Rebuild CUCM Publisher from Subscriber

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Introduction

This document describes how to restore the Cisco Unified Communications Manager (CUCM) publisher node from the subscriber database without prior backup or root access.

Background

In early versions of CUCM, the publisher node was regarded as the only authoritative source for the Structured Query Language (SQL) DB.

Consequently, if a publisher node was lost due to a hardware failure or a file system corruption, the only way to recover it was to reinstall and restore the DB from a Disaster Recovery System (DRS) backup.

Some customers did not keep proper backups, or had backups that were out-of-date, so the only option was

to rebuild and reconfigure the publisher server node.

In CUCM Version 8.6(1), a new feature was introduced in order to restore a publisher DB from a subscriber database.

This document describes how to take advantage of this feature in order to successfully restore a publisher DB from the subscriber.

Cisco strongly recommends that you keep a full Disaster Recovery Framework (DRF) backup of the entire cluster.

Since this process only recovers the CUCM DB configuration, other data, such as certificates, Music on Hold (MoH), and TFTP files, are not recovered. In order to avoid these issues, keep a full cluster DRF backup.

Note: Cisco recommends that you review and be familiar with the entire process described in this document before you begin.

Gather Cluster Data

Before you reinstall the publisher, it is critical that you gather the pertinent details about the previous publisher. These details must match the original publisher installation:

- IP address
- Host name
- Domain name
- Security passphrase
- Exact CUCM version
- Installed Cisco Options Package (COP) files

In order to retrieve the first three items in the list, enter the **show network cluster** command at the current subscriber node CLI:

<#root>

admin:

show network cluster

172.18.172.213 cucm911ccnasub1 Subscriber authenticated

172.18.172.212 cucm911ccnapub

Publisher not authenticated - INITIATOR since Tue Dec 3 12:43:24 2013 172.18.172.214 cucm911ccnasub2 Subscriber authenticated using TCP since Sun Dec 1 17:14:58 2013

In this case, the IP address is **172.18.172.212**, the host name is **cucm911ccnapub**, and there is no domain name configured for the publisher.

The security passphrase (the fourth item in the list) is retrieved from the site documentation.

If you are unsure about the security passphrase, make a best-effort guess, and you can attempt to verify and correct it as needed based on the CUCM version.

If the security passphrase is incorrect, then a cluster outage is required in order to correct the situation.

In order to retrieve the exact CUCM version and the installed COP files (the last two items in the list), gather the system output from the **show version active** command:

<#root> admin: show version active Active Master Version: 9.1.2.10000-28 Active Version Installed Software Options: No Installed Software Options Found.

In this case, Version 9.1.2.10000-28 is installed with no add-on COP files.

Note: It is possible that some COP files were previously installed on the publisher, but were not installed on the subscriber, and vice versa. Use this output as a guideline only.

Stop Replication on All Subscribers

When the publisher is installed, it is critical that replication does not set up and delete the current subscriber DBs. In order to prevent this, enter the **utils dbreplication stop** command on all subscribers:

<#root>
admin:
utils dbreplication stop

This command can delete the marker file(s) so that automatic replication setup
is stopped
It can also stop any replication setup currently executing
Deleted the marker file, auto replication setup is stopped
Service Manager is running
Commanded Out of Service
A Cisco DB Replicator[NOTRUNNING]
Service Manager is running
A Cisco DB Replicator[STARTED]

Completed replication process cleanup

Please run the command 'utils dbreplication runtimestate' and make sure all nodes are RPC reachable before a replication reset is executed

Install the CUCM Publisher

Gather a bootable image of the appropriate version, and perform an install with an upgrade to the appropriate version.

Note: Most CUCM Engineering Special (ES) Releases are already bootable.

Install the publisher and specify the correct values for the IP address, host name, domain name, and security passphrase mentioned previously.

Update Processnode Values on the Publisher

Note: The publisher must be aware of at least one subscriber server in order to restore the DB from that subscriber. Cisco recommends that you add all subscribers.

In order to retrieve the node list, enter the **run sql select name,description,nodeid from processnode** command at the CLI of a current subscriber.

The name values can be host names, IP addresses, or Fully Qualified Domain Names (FQDNs).

If you run CUCM Version 10.5(2) or later, the **utils disaster_recovery prepare restore pub_from_sub** command must be run on the publisher CLI before you can proceed to add nodes to **System > Server**:

admin:utils disaster_recovery prepare restore pub_from_sub admin:

Warning: Many people using CUCM Version 10.5(2) or later skip the command utils disaster_recovery prepare restore pub_from_sub; however, this is a critical command. Be sure not to skip any steps in this document.

After you receive the node list, navigate to **System > Server** and add all of the name values other than **EnterpriseWideData** to the Publisher Server Unified CM Administration page.

The name values must correspond to the Host Name/IP Address field on the System > Server menu.

<#root>

admin:

run sql select name, description, nodeid from processnode

EnterpriseWideData	====== 1
172.18.172.212	
CUCM901CCNAPub 2	
172.18.172.213	
CUCM901CCNASub1 3	
172.18.172.214	
CUCM901CCNASub2 4	

Note: The default installation adds the publisher host name to the processnode table. You can change it to an IP address if the name column lists an IP address for the publisher. In this case, do not remove the publisher entry, but open and modify the current **Host Name/IP Address** field.

Server Configuration	Server Configuration
🔜 Sava 🗶 Delate 🕂 Add New	🔜 Sarve 💥 Deletes 👍 Add Naw
- Status	- Status
(i) Status: Ready	i Status: Ready
Server Information	_Server Information
Database Replication Publisher	Database Replication Publisher
Host Name/JP Address* sucm911ccnaput	Host Name/IP Address* 172.10.172.212
CPv6 Name	IPv6 Name
MAC Address	NAC Address
Description	Description
Location Bandwidth Management Information	_Location Bandwidth Management Information
LBM Hub Group < None > • View Details	LBM Hub Group < None > View Details
Save Delete Add New	Save Delete Add New
admin:run sql select name,description, nodeid from processm name description nodeid	Servers (1 - 3 of 3)
	Find Servers where Host Name/IP Address 💌 begins with 💌
EnterpriseVideData 1	
172.18.172.212 CUCM901CCNAPub 2	Host Na
172.18.172.214 COCK901CCM2Sub1 5	172.18.172.212
	172.18.172.213
	172.18.172.214
	Add New

Reboot the Publisher Node

In order to restart the publisher after the processnode changes are complete, enter the **utils system restart** command:

<#root>
admin:
utils system restart

```
Do you really want to restart ?
Enter (yes/no)? yes
Appliance is being Restarted ...
Warning: Restart could take up to 5 minutes.
Shutting down Service Manager. Please wait...
\Service Manager shutting down services... Please Wait
Broadcast message from root (Tue Dec 3 14:29:09 2013):
The system is going down for reboot NOW!
Waiting .
Operation succeeded
```

Verify Cluster Authentication

After the publisher restarts, if you made the changes correctly and the security passphrase is correct, the cluster must be in the authenticated state. In order to verify this, enter the **show network cluster** command:

```
<#root>
admin:
show network cluster

172.18.172.212 cucm911ccnapub Publisher authenticated
172.18.172.213 cucm911ccnasub1

Subscriber authenticated using TCP since
Tue Dec 3 14:24:20 2013

172.18.172.214 cucm911ccnasub2
Subscriber authenticated using TCP since
Tue Dec 3 14:25:09 2013
```

Note: If the subscribers do not appear as **authenticated**, refer to the Troubleshoot section of this document in order to resolve this issue before you proceed.

Perform a New Backup

If no previous backup is available, perform a cluster backup on the DRS page.

Note: Although you can use the subscriber DB for the restore, a backup is still required in order to restore the non-DB components.

If no backup is available, then perform a new one; if a backup already exists, then you can skip this section.

Add a Backup Device

Use the Navigation Menu in order to navigate to the Disaster Recovery System, and add a backup device.

– Status –		
③ Status:Ready		
–Backup device name—		
Backup device name*		
– Select Destination* –––		
🔿 Tape Device		
	Device Name	Not Selected 👻
Network Directory		
	Host name/IP address	
	Path name	
	User name	
	Password	
Number of backups to stor	e on Network Directory	
Save Back		

Start a Manual Backup

After the backup device is added, start a manual backup.

Note: It is critical that the publisher node has the CCMDB component registered.

Backup 💌 Res	fors 👻 Halp 💌							
Backup Statu	s							
A Referet and Annual								
Control and	- sanser							
-status								
U SUCCES	S: Backup Completed							
-Rackup det	alle							
- Backup dec								
Tar Elenam		2013-12-03-14-	44-30.bar					
Backup Dev	vice :	NETWORK	TT OFFICE					
Operation:		BACKUP						
Percentage	Complete:	100%						
Feature	Server	Component	Status	Result **	Start Time	Log File *		
ELM	CUCM911CCNAPUB	ELM-AGENT	100	SUCCESS	Tue Dec 03 14:44:30 EST 2013	2013-12-03-14-44-30 b cucm911conapub elm elm-agentilog		
ELM	CUCM911CCNAPUB	ELM-SERVER	100	SUCCESS	Tue Dec 03 14:44:32 EST 2013	2013-12-03-14-44-30 b cuem911cenapub elm elm-server.log		
CDR_CAR	CUCM911CCNAPUB	CAR	100	SUCCESS	Tue Dec 03 14:44:34 EST 2013	2013-12-03-14-44-30 b cucm911cenapub edr car carlog		
UCM	CUCM911CCNAPUB	CDPAGT	100	SUCCESS	Tue Dec 03 14:46:08 EST 2013	2019-12-09-14-44-30 b cuern911cenapub uern edpagt.log		
UCM	CUCM911CCNAPUB	SYSLOGAGT	100	SUCCESS	Tue Dec 03 14:46:08 EST 2013	2013-12-03-14-44-30 b cucm911cenapub ucm syslecapt.log		
UCM	CUCM911CCNAPUB	COMPREFS	100	SUCCESS	Tue Dec 03 14:46:09 EST 2013	2013-12-03-14-44-30 b cucm911cenapub ucm comprefs.log		
UCM	CUCM911CCNAPUB	PLATFORM	100	SUCCESS	Tue Dec 03 14:46:10 EST 2013	2013-12-03-14-44-30 b cucm911cenapub ucm platform.log		
UCM	CUCM911CCNAPUB	CLM	100	SUCCESS	Tue Dec 03 14:46:10 EST 2013	2013-12-03-14-44-30 b cuem911cenapub uem elm.log		
UCM	CUCM911CCNAPUB	COMDB	100	SUCCESS	Tue Dec 03 14:46:10 EST 2013	2013-12-03-14-44-30 b cucm911cenapub ucm comdbilog		
UCM	CUCM911CCNAPUB	TOT	100	SUCCESS	Tue Dec 03 14:46:27 EST 2013	2013-12-03-14-44-30 b cucm911cenapub ucm tot.log		
UCM	CUCM911CCNASUB1	PLATFORM	100	SUCCESS	Tue Dec 03 14:46:27 EST 2013	2013-12-03-14-44-30 b cucm911cenasub1 uom platform.log		
UCM	CUCM911CCNASUB1	CLM	100	SUCCESS	Tue Dec 03 14:46:31 EST 2013	2013-12-03-14-44-30 b cucm911cenasub1 ucm clm.log		
UCM	CUCM911CCNASUB2	PLATFORM	100	SUCCESS	Tue Dec 03 14:46:31 EST 2013	2013-12-03-14-44-30 b cucm911conasub2 upm platform.log		
UCM	CUCM911CONASUB2	CLM	100	SUCCESS	Tue Dec 03 14:46:34 EST 2013	2013-12-03-14-44-30 b cuern911cenasub2 uem elm.log		
Defrach				Car	eal Backur			
Nerresit				Can	oor backdb			

Publisher Restore from the Subscriber DB

On the Disaster Recovery System page, navigate to **Restore > Restore Wizard**.

If a current backup was available, and you skipped the previous section, check all of the feature check boxes in the Select Features section: Enterprise License Manager (**ELM**) if available, **CDR_CAR**, and Unified Communications Manager (**UCM**).

If you use a backup that was performed in the previous section, check only the UCM check box:

Backup + Restore + Help +		
Step3 Restore - Select the	type of Restore	
🖕 Beck 🔠 Select All 🏢	Clear Al 📫 Next 🙆 Cancel	
Status:Ready		
Select Features*		
ELM		
Internet and a second s		
UCM		
Backed up components in	1 TAR:	
■ CDR_CAR ✓ UCM - Backed up components in Eosture	I TAR:	famoent
CDR_CAR COM Backed up components in Feature EUM	Server	Component ELM-AGENT
ELM	CUCM911CCNAPUB	Component ELM-AGENT ELM-SERVER
ELM CDR_CAR Backed up components in Feature ELM CDR_CAR	CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB	Component ELM-AGENT ELM-SERVER CAR
ELM CDR_CAR Feature ELM CDR_CAR UCM	TAR: CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB	Component ELM-AGENT ELM-SERVER CAR CDPAGT
EUM CDR_CAR Feature EUM CDR_CAR UCM UCM	CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB	Component ELM-AGENT ELM-SERVER CAR CDPAGT STSLOGAGT
EUM CDR_CAR Feature EUM CDR_CAR UCM UCM	TAR: CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB	Component ELM-AGENT ELM-SERVER CAR CDPAGT SYSLOGAGT CCMPREPS
EUM CDR_CAR Feature EUM CDR_CAR UCM UCM UCM	TAR: CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB	Component ELM-AGENT ELM-SERVER CAR CDPAGT CDPAGT CCMPREFS PLATFORM
EUM EUM EUM CDR_CAR UCM UCM UCM UCM UCM	TAR: CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB CUCM911CCNAPUB	Component ELM-AGENT ELM-SERVER CAR CDPAGT CDPAGT SYSLOGAGT CCMPREFS PLATFORM CLM
EUM EUM CDR_CAR EUM EUM CDR_CAR UCM UCM UCM UCM UCM UCM	Server CUCM911CCNAPUB	Component ELM-AGENT ELM-SERVER CAR CDPAGT CDPAGT SYSLOGAGT CCMPREFS PLATFORM CLM COMD8
EUM EUM CDR_CAR EUM CDR_CAR UCM UCM UCM UCM UCM UCM UCM	TAR: Server CUCM911CCNAPUB CUCM911CCNAPUB	Component ELM-AGENT ELM-SERVER CAR CDPAGT CDPAGT SYSLOGAGT CCMPREFS PLATFORM CLM CCMD8 TCT
EUM EUM EUM CDR_CAR UCM UCM UCM UCM UCM UCM UCM UCM	Server CUCM911CCNAPUB	Component ELM-AGENT ELM-SERVER CAR CDPAGT SYSLOGAGT CCMPREPS PLATFORM CLM CCMD8 TCT PLATFORM
ECR_CAR UCM Backed up components in Feature ELM ELM CDR_CAR UCM UCM UCM UCM UCM UCM UCM UCM	Some CUCM911CCNAPUB CUCM911CCNAPUB	Component ELM-AGENT ELM-SERVER CAR CDPAGT SYSLOGAGT CCMPREFS PLATFORM CLM CCMD8 TCT PLATFORM CLM
EUR_CAR UCM Feature EUM CDR_CAR UCM UCM UCM UCM UCM UCM UCM UCM	Server CUCM911CCNAPUB CUCM911CCNASUB1 CUCM911CCNASUB1 CUCM911CCNASUB1 CUCM911CCNASUB2	Component ELM-AGENT ELM-SERVER CAR CDPAGT SYSLOGAGT CCMPREFS PLATFORM CLM CCMD0 TCT PLATFORM CLM PLATFORM CLM

Click Next. Check the publisher node check box (CUCM911CCNAPUB), and choose the subscriber DB from which the restoration takes place. Then, click **Restore**.

Step4 Restore - Final Warning for Restore
🖕 Back 🔘 Restore 🙆 Cancel
- Status
G Stable: Beady
 Statistikaani
- Warning
* Feature(s) UCM have been selected for restore. Select the servers on which these features need to be restored. Once the selection has been server and all the existing data for the selected feature will be lost.
* The following is applicable in case of a cluster setup : If node selected is publisher, whole cluster database will be restored. This may take up database being restored. In case of only the publisher restore, please restart the entire cluster after the successful restore of the publisher.
* The following is applicable in case of a cluster setup : If you are attempting to restore the entire cluster on a freshly installed publisher, then publisher to become cluster aware. If the publisher becomes cluster aware then select the servers and click on Restore button which will start to become cluster aware then follow the normal two-step restore process where the publisher is to be restored first. The subsequent nodes c restore. For further details please refer to the Disaster Recovery System Administration Guide.
One-Step Restore One-Step Restore Perform a one-step restore of entire cluster.
- File integrity check
Perform file integrity check using SHA1 Message Digest
Select the Servers to be restored for each feature*
• UCM
CUCM911CCNAPUB CUCM911CCNASUB1 CUCM911CCNASUB2
Select the server from which database data need to be restored * This feature can be used if the Publisher database is in inconsistent state and needs to be restored from duplicate database in subscriber. If a database will be restored from selected subscriber. Also, this restore process will not restore database on any of the subscribers of Please ensure selected subscriber is up and connected to the cluster before restore process starts. Select server name CUCM911CCNASUB1 +
Back Restore Cancel

Restore Status

When the restoration reaches the **CCMDB** component, the Status text must appear as **Restoring Publisher** from Subscriber Backup:

- Status								
Restoring server [CUCH9t10ChAPU6], please wait 3								
-Restore a	listants							
Tar film	ante:	2013-12-	03-14-44-30.ta-					
Backup D	Service:	NETWORK	ĸ					
Operatio	12	RESTORE	:					
Parcenta	ge Complete:	78%						
Feature	Server	Component	Status	Result 11	Start Time	Log File "		
пси	CUCHREECONAPUS	CDRAGT	100	SUCCESS	Tue Dec 03 15:29:53 CST 2013	2012-12-02-12-29-12 r successi incomputi unco operation		
гси	CUCH911CONAPUS	SYSLOGAGT	100	SUCCESSS	Tue Dec 13 15:32:05 EST 2013	2012-12-02-12-25-42 + corm911cmopub_acm_asslocarp.log		
цем	CUCH011CCNAPUS	COMPREFS	100	SUCCESS	Tue Dec 09 15:32:06 EST 2013	2012-12-02-15-20-49 + coem001cenagob orm comprefector		
цем	CUCH9110CNAPU5	PLATFORM	100	BUCCESS	Tue Dec 09 15:92:07 EST 2019	2012-12-03-15-20-43 / cuemBticenscub uem alstform.log		
цем	CUCM9110CNA905	CLM	100	BUCCESS	Tue Dec 03 15:32:09 EST 2013	2013-12-03-19-29-49 / cucm911conscub ucm dm.lcg		
TCN	COCH9110CMA905	COMDE	50 - 12/03/13 15:41:57 - Restoring Publisher from Subscriber Dackup	Active	Tue Dec 03 15:32:10 DST 2013			
IICH	CUCHPLICONARUS	TOT	n					
Refresh								

Run a Sanity Check on the Publisher DB

Before you reboot and set up replication, it is a good practice to verify that the restoration is successful and that the publisher DB contains the required information.

Ensure that these queries return the same values on the publisher and subscriber nodes before you proceed:

- run sql select count(*) from device
- run sql select count(*) from enduser

Reboot the Cluster

After the restoration is complete, enter the **utils system restart** command on every node. Start with the publisher followed by each subscriber.

<#root>
admin:
utils system restart
Do you really want to restart ?
Enter (yes/no)? yes
Appliance is being Restarted ...
Warning: Restart could take up to 5 minutes.
Shutting down Service Manager. Please wait...
\ Service Manager shutting down services... Please Wait
Broadcast message from root (Tue Dec 3 14:29:09 2013):
The system is going down for reboot NOW!
Waiting .
Operation succeeded

Verify Replication Setup Requirements

Navigate to the Cisco Unified Reporting page and generate a Unified CM Database Status Report.

It is likely that replication cannot have set up yet, but it is important to ensure that the Unified CM Hosts, Unified CM Rhosts, and Unified CM Sqlhosts files match the publisher.

If they do not, those nodes that do not match need to be rebooted again. If these files do not match, do not proceed to the next step or reset replication.

Unified CM Hosts
✓ All servers have equivalent host files Ⅲ <u><i>View Details</i></u>
Unified CM Rhosts
🗹 All servers have equivalent rhosts files.
All servers have equivalent rhosts files. ⊞ <u>View Details</u>
Unified CM Sqlhosts
🗹 All servers have equivalent sqlhosts files.
▲ All servers have equivalent sqlhosts files. ■ <u>View Details</u>

Replication Setup

Dependent upon the version, replication cannot set up automatically. In order to check this, wait for all of the services to start, and enter the **utils dbreplication runtimestate** command.

A state value of 0 indicates that setup is in progress, while a value of 2 indicates that replication is set up successfully for that node.

This output indicates that the replication setup is in progress (state appears as **0** for two of the nodes):

admin:utils dbr	eplication runti	mestate							
		PING		CDR	Server	REPL.	DBver&	REPL.	REPLICATION SETUP
SERVER-NAME	IP ADDRESS	(msec)	RPC?	(ID)	& STATUS	QUEUE	TABLES	LOOP?	(RTMT) & details
cucm911ccnapub	172.18.172.212	0.043	Yes	(2)	Connected	0	match	Yes	(2) PUB Setup
Completed									
cucm911ccnasub1	172.18.172.213	0.626	Yes	(3)	Connected	1920	match	Yes	(0) Setup Completed
cucm911ccnasub2	172.18.172.214	0.676	Yes	(4)	Connected	0	match	Yes	(0) Setup Completed

This output indicates that replication is set up successfully:

admin:utils dbreplication runtimestate									
Cluster Detailed View from cucm911ccnapub (3 Servers):									
SERVER-NAME	IP ADDRESS	PING (msec)	RPC?	CDR Server (ID) & STATUS	REPL. QUEUE	DBver& TABLES	REPL. LOOP?	REPLICATION SETUP (RTMT) & details	
cucm911ccnapub	172.18.172.212	0.043	Yes	(2) Connected	0	match	Yes	(2) PUB Setup	
Completed									
cucm911ccnasub1	172.18.172.213	8.858	Yes	(3) Connected	0	match	Yes	(2) Setup Completed	
cucm911ccnasub2	172.18.172.214	0.729	Yes	(4) Connected	0	match	Yes	(2) Setup Completed	

If any nodes appear with a state value of **4**, or if replication does not successfully set up after several hours, enter the **utils dbreplication reset all** command from the publisher node.

If replication continues to fail, refer to the <u>Troubleshooting CUCM Database Replication in Linux</u> <u>Appliance Model</u> Cisco article for more information about how to troubleshoot the issue.

Post Restore

Since the DB restoration does not restore all of the previous components, many server-level items must be manually installed or restored.

Activate Services

The DRF restoration does not activate any services. Navigate to **Tools > Service Activation**, and activate any necessary services that the publisher must run, based on the site documentation from the Unified Serviceability page:

Service Activation		Relate
🔚 Save 🧬 Set to	Default 🔇 Refresh	
Status: () Ready		
Select Server	72.18.172.212 • 60	
Check All Services		

CM Services			
	Service Name	Activation Status	
1	Cisco CallManager	Activated	
	Cisco Messaging Interface	Deactivated	
1	Cisco Unified Mabile Vaice Access Service	Activated	
V	Cisco IP Voice Media Streaming App	Activated	
V	Cisco CTIManager	Activated	
1	Cisco Extension Mobility	Activated	
\checkmark	Cisco Extended Functions	Activated	
V	Cisco DHCP Monitor Service	Activated	
1	Cisco Interduster Lookup Service	Activated	
V	Cisco Location Bandwidth Manager	Activated	
1	Cisco Dialed Number Analyzer Server	Activated	
1	Cisco Dialed Number Analyzer	Activated	
V	Cisco Tftp	Activated	
 <	Cisco IP Voice Media Streaming App Cisco CTIManager Cisco Extension Mobility Cisco Extended Functions Cisco DHCP Monitor Service Cisco DHCP Monitor Service Cisco Interduster Lookup Service Cisco Interduster Lookup Service Cisco Location Bandwidth Manager Cisco Dialed Number Analyzer Server Cisco Dialed Number Analyzer	Activated Activated Activated Activated Activated Activated Activated Activated Activated Activated Activated	

Install Data that was not Restored

If a full backup was not available, you must reproduce certain manual configurations. Particularly, those configurations that involve certificates and TFTP functions:

- MoH files
- Device packs
- Dial plans (for non-North American Numbering Plan (NANP) dialing)
- Locales
- Any other miscellaneous COP files
- Any files that previously were manually uploaded to the publisher (if it was a TFTP server)
- Simple Network Management Protocol (SNMP) community strings
- Bulk certificate exports for Extension Mobility Cross Cluster (EMCC), Intercluster Location Bandwidth Manager (LBM), and Intercluster Lookup Service (ILS)
- Certificate exchanges for secure trunks, gateways, and conference bridges

Note: For mixed-mode clusters, you must run the Certificate Trust List (CTL) client again.

Troubleshoot

This section describes various scenarios that can cause this procedure to fail.

Cluster does not Authenticate

If the cluster does not authenticate, the two most common causes are mismatched security passphrases and connectivity issues on TCP port 8500.

In order to verify that the cluster security passphrases match, enter the **utils create report platform** command at the CLI of both nodes, and inspect the hash value from the **platformConfig.xml** file. These must match on the publisher and subscriber nodes.

```
<#root>
```

```
<IPSecSecurityPwCrypt>
    <ParamNameText>Security PW for this node</ParamNameText>
    <ParamDefaultValue>password</ParamDefaultValue><ParamValue>
0F989713763893AC831812812AB2825C8318
    12812AB2825C831812812AB2825C
    </ParamValue>
    </IPSecSecurityPwCrypt>
```

If these match, verify the TCP connectivity on port 8500. If they do not match, there can be difficulties when you attempt to fix the passphrase due to several defects in the CUCM code that surround the procedure:

- Cisco bug ID <u>CSCtn79868</u> pwrecovery tool resetting only sftpuser password
- Cisco bug ID <u>CSCug92142</u> pwrecovery tool does not update the internal user passwords
- Cisco bug ID <u>CSCug97360</u> selinux denials in pwrecovery utility
- Cisco bug ID <u>CSCts10778</u> Denials thrown for security Password Recovery procedure
- Cisco bug ID <u>CSCua09290</u> CLI "set password user security" did not set the correct apps password
- Cisco bug ID <u>CSCtx45528</u> pwd reset cli returns good but does not change password
- Cisco bug ID <u>CSCup30002</u> DB service is down, after changing the security password on CUCM 10.5
- Cisco bug ID <u>CSCus13276</u> CUCM 10.5.2 security password recovery causes DB to not start at reboot

If the CUCM version contains fixes for all of these issues, the easiest solution is to complete the password recovery procedure detailed in <u>Cisco Unified Communications Operating System Administration Guide</u>, <u>Release 10.0(1)</u> on all nodes.

If the CUCM version does not contain the fixes for these issues, then the Cisco Technical Assistance Center (TAC) can have the ability to perform a workaround, dependent upon the situation.

Restoration does not Process CCMDB Component

If the restoration does not list the DB component, then it is possible that the backup itself does not contain a DB component. Ensure that the publisher DB runs and can accept queries, and perform a new backup.

Replication Failure

Refer to the <u>Troubleshooting CUCM Database Replication in Linux Appliance Model</u> Cisco article in order to troubleshoot a replication failure.

Phones do not Register or are Unable to Access Services

Since the DB restoration does not restore any certificates, if the publisher is the primary TFTP server, the signer is different.

If the phones trust subscriber Trust Verification Service (TVS) certificates, and TCP port 2445 is open between the phones and the TVS servers, the issue must be resolved automatically.

For this reason, Cisco recommends that you maintain full cluster DRF backups.

CUCM versions prior to Version 8.6 can also have certificate issues, even with a previous successful backup, due to Cisco bug ID <u>CSCtn50405</u>.

Note: Refer to the <u>Communications Manager Security By Default and ITL Operation and</u> <u>Troubleshooting</u> Cisco article for additional information about how to troubleshoot Initial Trust List (ITL) files.