Obtain and Run Recovery Software on the CUCM VM

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Introduction

This document describes how to obtain and run the Recovery Software for the Cisco Unified Communications Manager (CUCM).

Background Information

This document describes how to obtain and run the Recovery Software for the Cisco Unified Communications Manager (CUCM), as well as the changes that are required to the Virtual Machine (VM) settings before and after the recovery.

The Recovery Software ISO images are saved in the ESXi datastore.

Datastores are logical containers, analogous to file systems, which hide the specifics of each storage device and provide a uniform model for the storage of VM files. Datastores can also be used in order to store ISO images, VM templates, and floppy images.

The vSphere Client is used in order to access the different types of storage devices that your ESXi host discovers, and in order to deploy datastores on them.

Download Recovery Software ISO Image

To obtain the Recovery Software ISO image:

- 1. From the Cisco home page, navigate to **Downloads Home > Products > Unified Communications > Call Control > Unified Communications Manager (CallManager)**.
- 2. Click the appropriate CUCM version and download the **Recovery Software**:

Select a Software Type:



3. Download the Recovery Software ISO image and save it in the ESXi Datastore.

Upload ISO Image to the ESXi Datastore

Complete these steps in order to upload the Recovery Software ISO image to the datastore via the vSphere Client Version 5.0:

1. Log into the vSphere Client:



2. Click Datastore and Datastore Clusters:

LALU-BGL-TAC Getting Started Summary Virtual Machines Hosts Datastores and Datastore Clusters IP Po					
Identification 🗠	Status	Device	Drive Type	Capacity	
👔 bgl-vaas-33:datas	🦁 Normal	naa.60030130f09	Non-SSD	552.00 GB	
👔 bgl-vaas-35:datas	🦁 Normal	naa.60030130f09	Non-SSD	552.00 GB	
👔 bgl-vnap-04:datas	🦁 Normal	naa.60030130f09	Non-SSD	131.00 GB	
🔋 bgl-vnap-05:datas	🦁 Normal	naa.60030130f09	Non-SSD	131.00 GB	
🔋 bgl-vnap-06:datas	🥏 Normal	naa.60030130f09	Non-SSD	131.00 GB	

3. Right-click the datastore to which you would like to upload the file and click **Browse Datastore**:

Getting Started Summary Virtual Machines Hosts Datastores and Datastore Clusters

Iden	tification 🗠	Status	Device	Drive Type	Capa
	bgl-vaas-33:datas.	🧢 Normal	Dee 60030130600	Non-SSD	552.00
	bgl-vaas-35:datas.	Browse Data	store		552.00
	bgl-vnap-04:datas.	Alarm	•	•	131.00
	bgl-vnap-05:datas.	Assian User-	Defined Storage Ca	pability	131.00
	bgl-vnap-06:datas.				131.00
	bgl-vnap-07:datas.	Rename			552.00
	bgl-vnap-08:datas.	Delete			552.00
	bgl-vnap-09:datas.				552.00
	bgl-vnap-10:datas.	Open in Nev	v Window (Strl+Alt+N	552.00
	bgl-vnap-11:datas.	Refresh			552.00
	bgl-vnap-18:datas.	Copy to Clip	board	Ctrl+C	366.50
	bgl-vnap-19:datas	V Norman	1199'00000100100	עככיווטעו	366.50

4. Choose the folder to which you would like to upload the ISO image:



5. Click the **Upload files** tab:



6. Browse to the folder location where the image is saved on your machine:



7. Once you select the file, a pop-up message appears. Choose **Yes**:

	🗟 🗙	0			
Iders Search	1	[bgl-vaas-33:datastore1] /			
0i		Name	Size	Туре	Path
	4	If a file or folder in the target copied, it will be replaced. Do	location has the same nan you still want to continue? anain	ne as the one be	en
		Yes	No No		

The ISO image then begins to upload to the datastore:



Required VM Settings Prior to Recovery

Complete these steps in order to ensure that the VM settings are correct before you run the Recovery Software:

- 1. From the vSphere Client, navigate to the CUCM VM machine.
- 2. Right-click the VM for which you would like to run the Recovery Software and power off the VM:



3. Right-click and navigate to **Edit Settings**:



4. From the Hardware tab, select **CD/DVD drive**, check the **Connect at power on** check box, and browse to the **recovery.iso** image that you saved in the datastore:

Hardware Options Resources Pro	files VServices	Virtual Machine V
Show All Devices Hardware Memory CPUs Video card WMCI device SCET controlling 0	Add Remeve Summary 4096 MB 1 Viceo card Restricted	Connected Connect at power on Cervice Type Client Device Note: To connect this device, you must power on to vicual machine and then didk the Connect CD/DVD bytop in the fordhare.
Hard disk 1 CD/DVD drive 1 (edited) Network adapter 1	Virtual Disk [ISO_01] UC/CUCN VLAN-325 10.106.82.1	Hust Device No Devices available Datastore ISO File JC4/9.x/9.1.1.200005-recovery.iso Browse
		Pesati nough IDC (recommended) Enulate IDE

5. From the Options tab, select **Boot Options**, check the **Force BIOS Setup** check box, select **OK**, and power on the VM:



6. The VM boots into BIOS mode. Navigate to the boot menu:

Tetting Started (Samuer) (Resource Allocator (Performance) Tasis	8Events 🔪 4	orns Coesole 7	emission Plaps		
	fkin	Advanced	Security	Boot	Exit
	Pres	ushla Davisa		4	Item Specific Help
	-Ken -Haro O - Nets	ondie Device I Drive Off Trive work boot fro	s		Keys used to view or configure devices: (Inter) expands or collapses devices with a + or - (Ctrl+Enter) expands all (-) and (-) moves the device up or down. (n) May nove removable device between Hard Disk or Removable Disk (d) Remove a device that is not installed.
	F1 Help Esc Exit	i 14 Selec I 🚥 Selec	t Iten -/+ t Nenu - Enter	Change Ua Select >	hues P9 Setuy Defaults Sub-Nenu P10 Save and Exit

7. Use the **plus** (+) symbol in order to move the **CD-ROM Drive** option to the top of the list:

			PhoenixBI	US Setup	Utility	
Ma	in I	Advanced	Security	Boot	Exit	
	CD-RUH •Renova	Drive d	5			Item Specific Help
	+Hard JJ	rive k boot from	n Intel E1000			Keys used to view or configure devices: (Enter> expands or collapses devices with a * or - (Ctrl+Enter> expands all (+> and (-> noves the device up or down. (n> May nove removable device between Hard Disk or Removable Disk (d> Remove a device that is not installed.
F1	Hely	11 Select	Item -/+	Change	Ualues	F9 Setup Defaults
LSC	Exit	Select	nenu Ente	r Select	F Sub-N	emu 1010 Save and Exit

8. Press the **F10** key, and you are prompted to save this setting:



The system now loads with the CD-ROM drive where the Recovery Software is located. When the system boots up, you see the options that are shown in the next image.

9. Choose option **F** (press the **F** key):

```
Running the system installer.
Please wait
Detecting Server Hardware - this can take several minutes
VMware: passed detection validation
Helcome to Cisco Unified Communications Recovery Disk
Uersion 9.1.1.20008-5
Copyright - Cisco System, Inc. 2005-2010
....
***
***
***
    Active partition:
                      PARTITION A - 9.1.1.20003-5
***
***
    Please enter one of the following options:
***
.....
    [F]:[f] Check and correct disk file systems.
***
    [U]:[v] Verify the disk partitioning layout.
***
*** [Alila] Align partitions on disk(s).
*** [Q]i[q] Quit this recovery disk program.
****
```

The File System check begins:

```
Please enter one of the following options:
NHR
10110
-----
    [F]![f] Check and correct disk file systems.
NHR
    [V] [v] Verify the disk partitioning layout.
    [All[e] Align partitions on disk(s)
NH N
    [Q]:[c] Quit this recovery disk program.
HEH W
химин ни мин ме ки ил ими жики жики че ки ме ими ки ими не ни ме не ими не ки ме ими ни ими ки ими не на не не
> F
                      ******************
Use of the file system repair on the recovery disc does not guarantee
a fully functioning system. Even if the server is recovered into an operable
state, full functionality of all features and services cannot be guaranteed.
Cisco strongly recommends a server rebuild if the file system has become
corrupted to ensure full functionality.
Press Enter key to continue...
Unmounting partition /mnt/part1
Unmounting partition zentzpartZ
Bonnunting partition zmmtzpart3
Homounting partition /mnt/part6
Checking device /dev/dev1
fsck 1.41.14 (22-Dec-2010)
$ 86.5%
```

Once the File System check is complete, you are taken back to the main menu:

```
Pass 4: Checking reference counts
Pass 5: Checking group summary information
/common: 57819/12958784 files (8.6% mon-contiguous), 6924958/12958398 blocks
UK.
Mounting partition /mnt/part1
                             : I DK I
Mounting partition zmnt/part2
                               I DK I
Mounting partition /mnt/part3
                               E DK
                                    Mounting partition zmntzpart6
                             : [ DK ]
第批业本学业发展基本有关资源法认为大型资源发生不存在成长不不不规则成为关系发展的成本不不不不不可能是规则是为人发发出不非不能能发生不有有限的成本
        Welcome to Cisco Unified Communications Recovery Disk
RHH
                   Uprecion 9 1 1 20009-5
20-20-20
              Copyright - Cisco System, Inc. 2006-2010
....
10-10-10
*** Active partition:
                       PARTITION A - 9.1.1.22888-5
H-H-H
   Please enter one of the following options:
***
N N N
*** IFISIFI Check and correct disk file systems.
    (VIIIv) Verify the disk partitioning lagout.
8-8-8
    [A]:[a] Align partitions om disk(s).
8.8.9
    [Q]:[q] Quit this recovery disk program.
R-8-9
```

10. Choose option **Q** (press the **Q** key) in order to quit the Recovery Software program. You are then prompted to reboot the system, as shown here:

```
[V]:[v] Verify the disk partitioning layout.
***
***
    [A][[a] Align partitions on disk(s).
    [Q]:[q] Quit this recovery disk program.
***
> 0
The system will HALT NOW!!! Once halted, please eject the CD.
install exited abnormally [1/1]
sending termination signals...done
sending kill signals...done
disabling swap...
unmounting filesystems...
       /mnt/runtimc donc
       disabling /dev/loop8
       /proc done
       /dev/pts done
       /sys done
       /tmp/ramfs done
       /mnt/source done
       /selinux done
       /mnt/part1 done
       /mnt/part2 done
       /mnt/part3 done
       /mnt/part6 done
you may safely reboot your system
```

Post-Recovery Requirements



Note: Before you proceed with the reboot, ensure that you uncheck the **Force entry into BIOS** check box.

Complete these steps after you have run the Recovery Software:

1. Right-click the VM, navigate to Edit Settings > Options > Advanced > Boot Options, and ensure that The next time the virtual machine boots, force entry into the BIOS setup screen check box is unchecked:



2. From the Hardware tab, uncheck the Connected and Connect at Power ON check boxes:

T the Al Devices	Add Cemove	Device Status
Hardware	Summary	Connect at power on
Network adapter 1 Public CPUs CPUs VMCI device SCSI controller 0 CD/D/D/D crive 1 Network adapter 1	4096 MD 1 Video card Restricted LSE Logic Parallel Vidual Disk [ISO_01]UC/CUCM/S.x VLAN-326 10.106.62.1	Device Type Clent Device Note: To connect this device, you must power so the vetual machine and then click the Connect CD/0*D buttor in the twolbar. Host Device True Device True Device
		Datastore ISO He [[ISO_01] UC/CUCM/S.x/9.1.1.20000 Browse Mode Pesschrough IEE (recommended) Emulate IDE Vrtual Device Node (© TTF (0-0) CD/IND drive 1

- 3. Proceed to reboot the system:
 - A. Right-click the CUCM VM.
 - B. Power off the machine.
 - C. Power on the machine.



Note: Although the Recovery Software helps to fix the file system errors and move the system out of the Read-Only mode, Cisco recommends as a best practice that either the server is upgraded to the next patch level or is rebuilt.