Release Notes for Cisco TV CDS 2.3.3

These release notes cover Cisco TV CDS Release 2.3.3.
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New Features

The following features are supported in Release 2.3:

- ISA Environments
- RTSP Environments

ISA Environments

ISA environments with a centrally managed VVI supports the following new features:

- Real-Time Ingest (RTI) from local Vault Groups.
- Steering local live stream ingestos to local Vault Groups.
- Streamers able to locate content in central (national) Vault Groups for VOD content or a local Vault Group for real-time streaming.
- Supports Play Now feature on STBs, which allows a STB to connect to the live point on a live stream and rewind to the beginning.

RTSP Environments

RTSP environments support the following new features:

- Playlist support for Quative (off-vpath) with up to four items per playlist.
- New Cisco RTSP model (RTSP Deployment Type) that includes interaction with an Authentication Manager and supports both IPTV and cable stream destination types.
- EventIS I-30 interface.
- Interaction with Zapper set-top box (STB).
- Redirect Server—Configuration of the port used for redirecting RTSP requests to another Streamer and configuration of the debug level setting.
- Interaction with Cisco Content Delivery System (CDS) Video Navigator and Poster Art Server (PAS) Release 2.3.

Multiple Vault Groups

Up to four Vault Groups are supported in Release 2.3. If Vault Group Redundancy is enabled, content is mirrored among as many as four Vault Groups (one Vault Group ingests the content and up to three Vault Groups mirror the content). Each Vault Group has a separate mirroring policy defined by the Vault Redundancy and the number of copies stored for each Vault in the Vault Group.

In Release 2.3, a Vault Group is configured as the master Vault Group, with one of the Vaults in that group acting as the master Vault. If the master Vault fails, another Vault in that group takes over as the master.

Note: Continue using the “nofailover 1” setting in the .arroyorc file on the Vaults that should not takeover as master, if applicable to your configuration.
Enhancements

The following enhancements have been added in Release 2.3:

- Database Patrol is a new mechanism to keep the database synchronized.
- Multiple power supply fan, temperature and failure monitoring.

Supported Environments

Release 2.3.3 of the Cisco TV CDS supports the following environments and associated backoffice integrations:

- ISA environment
  - Tandberg OpenStream backoffice
  - Onewave backoffice
- RTSP environment
  - SeaChange Axiom backoffice (NGOD architecture)
  - EventIS
  - Minerva
  - Quative
  - Myrio
  - Coship
  - Eyeka

System Requirements

The Cisco TV CDS Release 2.3.3 runs on the CDE110, CDE220, and CDE420. See the Cisco Content Delivery Engine 110 Hardware Installation Guide, and the Cisco Content Delivery Engine 205/220/420 Hardware Installation Guide.

The Cisco TV CDS Release 2.3.3 also runs on the CDE100, CDE200, CDE300, and CDE400 hardware models that use the Lindenhurst chipset. See the Cisco Content Delivery Engine CDE100/200/300/400 Hardware Installation Guide for setup and installation procedures.

Release 2.3.3 does not support the CDEs with the ServerWorks chipset. All CDEs with the ServerWorks chipset need to be replaced with the CDEs with the Lindenhurst chipset or the Next Generation Appliances (CDE110, CDE220, and CDE420) before upgrading to Release 2.3.3.

See the “Related Documentation” section on page 27 for links to the documentation online.
Important Notes

The section covers important notes that apply to this release.

New SSD Driver

There is a new driver for the new solid-state drives (SSDs) that also addresses an issue with the old SSDs.

Old SSD Issue

When an abrupt power loss occurs on an older SSD while the SSD is under load, which can also happen when the SSD is being written to and a power-off shutdown occurs, the result is that the SSD may become corrupted and unusable. If an SSD becomes corrupted in this way it must be replaced.

This driver update provides a fix to prevent the corruption of the SSD when the system is being shutdown. When the system is being shutdown the driver sends a command to the SSD to stop all activity and therefore is protected from corruption.

Note

We recommend that this driver update be installed on all systems with SSDs. The driver update is compatible with both the older PV SSDs and the newer PVR SSDs.

New SSDs

New solid-state drives (SSDs) used in the following CDE models require a device driver update for the TV CDS software to recognize the drives:

- CDE220-2S1
- CDE220-2S3
- CDE250-2S5
- CDE250-2S6

A new Generation 2 SSD drive could occur in one of the above newly manufactured CDEs or as a returned merchandise authorization (RMA) SSD drive replacement.

The new SSDs replace the end-of-life (EOL) external 160 GB SSDs. A new SSD drive is a Generation 2 front-mounted SSD. The new SSD model is identified by the title “Intel SSD 320 Series” on the label and has the model number: SSDSA2BW160G3. For more information, see Field Notice 63438 at: http://www.cisco.com/en/US/products/ps7126/prod_field_notices_list.html.

The new driver prevents the corruption of the existing SSDs in the field when a system is shutdown. In the case of receiving any new model of SSDs, the driver must be installed.

Note

The new driver is 100 percent backward-compatible with older, pre-existing SSD drives. We recommend that a proactive upgrade of the SSD driver is a good best-practice.

For more information, see the “Updating the Device Drivers for new SSDs” section on page 25.

Vault Redundancy Mode

When upgrading from 2.1.x and 2.2.x to 2.3.3 with Vault Redundancy Mode turned on, the master Vault Group must be defined; otherwise, no Vault is acting as a master Vault.
Open Caveats

This release contains the following open caveats:

Cache2app

- CSCth22711
  Symptom:
  Server was hard hung.
  Conditions:
  This can occur with old hardware with a bad controller.
  Workaround:
  Reboot. Replace the hardware.

- CSCth26207
  Symptom:
  The following message is seen in the /arroyo/log/controlblocktiming.log.<date> file.
  Control block CM::RemoteFillWatcher work consumed xx.x percent of the polling process
  CPU for xx seconds
  Conditions:
  The disk and mirroring evaluators are disabled. A drive has gone bad and the Vault is trying to repair
  it. The Vault is queuing thousands of mirroring requests from other Vaults. These requests are not
  processed until the evaluator is enabled again.
  Workaround:
  Restart the Vault.

- CSCti00738
  Symptom:
  CalypsoContentStoreServer process on the Vault restarts.
  Conditions:
  When an ingest provisioning request comes in and the backoffice is unreachable at the time the
  backoffice is queried for the pre-encryption details. This query is made within a second or two from
  the initial ingest request.
  Workaround:
  None.

- CSCtk64351
  The ISA StreamService keeps getting restarted. The streams were getting stuck, so destroy stream
  API internally to the ISA/cache2app blocking a thread and eventually after losing 16 threads, the
  monitor script restarts the ISA StreamService.
  Conditions:
  There is an issue with the Primary or backup Control streamer that causes streams to get stuck.
Workaround:
Offload the Primary Control streamer and reboot it.

**Caching Node**

- **CSCth13373**
  Symptom:
  Caching Node generates a kernel core file and reboots.
  Conditions:
  Core file caused by a rare multi-CPU race condition in TCP network stack, which results in a divide-by-zero fault.
  Workaround:
  None.

- **CSCtk58386**
  Symptom:
  When a disk drive is going bad, duplicate 1x goid copy will be generated. In the meanwhile, a small portion of streams lost fills from Cache Nodes and became open.
  Conditions:
  The issue is a bad disk drive caused duplication of goid copies and streaming failures. The bad disk drive should be auto detected and permanently removed.
  Workaround:
  Soft remove the bad disk drive and replace it with good disk drive.

**Configuration**

- **CSCti70956**
  Symptom:
  Cannot enter host names containing "." through the CDSM GUI. Error message is displayed preventing entry.
  Conditions:
  The form field validation does not allow for "." in Host Name field.
  Workaround:
  Manually edit the host file.

- **CSCti78219**
  Symptom:
  Not all packages are found in the dropdown on the Monitor > System Level > Package Monitor page.
  Conditions:
  When the number of packages in the system reaches a level greater than ~70K.
  Workaround:
If the number of packages in the system grows much beyond 70K, then the dropdown may not be able to display them all. The solution is to delete packages that are no longer needed. The max number of packages that will display in the dropdown is variable, and is dependent on the system that is accessing the web page.

- **CSCtk98203**
  
  **Symptom:**
  Accessing the groups in Configure->Array Level Stream Groups, Configure-> Array Level -> Vault Groups, Configure -> Array Level -> Cache groups results the GUI page not responding.
  
  **Conditions:**
  This situation may occur if a server that was the part of the group was removed from the CDSM using `/home/stats/svrinit_15 -d`, without removing it from the group.
  
  **Workaround:**
  1. Add the server that was causing this issue back to the CDSM using `/home/stats/svrinit_15`, with the the same groupid and server id as it was having earlier when it was managed by the CDSM.
  2. Remove it from the Stream/Vault/Cache Group.
  3. Execute `/home/stats/svrinit_15 -d` to remove the server.

- **CSCtk98236**
  
  **Symptom:**
  On the CDSM GUI Configure > Array Level > Barker Setup page, the number of contents available for selection in the provided dropdown is found to only be 100 contents.
  
  **Conditions:**
  This issue is encountered in both ASI and GigE streaming modes when the system has more than 100 completed ingests.
  
  **Workaround:**
  The API called to return a list of contents available for use in a Barker stream returns the first 100 contents in a lexicographic order. Therefore, it is recommended that customers wishing to stream Barkers name their Barker contents using the prefix “000”. For example, the first Barker content would be named “000_barkernname1.mpg”, the second “000_barkernname2.mpg”, etc. This will ensure that the content the customer wants available for Barker streams is always available within the drop-down lists on the Configure > Array Level > Barker Setup page.

**CServer**

- **CSCth80826**
  
  **Symptom:**
  No support for Live Ingest and Streaming for CDN.
  
  **Conditions:**
  Live Streaming of C2 Index formatted files.
  
  **Workaround:**
  This is a new feature scheduled for 2.5.

- **CSCti02825**
  
  **Symptom:**
Took too long to initialize CServer memory and the system crashed.

**Conditions:**
Potentially bad memory in the server or bad controller.

**Workaround:**
Reboot the server or check and replace hardware.

- **CSCti12423**
  
  **Symptom:**
  An input/output request is not returned from the host bus adapter (HBA) driver during a reset. This can cause the evaluators to hang which may have cascading effects to other nodes in the system.
  
  **Conditions:**
  This potentially only occurs with devices that are struggling with input/output requests because of the device or media errors.
  
  **Workaround:**
  None.

- **CSCti34224**
  
  **Symptom:**
  No support for Live Ingest and Streaming for CDN.
  
  **Conditions:**
  Live Streaming of C2 Index formatted files.
  
  **Workaround:**
  This is a new feature scheduled for 2.5.

- **CSCtj18612**
  
  **Symptom:**
  Large number of damaged and/or missing goids.
  
  **Conditions:**
  Create thin pipe, force system out of sync.
  
  **Workaround:**
  If sites are overwhelmingly out of sync the system will take a large amount of time for the evaluators to replicate and clean up data through the thin pipe. Over time, system will clean up.

- **CSCtk56148**
  
  **Symptom:**
  No support for Live Ingest and Streaming for CDN.
  
  **Conditions:**
  Live Streaming of C2 Index formatted files.
  
  **Workaround:**
  This is a new feature scheduled for 2.5.

- **CSCtk57387**
  
  **Symptom:**
If a streamer server in group A was able to communicate with a server in group B, all streamers in group A show the service address record of the other streamer.

Conditions:
Streamers in group A show the service address record of the other streamer

Workaround:
The code could be changed so that when servers send the service address state to each other, they would not send information for any service addresses for which the sending server has never communicated with either the primary or backup server for that service. This change would automatically stop propagating the service address information to new servers when there are no longer any servers running that have actually communicated with the primary or backup server for that service address.

- CSCtk66303
  Symptoms:
The cache server has a general protection fault in CM::LocalReadRate::checkAndFillHole+0x66c as can be see in the back trace.
  Conditions:
The crash was caused because an acknowledge packet sent from a streamer to the cache server has a bad length for the amount of data acknowledged. This causes the cache server to unlock the wrong amount of data associated with the fill and this causes the later protection fault.
  Workaround:
Older streamers are known to cause this problem. Updating streamers to the latest release may resolve the issue. Still looking for an additional cause.

Database

- CSCtg93593
  Symptom:
  Replay.db grows to excessively large size, eventually running the filesystem out of disk space.
  Condition:
  An extended outage event such as network partitioning between Streamers and Vaults or CDSM can cause a large number of error events (and SNMP traps), which are sent to the CDSM and they become queued on the source device, which causes this issue.
  Workaround:
  Restore connectivity between sites and servers to avoid buildup of error events. Database stopped on the Brussels streamer due to partition issue.
  1. Delete the reply.db (17G) and restart the database.
  2. Bounce statsd on both vlt 7 & brx1str.
  3. Re-push configs from CDSM to both servers, and verify the files have updated on both servers.
  4. Then copy over a new DB to BRX1str.

- CSCtk62560
  Symptom:
  Setup file contains wrong RTSP ports in the setupfile on the Streamer.
Conditions:
RTSP Deployment Type. Centralized VVIM/CDSM or Streamer CDSM side.

Workaround:
Check for the following in the statsd.log.DATE:
“ERROR: no deployment type found, server is NOT configured for isa via bms vendor!” in statsd log of the streamer.

RESOLUTION:
1. Log in as arroyo, change the deployment type from NGOD to something else, submit, and then change it back to NGOD, submit.
2. Log into the various streamers and restart the statsd.
CONFIRM: statsd.log.DATE says “RTSP Deployment type is [2]” on statsd log. (if the customer environment is a NGOD RTSP Env).

- CSCtk84103
Symptom:
Database shutdown process took prolonged time for 73 minutes on the master Vault. During shutdown process, database is unavailable on the master Vault.

Conditions:
Database has a big number of assets.

Workaround:
None

- CSCtl03347
Symptom:
When viewing the avsdb.log file, messages of the following sort may appear which may seem to indicate an error has occurred:

\[\begin{align*}
\text{xx-xx-2010} & \quad 01:32:50\text{PM}: \text{CONTENT\_OBJECT\_GET\_ALL\_RATELIMIT} \text{ for sockfd=195 starting} \\
\text{xx-xx-2010} & \quad 01:32:50\text{PM}: \text{CONTENT\_OBJECT\_GET\_ALL\_RATELIMIT} \text{ for sockfd=195 exiting due to counter = 1 >= limit = 1} \\
\text{xx-xx-2010} & \quad 01:32:50\text{PM}: \text{CONTENT\_OBJECT\_GET\_ALL\_RATELIMIT} \text{ for sockfd=195 send 9999 failed} \\
\text{xx-xx-2010} & \quad 01:32:50\text{PM}: \text{CONTENT\_OBJECT\_GET\_ALL\_RATELIMIT} \text{ for sockfd=195 returning with error}
\end{align*}\]

A log of “send 9999 failed” appears after a mention of exiting due to a counter reaching its limit of 1, and then a “returning with error” message for the same sockfd appears.

Conditions:
These messages appear during content object resynchronization, which will also take place during node addition and patrol functionality. The messages would appear on the master Vault/SSV from which another server is performing the content object resynchronization.

Workaround:
This is a cosmetic issue as there is actually no error. The client server makes a test request to the master Vault/SSV in order to check for rate limit support, and then closes the connection before continuing with its actual getall request. This is normal procedure, and these messages simply should not appear in the logs. Please disregard these messages if and when they appear, as they are not indicative of an actual error.
FSI

- CSCtk69310
  Symptom:
  The NGOD A3 live recording TransferStatus asynchronous notification message doesn’t contain correct bit rate value. e.g. bitrate = 0.
  Conditions:
  For NGOD A3 live recording, all the status asynchronous notification has this problem.
  Workaround:
  After recording completes, the client can actively issue one GetTransferStatus request to get the final bit rate.

ISA

- CSCth65408
  Symptom:
  The stream setup fails continuously if there is only one stream control and it gets stuck. The existing sessions also losses the trick-mode functionality.
  Conditions:
  The stream control network (QPSK) might have some issue so sending the LSCP response gets blocked.
  Workaround:
  Restarted the LSCP service as user ISA.
  ./stop_calypso_service --lscp

Monitoring

- CSCtj33259
  Symptom:
  If none of the vaults are available to perform the ingest then provision request is failed but content is not marked as out of service. This causes reporting issues to the VVIM, the ingest is failed but not reported as failed.
  Conditions:
  There are some configuration or connectivity issues between vaults causing none of the vaults available to perform ingests.
  Workaround:
  Problem that is causing none of the vaults available to do ingests should be rectified.
Network

- **CSCtj57299**
  
  **Symptom:**
  
  When remote mirroring (within an array) or array mirroring (to another array/site) is enabled, the ingest code will attempt to concurrently make a copy of the content to the remote vault(s). However, if the network is unable to keep up with the level of ingest traffic especially when a thin-pipe is present), then the ingest mirroring logic will send different “chunks” of the ingested files to different remote servers. The side effect is that this causes the system to temporarily generate more than the desired number of copies of content. This is clearly inefficient. The fix is to make this ingest mirroring code more intelligent in how it mirrors content. However, this will involve changing the protocol and was deemed too risky for the 2.3.3 release. Eventually, the mirroring logic will “clean-up” these extra copies.

  Several issues were discovered due to the fact that this code was generating an excessive number of copies. These defects have been resolved leaving this one as mostly an annoying inefficiency.

  **Conditions:**
  
  Mirroring is not able to keep up with the ingest or the “best” vault changes while ingesting (this is a normal condition).

  **Workaround:**
  None.

- **CSCtj84853**
  
  **Symptom:**
  
  The Stream setups are failing intermittently because the CServer is failing “SetStreamInfo” for a particular control, which is not reachable any more because of connectivity issues on the caching network.

  **Conditions:**
  
  The caching network between Primary setup streamers and Primary Control streamer is partitioned.

  **Workaround:**
  
  There are multiple workarounds.

- **CSCtk66793**
  
  **Symptom:**
  
  This problem occurs only if stream control interface is different than management interface. If the service is primary or back up control and this interface goes down then cserver does not perform the failover for the control role it has.

  **Conditions:**
  
  Switch or interface port could go down or pulled manually or cable is defective.

  **Workaround:**
  
  Enabled the interface, or offload the server and reboot it.
Other

- CSCsq57645
  Symptom:
  AIM unable to make directories in the /arroyo/asmrpt/adi/packages directory on the CDSM.
  Conditions:
  Number of directories exceeds 32K which is an ext3 limit.
  Workaround:
  Remove directories from the /arroyo/asmrpt/adi/packages directory on CDSM. Fix will be included in next major release.

- CSCtj22751
  Symptom:
  Assets won’t ingest. If you look at the log you’ll see CDS had trouble finding the PMT.
  Conditions:
  The PMT must span packets, meaning it must occupy more bytes than will fit in a single 188-byte MPEG-2 transport packet. Currently CDS TV does not support such assets. Generally this happens internationally (unlikely in the US) where the extra closed caption streams or extra audio languages can cause this to happen.
  Workaround:
  Reduce the number of languages or subtitles/captions in the stream when it is encoded.

- CSCtj33903
  Symptom:
  Currently, the steamer waits 500ms for C2 to locate a response which could cause some Content Not Found Error in production environment due to the delay.
  Conditions:
  C2 locate response takes more than 500ms.
  Workaround:
  None.

- CSCtj47588
  Symptom
  When a Power Supply (PS) fails, a PS warning alarm is generated, but not if (a redundant) PS is removed.
  Conditions:
  The PS warning alarm is generated (in the SNMP trap) when the redundant PS looses power from a power source or when the power cord is pulled out. But when the redundant PS is removed totally from the system, it momentarily generates the alarm but disappears soon after and is not seen anymore.
  Workaround:
  Upgrade the Release Builds to 2.33, 2.42 or later versions.
Streamer

- **CSCth05766**
  Symptom:
  Evaluator disabled message during Data Recovery.
  Conditions:
  When there is a very thin pipe defined (for example, less than 100 Mbps) and a very large title count (for example, greater than 250,000 titles), the data recovery evaluator can stop working between multiple sites.
  Workaround:
  Define larger communication pipes.

- **CSCti79844**
  Symptom:
  This defect typically should not have any adverse affect on a production system. If there are more than eight setup and control service address managers configured in /arroyo/test/streamer/setupfile, including the duplicate, there is the possibility that the final service address entries listed after the eight will be ignored if there are duplicate entries.
  Conditions:
  This defect is characterized by having duplicate service address entries in the /arroyo/test/setupfile. For example:
  ```
  service address 10.94.153.130 setup 3300 control 9000
  service address 10.94.153.130 setup 3300 control 9000
  ```
  Workaround:
  Manually remove duplicate service address entries in /arroyo/test/streamer/setupfile, reboot and ensure that the duplicate entries no longer exists after reboot.

- **CSCti96225**
  Symptom:
  Missing transition event in ODRMSessionHistory.

- **CSCtj66430**
  Symptom:
  CGW continues to serve cache-fill streams even when it loses connection to all the vaults, which cause streaming errors.
  Conditions:
  2.2.1 CGW loses connection to all the vaults.
  Workaround:
  None.

Vault

- **CSCtf11524**
  Symptom:
Vault will crash when number of content is above 300,000 titles.
Conditions:
When ingesting more than 300,000 title the system crashes.
Workaround:
Don’t ingest more than 300,000 titles.

• CSCtf11533
  Symptom:
  Vault will crash when number of content is above 300,000 titles.
  Conditions:
  When ingesting more than 300,000 title the system crashes.
  Workaround:
  Don’t ingest more than 300,000 titles.

• CSCtk34612
  Symptom:
  The logic for cache-fill needs to consider unequal thin pipe setting and bandwidth analysis.
  Conditions:
  This behavior was noticed while trying to debug an issue where a customer was seeing an imbalance in traffic between multiple sites. After further analysis it was determined that this issue was not the actual cause of the extreme imbalance. Further review determined that this condition has only minor affects given all the other dynamics in a multiple site system.
  Workaround:
  None.

Resolved Caveats

The following caveats have been resolved since Cisco TV CDS Release 2.3.3. Not all resolved issues are mentioned here. The following list highlights associated with customer deployment scenarios.

Cach2app

• CSCtg18769
  Symptom:
  When adding or deleting a stream destination from the CDSM GUI, if the master Streamer goes into kernel debugger (KDB) mode, the CalypsoClient process is stuck at the CDSM and the script to add or delete a new stream destination for that Service Group is not able to run.

CServer

• CSCth31829
  Symptom:
Resolved Caveats

Mirroring within an array is slow due to excessive memory being consumed by communications to another array.

Conditions:
Mirroring is completely blocked because the thin pipe settings are not allowing data to flow because the per interval value is less than a full packet.

- CSCth87732
  Symptom:
The “PAID not found: hbo.com::HBOD1000000000575947::index status: 4” type error messages need to print out the vault to which the CGW communicated. This is to help the debugging process.

- CSCti94507
  Symptom:
  Vault is constantly coring.

- CSCtj02140
  Symptom:
  When rebooting C2 master, all the CGW in the cache group started seeing, unseeing, each other per the CServer.

- CSCtj16184
  Symptom:
  Hardware Monitors reporting improper values on some servers inconsistently.

- CSCtj77501
  Symptom:
  CGW core during cache filling and experience network connectivity issue.

Configuration

- CSCtg88234
  Symptom:
  Submitting System-> Headend Setup page removes the leading zeros in the Service Group Name.

- CSCth21572
  Symptom:
  A device (vault, cache or streamer) in a VVIM may accidentally delete the /arroyo/test/RemoteServers file while doing a system reconfiguration. This reconfiguration may be triggered in multiple ways, such as adding new Vaults. Without an appropriate RemoteServers file, the affected device cannot communicate with other devices in the network.

- CSCth69300
  Symptom:
  New DSCP markings get configured in the /arroyo/test/cache/setupfile and /arroyo/test/vault/setupfile. The values are selected from the Configure > Server Level > Server Setup page, under Assured Forwarding Class. There is no way to keep these settings out of the setupfile.
Resolved Caveats

- CSCti03224
  Symptom:
  All servers on the platform get unregistered from their respective groups (stream/vault/cache/ssv).

- SCti17154
  Symptom:
  The RemoteServers contains all streamers in a deployment, not simply the streamers that are part of the group.

- CSCti77728
  Symptom:
  Some changes that can be made to the subnet table require a reboot. The GUI needs to alert the user to this fact.

- CSCtk30422
  Symptom:
  Peer Entries are removed from the remote server file.

Database

- CSCtc36567
  Symptom:
  Deleted content can sometimes be successfully deleted in the CServer and database; however, in the content reports they are shown with a delete timestamp of N/A. This is due to the VVIM being down for a longer period of time and upon restoration of the VVIM the content objects are resynchronized. It is during this resynchronization process that the delete timestamp is not populated; however, the content object metadata is cleared out of the database. Customers can require that this time stamp is populated for auditing purposes that state that content has been removed from the system.

- CSCth02785
  Symptom:
  Contents on the VVIM do not completely match the contents on the Vault.

- CSCti38354
  Symptom:
  During a new cache server addition, the remoteservers file is not updated with all of the vault servers.

- CSCti73302
  Symptom:
  In 2.3.2 b20 when the customer executes a db_shutdown command avsdb generates a core file.

- CSCtk68063
  Symptom:
  A local server (server A) has fewer contents than the master Vault/SSV (server B).

- CSCtk69852
  Symptom:
During adding Vault 10.74.115.134, all other servers are online, also online status check for other servers are passed, after cdsconfig returned and said that DB full sync completed and new server is added into system. Check other servers’ .arroyorc, only Vault 10.74.115.124 and Vault 10.74.115.136’s .arroyorc are updated, all other servers’ .arroyorc are not updated.

- CSCtk94473
  Symptom:
  When dynamically adding a new server 10.74.115.134, after it is complete all other servers' .arroyorc are updated correctly, but cdsconfig prompted that new adding failed from avsdb log. Database was shutdown after failure happen.

### File Systems

- CSCth87521
  Symptom:
  2.2.2 Multiple copies of Goids were created causing KDB m_lastWriteStart.

### FSI

- CSCti91796
  Symptom:
  213 in FSI response is assumed successful. There is an issue getting the file size from the ftp server as part of the ingest process. The ftp server is returning a 550 response for the SIZE request. There is also a source code issue. This response is parsed for a 213 response code, which is the success code for the ftp SIZE response. If you notice the 550 response contains the 213 characters:

### Installation

- CSCth87710
  Symptom:
  The /arroyo partition on CDE250-2S6 streamer has only 8GB disk space. It is much smaller than the /arroyo partition on GEN2 streamer which has 35GB space. With 8GB space it would be filled out by the log files within one day if we keep running a large streaming load, like 7K-10K streams.

- CSCtj23608
  Symptom:
  Installation fails during RPM installation with error message: DB_VERSION_MISMATCH.

### ISA

- CSCth34073
  Symptom:
  The session plays from the beginning if the ISA stream setup fails during the session resume.
  Conditions:
The ISA Stream Setup fails and the API Stream.status() return 0 npt to the OpenStream.

- **CSCth63889**
  
  **Symptom:**
  
  If the CDSM gets stuck, it cannot persist the trick-mode data for the sessions, and the data is lost if the CDSM or avsdb is restarted.

  If the trick-mode events are not dispatched to OpenStream, OpenStream goes into reconciliation mode. ISA Stream Service returns an empty list of the sessions, because it does not have the trick-mode data. OpenStream keeps calling StreamService.getTrickmodeEventsList() every 10 seconds.

  **Conditions:**
  
  The trick-mode data is lost some how.

- **CSCtg09554**
  
  **Symptom:**
  
  Delete an IP subnet from the VHO CDSM and look into the VHO OpenStream for returnRoutings. The returnRoutings still shows the deleted IP Subnet. This does not impact any normal functionality though.

  **Conditions:**
  
  Deleting an IP Subnet.

- **CSCth98418**
  
  **Symptom:**
  
  ISA ContentStore restarts because of network issues. If the network issues occur then it could cause multi-master. If multi-master occurs then content store or isa service monitor application might not get the reply back for its requests and could wait forever and so script times out and restart both monitor application and the content store.

- **CSCti21413**
  
  **Symptom:**
  
  If the CDS server is unable to get to the OpenStream for registration, then it is quite hard to figure out what underneath causing the issue.

- **CSCtk01542**
  
  **Symptom:**
  
  If the Content is already deleted from the Content table, then the MSV record for that content from the pending delete table should be deleted. The script also archive the log file.

- **CSCtk56053**
  
  **Symptom:**
  
  Provision 2 packages with the same content name. The ContentStore will not throw the duplicate exception if 2nd content is getting provisioned.

### Memory

- **CSCti68313**
  
  **Symptom:**
When a new vault is added to an array, the scope of other systems that it has visibility to is larger than can fit in an 8K buffer and the memory allocation fails. This causes an overflow condition and the vault crashes.

**Monitoring**

- **CSCtj83961**
  Symptom:
  The test bed works on 2.3.3 b16 rtsp environment. If it ingest live recording and play live stream using this content in some trick speed, after the recording finish, the content copies on Completed Ingest page shows some goids are partially on the streamer.

- **CSCtk58766**
  Symptom:
  When System Temperature reported by SDT exceeds the high limit, VVIM reports System Temperature incorrectly in the Server Vitals page.
  High limit becomes concatenated with the label, e.g., “System Temp 50C/122F”, current value is printed as 0C/32F and actual current value (e.g., “51C/123F”) is incorrectly reported as maximum limit.

**Network**

- **CSCtj86813**
  Symptom:
  Each system (vault, cache node, or streamer) keeps track of all the other servers that is within its scope of visibility. That allows for each of the systems to communicate, transfer content, provide management communications, provide fault tolerance and resiliency and maintain general health of the system. A table is kept in memory called the remote servers table and is used for keeping track of all other servers that are visible to each server. This remote servers table has a limit of 125 entries. A check was in the code to not allow more than 125 entries so that the table would not overflow and cause memory corruption. An error in the logic of how to handle this condition did not allow for appropriate operation of the system and therefore it went into kdb. Since this same condition exists in the code that is running on each of the vaults, when the 126th server was brought up it was visible to all the other vaults, therefore they all executed the invalid logic in the code causing each of them to go to kdb.

- **CSCtj87648**
  Symptom:
  When a cache server has two vault groups that it could fill from and one of the vault groups has all the vaults offline so that they will not accept ingests, this triggers a situation where none of those vaults in that group will be selected to fulfill the fill request. This creates a situation where most if not all fill request made by the cache server will go to the one vault group and the fill capacity is not balanced.

- **CSCtk11488**
  Symptom:
  Duplication of content across caching servers.
Other

- CSCso89545
  Symptom:
  Performance test for 60-channels keeps going working with BMS. 3 core dumps are found when creating and publishing ADI packages. Confirmed by BMS, at that time, OpenStream servers was rebooting.

- CSCtg97814
  Symptom:
  /arroyo/test/RemoteServers file on the streamer is populated with all the cache servers IPs.

- CSCth40761
  Symptom:
  After rebooting a Vault, the Trickle_Down file is missing.

- CSCth83720
  Symptom:
  Error in CDSM /arroyo/www/logs/error_log:
  /arroyo/www/htdocs/scripts' not found or unable to stat

- CSCti05893
  Symptom:
  While running cdsconfig on a streamer in a CDSM Domain (Split Domain using HTTP as cache fill protocol), it doesn’t accept a Server ID greater than 1000.

- CSCtj21349
  Symptom:
  Ingests on the platform will not start.

- CSCtk09042
  Symptom:
  During the ingest process where Widevine encryption is utilized, AIM issues a PackageNotifyRequest. Widevine provides a HTTP response that utilizes chunked encoding for the XML payload. On occasion, the next chunk is not immediately in the socket and AIM is failing the ingest request. AIM should be more robust and allow for the situation where the next chunk is not immediately available on the socket.

RTSP

- CSCtg60835
  Symptom:
  RTSP server issues a 551 Option Not Supported response for requests that don’t include the .decimal_npts require value.
Resolved Caveats

- **CSCti83038**
  Symptom:
  RTSP requests are not being processed and/or are being processed very slowly (long latency between request and response).

**SNMP**

- **CSCth34909**
  Symptom:
  When performing an SNMP GET or GETNEXT on some ifXTable objects, e.g., ifHighSpeed.4, SNMPD crashes almost randomly. SNMP walk on this table produces similar results.

**statsd**

- **CSCti83139**
  Symptom:
  In ISA environments where Vault redundancy is disabled and National and Local Vaults are configured, it is possible that the Setup Stream Group does not have the servers from the other Control-only Stream Groups.
  Conditions:
  ISA environments, Vault redundancy disabled, National and Local Vaults are configured.

- **CSCtk69250**
  Symptom:
  In customer there are four streamer groups: ZZ-Streamer-Group1, ZZ-Streamer-Group2, ZZ-Streamer-Group3, and XX-Streamer-Group1.
  ZZ-Streamer-Group1 is the setup streamer group. Normally, remoteservers file from setup streamer group should have all other streamers; remoteservers file from non setup streamers should only have peer streamers in the same group and streamers in the setup groups.
  Right now, streamer in other three streamer groups have wrong remoteservers file, they include streamer from other non setup streamer groups.

- **CSCtk82042**
  Symptom:
  Allows for new (multiple) power supply fan, temp. and failure monitoring.

**Streamer**

- **CSCtg51516**
  Symptom:
  Content that has been pre-encrypted for Motorola STBs sometimes does not play the first time. Subsequent play attempts sometimes succeed.
Resolved Caveats

- CSCtg78367
  Symptom:
  Streamer in kdb state with back trace showing SC::Stream::setStreamInfo+0x619 as the location of the page fault.

- CSCti79602
  Symptom:
  If RTSP is having issues and we move the master then we may crash the backup.

Utilities

- CSCtg25603
  Symptom:
  On avs_clist on 1.5.1.5.4, the clone list has problems with the goid length. Also, the cloned vault can delete a remote goid.

Vault

- CSCtg29316
  Symptom:
  This fix is to prevent a malformed vaultcloner file from causing the cloner to delete content on the donor.

- CSCth97509
  Symptom:
  Evaluator stuck in disabled Mode. In the protocoltiming.log, the following warning is seen:

  WARNING: Evaluators are disabled.

- CSCtj00762
  Symptom:
  Vault kdb when more than 20 copies are created:

  Unable to handle kernel paging request at 000000a087d65de0

- CSCtj61822
  Symptom:
  Evaluator is stuck in disable mode on several vaults.

- CSCtk69771
  Symptom:
  Vault repeatedly enters kdb at “../rom/ObjectUpgrader.cpp”, line 1234.

- CSCtk97769
  Symptom:
  One vault hit ASSERT “LOM::ObjectLocalMirrorAgent invalid remove\n” when concurrently ingest different rate VOD contents, include MPEG SD, MPEG HD, H.264 SD, H.264 HD, non-SD.
Video Quality

- CSCtg36215
  Symptom:
  Macroblocking for up to a second after a transition from FF or REW to 1x Play.

- CSCti79546
  Symptom:
  Content ftpout size mismatched the original size.

- CSCti19189
  Symptom:
  Occurs during tick mode when fast-forward is selected the IMG timer shows 2:10, then when selecting play, the IMG timer shows 2:25 and the video jumps. Other times if fast-forward has been selected and then play is selected, a five-second jump can be seen.

- CSCti24141
  Symptom:
  If OLES encryption is enabled in an IP VOD environment, and jitter is measured at stream output from CDS TV, the jitter will exceed the MPEG-2 specs.

- CSCti59696
  Symptom:
  Content fails ingest.

- CSCtk32629
  Symptom:
  Content won’t ingest.

Upgrading to Release 2.3.3

For new installation and upgrade procedures, see the Cisco TV CDS 2.3 Installation, Upgrade, and Maintenance Guide.

If custom modifications have been made to the root crontab (for example, in ISA environments the MSV script to delete orphaned content), create the /etc/cds_noCrontabOverwrite file before upgrading the TV CDS software in order to avoid the custom crontab being overwritten. To create this file, enter the following command:

touch /etc/cds_noCrontabOverwrite

When upgrading to Release 2.3.3 or installing Release 2.3.3, you must run the cdsconfig script in order to disable the Redirect Server for RTSP Deployments. The following prompt has been added to the cdsconfig script:

Do you want to enable Redirect Server ? (yes/no) [y]

Select no if you need to disable the Redirect Server. It is not required to run cdsconfig for ISA/RTSP Shim Deployments.
Note

Release 2.3.3 supports upgrades from Release 2.0.x and Release 2.1.x. If your CDS is running an older version, you need to upgrade to Release 2.0.x or 2.1.x, before upgrading to Release 2.3.

If downgrading the VVIM or CDSM from Release 2.3.3 to Release 2.2.1, you must remove the /arroyo/www/htdocs/cdsm directory before downgrading the software.

Note

The following TV CDS software releases can coexist during an upgrade process, which allows for long upgrade windows, if necessary:

- For Vaults in a VVI in an ISA environment with SCS, the Release 2.2.1 ES8 software can coexist with the Release 2.3.3 software.
- For Caching Nodes in a VVI in an ISA environment with SCS, the Release 2.2.1 ES9 software can coexist with the Release 2.3.3 software.
- For Streamers in a VVI in an ISA environment with SCS, the Release 2.2.1 ES5 software can coexist with the Release 2.3.3 software.
- For VVI in an RTSP environment with HTTP Streamers, the Release 2.3.2 ES3 software can coexist with the Release 2.3.3 software.
- For CDS (non-VVI) in both ISA and RTSP environments, the Release 2.0.x, 2.1.x, and 2.3.2 software can coexist with the Release 2.3.3 software.

The above TV CDS software releases can only coexist during an upgrade process, and only if the upgrade sequences described in the *Cisco TV CDS 2.3 Installation, Upgrade, and Maintenance Guide* are followed.

Different TV CDS software releases are not supported in the long term on an ongoing basis.

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**Updating the Device Drivers for new SSDs**

The SSD driver update is for new SSDs and to address an issue with older SSDs. For more information, see the “New Features” section on page 2.

If a CDE requires an SSD replacement, the device driver must be updated. The device driver must be updated before replacing the SSD. If a new CDE is being added to the CDS, after upgrading the TV CDS software, the device driver must be updated. New SSDs are not recognized with the proper attributes until the device driver is updated.

Note

The new driver is 100 percent backward-compatible with older, pre-existing SSD drives. We recommend that a proactive upgrade of the SSD driver is a good best-practice.

To view a list of TV CDS software releases this device driver applies to see the defect, CSCtr29064, in the Bug Tool Kit ((http://tools.cisco.com/Support/BugToolKit/).

Note

When using the `cdsinstall` script to install the software image file, install the driver package after the `cdsinstall` script is complete.
To install the device driver update package, do the following:

---

**Step 1**
Download the `cdstv_x.y.z_CSCtr29064.bin` driver update package to the `/root` directory of the CDE. The filename is `cdstv_x.y.z_CSCtr29064.bin`, where `x.y.z` denotes the software release.

*Note*  
The driver update package includes support for all applicable software releases, so any `cdstv_x.y.z_CSCtr29064.bin` file installs correctly and can be used to update the drivers for any applicable release.

Following is the md5 checksum for the `cdstv_x.y.z_CSCtr29064.bin` driver update package:
89684e2094d841b236ba1d83e958df9b cdstv_x.y.z_CSCtr29064.bin

The driver update package is a self-extracting, self-installing package.

**Step 2**
Change the permissions on the CDE. As user `root`, enter the following command:
```
# chmod 755 /root/cdstv_x.y.z_CSCtr29064.bin
```

**Step 3**
Install the device driver update. As user `root` user enter the following commands:
```
# cd /root
# ./cdstv_x.y.z_CSCtr29064.bin
```

The package installs the device driver.

**Step 4**
To verify that the package has been installed on the CDE, view the `/etc/cisco-version-history` file, and verify that the string “cdstv_CSCtr29064” has been added to this version-history file.

**Step 5**
To verify that the driver has been updated and will be used by the CDS server, enter the following commands:
```
cd /lib/module/`uname -r`
/sbin/modinfo -F version csd.ko cdd_sys.ko
```

The updated driver files report the same version for both driver files in the format of `x.y.z.1`, where `x.y.z` is the version of the TV CDS software (for example, 2.3.3.1).

**Step 6**
Reboot the CDS server.
```
# reboot
```

*Note*  
Rebooting a Vault server does not interrupt stream services, but causes current ingests to fail. If your CDS does not have stream failover, rebooting a Streamer without offloading it interrupts all stream services. If possible, you should perform functions that require a system restart during times when the least number of users are actively connected to your system.

---

A new SSD drive is a Generation 2 front-mounted SSD. The new SSD model is identified by the title “Intel SSD 320 Series” on the label and has the model number: SSDSA2BW160G3. For more information, see Field Notice 63438 at:


The following command provides information on the external SSDs that are the new drive model:

```
# find /sys/devices -name "model" | xargs grep SSDSA2BW16
```

```bash
/sys/devices/pci0000:80/0000:80:05.0/0000:87:00.0/host3/port-3:7/end_device-3:7/target3:0:7/3:0:7:0/model:INTEL SSDSA2BW16
```

---
To view all SSD models currently supported by the Cisco TV CDS software, enter the following command:

```bash
# find /sys/devices -name "model" | xargs grep SSDSA
```

The older SSD model is INTEL SSDSA2BW16.

**Rolling Back the SSD Driver Update**

If for any reason you need to revert to the older SSD driver, with the TV CDS software running on the CDS server, do the following:

**Step 1** Change to the drivers directory.

```bash
cd /lib/module/`uname -r`
```

**Step 2** To save the updated driver (optional), enter the following command:

```bash
cp csd.ko csd.ko.update
cp cdd_sys.ko cdd_sys.ko.update
```

**Step 3** Rename the backed up driver files to the driver filenames. The “previous_version” is the version number of the driver update.

```bash
cp csd.ko_bkup_<previous_version> csd.ko
cp cdd_sys.ko_bkup_<previous_version> cdd_sys.ko
```

**Step 4** Verify the driver versions by using the following command:

```bash
/sbin/modinfo -F version csd.ko cdd_sys.ko
```

The drivers before the driver update have a version in the format of a.b.c and the two drivers do not necessarily have the same version number.

**Step 5** Reboot the CDS server.

---

**Related Documentation**

Refer to the following documents for additional information about the Cisco TV CDS 2.3:

- *Cisco TV CDS 2.3 ISA Software Configuration Guide*

- *Cisco TV CDS 2.3 RTSP Software Configuration Guide*

- *Cisco TV CDS 2.1–2.3 API Guide*
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:

Subscribe to the What’s New in Cisco Product Documentation as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

The entire CDS software documentation suite is available on Cisco.com at:

The entire CDS hardware documentation suite is available on Cisco.com at:

• Cisco TV CDS 2.3 Installation, Upgrade, and Maintenance Guide

• Cisco Content Delivery System 2.x Documentation Roadmap

• Cisco Content Delivery Engine 205/220/250/420 Hardware Installation Guide

• Cisco Content Delivery Engine 110 Hardware Installation Guide

• Cisco Content Delivery Engine 100/200/300/400 Hardware Installation Guide

• Regulatory Compliance and Safety Information for Cisco Content Delivery Engines

The entire CDS software documentation suite is available on Cisco.com at:

The entire CDS hardware documentation suite is available on Cisco.com at: