Installation Guide for the Cisco Application Performance Assurance Engine 1.0

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Preface

This preface explains the objectives, intended audience, and organization of *Installation Guide for the Cisco Application Performance Assurance Engine 1.0* and describes the conventions that convey instructions and other information.

The preface contains the following sections:

- Objective
- Audience
- Document Organization
- Document Conventions
- Related Documentation
- Obtaining Documentation, Obtaining Support, and Security Guidelines

Objective

This document is a guide to the installation and use of the Cisco Application Performance Assurance (APA) engine.

Audience

This guide is intended for Cisco APA users and administrators.

Note This guide assumes a basic familiarity with the telecommunications equipment and installation procedures.

Document Organization

This guide contains the following chapters:

- Chapter 1, "Product Overview,"describes the software and hardware features of the Cisco APA.
- Chapter 2, "Installing the Cisco Application Performance Assurance Engine," describes the installation procedure for installing the APA.

Document Conventions

This guide uses the convention whereby the symbol ^ represents the key labeled *Control*. For example, the key combination **^z** means hold down the **Control** key while you press the **z** key.

Command descriptions use these conventions:

- Examples that contain system prompts denote interactive sessions, indicating the commands that you should enter at the prompt. The system prompt indicates the current level of the EXEC command interpreter. For example, the prompt `Router>` indicates that you should be at the *user* level, and the prompt `Router#` indicates that you should be at the *privileged* level. Access to the privileged level usually requires a password. Refer to the related software configuration and reference documentation listed in "Related Documentation" for additional information.
- Commands and keywords are in **boldface** font.
- Arguments for which you supply values are in *italic* font.
- Elements in square brackets ([ ]) are optional.
- Alternative keywords of which you must choose one are grouped in braces ({}) and separated by vertical bars (|).

Examples use these conventions:

- Terminal sessions and sample console screen displays are in `screen` font.
- Information you enter is in **`boldface screen`** font.
- Nonprinting characters, such as passwords, are in angle brackets (< >).
- Default responses to system prompts are in square brackets ([]).
- An exclamation point (!) at the beginning of a line indicates a comment line.

Caution Means *reader be careful*. You are capable of doing something that might result in equipment damage or loss of data.

Note Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in this manual.

Timesaver Means *the described action saves time*. You can save time by performing the action described in the paragraph.

Warning **This warning symbol means *danger*. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. To see translations of the warnings that appear in this publication, refer to the *Regulatory Compliance and Safety Information* document that accompanied this device.** Statement 1074

Related Documentation

The Cisco APA documentation set includes the following guides:

- *Installation Guide for the Cisco Application Performance Assurance Engine 1.0*
  http://www.cisco.com/en/US/products/ps9799/prod_installation_guides_list.html
- U*ser Guide for the Cisco Application Performance Assurance Engine 1.0*
  http://www.cisco.com/en/US/products/ps9799/products_user_guide_list.html
- Release Notes for the Cisco Application Performance Assurance Engine 1.0
  http://www.cisco.com/en/US/products/ps9799/prod_release_notes_list.html
- Finding Documentation for the Cisco Application Performance Assurance Engine 1.0
  http://www.cisco.com/en/US/products/ps9799/products_documentation_roadmaps_list.html
- *Troubleshooting Guide for the Cisco Application Performance Assurance Engine 1.0*
  http://www.cisco.com/en/US/products/ps9799/prod_troubleshooting_guides_list.html
- Online help—Click **Help** from any APA screen.

The following hardware documentation is also available for the Cisco Application Performance Assurance engine:

- *Cisco Application Deployment Engine (ADE) 2130 and 2140 Series Appliance RCSI*
- *Cisco Application Deployment Engine (ADE) 2130 and 2140 Series Appliance Hardware Installation Guide*

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

CHAPTER 1

Product Overview

The Cisco Application Performance Assurance Engine (APA) performs Layer 7 stateful deep packet inspection and control over network traffic on a per-application, per-user basis. Designed for small data centers and higher education deployments, the APA solution identifies and prioritizes about 1,000 applications, including ERP applications, voice over IP (VoIP), Web browsing, music downloads, distance learning applications, video streaming, and peer-to-peer (P2P) traffic.

This chapter describes software and hardware features of the Cisco APA and includes the following sections:

- Hardware Features, page 1-1
- Software Features, page 1-2

Note For translated safety warnings and regulatory compliance information, see the document titled *Cisco Application Deployment Engine (ADE) 2130 Series Appliance RCSI.*

Hardware Features

For Cisco APA hardware information, see the following documents:

- *Cisco Application Deployment Engine (ADE) 2130 and 2140 Series Appliance RCSI*
- *Cisco Application Deployment Engine (ADE) 2130 and 2140 Series Appliance Hardware Installation Guide*

Software Features

The Cisco APA Engine contains software with the following major features:

- Device management
- Traffic management
- User management
- Reporting
- Admin management

The Cisco APA includes a Web interface, the Application Performance Assurance Device Console (APADC), which you access by using a browser. The APADC provides access to all device management tasks and most of the management tasks for the Cisco APA. For information on using the Web interface, see the Cisco APA online help or the *User Guide for the Cisco Application Performance Assurance Engine 1.0*.

CHAPTER 2

Installing the Cisco Application Performance Assurance Engine

This section describes the installation procedure for installing the Cisco Application Performance Assurance (APA) Engine and relevant software.

- Preparing to Install, page 2-1
- Interface Cabling, page 2-1
- Setting Up the APA, page 2-2
- Verifying the Configuration, page 2-3
- Configuring the Web Browser, page 2-3
- Logging Into the Web Interface, page 2-3
- Upgrading the APA Software, page 2-4
- Reinstalling the APA Software Using the CD, page 2-4

Preparing to Install

Make sure you have read the following documents before proceeding with setting up the APA appliance:

- *Cisco Application Deployment Engine (ADE) 2130 and 2140 Series Appliance RCSI*
- *Cisco Application Deployment Engine (ADE) 2130 and 2140 Series Appliance Hardware Installation Guide*

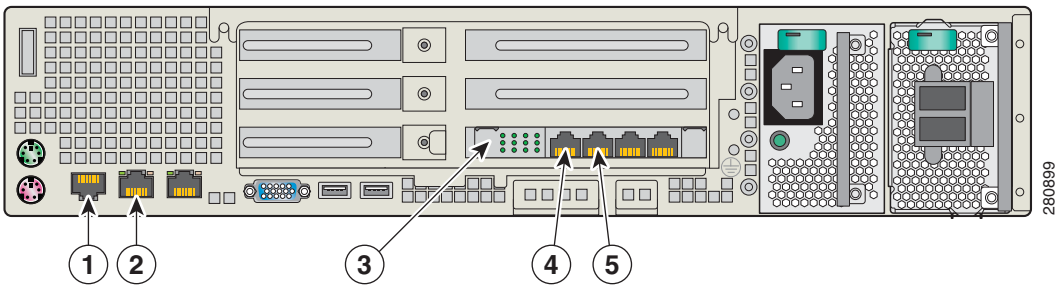
Interface Cabling

The APA Engine is deployed using an inline ("bump-in-the-wire") topology, where it resides physically on the Gigabit Ethernet (GBE) link between the users (LAN-side) and the network (WAN-side).

To support the APA Engine deployment, the Cisco ADE appliance is equipped with an additional network interface card with a hardware "fail-to-wire" feature that guarantees traffic will by bypassed and not be dropped in case of a product malfunction.

The location of this network interface card is shown in Figure 2-1. The network interface card has 4 GBE interfaces, of which only two are used, LAN 0 and WAN 0.

Figure 2-1 APA Engine Rear View



Number	Port	Interface Name	Description
1	Console port		Serial console port for connecting a local terminal using a rollover cable.
2	Management port	FastEthernet 0/0	GBE port labelled GE1. The IP address of this interface is configured during the installation procedure
3	Line port NIC card		The LEDs on the this NIC card indicate the following conditions: • Top LED indicates link activity. • Middle LED indicates 100 MBs per second speed. • Bottom LED indicates 1000 MBs per second speed. Both the middle and bottom lights are lit when the port is in bypass mode.
4	LAN 0	FastEthernet 0/1	Connect the LAN-side cable to this port.
5	WAN 0	FastEthernet 0/2	Connect the WAN-side cable to this port.

Setting Up the APA

Using the APA appliance console port, you must access the CLI and execute the commands as shown below.

Note The enable password you specify can be different for each of the four levels (0, 5, 10, and 15).

```
Password:cisco
CAM-APA> enable 15
Password: cisco
CAM-APA#> configure
CAM-APA(config)#> enable password level 0 0 password
CAM-APA(config)#> enable password level 5 0 password
CAM-APA(config)#> enable password level 10 0 password
CAM-APA(config)#> enable password level 15 0 password
CAM-APA(config)#> interface FastEthernet 0/0
CAM-APA(config-if)#> ip address ip-address subnet-mask
CAM-APA(config-if)#> exit
CAM-APA(config)#> ip default-gateway address
CAM-APA(config)#> exit
CAM-APA#> copy running-config statup-config
```

You are now able to Telnet into the APA.

Verifying the Configuration

You can verify the configuration of the APA by executing the following command:

```
CAM-APA#> show running-config
```

Configuring the Web Browser

Before connecting to the APA web interface, make sure you are using a supported browser and the browser is properly configured. The supported browsers for APA are:

- Microsoft Internet Explorer 6.0
- Mozilla Firefox 2.0

. While using the APA Web interface, you should disable popup-blocking software or add the APA to the "allow" list.

Logging Into the Web Interface

APA provides a Graphical User Interface (GUI) for configuration and security functions. You use the GUI, called the Application Performance Assurance Device Console (APADC) to perform the functions described in this guide.

To verify connectivity, connect to the APA using a supported, properly configured Web browser (see Configuring the Web Browser, page 2-3) and perform the following steps:

Step 1 In the Address field of your web browser, enter the name of the machine that is hosting the APA in the following format:

http://*hostname***:8080**

where *hostname* is the name of the machine that is hosting the APA.

The APA Device Console (APADC) login screen appears.

Step 2 Enter the initial default login information for the APA:

Username: **root**

Password: **cisco**

The Create IT Manager screen appears.

Step 3 Create a user with IT Manager privileges by entering the following information:

- Username
- Password
- Confirm password

Note By default, the APA Access Level for the IT Manager is 15. For additional information about roles and access levels, see the *User Guide for the Cisco Application Performance Assurance Engine 1.0*.

Step 4 Click **Create**.

You are returned to the login screen where you must log in as the IT Manager user that you just created.

After you successfully log in, you are connected to the APA. The dashboard page appears displaying summary attributes of the APA.

Upgrading the APA Software

You can upgrade the APA software running on the hardware appliance by downloading a new software image from cisco.com and installing the software using the APA Device Console (APADC).

Step 1 Download the APA software image (an .iso file) from cisco.com and save it to a file system which can be accessed from the browser running the APADC.

Step 2 Open a console port window to observe any errors or warnings.

Step 3 Log in to the APADC and select **Device Management > Installation**.

Step 4 Click the **CAM sw (.iso)** button, then click **Clean Install** to delete all existing APA configurations. If you do not select the **Clean Install** check box, APA preserves the previously saved configuration including all traffic, user, and device configuration management elements.

Caution All APA configurations are deleted if you click the **Clean Install** check box.

Step 5 In the Image File field, enter the name of the image that you downloaded from cisco.com or click **Browse** to navigate and select the downloaded file.

Step 6 Click **Apply**. The image file is uploaded to the APA hardware.

This step takes approximately 15 minutes. After the image file is successfully uploaded, the APA is reloaded and your browser session becomes inactive. Reloading the APA takes approximately 15 minutes. You can observe the progress of the reload on the console port. The reload is complete when the console port displays the login prompt.

Step 7 If you selected the **Clean Install** check box in Step 5, you must log into the console port and perform the basic configuration tasks from the console port as described in Setting Up the APA, page 2-2. When you log into the APADC, you must log in with the initial default login (root/cisco) and create the IT Manager user as described in Logging Into the Web Interface, page 2-3.

Step 8 If you did not select the **Clean Install** check box, you can log into the APADC using one of the previously created usernames and passwords. You do not need to log into the console.

Reinstalling the APA Software Using the CD

If you have an unrecoverable system error, you can reinstall the APA software from a CD as shown in the following steps. You first need to download the APA software image (an .iso file) from cisco.com and create a CD.

Step 1 When you install the APA from a CD, you are required to change the BIOS setting to reflect the boot selection to first boot from the CD if present, and then from the hard drive. When you start the APA appliance, it will automatically begin the software installation process.

Step 2 Connect a console and a keyboard to the APA appliance in order to provide the necessary input to the prompts.

Step 3 Make sure you have your DVD Certificate disk ready to install when prompted.

Step 4 To turn the APA appliance's power on, press the power switch. If you set the BIOS to boot from the CD first, the software automatically begins installing.

The installation takes approximately 10-15 minutes.

Step 5 When prompted, insert the DVD Certificate disk for the appliance. For information about the DVD Certificate disk, contact your Cisco representative. Cisco requires the serial number of your appliance in order to deliver a valid certificate. The provided certificate is for the specific hardware appliance for which it was issued only and is not transferrable to any other appliance.

After you have successfully installed the provided certificate, the appliance reboots and displays a message indicating the certificate was successfully installed.

Step 6 Hit any key to continue. The system times out after 1 minute if you do not press any key.

If there were any errors during the installation process, an error message appears and prompts you for required information.

Step 7 Set up the APA as explained in Setting Up the APA, page 2-2.

Related Topics

- Setting Up the APA, page 2-2
- Verifying the Configuration, page 2-3
- Logging Into the Web Interface, page 2-3

Using the APA Engine

For information on using the APA Engine, see the *User Guide for the Cisco Application Performance Assurance Engine 1.0*.

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