Troubleshooting Procedures for Cisco TelePresence Video Communication Server

Reference Guide

Cisco VCS X8.2

D14889.03

June 2014

Contents

Introduction

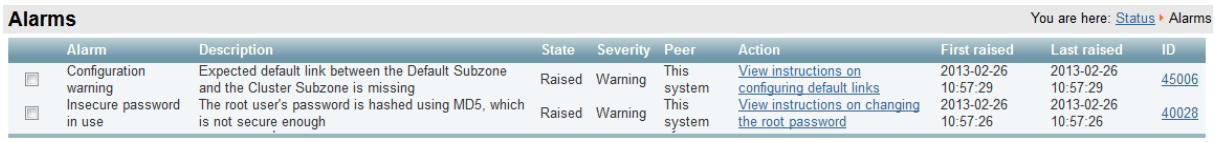
This document provides guidelines for the collection of logs and other diagnostic information to assist in the resolution of issues with the Cisco TelePresence Video Communication Server (Cisco VCS).

It is intended for use by the Cisco VCS system administrator or other support engineer.

Alarms

New, unacknowledged alarms are indicated in the top right corner of every VCS web page.

To see the details of each alarm, click on the alarm indicator, or go to **Status > Alarms**.



The **Alarms** page shows the type of alarm and which peer in a cluster (if applicable) it is affecting. It also indicates the remedial action to take to resolve the alarm. Alarms that are not important in an installation's particular circumstances can be acknowledged.

Alarms are also listed when logging in to the command line interface (CLI).

VCS logs

There are three types of VCS logs which can be seen by going to **Status > Logs > [type]**. These are passive logs, which the administrator can view and filter, but cannot interact with in other ways.

Event Log

The Event Log shows key events that have occurred on the VCS including call events, login events and alarms. Red events indicate events that have failed; green indicates events that have succeeded.

You can use the **Filter** options to search for specific URIs or keywords. The Event Log is the same as the messages files in the system snapshot.

Syslog

The Event Log can also be sent to one or more external syslog servers, for remote system monitoring. This is configured on the **Logging** page (**Maintenance > Logging**).

Up to four syslog servers can be specified.

Configuration Log

The Configuration Log provides a list of changes made to the VCS configuration by the system and through the web interface or CLI. It also shows from which IP address and user the changes were made.

This log is useful when reviewing a system which has started to behave unexpectedly - any changes made to the system can be reviewed to see if they may have had an impact on the state of the system.

Network Log

The Network Logs are similar to the Event Logs, in that they both show SIP and H.323 messaging. However the Network Logs also shows call routing decisions made based on the VCS search rules.

Call and search history

Calls

Current call status and historical calls can be seen on the **Call status** and **Call history** pages (**Status > Calls > Calls** and **Status > Calls > History** respectively).

- **Current calls**: the information shown includes the routing, bandwidth allocation and protocol being used.
- **Historic calls**: release cause information is also shown.

Search history

The **Search history** page (**Status > Search history**) shows the decisions the VCS made to route a call, based on transforms, FindMe profile and search rules, zones and soon.

This information is useful if calls are not hitting their intended destinations. It assists in working out why a call may be heading in a different direction to that which was expected.

Diagnostic logging

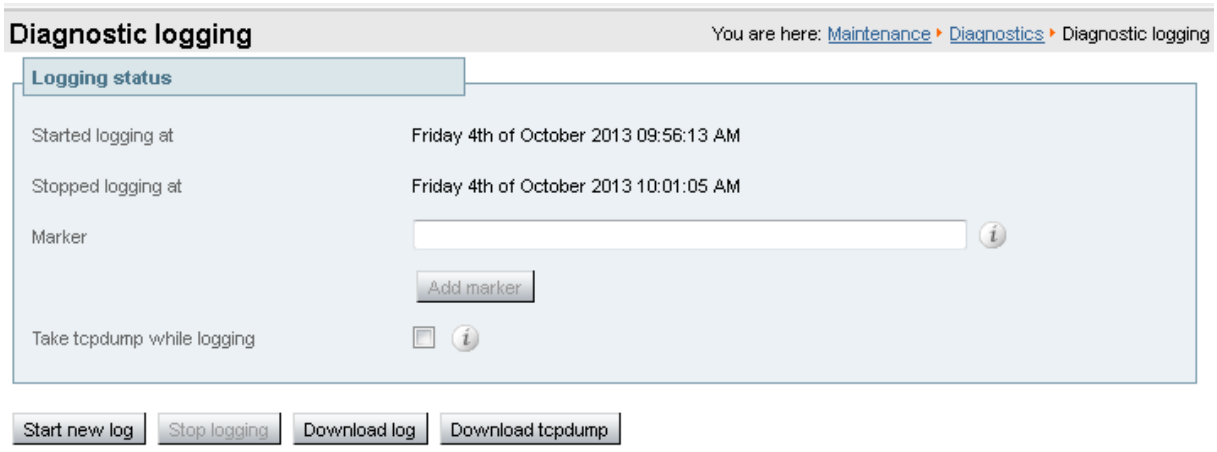
Diagnostic logging is active logging. The administrator can start and stop the logs as required. During logging you can insert text marker strings in to the log files as required. These markers can be useful for marking certain stages in reproducing a complex call scenario for example. You can also take a tcpdump while logging is in progress.

Enabling diagnostic logging

Go to **Maintenance > Diagnostics > Diagnostic logging**. Optionally, select **Take tcpdump while logging**, and then click **Start new log** to start the logging. The relevant system modules will have their log levels automatically set to "debug". Note, this raises an alarm to indicate that the VCS is running with a higher log level than normal. This alarm will clear when the logging is stopped.

Any steps to reproduce a problem should now be performed. If the steps are complicated, multiple markers can be inserted in to the log file which is being generated, using the **Marker** field and **Add marker** button. These markers can then be searched for in the resulting log file to find the right section of messaging for the step being performed.

When the scenario is complete, click **Stop logging**. The log can be downloaded for analysis or to send in to a support team, by clicking **Download log**. If appropriate, click **Download tcpdump** to also download the tcpdump file to your local file system.



Advanced logging levels

If instructed by the support organization, you can more finely tune the log levels before starting diagnostic logging (via the **Maintenance > Diagnostics > Advanced > Network log configuration** and **Maintenance > Diagnostics > Advanced > Support log configuration** pages).

Setting any of these log levels higher than their default will raise an alarm to indicate that the VCS is running with a higher log level than normal. These log levels are not reset after stopping the diagnostic log and so must be manually reset to their default level of *Info* after logging is complete.

NTP server

To gather more information for problems with NTP on the VCS, log in as root and type:

```
ntpq
```

At the “ntpq>” prompt type “as”:

```
ntpq>  as
```

Results such as the following should be seen:

```
ind assid status  conf reach auth condition  last_event cnt
===========================================================
  1  7696  961d   yes   yes  none  sys.peer              1
```

If this returns a blank please check that DNS is configured.

Make a note of the number in the “assid” column for each entry and then type:

```
rv <assid number>
```

All the variables ntpq has associated with that NTP server will be printed and will look similar to the following:

```
ntpq> rv 7696
associd=7696 status=961d conf, reach, sel_sys.peer, 1 event, popcorn,
srcadr=adc-sjc2-c1-4-w.cisco.com, srcport=123, dstadr=10.50.152.92,
dstport=123, leap=00, stratum=4, precision=-6, rootdelay=269.989,
rootdisp=115.555, refid=72.163.56.103,
reftime=d21c2d01.11365bdc  Thu, Sep 15 2011  7:51:29.067,
rec=d21c2d4c.d5627e75  Thu, Sep 15 2011  7:52:44.833, reach=377,
unreach=0, hmode=3, pmode=4, hpoll=10, ppoll=10, headway=0, flash=00 ok,
keyid=0, offset=27.581, delay=179.317, dispersion=15.669, jitter=7.882,
xleave=0.034,
filtdelay=   180.61  220.79  179.32  183.55  179.42  179.40  180.28  180.22,
filtoffset=   27.01    6.87   27.58   25.42   27.45   27.40   26.97   26.94,
filtdisp=     15.63   15.66   15.69   15.72   15.75   15.78   15.81   15.84
```

It is important to note the flash code if the VCS is failing to synchronize with the NTP server. The flash code details the reason for the NTP not synchronizing. A list of the flash codes and their meaning can be retrieved from http://www.eecis.udel.edu/~mills/ntp/html/decode.html#flash.

In some instances, Windows NTP servers that use their own internal clock as a reference time can give a “peer_dist” flash code. This may be due to the localclockdispersion registry value (located at “HKLM\SYSTEM\CurrentControlSet\Services\W32Time\Config”) being set too high. NTPQ will not synchronize with a server if it believes the error value the NTP server has on its time is too high. Time servers referencing their own internal clocks should only be used if no other NTP server is available. In this case it is safe to reduce the dispersion to 0. In all other cases a properly referenced time server should be used.

Additional information

Memory usage

From software version X8, VCS memory usage (as reported via the root top command, for example) shows higher allocations of virtual memory than when compared to previous software versions. This is due to new multi-threaded architectures introduced in X8.

However, this has not affected physical memory usage which is broadly similar to previous software versions.

Document revision history

The following table summarizes the changes that have been applied to this document.

Revision	Date	Description
3	June 2014	Updated for X8.2.
2	December 2013	Updated for X8.1.
1	September 2011	Initial release.