



## Troubleshooting

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This appendix presents troubleshooting tips for the upgrade and downgrade procedures. The topics covered in this appendix include:

- [Interfacing with the VDS Server During an Upgrade, page A-1](#)
- [Error Messages, page A-2](#)
- [Warning Messages, page A-5](#)
- [Failed or Stalled Upgrade, page A-5](#)
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## Interfacing with the VDS Server During an Upgrade

This section covers the following topics:

- [Viewing Upgrade Progress with Keyboard and Monitor Interface](#)
- [Backspace Does Not Work in Terminal](#)
- [Monitoring OS Load Runtime Syslog File](#)

### Viewing Upgrade Progress with Keyboard and Monitor Interface

If the serial and VNC Listener cannot be used to perform an upgrade, the keyboard and video monitor can be used for the upgrade. However, performing the upgrade using the keyboard and monitor provides limited visibility and is not recommended.

If the only option is to use a keyboard and monitor for the upgrade, press **Enter** when the upgrade script prompts for the VNC Listener. The server reboots several times. During the second stage of the operating system (OS) upgrade, the package installation progress and other steps of the upgrade can be viewed on the third virtual terminal on the keyboard/monitor interface. To access this virtual terminal press **Alt-F3** and the video switches to the third terminal.

### Backspace Does Not Work in Terminal

When working with different applications that provide SSH or telnet capability there are times when the terminal definition does not translate correctly to the shell opened to the server being upgraded. This causes the scripts to be unable to read the text entered and the backspace key does not function correctly.

To assist in allowing the backspace to work, determine the backspace key definition and use **stty erase** command to set the definition.

**Note**

This does not always work because the application closest to the user may still not translate the key definition correctly even after determining the key definition.

To determine the backspace key definition, do the following:

- Step 1** After logging in to the VDS server, press **Ctrl-V** followed by the **Backspace** or **Delete** key. The key sequence for the backspace is displayed. Typically, the key sequences are **^H** or **^?**.
- Step 2** Enter the key sequence exactly with the **stty erase** command; for example:

```
stty erase ^H
```

**Note**

The **^H** or **^?** are specifically **Shift-6** and uppercase H or question mark.

## Monitoring OS Load Runtime Syslog File

During the upgrade, when a VNC Listener is used, the stage 2 OS loading process can be monitored from the serial console window. View the `/tmp/syslog` file for details of the operations currently taking place. To view the syslog file use the **tail -f /tmp/syslog** command. After the stage 2 OS load has completed, the tail is killed and the server reboots.

**Note**

The following messages in the syslog file are known benign messages:

- <4>end\_request: I/O error, dev fd0, sector 0
- <4>end\_request: I/O error, dev fd0, sector 0
- <3>Buffer I/O error on device fd0, logical block 0

## Error Messages

The following error messages may occur during the software upgrade:

**\*\*\*ERROR: Unable to copy <file> to <target location>: cp: cannot stat ...**

If this error is seen, it is most likely a result of a corrupted kit. During the initial extraction of the kit, the contents are checked to ensure integrity. Verify that the initial kit extraction did not have errors. Recovery procedure for this issue is provided in the [“Warning Messages” section on page A-5](#).

**\*\*\*ERROR: Failed to delete partition /dev/sda#**

If this error is seen, it may be a result of an initial system configuration issue. See the [“Warning Messages” section on page A-5](#) to attempt to correct this issue.

**\*\*\*ERROR: /boot\_cds is not mounted. Please manually mount it before running this upgrade script again.**

This could be an indication that the /boot\_cds directory has been manually unmounted. Mount this partition before proceeding with the upgrade.

**\*\*\*ERROR: You have to be root to perform the remote ISO installation!**

You must be logged in as user root to run the upgrade or downgrade kit.

**\*\*\*ERROR: Hardware type is neither Merrimack nor Lindenhurst.**

You are attempting to run the upgrade or downgrade script on a nonsupported server.

**\*\*\*ERROR: Unable to create directory <dir>**

This may be the result of a missing parent directory or failed hardware. Run the `cds_upg_report.sh` script and contact Cisco Support.

**\*\*\*ERROR: Unable to mount <dir> on <dir>**

This may be the result of a missing file or directory, or hardware failure. Run the `cds_upg_report.sh` and contact Cisco Support.

**\*\*\*ERROR: Absolute path to ISO image not given.**

This indicates the ISO image file provided on the command line was not provided with the full path. Under normal operation this command line option is not needed. Rerun the command without providing the ISO option.

**\*\*\*ERROR: Unable to find ISO image**

This may be an indication that the kit was corrupted. Verify that no errors were provided during the initial extraction and rerun the self-extracting file.

**\*\*\*ERROR: <isofilepath> is not a "ISO 9660 CD-ROM filesystem" format file**

This indicates the ISO image file provided on the command line is not the standard ISO image file required for the upgrade. Under normal operation this command line option is not needed. Rerun without providing the ISO option.

**\*\*\*ERROR: Unable to unmount <mount point>**

This is an indication that a running process has a file open, or a shell is open currently in the mount point. Be sure there are no users running processes (for example, the vi editor) in the location that is identified as mount point.

**\*\*\*ERROR: VNC Listener <vnc\_ip>:<vnc\_port> is not reachable.**

This is an indication that the VNC Listener cannot be reached. Verify system, `vnc_ip`, has a running VNC Listener and that the server to be upgraded can ping the VNC system (check that your management routes are correct).

**\*\*\*ERROR: Partition /dev/sda7 does not exist on /dev/sda**

On initial running of the script, this is an expected benign error.

**\*\*\*ERROR: Hard drive <disk> not detected on server.**

The server has a hardware failure. Verify that the server was operating correctly and all drives defined in the hardware guide are operational.

**\*\*\*ERROR: unknown command line option**

An unknown or unsupported upgrade command line option was provided. Verify syntax of the command entered and rerun.

**\*\*\*ERROR: There is no default route on this server, cannot deduce the management interface.**

The upgrade script expects an operational server to perform the upgrade. In this situation a management default route should exist on the server. If a default route does not exist, log in to the CDSM GUI and verify one exists for this server (Server Setup page). If it does, re-submit and verify that a default route is configured on the server by running the **netstat -rn** command.

If this is a newly shipped CDS server, manually configure the management interface configuration, enable the interface and manually put in a default route. For more information, see the [“Upgrading the New CDEs with Release 3.9.1 VDS-TV Software” section on page 2-2.](#)

**\*\*\*ERROR: ISO image SHA1 checksum <string> does not match <string> in iso.sha1sum.**

This means the upgrade or downgrade kit is corrupted. Redownload the kit and extract it again.

**\*\*\*ERROR: /arroyo/db is not mounted.**

This could be an indication that the /arroyo/db directory has been manually unmounted or the upgrade exited prematurely in a previous run. Reboot the server and verify that the /arroyo/db directory is mounted.

**\*\*\*ERROR: restore.list|backup.list does not exist.**

This indicates that the kit has been corrupted in transition to the destination server. Verify that the checksum provided the Cisco software download website is the same as the checksum as the file on the server. If the checksums match, reextract the kit and run the upgrade again.

**\*\*\*ERROR: scp failed. Please retry:**

A failure occurred during the transfer of the backup archive to the remote server. Check the IP address, username, password, and network connectivity to the remote server.

**\*\*\*ERROR: Cannot create archive <backup\_archive\_name>.tgz.**

This indicates that the creation of the backup archive failed, most likely because of limited space in the /arroyo/db directory. The upgrade gives a best effort to calculate the amount of required space before the initial reboot, however if files have changed during the initial reboot this error may occur. Remove all non-essential files in the /, /home, and /arroyo/db directories and rerun the upgrade.

**\*\*\*ERROR: <partition> is XX % used, please clean <partition> up before running this upgrade script again.**

This means the <partition> partition does not have enough space for the upgrade to continue. Clean the partition space and rerun the upgrade.

**\*\*\*ERROR: There are two or more upgrade partitions on the system.**

If this error is encountered, it means there is more than one upgrade partition created. There can only be one upgrade partition, the second partition must be removed before proceeding.

## Warning Messages

The following warning messages may occur during the software upgrade:

**\*\*\*WARNING: Cannot create backup <type> archive <file name>**

The backup of the configuration, database, or log files has failed. Cleanup the file system space and rerun the upgrade.

**\*\*\*WARNING: Not enough space available to perform backup.**

The /arroyo/db directory does not have enough space to perform the backup. Remove all non-essential files and re-run the upgrade.

All other errors that have not been commented on should be provided to Cisco Support along with the cds\_upg\_report.sh archive and the output of the Linux history command (run as root).

**\*\*\*WARNING: /dev/sda7 does not exist, it needs to be created from /dev/sda6.**

The /dev/sda6 partition has XXXXXXXXXXXKB total disk space, which is more than the 8000000KB required to create new /dev/sda7 partition.

This is an expected warning the first time the cds\_remote\_iso\_install runs. No action is required.

**“WARNING!!! VNC server running with NO PASSWORD!”**

You can use the vncpassword=<password> boot option if you would like to secure the server. This is an expected benign warning. No action required.

**WARNING: No existing version found on this server. Cannot backup existing files.**

This warning is provided when running the vdsinit after the server has been upgraded. This is an expected warning and no action is required.

**“No kdump initial ramdisk found.[WARNING]” ... “Failed to run mkdumprd”**

This warning is provided when running the vdsinit after the upgrade and on first boot after vdsinit. The kdump configuration is resolved on the first reboot after the software installation. No action is required.

## Failed or Stalled Upgrade

In rare instances there is a failed or stalled upgrade. For example, this could occur if power is not maintained during the upgrade. The backup performed before the upgrade was started can be used with the new server image procedure to install Release 3.9.1.



**Note**

If power is lost during an upgrade there is no guarantee the upgrade will continue when power is restored.

A first attempt of just restoring power and booting the server should be performed. If this fails, then the server must be imaged directly to Release 3.9.1 and the configuration should be restored.

To image the server directly and restore the configuration, do the following:

- Step 1** Follow the instructions in the [“Imaging a VDS Server with 64-Bit OS using a DVD”](#) section on page 2-9.

If the server OS upgrade has not completed within 45 minutes or the upgrade is hung for a long time, then the upgrade has encountered an uncorrectable error.

If the upgrade has stalled on the rpm kernel add portion and a VNC Listener was used, tail the /tmp/syslog file from the serial port console. If VNC Listener was not used, go to the video console and press **Alt-F3** to switch to the virtual terminal. If the following error is seen:

```
Code={SATA NCQ Fail All Commands After Error},
```

the loading of the kernel is failing on a disk drive. Look on the front of the server to see if one of the drives is slowly blinking. If the drive is slowly blinking, remove it. If another drive starts blinking, remove it as well. Continue removing drives until no drives are blinking. After this, the server should continue to proceed with the installation.

**Step 2** Run the **vdsinit** script.

```
# cd /root
# ./vdsinit-3.9.1 CDS-TV-3.9.1.iso
```

**Step 3** Move the /etc/rc.d/upgrade.rc.local file to /etc/rc.d/rc.local.

```
# mv -f /etc/rc.d/upgrade.rc.local /etc/rc.d/rc.local
```

## VNC Listener

The VNC Listener is an application that waits to receive input from a remote host. When upgrading or downgrading the VDS-TV, the VNC Listener is used to remotely display the status of an upgrade, instead of the upgrade or downgrade output being sent to the video console.

We recommend that the software upgrade be monitored from a VNC Listener. During the stage 2 boot process of the upgrade, a window is provided to the user to see the operations taking place on the server. Using the VNC Listener provides the additional ability to triage issues through the serial console if there is a failure during the upgrade.