



# Release Notes for *Cisco Videoscape Distribution Suite Transparent Caching Release 5.1.1*

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These release notes describe the new features and caveats of the Cisco Videoscape Distribution Suite Transparent Caching Release 5.1.1.



**Note**

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VDS TC Release 5.1.1 is available as both a full installation and as an upgrade package. The file name for the *full* installation is “VDS-TC\_Installer-5.1.1b27-5.1.1b28-ISO-5.1b76-RELEASE-Cisco.iso”, and the file name for the *upgrade* package is “VDS-TC\_GA\_5.1.1b28\_Server\_Cluster.tar.gz” for a cluster installation and “VDS-TC\_GA\_5.1.1b27\_Integrated\_Appliance.tar.gz” for an integrated appliance installation.

For information on how to perform a full installation, see the “Cisco Videoscape Distribution Suite Transparent Caching Software Installation Guide” (document number OL-28015-03). For information on how to perform an upgrade, see the “Cisco Videoscape Distribution Suite Transparent Caching System Application Upgrade Guide”.

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For a list of open caveats that are pertinent to this release, see the “[Caveats](#)” section.

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# Introduction

The Cisco Videoscape Distribution Suite Transparent Caching (VDS TC) solution is focused on reducing costs and improving quality of user experience in delivering unmanaged Internet-based content, including Internet video, file sharing, software distribution, mobile application downloads, and web browsing. VDS TC integrates highly scalable caching software with high-performance Cisco Unified Computing System™ (UCS) servers and blades, Cisco® switches, and SAN storage. The VDS TC solution, combined with other Videoscape products like Cisco Videoscape Distribution Suite for Internet Streaming (VDS IS), provides a complete platform for optimizing managed and unmanaged content delivery.

For unmanaged content, Cisco VDS TC empowers service providers to alleviate network congestion due to Internet video and other high-bandwidth applications in their networks, while meeting subscribers' demand for the content and improved quality of experience. VDS TC is typically deployed in conjunction with a network element, such as a router, which is responsible for classification and redirection of traffic to the cache, based on Layer 4 and Layer 7 criteria.

## New Features

Release 5.1.1 of Cisco Videoscape Distribution Suite Transparent Caching (VDS TC) introduced the following new features:

- Added network redundancy by bonding dual NICs:
  - Bonding of dual 1 Gb NICs for connection to the management network
  - Bonding of dual 10 Gb NICs for connection to the iSCSI storage network
- Integration with up to four redundant PBR routers
- Support for Cisco NX-OS release 6.2.6 with support for IPSLA and track
- VSS configuration on the Cisco Catalyst 4500X
- Support for 10Gb connections to the storage enclosures for VDS TC Blade Server installation. This requires the use of a Cisco 2232™ Fabric Extender, or enough available 10Gb Ethernet ports on the Cisco Nexus 7000 Series Switches.
- Multicluster support using Cisco Nexus 7000 Series Switches
- Support for TACACS+ authentication when connecting with SSH
- The following enhancements have been made to the CDR:
  - TCP connections with a large timeout now show transferred-byte count
  - A new CDR type named “VERIFY\_AT” was added. This CDR type shows all verified sessions that did not end successfully because of a connection reset (RST) or connection timeout that was received from the client / server.
- You can now create complex policies that allow both AND and OR statements.
- The VDS TC Manager interface has been updated:
  - The navigation has been simplified and more efficiently organized.
  - A new Hardware View has been added.
  - The Logical View has been enhanced.
  - The option to export logs and graphs has been added to aid in remote support and troubleshooting of the system.

- Protocols that are under a user-definable threshold are not displayed on the graphs.

## Product Overview

Cisco VDS TC is multi-protocol, supporting HTTP for download, progressive download, and adaptive bit rate (ABR) streaming, as well as multiple peer-to-peer (P2P) protocols. The solution automatically adapts to content popularity once installed, and is access-network-agnostic. The system automatically adjusts to traffic mix changes during the day and week.

One of the benefits of Cisco VDS TC is that it can enable service providers to offload a significant amount of content traffic by serving the popular content from a locally cached copy, within the access network. As a result, service providers can experience a rapid return on investment (ROI) by reducing their operational network costs, and defer capital investments into their network infrastructures.

The other main benefit of Cisco VDS TC is the improvement of the quality of experience (QoE) for the subscribers of the service providers. By serving popular content from locally deployed cache, the content is better positioned to provide a better user experience than if the content were served from the original content server.

The Cisco VDS TC solution can enable service providers to:

- Lower core and edge network bandwidth
- Manage infrastructure costs for over-the-top (OTT) content in a cost-efficient manner
- Improve subscriber QoE for popular content
- Deploy OTT caching without impacting the client or origin CDN, or application behavior

## System Requirements

Cisco VDS TC is optimized for use on the Cisco Unified Computing Systems (Cisco UCS), such as the Cisco UCS C220 Rack Server or the Cisco UCS B200 Blade Server.

Product	Hardware
VDS TC Cache Server	Cisco UCS B200 Blade Server or Cisco UCS C220 Rack Mount Server with the following: <ul style="list-style-type: none"> <li>• For Cisco UCS C220 Rack Mount Server, firmware version 1.5.4.3</li> <li>• For Cisco UCS B200 Blade Server, firmware 2.2.1.b</li> </ul>
VDS TC Cache Manager	Cisco C220 Rack Mount Server or the Cisco C240 Rack Mount Server with firmware version 1.5.4.3
VDS TC SAN Storage	<ul style="list-style-type: none"> <li>• Controller BIOS version 07.86.3200</li> <li>• Storage Manager version 10.86</li> <li>• HDD firmware version 4.17</li> </ul>
VDS TC Integrated Cache Server, Manager, and storage for a VDS-TC-1S installation	Cisco UCS C240 Rack Mount Server with firmware version 1.5.4.3

# Caveats

## Open Caveats in Cisco Videoscape Distribution Suite Transparent Caching Release 5.1.1

- **CSCum14689: Show volume status from CLI**
  - **Symptom:** Currently, the only way to monitor the status of the different volumes is through the pang log files, which is not practical during live troubleshooting sessions.
  - **Workaround:** Get the volume status from pang log files.
- **CSCum52201: The incorrect iSCSI initiator connected target's Start-Up setting**
  - **Symptom:** iSCSI initiator connected target's Start-Up setting is manual by default.
  - **Workaround:** Setup correct iSCSI initiator connected target's Start-up setting to “onboot” manually.
- **CSCuh42211: (16B) Storage/Data Switches powerfail result in a disabled cluster**
  - **Symptom:**
    1. VDS-TC Cluster is running and processing traffic.
    2. Storage and Data switches go through power failure.
    3. Power failure recovery on both N7K and Storage.
    4. Cluster remains in disabled state and does not recover automatically.
    5. Manual **oper service stop** and **oper service start** does not help to recover.
    6. Manual reboot of cache engines is required to recover.
  - **Workaround:** Manual reboot of cache engines is required to recover.

## Resolved Caveats

This section contains the resolved caveats in Cisco VDS TC Release 5.1.1. Not all resolved issues are mentioned here. The following list highlights resolved caveats associated with customer deployment scenarios:

- **CSCug32380: Incorrect msg logged to /opt/pang/cdrs/\*log while ce6-eth1/eth2 down/up**  
Occasionally, incorrect messages are logged into /opt/pang/cdrs while unplugging and plugging back in the Ethernet1 and Ethernet2 cables of a cache engine.

For example:

```
stats: iff_4 (eth9) to classifier 0
10-04-13 13:32:09.080, 7189[common:Statistics]void
statistics_c::dump_packets_queues()### Classifier Interface queues stats: iff_5
(eth10) to classifier 0
10-04-13 13:32:09.080, 7189[common:Statistics]void
statistics_c::dump_packets_queues()### Classifier Interface queues stats: iff_6
(eth11) to classifier 0
10-04-13 13:32:09.080, 7189[common:Statistics]void
statistics_c::dump_packets_queues()### Classifier Interface queues stats: iff_7
(eth12) to classifier 0
```

- **CSCul06621: VDS-TC: CMDB sync issue at heavy load**  
One CE degraded after upgrading UCS and IBM firmware, which is caused by CMDB sync issue under heavy load.
- **CSCul06628: VDS-TC : core generated by Queue full after upgrade to 5.0.3**  
Core file on cache server can be created due to the log, “Queue full. actual queue size 1399000 queue max size 1400000” after upgrade to 5.0.3.
- **CSCul79132: Enhanced Disk Errors reports**  
Enhanced Disk Errors reports requested to ease for field operation and disk error repairing.
- **CSCul79169: PANG took over 300 secs to get cluster update from leader**  
One of the time the PANG restarted because it took for more than 300 seconds to get cluster update from cluster leader on the spread.
- **CSCul88403: Blank page when clicking detailed storage status**  
Detailed Storage Status page goes blank.
- **CSCum04715: Wrong default cluster\_conf.xml for Integrated Appliance with 1 router**  
The pang.log displays lots of warnings like the one below:  
11-12-13 23:40:19.442, 28505 [net:Warning] int  
forwarder\_thread\_c::send\_arp\_to\_cacheout\_gateway(cache\_out\_port\_c\*) Add gateway and add\_ip pair not in the same segment! Can't send arps for interface eth3 via 10.138.31.1 to Target 10.138.32.254/0.255.225.255.
- **CSCum12399: VDS-TC 5.0.2 requires Cisco ENIC driver upgrade**  
VDS-TC Cache Engine intermittent reboot.
- **CSCum14680: Incorrect “show volumes” output**  
The “show volumes” command may show all the volumes properly mounted despite some of them really being in error state.
- **CSCum15008: Double mount issue**  
There were caching system reboots due to DOUBLE MOUNT.
- **CSCum16534: TC Mgr/Statistics/Storage: Miss info (SizeGB, AvailGB, %)**  
In TC Manager/Statistics/Storage display, PA-1/LUN 13 misses the following info - Size GB, Used GB, Avail GB, and Usage %, etc.
- **CSCum29255: Cluster has been disabled due to SNMP agent on mg-1 restart on 5.0.3**  
“cluster has been disabled” displayed on a sudden and enabled in one second due to the SNMP agent on mg-1 restarted.
- **CSCum61668: iSCSI disconnect causing the cache engine to restart**  
iSCSI disconnect causing the cache engine to restart.
- **CSCum61696: Volume mounted after xfs\_repair for data partition failed**  
Volume mounted after xfs\_repair for data partition failed.
- **CSCum61698: Grid unstable since upgrade from 5.0 to 5.1 under high load**  
16 - Grid unstable and rebooted with core dump.
- **CSCum65492: Change the counter of the number of bad status notification**

Cache engine server rebooted.

- **CSCug09063: oper service stop from VDS-TC CLI not working**

For VDS TC 1S, the **oper service stop** command will take up to 20 seconds to complete. Please keep using **show status** to make sure it stops before issuing the **oper service start** command again.

- **CSCug27744: Grid/Blade cmdbutils -s returns “unexpected EOF ...” in the beginning**

The following 2 lines of erroneous messages are initially returned by `./cmdbutils -s`. However, the correct output is returned afterwards.

```
sh: -c: line 0: unexpected EOF while looking for matching `"'
sh: -c: line 41: syntax error: unexpected end of file
```

- **CSCui48738: 16B/b246: CE core dump**

In rare instances, one of the cache engines may core during high stress.

- **CSCuj50551: NTP settings needs to be configured using cluster\_config.xml**

Currently NTP settings must be configured manually, and this is inefficient in a large environment.

## Related Documentation

### Software Documents

Refer to the following documents for additional information about VDS TC 5.1.1.

Document	URL
<i>Cisco Videoscape Distribution Suite Transparent Caching Software Installation Guide</i>	<a href="http://www.cisco.com/en/US/docs/video/videoscape/distribution_suite/vds/v5_1_1/OL-28015-03_VDS-TC_5.1.1_sw_install_guide.pdf">http://www.cisco.com/en/US/docs/video/videoscape/distribution_suite/vds/v5_1_1/OL-28015-03_VDS-TC_5.1.1_sw_install_guide.pdf</a>
<i>Cisco Videoscape Distribution Suite Transparent Caching Software Configuration Guide</i>	<a href="http://www.cisco.com/en/US/docs/video/videoscape/distribution_suite/vds/v5_1_1/OL-28016-03_VDS-TC_5.1.1_sw_config_guide.pdf">http://www.cisco.com/en/US/docs/video/videoscape/distribution_suite/vds/v5_1_1/OL-28016-03_VDS-TC_5.1.1_sw_config_guide.pdf</a>
<i>Cisco Videoscape Distribution Suite Transparent Caching Manager User Guide</i>	<a href="http://www.cisco.com/en/US/docs/video/videoscape/distribution_suite/vds/v5_1_1/OL-28017-03_VDS-TC_5.1.1_manager_user_guide.pdf">http://www.cisco.com/en/US/docs/video/videoscape/distribution_suite/vds/v5_1_1/OL-28017-03_VDS-TC_5.1.1_manager_user_guide.pdf</a>
<i>Cisco UCS C-Series Rack Servers Install and Upgrade Guides</i> web page	<a href="http://www.cisco.com/en/US/products/ps10493/products_installation_and_configuration_guides_list.html">http://www.cisco.com/en/US/products/ps10493/products_installation_and_configuration_guides_list.html</a>
<i>Cisco UCS B200 Blade Server Installation and Service Note</i>	<a href="http://www.cisco.com/en/US/docs/unified_computing/ucs/hw/chassis/install/blade.html">http://www.cisco.com/en/US/docs/unified_computing/ucs/hw/chassis/install/blade.html</a>
<i>Cisco UCS B-Series Blade Servers Configuration Guides</i> web page	<a href="http://www.cisco.com/en/US/products/ps10280/products_installation_and_configuration_guides_list.html">http://www.cisco.com/en/US/products/ps10280/products_installation_and_configuration_guides_list.html</a>
<i>Cisco UCS 5108 Server Chassis Installation Guide</i>	<a href="http://www.cisco.com/en/US/docs/unified_computing/ucs/hw/chassis/install/ucs5108_install.html">http://www.cisco.com/en/US/docs/unified_computing/ucs/hw/chassis/install/ucs5108_install.html</a>

The entire VDS TC software documentation suite is available on Cisco.com at: [http://www.cisco.com/en/US/products/ps12654/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps12654/tsd_products_support_series_home.html)

# 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:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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