



# CHAPTER 18

## Troubleshooting Cisco Application Networking Manager Problems

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This section includes the following topics:

- [Changing Configuration Property Values, page 18-1](#)
- [Discovering and Adding a Device Does Not Work, page 18-3](#)
- [ANM Server Not Receiving Syslog Messages, page 18-4](#)
- [Using Lifeline, page 18-4](#)
- [Backing Up and Restoring Data, page 18-8](#)

For additional troubleshooting information, see the *Installation Guide for Cisco Application Networking Manager 3.0*.

### Changing Configuration Property Values

After you have installed the ANM, you can reconfigure ANM ports and other ANM configuration properties.



**Caution**

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Remember that if you enable HTTP, you make your connection to ANM less secure.

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To reconfigure ports or other ANM configuration properties, do the following:

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- Step 1** Log in as the root user.
- Step 2** Do one of the following:
- For a standard configuration change, enter `/opt/CSCOanm/bin/anm-tool configure`
  - To switch from a HA to a non-HA system configuration, enter `/opt/CSCOanm/bin/anm-tool --ha=0 configure`
  - To switch from a non-HA to a HA system configuration, enter `/opt/CSCOanm/bin/anm-tool --ha=1 configure`
- Step 3** When the **Keep existing ANM configuration? [y/n]:** prompt appears, enter **n**.  
You are prompted for the same configuration information as was presented during installation.

**Step 4** Modify the configuration properties as needed.

For each configuration property, the current value is displayed in square brackets.

Do one of the following:

- To accept the value for a configuration property, press **Enter**.
- To change a configuration property, enter the appropriate information.

**Step 5** Accept or ignore the configuration changes that you made.

When you have accepted or changed all of the configuration property values, a list of all the properties is displayed and you are prompted:

**Commit these values? [y/n/q]:**

Do one of the following:

- To accept the value and restart the ANM, enter **y**.
- To go through the list of configuration properties again, enter **n**.
- To retain the original property values and exit the configuration session, enter **q**.



**Tip** If you receive errors when attempting to change the HA properties configuration values after installing ANM, check the node ID to be sure they are not switched.

The following is an example of a configuration session for an HA system. Non-HA systems will not contain any HA properties, but will include some limited property value configuration. The values shown in the brackets are the currently configured values.

```
/opt/CSCOanm/bin/anm-tool configure
Configuring ANM

Checking ANM configuration files
Keep existing ANM configuration? [y/n]: n
Creating config file (/opt/CSCOanm/etc/cs-config.properties)

Data directory [/var/lib/anm]:
HTTP Port of Web Server [10080]:
Enable HTTP for Web Server [false]:
HTTPS Port of Web Server [10443]:
Enable HTTPS for Web Server [true]:
HA Node 1 UName [rh23.cisco.com]:
HA Node 2 UName [rh25.cisco.com]:
HA Node 1 Primary IP [192.168.65.23]:
HA Node 2 Primary IP [192.168.65.25]:
HA Node 1 HeartBeat IP [12.12.12.2]:
HA Node 2 HeartBeat IP [12.12.12.1]:
HA Virtual IP [192.168.65.126]:
HA Node ID [2]:

These are the values:
Data directory: /var/lib/anm
HTTP Port of Web Server: 10080
Enable HTTP for Web Server: false
HTTPS Port of Web Server: 10443
Enable HTTPS for Web Server: true
HA Node 1 UName: rh23.cisco.com
HA Node 2 UName: rh25.cisco.com
HA Node 1 Primary IP: 192.168.65.23
```

```
HA Node 2 Primary IP: 192.168.65.25
HA Node 1 HeartBeat IP: 12.12.12.2
HA Node 2 HeartBeat IP: 12.12.12.1
HA Virtual IP: 192.168.65.126
HA Node ID: 2

Commit these values? [y/n/q]: y
Committing values ... done
Keeping existing configuration: /opt/CSCOanm/lib/java/thirdparty/ctm_config.txt

Stopping services
Stopping monit services (/etc/monit.conf) ... (0)
Stopping monit ... Stopped
Stopping heartbeat ... Stopped
Stopping mysql ... Stopped

Installing system configuration files

Setting service attributes
Enabling mysql for SELinux
setsebool: SELinux is disabled.
Service monit is started by OS at boot time

Starting mysql ... Started

Configuring mysql
Checking mysql user/password
Setting mysql privileges
Disabling mysql replication
Setting up database
extracting anmdb.sql ... done
executing anmdb.sql ... done

Starting services
Starting monit ... Started
```

## Discovering and Adding a Device Does Not Work

After IP discovery has checked the network and made a list of devices of each type, the device import may have failed when you tried to import the device. The device import may not have worked because IP discovery uses Telnet and SNMP to discover potential devices, while ANM requires SSH to import a device. So it is likely that IP discovery may have found some devices that cannot be imported or may not have found devices that could be imported.

To update the device so that it can be imported by ANM, see the [“Preparing Devices for Import” section on page 4-3](#).

To add the device, use the Config > Devices > Add method. For detailed procedures, see the [“Adding Network Devices into ANM” section on page 4-9](#).

# ANM Server Not Receiving Syslog Messages

Firewall settings are implemented as IP tables with Red Hat Enterprise Linux 5.2, and might drop syslog traffic.

If you are not receiving syslog messages even after following the procedure documented in the [“Enabling a Setup Syslog for Autosync for Use With an ACE”](#) section on page 4-20, perform the procedure in this section.

## Procedure

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- Step 1** Update the rules in your IP tables using the command line.
- Step 2** Make sure the default syslog port 514 is open as noted in [Appendix A, “ANM Ports Reference.”](#)
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## Using Lifeline

Diagnosing network or system-related problems that happen in real time can consume a considerable amount of time and lead to frustration even for a system expert. When a critical problem occurs within the ANM system or the network components managed by the ANM, you can use the troubleshooting and diagnostics tools provided by the Lifeline feature to report to the Cisco support line and generate a diagnostic package. Support engineers and developers can subsequently reconstruct your system and debug the problem using the comprehensive information captured in the lifeline.

Lifeline takes a snapshot of the running system configuration, status, buffers, logs, thread dumps, messages, CLI device configuration commands, device **show run** commands, and so on. It gathers a period of historical network and system events that have been recorded directly preceding the event. If required, Lifeline can back up and package the ANM database or a file subdirectory or trace and package a period of traffic flow packets for a specified virtual context.

The following sections describe how to use the Lifeline feature:

- [Guidelines for Using Lifeline, page 18-4](#)
- [Creating a Lifeline Package, page 18-5](#)
- [Downloading a Lifeline Package, page 18-6](#)
- [Adding a Lifeline Package, page 18-6](#)
- [Deleting a Lifeline Package, page 18-7](#)

## Guidelines for Using Lifeline

Lifelines can be created when unwanted events occur. Under such circumstances, available resources could be extremely low (CPU and memory could be nearly drained). You should be aware of the following:

- Create a Lifeline package after you encounter a problem that might require customer support assistance. The package is meant to be viewed by customer support.

- Lifeline collects debug data from diagnostic generators based on priority – most important to least important. When the total data size reaches 200MB, the collector stops collecting, and data from generators with lower priorities can be lost. For details on content, size, time, state, and any dropped data, see the Readme file included in each Lifeline package.
- Lifeline collects the last 25 MB of data from the file and truncates the beginning content.
- Lifelines are automatically packaged by the system in zip files. The naming convention for a lifeline package is “lifeline-yyMMdd-hhmmss.zip”. For example, lifeline-07062-152140.zip is a Lifeline package created at 3:21:40 PM, June 22, 2007.
- Only one Lifeline package is created at a time. The system will reject a second request made before the first Lifeline has been packaged.
- Lifeline times out in 60 minutes.
- A maximum of 20 Lifeline packages are stored at a time.

## Creating a Lifeline Package

You can create a lifeline package.

### Assumptions

This section assumes the following:

- ANM is installed and running.
- You have reviewed the guidelines for managing lifelines (see the [“Guidelines for Using Lifeline” section on page 18-4](#)).
- You have opened a case with Cisco technical support.

### Procedure



#### Note

Your user role determines whether you can use this option.

**Step 1** Choose **Admin > Lifeline Management**.

**Step 2** Enter a description for the package (required).

The description can include information about why the package is being created, who requested the package, and so forth.

**Step 3** Click **Save**.

The package is created in the following format: lifeline-yyMMdd-hhmmss.zip, and displays in the Lifelines pane. The package size, name, and generation date display in the New Lifeline window.



#### Note

Do not perform any module maintenance until the package is created.

**Step 4** After the package is created, do one of the following:

- Click **Download** to save the package to a directory on your computer or to view the package contents. See the [“Downloading a Lifeline Package” section on page 18-6](#).
- Click **Add** to add the package to the ANM database. See the [“Adding a Lifeline Package” section on page 18-6](#).

- Click **Delete** to delete the package. See the “[Deleting a Lifeline Package](#)” section on page 18-7.
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**Related Topics**

- [Using Lifeline](#), page 18-4
- [Creating a Lifeline Package](#), page 18-5
- [Adding a Lifeline Package](#), page 18-6
- [Downloading a Lifeline Package](#), page 18-6

## Downloading a Lifeline Package

**Note**

Your user role determines whether you can use this option.

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You can download a package for displaying or saving to your local drive.

**Assumption**

You have created a package (see the “[Creating a Lifeline Package](#)” section on page 18-5).

**Procedure**

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**Step 1** Choose **Admin > Lifeline Management**.

**Step 2** Choose the package (Lifeline) from the list.

**Step 3** Click **Download**.

The package is sent to your web browser, with which you can save or view the package.

**Note**

Do not perform any module maintenance until the package download to your web browser has completed.

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**Related Topics**

- [Using Lifeline](#), page 18-4
- [Creating a Lifeline Package](#), page 18-5
- [Adding a Lifeline Package](#), page 18-6
- [Deleting a Lifeline Package](#), page 18-7

## Adding a Lifeline Package

**Note**

Your user role determines whether you can use this option.

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You can add a package to the ANM database.

**Assumption**

You have created a package (see the “[Creating a Lifeline Package](#)” section on page 18-5).

**Procedure**

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- Step 1** Choose **Admin > Lifeline Management**.  
The Lifeline Management window appears.
- Step 2** In the Lifeline Management window, enter a description and click **Add**.  
The package is added to the Lifelines list, and the window refreshes.



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**Note** Do not perform any module maintenance until the package is added to the list.

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**Related Topics**

- [Using Lifeline, page 18-4](#)
- [Creating a Lifeline Package, page 18-5](#)
- [Downloading a Lifeline Package, page 18-6](#)
- [Deleting a Lifeline Package, page 18-7](#)

## Deleting a Lifeline Package



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**Note** Your user role determines whether you can use this option.

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You can delete a package.

**Procedure**

- 
- Step 1** Choose **Admin > Others > Lifeline Management**.  
The Lifeline Management window appears.
- Step 2** From the list of lifelines in the Lifeline Management window, choose a lifeline to delete.  
The details of the lifeline display.
- Step 3** Click **Delete**.  
A confirmation popup window displays that requests you confirm the deletion.
- Step 4** Click **OK** to delete the package.  
The Lifeline Management window display updates.
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**Related Topics**

- [Using Lifeline, page 18-4](#)
- [Creating a Lifeline Package, page 18-5](#)

- [Adding a Lifeline Package, page 18-6](#)
- [Downloading a Lifeline Package, page 18-6](#)

## Backing Up and Restoring Data

These procedures enable you to backup ANM's configuration and restore it if necessary. This section contains the following topics:

- [Backing Up Data, page 18-8](#)
- [Restoring Data, page 18-9](#)



### Note

For details on using the ACE device backup and restore functions in ANM, see the “[Performing Device Backup and Restore Functions](#)” section on page 5-56. The backup and restore functions allow you to back up or restore the configuration and dependencies of an entire ACE or of a particular virtual context.

## Backing Up Data

You can back up the ANM configuration.



### Note

MySQL must be running to perform the backup.

### Procedure

#### Step 1

Log in as the root user.



### Caution

As the root user, you can adversely affect your operating environment if you are unaware of the effects of the commands you use. If you are a relatively inexperienced Linux user, limit your activities as the root user to the tasks described in this procedure.

Do the following:

- If you are not logged in, log in as the root user as follows:
  - >**login: root**
  - >**Password: root-password**
- If you are already logged in but not as the root user, use the **su** command as follows to change your login to root:
  - # **su**
  - # **Password: root-password**

#### Step 2

Verify ANM servers are running by entering the following command:

```
/opt/CSCOanm/bin/anm-tool info-services
```

#### Step 3

Back up the ANM configuration by entering the following command:

```
/opt/CSCOanm/bin/anm-tool backup backup-file
```

where *backup-file* is the name of the file that you want to back up.

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### Related Topics

[Restoring Data, page 18-9](#)

## Restoring Data

You can restore ANM configuration data.



### Note

You must restore the data on the same version of ANM on which you performed the backup. Restoring data to a different version of ANM is not supported in this release.

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### Procedure

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**Step 1** Log in as the root user.



### Caution

As the root user, you can adversely affect your operating environment if you are unaware of the effects of the commands you use. If you are a relatively inexperienced Linux user, limit your activities as the root user to the tasks described in this procedure.

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Do the following:

- If you are not logged in, log in as the root user as follows:

**>login: root**

**>Password: root-password**

- If you are already logged in but not as the root user, use the **su** command as follows to change your login to root:

**# su**

**# Password: root-password**

**Step 2** Verify the ANM servers are running by entering the following command:

**/opt/CSCOanm/bin/anm-tool info-services**

**Step 3** Restore the data by entering the following command:

**/opt/CSCOanm/bin/anm-tool restore *backup-file***

where *backup-file* is the name of the file you want to restore.

ANM automatically restarts.

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### Related Topics

[Backing Up Data, page 18-8](#)

