



## CHAPTER 3

# Troubleshooting CDS Video Navigator Software Components

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This chapter contains information that is useful for identifying and remedying problems related to Cisco CDS Video Navigator. This chapter contains the following major topics:

- [CDS Video Navigator Logging and Log Files, page 3-1](#)
- [CDS Video Navigator Directory Structure, page 3-3](#)
- [CDS Video Navigator Scripts, page 3-4](#)
- [CDS Video Navigator Troubleshooting, page 3-4](#)

## CDS Video Navigator Logging and Log Files

CDS Video Navigator log file entries can provide useful information for troubleshooting. CDS Video Navigator is a web application that makes use of the Apache Tomcat application server. Apache Tomcat uses the log4j logging system.

The CDS Video Navigator log file is named `midas.log` and resides in the `/home/isa/MIDAS/logs` directory. The log file is automatically rotated when its size reaches 20 MB. Up to ten archived log files are stored in the `/home/isa/MIDAS/logs` directory. For example:

```
-rw-rw-r-- 1 isa isa 342473 Jan 23 20:40 midas.log
-rw-rw-r-- 1 isa isa 20965936 Jan 19 17:45 midas.log.1
-rw-rw-r-- 1 isa isa 20960394 Jan 18 14:00 midas.log.2
-rw-rw-r-- 1 isa isa 20966090 Jan 17 20:52 midas.log.3
-rw-rw-r-- 1 isa isa 20968401 Jan 16 20:52 midas.log.4
-rw-rw-r-- 1 isa isa 20969543 Jan 15 20:51 midas.log.5
-rw-rw-r-- 1 isa isa 20969613 Jan 14 20:51 midas.log.6
-rw-rw-r-- 1 isa isa 20968092 Jan 13 20:51 midas.log.7
-rw-rw-r-- 1 isa isa 20966422 Jan 12 20:51 midas.log.8
-rw-rw-r-- 1 isa isa 20969681 Jan 11 20:51 midas.log.9
```

## Logging Levels

The CDS Video Navigator logging levels are FATAL, ERROR, WARN, INFO, and DEBUG. Logging levels go from least verbose to most verbose. The FATAL level generates the smallest number of messages, and the DEBUG level generates the greatest number of messages. The default value is WARN.

In a lab environment, you might want to keep the logging level at DEBUG. However, using the DEBUG level affects performance. For load testing or a production environment, the logging level should be set to INFO or, for better performance, WARN.

The CDS Video Navigator logging configuration file is named `midasLog.properties` and resides in the `/home/isa/MIDAS/config` directory.

To change the logging level, follow these steps:

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**Step 1** If needed, log in as root on the CDE110 that hosts CDS Video Navigator.

**Step 2** Change the working directory as follows:

```
[root@system]# cd /home/isa/MIDAS/config
```

**Step 3** Use a text editor to modify the `midasLog.properties` file.

- a. Change the log level in the property `log4j.logger.Midas Logger` to the value needed. Allowed values are FATAL, ERROR, WARN, INFO, and DEBUG. For example, the following line changes the log level to DEBUG:

```
log4j.logger.MidasLogger=DEBUG, MidasLogFile
```

- b. Save and close the `midasLog.properties` file.



**Note**

Changes to the `midasLog.properties` file do not take effect until CDS Video Navigator is restarted in [Step 4](#).

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**Step 4** To stop and restart CDS Video Navigator, issue the following commands:

```
[root@system]# stop_midas

MIDAS Running .....shutting down
Using CATALINA_BASE: /usr/local/tomcat
Using CATALINA_HOME: /usr/local/tomcat
Using CATALINA_TMPDIR: /usr/local/tomcat/temp
Using JRE_HOME: /usr/local/java
Killing: 17895
MIDAS stopped

[root@system]# start_midas

MIDAS not running ..... starting MIDAS
```

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## Log Entry Format

Each CDS Video Navigator log entry has the following format:

*[Date Time] [Logging level] [Logging class] - [Log message]*

Some sample log entries are as follows:

```
[2008-02-04 18:49:49,626] [ERROR] [CatalogHttpServer] - Error fetching catalog from
Tandberg java.io.IOException: Method failed: HTTP/1.1 503 Service Temporarily Unavailable
```

```

[2008-02-04 18:45:29,322][WARN] [BrowseCatalogAction] - device: 132 - Invalid page size -1
[2008-02-04 18:45:58,290][WARN] [BrowseCatalogAction] - device: 132 - Invalid page size -1
[2008-02-04 18:46:04,971][WARN] [BrowseCatalogAction] - device: 132 - Catalog 100 doesn't
exist

[2008-02-04 18:49:49,627][INFO] [CatalogHttpServer] - Fetch local catalog
[2008-02-04 18:49:49,825][INFO] [CatalogHttpServer] - Last local catalog
[2008-02-04 18:49:49,826][INFO] [CatalogHttpServer] - CR catalogId = 1
[2008-02-04 18:49:49,827][INFO] [CatalogHttpServer] - CR downloadTime = 1201219710722
[2008-02-04 18:49:49,828][INFO] [CatalogHttpServer] - CR fileName = catalog.113.xml
[2008-02-04 18:49:49,828][INFO] [CatalogHttpServer] - Going to load local catalog file
/home/isa/MIDAS/catalog/catalog.113.xml

[2008-02-04 18:49:50,133][DEBUG] [AssetIndexer] - Built index for asset 327
[2008-02-04 18:49:50,133][DEBUG] [AssetIndexer] - Add title = Wedding Crashers
[2008-02-04 18:49:50,134][DEBUG] [AssetIndexer] - Add summary = Two divorce mediators who
crash weddings to pick up women engage in comical misadventures at the nuptials of a
politician's daughter. Ends 09/02
[2008-02-04 18:49:50,134][DEBUG] [AssetIndexer] - Add content = Wedding Crashers Two
divorce mediators who crash weddings to pick up women engage in comical misadventures at
the nuptials of a politician's daughter. Ends 09/02 Owen Wilson Vince Vaughn Christopher
Walken Rachel McAdams
[2008-02-04 18:49:50,142][DEBUG] [AssetIndexer] - Built index for asset 328
[2008-02-04 18:49:50,142][DEBUG] [AssetIndexer] - Add title = The Rock
[2008-02-04 18:49:50,143][DEBUG] [AssetIndexer] - Add summary = Sean Connery and Nicolas
Cage team up to stop a devious U.S. general's threat to chemically attack San Francisco
from Alcatraz Island. Ends 09/09
[2008-02-04 18:49:50,160][DEBUG] [AssetIndexer] - Add content = The Rock Sean Connery and
Nicolas Cage team up to stop a devious U.S. general's threat to chemically attack San
Francisco from Alcatraz Island. Ends 09/09 Sean Connery Nicolas Cage Ed Harris Michael
Biehn William Forsythe

```

## CDS Video Navigator Directory Structure

CDS Video Navigator uses the directory structure shown in [Table 3-1](#).

**Table 3-1 CDS Video Navigator Directory Structure**

| Directory                       | Contents                                                                                                                                                                                        |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| /home/isa/MIDAS/catalog         | Contains the latest catalog files fetched from the Tandberg OpenStream. A maximum of five latest catalog files are kept in this directory. <i>Do not modify the contents of this directory.</i> |
| /home/isa/MIDAS/config          | Contains files for configuring CDS Video Navigator.                                                                                                                                             |
| /home/isa/MIDAS/docs            | Contains the release notes or some user help files. The release notes contain the release number of the installed CDS Video Navigator software.                                                 |
| /home/isa/MIDAS/epg/data        | Contains EPG data and a mapping file.                                                                                                                                                           |
| /home/isa/MIDAS/epg/index       | Contains EPG search indexes.                                                                                                                                                                    |
| /home/isa/MIDAS_IntegrationTest | Contains scripts for checking whether the client-facing and back-office interfaces are working correctly.                                                                                       |
| /home/isa/MIDAS/logs            | Contains the CDS Video Navigator log files. For more information, see the “ <a href="#">CDS Video Navigator Logging and Log Files</a> ” section on page 3-1.                                    |

**Table 3-1 CDS Video Navigator Directory Structure (continued)**

| Directory               | Contents                                                                                      |
|-------------------------|-----------------------------------------------------------------------------------------------|
| /home/isa/MIDAS/scripts | Contains scripts for starting, stopping, and checking whether CDS Video Navigator is running. |
| /home/isa/MIDAS/test    | Contains sample test files.                                                                   |
| /home/isa/MIDAS/webapps | Contains the CDS Video Navigator web applications.                                            |
| /usr/local/apache2      | Contains the Apache web server binary executable.                                             |
| /usr/local/tomcat       | Contains files related to the Tomcat application server.                                      |

## CDS Video Navigator Scripts

The CDS Video Navigator software includes the scripts shown in [Table 3-2](#). These scripts may be needed to troubleshoot and resolve some CDS Video Navigator problems.

**Table 3-2 CDS Video Navigator Scripts**

| Directory and Script                                | Contents                                                                                                                                                                                         |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| /home/isa/MIDAS/scripts/start_midas                 | Starts CDS Video Navigator and the Apache Tomcat application server (tomcat5).                                                                                                                   |
| /home/isa/MIDAS/scripts/stop_midas                  | Stops CDS Video Navigator.                                                                                                                                                                       |
| /home/isa/MIDAS/scripts/check_midas                 | Checks whether CDS Video Navigator is running and displays the release number of the installed CDS Video Navigator software.                                                                     |
| /home/isa/MIDAS_IntegrationTest/clientinterfacetest | Checks whether the Client-facing Web Services Interface is working correctly. The <b>clientinterfacetest</b> command does not verify the connection from CDS Video Navigator to the set-top box. |
| /home/isa/MIDAS_IntegrationTest/searchTest          | Checks whether EPG and VOD search is working.                                                                                                                                                    |
| /home/isa/MIDAS_IntegrationTest/tandbergtest        | Checks whether the connection to and the Web Services interface on the Tandberg OpenStream are working correctly.                                                                                |



### Note

The CDS Video Navigator software installation script adds /home/isa/MIDAS/scripts to the PATH variable but does not add /home/isa/MIDAS\_IntegrationTest to the PATH. Therefore, your current working directory must be /home/isa/MIDAS\_IntegrationTest when either the **clientinterfacetest** or **tandbergtest** scripts are executed.

## CDS Video Navigator Troubleshooting

This section provides information on troubleshooting the following specific problems that can occur with CDS Video Navigator:

- [VOD Catalog Not Displayed on Set-Top Boxes, page 3-5](#)

## VOD Catalog Not Displayed on Set-Top Boxes

**Symptom:** The VOD catalog is not displayed on one or more set-top boxes.

**Explanation:** If the VOD catalog is not available on a set-top box, set the CDS Video Navigator logging level to DEBUG. For information on how to set the logging level, see the [“Logging Levels” section on page 3-1](#).

Observe the entries in the log file for SignOn and BrowseCatalog requests as described in the following explanation.

When the set-top box user selects the VOD service, the CDS-VN client on the set-top box makes a SignOn request to CDS Video Navigator. The CDS-VN client queries CDS Video Navigator by device ID (MAC address of the set-top box) for the list of VOD services to which it is entitled. With the logging level set to DEBUG, you should be able to see the SignOn request in the CDS Video Navigator log file. For example:

```
[2008-01-31 11:10:38,125][DEBUG] [SignOnAction] - SignOn request
[2008-01-31 11:10:38,125][DEBUG] [SignOnAction] - deviceId = null
[2008-01-31 11:10:38,128][DEBUG] [SignOnAction] - deviceId 00:14:F8:E3:0A:DF- SignOn:
processServices
[2008-01-31 11:10:38,152][DEBUG] [SignOnAction] - Process service done
[2008-01-31 11:10:38,152][DEBUG] [SignOnAction] - deviceId 00:14:F8:E3:0A:DF- SignOn:
processRentals
[2008-01-31 11:10:38,221][DEBUG] [SignOnAction] - deviceId 00:14:F8:E3:0A:DF has 0 rental
records on Tandberg system
[2008-01-31 11:10:38,221][DEBUG] [SignOnAction] - No of rental records in MIDAS database =
0
[2008-01-31 11:10:38,222][DEBUG] [SignOnAction] - Process rental done
[2008-01-31 11:10:38,222][DEBUG] [ActionSkeleton] - HTTP Response
[2008-01-31 11:10:38,222][DEBUG] [ActionSkeleton] - <?xml version="1.0" encoding="UTF-8"?>
<env:Envelope xmlns:env="http://www.w3.org/2003/05/soap-envelope"><env:Body
xmlns="com.cisco.midas.client"><SignOnResponse /></env:Body></env:Envelope>^
```

When the set-top box user starts browsing the VOD catalog, the CDS-VN client on the set-top box makes a BrowseCatalog request to CDS Video Navigator. For example, the following log entries show a BrowseCatalog request and response:

```
[2008-01-31 11:10:38,334][DEBUG] [BrowseCatalogAction] - BrowseCatalog request
[2008-01-31 11:10:38,335][DEBUG] [BrowseCatalogAction] - deviceId = 00:14:F8:E3:0A:DF
[2008-01-31 11:10:38,335][DEBUG] [BrowseCatalogAction] - catalogId = 1
[2008-01-31 11:10:38,335][DEBUG] [BrowseCatalogAction] - categoryId = 0
[2008-01-31 11:10:38,338][DEBUG] [BrowseCatalogAction] - pageNo = 1
[2008-01-31 11:10:38,338][DEBUG] [BrowseCatalogAction] - pageSize = 7
[2008-01-31 11:10:38,338][DEBUG] [BrowseCatalogAction] - Construct JDOM response
[2008-01-31 11:10:38,339][DEBUG] [BrowseCatalogAction] - deviceId 00:14:F8:E3:0A:DF - From
= 0 to = 5
[2008-01-31 11:10:38,339][DEBUG] [BrowseCatalogAction] - deviceId 00:14:F8:E3:0A:DF -
Output list size = 5
[2008-01-31 11:10:38,339][DEBUG] [BrowseCatalogAction] - hasCategory
[2008-01-31 11:10:38,339][DEBUG] [BrowseCatalogAction] - hasServiceCategory
[2008-01-31 11:10:38,339][DEBUG] [ActionSkeleton] - HTTP Response
[2008-01-31 11:10:38,340][DEBUG] [ActionSkeleton] - <?xml version="1.0"
encoding="UTF-8"?>^M
<env:Envelope xmlns:env="http://www.w3.org/2003/05/soap-envelope"><env:Body
xmlns="com.cisco.midas.client"><BrowseCatalogResponse><category id="2" name="All Movies"
parentId="0" desc="" /><category id="4" name="Cat1" parentId="0" desc="" /><category
id="12" name="HBO" parentId="0" desc="" /><serviceCategory id="15" name="MAX" parentId="0"
desc=""><service id="203" name="MAX" desc="Cinemax On Demand" price="$2.99"
purchased="false"><backoffice name="vendorName" value="Tandberg" /><backoffice
name="vendorVersion" value="3.3" /><backoffice name="serviceOfferingId" value="203"
/><backoffice name="serviceName" value="MAX"
```

```

/></service></serviceCategory><serviceCategory id="20" name="Showtime" parentId="0"
desc=""><service id="255" name="SOD" desc="Showtime On Demand" price="$5.99"
purchased="false"><backoffice name="vendorName" value="Tandberg" /><backoffice
name="vendorVersion" value="3.3" /><backoffice name="serviceOfferingId" value="255"
/><backoffice name="serviceName" value="SOD"
/></service></serviceCategory><pageNo>1</pageNo><pageSize>7</pageSize><totalItems>5</total
Items><hasMore>false</hasMore><catalogVersion>1</catalogVersion></BrowseCatalogResponse></
env:Body></env:Envelope>

```

It is possible that the SignOn and BrowseCatalog requests and responses appear in the CDS Video Navigator log entries, but no VOD catalog is displayed on the set-top box. This set of symptoms may indicate that there is a network problem or (less likely) that the set-top box cannot process the returned data.

**Remedy:** If there is no log-file entry for the SignOn request or other activity in the CDS Video Navigator log file, follow these steps:



#### Note

Because CDS Video Navigator is a web application, there is no Video Navigator process that you can check to see if it is running. Instead, use the **check\_midas** command.

- 
- Step 1** Log in as root.
- Step 2** If you know the set-top box IP address, use the **ping** command and the IP address to verify that the CDS Video Navigator server (CDE110) can reach the set-top box.
- Step 3** To check that CDS Video Navigator is running, issue the following command:

```
[root@system]# check_midas
```

If CDS Video Navigator is running, the output has “MIDAS is running”. If CDS Video Navigator is not running, output has “MIDAS is not running”.

Do one of the following:

- If CDS Video Navigator is not running, go to [Step 5](#).
- If CDS Video Navigator is running, go to [Step 4](#).

- Step 4** If CDS Video Navigator is running, verify that the Apache HTTP server service (httpd) is running by issuing the following command:

```
[root@system]# ps -ef | grep httpd
```

Do one of the following depending on whether httpd is running.

- If httpd is running, the output is similar to the following. Go to [Step 6](#).

```

root      2880      1  0 Jul18 ?           00:00:00 /usr/sbin/httpd
apache    4881    2880  0 04:03 ?           00:00:00 /usr/sbin/httpd
apache    4882    2880  0 04:03 ?           00:00:00 /usr/sbin/httpd
apache    4883    2880  0 04:03 ?           00:00:00 /usr/sbin/httpd
apache    4884    2880  0 04:03 ?           00:00:00 /usr/sbin/httpd
apache    4885    2880  0 04:03 ?           00:00:00 /usr/sbin/httpd
apache    4886    2880  0 04:03 ?           00:00:00 /usr/sbin/httpd
apache    4887    2880  0 04:03 ?           00:00:00 /usr/sbin/httpd
apache    4888    2880  0 04:03 ?           00:00:00 /usr/sbin/httpd

```

- If httpd is not running, the preceding output will not be present. Restart the httpd daemon by issuing the following command:

```
[root@system]# service httpd restart
```

Go to [Step 6](#).

- Step 5** If CDS Video Navigator is not running, restart it and verify that it is running by issuing the following commands:

```
[root@system]# start_midas

MIDAS not running ..... starting MIDAS

[root@system]# check_midas

MIDAS (2.1.X.X) is running
```

- Step 6** On the set-top box, select or have the user select the VOD service.

- Step 7** Check the log entries to verify that a SignOn request from the set-top box is sent to CDS Video Navigator.
-

