



CHAPTER 1

Preparing to Install Application Networking Manager

This chapter describes what you need to know and steps you need to take before installing or upgrading ANM.

For detailed hardware and Cisco IOS requirements, see the *Supported Devices Table for Application Networking Manager 5.2.5* at the following URL:

http://www.cisco.com/en/US/products/ps6904/products_device_support_tables_list.html



Note

This guide describes how to install and administer the Cisco ANM server software only. For information about installing the ANM Virtual Appliance software on a VMware virtual machine, see the *Installation Guide for Cisco Application Networking Manager 5.2.5 Virtual Appliance*.

This chapter includes the following sections:

- [ANM Overview, page 1-1](#)
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- [Client Requirements, page 1-5](#)
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ANM Overview

ANM is a client/server application that enables you to perform all the following functions:

- Configure, monitor, and troubleshoot the functions of data center devices.
- Create policies for operations, applications owners, and server administration staff to activate and suspend network-based services without knowledge of, or ability to, change network configuration or topology.
- Manage the following product types:
 - Cisco Application Control Engine (ACE) module or appliance
 - Cisco Global Site Selector (GSS)
 - Cisco Content Services Switch (CSS)
 - Cisco Catalyst 6500 Virtual Switching System (VSS) 1440

- Cisco Catalyst 6500 series switch
 - Cisco 7600 series router
 - Cisco Content Switching Module (CSM)
 - Cisco Content Switching Module with SSL (CSM-S)
 - VMware vCenter Server
- Allow activation/suspension of VIP answers and DNS rules for the GSS.
 - The server runs on a dedicated Linux machine where you will need to install Red Hat Enterprise Linux. The client runs on supported versions of Internet Explorer or Firefox web browsers. A pair of ANM servers can be configured to run in High Availability mode.

ANM is available in two versions, allowing you to install it either on a dedicated server or on a VMware virtual machine as shown in [Figure 1-1](#). The capabilities and functions of the ANM software are the same regardless of which application you use. This guide uses the following terms to reference the two ANM applications:

- ANM server—Dedicated server with ANM server software and Red Hat Enterprise Linux (RHEL) operating system installed on it.
- ANM Virtual Appliance—VMware virtual appliance with ANM server software and Cisco Application Delivery Engine Operating System (ADE OS) installed on it. Cisco distributes ANM Virtual Appliance in Open Virtual Appliance (.OVA) format. For information about installing this type of ANM application, see the [Installation Guide for Cisco Application Networking Manager 5.2.5 Virtual Appliance](#).

Figure 1-1 ANM Server Deployment

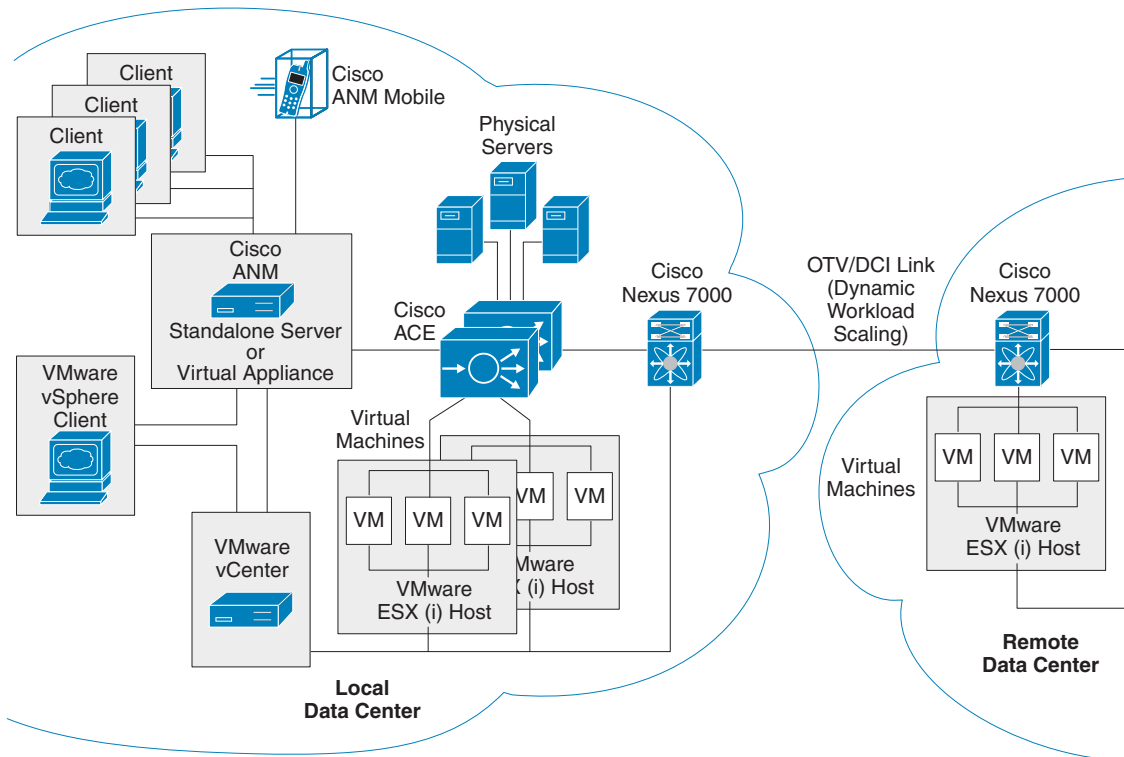


Figure 1-1 shows the following ANM and ACE features:

- VMware integration—Feature that enables ANM and the ACE to be integrated with VMware, allowing you to create and manage server farms for application delivery that consist of real servers that are a combination of physical servers and VMware virtual machines (VMs).
- Dynamic Workload Scaling—ACE feature that permits on-demand access to remote resources, such as VMs, that you own or lease from an Internet service provider (or cloud service provider). This feature uses Cisco’s Nexus 7000 series switches with Overlay Transport Virtualization (OTV), which is a Data Center Interconnect (DCI) technology used to create a layer 2 link over an existing IP network between geographically distributed data centers.

For more information, see the “[Dynamic Workload Scaling Overview](#)” section in the *User Guide for the Cisco Application Networking Manager 5.2.5*.



Note Dynamic Workload Scaling requires ACE module or appliance software Version A4(2.0) or later and the Cisco Nexus 7000 series switch.

- ANM plug-in for vCenter Server—Plug-in on an ANM server or ANM Virtual Appliance that permits access to ANM’s ACE server load-balancing functions from a VMware vSphere Client.
For more information, see the “[Using ANM With Virtual Data Centers](#)” section in the *User Guide for the Cisco Application Networking Manager 5.2.5*.
- ANM Mobile—Feature that enables supported mobile devices to access to your ANM server or ANM Virtual Appliance, allowing you to manage the network objects in much the same way you do from an ANM client. Using a mobile device, you can run ANM Mobile as a native application or inside the mobile device’s browser.

For more information, see [Chapter 19, “Using ANM Mobile”](#) in the *User Guide for the Cisco Application Networking Manager 5.2.5*.

Server Requirements

You install ANM server on an RHEL server only. ANM supports the following RHEL operating system versions:

- RHEL 5 (base server) Update 3 (5.3) 32-bit or 64-bit Server Edition (Linux 2.6 kernel)
- RHEL 5 (base server) Update 4 (5.4) 32-bit or 64-bit Server Edition (Linux 2.6 kernel)
- RHEL 5 (base server) Update 5 (5.5) 32-bit or 64-bit Server Edition (Linux 2.6 kernel)
- RHEL 5 (base server) Update 6 (5.6) 32-bit or 64-bit Server Edition (Linux 2.6 kernel)
- RHEL 5 (base server) Update 9 (5.9) 32-bit or 64-bit Server Edition (Linux 2.6 kernel)

With ANM 4.1 and later releases, 64-bit Server Edition (Linux 2.6 Kernel) support is added (see the “[Information About Upgrading ANM Server Software](#)” section on page 3-1). The upgrade procedure is similar to the procedures as described in the RHEL 5.x upgrade (RHEL 5.3, 5.4, 5.5, 5.6 or 5.9). The primary difference when you are not upgrading RHEL is that you do not have to back-up the data from the ANM server. This is because you are not upgrading the operating system software and the data that was previously configured on the ANM server remains intact.

During an ANM installation, MySQL (Sun’s 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.

**Tip**

If you are installing RHEL 5 servers for the first time, to avoid installation failures or incompatibilities, see the [“Red Hat Operating System Installation Tips”](#) section on page A-1.

Your server must also meet the following minimum requirements:

**Note**

No external software or libraries are needed to install ANM.

Your server must also meet the following minimum requirements:

- A dedicated Linux server for ANM.
- A *minimum* of 2-GB random access memory (RAM); we recommend 4 GB RAM as a minimum for optimum performance.
- A *minimum* of 120-GB hard drive.
- Disk space requirements for ANM components as listed in [Table 1-1](#).

**Note**

Because ANM can potentially span multiple partitions, the disk requirements are listed on a directory basis. The partition that contains the specified directory must have at least the specified amount of free space indicated in [Table 1-1](#).

Table 1-1 ANM Disk Space Requirements

Directory	Disk Requirement
/opt/CSCOanm	2 GB
/var/lib/anm	45 GB

- 3-GHz Pentium III CPU or equivalent (dual processor supported; application is multithreaded but performance/capacity increase has not been specified).
- CD-ROM drive.
- 100-Mbps Ethernet interface for a single ANM configuration.
- One ANM server license for the active or primary server that you can download to the machine after installation by using the product authorization key (PAK).

If you are installing ANM with fault-tolerant high availability (HA), ensure that you have the following:

- Two full-duplex 100-Mbps Ethernet interfaces
- Two hosts with unique hostnames
- Primary IP addresses of both hosts configured on the same subnet (requirement)
- Secondary IP addresses (used as heartbeats) of both hosts configured on the same subnet (requirement)
- An additional ANM server license for the standby or backup server

**Note**

For more information about high availability functions, see the [“Installing ANM in HA Mode”](#) section on page 2-3.

Client Requirements

Each client accessing ANM running on a Linux server must meet the following minimum requirements:

- IBM-compatible computer with 2-GHz or faster Pentium processor
- At least 1-GB minimum RAM

The client must run one of the following operating systems:

- Windows 7
- Windows 8
- Windows Vista with Service Pack 1
- Windows XP Professional with Service Pack 2
- Red Hat Enterprise Linux 5 (base server)

The client requires one of the following browsers:

- Microsoft Internet Explorer as follows:
 - IE 7.0 on Windows XP Professional with Service Pack 2 or Windows Vista with Service Pack 1
 - IE 8.0 on Windows XP Professional with Service Pack 2, Windows Vista with Service Pack 1
 - IE 9.0 on Windows Vista with Service Pack 2 and Windows 7.
 - IE 10.0 on Windows 8
- Firefox 20 on Windows XP Professional with Service Pack 2, Windows Vista with Service Pack 1, Windows 7, or Red Hat Enterprise Linux 5

**Note**

All browsers require that you enable cookies, JavaScript/scripting, Adobe Flash Player 9, and popup windows. Whenever ANM software is changed (upgrade or downgrade), end clients will need to clear their browser cache of each client.

ANM Software Licensing Requirements

Beginning with ANM software Version 5.2, the ANM software image includes a 90-day evaluation period that is activated when you install the software. This feature allows you to begin using ANM immediately after installing the software. You must install the permanent software license before the 90-day evaluation period expires to continue using ANM. When the time remaining to the evaluation period is down to 10 days, ANM issues daily reminders that the evaluation period is coming to an end and that you need to install the permanent license.

For more information about ANM software licenses, see the [“Acquiring and Uploading a Cisco Application Networking Manager License”](#) section on page 4-1

Becoming the Root User

To install ANM, you must be logged in as the root user on the server where you want to install ANM.

**Caution**

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

From the Linux command line, log in as the root user by entering the following at the prompts:

```
> login: root  
> Password: root-password
```

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

```
# su -  
# Password: root-password
```
