Install CUCM Cluster Using Data Export and Import Feature

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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 <u>ciscocm.DataExport</u> 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.

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



Data Export Command

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



Note: Here, I have used the same hostname and IP address of the Publisher.



Processing Data Export

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

A 10.201.251.172 - PuTTY	- 0	×
Processing data export	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.	, opensiter	
Exporting data to this software location, with these credentials:		
Server : 10.201.251.189		
Directory : /		
User : cisco		
admin: admin utils system upgrade dataexport status		
TVDE : 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:		

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.

File Home Sh	xport_Import are View						S	FTP
Pin to Quick Copy Past	Cut Copy path Paste shortcut	Move to *	Copy to *	Delete Renam	ne New folder	new 🗗 Easy	item ▼ access ▼	Properties
Clipboa	ard		Orga	anize		New		Oper
$\leftarrow \rightarrow \land \land \square \rightarrow$	This PC > Desktop	> FTPfold	er ≻ D	ata_Export_Imp	ort >			
 Quick access OneDrive This PC 3D Objects 	Name	^ 01.251.172			Date modi 5/23/2024	fied 12:38 PM	Type File fold	der
Desktop								

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**.

File Home	luster-10.201.25 Share Vi	1.172 ew								SFTP
Pin to Quick Copy access	Paste	by path te shortcut	Move to *	Delete Renar	me New folde	Pasy Easy	item ▼ access ▼	Properties	I Open → Edit History	Select all Select none
C	lipboard		Or	ganize		New		Op	en	Select
$\leftarrow \rightarrow \cdot \uparrow$	> This PC >	> Desktop >	FTPfolder >	Data_Export_Im	port > clu	ister-10.201	.251.172			
	Nam	ne	^		Date mod	ified	Туре		Size	
Quick access		clusterinfo-10	.201.251.172_1).201.251.172	5/23/2024	12:38 PM	XML Do	ocument	1	KB
OneDrive		node-10.201.2	1.251.172_10.201.251.172.tar		5/23/2024	12:43 PM	TAR File	e 1,193,540	1,193,540	KB
This PC										
3D Objects										
📃 Desktop										

Data Export is Completed for the Publisher

@ 10.201.251.172 - PuTTY	- 0 X
admin:utils system upgrade dataexport status	PUBLICHED
Type : DATAEXFORT 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.	POBLISHER
Exporting data to this software location, with these credentials:	
Server : 10.201.251.189	
Directory : /	
User : cisco	
admin: admin: admin: <mark>utils system upgrade dataexport status</mark>	
Type : DATAEXPORT	
Status : <u>COMPLETED</u>	
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:	

Data Export is Completed for the Publisher

Export Data from the Source Cluster Subscriber to the SFTP Server

The steps are same like what we did for the Publisher.

Run the command 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 we used 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.

📙 🛃 📕 🖛 clu	uster-10.201.251.172							SFTP
File Home	Share View							
Pin to Quick Copy access	Paste Paste shortcut	Move Copy to * to *	ename M	Rew ∰ Easy lder	item • access •	Properties	Edit	Select all Select none Invert selection
Clip	board	Organize		New		Op	en	Select
$\leftarrow \rightarrow \neg \uparrow$	> This PC > Desktop	> FTPfolder > Data_Export_	Import >	cluster-10.201	.251.172			
🛃 Quick access	Name	^	Date m	odified	Туре		Size	
Curck access	clusterinfo-	10.201.251.172_10.201.251.172	5/23/2	024 12:38 PM	XML Do	ocument	11	KB
OneDrive	clusterinfo-	10.201.251.175_10.201.251.175	5/23/2	024 12:57 PM	XML Do	ocument	11	KB
This PC	node-10.20	1.251.172_10.201.251.172.tar	5/23/2	024 12:43 PM	TAR File	e	1,193,540	(B
3D Objects	node-10.20	1.251.175_10.201.251.175.tar	5/23/2	024 1:03 PM	TAR File	e	1,171,880	⟨B
Desktop								
Documents								

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**.

A 10.201.251.175 - PuTTY	-	0	×
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.	SUBSC	RIBER	
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:			

Data Export is Completed for Subscriber

Shutdown the Source Cluster Publisher

Shutdown the Publisher by executing the command utils system shutdown.



Shutdown the Publisher

Shutdown the Source Cluster Subscriber

Shutdown the Subscriber by executing the command utils system shutdown.



Shutdown the Subscriber

Install New Publisher Using Exported Data

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 the OK button.

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



Proceed with Install

Click the **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 the **OK** button.

Click the **Continue** button in the Auto Negotiation Configuration.

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

Press the No button under the DHCP Configuration.

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



Static Network Configuration

Click the Yes button under the DNS Client Configuration.

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

Cisco	Unified Communications Manag	er 15.0.1.11900-	23	PUBLISHER
	DNS C1	ient Configurati	on	
	Primary DNS Secondary DNS (optiona	10.88.11.170_		
	Doma i n	<mark>CiscoHttsTAC.</mark>	com	
	ОК	Back	Help	
<tab>/</tab>	<alt-tab> to move between el</alt-tab>	ements. <space></space>	to select. <enter></enter>	to proceed.

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

DNS Client Configuration



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

Clipboard	Organize	New	(SFTP
C:\Use	rs\agent1\Desktop\FTPfolder\Data_Export_Impor	t\cluster-10.201.251.172		
	Name	Date modified	Туре	Size
5	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
5	node-10.201.251.175_10.201.251.175.tar	5/23/2024 1:03 PM	TAR File	1,171,880 KB

Exported Data Location in the SFTP Server



Software Location of Data to Import

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

Press the Yes button under First Node Configuration.



First Node Configuration

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

Cisco	Unified Communica	ations Manager 15.0.	1.11900-23		PUBLISHER
	Netu	work Time Protocol C	lient Config	uration	
	NTP	Server 1	10.88.7.37		
	NTP	Server 2			
	NTP	Server 3			
	NTP	Server 4			
	NTP	Server 5			
	Test	Proceed	Back	Help	
<tab>/</tab>	<alt-tab> to move</alt-tab>	e between elements.	<space> to s</space>	elect. <enter> t</enter>	o proceed.

NTP Client Configuration

Click the 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 the **OK** button.

Click the **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

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 the OK button.

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

Click the **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 the **OK** button.

Click the **Continue** button in the Auto Negotiation Configuration.

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

Press the 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 the **OK** button.



Static Network Configuration

Click the Yes button under the DNS Client Configuration.

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

Cisco I	Jnified Communications M	anager 15.0.1.11900-	-23	SUBSCRIBER
	DN	S Client Configurati	on	
	Primary DNS Secondary DNS (opt	10.88.11.170_		
	Doma i n	CiscoHttsTAC.	COM	
	OK	Back	Help	
<tab>/</tab>	(Alt-Tab> to move betwee	n elements. <space></space>	to select. <enter< th=""><th>r> to proceed.</th></enter<>	r> to proceed.

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

DNS Client Configuration



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.

C:\U	sers\agent1\Desktop\FTPfolder\Data_Export_Import	cluster-10.201.251.172		SFTP
	Name	Date modified	Туре	Size
ss	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
CS				

Subscriber Exported Data Location in SFTP Server

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

Press the No button under First Node Configuration.



First Node Configuration

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

Click on the 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 the **OK** button.



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

Cisco I	Unified Communications M	anager 15.0.1.11900-	-23	SUBSCRIBER
	First	Node Access Configur	ation	
	Connectivity to Fi	rst Node:		
	Host Name	cucmpublisher		
	IP Address	10.201.251.172		
	Security Password	*******		
	Confirm Password	*****		
	OK	Back	Help	
<tab>/</tab>	<pre><alt-tab> to move betwee</alt-tab></pre>	n elements. <space></space>	to select. <enter:< th=""><th>> to proceed.</th></enter:<>	> to proceed.

First Node Access Configuration

Click the No button for SMTP Host Configuration.



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

Click the **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

Putty 10.201.251.172 - Putty

PUBLISHER



Publisher Verification

P 10.201.251.172 - PuTTY -	- 0	1	×					
admin:utils dbreplication runtimestate	PUBLISI	HER						
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/db1/20240526_111231_db1_rep1_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 SE SERVER-NAME IP ADDRESS (msec) DbMon? QUEUE Group ID (RTMT) & Detai	TUP ls							
cucmpublisher 10.201.251.172 0.019 Y/Y/Y 0 (g_2) (2) Setup Comp cucmsubscriber1 10.201.251.175 0.233 Y/Y/Y 0 (g_3) (2) Setup Comp	leted leted	1						

admin:

Publisher Verification

🔗 10.201.251.172 - PuTTY — — — — — — — — — — — — — — — — — —
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: Product Version 15.0.1.1900-23
05/26/2024 09:18:27 root: Kernel Image 4, 18, 0-372, 16, 1, e18, 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		SUBSCRIBER				
admin:show myself						
Machine Name :	cucmsubscriber1					
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:						

Subscriber Verification

2	10.201	1.251.1	75 -	PuTTY
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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):

SERVER-NAME	IP ADDRESS	PING (msec)	DB/RPC/ DbMon?	REPL. QUEUE	Replication Group ID	REPLICATION SETUP (RTMT) & DB Status
cucmpublisher	10.201.251.172	0.202	Y/Y/Y	0	(g_2)	(2) Setup Completed
cucmsubscriberi	10.201.251.175	0.018	1/1/1	0	(g_3)	(2) Setup Completed

Subscriber Verification

PuTTY 10.201.251.175 - PuTTY						
PROCESS option: Only	available on the PUB					SUBSCRIBER
Cluster Detailed Vie	w from cucmsubscriber	1 (2 Serve	ers):			
SERVER-NAME	IP ADDRESS	PING (msec)	DB/RPC/ DbMon?	REPL. QUEUE	Replication Group ID	REPLICATI (RTMT) &
cucmpublisher cucmsubscriber1	10.201.251.172 10.201.251.175	0.202 0.018	¥/¥/¥ ¥/¥/Y	0 0	(g_2) (g_3)	(2) Setur (2) Setur
admin: admin: admin:file view inst	all system-history.lo	a				
Product Name - Ci. Product Version - 15 Kernel Image - 4.	sco Unified Communica .0.1.11900-23 18.0-372.16.1.el8_6.x	tions Mana 86_64	ager			
05/26/2024 10:09:55 05/26/2024 10:21:39 05/26/2024 11:03:57 05/26/2024 11:03:57	root: Install 15.0. root: Boot 15.0.1.1 root: Import during root: Product Versi	1.11900-23 1900-23 st Install 1 on 15.0.1.	3 Start tart 12.5.1.1590 .11900-23	0-66-to-1	5.0.1.11900-23	Success
05/26/2024 11:03:57 end of the file reac options: q=quit, n=n	root: Kernel Image hed ext, p=prev, b=begin,	4.18.0-372 e=end (15	2.16.1.el8_ ines 1 - 10	6.x86_64 of 10) :		Ι

Subscriber Verification

Related Information

Install with Data Import

SUBSCRIBER