



## **Cisco Videoscape Distribution Suite Transparent Caching Application Upgrade Guide**

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## Preface

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The *Cisco Videoscape Distribution Suite Transparent Caching Application Upgrade Guide* provides information on how to upgrade the VDS TC software and license.

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

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# CHAPTER 1

## Upgrading the VDS TC Software and License for an Integrated Appliance Installation

This chapter describes how to upgrade to a new software version of VDS TC for an Integrated Appliance system. This chapter contains these sections:

- [Preparing for the Upgrade](#)
- [Performing the VDS TC Software Upgrade](#)



**Note**

Because you will need to stop traffic redirection to the VDS TC system during the upgrade process, you should perform the upgrade during a maintenance window.

## Preparing for the Upgrade

### Confirming Correct BIOS, Firmware, and Software Versions

The following BIOS, firmware, and software versions are required for VDS TC 5.1.1:

Hardware Component	Model	Required Firmware Version and Image File
Integrated Appliance	Cisco UCS-C240-M3S	Firmware version: 1.5.4.3 Image file: ucs-c240-huu-1.5.4-3.iso
Data switch	Cisco Catalyst 4948E	Cisco IOS Release 15.1(2)SG or later, with the ENTERPRISE SERVICES W/O CRYPTO

If you need to perform a firmware upgrade for the Cisco UCS-C240-M3S, see the Cisco UCS C-Series Rack-Mount Server BIOS Upgrade Guide document available at [http://www.cisco.com/en/US/docs/unified\\_computing/ucs/c/sw/bios/b\\_Upgrading\\_BIOS\\_Firmware.html](http://www.cisco.com/en/US/docs/unified_computing/ucs/c/sw/bios/b_Upgrading_BIOS_Firmware.html).

If you need to perform an IOS upgrade on the Cisco Catalyst 4948E, see the “Upgrading Software Images on Catalyst 4000/4500 Series Switch” at [http://www.cisco.com/en/US/products/hw/switches/ps663/products\\_configuration\\_example09186a00801461ef.shtml](http://www.cisco.com/en/US/products/hw/switches/ps663/products_configuration_example09186a00801461ef.shtml).

## Obtaining Required VDS TC Files

To perform an upgrade to VDS TC 5.1.1, you must obtain the following files:

- A new license that is valid for VDS TC 5.1.1
- The VDS TC 5.1.1 upgrade image for an Integrated Appliance

Follow these steps to obtain these files:



### Note

You should send this request a few days prior to when you want to schedule the upgrade.

- Step 1** In a web browser, enter the management IP address of the VDS TC appliance to connect to the VDS TC Manager.
- Step 2** Enter a username of **padmin** and the password that was provided by Cisco.
- Step 3** From VDS TC Manager, in the left navigation pane, choose **Configuration > License Manager**.
- Step 4** From the License Manager window, click the **Generate License Request** button. The Open license-request dialog window appears.
- Step 5** Click **Save File** and then **OK** to save the file request.
- Step 6** Enter a name and location of the file to save. You must send this file to Cisco support to receive a license file.
- Step 7** Email the license-request.xml file that was generated in Step 6 to Cisco at [vdstc-lic@cisco.com](mailto:vdstc-lic@cisco.com). Please include the company name in the email request.
- Step 8** After you receive the VDS TC 5.1.1 license from Cisco, save the license file to a location that you will be able to access while connected to the VDS TC management server.



### Note

It may take a couple of days to receive the license from Cisco.

- Step 9** Obtain the VDS TC upgrade image from Cisco. The upgrade image filename for an Integrated Appliance upgrade will begin with VDS-TC\_GA and will have “Integrated\_Appliance” in the filename, for example VDS-TC\_GA\_5.1.1b27\_Integrated\_Appliance.tar.gz. The numbers in the filename represent the version number and build number.

## Performing the VDS TC Software Upgrade

Follow these steps to upgrade the VDS TC software to version 5.1.1 and to update the license file to a version that supports VDS TC 5.1.1.

- Step 1** On the PBR routers, stop redirecting traffic to the VDS TC solution.
- Step 2** Using SFTP software, such as WinSCP, connect to the management IP address that was assigned to the VDS TC integrated appliance. Log in using the user name **padmin** and the password that was provided by Cisco.
- Step 3** Copy the VDS TC upgrade image file and the updated VDS TC 5.1.1 license file to the /tftpboot folder. These are the files that you obtained in the [Obtaining Required VDS TC Files](#) section.



**Note**

You must have a valid VDS TC 5.1.1 license in the /tftpboot folder before you perform the following steps. If you do not, the upgrade will fail.

- Step 4** After you finish uploading the software to the /tftp folder on the server, check that the MD5 SUM of the source file is the same as the destination file in the server.
- Step 5** Close any open VDS TC Manager windows and ensure that no other administrators are connected to the VDS TC Manager before proceeding.
- Step 6** Using SSH software, such as Putty, open an SSH connection to the management IP address of the VDS TC appliance.
- Step 7** Log into the system using the username **admin**. The default password is the serial number of the VDS TC Integrated Appliance, which can be found either by accessing the CIMC or by accessing the Status > Hardware View page from VDS TC Manager. The serial number is displayed in the Support Tag ID field in VDS TC Manager.
- Step 8** From the VDS TC CLI prompt, enter the **enable** command. When prompted, enter the Enable mode password and press **Enter**. You are now logged into Enable mode and the Enable prompt, console#, should appear.

**Note**

By default, your system serial number is the password for the Enable mode, but this password may have been changed.

- Step 9** From the Enable mode prompt, enter the command **oper service stop** to stop the caching service.
- Step 10** Wait a few minutes and then enter the command **show status**. Check to see if the Device State shows “stopped.” For example:

```
console# show status
Operational state Device state Administrative state
disabled          stopped          unlocked
```

**Caution**

Do not proceed to the next step until the Device State shows “stopped.” You may need to repeat the **show status** command several times before you see this status. Wait several minutes between executions of the **show status** command.

- Step 11** You should backup the current cluster\_conf.xml file before performing the upgrade. To backup the exiting cluster\_conf.xml file, enter the **export tftp\_server filename** command, where *tftp\_server* is the IP address or the hostname of the TFTP server to which you want to export the configuration and *filename* is the filename to create when exporting the current configuration file. You should include the version of VDS TC in the filename to help differentiate it from the new cluster\_conf file that will be created during the upgrade process. For example, you could use the filename cluster\_conf\_5.0.3b233\_bkp.xml.
- Step 12** From the CLI Enable mode, enter the command **upgrade 127.0.0.1 filename**, where *filename* is the name of the software upgrade image file that you copied to the /tftpboot directory in Step 3.

**Caution**

If you are upgrading a VDS TC Cluster system, use the **upgrade all 127.0.0.1 filename** command.

- Step 13** If this is a major upgrade from version 5.0 to 5.1.1, a new license is required. The upgrade process will warn you to only proceed with the upgrade if you already have a new license file for 5.1.1. This is the license file that you copied to the /tftpboot directory in Step 3.

**Figure 1-1 Upgrade Dialog**

```

console# upgrade
<tftp server> <file>
console# upgrade 127.0.0.1 VDS-TC_GA_5.1.1b19_Integrated_Appliance.tar.gz
Testing for a need to backup existing configuration...
Detected major version upgrade (5.0->5.1)
Upgrading to version 5.1 requires a new license file to be activated on the platform once the upgrade process is over.
Without this 5.1 license file, the platform will NOT start.
If you do not have a new license file for version 5.1 - please do not proceed with the upgrade !!
Do you want to proceed with the upgrade [Y/N]Y ?

```

- Step 14** When the “Do you want to proceed with the upgrade?” prompt appears, enter **Y** and when prompted to confirm, enter **Y**.

**Figure 1-2 Confirm Upgrade**

```

console# upgrade
<tftp server> <file>
console# upgrade 127.0.0.1 VDS-TC_GA_5.1.1b19_Integrated_Appliance.tar.gz
Testing for a need to backup existing configuration...
Detected major version upgrade (5.0->5.1)
Upgrading to version 5.1 requires a new license file to be activated on the platform once the upgrade process is over.
Without this 5.1 license file, the platform will NOT start.
If you do not have a new license file for version 5.1 - please do not proceed with the upgrade !!
Do you want to proceed with the upgrade [Y/N]Y ?Y
Are you sure? [Y/N]Y

```

- Step 15** The next step in the upgrade process is for the upgrade script to validate the VDS TC 5.1.1 license file. When prompted for the IP address of the TFTP server that contains the license file, enter **127.0.0.1** and when prompted for the path to the 5.1.1 license file, enter the name of the license file.

**Figure 1-3 Upgrade License Validation**

```

Please provide license file location information (on an accessible TFTP server):
TFTP server address:
127.0.0.1
Path to 5.1 license file:
0000000-5.1-CISCO UCS240_XY-License_20140127_19862.xml
File found , validating ...

```



**Note**

The license is only validated during the software upgrade script, it is *not* installed. You must install the license file after the software upgrade process finishes.

- Step 16** When the software upgrade has finished, you will see a “Succeeded” message and a reminder to import and activate the new VDS TC 5.1.1 license before restarting the service. You will perform these steps next.

Figure 1-4 Software Upgrade Script Succeeded

```

Installing SNMP agent (+Cisco subagent)
Backing up old logs
Stopping any running daemons ...
Installing SNMP agent in /etc/inittab
Installing standalone caching engine...
Upgrading caching engine ...
Installing Storage Monitor
Restarting Storage Monitor daemon
starting bpctl
insmod /lib/modules/2.6.27.19-1lpr-5-default/kernel/drivers/char/bpctl_mod.ko
Done
Installing File system Snapshot at Boot
Shutting down irqbalance ..done
Shutting down CRON daemon..done
Starting CRON daemon..done

Succeeded

Please remember to import and activate the 5.1 license before starting service.
console#

```

- Step 17** After upgrading the system, exit completely from the VDS TC CLI and log back into the CLI to access the new software version.

**Note**

If you do not log out of the VDS TC CLI and log back in, you will not see the current version and when you try to activate the new license, you will receive a “License activation failed” error message.

- Step 18** From the VDS TC prompt, enter the **enable** command. When prompted, enter the Enable mode password and press **Enter**.
- Step 19** Enter the command **show version** to confirm that the correct version is now installed.
- Step 20** From Enable mode, enter the command **license import 127.0.0.1 filename**, where *filename* is the name of the new license file. For example, **license import 127.0.0.1 0000000-5.1-CISCO\_UCS240\_XY-License\_20140127\_19862.xml**
- Step 21** Enter **license activate** to apply the license. When prompted with “Are you sure you want to activate this license?” enter **Y**.

**Figure 1-5 License Activation**

```

console# license activate
Licensed chassis serial number: FCH1623V4EV
Number of blades: 1
EDK enabled: 1
Bittorrent enabled: 1
Kazaa enabled: 1
Gnutella enabled: 1
Ares enabled: 1
Http enabled: 1
Pando enabled: 1
Thunder enabled: 1
Smartfilter enabled: 1
Netflix enabled: 1
Silverlight enabled: 1
Storage volumes: 1
Controllers: 1
CDR logs: 1
Service Detection: 1
web Cache enabled: 1
N_PLUS_K enabled: 1
Max bandwidth: unlimited
Max forwarding: 3000 Mbps
Are you sure that you want to activate this license? (y/n)? y
Activating license...
console#

```

**Note**

If you receive the error message “License activation failed”, repeat Steps 17 through 21. If you still receive the error message, contact Cisco support.

- Step 22** After the license activation is complete, at the Enable mode prompt enter the command **oper service start** to start the caching service.
- Step 23** Wait a few minutes and then enter the command **show status**. Do not proceed to the next step until you see a Device Status of “Started.” For example:
- ```

console# show status
Operational state Device state Administrative state
enabled          started          unlocked

```
- Step 24** Use VDS TC Manager to confirm the upgrade and version number. In a web browser, enter the management IP address of the VDS TC appliance to connect to the VDS TC Manager.
- Step 25** Enter a username and password that was provided by Cisco.
- Step 26** From the default web page that opens (Dashboard) you can confirm that the software has been upgraded. The version number of the product appears in the upper-right hand corner of the window, below the username. Confirm that you see the correct upgraded version. Also you will notice that the web page layout has changed.
- Step 27** On the PBR routers, start redirecting traffic to the VDS TC solution.



## CHAPTER 2

# Upgrading the VDS TC Software and License for a Cluster Installation

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This chapter describes how to upgrade to a new software version of VDS TC for a cluster. This chapter contains these sections:

- [Preparing for the Upgrade](#)
- [Performing the VDS TC Software Upgrade](#)



### Note

Because you will need to stop traffic redirection to the VDS TC system during the upgrade process, you should perform the upgrade during a maintenance window.


---

## Preparing for the Upgrade

### Confirming Correct BIOS, Firmware, and Software Versions

#### C-Series Cluster Installation

The following BIOS, firmware, and software versions are required for VDS TC 5.1.1 for a C-Series cluster installation.

| Hardware Component | Model                                          | Required Firmware Version and Image File                                                                                                                                                                                                                                                                                                                |
|--------------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Management Server  | Cisco UCS C220-M3S<br>or<br>Cisco UCS-C240-M3S | Cisco UCS C220-M3S: <ul style="list-style-type: none"> <li>Firmware version: 1.5.4.3</li> <li>Image file: ucs-c220-huu-1.5.4-3.iso</li> </ul> Cisco UCS-C240-M3S: <ul style="list-style-type: none"> <li>Firmware version: 1.5.4.3</li> <li>Image file: ucs-c240-huu-1.5.4-3.iso</li> </ul>                                                             |
| Cache Engine       | Cisco UCS C220-M3S                             | Cisco UCS C220-M3S: <ul style="list-style-type: none"> <li>Firmware version: 1.5.4.3</li> <li>Image file: ucs-c220-huu-1.5.4-3.iso</li> </ul>                                                                                                                                                                                                           |
| Storage enclosure  | IBM DS3524                                     | <ul style="list-style-type: none"> <li>Controller BIOS version: 07.86.32.00</li> <li>Controller Image file:<br/>ibm_fw_ds3k_07863200_anyos_anycpu.zip</li> <li>HDD BIOS version: 4.17</li> <li>HDD Image file:<br/>ibm_fw_ds3khdd_4.17_anyos_anycpu.zip</li> <li>Storage Manager 10.86<br/>(SM10.86_Linux_64bit_x86-64_SMIA-10.86.x5.28.tgz)</li> </ul> |
| Data switch        | Cisco Catalyst 4500X switch                    | Cisco IOS Release: <ul style="list-style-type: none"> <li>03.03.01.SG, Universal image<br/>(cat4500e-universal.SPA.03.03.01.SG.151-1.SG1.bin)</li> <li><i>or</i></li> <li>03.04.00.SG, Universal image<br/>(cat4500e-universal.SPA.03.04.00.SG.151-2.SG.bin)</li> </ul>                                                                                 |
| Management switch  | Cisco Catalyst 4948E                           | Cisco IOS Release 15.1(2)SG or later, with the LAN BASE W/O CRYPTO feature set<br>Image filename: 15.2(1)E<br>cat4500e-lanbase-mz.152-1.E.bin<br> <b>Note</b> The IP BASE W/O CRYPTO feature set can also be used<br>(cat4500e-ipbase-mz.152-1.E.bin)                |

If you need to perform a firmware upgrade for the Cisco UCS-C220-M3S or Cisco UCS-C240-M3S server, see the Cisco UCS C-Series Rack-Mount Server BIOS Upgrade Guide document available at [http://www.cisco.com/en/US/docs/unified\\_computing/ucs/c/sw/bios/b\\_Upgrading\\_BIOS\\_Firmware.html](http://www.cisco.com/en/US/docs/unified_computing/ucs/c/sw/bios/b_Upgrading_BIOS_Firmware.html).

If you need to perform an IOS upgrade on the Cisco Catalyst 4500X or Cisco Catalyst 4948E, see the “Upgrading Software Images on Catalyst 4000/4500 Series Switch” at [http://www.cisco.com/en/US/products/hw/switches/ps663/products\\_configuration\\_example09186a00801461ef.shtml](http://www.cisco.com/en/US/products/hw/switches/ps663/products_configuration_example09186a00801461ef.shtml).

## Blade Server Cluster Installation

The following BIOS, firmware, and software versions are required for VDS TC 5.1.1 for a Blade Server cluster installation.

| Hardware Component         | Model                                                                          | Required Firmware Version and Image File                                                                                                                                                                                                                                                                                                    |
|----------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Management Server          | Cisco UCS C220-M3S<br>or<br>Cisco UCS-C240-M3S<br>or<br>Cisco UCS C240 M3 NEBS | Cisco UCS C220-M3S: <ul style="list-style-type: none"> <li>Firmware version: 1.5.4.3</li> <li>Image file: ucs-c220-huu-1.5.4-3.iso</li> </ul> Cisco UCS-C240-M3S: <ul style="list-style-type: none"> <li>Firmware version: 1.5.4.3</li> <li>Image file: ucs-c240-huu-1.5.4-3.iso</li> </ul>                                                 |
| Cache Engine               | Cisco UCS-B200-M3<br>Cisco UCS 6248 UP Fabric Interconnect                     | Cisco UCS-B200-M3: <ul style="list-style-type: none"> <li>Firmware version: 2.2.1.b</li> <li>Image file: ucs-k9-bundle-b-series.2.2.1b.B.bin</li> </ul> Cisco UCS 6248 UP Fabric Interconnect: <ul style="list-style-type: none"> <li>Firmware version: 2.2.1.b</li> <li>Image file: ucs-k9-bundle-infra.2.2.1b.A.bin</li> </ul>            |
| Storage enclosure          | IBM DS3524                                                                     | <ul style="list-style-type: none"> <li>Controller BIOS version: 07.86.32.00</li> <li>Controller Image file: ibm_fw_ds3k_07863200_anyos_anycpu.zip</li> <li>HDD BIOS version: 4.17</li> <li>HDD Image file: ibm_fw_ds3khdd_4.17_anyos_anycpu.zip</li> <li>Storage Manager 10.86 (SM10.86_Linux_64bit_x86-64_SMIA-10.86.x5.28.tgz)</li> </ul> |
| Data and management switch | Nexus 7004                                                                     | Cisco NX-OS version: 6.2(6) or later with feature set K9<br><br>Image files: n7000-s2-dk9.6.2.6.bin and n7000-s2-kickstart.6.2.6.bin                                                                                                                                                                                                        |

If you need to perform a firmware upgrade for the Cisco UCS-C220-M3S or Cisco UCS-C240-M3S server, see the Cisco UCS C-Series Rack-Mount Server BIOS Upgrade Guide document available at [http://www.cisco.com/en/US/docs/unified\\_computing/ucs/c/sw/bios/b\\_Upgrading\\_BIOS\\_Firmware.html](http://www.cisco.com/en/US/docs/unified_computing/ucs/c/sw/bios/b_Upgrading_BIOS_Firmware.html).

If you need to perform a firmware upgrade for either the Cisco UCS B200-M3 server or the Cisco UCS 6248 UP Fabric Interconnect, see the Cisco UCS Manager Install and Upgrade Guides page available at [www.cisco.com/en/US/products/ps10281/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps10281/prod_installation_guides_list.html).

If you need to perform an IOS upgrade on the Cisco Catalyst 4500X or Cisco Catalyst 4948E, see the “Upgrading Software Images on Catalyst 4000/4500 Series Switch” at [http://www.cisco.com/en/US/products/hw/switches/ps663/products\\_configuration\\_example09186a00801461ef.shtml](http://www.cisco.com/en/US/products/hw/switches/ps663/products_configuration_example09186a00801461ef.shtml).

## Obtaining Required VDS TC Files

To perform an upgrade to VDS TC 5.1.1, you must obtain the following files:

- A new license that is valid for VDS TC 5.1.1
- The VDS TC 5.1.1 upgrade image for cluster installation
- Updated ENIC installer file

Follow these steps to obtain these files:



### Note

You should send this request a few days prior to when you want to schedule the upgrade.

- Step 1** In a web browser, enter the management IP address of the VDS TC appliance to connect to the VDS TC Manager.
- Step 2** Enter a username of **padmin** and the password that was provided by Cisco.
- Step 3** From VDS TC Manager, in the left navigation pane, choose **Configuration > License Manager**.
- Step 4** From the License Manager window, click the **Generate License Request** button. The Open license-request dialog window appears.
- Step 5** Click **Save File** and then **OK** to save the file request.
- Step 6** Enter a name and location of the file to save. You must send this file to Cisco support to receive a license file.
- Step 7** Email the license-request.xml file that was generated in Step 6 to Cisco at [vdsc-lic@cisco.com](mailto:vdsc-lic@cisco.com). Please include the company name in the email request.
- Step 8** After you receive the VDS TC 5.1.1 license from Cisco, save the license file to a location that you will be able to access while connected to the VDS TC management server.



### Note

It may take a couple of days to receive the license from Cisco.

- Step 9** Obtain the VDS TC upgrade image from Cisco. The upgrade image filename for a Cluster upgrade will begin with VDS-TC\_GA and will have “Server\_Cluster” in the filename, for example VDS-TC\_GA\_5.1.1b28\_Server\_Cluster.tar.gz. The numbers in the filename represent the version number and build number.
- Step 10** Obtain the updated ENIC installer file Patch-VDS\_TC\_Installer\_ISO-01b02\_ENIC\_Driver\_2.1.1.52.tgz. This file is published on Cisco.com along with the VDS TC image file.



# Performing the VDS TC Software Upgrade

Follow these steps to upgrade the VDS TC software to version 5.1.1 and to update the license file to a version that supports VDS TC 5.1.1.

- Step 1** On the PBR routers, stop redirecting traffic to the VDS TC solution.
- Step 2** Using SFTP software, such as WinSCP, connect to the management IP address that was assigned to the VDS TC appliance. Log in using the user name **padmin** and the password that was provided by Cisco.
- Step 3** Copy the VDS TC upgrade image file, updated VDS TC 5.1.1 license file, and the updated ENIC installer file to the /tftpboot folder. These are the files that you obtained in the [Obtaining Required VDS TC Files](#) section.



## Note

You must have a valid VDS TC 5.1.1 license in the /tftpboot folder before you perform the following steps. If you do not, the upgrade will fail.

- Step 4** After you finish uploading the software to the /tftpfolder on the server, check that the MD5 SUM of the source file is the same as the destination file in the server.
- Step 5** Close any open VDS TC Manager windows and ensure that no other administrators are connected to the VDS TC Manager before proceeding.
- Step 6** Using SSH software, such as Putty, open an SSH connection to the VDS TC management server.
- Step 7** Log into the system using the username **admin**. The default password is the serial number of the VDS TC management server, which can be found either by accessing the CIMC or by accessing the Status > Hardware View page from VDS TC Manager. The serial number is displayed in the Support Tag ID field in VDS TC Manager.
- Step 8** From the VDS TC prompt, enter the **enable** command. When prompted, enter the Enable mode password and press **Enter**. You are now logged into Enable mode and the Enable prompt, console#, should appear.



## Note

By default, your system serial number is the password for the Enable mode, but this password may have been changed.

- Step 9** From the Enable mode prompt, enter the command **oper service stop** to stop the caching service.
- Step 10** Wait a few minutes and then enter the command **show status**. Check to see if the Device State shows “stopped.” For example:

```
console# show status
Operational state Device state Administrative state
disabled           stopped          unlocked
```



## Caution

Do not proceed to the next step until the Device State shows “stopped.” You may need to repeat the **show status** command several times before you see this status. Wait several minutes between executions of the **show status** command.

- Step 11** You should backup the current cluster\_conf.xml file before performing the upgrade. To backup the exiting cluster\_conf.xml file, enter the **export tftp\_server filename** command, where *tftp\_server* is the IP address or the hostname of the TFTP server to which you want to export the configuration and *filename* is the filename to create when exporting the current configuration file. You should include the

version of VDS TC in the filename to help differentiate it from the new cluster\_conf file that will be created during the upgrade process. For example, you could use the filename cluster\_conf\_5.0.3b233\_bkp.xml.

**Step 12** From the CLI Enable mode, enter the command **upgrade all 127.0.0.1 filename**, where *filename* is the name of the software upgrade image file that you copied to the /tftpboot directory in Step 3.

**Step 13** If this is a major upgrade from version 5.0 to 5.1.1, a new license is required. The upgrade process will warn you to only proceed with the upgrade if you already have a new license file for 5.1.1. This is the license file that you copied to the /tftpboot directory in Step 3.

The output will look like the following:

```
console#upgrade 127.0.0.1 VDS-TC_GA_5.1.1b28_Server_Cluster.tar.gz
Checking for network connectivity...
Contacting ce-4 machine ...
Ok
Contacting ce-3 machine ...
Ok
Contacting ce-2 machine ...
Ok
Contacting ce-1 machine ...
Ok
Testing for a need to backup existing configuration...
Detected major version upgrade (5.0->5.1)
Upgrading to version 5.1 requires a new license file to be activated on the platform once
the upgrade process is over.
    Without this 5.1 license file, the platform will NOT start.
    If you do not have a new license file for version 5.1 - please do not proceed with the
upgrade !!
    Do you want to proceed with the upgrade [Y/N]
```

**Step 14** When the “Do you want to proceed with the upgrade?” prompt appears, enter **Y** and when prompted to confirm, enter **Y**.

**Figure 2-1 Confirm Upgrade**

```
Do you want to proceed with the upgrade [Y/N]Y ?
Are you sure? [Y/N]Y
```

**Step 15** The next step in the upgrade process is for the upgrade script to validate the VDS TC 5.1.1 license file. When prompted for the IP address of the TFTP server that contains the license file, enter **127.0.0.1** and when prompted for the path to the 5.1.1 license file, enter the name of the license file.



**Note**

Enter only the name of the license file the you uploaded to the /tftpboot folder. Do *not* enter any path. See the example in the following figure.

**Figure 2-2 Upgrade License Validation**

```
Please provide license file location information (on an accessible TFTP server):
TFTP server address: 127.0.0.1
Path to 5.1 license file: 0000000-5.1-CISCO_UCS_Grid_2.101_XY-License_20140130_183455.xml
File found , validating ...
Valid 5.1 license found , proceeding with this upgrade...
```

**Note**

The license is only validated during the software upgrade script, it is *not* installed. You must install the license file after the software upgrade process finishes.

- Step 16** When the software upgrade has finished, you will see a “Succeeded” message and a reminder to import and activate the new VDS TC 5.1.1 license before restarting the service. You will perform these steps next.

**Figure 2-3 Software Upgrade Script Succeeded**

```
Web installation finished successfully
installing policy manager
Backing up PolicyManager ver. 5.1.0.108 database...
Installing tacacs support
Succeeded
Starting upgrade on ce-4..
Checking for valid chassis id ...
Chassis id test passed ok

Stopping running daemons ..
Installing SPREAD environment
Installing SPREAD files
Installing SNMP agent (+PeerApp subagent)
Stopping any running daemons ..
Installing SNMP agent in /etc/inittab
starting bpctl
Installing Storage Monitor
Upgrading caching engine ...
Backing up existing configuration
Done
Installing File system Snapshot at Boot
Shutting down irqbalance ..done

Succeeded
```

- Step 17** After upgrading the system, exit completely from the VDS TC CLI and log back into the CLI to access the new software version.

**Note**

If you do not log out of the VDS TC CLI and log back in, when you try to activate the new license, you will receive a “License activation failed” error message.

- Step 18** From the VDS TC prompt, enter the **enable** command. When prompted, enter the Enable mode password and press **Enter**.
- Step 19** Enter the command **show version** to confirm that the correct version is now installed.
- Step 20** From Enable mode, enter the command **license import 127.0.0.1 filename**, where *filename* is the name of the new license file. For example, **license import 127.0.0.1 0000000-5.1-CISCO\_UCS\_Grid\_2.101\_XY-License\_20140130\_183455.xml**
- Step 21** Enter **license activate** to apply the license. When prompted with “Are you sure you want to activate this license?” enter **Y**.

**Figure 2-4 License Activation**

```

console# license activate
Licensed chassis serial number: FCH1623V4EV
Number of blades: 1
EDK enabled: 1
Bittorrent enabled: 1
Kazaa enabled: 1
Gnutella enabled: 1
Ares enabled: 1
Http enabled: 1
Pando enabled: 1
Thunder enabled: 1
Smartfilter enabled: 1
Netflix enabled: 1
Silverlight enabled: 1
Storage volumes: 1
Controllers: 1
CDR logs: 1
Service Detection: 1
web Cache enabled: 1
N_PLUS_K enabled: 1
Max bandwidth: unlimited
Max forwarding: 3000 Mbps
Are you sure that you want to activate this license ? (y/n)? y
Activating license...
console#

```

**Note**

If you receive the error message “License activation failed”, repeat Steps 17 through 21. If you still receive the error message, contact Cisco support.

- Step 22** Enter the command **show cluster-bus-ip** to determine whether the management server and all cache engines are configured to use broadcast.
- Step 23** Enter the **show cluster-bus-ip** command. If the management server or any of the cache engines are set to use *multicast* instead of *broadcast*, do the following:

- a. Enter the command **config** to enter configuration mode. The configuration prompt, configuration#, will appear.
- b. In configuration mode, enter the command **cluster-bus-ip broadcast**. For example:

```

configuration# cluster-bus-ip broadcast
Processing...
All the CEs are configured to work with Broadcast IP.

```

- c. Enter **exit** to exit from configuration mode and go back to Enable mode.
- d. Enter the command **show cluster-bus-ip** to confirm that the management server and all cache engines are configured to use broadcast. For example:

```

console# show cluster-bus-ip
Processing...
MG-1: [Broadcast]
CE-1: [Broadcast]
CE-2: [Broadcast]
CE-3: [Broadcast]
CE-4: [Broadcast]
CE-5: [Broadcast]
CE-6: [Broadcast]
CE-7: [Broadcast]
CE-8: [Broadcast]
OK. All the CEs are configured to work with Broadcast IP.

```

- Step 24** Log into the VDS TC management server as the root user with the password provided by Cisco.

- Step 25** To copy the updated ENIC installer file first Cache Engine, enter the command **scp /tftpboot/Patch-VDS\_TC\_Installer\_ISO-01b02\_ENIC\_Driver\_2.1.1.52.tgz root@ce-1:/tftpboot**. This is the file you obtained in the [Obtaining Required VDS TC Files](#) section from Cisco.com.
- Step 26** Repeat Step 25 for all of your Cache Engines.
- Step 27** Enter the command **ssh root@ce-1** to connect to the cache engine as the root user.
- Step 28** To create a new directory and move the ENIC installer file to that new directory, perform the following steps:
- Enter the command **mkdir /tftpboot/enic**
  - Enter the command **mv /tftpboot/Patch-VDS\_TC\_Installer\_ISO-01b02\_ENIC\_Driver\_2.1.1.52.tgz /tftpboot/enic/**
  - Enter the command **cd /tftpboot/enic/**
- Step 29** To extract the files from the package, enter the command **tar -zxvf Patch-VDS\_TC\_Installer\_ISO-01b02\_ENIC\_Driver\_2.1.1.52.tgz**
- Step 30** To change directories, enter the command **cd Patch-VDS\_TC\_Installer\_ISO-01b02/**
- Step 31** Enter the command **./install.sh** to run the installation script.

**Note**

The installation script will automatically reboot the cache engine after it has finished running.

```
DEPMOD 2.6.27.19-llpf-5-default
make[1]: Leaving directory '/usr/src/linux-2.6.27.19-5-llpf'
/sbin/depmod -a >/dev/null
+ make clean
make -C /lib/modules/`uname -r`/build M=`pwd` clean
make[1]: Entering directory '/usr/src/linux-2.6.27.19-5-llpf'
CLEAN /tftpboot/enic/Patch-VDS_TC_Installer_ISO-01b02/enic-
2.1.1.52_RX16/tmp_versions
CLEAN /tftpboot/enic/Patch-VDS_TC_Installer_ISO-01b02/enic-
2.1.1.52_RX16/Module.symvers
make[1]: Leaving directory '/usr/src/linux-2.6.27.19-5-llpf'
rm -f Module.symvers modules.order
rm -rf rpms
+ echo 'System will reboot now to enable new enic driver.'
System will reboot now to enable new enic driver.
+ reboot -f
=====
=====
```

- Step 32** After the system reboots, enter the command **modinfo enic** to confirm the new version of the ENIC driver is 2.1.1.52:

```
ce-1:~ # modinfo enic
filename:      /lib/modules/2.6.27.19-llpf-5-default/extra/enic.ko
version:      2.1.1.52
license:      GPL v2
author:       Scott Feldman <scofeldm@cisco.com>
description:  Cisco VIC Ethernet NIC Driver
srcversion:   BFD76AEC2668796A473472A
alias:        pci:v00001137d00000071sv*sd*bc*sc*i*
alias:        pci:v00001137d000000044sv*sd*bc*sc*i*
alias:        pci:v00001137d000000043sv*sd*bc*sc*i*
depends:
```

```
vermagic: 2.6.27.19-11pf-5-default SMP mod_unload modversions
```

- Step 33** Repeat Step 27 through Step 32 for each remaining Cache Engine.
- Step 34** From the SSH connection to the VDS TC management server, make sure you are in the Enable mode prompt of the VDS TC CLI.
- Step 35** Enter the command **oper server 1** and then **start** to start the leader.
- Step 36** After the leader has started, enter the command **oper service start**.
- Step 37** Wait a few minutes and then enter the command **show status**. Do not proceed to the next step until you see a Device Status of “Started.” For example:
- ```
console# show status
Operational state Device state Administrative state
enabled          started      unlocked
```
- Step 38** Use VDS TC Manager to confirm the upgrade and version number. In a web browser, enter the management IP address of the VDS TC appliance to connect to the VDS TC Manager.
- Step 39** Enter a username and password that was provided by Cisco.
- Step 40** From the default web page that opens (Dashboard) you can confirm that the software has been upgraded. The version number of the product appears in the upper-right hand corner of the window, below the username. Confirm that you see the correct upgraded version. Also you will notice that the web page layout has changed.
- Step 41** On the PBR routers, start redirecting traffic to the VDS TC solution.