



CHAPTER 4

Downgrading from Release 3.2.1

This chapter describes the downgrade procedure for the CDSM, VVIM, and CDS servers. The chapter covers the following topics:

- [Downgrading a TV CDS Server from Release 3.2.1, page 4-1](#)
- [Downgrading the Software on a CDSM or VVIM, page 4-12](#)



Caution

Before proceeding with the software downgrade, review [Chapter 2, “Overview of Upgrading and Downgrading the TV CDS Software”](#) for information on getting the Release 3.2.1 software files, prerequisites for the software downgrade, the downgrade sequence for the devices in the CDS, and information about the upgrade and downgrade kits.

Downgrading a TV CDS Server from Release 3.2.1



Note

Before downgrading the CDS servers, review the information in [Chapter 2, “Overview of Upgrading and Downgrading the TV CDS Software.”](#)

To downgrade a CDS server, do the following:

Step 1 Login to the CDS server as *root*.

- a. If you are downgrading a Vault Group, you must disable Vault Group Mirroring. If you are downgrading a different server, go to [Step 2](#).

Use SSH to access each vault in the group and enter the following command:

```
echo 0 > /proc/calypso/tunables/allowvaultarraymirroring
```

- b. Go to `vi /arroyo/test/vault/setupfile`, comment the line “allow vault array mirroring 1”.
- c. Kill the SNMPD process:

```
# ps aux | grep snmpd | grep -v grep
root      3774  0.0  0.0 683636  6308 ?        SNL   Jun28   1:28 /usr/local/sbin/snmpd -f
# kill 3774
```

**Note**

Editing the setupfile keeps the array mirroring feature disabled within this array, even after you upgrade and reboot, until the downgrade procedure is complete.

Step 2 Verify that the CDS server has the necessary space and copy the downgrade kit to it.

```
# ssh <IP_addr_CDS_server> -l root
# df -k /root
# scp -p <remote ip>:<remote location of kit> /root
```

**Note**

Only perform [Step 2](#) through [Step 6](#) when downgrading Release 3.2.1 software to Release 2.0.x or 2.1.x.

Step 3 Verify the MD5 checksum value.

```
# md5sum cdstv-3.2.1-b169-i386-os-kit.sh
```

The value provided should be compared against the value shown on the Cisco software download website. If they do not match, remove the file and download it again.

Step 4 Change permissions assigned to the upgrade kit to allow the file to be executed.

```
# chmod+x cdstv-3.2.1-b169-i386-os-kit.sh
```

Step 5 Run the self-extracting file to extract the contents.

```
# ./cdstv-3.2.1-b169-i386-os-kit.sh
```

After extracting the kit, verify that there are no errors before proceeding. If an error message is displayed or “cdstv-os-5.1-i386.iso: OK” is not displayed as the last line, the kit may have had errors in downloading. Download and extract the kit again. See the “[Downgrade Kit Content](#)” section on [page 2-14](#) for information on the content of the kit.

Step 6 Change directory to the `cds_remote_upgrade` directory and run the `cds_remote_iso_install` script with the `--check` option. See the “[cds_remote_iso_install Details](#)” section on [page 2-15](#) for more information.

```
# cd cds_remote_upgrade
# ./cds_remote_iso_install --check
```

If all prerequisite checks pass, the server is ready to be brought offline to perform the upgrade.

Step 7 Using the CDSM or VVIM GUI, offload the server that you want to downgrade.

- a. Click **Maintain > Servers > Server Offload**. The Server Offload page is displayed.
- b. From the **Server IP** drop-down list, choose the IP address or nickname of the server and click **Display**.
- c. Select **Offline (No Ingest)** for Vaults or select **Offline** for Cache Nodes and Streamers and click **Submit**.

When Server Offload is enabled on a server, the server is configured to reject new provisioning; that is, it does not allow new streams on a Cache Node/Streamer and it gracefully moves existing Streams to another Cache Node or Streamer.

**Note**

The Vaults, Streamers, and ISVs must be offloaded. There is no requirement to offload the Caching Nodes for a software downgrade.

Step 8 Log into the server as `root`.

Step 9 Ensure that the server is fully offloaded.

- a. Verify that the TRICKLE_DOWN file exists in the /usr/tmp directory.
- b. For a Streamer, check that the protocoltiming log displays a warning message indicating that the server is going offline.

```
tail -f /arroyo/log/protocoltiming.log.20090917
```

You should see the following:

```
Remote vaults 2 caches 0 streamers 1, Adapters fill 4 (1024) stream 4 (1316)
CPU Receive: Ave0+0+0 Cur 0+0+0, Network: 0, Poll: 34 (0 scaled)
Warning: Server is going OFFLINE
```

- c. For a Streamer, make sure that all the active streams have moved over to the other Streamers. Check the Active Streams line in the protocoltiming log.
- d. For a Vault, make sure that all active ingests on this server have finished. Check that there is no Active Ingest Connections line in the protocoltiming log.
- e. Check there is no active traffic on the network interface cards (NICs) using the /home/stats/ifstats command.



Note

Only perform [Step 10](#) through [Step 13](#) when downgrading Release 3.2.1 software to Release 2.0.x or 2.1.x.

Step 10 Run the `cds_remote_iso_install` script with the `--downgrade` option, and `vnc-listener` sub-option if being used.

Following are some user prompts and operations to be aware of when running the downgrade script:

- If the `vnc-listener` sub-option is not used, the script prompts for the listener. If a listener is not available, then press **Enter** to continue the upgrade.



Note

Not using a listener may limit the ability to debug issues that might occur during the downgrade process.

- Prerequisite checks are performed to ensure the server can be downgraded.
- If the TV CDS processes are still running when the downgrade script runs, you are prompted to stop the processes and reboot the server. This is a required step to perform a backup of the configuration and database files on the server. After the server reboots, run the downgrade script again.
- Before the server reboots, `/etc/rc.d/rc.local` is moved to `/etc/rc.d/upgrade.rc.local`. When the CDS server reboots, there is no `rc.local` file, so the CDS processes are not started.
- When the downgrade script is run again, prerequisite checks are performed again and a backup is created. The `scp` command is used to copy the backup to a remote server. You are prompted to enter the following remote server information:
 - IP address of the remote server
 - Remote directory location
 - User for the `scp` operation
- After the backup is copied to the remote server, you are prompted one last time to choose to perform the downgrade. If yes is provided, power must be maintained to the system until the downgrade is complete. The downgrade is complete when a login prompt is provided on the serial console.

**Note**

This backup backs up the Release 3.2.1 configuration and database files and should not be restored on to an older TV CDS software release.

Downgrade Script Output—First-Time Run

```
# ./cds_remote_iso_install --downgrade
*****
*****          WARNING          WARNING          WARNING          *****
*****
This program will perform an OS downgrade on this CDS server.
The current configuration will be backed up and stored on the
/boot_cds partition. This backup CANNOT be used to restore the
system after the downgrade is complete.

To restore the system to the version being downgraded to, the
backup created prior to downgrading to this base OS must be used
to restore the system.

For more information contact your Cisco support representative.

Details of this process are provided in:
    /var/log/cds/cds_upgrade_host.log

This will be the only warning provided.

Continue the downgrade procedure now? [yes/no]: yes

VNC Listener IP[:Port]? []: 2.2.2.2:5500

Upgrade version: cdstv-3.2.1
Script mode: --downgrade
Hardware type: Merrimack
ISO location: /root/cds_remote_upgrade/cdstv-os-5.1-i386.iso
Baud rate: 115200
Script running directory: /root/cds_remote_upgrade
Command line options: --downgrade
VNC Listener IP[:Port]: 2.2.2.2:5500
Doing prerequisite checking... [DONE]
    VNC Listener 2.2.2.2:5500 is reachable.
    ISO image SHA1 checksum dd6ea8c20235bd0233f5da6d58cb7c95a534804d matches
dd6ea8c20235bd0233f5da6d58cb7c95a534804d in iso.shalsum.
    Created directory /mnt/cdrom.
    Mounted /root/cds_remote_upgrade/cdstv-os-5.1-i386.iso on /mnt/cdrom.
    Server should be offline (not streaming or servicing requests) before continuing.
    CDSTV application processes " avbdb statsd cserver" are running

/dev/hda1 is mounted on /boot.
/boot is 22% used.
/dev/hda2 is mounted on /.
/ has 4718996 KB space available, more than 1000000 KB required.
/dev/sda2 is mounted on /home.
/dev/sda3 is mounted on /var.
/dev/sda6 is mounted on /arroyo.
/dev/sda1 is mounted on /arroyo/db.
/boot_cds has 3845796 KB space available, more than 1000000 KB required.
Stored chkconfig --list output to chkconfig-list.output.
Copied chkconfig-list.output to /root/chkconfig-list.output.
Copied /etc/rc.d/rc.local to /etc/rc.d/upgrade.rc.local.
Found CDS version cdstv-3.2.1 to backup
Found restore.list.
Found backup.list.
```

```
Detailed size of backup files list:
/home/isa 211700KB
/etc 32368KB
/root/chkconfig-list.output 8KB
/arroyo/test 88KB
/arroyo/image/tags 4KB
/usr/local/share/snmp/snmpd.conf 8KB
/var/spool/cron 12KB
/var/net-snmp 12KB
Total available space on /arroyo/db: 46167372 KB,
Space needed for /arroyo/db/DATADIR: 34652 KB,
Space needed for /arroyo/log: 375216 KB,
Total estimated space required for all archives is: 654068 KB,
Excluded space of preexisting backups: 0 KB,
Calculated space needed for backup: 218022 KB.
There is enough space for backup.
```

***** NOTICE *****

CDS-TV processes are running. A reboot is required to stop these processes.
 Note: If the system is active (i.e. "offline disabled" state), the reboot may disrupt live services.

After the reboot this program will need to be manually rerun to continue.

Reboot this system now to stop the CDS-TV processes? [yes/no]: **yes**

***** NOTICE *****

The /etc/rc.d/rc.local has been moved so the CDS-TV application processes will not start after reboot.

Cleaning up... [DONE]
 /mnt/cdrom is unmounted.

Logfile at: /var/log/cds/cds_upgrade_host.log.
 It's also available at /boot_cds/upgrade/cds_upgrade_host.log after upgrade completed.
 The system is going to reboot in 5 seconds...
 INIT: Switching to runlevel: 6
 INIT: Sending processes the TERM signal

Downgrade Script Output—Second-Time Run

```
# ./cds_remote_iso_install --downgrade
```

```
*****
*****      WARNING      WARNING      WARNING      *****
*****
```

This program will perform an OS downgrade on this CDS server.
 The current configuration will be backed up and stored on the /boot_cds partition. This backup CANNOT be used to restore the system after the downgrade is complete.

To restore the system to the version being downgraded to, the backup created prior to downgrading to this base OS must be used to restore the system.

For more information contact your Cisco support representative.

Details of this process are provided in:
 /var/log/cds/cds_upgrade_host.log

This will be the only warning provided.

Continue the downgrade procedure now? [yes/no]: **yes**

```

VNC Listener IP[:Port]? []: 10.86.21.204:5500

Upgrade version: cdstv-3.2.1
Script mode: --downgrade
Hardware type: Lindenhurst
ISO location: /root/cds_remote_upgrade/cdstv-os-5.1-i386.iso
Baud rate: 115200
Script running directory: /root/cds_remote_upgrade
Command line options: --downgrade
VNC Listener IP[:Port]: 10.86.21.204:5500
Doing prerequisite checking... [DONE]
VNC Listener 10.86.21.204:5500 is reachable.
ISO image SHA1 checksum dd6ea8c20235bd0233f5da6d58cb7c95a534804d matches
dd6ea8c20235bd0233f5da6d58cb7c95a534804d in iso.shalsum.
Created directory /mnt/cdrom.
Mounted /root/cds_remote_upgrade/cdstv-os-5.1-i386.iso on /mnt/cdrom.
CDSTV application processes are not running.
/dev/hda1 is mounted on /boot.
/boot is 22% used.
/dev/hda2 is mounted on /.
/ has 4718984 KB space available, more than 1000000 KB required.
/dev/sda2 is mounted on /home.
/dev/sda3 is mounted on /var.
/dev/sda6 is mounted on /arroyo.
/dev/sda1 is mounted on /arroyo/db.
/boot_cds has 3845796 KB space available, more than 1000000 KB required.
Stored chkconfig --list output to chkconfig-list.output.
Copied chkconfig-list.output to /root/chkconfig-list.output.
Found CDS version cdstv-3.2.1 to backup
Found restore.list.
Found backup.list.
Detailed size of backup files list:
/home/isa 211700KB
/etc 32360KB
/root/chkconfig-list.output 8KB
/arroyo/test 88KB
/arroyo/image/tags 4KB
/usr/local/share/snmp/snmpd.conf 8KB
/var/spool/cron 12KB
/var/net-snmp 12KB
Total available space on /arroyo/db: 46166868 KB,
Space needed for /arroyo/db/DATADIR: 35156 KB,
Space needed for /arroyo/log: 375348 KB,
Total estimated space required for all archives is: 654696 KB,
Excluded space of preexisting backups: 0 KB,
Calculated space needed for backup: 218232 KB.
There is enough space for backup.

Doing backup... [DONE]
Successfully created backup archive
/arroyo/db/host_cdstv-3.2.1_20100322-052820_backup.tgz.
Successfully created backup db archive
/arroyo/db/host_cdstv-3.2.1_20100322-052820_backup_db.tgz.
Successfully created backup log archive
/arroyo/db/host_cdstv-3.2.1_20100322-052820_backup_log.tgz.

Backup archive /arroyo/db/host_cdstv-3.2.1_20100322-052820_backup.tgz is complete.

Backup db archive /arroyo/db/host_cdstv-3.2.1_20100322-052820_backup_db.tgz is complete.

Backup log archive /arroyo/db/host_cdstv-3.2.1_20100322-052820_backup_log.tgz is complete.

Would you like to upload backup archives to a remote server? [yes/no]: yes

```

```

Remote SSH server address: 1.1.1.1

Remote SSH server path: /arroyo/backup

Username: root

scp /arroyo/db/host_cdstv-3.2.1_20100322-052820_backup*.tgz root@1.1.1.1:/arroyo/backup
The authenticity of host '1.1.1.1 (1.1.1.1)' can't be established.
RSA key fingerprint is d2:92:dc:d5:1b:a4:d9:ee:ab:a8:93:48:ba:47:fb:a5.
Are you sure you want to continue connecting (yes/no)? yes
root@1.1.1.1's password:
Successfully copied /arroyo/db/host_cdstv-3.2.1_20100322-052820_backup.tgz to 1.1.1.1
Successfully copied /arroyo/db/host_cdstv-3.2.1_20100322-052820_backup_db.tgz to 1.1.1.1
Successfully copied /arroyo/db/host_cdstv-3.2.1_20100322-052820_backup_log.tgz to 1.1.1.1

***** WARNING *****
All prerequisite checking has completed and the downgrade is ready
to continue. In the next section of this downgrade, the OS will be
reloaded and power must be maintained to the system. This is
the last chance to manually terminate this downgrade.
Would you like to continue? [yes/no]: yes

Creating upgrade partition for remote installation... [DONE]
  Located hard drive sda.
  Located /dev/sda6 on /dev/sda.
  Located /dev/sda7 on /dev/sda.
  /dev/sda7 has 4883728KB total disk space, more than 4800000KB required.
  Created directory boot_cds/upgrade.
  Created directory /arroyo/db.

Copying install ISO Image /root/cds_remote_upgrade/cdstv-os-5.1-i386.iso to
/boot_cds/upgrade... [DONE]
  Copied /root/cds_remote_upgrade/cdstv-os-5.1-i386.iso to /boot_cds/upgrade/.

Removing other ISO in //upgrade (other than cdstv-os-5.1-i386.iso)... [DONE]
  Removed ISO cdstv-os-5.1-x86_64.iso

Copying upgrade files to upgrade directory /boot_cds/upgrade... [DONE]
  Copied ks_remote_template.cfg to /boot_cds/upgrade/ks_remote_template.cfg.
  Copied cds_remote_iso_install to /boot_cds/upgrade/cds_remote_iso_install.
  Copied cdsmodify.sh to /boot_cds/upgrade/cdsmodify.sh.
  Copied backup.list to /boot_cds/upgrade/backup.list.
  Copied restore.list to /boot_cds/upgrade/restore.list.
  Copied cdsinstall to /boot_cds/upgrade/cdsinstall.
  Copied chkconfig-list.output to /boot_cds/upgrade/chkconfig-list.output.
  Copied /mnt/cdrom/isolinux/vmlinuz to /boot/vmlinuz-cds.
  Copied /mnt/cdrom/isolinux/initrd.img to /boot/initrd-cds.img.
  Copied restore_cfg.sh to /boot_cds/upgrade/restore_cfg.sh.
  Copied backup_cfg.sh to /boot_cds/upgrade/backup_cfg.sh.
  Copied cds_upg_report.sh to /boot_cds/upgrade/cds_upg_report.sh.
  Copied /mnt/cdrom/Server/logrotate-3.7.4-7.i386.rpm to /boot_cds/upgrade/.

Generating stagel kickstart for selected upgrade options... [DONE]

Modifying grub.conf for selected upgrade options... [DONE]

Copying upgrade files from /boot_cds/upgrade to /upgrade... [DONE]
  Created directory /upgrade.
  Copied /boot_cds/upgrade/cdstv-os-5.1-i386.iso to /upgrade/cdstv-os-5.1-i386.iso.
  Copied /boot_cds/upgrade/cdsmodify.sh to /upgrade/cdsmodify.sh.
  Copied /boot_cds/upgrade/CDS_UPGRADE_INFO to /upgrade/CDS_UPGRADE_INFO.
  Copied /boot_cds/upgrade/ks_upgrade_host_stagel.cfg to
/upgrade/ks_upgrade_host_stagel.cfg.

```

```
Removing unnecessary backup files... [DONE]
  Removed /root/CDS_BACKUP_INFO
```

```
Cleaning up... [DONE]
  /mnt/cdrom is unmounted.
```

```
Logfile at: /var/log/cds/cds_upgrade_host.log.
It's also available at /boot_cds/upgrade/cds_upgrade_host.log after upgrade completed.
The system is going to reboot in 5 seconds...
... details omitted...
```

The OS downgrade is complete.

Step 11 After the CDS server reboots, log in as *root*.

Step 12 Copy the server backup files from the remote server to the CDS server that is being downgraded. The backup files (backup and backup_db) were created as part of the upgrade procedure and stored on a remote server.



Note These backup files were the files created during the upgrade procedure, not the downgrade procedure.

Step 13 Restore the backup with the **restore_cfg.sh** script. Both the backup and the backup_db archives are needed. If one archive is missing, the other archive is not restored by the **restore_cfg.sh** script. At the “Backup configuration tgz archive?” prompt, enter the full path and filename of the backup file:

```
# cd /boot_cds/upgrade
# ./restore_cfg.sh

*****
*****          WARNING          WARNING          WARNING          *****
*****
This is the restore_cfg.sh that is expected to be used to restore
a system configuration archive that was created from the backup_cfg.sh
or from an upgrade/downgrade process for the CDS-TV systems.
If the archive being restored is not from either source defined above,
do not continue this process. Continuing without a valid archive
could render the system inoperative. This will be the only warning.

Do you wish to continue? [yes/no]: yes
Backup configuration tgz archive?: /<backup_location>/host_CDS-TV-Release_timestamp_backup.tgz
Found tgz archive /<backup_location>/<host_cdstv-2.1.3-b1_20100312-140644_backup.tgz.
Found db tgz archive /<backup_location>/host_cdstv-2.1.3-b1_20100312-140644_backup_db.tgz.
Found /boot_cds/upgrade/restore.list.
Found restore file list in boot_cds/upgrade/restore.list.
Changed directory to /.

Checking /<backup_location>/host_cdstv-2.1.3-b1_20100312-140644_backup.tgz...
Checking /<backup_location>/host_cdstv-2.1.3-b1_20100312-140644_backup_db.tgz...

Extracting /<backup_location>/host_cdstv-2.1.3-b1_20100312-140644_backup.tgz...

Restore the services from /root/chkconfig-list.output
chkconfig --level 0 ntpd off
chkconfig --level 1 ntpd off
chkconfig --level 2 ntpd on
chkconfig --level 3 ntpd on
chkconfig --level 4 ntpd on
chkconfig --level 5 ntpd on
chkconfig --level 6 ntpd off
```



```
Removing existing /arroyo/db/DATADIR...

Extracting /<backup_location>/host_cdstv-2.1.3-b1_20100312-140644_backup_db.tgz...

Restoration completed.

Review the details of the restoration procedure in:
/var/log/cds/restore_cfg.log
```

Step 14 Move the `/etc/rc.d/upgrade.rc.local` file to `/etc/rc.d/rc.local` and reboot the server:

```
mv -f /etc/rc.d/upgrade.rc.local /etc/rc.d/rc.local
# init 6
```



Note

During the initialization process of a CDS server or after recovering a CDS server that has been down for less than an hour, the CDS database performs a complete synchronization. The database synchronization takes approximately five minutes before the server becomes ready for service. If the CDS server is down for a much more than an hour, the database synchronization takes longer than five minutes. The `netstat` command does not show the interfaces as up until the synchronization has completed.

Step 15 Copy the ISO image file downloaded from the Cisco software download website to the `/root` directory of the CDS server and run the `cdsinstall` script to downgrade the software. In the following example, the CDS server is downgraded to Release 2.3.3 for an RTSP environment:

```
# mv cdsinstall cdsinstall.252
# cp -p cdsinstall.233 cdsinstall
# ./cdsinstall <CDS-TV-2.3.3.iso>
Select Deployment Type (ctrl-c to quit):
  1) ISA
  2) RTSP/FSI
2
RTSP Selected
Mounting /CDS-TV.iso at /mnt/cdrom
Calling inst.sh for common files
Killing running processes: statsd

Starting cdsupgrade.sh
  WARNING: No existing version found on this server.  Cannot backup existing files
Un-taring common-base.tgz
Fixing modprobe.conf
Loading File List
...done

Processing File List
...done

Moving modprobe.conf into place
...done

Installing kernel rpm
Installing cserver production rpm
Disabled various startup scripts in /etc/init.d
Installing busybox
warning: /home/packages/busybox-1.2.0-4.el5.i386.rpm: Header V3 DSA signature: NOKEY, key
ID 37017186
Installing kdump
warning: /home/packages/kexec-tools-1.101-194.4.el5.i386.rpm: Header V3 DSA signature:
NOKEY, key ID 37017186

Configuring kdump...
```

```

Starting kdump service...

No kdump initial ramdisk found.[WARNING]
Rebuilding /boot/initrd-2.6.18-53.el5PAEkdump.img
kernel-debuginfo-2.6.18-53.el5PAE is not installed. You need this to use makedumpfile!
please install it and restart the kdump service
Failed to run mkdumpd
Upgrading logrotate if necessary
warning: /home/packages/logrotate-3.7.4-8.i386.rpm: Header V3 DSA signature: NOKEY, key ID
37017186
Installing CmdTool2

Set Write Policy to WriteBack on Adapter 0, VD 0 (target id: 0) success

Set Write Cache OK if bad BBU on Adapter 0, VD 0 (target id: 0) success

Set Disk Cache Policy to Enabled on Adapter 0, VD 0 (target id: 0) success

Starting fixperms.sh
  Loading File List
  Processing File List
Ending fixperms.sh
Calling inst.sh for rtsp
Killing running processes: statsd
Un-taring rtsp-base.tgz
Calling forprod.sh
Removing ISA-specific files
Installing RTSP-specific files (existing files backed up to .file)
mv: `/home/isa/bss/database/avsdb' and `/arroyo/db/avsdb' are the same file
mv: `/home/isa/bss/database/AVSDBUtil' and `/arroyo/db/AVSDBUtil' are the same file
mv: `/home/isa/bss/database/DATADIR' and `/arroyo/db/DATADIR' are the same file
mv: `/home/isa/bss/database/lost+found' and `/arroyo/db/lost+found' are the same file
RTSP installation complete

Starting fixperms.sh
  Loading File List
  Processing File List
Ending fixperms.sh
Unmounting /mnt/cdrom
cdsinstall completed. Please reboot the device.

```



Note The warning, *Failed to run*, and move messages in the out put above are known, benign errors and can be ignored.

Step 16 If you are downgrading a Vault, edit the `/home/isa/bss/etc/fsi.conf` file and add the following line. If you are downgrading a different server, go to [Step 21](#).

```
live_ingest_redundancy_backup_postfix=#B#
```

a. Restart `avsdb` and `statsd` by entering the following commands:

```

# db_shutdown
# pgrep avsdb (to make sure there is no avsdb processes running)
# su - isa
# netstat -na |grep 9999 (to make sure db connections are established)
$ exit
# pkill statsd
# pgrep statsd (to make sure there is no statsd process running)
# /home/stats/statsd -d eth0 (copy statsd start line from /etc/rc.local and run the
command here)

```

- b. Submit the Server Setup page for the CDS Server. the 2.3.3 setupfile is generated in `/arroyo/test/<vault/cache/streamer>/setupfile`. 2.3.3 statsd do not support online changing of thin pipes. By submitting the Server Setup page for a CDS Server, the cache/stream interface files `ifcfg-eth<index>` on the CDS Server are removed, so thin pipe settings in the memory are still in Release 3.2.1 format and work with the 3.2.1 cServer.

The following is a sample thin pipe definition in `/arroyo/test/<vault/cache/streamer>/setupfile`:

```
pipe 8:vg1-cg1 bandwidth limit 3000
arrayid 3
end pipe
pipe 8:vg1-vg2 bandwidth limit 200
arrayid 9
end pipe
```

- c. Downgrade the thin pipe configuration in `/arroyo/test/<vault/cache/streamer>/setupfile` and remove cache/stream interface files `ifcfg-eth<index>`.

Step 17 Uncomment the start line of `snmpd` in `/etc/rc.local`.

Step 18 Comment the "run_isa_boot" line and uncomment the "run_isa" line in `/etc/rc.local`.

Step 19 Shutdown the database on the server:

```
# db_shutdown
```

Step 20 Reboot the server.

Step 21 Using the CDSM GUI, verify the server is online:

- a. Click **Monitor > System Health**. The System Health Monitor page is displayed.
- b. Verify the status boxes for the server are green.

It takes a few minutes to synchronize the database. Wait until the other CDS servers become reachable and the services are running. The CDSM GUI System Health Monitor Page can be used to verify the CDS server is functioning correctly after the downgrade. The CDSM GUI System Health Monitor page shows the states of the network, disk, and services on each CDS server.

Step 22 After the CDS server has been verified as being reachable, log in to the CDSM GUI and disable the server offload:

- a. Click **Maintain > Servers > Server Offload**. The Server Offload page is displayed.
- b. From the **Server IP** drop-down list, choose the IP address or nickname of the server and click Display.
- c. Choose **Online** and click **Submit**.

When Server Offload is enabled on a server, the server is configured to reject new provisioning. That is, the server does not allow new ingests on a Vault or new streams on a Streamer and gracefully moves existing streams to another Streamer.



Note When downgrading to Release 2.0.x, the `/arroyo/log/protocoltiming.log` file incorrectly displays the following warning displays, "WARNING: Server is OFFLINE" after a server has been brought online.

Step 23 If you are downgrading a Vault, enable the vault mirror group. If you are downgrading a different server, go to [Step 24](#).

Use SSH to access each vault in the group and enter the following command:

```
echo 1 > /proc/calypso/tunables/allowvaultarraymirroring
```

Go to `vi /arroyo/test/vault/setupfile` and uncomment the line “allow vault array mirroring 1”.

- Step 24** To verify that the CDS server is online, make sure that the file `/var/tmp/TRICKLE_DOWN` does not exist.

The downgrade is complete. If there are any issues or if you want to review the upgrade process, run the `/boot_cds/upgrade/cds_upg_report.sh` script and use the resulting archive for the review.

Downgrading the Software on a CDSM or VVIM

If the CDS or VVI has redundant CDSMs or VVIMs, downgrade the secondary first, then downgrade the primary.

The primary and secondary CDSM or VVIM can be determined by entering the `ifconfig -a | more` command. The primary has the following output:

```
eth0:1    Link encap:Ethernet  HWaddr 00:11:00:00:00:00
          inet addr:172.22.98.54  Bcast:172.22.99.255  Mask:255.255.254.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          Memory:b8820000-b8840000
```

The primary CDSM has device `eth0:1`. The secondary CDSM does not have the virtual IP address as up.



Note

Downgrading a CDSM requires that the TV CDS ISO image file has been downloaded and copied to the CDSM and if applicable, VVIM. Before downgrading the software, review the information in the “Introduction” section on page 2-1. For information on downloading the software files, see the “Getting the Cisco TV CDS Software Files for Release 3.2.1” section on page 2-6.



Note

Before downgrading a CDSM or VVIM, delete all sites and thin pipes from the CDSM or VVIM, if any exist.

To downgrade the software on a CDSM or VVIM, do the following:

- Step 1** Log in to the CDSM as `root`. Log in to the secondary CDSM and downgrade it first, if redundant CDSMs exist.
- Step 2** Restore the configuration and database files from the backup that was created as part of the upgrade procedure. For information on this procedure, see the “Performing a Restore on the CDSM” section on page 5-29.
- Step 3** If you are downgrading to Release 2.0, remove the `/arroyo/www/htdocs/cdsm` file before downgrading the software version on the CDSM:
- ```
#rm -fr /arroyo/www/htdocs/cdsm
```
- Step 4** Delete thin pipe definitions:
- Log in to the GUI and going to **Configure > Array Level > Thin Pipe Map** page.
  - Delete the pipe from **Configured Pipes**.
  - Click **Delete**.

- d. Click **OK**.
- e. Repeat Steps **b.** to **d.** to delete all thin pipes configured in Release 3.2.1 software.

**Step 5** Delete site definitions:

- a. Login to the GUI and go to **Configure > Array Level > Site Setup** page.
- b. Select the Site to be deleted and click **Display**.
- c. Select **None** in **New Site** list and click **OK** for each Group Name in **Site Members**. This site is listed in **Unassigned Groups**.
- d. Click **Delete Site** to remove this site.
- e. Repeat Steps **b.** to **d.** to delete all sites defined in 3.2.1 until there is no site displayed in the page.

**Step 6** Run the **cdsinstall** script to downgrade the software using the ISO image file downloaded from the Cisco software download website. In the following example, the CDSM is downgraded to Release 2.3.3:

```
mv cdsinstall cdsinstall.252
cp -p cdsinstall.233 cdsinstall
./cdsinstall <CDS-TV-2.3.3.iso>
Select Deployment Type (ctrl-c to quit):
 1) CDSM
1
CDSM Selected
Mounting CDS-TV-PROD.iso at /mnt/cdrom
Running inst.sh for isa
Killing running processes: statsd
Un-taring isa-base.tgz
Calling forprod.sh
Removing RTSP-specific files
(Output omitted)
```

**Step 7** After both CDSMs or VVIMs are downgraded (slave and master), reset the password on one of CDSMs or VVIMs. To reset the password, execute the following command as root user on the CDSM or VVIM:

```
/home/stats/resetpw
Parsed 3 tokens, use PlainText, image version: 2.3.3-b0
Did not find regular file /etc/cdsremoteauth
Password values reset successfully
```

**Step 8** Reload the CDSM or VVIM GUI and enter the password that was used in Release 2.3.3.

**Step 9** When downgrading the CDSM to a 2.0.x Release, network information contained in the SubnetTable is moved to the RouteTable. Verify that the Route Tables have been restored:

- a. Choose **Configure > Server Level > Route Tables**. The Route Tables page is displayed.
- b. Verify the information contained in the Route Tables and click **Submit**.

---

The downgrade is complete.

