



# Release Notes for Cisco TV VDS 3.8.1

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**Last Updated: October 16, 2014**

These release notes describe the features and caveats for all releases in the Cisco TV VDS Release 3.8 train.

These release notes are updated with each release in the train. This update adds information for Cisco TV VDS Release 3.8.1. For a list of the caveats that apply to this release, see the [“Caveats” section on page 4](#).

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# Introduction

Cisco TV VDS 3.8.1 is a next-generation cloud DVR appliance that works together with Cisco Cloud Object Store (COS) as well as third-party cloud storage products. TV VDS 3.8.1 embodies the program recording functions of Cisco Video Distribution Suite for Television (VDS-TV), but provides new features and enhancements in response to customer requests.

TV VDS 3.8.1 includes:

- Support for archival storage via the Cisco Cloud Object Store (COS)
- Feature enhancements relative to previous Cisco TV recorder offerings
- Multiple bit rate (MBR) VOD ingest integration with the COS
- Optional archiving to cloud storage using the OpenStack Swift API
- Use of Yellow Dog Updater Modified (YUM) for installation and upgrade
- SNMP MIBs for enhanced monitoring of TV Recorder statistics

## Feature Enhancements

Compared to previous Cisco cloud DVR offerings, TV VDS 3.8.1 provides the following enhancements:

- Improved system management
- Redundancy and recovery capabilities
- Comcast R8 updates for I03 and I04
- Comcast C2 video indexing I04 (Version 2)

## Hardware Enhancements

TV VDS 3.8.1 adds support for the Cisco Content Delivery Engine (CDE) equipped with 4 TB hard drive (CDE 460-4R3), and continues to support CDE models 110, 250, 460-4R1, and 470-4R2. Support for CDE470-4R2 and CDE460-4R3 hardware allows Digital Video Recording storage in a high capacity cloud. See the [Cisco Content Delivery Engine 205/220/250/420/460/470 Hardware Installation Guide](#).

## Software Enhancements

Enhancements to software features present in earlier VDS-TV releases include new functionality to support:

- Enhanced statistics monitoring
- AVS database (AVSDB) data protection
- Swift API support for Cloud Object Store (COS) archiving
- Comcast R8 I03 and I04 support
- MBR Profiles alignment
- Cross-recording prevention
- HTTP ingest
- Orphaned Global Object ID (GOID) cleanup
- Support for Comcast C2 Indexing V2 specification, including:

- Reduction of index file size
- Reordering of index records
- Update to Audio Header Records
- Limiting Audio Index Records
- HE-AAC Support
- Removal of AVC B and P Frame Records
- Update to AVC I Frame Record
- Update to EBP Index Record
- Update to AVC Normal Rate Random Access Picture Record
- Variable Bit Rate (VBR) Record Flag
- Implementation of AVC PPS, AVC SEI, and AVC Slide Header records
- Additional Program Map Table (PMT) Descriptor support, including
  - Audio Descriptor - High Efficiency Advanced Audio Coding (HE-AAC)
  - Maximum Bit Rate Descriptor - Provides hints to TV Recorder for resource allocation
  - Closed Caption (CC) Descriptor - Eliminates the need to parse AVC SEI for CC information
- CableLabs Encoder Boundary Point (EBP) Support
- Configuration changes to support new features and enhancements
- Supports recording start times later than the current NTP time for interoperation with Cisco Recorder Manager
- AVSDB partition size check and automatic shutdown if either /arroyo/db or /arroyo/log partition reaches 90%

## Unsupported Features

The following features are not implemented in TV VDS 3.8.1, but are under consideration for a future release:

- Support for PMT Change
- Support for CableLabs AAC Audio Descriptor

## Supported Environments

TV VDS 3.8.1 supports RTSP environments. Some RTSP environment features only apply to certain RTSP Deployment Types.

## System Requirements

TV VDS 3.8.1 runs on the CDE110, CDE250, CDE460, and CDE470. See the [Cisco Content Delivery Engine110 Hardware Installation Guide](#), and the [Cisco Content Delivery Engine 205/220/250/420/460/470 Hardware Installation Guide](#). TV VDS 3.8.1 does not run on the CDE100, CDE200, CDE300, and CDE400 hardware models.

TV VDS 3.8.1 supports Recorder Manager version usrm-3.3.0-40.e15.

**Note**

To display online help correctly when viewing the CDSM GUI in Internet Explorer 8, turn on Compatibility View by choosing **Tools > Compatibility View** from the browser main menu.

## Caveats

Caveats describe unexpected behavior in Cisco VDS software releases. Severity 1 caveats are the most serious caveats; severity 2 caveats are less serious. Severity 3 caveats are moderate caveats, and only selected severity 3 caveats are included in the caveats document.

Caveat numbers and brief descriptions for Cisco VDS TV Release 3.8-based releases are listed in this section.

## Open Caveats

### Open Caveats for Cisco TV VDS Release 3.8.1

[Table 1](#) lists the open issues in the TV VDS 3.8.1 release.

Bug details are displayed in the [Bug Search](#).

**Table 1** *Open Caveats in TV VDS 3.8.1 Release*

Bug ID	Description
CSCuq89430	3.8 : CDSM GUI monitor shows incorrect disk availability.
CSCuq95607	3.8 avbdb: unclosed transactions in several tables.
CSCur03647	3.8: avbdb exists due to /arroyo/log partition >95% full.
CSCuq87435	3.8: live backup should be able to clean up B_* directories.
CSCun02763	[CISCO-159] DB trigger problem causes recordings to fail.
CSCuj56388	Improperly includes SCTE-35 PID.
CSCun94647	[CISCO-238] Do not index \"invalid\" EBPs.
CSCun94660	[CISCO-237] All I-Frames are not also IDR.
CSCuq51102	3.8 Rec: Support compaction without avbdb running.
CSCuq66076	380B39: Yum upgrade changes ttyS0 console baud rate.
CSCuq01328	nDVR-Recorder (CDE460) is not generating a vmcore.
CSCuo90819	[CISCO-295] Orphan COIDS and GOIDS.
CSCuq60662	3.8 Rec: Orphaned GOID generated when many R8 DeleteContent requests.
CSCuq52315	Orphan GOID on Recorders.
CSCur24931	3.8 recsvr hit coredump when deleting accounts.
CSCur26221	Online 381B13 recorder displays as Down on CDSM.

## Resolved Caveats

### Resolved Caveats Cisco TV VDS Release 3.8.1

[Table 2](#) lists the fixed issues in the TV VDS 3.8.1 release.

Bug details are displayed in the [Bug Search](#).

**Table 2** *Resolved Caveats in TV VDS 3.8.1 Release*

Bug ID	Description
CSCup52183	3.6 Rec: Yum install from 3.4.2ES2 is stuck at avbdb shutdown.
CSCup33343	Monitor will not start avbdb automatically after I shutdown db manually.
CSCup50879	3.6 Yukon AVSDB protection:backup server stuck when client stop avbdb.
CSCup49088	3.6.0 b183 cserver cannot startup and disk up/down frequently.
CSCtr62991	IP nick names stuck in system after re IP.
CSCtx23597	DB_VERSION_MISMATCH when running "rpm -qa".
CSCui37462	Live ingest would delay after system run a long time.
CSCuj02516	Smoothing algorithm needs to be fixed to run less often.
CSCuj19102	CDSM - Trick Mode Capture enable/disable has to be more granular.
CSCuj31912	Add statistics to track individual control message bw.
CSCuj31938	Vaults not seeing the correct primary server.
CSCuj38030	MD5checksum are same.
CSCuj43061	CCP Proxy Locate and on demand remote server connection issue.
CSCuj44621	RTSP thread monitoring can't be enabled.
CSCuj82750	IP Nickname page slow.
CSCuj84010	DB crash on memory allocation for transaction detail.
CSCul00394	opulate_contents_remotely.py script does not operate as expected.
CSCul24306	TCP connection exist always after power off STB.
CSCul29203	TrickMode API calls to CDSM: Connections are not being closed properly.
CSCul55720	Ingest FTP pull should use relative path.
CSCul93441	Full resync is triggering every time we restart Database.
CSCul96087	One way connection between vault and primary streamer.
CSCum04796	NGOD A3 GetContentInfo response enhancement.
CSCum17582	ISA services restart should be avoided during startup GOID validation.
CSCum18718	Liveness Inactivity Timer only updated on Pause.
CSCum21030	Wrapper Script on AVSDBUtil for getting the GOIDs for the PAID inputted.
CSCum26100	Importer doesn't delete .fin file.
CSCum34791	MasterContentstore failed when any slave down and back until slave is up.
CSCum50991	db gets hung when trying to sync.
CSCum54834	Divide by zero bug in find_busiest_group.

**Table 2**      **Resolved Caveats in TV VDS 3.8.1 Release**

Bug ID	Description
CSCum60267	FSI using Streamer Load information from Database.
CSCum63857	Excessive blkog messages on VVIMs.
CSCum68181	[CISCO-159] Rec returns 503 on /rec/record/RecordingStatus queries.
CSCum74618	Limit the rate of evaluator queries.
CSCum74646	Low priority bandwidth calc. need to include receive buffer backlog.
CSCum74673	Smoothing evaluators are running too often.
CSCum74680	Remote Smoother should not prefer one server.
CSCum74692	Server overall capacity should include network CPU.
CSCum74726	Do not send out ack on every single network interrupt
CSCum82644	ifcfg-ethx file for Locate port have a "NETMASK=(blank)".
CSCum95976	42: Inaccurate calculation of the bitrate for AAC audio.
CSCum96674	Index file for Live ingest should only be mirrored from ingesting Vault.
CSCum97178	3.2.5 : repdb_bkup file not available under /arroyo/db.
CSCun07983	Issue with the Locate Virtual IP - Netmask is not getting updated.
CSCun07992	Original mpeg name should not be altered.
CSCun08079	[CISCO-159] CDE460 not reporting status on recordings (SR 628999379).
CSCun15656	Top Flag Field is being forced to true for progressive contents.
CSCun15815	Recorder Transfer Request Failure.
CSCun18714	CServer detects "pic_order_cnt_type" incorrect.
CSCun20686	250-2A4 vault hang ad requires power cycle to clear.
CSCun22327	Backup utility failed for STREAM_OBJECT_15.db table.
CSCun23927	Content Store Master Crashes if the hostname is more than 16 Characters.
CSCun25181	Locate/General Port Subnet Mask not exporting into the XML.

## Accessing the Bug Search Tool

This section explains how to use the Bug Search tool to search for a specific bug or to search for all bugs in a release.

- 
- Step 1** Go to <https://tools.cisco.com/bugsearch/>.
- Step 2** At the Log In screen, enter your registered Cisco.com username and password; then, click **Log In**. The Bug Search page opens.



**Note** If you do not have a Cisco.com username and password, you can register for them at <http://tools.cisco.com/RPF/register/register.do>.

- Step 3** To search for a specific bug, enter the bug ID in the Search For field, and press **Enter**.

- Step 4** To search for bugs in the current release, specify the following criteria:
- Select the **Model/SW Family** Product Category drop-down list box, then enter **Cisco Videoscape Distribution Suite for Television** or select the name from the **Select from list** option.
  - Select **Cisco Videoscape Distribution Suite for Television** from the list that displays.
  - The **VDS Television Software** type displays in the Software Type drop-down list box.
  - Releases: 3.8.1.
  - Advanced Filter Options—Define custom criteria for an advanced search by selecting an appropriate value from the drop-down lists by choosing either one Filter or multiple filters from the available categories. After each selection, the results page will automatically load below the filters pane. If you select multiple filters, it behaves like an AND condition.
    - Modified Date—Select one of these options to filter bugs: **Last Week, Last 30 days, Last 6 months, Last year, or All.**
    - Status—Select **Fixed, Open, Other, or Terminated.**

Select **Fixed** to view fixed bugs. To filter fixed bugs, uncheck the Fixed check box and select the appropriate suboption (Resolved or Verified) that appears below the Fixed check box.

Select **Open** to view all open bugs. To filter the open bugs, uncheck the Open check box and select the appropriate suboptions that appear below the Open check box.

Select **Other** to view any bugs that are duplicates of another bug.

Select **Terminated** to view terminated bugs. To filter terminated bugs, uncheck the Terminated check box and select the appropriate suboption (Closed, Junked, or Unreproducible) that appears below the Terminated check box. Select multiple options as required.
    - Severity—Select the severity level:
      - 1: Catastrophic.
      - 2: Severe
      - 3: Moderate
      - 4: Minor
      - 5: Cosmetic
      - 6: Enhancement
    - Rating—Select the bug’s quality rating: **5 Stars** (excellent), **4 or more Stars** (good), **3 or more Stars** (medium), **2 or more Stars** (moderate), **1 or more Stars** (poor), or **No Stars**.
    - Support Cases—Select whether the bug **Has Support Cases** or **No Support Cases**.
    - Bug Type—Select whether the bug is **Employee Visible & Customer Visible** or **Customer Visible Only**.
- Step 5** The Bug Toolkit displays the list of bugs based on the specified search criteria.
- Step 6** You can save or email the current search by clicking their respective option.

If you have any problems using the Bug Search tool, log into the Technical Support website at <http://www.cisco.com/cisco/web/support/index.html> or contact the Cisco Technical Assistance Center (TAC).

## Configuring New CDE460 and CDE470 Systems

Complete the following steps to set up a new CDE460 or CDE470 with TV VDS 3.8.1.

- 
- Step 1** Configure `/etc/hosts`, `/etc/sysconfig/network`, and `/etc/sysconfig/network-scripts/ifcfg-eth0`.
  - Step 2** Execute `service network start` to start the network device.
  - Step 3** Execute `/vdstvpreinstall /VDS-TV-PROD.iso` and select **5** for RECORDER.
  - Step 4** Enter `yum groupupdate recorder`.
  - Step 5** Reboot the CDE460 or CDE470.
  - Step 6** Execute `cdsconfig`.
  - Step 7** Configure the following either manually or via the CDSM GUI:
    - a. Interface setup
    - b. Recorder setup
    - c. Route table
  - Step 8** Reboot the CDE460 or CDE470 again.
  - Step 9** Start `avsd` and confirm that it starts successfully.
  - Step 10** Start `cserver` and confirm that it starts successfully.

## Upgrading to Cisco VDS-TV Release 3.8.1

For the upgrade sequence of the VDS devices in your system (CDSM and VDS Recorder), see the “Overview” chapter in the [Cisco TV VDS 3.8 Installation, Upgrade, and Maintenance Guide](#).

To upgrade a VDS device, do the following:

- 
- Step 1** Download the ISO image file (`VDS-TV-PROD-3.8.1-b13.iso`) and the `vdstvpreinstall` script from the Cisco Software Download website. For more information on downloading the software files, see the “Overview” chapter in the [Cisco TV VDS 3.8 Installation, Upgrade, and Maintenance Guide](#).



**Note** VDS-TV servers running RedHat Linux 5.1 and 5.2 may require a patch to fix a vulnerability in the Bash shell, a software component that ships with Cisco TV VDS Release 3.8.1. To access the patch file and instructions for applying it, go to [http://cdsrelease.cisco.com/hotpatch/Bash\\_Upgrad\\_3.2.25](http://cdsrelease.cisco.com/hotpatch/Bash_Upgrad_3.2.25).

- 
- Step 2** For the VDS Recorder, on Recorder Manager, offload the VDS Recorder to prevent new recording requests.
    - a. From the Recorder Manager web GUI, choose **ResourceManager > Recorders**, and select the VideoRecorder to be upgraded.
    - b. Choose **VideoRecorder CDSRECORDER:XXXX:YYY > Configuration**, and change the value of AdminState from InService to **OutOfService**.
    - c. Change the value of ArchiveAdminState from InService to **OutOfService**.



- Step 3** For the VDS Recorder, offload the device before upgrading the software to prevent the processing of fill requests.
- From the CDSM GUI, choose **Maintain > Servers > Server Offload**. The Server Offload page appears.
  - From the **Server IP** drop-down list, select the IP address or nickname of the server and click **Display**.
  - From the New Server Status drop-down list, select **Offline** for a Recorder or Streamer or Caching Node, then select **Offline (No Ingest & Fill)** for a Vault.
  - Click **Submit**.
  - Check the protocoltiming log to confirm that the VDS server has been offloaded.

**Step 4** Log into the VDS server via SSH as user *root*.

**Step 5** Copy the YUM ISO image file, YUM *vdstvpreinstall* script, and Bash RPM to the VDS Recorder.

```
# scp -p <user>@<remote_ip_address>:VDS-TV-3.8.1.iso /root/.
# scp -p <user>@<remote_ip_address>:vdstvpreinstall /root/.
```

**Step 6** Enter the following command to kill the *monit* process and prevent applications from being restarted automatically:

```
# ps -ef|grep monit
# kill -9 <PID>
```

Enter the following command to confirm that the *monit* process is killed.

```
# pgrep monit
```

**Step 7** For VDS Recorder, enter the following command to stop all applications, especially *avbdb*:

```
# su - isa
# arroyo stop
```

Enter the following command to confirm that all applications, especially *avbdb*, have stopped.

```
# arroyo status
# exit
```

For CDSM, enter the following command to shut down *avbdb*:

```
# db_shutdown
```

Wait for a moment, and then enter the following command to confirm that *avbdb* is stopped:

```
# ps -ef|grep avbdb
```

**Step 8** Enter the following command to back up the database:

```
# cd /arroyo/db
# cp -pr DATADIR DATADIR-342ES2
```

**Step 9** Comment out the following lines that start the services in */etc/rc.local*:

```
# su - isa -c "arroyo start avbdb" >& /dev/null
# /arroyo/test/run

# /home/stats/statsd.bin -i <Server IP> -s <subnet mask> -d eth0

# /home/stats/monit/monit -d 1 -c /home/stats/monit/monitrc >& /dev/null
# sleep 1
# /home/stats/monit/monit -c /home/stats/monit/monitrc reload >& /dev/null
# sleep 1
```

```
# /home/stats/monit/monit -c /home/stats/monit/monitrc monitor all >& /dev/null

# su - isa -c "arroyo start recsvr" >& /dev/null
# su - isa -c "arroyo start dnsresolver" >& /dev/null
```

**Step 10** If necessary to resolve the Bash vulnerability described in Step 1, download the Bash patch file and its release notes from [http://cdsrelease.cisco.com/hotpatch/Bash\\_Upgrad\\_3.2.25](http://cdsrelease.cisco.com/hotpatch/Bash_Upgrad_3.2.25). Follow the instructions in the release notes for applying the patch.

**Step 11** Enter the following command to run the vdstvpreinstall script to prepare for YUM installation:

```
# cd /root
# ./vdstvpreinstall VDS-TV-3.8.1.iso
```

When prompted, choose *one* of the following:

- Choose **5** for RECORDER.
- Choose **1** for CDSM/VVIM.



**Note**

When installing YUM for the first time, execute vdstvpreinstall locally on the Recorder. This will install YUM RPMs, create configuration files, and create a local repository.

For subsequent YUM upgrades, you can use the same method, or optionally, use an external YUM server. To use an external YUM server, configure the server in /etc/yum.repos.d/vdstv.repo as shown in the following example:

```
baseurl=http://10.74.15.187/Yukon/VDSTV 381 3
```

**Step 12** For the VDS Recorder, run the following YUM command to upgrade to Release 3.8.1:

```
# yum -y groupupdate recorder
# reboot
```

For the CDSM, run the YUM command to upgrade to Release 3.8.1:

```
# yum -y groupupdate vdstv-cdsm
# reboot
```

**Step 13** For the CDSM, log in to the GUI as a user with *Engineering* access level and configure the settings on the CDSM Setup page.

**Step 14** After the Recorder has come up, edit /arroyo/test/afterrun to use the new index mode tool.

Replace the old tunable:

```
echo 0x80 > /proc/calypso/internal/trick_test0
```

...with the new index mode tool:

```
avs_indexingmode -c
```

**Step 15** Check the execution permission of /arroyo/test/afterrun.

```
# ll /arroyo/test/afterrun
# chmod +x /arroyo/test/afterrun
```



**Note**

If afterrun does not have permission to execute, add permission.

**Step 16** After the Recorder has come up, start the services as per the sequence in `/etc/rc.local`,

a. Start avbdb:

```
# su - isa -c "arroyo start avbdb" >& /dev/null
```

b. Start cserver:

```
# /arroyo/test/run
```

c. Start statsd:

```
# /home/stats/statsd.bin -i <Server IP> -s <subnet mask> -d eth0
```

**Step 17** If R8 I04 is to be used, wait until statsd connects to avbdb and both are operational, then change the R8 version from the original I02 to I04 as follows:

a. From the CDSM GUI, choose **Configure > Server Level > Recorder Setup**.

b. From the **Server IP** drop-down list, select the IP address or nickname of the sever and click **Display**.

c. From the **Protocol Version** drop-down list, select **I04**.

d. Click **Submit**.

e. Confirm that **ProtocolVer=4** has been written to `/home/isa/bss/etc/recsvr.conf`.

**Step 18** Continue to start the services left in the `/etc/rc.local` as follows.

a. Start monit:

```
# /home/stats/monit/monit -d 1 -c /home/stats/monit/monitrc >& /dev/null
```

```
# sleep 1
```

```
# /home/stats/monit/monit -c /home/stats/monit/monitrc reload >& /dev/null
```

```
# sleep 1
```

```
# /home/stats/monit/monit -c /home/stats/monit/monitrc monitor all >& /dev/null
```

b. Start Recorder applications:

```
# su - isa -c "arroyo start recsvr" >& /dev/null
```

```
# su - isa -c "arroyo start dnsresolver" >& /dev/null
```

**Step 19** Uncomment the following lines that start the services in `/etc/rc.local`:

```
su - isa -c "arroyo start avbdb" >& /dev/null
```

```
/arroyo/test/run
```

```
/home/stats/statsd.bin -i <Server IP> -s <subnet mask> -d eth0
```

```
/home/stats/monit/monit -d 1 -c /home/stats/monit/monitrc >& /dev/null
```

```
sleep 1
```

```
/home/stats/monit/monit -c /home/stats/monit/monitrc reload >& /dev/null
```

```
sleep 1
```

```
/home/stats/monit/monit -c /home/stats/monit/monitrc monitor all >& /dev/null
```

```
su - isa -c "arroyo start recsvr" >& /dev/null
```

```
su - isa -c "arroyo start dnsresolver" >& /dev/null
```

**Step 20** For VDS Recorder, after the VDS Recorder is operational, return the server to online status as follows:

a. Choose **Maintain > Servers > Server Offload**. The Server Offload page appears.

b. From the **Server IP** dropdown list, select the IP address or nickname of the server and click **Display**.

- c. Choose **Online** and click **Submit**.
- d. Choose **Monitor > System Level > System Health** and, on this page, verify the online status of the VDS server.

**Step 21** For the VDS Recorder, verify that the following TRICKLE DOWN files *do not* exist.

```
# 11 /usr/tmp/TRICKLE_DOWN
# 11 /tmp/TRICKLE_DOWN
```

If either file exists, remove it using the appropriate command, as follows:

```
# rm -f /usr/tmp/TRICKLE_DOWN
# rm -f /tmp/TRICKLE_DOWN
```

**Step 22** For VDS Recorder, check the status of the locate port status as follows:

```
#cat /proc/calypso/status/resiliencyinfo
```

For example, if the locate port is not started:

```
[root@CDE460-17-30 tmp]# cat /proc/calypso/status/resiliencyinfo
Resiliency Info:
Configured Service Addresses: 1

Service Address: 10.60.190.100
HTTP Redirector Service: Not Usable
```

For example, if the locate port starts successfully:

```
[root@CDE460-17-30 ~]# cat /proc/calypso/status/resiliencyinfo
Resiliency Info:
Configured Service Addresses: 1

Service Address: 10.60.190.100
HTTP Redirector Service: Primary
```

If the locate port does not start successfully, stop the service using Steps 6-7 above, reboot the server, and repeat Step 21 above.

**Step 23** For the VDS Recorder, on Recorder Manager, bring the VDS Recorder online as follows:

- a. From the Recorder Manager Web GUI, choose **ResourceManager > Recorders**, and select the VideoRecorder to be upgraded.
- b. Choose **VideoRecorder CDSRECORDER:XXXX:YYY > Configuration**, and change the value of AdminState from OutOfService to **InService**.
- c. Change the value of ArchiveAdminState from OutOfService to **InService**.

**Step 24** For the VDS Recorder, check the heartbeat messages in the Event Log of Recorder Manager to confirm that the VDS Recorder is operational, as follows:

```
# tail -f /opt/cisco/usrm/EventLog/DDMMYYYY_000000.txt |grep <Recorder_IP_ADDR>
```

For example:

```
# tail -f /opt/cisco/usrm/EventLog/25Jun2014_000000.txt |grep 172.22.99.189
```

## Downgrading from Release 3.8.1

For the downgrade sequence of the VDS devices in your system (CDSM/VVIM and VDS servers [Vault, Streamer, Caching Node, ISV]), see the “Overview” chapter in the [Cisco TV VDS 3.8 Installation, Upgrade, and Maintenance Guide](#). To downgrade a VDS device, do the following:

- 
- Step 1** Download the ISO image file (for example, CDS-TV-3.4.2es2-b11.iso) and the cdsinstall script (for example, cdsinstall-3.4.2es2) for Release 3.8 from the Cisco software download website. For more information on downloading the software files, see the “Overview” chapter in the [Cisco TV VDS 3.8 Installation, Upgrade, and Maintenance Guide](#).
- Step 2** For the VDS Recorder, on Recorder Manager, offload the VDS Recorder to prevent new recording requests as follows:
- From the Recorder Manager Web GUI, choose **ResourceManager > Recorders**, and select the VideoRecorder to be upgraded.
  - Choose **VideoRecorder CDSRECORDER:XXXX:YYY > Configuration**, and change the value of AdminState from InService to **OutOfService**.
  - Change the value of ArchiveAdminState from InService to **OutOfService**.
- Step 3** For the VDS Recorder, offload the device before upgrading the software to prevent fill requests as follows:
- From the CDSM GUI, choose **Maintain > Servers > Server Offload**. The Server Offload page appears.
  - From the **Server IP** drop-down list, select the IP address or nickname of the sever and click **Display**.
  - From the **New Server Status** drop-down list, select either:
    - Offline** for a Recorder, Streamer, or Caching Node.
    - Offline (No Ingest & Fill)** for a Vault.
  - Click **Submit**.
  - Check the protcoltiming log to confirm that the VDS server has been offloaded.
- Step 4** Log in to the VDS server via SSH as user *root*.
- Step 5** Copy the ISO image file and the cdsinstall script to the /root directory and run the cdsinstall script to download the software.
- For example, use the following commands for downgrading to Release 3.4.2es2:
- ```
# scp -p <user>@<remote_ip_address>:CDS-TV-3.4.2es2-b11.iso /root
# scp -p <user>@<remote_ip_address>:cdsinstall-3.4.2es2 /root
```
- Step 6** Enter the following command to kill the monit process and prevent applications from being restarted automatically:
- ```
# ps -ef|grep monit
# kill -9 <PID>
```
- Then, enter the following command to confirm that the monit process is killed:
- ```
# pgrep monit
```
- Step 7** For the VDS Recorder, enter the following commands to stop all applications, especially avbdb:
- ```
# su - isa
# arroyo stop
```

Then, enter the following command to confirm that all applications, especially avbdb, have stopped:

```
# arroyo status
# exit
```

For the CDSM, enter the following commands to shut down avbdb:

```
# db shutdown
```

Wait for a moment, and then enter the following command to confirm that avbdb is stopped:

```
ps -ef|grep avbdb
```

**Step 8** For the VDS Recorder, enter the following commands to remove all 3.8.1 YUM packages:

```
# yum -y groupremove recorder
# yum clean all
# reboot
```

For the CDSM, enter the following commands to remove all 3.8.1 YUM packages:

```
# yum -y groupremove vdstv-cdsm
# yum clean all
# reboot
```

**Step 9** After the server comes up, run the cdsinstall script to install the 3.4.2 ISO image as follows:

```
# cd /root
# ./cdsinstall-3.4.2es2 CDS-TV-3.4.2es2-b11.iso
```

**Step 10** For the CDSM or VDS Recorder, enter the following command to revert to the database that was backed up before upgrade:

```
# cd /arroyo/db
# mv DATADIR DATADIR-381
# mv DATADIR-342ES2 DATADIR
```

**Step 11** For the VDS Recorder, edit /arroyo/test/afterrun to use old index tunable.

Replace the new index mode tool:

```
avs_indexingmode -c
```

With the old index tunable:

```
echo 0x80 > /proc/calypso/internal/trick_test0
```



**Note** With VDS-TV 3.4.2, it is acceptable to leave ProtocolVer=4 in /home/isa/bss/etc/recsvr.conf because this configuration does not take effect. As a result, recsvr always functions as R8 I02.

**Step 12** Reboot the CDSM or VDS Recorder as follows:

```
# reboot
```

For VDS Recorder, the services avbdb, cserver, monit, recsvr, and dnsresolver should start automatically after the VDS server has rebooted, as specified in /etc/rc.local.

**Step 13** For VDS Recorder, after the VDS server is operational, return VDS Recorder to online status as follows:

- a. Choose **Maintain > Servers > Server Offload**. The Server Offload page appears.
- b. From the Server IP drop-down list, select the IP address or nickname of the server and click **Display**.
- c. From the **New Server Status** drop-down list, select **Online** and click **Submit**.

- d. Choose **Monitor > System Level > System Health**, and on this page, verify the online status of the VDS server.

**Step 14** For the VDS Recorder, verify that the following TRICKLE DOWN files *do not* exist.

```
# ll /usr/tmp/TRICKLE_DOWN
# ll /tmp/TRICKLE_DOWN
```

If either file exists, remove it using the appropriate command, as follows:

```
# rm -f /usr/tmp/TRICKLE_DOWN
# rm -f /tmp/TRICKLE_DOWN
```

**Step 15** For VDS Recorder, check the status of the locate port status as follows:

```
#cat /proc/calypso/status/resiliencyinfo
```

**Example: Locate port not started**

```
[root@CDE460-17-30 tmp]# cat /proc/calypso/status/resiliencyinfo
Resiliency Info:
Configured Service Addresses: 1

    Service Address: 10.60.190.100
    HTTP Redirector Service: Not Usable
```

**Example: Locate port starts successfully**

```
[root@CDE460-17-30 ~]# cat /proc/calypso/status/resiliencyinfo
Resiliency Info:
Configured Service Addresses: 1

    Service Address: 10.60.190.100
    HTTP Redirector Service: Primary
```

If the locate port does not start successfully, stop the service using Steps 6-7 above, reboot the server, and repeat Step 15 above.

**Step 16** For the VDS Recorder, on Recorder Manager, bring the VDS Recorder online as follows:

- a. From the Recorder Manager web GUI, choose **ResourceManager > Recorders**, and select the VideoRecorder to be upgraded.
- b. Choose **VideoRecorder CDSRECORDER:XXXX:YYY > Configuration**, and change the value of AdminState from OutOfService to **InService**.
- c. Change the value of ArchiveAdminState from OutOfService to **InService**.

**Step 17** To confirm that the VDS Recorder is operational, check the heartbeat messages in the EventLog of Recorder Manager as follows:

```
# tail -f /opt/cisco/usrm/EventLog/DDMMYYYY_000000.txt |grep <Recorder_IP_ADDR>
```

For example:

```
# tail -f /opt/cisco/usrm/EventLog/25Jun2014_000000.txt |grep 172.22.99.189
```

## Related Documentation

Refer to the following documents for additional information about TV Recorder 3.8.1:

- *Cisco TV VDS 3.8 Software Configuration Guide*
- *Cisco Content Delivery Engine 205/220/250/420/460/470 Hardware Installation Guide*
- *Regulatory Compliance and Safety Information for Cisco Content Delivery Engines*
- *Open Source Used in Cisco TV VDS 3.8.1*

[http://www.cisco.com/en/US/products/ps12653/products\\_licensing\\_information\\_listing.html](http://www.cisco.com/en/US/products/ps12653/products_licensing_information_listing.html)

The entire VDS-TV software documentation suite is available on Cisco.com at:

[http://www.cisco.com/en/US/products/ps12653/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps12653/tsd_products_support_series_home.html)

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