CHAPTER 2

Installing NAM Virtual Services Blade Software

This chapter contains information about installing NAM Virtual Services Blade (VSB) software on a supported WAAS device. NAM VSB software supports the following WAAS appliances:

- WAVE-574
- WAE-674

Note Installing the Cisco NAM VSB software using Central Manager requires WAAS version 4.1.3 on both the Central Manager and the Managed WAAS device.

Installing NAM Software on a WAE Device

This section describes how to install Cisco NAM VSB software on a WAE device.

This section includes the following:

Enabling Virtual Services Blade on the WAE

This section describes how to set up the WAE to support VSB. You can skip this step if the WAE device has already been set up to support VSB. You can use either CLI commands or the Central Manager (CM) GUI windows.

Using the CLI

To enable a VSB on a WAE using the CLI, do the following steps:

Step 1 Log into the WAE serial console.

Step 2 Enter the following command:

setup

Step 3 Check the setup menu and confirm the following:

- Device mode is Application-Accelerator
- Management interface is set to GigabitEthernet1/0

You can type **setup** at any time and accept the defaults or change them, and choose to save or not save at the end of the session.

Step 4 Enable the virtual-blade feature using the following commands:

Note This procedure reformats the disk and requires a **reload**.

conf t

virtual-blade enable

exit

wr mem

reload

After the login prompt returns, you are ready to log in and set up the VSB.

For details on configuring a VSB, see Chapter 14, Configuring Virtual Blades in the Cisco Wide Area Application Services Configuration Guide.

http://www.cisco.com/en/US/docs/app_ntwk_services/waas/waas/v413/configuration/guide/virtual.html

Using the GUI

To enable a VSB on a WAE device using the Central Manager GUI, do the following steps:

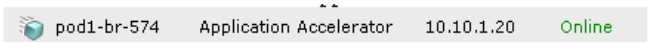
Step 1 Log into the WAAS Central Manager GUI.

Step 2 In the Action menu, click **Manage Devices** as shown in Figure 2-1.

Figure 2-1 WAAS Central Manager GUI - Manage Devices

Step 3 Confirm that the mode is set to Application Accelerator and that the WAE is addressable as shown in Figure 2-2, seen when accessing the Manage Devices tab.

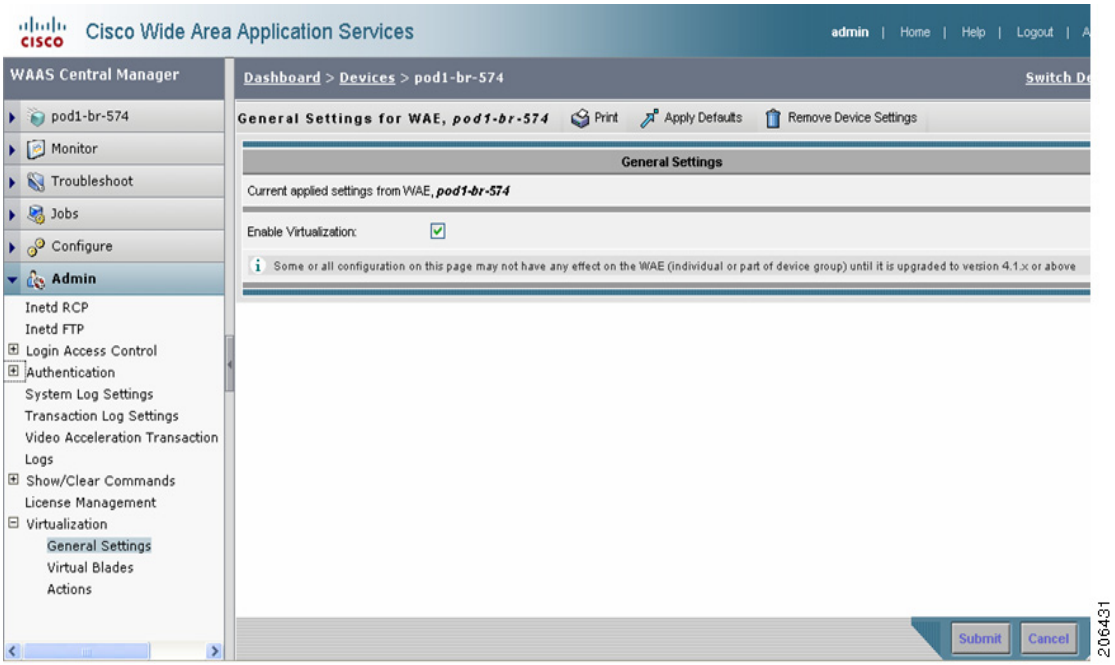
Figure 2-2 Checking Mode Setting



Note Click on the cube beside the device name to edit the device on which you want to install the Cisco NAM VSB software.

Enable the VSB feature on the selected device by choosing **Admin > Virtualization** -- **General Settings**, check the **Enable Virtualization** check box, then click **Submit**.

Figure 2-3 General Settings Window



You are prompted to confirm that you want to modify general settings. Doing so will cause the WAE to reboot. After the reboot, the WAE will have a disk partition and other resources reserved for VSB use.

Configuring the IP Address on the WAE

This section describes how to set up the IP address of the WAE. The management interface for the WAE and the VSBs are the same.

Note If you have already configured the WAE with an IP address, skip these steps.

Using the CLI

To configure the IP address on a WAE device using the CLI, do the following steps:

Step 1 Log into the WAE Serial console.

Step 2 Check to see if the first Ethernet interface is configured with an IP address using the following command:

show interface GigabitEthernet 1/0

```
WAAS# show int gigabitEthernet 1/0
Type:Ethernet
Ethernet address:00:1A:64:D4:E4:94
Internet address:172.20.122.42
Broadcast address:172.20.122.127
Netmask:255.255.255.128
Maximum Transfer Unit Size:1500
Metric:1
Packets Received: 531150131
Input Errors: 0
Input Packets Dropped: 4976
Input Packets Overruns: 0
Input Packets Frames: 0
Packet Sent: 7709986
Output Errors: 0
Output Packets Dropped: 0
Output Packets Overruns: 0
Output Packets Carrier: 0
Output Queue Length:1000
Collisions: 0
Interrupts:16
Flags:UP BROADCAST RUNNING PROMISC MULTICAST
Mode: autoselect, full-duplex, 1000baseTX
WAAS#
```

If an IP address is not configured, continue with the Step 3. Otherwise, skip to the section Setting Up the NAM Virtual Services Blade on the WAE, page 2-6

Step 3 Enter the following commands to configure the IP address:

conf t

int GigabitEthernet 1/0

ip address <IP-Address> <Subnet-Mask>

(Enter the IP address and subnet mask of the WAE device.)

no shut

exit

ip default-gateway <Gateway-IP-Address>

(Enter the IP address of the Gateway for the WAE device.)

exit

Using the WAAS CM GUI

To configure the IP address on a WAE device using the Central Manager GUI, do the following steps:

Step 1 Log into the device on which the VSB software is being installed.

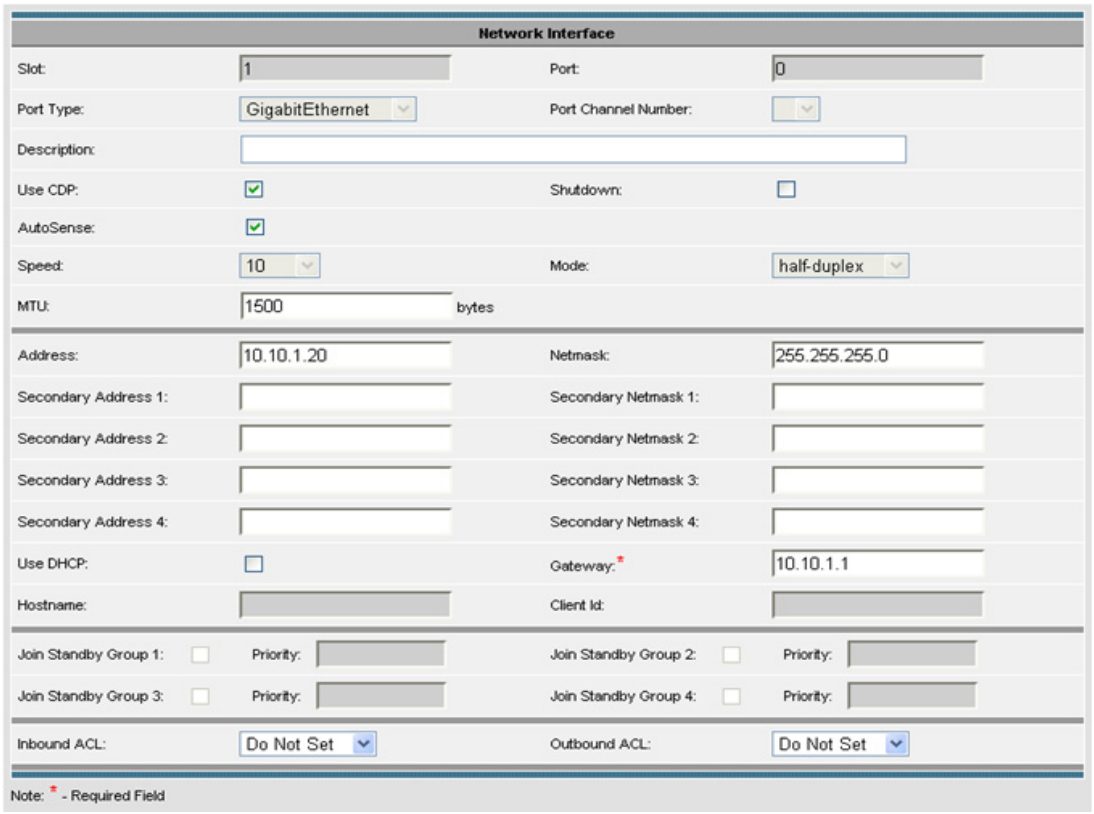
Step 2 Choose **Configure > Network > Network Interfaces** window and configure GigabitEthernet 1/0 as the Primary Interface.

Step 3 Click the **Edit** icon.

Step 4 Configure GigabitEthernet 1/0 with the desired IP Address and Gateway, then click **Submit**.

Figure 2-4 shows the Network Interface window after entering the required IP address information for the WAE device.

Figure 2-4 WAE Device - Network Interfaces



Setting Up the NAM Virtual Services Blade on the WAE

At this point, you are ready to set up the blade parameters and load the NAM software image onto the WAE disk. Use **telnet** and/or the console connection to log in, and open two session windows.

Note We recommend that you open two login sessions on the WAAS console. This enables you to use one for the VSB session and the other session to set the VSB parameters and control the blade.

Copying the Cisco NAM Virtual Services Blade Software Image

To copy the NAM image onto the WAE, use a command like the following:

copy ftp disk <FTP-IP> / <NAM-ISO-PATH_FILE> /local1/vbs/appHelper.iso

Where:

- FTP-IP is the IP address of the FTP server.
- **NAM-ISO-PATH_FILE** is the path and name of the ISO file on the server.
- ***/local1/vbs/appHelper.iso*** is the path and filename of the target location.

Example:

```
copy ftp disk 192.168.40.101 / nam-app-x86_64.5-0-1.iso / local1/vbs/appHelper.iso
```

Configuring Virtual Services Blade Parameters

This section describes how to set up the VSB parameters. The minimum disk space required is 40 GB, minimum memory is 1 GB, as shown in procedure steps below. The total available disk space and memory might vary from one device to another, and devices with higher capacity can be used. The WAE initially boots from the **.iso** (cd-rom), but after installation is reconfigured to boot disk.

Using the CLI

To configure VSB parameters using the CLI, do the following steps:

Step 1 Log into the WAE Serial console, and enter the following commands.

conf t

virtual-blade 1 boot cd-image disk /local1/vbs/appHelper.iso

virtual-blade 1 disk 40

virtual-blade 1 memory 1024

virtual-blade 1 interface 1 bridge GigabitEthernet 1/0

virtual-blade 1 description "NAM Virtual Services Blade"

virtual-blade 1 device cpu qemu64

virtual-blade 1 device nic e1000

virtual-blade 1 device disk ide

virtual-blade 1 boot from cd-rom

exit

Using CM GUI

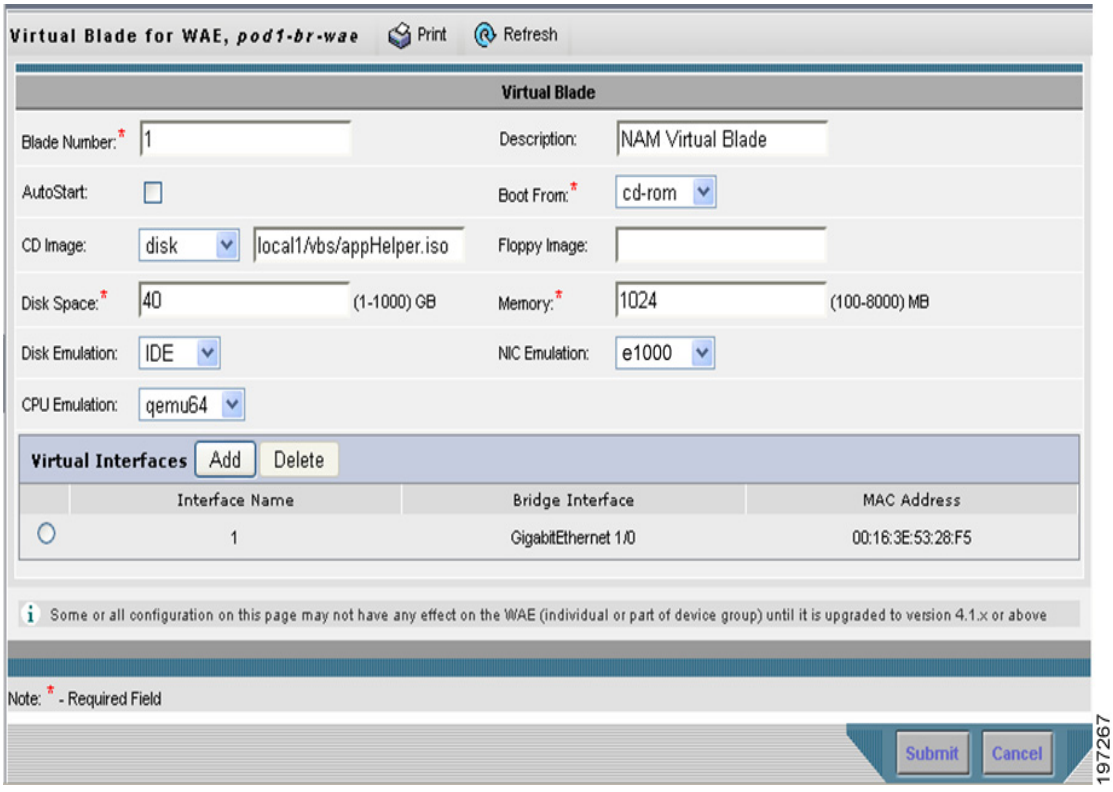
To configure the VSB parameters on a WAE device using the Central Manager GUI, do the following steps:

Step 1 Log into the device on which the VSB software is being installed.

Step 2 Navigate to the **Admin > Virtualization > Virtual Blades** window and click **Create**.

The Virtual Blade Parameters window displays as shown in Figure 2-5.

Figure 2-5 Virtual Blade Parameters



Step 3 Enter the Virtual Blade parameters as shown in Table 2-1.

Table 2-1 Virtual Blade Parameters for WAE

Field	Value and Usage Notes
Blade Number	1
Description	NAM Virtual Services Blade
AutoStart	
Boot From	cd-rom
CD Image	Disk and path to bootfile
Floppy Image	
Disk Space	40
Memory	1024
Disk Emulation	IDE
NIC Emulation	e1000
CPU Emulation	qemu64

Step 4 Add GigabitEthernet 1/0 as a bridged interface and generate a MAC address for it.

Step 5 Log into the WAE and enter the following commands:

conf t

virtual-blade 1 device nic e1000

virtual-blade 1 boot from cd-rom

Booting the NAM Virtual Services Blade

This section describes how to boot the NAM VSB and set up its IP address to enable you to begin to use the NAM GUI. Use **telnet** and/or the console connection to log in, and open two session windows.

Note We recommend that you open two login sessions into the WAE. This enables you to use one session to issue commands on the WAE and the other to session into the NAM VSB.

Step 1 Start two **telnet** sessions into the WAE.

Step 2 In one session, start the NAM VSB using the following command:

virtual-blade 1 start

Note If a license issue occurs, see the section VSB Licensing to fix the issue, then retry.

Step 3 To start the VSB from the CM GUI, click **Admin > Virtualization > Actions**.

Step 4 In the second session window, session into the NAM VSB with the following command:

virtual-blade 1 session

The virtual-blade start command from Step #2 brings up the NAM boothelper menu on the NAM VSB console session after a few minutes. as shown below:

```
======================================================
Cisco Systems, Inc.
Network Analysis Module (NAM) helper utility
Version 5.1
-----
Main menu
1 - Download application image and write to HDD
2 - Download application image and reformat HDD
3 - Install application image from CD
4 - Display software versions
5 - Reset application image CLI passwords to default
6 - Change file transfer method (currently ftp/http)
7 - Send Ping
n - Configure network
h - Exit and shut down Services Engine
Selection [1234567nh]:
```

Step 5 Enter **1** or **2** as required. Choose *Install application image from CD* and follow the prompts.

The filename will be the name you had given it when it was downloaded.

Step 6 After the NAM application image is installed on the disk, shut down the NAM VSB. Enter **h** to *Exit and shut down Services Engine*.

It is important to shut down the NAM VSB so you can change the VSB configuration to boot from disk so you boot the application image.

Step 7 Return to the first session, and stop the NAM VSB with the following command:

virtual-blade 1 stop

Step 8 From the CM GUI, choose **Admin > Virtualization > Actions**.

Step 9 Return to the first session and after the WAE console prompt returns, enter the following commands to configure the NAM VSB to boot from disk:

conf t

virtual-blade 1 boot from disk

exit

wr mem

Step 10 Enter the following commands to boot the NAM application image, then wait for the NAM login prompt.

virtual-blade 1 start

virtual-blade 1 session

Initial NAM Configuration

This section describes the initial configuration of the NAM VSB using the NAM CLI.

Step 1 Log into the NAM console as user *root*.

The default password for user *root* is *root*.

Step 2 Enter the following CLI commands to enable IP access.

ip address <IP-Address> <Subnet-Mask>

ip gateway <Gateway-IP-Address>

ip domain <Domain-name>

ip nameserver <Nameserver-IP-Address>

ip http server enable

```
(Enter the web username and password)
```

exsession on

Step 3 Connect to the NAM IP Address in the URL field of your web browser, then login using the username and password you have selected.