



CHAPTER 2

Installing Application Networking Manager Software

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This chapter describes how to install or uninstall the Application Networking Manager (ANM) software on the server. This chapter includes the following sections:

- [Information About ANM High Availability, page 2-1](#)
- [Information About Installing Application Networking Manager, page 2-2](#)
- [Installing ANM in Non-HA or Standalone Mode, page 2-3](#)
- [Installing ANM in HA Mode, page 2-4](#)
- [Uninstalling Application Networking Manager, page 2-5](#)

Information About ANM High Availability

ANM high availability (HA) consists of two peer hosts, an active (primary) and a standby (secondary or backup host). Both peers in an ANM HA system *must* be running the same version of ANM.

Each host must have at least two network interfaces:

- A primary interface, which is normally used to access the host.
- A heartbeat interface, which is used as a redundant network element in case the primary host fails. The heartbeat interfaces of the two hosts must be connected through a crossover Ethernet connection, which must be a physical connection, configured on its own (private) subnet.

ANM does not configure the primary and heartbeat IP addresses for Nodes 1 and 2. You must manually configure these addresses. Typically, the heartbeat IP address is not on the same subnet as the subnet that connects the nodes to your network.



Note

The heartbeat interfaces on Node 1 and Node 2 should be configured on a private subnet that only includes each node's individual IP addresses.



Note

You must designate eth0 as the primary interface and eth1 as the heartbeat interface. For more information on high availability, see Chapter 10, "Configuring ANM High Availability," in the online help or the *User Guide for the Cisco Application Networking Manager 2.1*.

When you install ANM, you need to provide values for high availability parameters. Because there are no default values for the high availability parameters, you cannot specify *interactive=0* during installation.

**Note**

The parameter *interactive=0* conflicts with *ha=1* and should *not* be used during installation.

Table 2-1 describes the installation parameters. Use these parameters as described in the “Installing ANM in HA Mode” section on page 2-4.

**Note**

All parameter values shown in Table 2-1 must be identical on both machines except for the HA Node ID parameter.

Table 2-1 ANM High Availability Installation Parameter Descriptions

Installation Parameter	Description
Database Password	Password for the MySQL database.
HA Node 1 Uname	Name of Node 1, which can be returned by entering the uname -n command on the host.
HA Node 2 Uname	Name of Node 2, which can be returned by entering the uname -n command on the host.
HA Node 1 Primary IP	IP address that Node 1 uses for normal (nonheartbeat related) communication. This IP address must be on the same subnet as the primary IP address of Node 2.
HA Node 2 Primary IP	IP address that Node 2 uses for normal (nonheartbeat related) communication. This IP address must be on the same subnet as the primary IP address of Node 1.
HA Node 1 Heartbeat IP	IP address associated with the crossover network interface of Node 1. This IP address must be on the same subnet as the heartbeat IP address of Node 2. Typically, this subnet is private.
HA Node 2 Heartbeat IP	IP address associated with the crossover network interface of Node 2. This IP address must be on the same subnet as the heartbeat IP address Node 1. Typically, this subnet is private.
HA Virtual IP	Virtual IP address that is associated with the active host. This IP address must be on the same subnet as the primary IP addresses of both Node 1 and Node 2. This IP address is automatically created by ANM HA.
HA Node ID	Predetermined node ID of the node, which must be either 1 or 2.

Information About Installing Application Networking Manager

You can install ANM on the server in either high availability (HA) or non-HA mode. High Availability (or fault tolerance) ensures that your network services and applications are always available.

During the ANM installation, MySQL (a Sun RDBMS) is automatically installed. If your system contains a different version of MySQL than the one used by ANM, it will be replaced with the version used by ANM during installation.

HTTP is disabled for new installations. After the installation, you can change the properties file if you want to access ANM using HTTP. For more information, see the “Changing Configuration Property Values” section in the online help or Chapter 16, “Troubleshooting Cisco Application Networking Manager Problems” of the *User Guide for the Cisco Application Networking Manager 2.1*.

**Note**

You must enable popup windows for ANM features, such as ACL tables, to work.

Installing ANM in Non-HA or Standalone Mode

**Note**

Before you install the Application Networking Manager software on the server, make sure that your system meets the requirements listed in the “[Server Requirements](#)” section on page 1-3.

During the installation of ANM 2.1, you must specify an admin password. If you are installing ANM in HA mode, you must specify a MySQL password in addition to an admin password.

**Note**

The MySQL password *must* be the same on both HA nodes.

To install ANM in non-HA or standalone mode, follow these steps:

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- Step 1** Insert the CD-ROM into the drive of the Linux server and mount to the /cdrom directory from the command line.
- Step 2** Once logged in, change your directory to the /cdrom directory or the directory to which you mounted the CD.
- Step 3** From the Linux command line, log in as the root user as described in the “[Becoming the Root User](#)” section on page 1-4.
- Step 4** (Optional) From the command line, change the access mode of the installation file by entering the **chmod a+x anm-2.1.bin**.
- Step 5** From the command line, enter the **./anm-2.1.bin [--interactive=0|1] [--admin-password=admin-password]** command to start the installation script.
- The **--interactive** keyword specifies whether there is an interaction during ANM installation. Enter **0** to specify that there will be no possible interaction. Enter **1** to specify that there will be an interaction. The default value is **1**. Note that *admin-password* is required only for noninteractive mode.
- The installation begins and status messages appear on your login window. When Done appears, the installation script has finished.
- Step 6** Locate and enter the product authorization key (PAK) that you received with your software to acquire a license file on Cisco.com if you have not already done so. For more information, see the “[Acquiring and Uploading a Cisco Application Networking Manager License](#)” section on page 4-1.

**Note**

This step will require an Internet connection.

- Step 7** From the command line of your Linux server, enter the `/opt/CSCOanm/bin/anm-license install /path/ANMxxxxxxxxxxxxxxxxx.lic` command to install the license on the ANM server.
- path* is the location of the license file and *ANMxxxxxxxxxxxxxxxxx.lic* is the name of the license file.



Note You must have a license before you can log into ANM.

- Step 8** Unmount the CD-ROM, and then continue to the “[Getting Started with Application Networking Manager](#)” section on page 4-1.

Installing ANM in HA Mode



Note Before you install the Application Networking Manager software on the server, make sure that your system meets the requirements listed in the “[Server Requirements](#)” section on page 1-3.

HA requires two hosts. One host takes an *active* role and the other host takes a *standby* role. The active host provides ANM functionality. If something happens to the active host, the standby takes over after a brief delay. All active sessions are lost when the standby server takes over. Therefore, you will need to log in again. To install ANM in HA mode, complete the following steps on *both* machines. To prepare for the questions that are part of the installation, see the “[Information About ANM High Availability](#)” section on page 2-1.

During the installation of ANM 2.1, you must specify an admin password. If you are installing ANM in HA mode, you must specify a MySQL password in addition to an admin password.



Note The MySQL password *must* be the same on both HA nodes.

- Step 1** Insert the CD-ROM into the drive of the Linux server and mount to the `/cdrom` directory.
- Step 2** From the command line, change your directory to the `/cdrom` directory or the directory to which you mounted the CD.
- Step 3** From the Linux command line, log in as the root user as described in the “[Becoming the Root User](#)” section on page 1-4.
- Step 4** (Optional) Change the access mode of the installation file by entering the `chmod a+x anm-2.1.bin` command.
- Step 5** From the command line, enter the `./anm-2.1.bin --ha=1` command to start the installation script.
- `--ha=1` specifies this as an HA installation. The default value for HA is 0. HA installations are interactive; if you enter 0, the installation will fail. The installation begins and status messages appear in your login window.

An HA installation requires that two hosts be configured. You must configure the hosts identically, but you can have unique hostnames (except for the node ID).



Caution Each host must have a unique hostname, or an error will result. You can use the `uname -n` command to verify that the names are unique.

You will receive a series of prompts requesting the information that follows.

- Step 6** When prompted, enter the MySQL database password in the space provided.
- Step 7** When prompted, enter the name of Node 1 in the space provided.
- Step 8** When prompted, enter the name of Node 2 in the space provided.
- Step 9** When prompted, enter the IP address of the primary network interface card (NIC) on Node 1 in the space provided.
- Step 10** When prompted, enter the IP address of the primary NIC on Node 2 in the space provided.
- Step 11** When prompted, enter the IP address of the HeartBeat NIC on Node 1 in the space provided.
- Step 12** When prompted, enter the IP address of the HeartBeat NIC on Node 2 in the space provided.
- Step 13** When prompted, enter the virtual IP address of the Node 1–Node 2 pair in the space provided.
- Step 14** When prompted, enter the node ID of the node that you are configuring in the space provided. For Node 1, enter **1**. For Node 2, enter **2**.
- Step 15** When Done appears, the installation script has finished.
- Step 16** Locate and enter the product authorization key (PAK) that you received with your software to acquire a license file on Cisco.com if you have not already done so. For more information, see the [“Acquiring and Uploading a Cisco Application Networking Manager License”](#) section on page 4-1.
- Step 17** Enter the following command to install the license on the ANM server. A license file must be present before you can log into ANM.

```
/opt/CSCOanm/bin/anm-license install /path/ANMxxxxxxxxxxxxxxxxx.lic
```

where *path* is the location of the license file and *ANMxxxxxxxxxxxxxxxxx.lic* is the name of the license file.

- Step 18** Unmount the CD-ROM and repeat the previous steps on the other HA host. After your standby host is installed, continue to the [“Getting Started with Application Networking Manager”](#) section on page 4-1.

**Note**

Some ANM processes will run on a standby ANM host. For more information, see the “Configuring High Availability” chapter in the *User Guide for the Cisco Application Networking Manager 2.1*.

Uninstalling Application Networking Manager

You can uninstall the Application Networking Manager application from the standalone (non-HA mode) or HA-mode. Make sure that you uninstall ANM before you install it again.

This section includes the following topics:

- [Uninstalling ANM in Non-HA or Standalone Mode, page 2-6](#)
- [Uninstalling ANM From HA Mode, page 2-6](#)

Uninstalling ANM in Non-HA or Standalone Mode

To uninstall ANM, follow these steps:


Note

Make sure that your current working directory is *not* `/opt/CSCOanm` or one of its subdirectories when performing the uninstall. Uninstalling ANM results in the `/opt/CSCOanm` directory being removed.

- Step 1** From the Linux command line, log in as the root user as described in the [“Becoming the Root User” section on page 1-4](#).
- Step 2** Once logged into ANM, enter the `/opt/CSCOanm/bin/anm-tool uninstall` command at the command line to uninstall ANM.

When the uninstallation is complete, the `/opt/CSCOanm` directory, RPMs, and application files are deleted.


Note

When uninstalling ANM, MySQL is also uninstalled.

Uninstalling ANM From HA Mode

To uninstall ANM HA from HA-mode, follow these steps:


Note

Make sure that your current working directory is *not* `/opt/CSCOanm` or one of its subdirectories when performing the uninstall. Uninstalling ANM results in the `/opt/CSCOanm` directory being removed.

- Step 1** From the Linux command line, log in as the root user as described in the [“Becoming the Root User” section on page 1-4](#).
- Step 2** From the command line, enter the `/opt/CSCOanm/bin/anm-tool uninstall` command on the standby server to uninstall ANM.
- Step 3** From the command line, enter the `/opt/CSCOanm/bin/anm-tool uninstall` command on the active server to uninstall ANM.

When the uninstallation is complete, the `/opt/CSCOanm` directory RPMs, and application files are deleted.