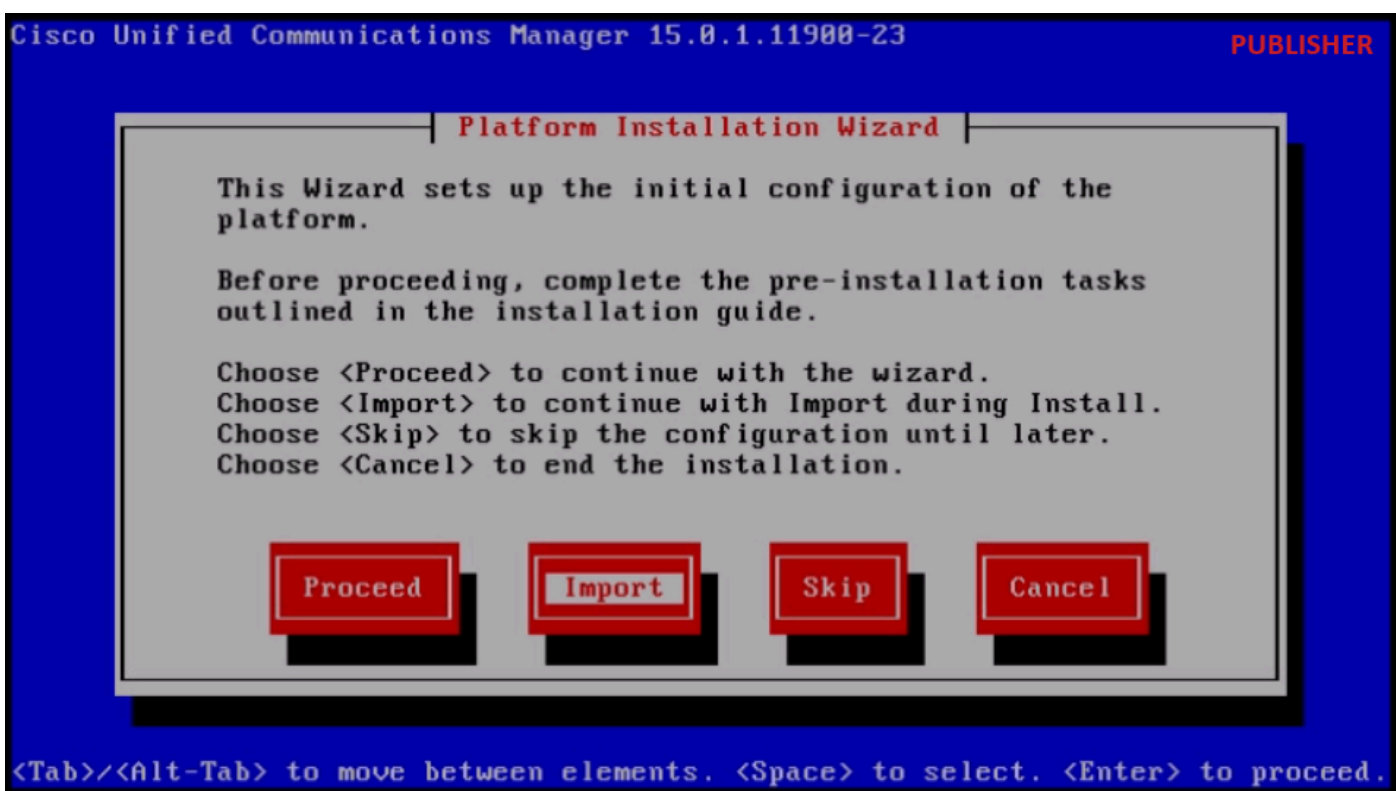
選擇Cisco Unified Communication Manager並按一下OK按鈕。

按Yes按鈕以繼續安裝15.0.1.11900-23版本。



繼續安裝

按一下「Platform Installation Wizard」中的Import按鈕。



平台安裝精靈

閱讀顯示的資訊後，在Import Upgrade Configuration資訊中按一下OK按鈕。

Import Upgrade Configuration Information

Following screens will configure network IP/hostname for the node and import data from SFTP server.
Please ensure you enter:

1. Same network IP/hostname of destination server as used during data export.
2. Valid SFTP server details and export directory in format- `<export_directory>/cluster-<source_publisherIP>`



導入升級配置資訊

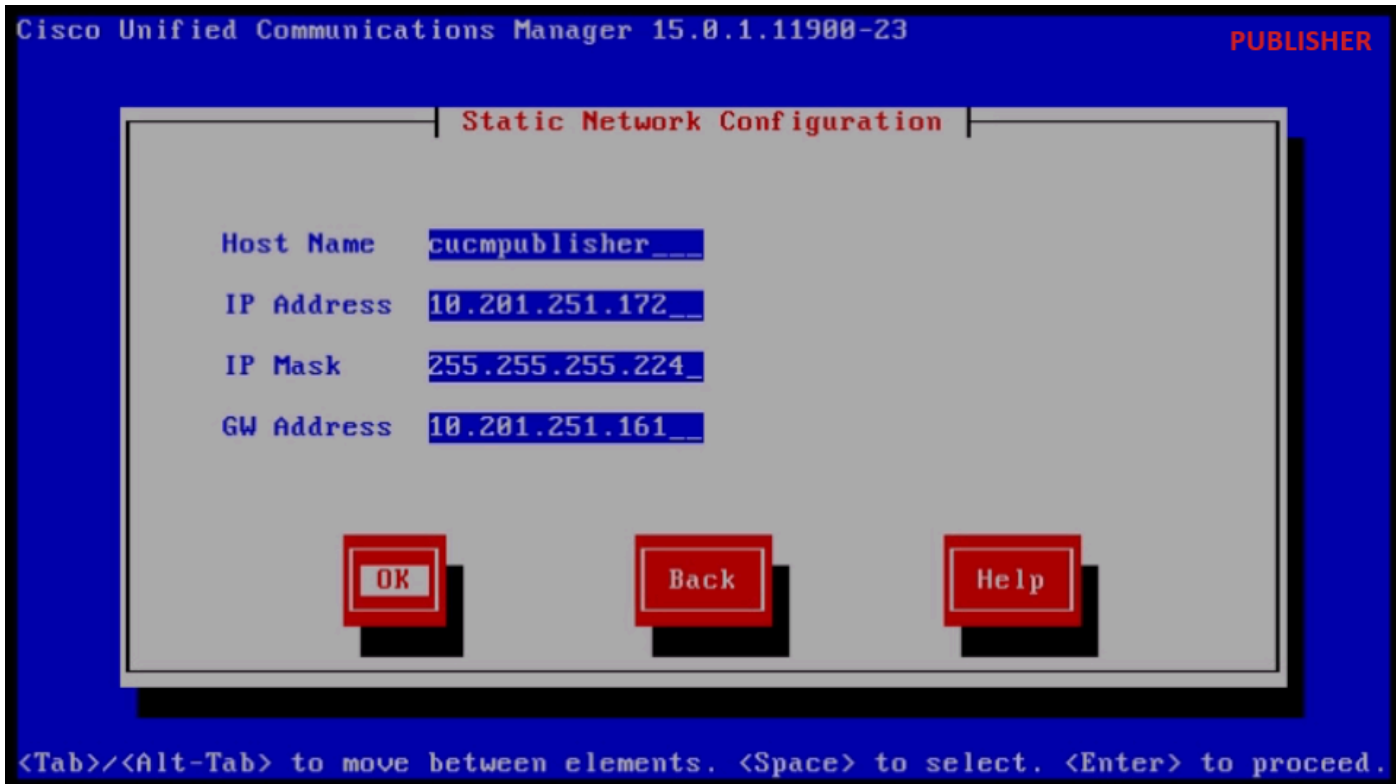
選擇適當的時區，然後按一下OK按鈕。

在自動協商配置中，按一下Continue按鈕。

按一下No按鈕在MTU Configuration中設定預設值。

在「DHCP Configuration」下按No按鈕。

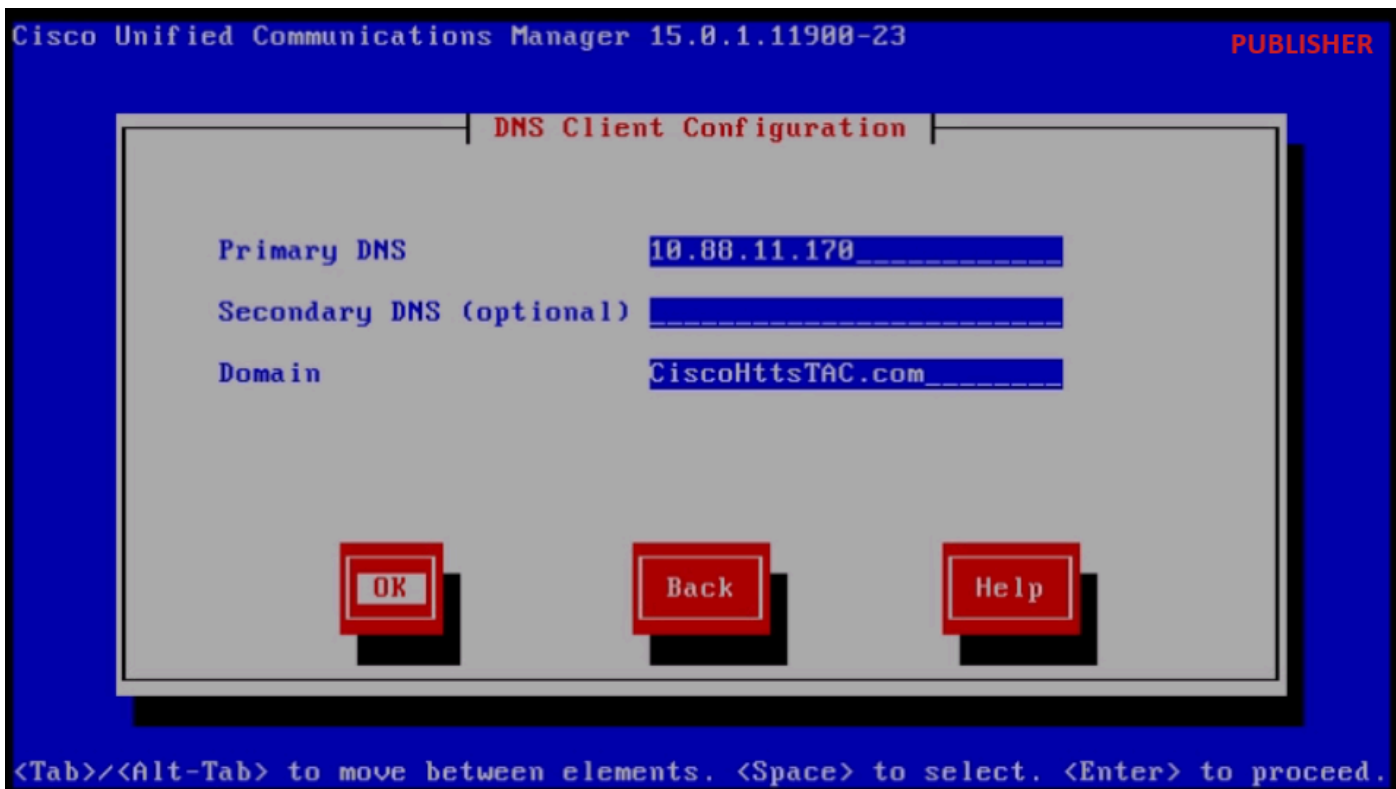
提供主機名、IP地址、IP掩碼和網關(GW)地址，然後按OK按鈕。



靜態網路配置

按一下「DNS Client Configuration」下的Yes按鈕。

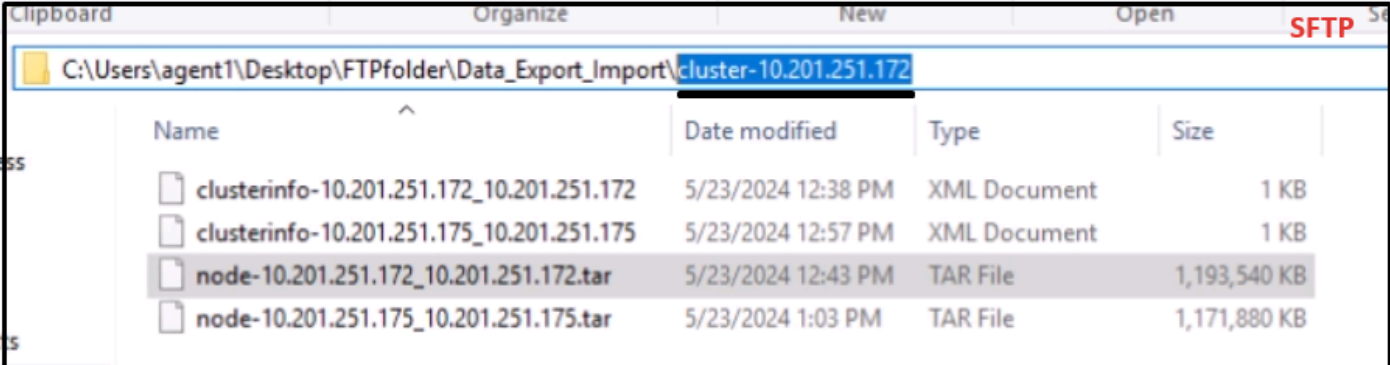
提供主DNS伺服器IP地址和域，然後按一下OK按鈕。



DNS客戶端配置

提供用於導出源群集資料的SFTP伺服器資訊（IP、目錄、登入ID和密碼），然後按確定按鈕。

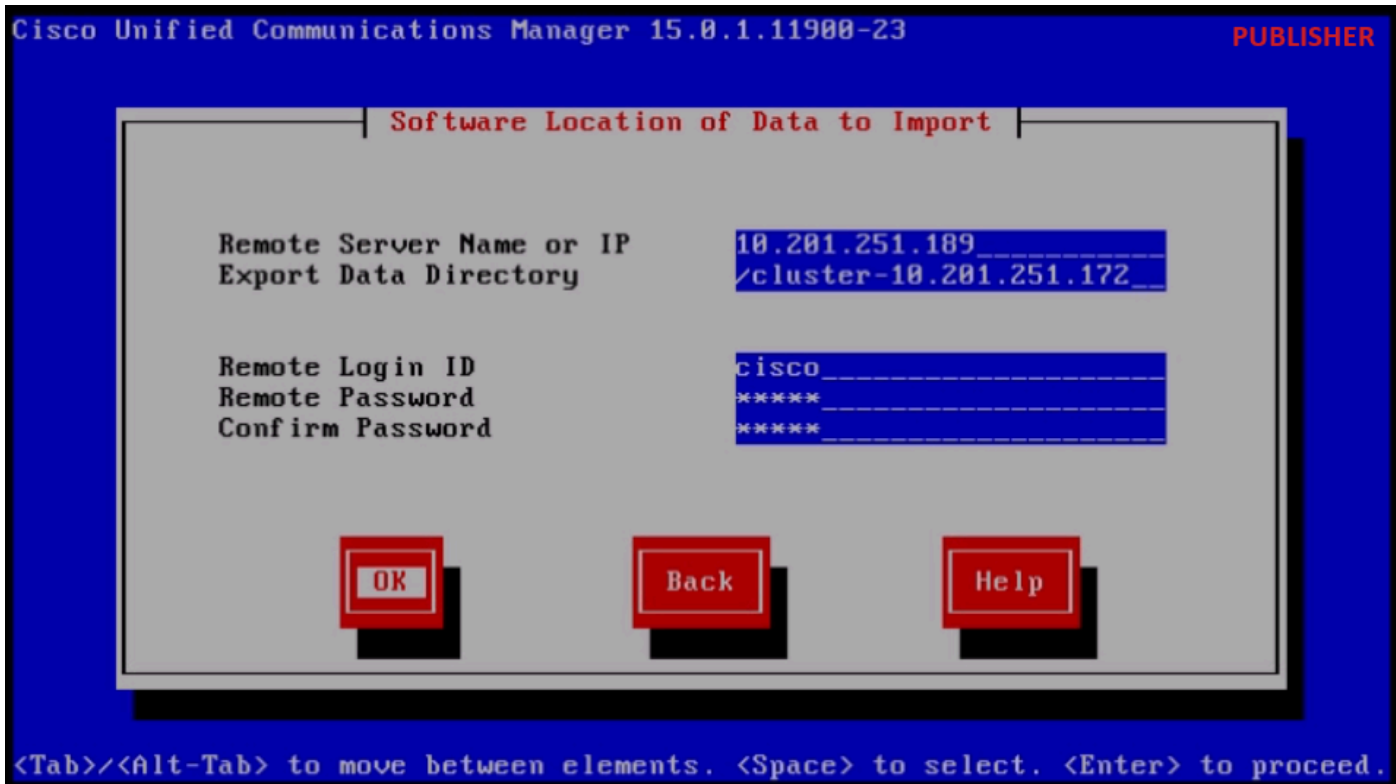
注意：發佈伺服器導出資料的位置存在於資料夾cluster-Publisher_IP_Address中，如螢幕截圖所示。



The screenshot shows a Windows File Explorer window with the address bar set to 'C:\Users\agent1\Desktop\FTPfolder\Data_Export_Import\cluster-10.201.251.172'. The window title is 'Clipboard Organize New Open SFTP St'. The main area displays a list of files with the following columns: Name, Date modified, Type, and Size.

Name	Date modified	Type	Size
clusterinfo-10.201.251.172_10.201.251.172	5/23/2024 12:38 PM	XML Document	1 KB
clusterinfo-10.201.251.175_10.201.251.175	5/23/2024 12:57 PM	XML Document	1 KB
node-10.201.251.172_10.201.251.172.tar	5/23/2024 12:43 PM	TAR File	1,193,540 KB
node-10.201.251.175_10.201.251.175.tar	5/23/2024 1:03 PM	TAR File	1,171,880 KB

SFTP伺服器中的導出資料位置



要匯入資料的軟體位置

提供證書資訊並按一下OK按鈕。

按「First Node Configuration」下的Yes按鈕。



第一個節點配置

配置NTP（網路時間協定）伺服器，然後按一下Proceed按鈕。

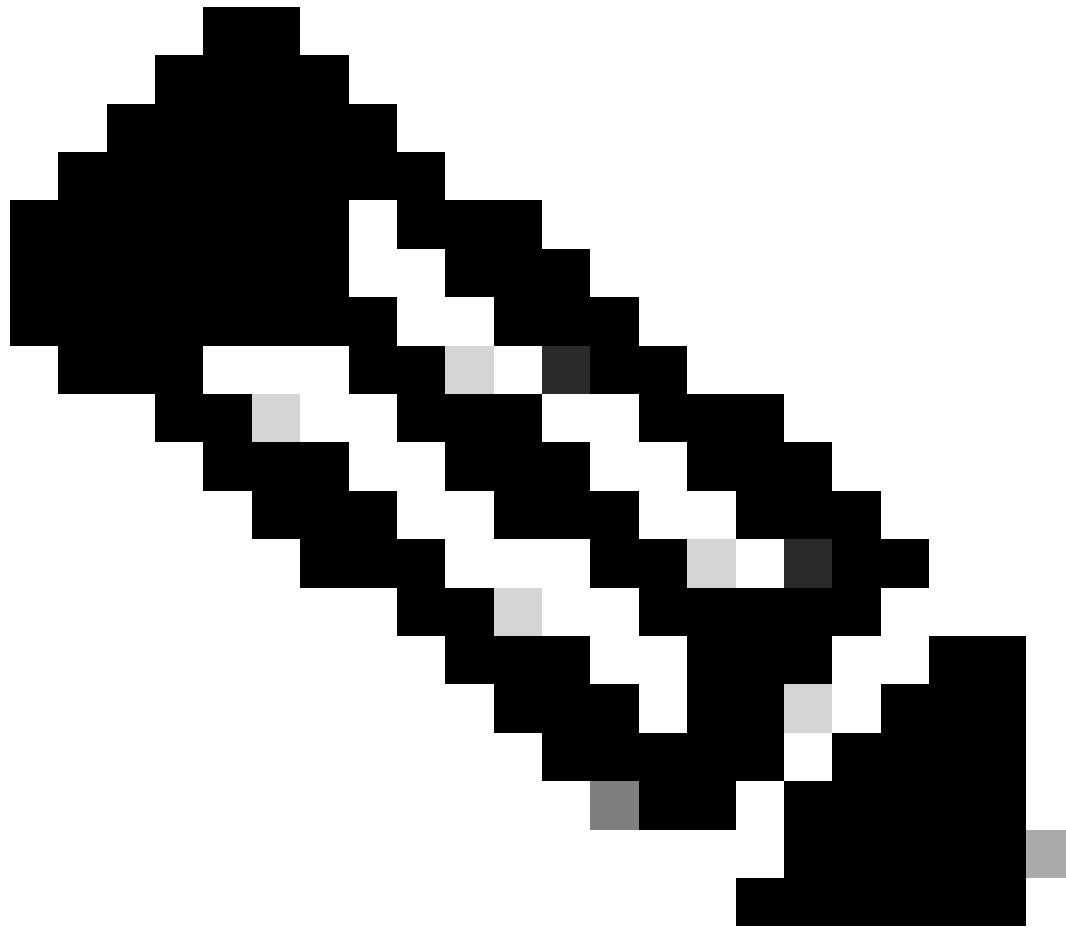
Network Time Protocol Client Configuration

NTP Server 1	<input type="text" value="10.88.7.37"/>
NTP Server 2	<input type="text"/>
NTP Server 3	<input type="text"/>
NTP Server 4	<input type="text"/>
NTP Server 5	<input type="text"/>

<Tab>/<Alt-Tab> to move between elements. <Space> to select. <Enter> to proceed.

NTP客戶端配置

按一下「SMTP Host Configuration」旁邊的No按鈕。



注意：如果要配置SMTP，請按「是」按鈕並配置SMTP主機。

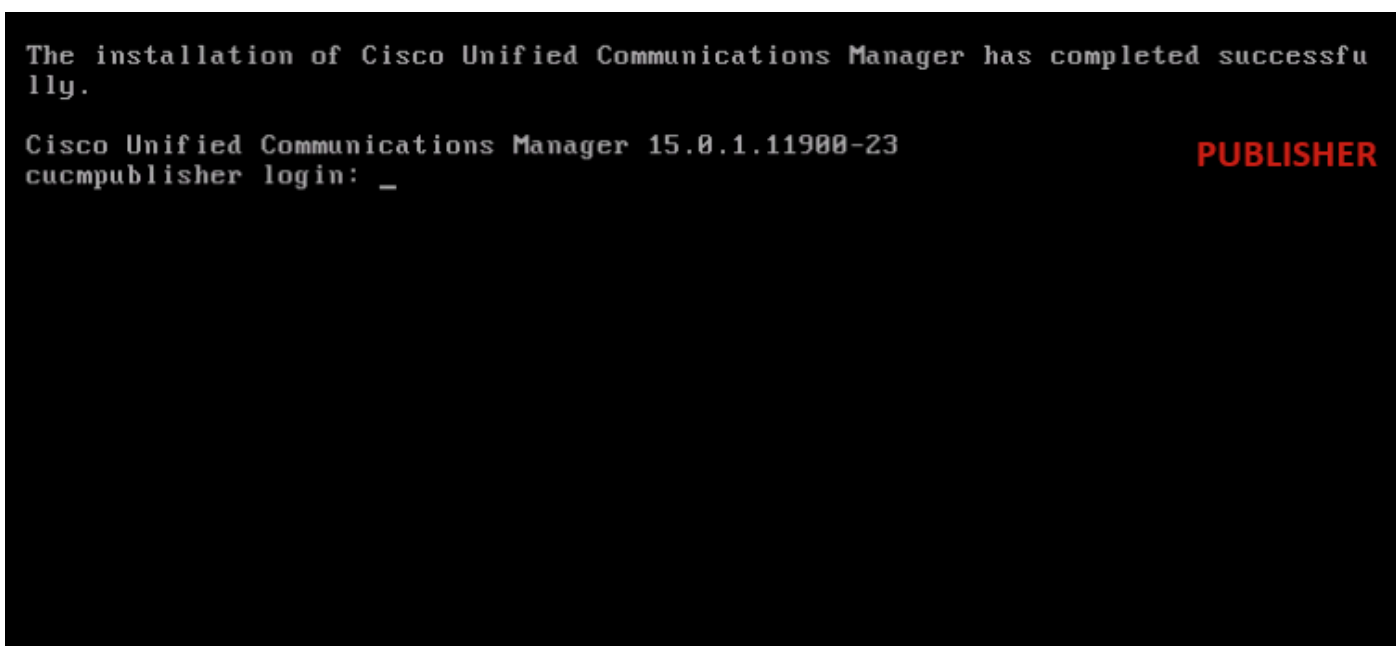
在Smart Call Home Enable Page下選擇適當的選項，然後按一下OK按鈕。

按一下「Platform Configuration Confirmation」頁下的OK按鈕以繼續安裝。



平台配置確認

幾分鐘後，使用導入功能完成發佈伺服器的安裝。



發佈伺服器安裝已成功完成

使用匯出的資料安裝新訂戶

使用適當的OVA模板為使用者構建虛擬機器。

將15.0.1.11900-23版本的可啟動映像裝載到虛擬機器(VM)並打開虛擬機器。

在介質檢查成功之後，請按確定按鈕。

選擇Cisco Unified Communication Manager並按一下OK按鈕。

按Yes按鈕以繼續安裝15.0.1.11900-23版本。

按一下「Platform Installation Wizard」中的Import按鈕。



平台安裝精靈

閱讀顯示的資訊後，在Import Upgrade Configuration資訊中按一下OK按鈕。

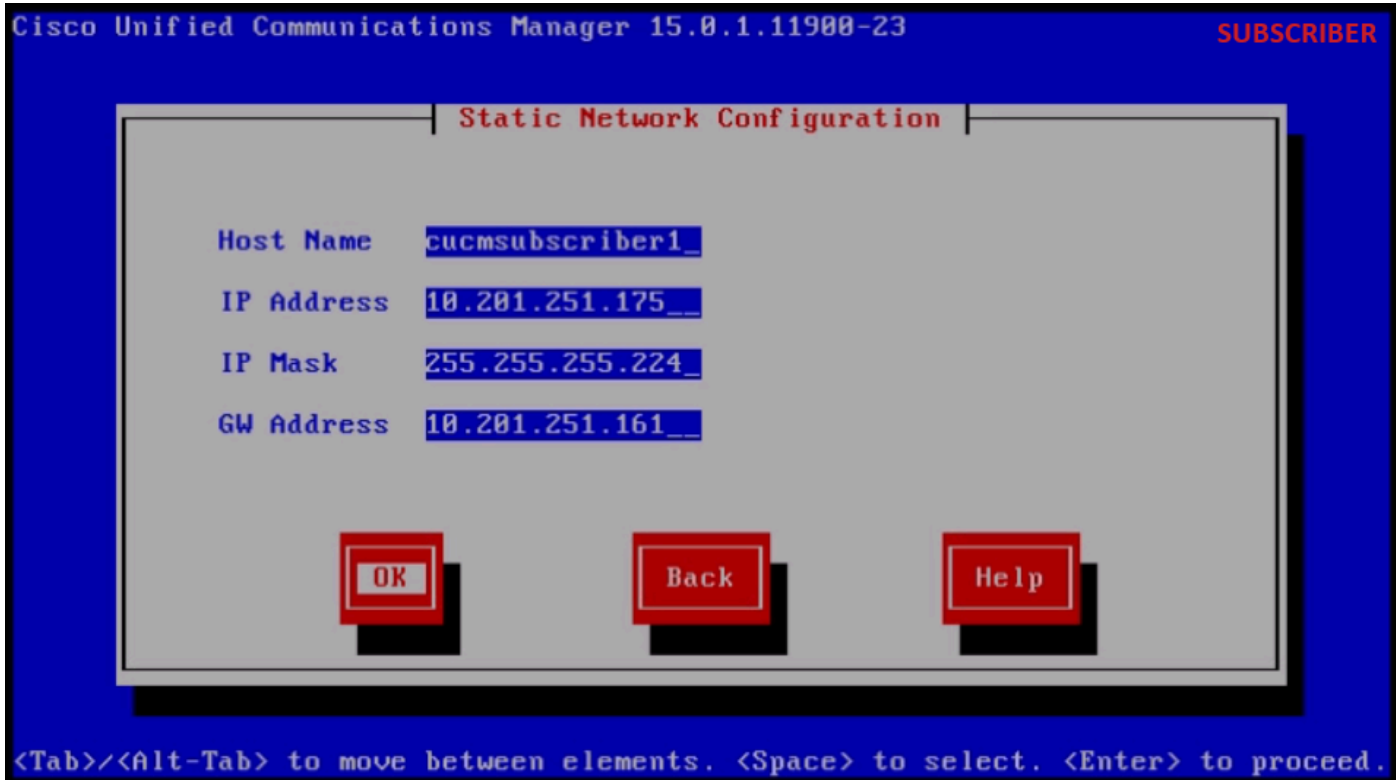
選擇適當的時區，然後按一下OK按鈕。

在自動協商配置中，按一下Continue按鈕。

按一下No按鈕在MTU Configuration中設定預設值。

在「DHCP Configuration」下按No按鈕。

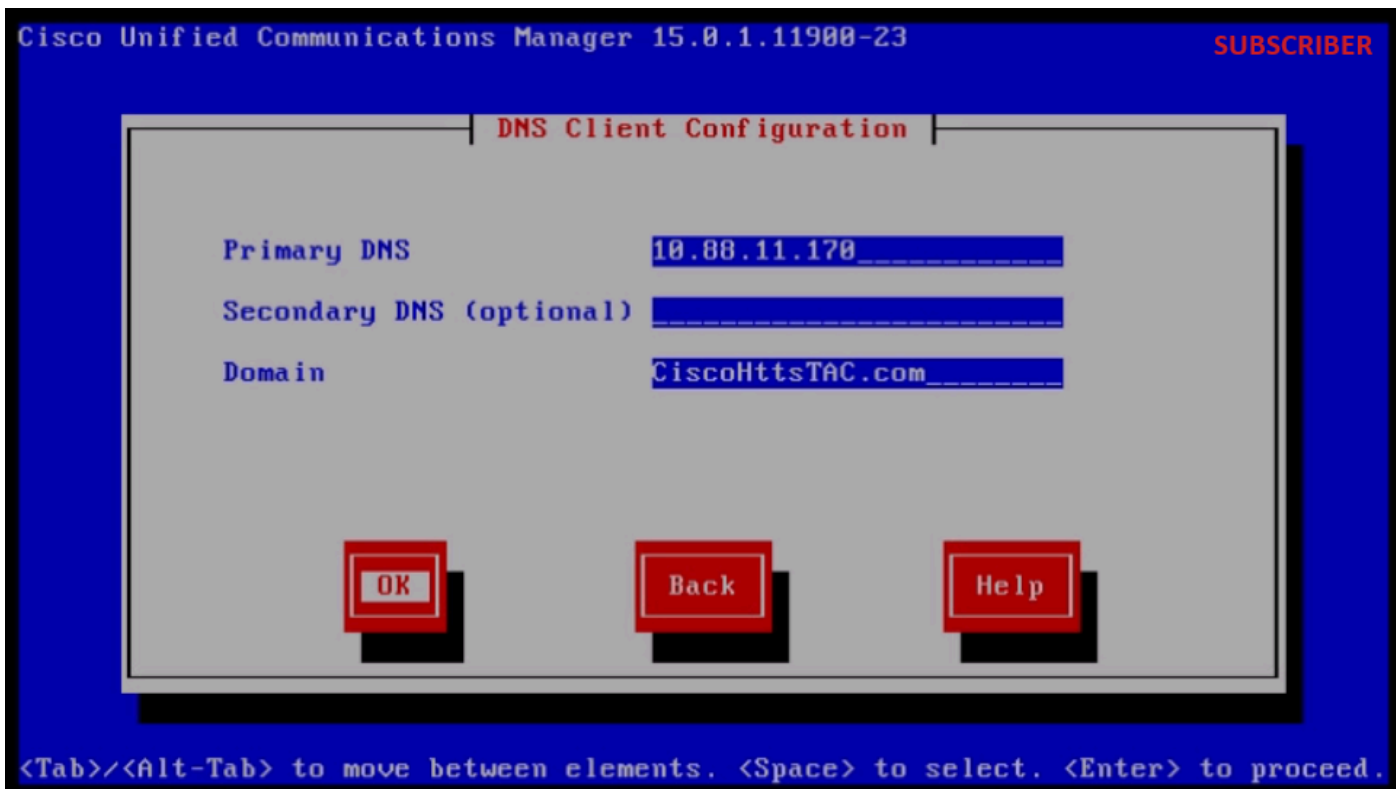
提供使用者伺服器的主機名、IP地址、IP掩碼和網關(GW)地址，然後按確定按鈕。



靜態網路配置

按一下「DNS Client Configuration」下的Yes按鈕。

提供主DNS和域，然後按一下OK按鈕。



DNS客戶端配置

提供用於導出源群集資料的SFTP伺服器資訊（IP、目錄、登入ID和密碼），然後按確定按鈕。

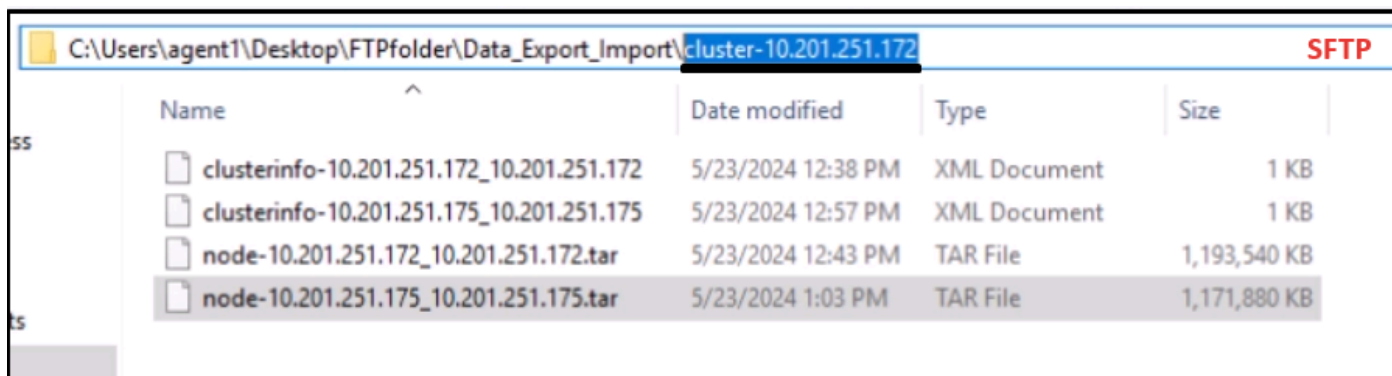
Software Location of Data to Import

Remote Server Name or IP	10.201.251.189
Export Data Directory	/cluster-10.201.251.172__
Remote Login ID	cisco_____
Remote Password	*****
Confirm Password	*****

<Tab>/<Alt-Tab> to move between elements. <Space> to select. <Enter> to proceed.

要匯入資料的軟體位置

注意：訂閱伺服器導出資料的位置位於資料夾cluster-Publisher_IP_Address中，如螢幕截圖所示。



Name	Date modified	Type	Size
clusterinfo-10.201.251.172_10.201.251.172	5/23/2024 12:38 PM	XML Document	1 KB
clusterinfo-10.201.251.175_10.201.251.175	5/23/2024 12:57 PM	XML Document	1 KB
node-10.201.251.172_10.201.251.172.tar	5/23/2024 12:43 PM	TAR File	1,193,540 KB
node-10.201.251.175_10.201.251.175.tar	5/23/2024 1:03 PM	TAR File	1,171,880 KB

使用者在SFTP伺服器中導出的資料位置

提供證書資訊並按一下OK按鈕。

按「First Node Configuration」下的No按鈕。

First Node Configuration

Is this server the First Node in the cluster?

Yes

No

Back

Help

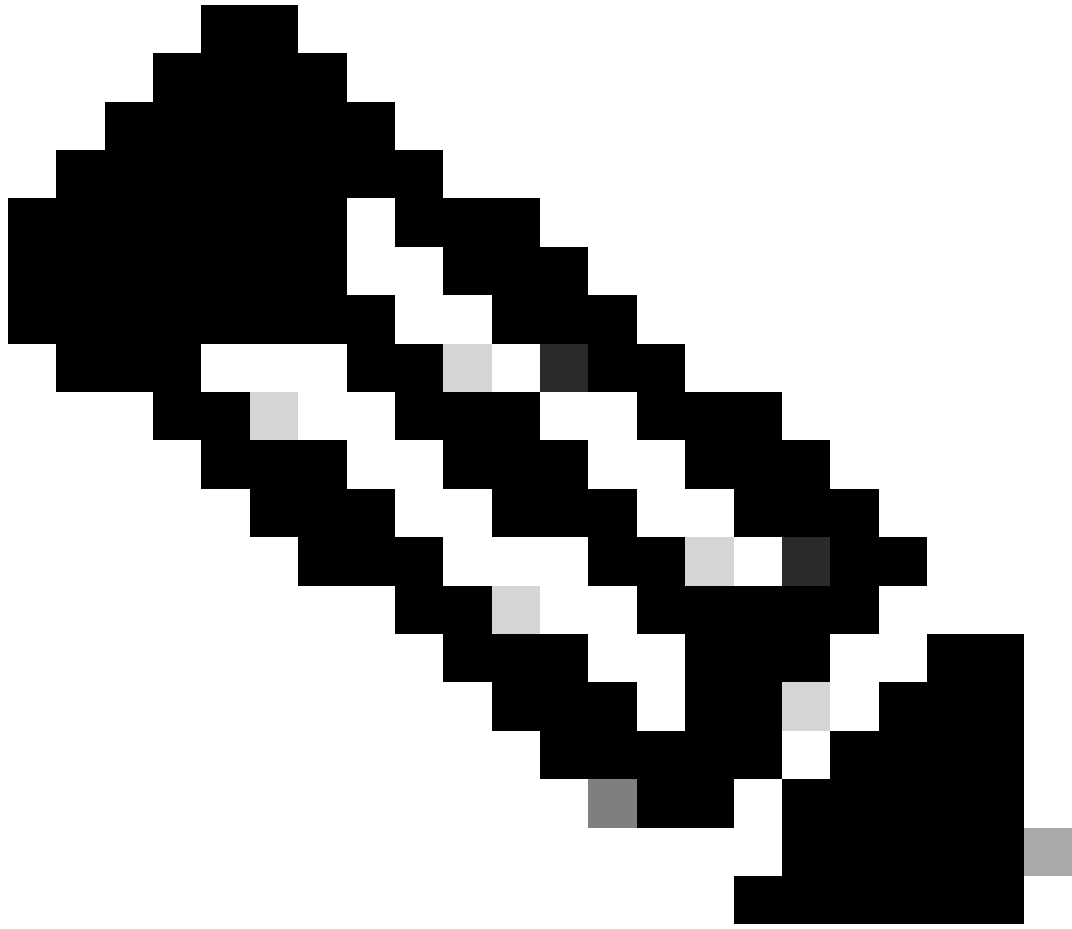
<Tab>/<Alt-Tab> to move between elements. <Space> to select. <Enter> to proceed.

第一個節點配置

按「First Node Configuration」頁上的OK按鈕。

按一下「Network Connectivity Test Configuration」頁下的No按鈕。

在「第一個節點訪問配置」頁中提供發佈伺服器主機名和IP地址，然後按一下確定按鈕。



注意：系統會透過此頁面中的匯入資料自動填入「安全密碼」。

First Node Access Configuration

Connectivity to First Node:

Host Name

IP Address

Security Password

Confirm Password

OK

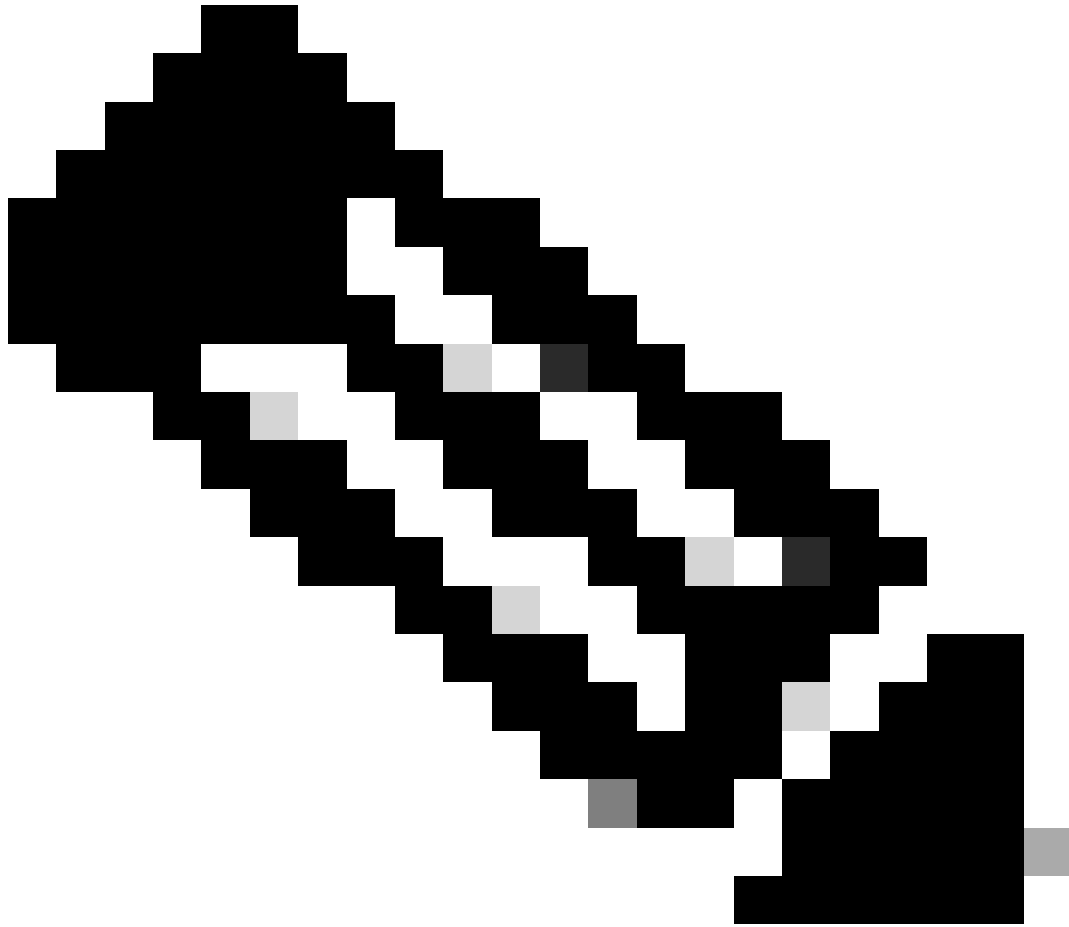
Back

Help

<Tab>/<Alt-Tab> to move between elements. <Space> to select. <Enter> to proceed.

第一個節點訪問配置

按一下「SMTP Host Configuration」旁邊的No按鈕。



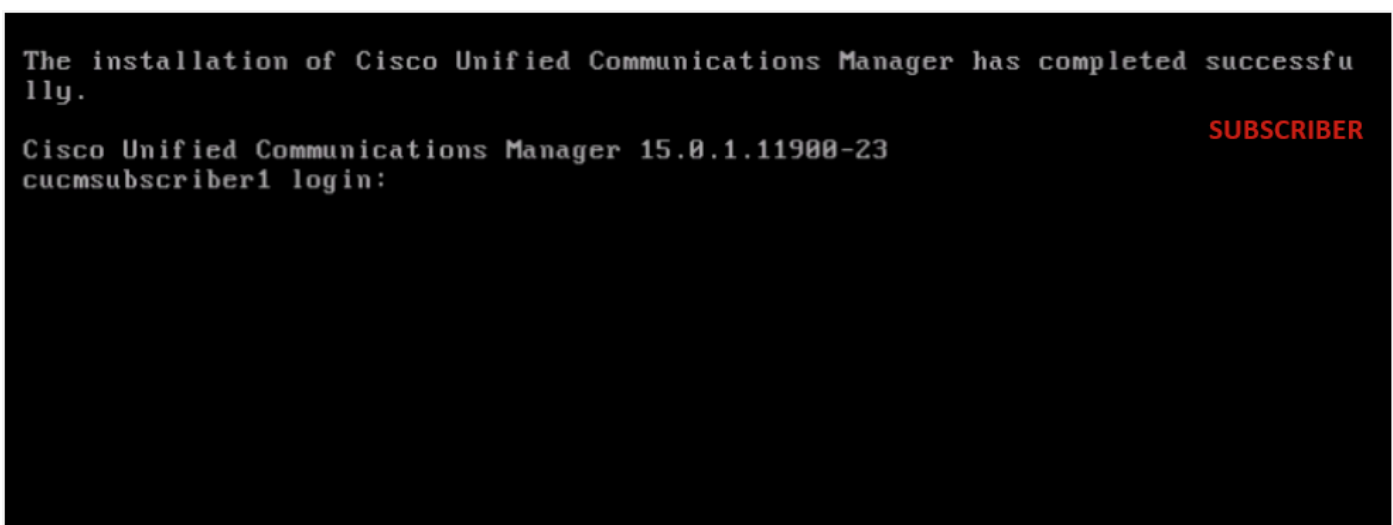
注意：如果要配置SMTP，請按「是」按鈕並配置SMTP主機。

按一下「Platform Configuration Confirmation」頁下的OK按鈕以繼續安裝。



平台配置確認

幾分鐘後，使用導入功能成功安裝訂戶。



使用者安裝成功

驗證

成功安裝發佈伺服器 and 訂閱伺服器後，運行命令進行驗證。

顯示自己

顯示使用中的版本

實用程式dbreplication runtimestate

檔案檢視install system-history.log

發行者

```
10.201.251.172 - PuTTY 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:
```

發行者驗證

```
10.201.251.172 - PuTTY PUBLISHER
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: ccml5_0_1_11900_23

Repltimeout set to: 300s
PROCESS option set to: 40

Cluster Detailed View from cucmpublisher (2 Servers):

SERVER-NAME      IP ADDRESS      PING      DB/RPC/      REPL.      Replication      REPLICATION SETUP
-----          -
cucmpublisher    10.201.251.172  0.019     Y/Y/Y        0           (g_2)            (2) Setup Completed
cucmsubscriber1  10.201.251.175  0.233     Y/Y/Y        0           (g_3)            (2) Setup Completed

admin:
```

發行者驗證

```
10.201.251.172 - PuTTY PUBLISHER
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 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:
```

發行者驗證

訂閱者

```
10.201.251.175 - PuTTY SUBSCRIBER
admin:show myself
Machine Name      : cucmssubscriber1
account name     : admin
privilege level  : 4
command count    : disabled
logging setting  : disabled
admin:
admin:show version active
Active Master Version: 15.0.1.11900-23
Active Version Installed Software Options:
No Installed Software Options Found.
admin:
admin:
```

使用者驗證

```
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 cucmssubscriber1 (2 Servers):

SERVER-NAME          IP ADDRESS          PING          DB/RPC/          REPL.          Replication          REPLICATION SETUP
-----          -----          (msec)          DbMon?          QUEUE          Group ID          (RTMT) & DB Status
-----          -----          -----          -----          -----          -----          -----
cucmpublisher        10.201.251.172      0.202          Y/Y/Y           0              (g_2)             (2) Setup Completed
cucmssubscriber1    10.201.251.175      0.018          Y/Y/Y           0              (g_3)             (2) Setup Completed
```

使用者驗證

```
10.201.251.175 - PuTTY
PROCESS option: Only available on the PUB
SUBSCRIBER

Cluster Detailed View from cucmssubscriber1 (2 Servers):

SERVER-NAME          IP ADDRESS          PING          DB/RPC/          REPL.          Replication          REPLICATI
-----          -----          (msec)          DbMon?          QUEUE          Group ID          (RTMT) &
-----          -----          -----          -----          -----          -----          -----
cucmpublisher        10.201.251.172      0.202          Y/Y/Y           0              (g_2)             (2) Setup
cucmssubscriber1    10.201.251.175      0.018          Y/Y/Y           0              (g_3)             (2) Setup

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) : █
```

使用者驗證

相關資訊

[使用資料匯入進行安裝](#)

關於此翻譯

思科已使用電腦和人工技術翻譯本文件，讓全世界的使用者能夠以自己的語言理解支援內容。請注意，即使是最佳機器翻譯，也不如專業譯者翻譯的內容準確。Cisco Systems, Inc. 對這些翻譯的準確度概不負責，並建議一律查看原始英文文件（提供連結）。