C H A P T E R **18**

Troubleshooting Cisco DCNM

This chapter describes some common issues you might experience while using Cisco Data Center Network Manager (DCNM), and provides solutions.

Note For troubleshooting Cisco DCNM server installation issues, see the *Cisco DCNM Installation and Licensing Guide, Release 5.x.*

This chapter includes the following sections:

Tips for Using Cisco DCNM

This section includes the following topics:

Events Tabs Show Fewer Events than the Event Browser

The Event Browser feature shows all messages received by Cisco DCNM, even if the message pertains to a feature that is not supported by Cisco DCNM.

An Events tab shows only those messages that reflect the status of the currently selected feature. For some features, this is a subset of the possible messages about the feature.

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Event Browser Pie Chart May Be Inaccurate for Small Numbers

The Event Browser pie chart may sometimes show incorrect sizes for wedges that are less than 5 percent of the pie; however, the numbers shown are correct.

Trouble with Starting the Cisco DCNM Server

This section includes the following topics:

- Cisco DCNM Server Fails to Start, page 18-2

Cisco DCNM Server Fails to Start

Check Table 18-1 for symptoms related to downloading the Cisco DCNM client. For each symptom that describes your trouble, determine which possible causes apply and follow the corresponding solutions.

Table 18-1   Cisco DCNM Server Fails to Start

Symptom	Possible Cause	Solution
Cisco DCNM server fails to start.	The Postgres database did not install.	For troubleshooting Cisco DCNM server installation issues, see the *Cisco DCNM Installation and Licensing Guide, Release 5.x*.
	The Postgres service is not running.	Start the Postgres service: • In Microsoft Windows Server, choose **Start > All Programs > Postgres 8.2 > Start Service**. • In RHEL, use the following command: **/DCNM/db/bin/DB start**
	The Postgres user credentials are incorrect.	1. Correct the Postgres user credentials. For detailed steps, see the "Updating Cisco DCNM Database Name and Username in pgAdmin III" section on page 18-3. 2. Start the Cisco DCNM server. For detailed steps, see the "Starting Cisco DCNM Servers" section on page 16-2.
	The ports used by the server are already in use.	1. Check the server log for messages such as "Port *port-number* already in use." The server log is the following file: *Installation_directory*\jboss-4.2.2.GA\server\dcnm\log\server.log 2. Determine which application is using the port and stop or reconfigure the application. 3. Restart the Cisco DCNM server.

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Trouble with the Cisco DCNM Database

This section includes the following topics:

Note   If the Cisco DCNM database fails or communication to the Cisco DCNM database fails, you must stop the DCNM Server or shutdown the cluster of DCNM Servers before addressing the problem. Always verify that the Cisco DCNM database and the communication to the Cisco DCNM database are functioning properly before restarting the DCNM Server or cluster of DCNM Servers.

Trouble with a PostgreSQL Database

Check Table 18-2 for symptoms related to the pgAdmin III application for administering a postgreSQL database used with Cisco DCNM. For each symptom that describes your trouble, determine which possible causes apply and follow the corresponding solutions.

Table 18-2   pgAdmin III Errors

Symptom	Possible Cause	Solution
Error message states that the Cisco DCNM database does not exist.	The Cisco DCNM database name might have changed during an upgrade or reinstallation of the Cisco DCNM server software.	In the pgAdmin III application, perform the steps in the "Updating Cisco DCNM Database Name and Username in pgAdmin III" section on page 18-3.
Error message states that password authentication failed for the Cisco DCNM database username.	The Cisco DCNM database username may have changed during an upgrade or reinstallation of the Cisco DCNM server software.	

Updating Cisco DCNM Database Name and Username in pgAdmin III

You can update the Cisco DCNM database and username in pgAdmin III.

Step 1   Open the pgAdmin III application.

Step 2   In the Object Browser pane, under Servers, click **PostgreSQL Database Server 8.2**.

In the right-hand pane, the Properties tab appears with several other tabs.

Step 3   On the Properties tab, double-click **Maintenance database**.

A dialog box displays a Properties tab for the server.

Step 4   If you need to change the database name, click the **Maintenance DB** field and type the correct Cisco DCNM database name.

Note   The database name should be the name that you specified when you most recently upgraded or reinstalled the Cisco DCNM server software.

Step 5   If you need to change the database username, click the **Username** field and type the correct Cisco DCNM database username.

> **Note**   The database username should be the database username that you specified when you most recently upgraded or reinstalled the Cisco DCNM server software.

Step 6   Click **OK**.

Step 7   In the Object Browser pane, double-click **PostgreSQL Database Server 8.2**.

If you changed the username in Step 5, the Connect to Server dialog box appears.

Step 8   If necessary, enter the password for the username that you specified in Step 5 and click **OK**.

The pgAdmin III application connects to the Cisco DCNM database and displays the databases and login roles.

If you need additional assistance, see the Help menu in the pgAdmin III application or see the pgAdmin web site at the following URL:

http://pgadmin.org/docs/1.6/index.html

Trouble with an Oracle Database

If the Cisco DCNM server has trouble using an Oracle database, it logs the error messages in the following file:

Installation_directory\jboss-4.2.2.GA\server\dcnm\log\server.log

Check Table 18-3 for symptoms related using an Oracle database with Cisco DCNM. For each error message, see the possible cause and follow the corresponding solution.

Table 18-3   ***Cisco DCNM server.log File Errors with an Oracle Database***

Symptom	Possible Cause	Solution
The following error appears in the server.log file: `java.sql.SQLException: ORA-01653: unable to extend table Cisco DCNMUSER.DCMRAWEVENTTABLE by 1024 in tablespace SYSTEM`	The tablespace SYSTEM is too small.	1. Stop the Cisco DCNM server. See Chapter 16, "Starting and Stopping Cisco DCNM Servers." 2. Increase the SYSTEM table space. For detailed steps, see the *Cisco DCNM Installation and Licensing Guide, Release 5.x*. 3. Start the Cisco DCNM server. See Chapter 16, "Starting and Stopping Cisco DCNM Servers."

The following error appears in the server.log file:
 	
`[org.hibernate.util.JDBCExceptionReporter] Could not create connection; - nested throwable:`
 	
`(java.sql.SQLException: Listener refused the connection with the following error:`
`ORA-12519, TNS:no appropriate service handler found`
	The number of available sessions and processes is inadequate.	1. Stop the Cisco DCNM server. See Chapter 16, "Starting and Stopping Cisco DCNM Servers."
		
		2. Increase the number of sessions and processes to 150 each. For detailed steps, see the *Cisco DCNM Installation and Licensing Guide, Release 5.x*.
		
		3. Start the Cisco DCNM server. See Chapter 16, "Starting and Stopping Cisco DCNM Servers."

The following error appears in the server.log file:
 	
`2009-04-08 15:53:47,125 ERROR [org.hibernate.util.JDBCExceptionReporter] ORA-00604: error occurred at recursive SQL level 1`
`ORA-01000: maximum open cursors exceeded`
	The number of open cursors is inadequate.	1. Stop the Cisco DCNM server. See Chapter 16, "Starting and Stopping Cisco DCNM Servers."
		
		2. Increase the number of open cursors to 1000. For detailed steps, see the *Cisco DCNM Installation and Licensing Guide, Release 5.x*.
		
		3. Start the Cisco DCNM server. See Chapter 16, "Starting and Stopping Cisco DCNM Servers."

Trouble with the Cisco DCNM Client

This section includes the following topics:

Cannot Download the Cisco DCNM Client from the Server

Check Table 18-4 for symptoms related to downloading the Cisco DCNM client. For each symptom that describes your trouble, determine which possible causes apply and follow the corresponding solutions.

Table 18-4   Cannot Download the Cisco DCNM Client from the Server

Symptom	Possible Cause	Solution
Cannot download the Cisco DCNM client from the server.	You are using the wrong URL or web server port.	Verify that you are using the correct URL, including the port number.
	The TCP port is blocked by a gateway device.	Open the TCP port in your firewall. For information about ports used by Cisco DCNM, see the *Cisco DCNM Installation and Licensing Guide, Release 5.x*.
	You are using an unsupported web browser.	Use a supported web browser. For more information about supported web browsers, see the *Cisco DCNM Release Notes, Release 5.x*.

Cannot Install the Cisco DCNM Client

Check Table 18-4 for symptoms related to installing the Cisco DCNM client. For each symptom that describes your trouble, determine which possible causes apply and follow the corresponding solutions.

Table 18-5   Cannot Install the Cisco DCNM Client

Symptom	Possible Cause	Solution
Installer attempts to install Java version 1.5.0_11 but fails.	The system does not have Internet access.	The Cisco DCNM client installer requires Internet access to download the Java version 1.5.0_11 JRE. If the system cannot access the Internet, use another system to download the Java installer, copy it to the system that you want to install the Cisco DCNM client on, install Java, and restart the Cisco DCNM client installation. You can download Java version 1.5.0_11 JRE from the Java[tm] Technology Products Download website, at http://java.sun.com/products/archive. The Java version 1.5.0_11 JRE is listed as JRE 5.0 Update 11.
	Your network environment requires the use of a proxy connection to access the Internet.	If your network environment requires a proxy connection to permit the download of the Java installer, ensure that the proxy settings are configured in Internet Options, available from the Control Panel. For more information, see http://java.sun.com/j2se/1.5.0/proxy_note.html.

Cannot Start the Cisco DCNM Client

Check Table 18-6 for symptoms related to starting the Cisco DCNM client. For each symptom that describes your trouble, determine which possible causes apply and follow the corresponding solutions.

Table 18-6   Cannot Start the Cisco DCNM Client

Symptom	Possible Cause	Solution
Cannot start the Cisco DCNM client.	The client installation may be corrupted. The wrong version of Java may be installed.	1. Uninstall the Cisco DCNM client. For more information, see the "Uninstalling the Cisco DCNM Client" section on page 2-8. 2. Download and install the Cisco DCNM client from the Cisco DCNM server. During the client installation, allow Cisco DCNM to install the supported version of Java on the computer. When you download the client from the Cisco DCNM server, if the supported version of Java is not detected on the computer, Cisco DCNM asks you for permission to install the supported version of Java. Your browser may notify you that the Java installer was digitally signed by an expired certificate. To continue, confirm the installation. For more information, see the "Downloading and Launching the Cisco DCNM Client" section on page 2-3.

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Cannot Log into the Cisco DCNM Client

Check Table 18-7 for symptoms related to logging into the Cisco DCNM client. For each symptom that describes your trouble, determine which possible causes apply and follow the corresponding solutions.

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Table 18-7   Cannot Log into the Cisco DCNM Client

Symptom	Possible Cause	Solution
Cannot log into the Cisco DCNM client.	You forgot your password.	Ask a Cisco DCNM administrator to reset your password using one of the following scripts: • For Microsoft Windows, use *dcnm_root_directory*/dcm/dcnm/bin/pwreset.bat (by default, *dcnm_root_directory* is c:\Program Files\Cisco Systems\dcm\dcnm\bin). • For Linux, use *dcnm_root_directory*/dcm/dcnm/bin/pwreset.sh (by default, the *dcnm_root_directory* is /usr/local/cisco). To reset a password, run the appropriate script for the operating system that you are using, and then enter the user ID to be reset and the password to be used for it. If no one has administrative access to Cisco DCNM, you can reset the local administrator account or change Cisco DCNM server authentication settings by reinstalling the Cisco DCNM server software. For more information, see the *Cisco DCNM Installation and Licensing Guide, Release 5.x.*
	Authentication servers are not configured to authenticate Cisco DCNM users.	If Cisco DCNM is configured to use authentication servers, ensure that every authentication server that you have configured Cisco DCNM to use is configured to accept authentication requests from the Cisco DCNM server. If you have deployed Cisco DCNM in a clustered-server environment, ensure that every authentication server is configured to accept requests from each Cisco DCNM server in the cluster.
	The Cisco DCNM server is down.	Restart the Cisco DCNM server. See the "Starting a Single Cisco DCNM Server" section on page 16-2.
	The Cisco DCNM server is unreachable.	Ensure that the computer that runs the Cisco DCNM client meets the network requirements for using the Cisco DCNM client remotely. Any gateway network devices between the Cisco DCNM client and server must allow connections to the Cisco DCNM web server and to the Cisco DCNM server. By default, the Cisco DCNM web server listens to port 8080 and the Cisco DCNM server listens to port 1099; however, you can configure these ports during Cisco DCNM server installation. If you need to change either port, reinstall the server and choose the Full Reinstall option. For information about ports used by Cisco DCNM, see the *Cisco DCNM Installation and Licensing Guide, Release 5.x.*
	The Cisco DCNM server IP address changed after you installed the server.	Do the following: 1. Ensure that the IP address of the Cisco DCNM server is statically assigned. 2. Reinstall the Cisco DCNM server and choose the Full Reinstall option, which allows you to specify the server IP address. See the *Cisco DCNM Installation and Licensing Guide, Release 5.x.* 3. Log into the Cisco DCNM client and specify the new IP address of the Cisco DCNM server in the DCNM Server field of the login dialog box.

Table 18-7   Cannot Log into the Cisco DCNM Client (continued)

Symptom	Possible Cause	Solution
Cannot log into the Cisco DCNM client (continued).	The wrong Cisco DCNM server port number was used in the login attempt.	In the Cisco DCNM client login window, click **More** and, in the Port field, change the port number that your Cisco DCNM server uses. See the "Restarting the Cisco DCNM Client" section on page 2-7. If you want to change the port that the Cisco DCNM server listens to, reinstall the Cisco DCNM server and choose the Full Reinstall option, which allows you to specify the Cisco DCNM server port. See the *Cisco DCNM Installation and Licensing Guide, Release 5.x*.
When you try to log into the Cisco DCNM client, you receive the error message "Can not resolve Cisco DCNM server *hostname* via DNS. Make sure that Cisco DCNM server has a valid DNS entry."	You used a hostname to specify the Cisco DCNM server during the login and DNS does not have an entry for the Cisco DCNM server.	Ensure that DNS on your network has an entry for the Cisco DCNM server hostname.

Client Loses Connection to the Cisco DCNM Server

Check Table 18-8 for symptoms related to the Cisco DCNM client losing its connection with the server. For each symptom that describes your trouble, determine which possible causes apply and follow the corresponding solutions.

Table 18-8   Client Loses Connection to the Cisco DCNM Server

Symptoms	Possible Cause	Solution
• Client loses connection to the server. • The Cisco DCNM client window is pink.	The client had a failure.	Restart the Cisco DCNM client.
	The Cisco DCNM server is down.	Restart the Cisco DCNM server. See Chapter 16, "Starting and Stopping Cisco DCNM Servers."
	The Cisco DCNM server is unreachable.	Investigate your network to determine if it meets the network requirements for using the Cisco DCNM client remotely. For information about ports used by Cisco DCNM, see the *Cisco DCNM Installation and Licensing Guide, Release 5.x*.

Trouble with Device Discovery or Device Status

Check Table 18-9 for symptoms related to issues with device discovery or the device status. For each symptom that describes your trouble, determine which possible causes apply and follow the corresponding solutions.

Table 18-9   Trouble with Device Discovery or Management

Symptoms	Possible Cause	Solution
• A device discovery task fails. • A device status changes to Unmanaged or Unreachable.	Incorrect device credentials were provided.	Reenter the username and password, and try discovering the device again. If you are attempting to discover CDP neighbors of the seed device, ensure that the credentials that you provide are valid on all devices that you want to discover.
	The SSH server is disabled on the device.	Reenable the SSH server on the device and try discovering the device again.
	The maximum number of SSH sessions that the device can support has been reached.	Check the number of user sessions on the device. Free at least one connection and try discovering the device again.
	CDP is disabled on the device or on the device interface that the Cisco DCNM server connects to.	Ensure that CDP is enabled on the device globally and that it is enabled on the specific interface that the Cisco DCNM server connects to.
	The device interface that the Cisco DCNM server connects to is shut down.	Ensure that the device interface that the Cisco DCNM server connects to is up.
	The device restarted or shut down before discovery could complete.	Ensure that the device is running and try discovering the device again.
	The Cisco DCNM server cannot reach the device.	Ensure that the network requirements for device management are met. See the "Verifying the Discovery Readiness of a Cisco NX-OS Device" section on page 5-7.

Trouble with Device Management

Check Table 18-6 for symptoms related to device management. For each symptom that describes your trouble, determine which possible causes apply and follow the corresponding solutions.

Table 18-10   Trouble with Device Management

Symptom	Possible Cause	Solution
Clearing the log file or the accounting log on a Cisco NX-OS device does not cause Cisco DCNM to rediscover the device automatically.	The device did not generate a system message about the accounting log or the log file being cleared. This problem is particularly likely if the device is a Cisco MDS 9000 Family Multilayer Switch running Cisco SAN-OS Release 3.1 or earlier.	Rediscover the device. For more information, see the "Discovering a Device" section on page 6-4.
The Cisco DCNM client shows device configuration information that is out of date.	The Cisco DCNM server was down.	You can do either of the following: • Rediscover the device. For more information, see the "Discovering a Device" section on page 6-4. • Restart the Cisco DCNM server with a clean database. If the server was down for a long time, this action is the recommended solution. 1. Stopping Cisco DCNM Servers, page 16-5 2. Cleaning a Cisco DCNM Database, page 17-5 3. Starting Cisco DCNM Servers, page 16-2

Trouble with Topology

Check Table 18-11 for symptoms related to using the topology feature. For each symptom that describes your trouble, determine which possible cause applies and follow the corresponding solution.

Table 18-11   Trouble with Topology

Symptom	Possible Cause	Solution
• Links between Cisco MDS 9000 Family Multilayer Switches continue appear after the link has gone down.	Devices are connected by Gigabit Ethernet or Fast Ethernet ports, and are running Cisco SAN-OS Release 3.1 or earlier.	Rediscover the devices that topology incorrectly shows as linked.

Trouble with Device OS Management

Check Table 18-12 for symptoms related to the Device OS Management feature. For each symptom that describes your trouble, determine which possible causes apply and follow the corresponding solutions.

Table 18-12   Trouble with Device OS Management

Symptom	Possible Cause	Solution
• During a software installation job, the software image file transfer between a file server and a device takes too much time.	The connection between the file server and the device is slow.	Use a file server that is on the same LAN as the devices included in the software installation job. If all of the available file servers transfer software image files too slowly, before you create the software installation job, manually copy the files to the devices that you will include the job and configure the job to use the manually copied files rather than a file server. For information about configuring a software installation job, see the *Cisco DCNM System Management Configuration Guide, Release 5.x*.

Trouble with Event Browsing

Check Table 18-13 for symptoms related to event browsing issues. For each symptom that describes your trouble, determine which possible causes apply and follow the corresponding solutions.

Table 18-13   Trouble with Event Browsing

Symptom	Possible Cause	Solution
• Events available on the device command line do not appear in the Cisco DCNM client.	Logging levels on managed devices are set incorrectly.	Check the logging level configuration on managed devices. See the "Cisco NX-OS System-Message Logging Requirements" section on page 5-3.
• Too few events are shown in Event Browser or an Events tab.	The Cisco DCNM client fetches events that are not old enough.	Check the events-related setting in the Cisco DCNM client preferences. For more information, see the "Configuring the Maximum Age of Events Fetched from the Server" section on page 3-16.

Table 18-13   Trouble with Event Browsing

Symptom	Possible Cause	Solution
Too many events are shown in Event Browser or on an Events tab.	A managed device has an issue that is generating many system log messages.	Temporarily unmanage the device until you resolve the issues on the device. For more information, see the "Unmanaging a Device" section on page 6-5.
	Logging levels on managed devices are set incorrectly.	Check the logging level configuration on managed devices. See the "Cisco NX-OS System-Message Logging Requirements" section on page 5-3.
A feature Events tab does not show events that appear in the Event Browser.	By design, an Events tab shows only messages that apply to the currently selected feature and may show only a subset of the possible messages for the feature. For more information, see the "Events Tabs Show Fewer Events than the Event Browser" section on page 18-1.	Use the Event Browser to see status-related system messages received by Cisco DCNM. For more information, see the *Cisco DCNM System Management Configuration Guide, Release 5.x*.