



Release Notes for Cisco Intrusion Prevention System 7.0(9)E4

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Note

We highly recommend that you upgrade to the latest IPS 7.1(x) version if you have the IPS 4240, IPS 4255, IPS 4260, IPS 4270-20, or AIP SSM-10/20/40. IPS 7.0(9)E4 applies only to the AIM IPS, IDSM2, and NME IPS, so 7.0(9)E4 upgrade files will be prevented from being installed on all other platforms

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**Caution**

The BIOS on Cisco IPS sensors is specific to IPS sensors and must only be upgraded under instructions from Cisco with BIOS files obtained from the Cisco website. Installing a non-Cisco or third-party BIOS on IPS sensors voids the warranty.

IPS File List

**Note**

All IPS platforms allow ten concurrent CLI sessions.

**Note**

The AIM IPS and the NME IPS do not support the IPv6 features, because the router in which they are installed does not send them IPv6 data. IPv6 inspection may work on the IDSM2, but we do not officially support it. There is no support for IPv6 on the management (command and control) interface.

The following files are part of Cisco IPS 7.0(9)E4:

- Readme
 - IPS-7.0-9-E4_readme.txt
- Service Pack Upgrade Files
 - IPS-IDSM_2-K9-7.0-9-E4.pkg
 - IPS-AIM-K9-7.0-9-E4.pkg
 - IPS-NME-K9-7.0-9-E4.pkg
- CSM Service Pack Upgrade File
 - IPS-CSM-K9-7.0-9-E4.zip
- System Image Files
 - IPS-IDSM2-K9-sys-1.1-a-7.0-9-E4.bin.gz
 - IPS-AIM-K9-sys-1.1-a-7.0-9-E4.img
 - IPS-NME-K9-sys-1.1-a-7.0-9-E4.img
- Recovery Image Files
 - IPS-IDSM_2-K9-r-1.1-a-7.0-9-E4.pkg
 - IPS-AIM-K9-r-1.1-a-7.0-9-E4.pkg
 - IPS-NME-K9-r-1.1-a-7.0-9-E4.pkg

For More Information

For the procedure for obtaining these files on Cisco.com, see [Obtaining Software on Cisco.com, page 8](#).

Supported Platforms

Cisco IPS 7.0(9)E4 is supported on the following platforms:

- IDSM2 Series Intrusion Detection System Modules (IDSM2)
- Intrusion Prevention System Advanced Integration Modules (AIM IPS)
- Intrusion Prevention System Network Modules (NME IPS)

Cisco IPS 7.0(9)E4 is not supported on the following platforms:

- IPS 4240 series sensor appliances
- IPS 4255 series sensor appliances
- IPS 4260 series sensor appliances
- IPS 4270-20 series sensor appliances
- IPS 4345 series sensor appliances
- IPS 4360 series sensor appliances
- IPS 4510 series sensor appliances
- IPS 4520 series sensor appliances
- ASA 5500 series adaptive security appliances with AIP SSC-5
- ASA-SSM-AIP-10 Series Cisco ASA Advanced Inspection and Prevention Security Service Modules (AIP SSM-10)
- ASA-SSM-AIP-20 Series Cisco ASA Advanced Inspection and Prevention Security Service Modules (AIP SSM-20)
- ASA-SSM-AIP-40 Series Cisco ASA Advanced Inspection and Prevention Security Service Modules (AIP SSM-40)
- ASA 5585-X adaptive security appliances with IPS SSP
- ASA 5500-X adaptive security appliances with IPS SSP

Supported Servers

The following FTP servers are supported for IPS software updates:

- WU-FTPD 2.6.2 (Linux)
- Solaris 2.8
- Sambar 6.0 (Windows 2000)
- Serv-U 5.0 (Windows 2000)
- MS IIS 5.0 (Windows 2000)

The following HTTP/HTTPS servers are supported for IPS software updates:

- CSM - Apache Server (Tomcat)
- CSM - Apache Server (JRun)

ROMMON and TFTP

ROMMON uses TFTP to download an image and launch it. TFTP does not address network issues such as latency or error recovery. It does implement a limited packet integrity check so that packets arriving in sequence with the correct integrity value have an extremely low probability of error. But TFTP does not offer pipelining so the total transfer time is equal to the number of packets to be transferred times the network average RTT. Because of this limitation, we recommend that the TFTP server be located on the same LAN segment as the sensor. Any network with an RTT less than a 100 milliseconds should provide reliable delivery of the image. Be aware that some TFTP servers limit the maximum file size that can be transferred to ~32 MB.

For More Information

- For the procedure for downloading IPS software updates from Cisco.com, see [Obtaining Software on Cisco.com, page 8](#).
- For the procedure for configuring automatic updates, for the CLI refer to [Configuring Automatic Updates](#), for the IDM refer to [Configuring Automatic Update](#), and for the IME refer to [Configuring Automatic Update](#).

IPS Management and Event Viewers

Use the following tools for configuring Cisco IPS 7.0(9)E4 sensors:

- Cisco IDM 7.1.3
IDM 7.1.3 is included within the IPS 7.0(9)E4 files.
IDM 7.1.3 requires JRE 1.6 or later.
- Cisco IME 7.2.1
You can use IME 7.2.1 to configure IPS 6.1, 6.2, 7.0, and 7.1 sensors.
IDM 7.1.3 is included within IME 7.2.1.
- IPS CLI 7.0.9

Use the following tools for monitoring Cisco IPS 7.0(9)E4 sensors:

- IME 7.2.1
- MARS minimum version 5.2 and latest version 6.0.5
- CSM 4.4 SP2 and later



Note

You may need to configure viewers that are already configured to monitor the earlier version sensors to accept a new SSL certificate for the Cisco IPS 7.0(9)E4 sensors.

New and Changed Information

Cisco IPS 7.0(9)E4 contains the following new and changed information:

- Signature update S697



Note This service pack contains the S697 signature level, but preserves any more recent signature levels installed on your sensor.

- IDM 7.1.3
- The IDSM2 has the IDSM_2 identifier in the upgrade filenames.

MySDN Decommissioned

Because MySDN has been decommissioned, the URL in older versions of the IDM and the IME is no longer functional. If you are using IPS 6.0 or later, we recommend that you upgrade your version of the IDM and the IME.

You can upgrade to the following versions to get the functioning MySDN URL:

- IME 7.2.1
- IPS 7.0(9), which contains IDM 7.1.3

If you are using version IPS 5.x, you must look up signature information manually at this URL:

<http://tools.cisco.com/security/center/search.x>

For More Information

For information on MySDN, for the IDM refer to [Understanding MySDN](#), and for the IME refer to [MySDN](#).

Before Upgrading to Cisco IPS 7.0(9)E4

This section describes the actions you should take before upgrading to Cisco IPS 7.0(9)E4. It contains the following topics:

- [Perform These Tasks, page 6](#)
- [Backing Up and Restoring the Configuration File Using a Remote Server, page 6](#)
- [Obtaining Software on Cisco.com, page 8](#)
- [IPS Software Versioning, page 9](#)
- [Software Release Examples, page 12](#)

Perform These Tasks

Before you upgrade your sensors to IPS 7.0(9)E4, make sure you perform the following tasks:

- Check to make sure you have a valid Cisco Service for IPS service contract per sensor so that you can apply software upgrades.
- Created a backup copy of your configuration.
- Saved the output of the **show version** command.

If you need to downgrade a signature update, you will know what version you had, and you can then apply the configuration you saved when you backed up your configuration.

For More Information

- For more information on how to obtain a valid Cisco Service for IPS service contract, see [Service Programs for IPS Products, page 20](#).
- For the procedure for creating a backup copy of your configuration, see [Backing Up and Restoring the Configuration File Using a Remote Server, page 6](#).
- For the procedure for finding your Cisco IPS software version, for the CLI refer to [Displaying Version Information](#), for the IDM refer to [IDM Home Window](#), and for the IME refer to [Sensor Information Gadget](#).
- For the procedure for downgrading signature updates on your sensor, refer to [Upgrading, Downgrading, and Installing System Images](#).

Backing Up and Restoring the Configuration File Using a Remote Server



Note

We recommend copying the current configuration file to a remote server before upgrading.

Use the **copy** [**/erase**] *source_url destination_url keyword* command to copy the configuration file to a remote server. You can then restore the current configuration from the remote server. You are prompted to back up the current configuration first.

The following options apply:

- **/erase**—Erases the destination file before copying.
This keyword only applies to the current-config; the backup-config is always overwritten. If this keyword is specified for destination current-config, the source configuration is applied to the system default configuration. If it is not specified for the destination current-config, the source configuration is merged with the current-config.
- *source_url*—The location of the source file to be copied. It can be a URL or keyword.
- *destination_url*—The location of the destination file to be copied. It can be a URL or a keyword.
- **current-config**—The current running configuration. The configuration becomes persistent as the commands are entered.
- **backup-config**—The storage location for the configuration backup.

The exact format of the source and destination URLs varies according to the file. Here are the valid types:

- **ftp:**—Source URL for an FTP network server. The syntax for this prefix is:

```
ftp://[[username@]location][relativeDirectory]/filename
```

```
ftp://[[username@]location][absoluteDirectory]/filename
```



Note You are prompted for a password.

- **scp:**—Source URL for the SCP network server. The syntax for this prefix is:

```
scp://[[username@]location][relativeDirectory]/filename
```

```
scp://[[username@]location][absoluteDirectory]/filename
```



Note You are prompted for a password. You must add the remote host to the SSH known hosts list.

- **http:**—Source URL for the web server. The syntax for this prefix is:

```
http://[[username@]location][directory]/filename
```



Note The directory specification should be an absolute path to the desired file.

- **https:**—Source URL for the web server. The syntax for this prefix is:

```
https://[[username@]location][directory]/filename
```



Note The directory specification should be an absolute path to the desired file. The remote host must be a TLS trusted host.



Caution

Copying a configuration file from another sensor may result in errors if the sensing interfaces and virtual sensors are not configured the same.

Backing Up the Current Configuration to a Remote Server

To back up your current configuration to a remote server, follow these steps:

Step 1 Log in to the CLI using an account with administrator privileges.

Step 2 Back up the current configuration to the remote server.

```
sensor# copy current-config scp://user@192.0.2.0//configuration/cfg current-config
```

```
Password: *****
```

```
Warning: Copying over the current configuration may leave the box in an unstable state.
```

```
Would you like to copy current-config to backup-config before proceeding? [yes]:
```

Step 3 Enter **yes** to copy the current configuration to a backup configuration.

```
cfg          100% |*****| 36124          00:00
```

Restoring the Current Configuration From a Backup File

To restore your current configuration from a backup file, follow these steps:

Step 1 Log in to the CLI using an account with administrator privileges.

Step 2 Back up the current configuration to the remote server.

```
sensor# copy scp://user@192.0.2.0//configuration/cfg current-config
Password: *****
Warning: Copying over the current configuration may leave the box in an unstable state.
Would you like to copy current-config to backup-config before proceeding? [yes]:
```

Step 3 Enter **yes** to copy the current configuration to a backup configuration.

```
cfg          100% |*****| 36124      00:00

Warning: Replacing existing network-settings may leave the box in an unstable state.
Would you like to replace existing network settings
(host-ipaddress/netmask/gateway/access-list) on sensor before proceeding? [no]:
sensor#
```

Step 4 Enter **no** to retain the currently configured hostname, IP address, subnet mask, management interface, and access list. We recommend you retain this information to preserve access to your sensor after the rest of the configuration has been restored.

For More Information

For the procedure for adding trusted hosts, for the CLI refer to [Adding TLS Trusted Hosts](#), for the IDM refer to [Configuring Trusted Hosts](#), and for the IME refer to [Adding Trusted Hosts](#).

Obtaining Software on Cisco.com

You can find major and minor updates, service packs, signature and signature engine updates, system and recovery files, firmware upgrades, and Readmes on the Download Software site on Cisco.com. Signature updates are posted to Cisco.com approximately every week, more often if needed. Service packs are posted to Cisco.com following a train schedule. Major and minor updates are also posted periodically. Check Cisco.com regularly for the latest IPS software.

You must have an account with cryptographic access before you can download software. You set this account up the first time you download IPS software from the Download Software site.



Note

You must be logged in to Cisco.com to download software. You must have an active IPS maintenance contract and a Cisco.com password to download software. You must have a sensor license to apply signature updates.

Downloading IPS Software

To download software on Cisco.com, follow these steps:

Step 1 Log in to [Cisco.com](#).

Step 2 From the Support drop-down menu, choose **Download Software**.

Step 3 Under Select a Software Product Category, choose **Security Software**.

- Step 4** Choose **Intrusion Prevention System (IPS)**.
- Step 5** Enter your username and password.
- Step 6** In the Download Software window, choose **IPS Appliances > Cisco Intrusion Prevention System** and then click the version you want to download.



Note You must have an IPS subscription service license to download software.

- Step 7** Click the type of software file you need. The available files appear in a list in the right side of the window. You can sort by file name, file size, memory, and release date. And you can access the Release Notes and other product documentation.
- Step 8** Click the file you want to download. The file details appear.
- Step 9** Verify that it is the correct file, and click **Download**.
- Step 10** Click **Agree** to accept the software download rules. The first time you download a file from Cisco.com, you must fill in the Encryption Software Export Distribution Authorization form before you can download the software.
- Fill out the form and click **Submit**. The Cisco Systems Inc. Encryption Software Usage Handling and Distribution Policy appears.
 - Read the policy and click **I Accept**. The Encryption Software Export/Distribution Form appears.
- If you previously filled out the Encryption Software Export Distribution Authorization form, and read and accepted the Cisco Systems Inc. Encryption Software Usage Handling and Distribution Policy, these forms are not displayed again. The File Download dialog box appears.
- Step 11** Open the file or save it to your computer.
- Step 12** Follow the instructions in these Release Notes or the Readme to install the update.
-

IPS Software Versioning

When you download IPS software images from Cisco.com, you should understand the versioning scheme so you know which files are base files, which are cumulative, and which are incremental.

Major Update

A major update contains new functionality or an architectural change in the product. For example, the Cisco IPS 7.0 base version includes everything (except deprecated features) since the previous major release (the minor update features, service pack fixes, and signature updates) plus any new changes. Major update 7.0(1) requires 5.1(6) and later. With each major update there are corresponding system and recovery packages.



Note The 7.0(1) major update is used to upgrade 5.1(6) and later sensors to 7.0(1) If you are reinstalling 7.0(1) on a sensor that already has 7.0(1) installed, use the system image or recovery procedures rather than the major update.

Minor Update

A minor update is incremental to the major version. Minor updates are also base versions for service packs. The first minor update for 7.0 is 7.1. Minor updates are released for minor enhancements to the product. Minor updates contain all previous minor features (except deprecated features), service pack fixes, signature updates since the last major version, and the new minor features being released. You can install the minor updates on the previous major or minor version (and often even on earlier versions). The minimum supported version needed to upgrade to the newest minor version is listed in the Readme that accompanies the minor update. With each minor update there are corresponding system and recovery packages.

Service Pack

A service pack is cumulative following a base version release (minor or major). Service packs are released in a train release format with several new features per train. Service packs contain all service pack fixes since the last base version (minor or major) and the new features and defect fixes being released. Service packs require the minor version. The minimum supported version needed to upgrade to the newest service pack is listed in the Readme that accompanies the service pack. Service packs also include the latest engine update. For example, if service pack 7.0(9) is released, and E4 is the latest engine level, the service pack is released as 7.0(9)E4.

Patch Release

A patch release is used to address defects that are identified in the upgrade binaries after a software release. Rather than waiting until the next major or minor update, or service pack to address these defects, a patch can be posted. Patches include all prior patch releases within the associated service pack level. The patches roll into the next official major or minor update, or service pack.

Before you can install a patch release, the most recent major or minor update, or service pack must be installed. For example, patch release 7.0(1p1) requires 7.0(1).

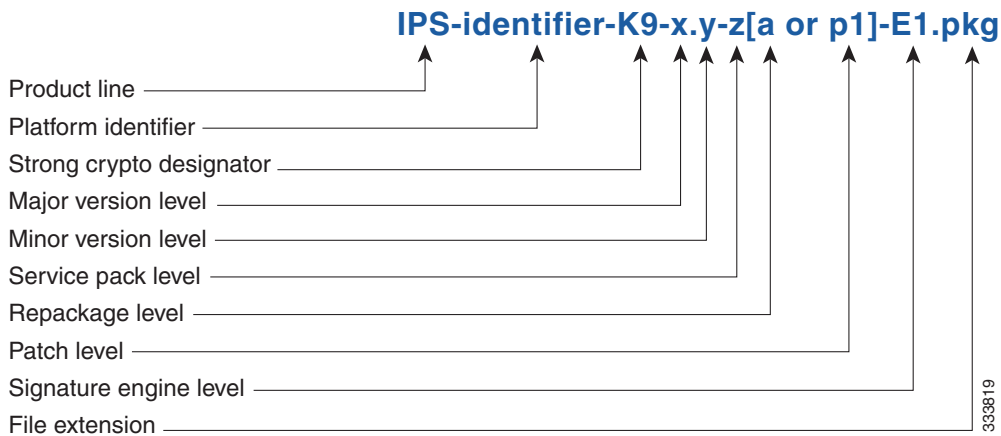


Note

Upgrading to a newer patch does not require you to uninstall the old patch. For example, you can upgrade from patch 7.0(1p1) to 7.0(1p2) without first uninstalling 7.0(1p1).

Figure 1 illustrates what each part of the IPS software file represents for major and minor updates, service packs, and patch releases.

Figure 1 *IPS Software File Name for Major and Minor Updates, Service Packs, and Patch Releases*

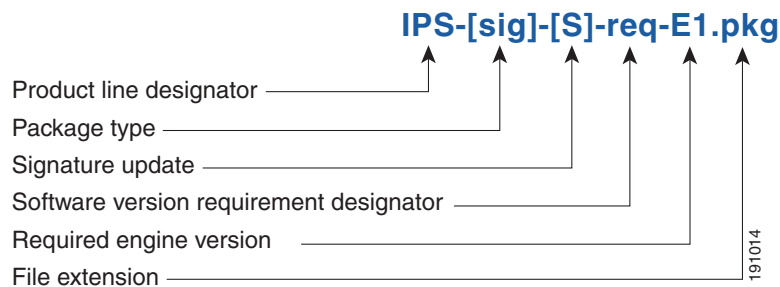


Signature Update

A signature update is a package file containing a set of rules designed to recognize malicious network activities. Signature updates are released independently from other software updates. Each time a major or minor update is released, you can install signature updates on the new version and the next oldest version for a period of at least six months. Signature updates are dependent on a required signature engine version. Because of this, a *req* designator lists the signature engine required to support a particular signature update.

Figure 2 illustrates what each part of the IPS software file represents for signature updates.

Figure 2 IPS Software File Name for Signature Updates

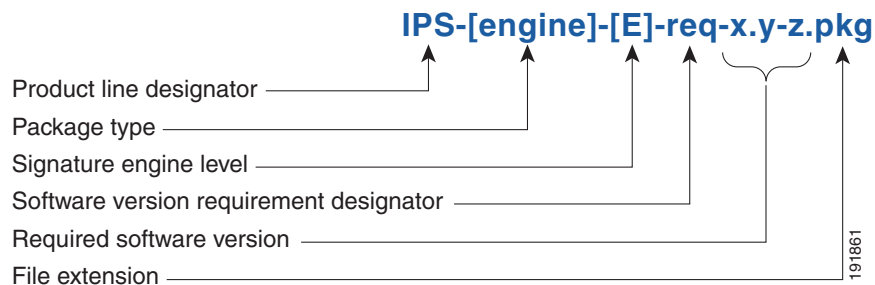


Signature Engine Update

A signature engine update is an executable file containing binary code to support new signature updates. Signature engine files require a specific service pack, which is also identified by the *req* designator.

Figure 3 illustrates what each part of the IPS software file represents for signature engine updates.

Figure 3 IPS Software File Name for Signature Engine Updates



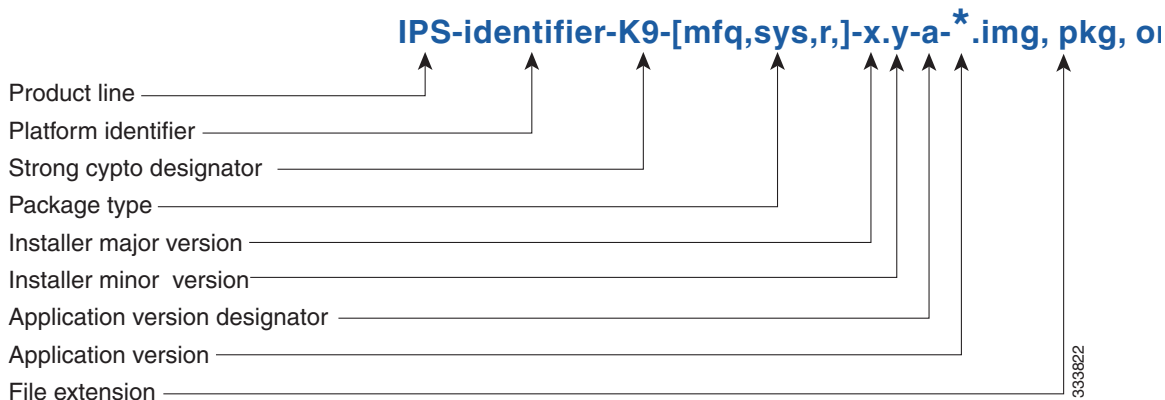
Recovery and System Image Files

Recovery and system image files contain separate versions for the installer and the underlying application. The installer version contains a major and minor version field. The major version is incremented by one of any major changes to the image installer, for example, switching from .tar to rpm or changing kernels. The minor version can be incremented by any one of the following:

- Minor change to the installer, for example, a user prompt added.
- Repackages require the installer minor version to be incremented by one if the image file must be repackaged to address a defect or problem with the installer.

Figure 4 illustrates what each part of the IPS software file represents for recovery and system image files.

Figure 4 IPS Software File Name for Recovery and System Image Files



Software Release Examples

Table 1 describes platform-dependent software release examples.

Table 1 Platform-Dependent Release Examples

Release	Target Frequency	Identifier	Supported Platform	Example Filename
Signature update ¹	Weekly	sig	S697	IPS-sig-S697-req-E4.pkg
Signature engine update ²	As needed	engine	E4	IPS-engine-E4-req-7.0-9.pkg
Service packs ³	Semi-annually or as needed	—	7.0(9)	IPS-IDSM_2-K9-7.0-9-E4.pkg IPS-AIM-K9-7.0-9-E4.pkg IPS-NME-K9-7.0-9-E4.pkg
System image ⁴	Annually	sys	Separate file for each sensor platform	IPS-IDSM2-K9-sys-1.1-a-7.0-9-E4.bin.gz IPS-AIM-K9-sys-1.1-a-7.0-9-E4.img IPS-NME-K9-sys-1.1-a-7.0-9-E4.img
Patch release ⁵	As needed	patch		IPS-IDSM_2-K9-patch-7.0-1pl-E4.pkg IPS-AIM-K9-patch-7.0-1pl-E4.pkg IPS-NME-K9-patch-7.0-1pl-E4.pkg
Recovery package ⁶	Annually or as needed	r		IPS-K9-r-1.1-a-7.0-9-E4.pkg IPS-AIM-K9-r-1.1-a-7.0-9-E4.pkg IPS-NME-K9-r-1.1-a-7.0-9-E4.pkg
Maintenance partition image ⁷	Annually	mp	IDSM2	c6svc-mp.2-1-2.bin.gz

Table 1 Platform-Dependent Release Examples (continued)

Release	Target Frequency	Identifier	Supported Platform	Example Filename
Bootloader	As needed	bl	AIM IPS NME IPS	pse_aim_x.y.z.bin pse_nm_x.y.z.bin (where x, y, z is the release number)
Mini-kernel	As needed	mini-kernel	AIM IPS NME IPS	pse_mini_kernel_1.1.10.64.bz2

1. Signature updates include the latest cumulative IPS signatures.
2. Signature engine updates add new engines or engine parameters that are used by new signatures in later signature updates.
3. Service packs include defect fixes.
4. The system image includes the combined recovery and application image used to reimagine an entire sensor.
5. Patch releases are for interim fixes.
6. The r 1.1 can be revised to r 1.2 if it is necessary to release a new recovery package that contains the same underlying application image. If there are defect fixes for the installer, for example, the underlying application version may still be 7.0(9), but the recovery partition image will be r 1.2
7. The maintenance partition image includes the full image for the IDSM2 maintenance partition. The file is installed from but does not affect the IDSM2 application partition.

Table 2 describes the platform identifiers used in the platform-specific names.

Table 2 Platform Identifiers

Sensor Family	Identifier
IDS module for Catalyst 6K	IDSM2
IPS network module	AIM NME

Upgrading to Cisco IPS

This section provides information on upgrading to Cisco IPS 7.0(9)E4, and contains the following topics:

- [Upgrade Notes and Caveats, page 13](#)
- [Upgrading to IPS 7.0\(9\)E4, page 15](#)
- [CSM Update Instructions, page 17](#)

Upgrade Notes and Caveats

The following upgrade notes and caveats apply to upgrading your sensor to IPS 7.0(9)E4:

- IPS 7.0(9)E4 supports the IDSM2, AIM IPS, and NME IPS.
- IPS 7.0(9)E4 does not support the IPS 4240, IPS 4255, IPS 4260, or IPS 4270-20. We recommend that you upgrade from 7.0(x)E4 to 7.1(7)E4.
- The minimum required version for upgrading to IPS 7.0(9)E4 is IPS 5.1(6)E3 or later.

- You must be logged on to Cisco.com using an account with cryptographic privileges to access the download site, and you must have a SMARTnet maintenance contract number to request software upgrades from Cisco.com.
- This service pack requires an automatic reboot of the sensor to apply the changes. Inline network traffic will be disrupted during the reboot.
- You cannot uninstall the 7.0(9)E4 service pack. You must reimage the sensor using a system image file, which causes all configuration settings to be lost.
- After you upgrade any IPS software on your sensor, you must restart the IDM to see the latest software features.
- The Cisco.com IP address has been changed in the Auto Update configuration.

**Caution**

In IPS 7.0(9)E4 the default value of the Cisco server IP address has been changed from 198.133.219.25 to 72.163.4.161 in the Auto Update URL configuration. If you have automatic update configured on your sensor, you may need to update firewall rules to allow the sensor to connect to this new IP address.

- Using automatic update:
 - When you upgrade the AIM IPS or NME IPS using automatic update, you must disable heartbeat reset on the router before placing the upgrade file on your automatic update server. After the AIM IPS and NME IPS have been automatically updated, you can reenale heartbeat reset. If you do not disable heartbeat reset, the update can fail and leave the AIM IPS and NME IPS in an unknown state, which can require a system reimage to recover.
 - If you are using automatic update from an FTP or SCP server with a mixture of platforms that are supported by IPS 7.0(9)E4 as well as platforms that are not supported by IPS 7.0(9)E4, we recommend that you create a separate automatic update directory for the IPS 7.0(9)E4 files. Modify the automatic update configuration for sensors supporting IPS 7.0(9)E4 to point to the new directory. Placing the IPS 7.0(9)E4 files in the automatic update directory for those sensors not supporting IPS 7.0(9)E4 results in those sensors constantly downloading the update and generating errors during the attempted update.
- Using manual update:
 - If you want to manually update your sensor, copy the IPS 7.0(9)E4 update files to the directory on the server that your sensor polls for updates.
 - When you upgrade the AIM IPS or NME IPS using manual upgrade, you must disable heartbeat reset on the router before installing the upgrade. You can reenale heartbeat reset after you complete the upgrade. If you do not disable heartbeat reset, the upgrade can fail and leave the AIM IPS or NME IPS in an unknown state, which can require a system reimage to recover.
- Global correlation health status defaults to red and changes to green after a successful global correlation update. Successful global correlation updates require a DNS server or an HTTP proxy server. Because DNS and HTTP proxy server configuration features are beginning with IPS 7.0(1)E3, they are unconfigured after an upgrade from 6.x to 7.0(1)E3 or higher. As a result, global correlation health and overall sensor health status are red until you configure a DNS or HTTP proxy server on the sensor. If the sensor is deployed in an environment where a DNS or HTTP proxy server is not available, you can address the red global correlation health and overall sensor health status by disabling global correlation and configuring sensor health status not to include global correlation health status.
- If you install an update on your sensor and the sensor is unusable after it reboots, you must reimage your sensor. You can reimage your sensor in the following ways:
 - For all sensors, use the **recover** command.

- For the AIM IPS and NME IPS, use the bootloader.
- For the IDSM2, reimage the application partition from the maintenance partition.

**Caution**

When you install the system image for your sensor, all accounts are removed and the default account and password are reset to **cisco**.

For More Information

For the procedures for reimaging sensors, refer to [Upgrading, Downgrading, and Installing System Images](#).

Upgrading to IPS 7.0(9)E4

**Caution**

You must log in to Cisco.com using an account with cryptographic privileges to download software. The first time you download software on Cisco.com, you receive instructions for setting up an account with cryptographic privileges.

**Caution**

Do not change the filename. You must preserve the original filename for the sensor to accept the update.

To upgrade the sensor, follow these steps:

Step 1 Download the appropriate file to an FTP, SCP, HTTP, or HTTPS server that is accessible from your sensor.

Step 2 Log in to the CLI using an account with administrator privileges.

Step 3 Enter configuration mode.

```
sensor# configure terminal
```

Step 4 Upgrade the sensor.

```
sensor(config)# upgrade url/IPS-AIM-K9-7.0-9-E4.pkg
```

The URL points to where the update file is located, for example, to retrieve the update using FTP, enter the following:

```
sensor(config)# upgrade ftp://username@ip_address//directory/IPS-AIM-K9-7.0-9-E4.pkg
```

Step 5 Enter the password when prompted.

```
Enter password: *****
```

Step 6 Enter **yes** to complete the upgrade.

**Note**

Major updates, minor updates, and service packs may force a restart of the IPS processes or even force a reboot of the sensor to complete installation.



Note The operating system is reimaged and all files that have been placed on the sensor through the service account are removed.

Step 7 Display your new sensor version:

```

sensor# show version
Application Partition:

Cisco Intrusion Prevention System, Version 7.0(9)E4

Host:
  Realm Keys          key1.0
Signature Definition:
  Signature Update    S697.0          2013-02-15
OS Version:          2.6.14-Cavium-Octeon
Platform:             NME-IPS-K9
Serial Number:       FOC134824BR
Licensed, expires:   <07-Aug-2013 UTC >
Sensor up-time is 4 days.
Using 112414720 out of 454148096 bytes of available memory (24% usage)
system is using 22.4M out of 80.0M bytes of available disk space (28% usage)
application-data is using 47.2M out of 213.0M bytes of available disk space (23%
usage)
boot is using 55.1M out of 114.8M bytes of available disk space (51% usage)
application-log is using 61.8M out of 513.0M bytes of available disk space (12%
usage)

MainApp              B-2013_06_07_06_57_7_0_8_9   (Ipsbuild)   2013-06-07T07:02:26
-0500 Running
AnalysisEngine       B-2013_06_07_06_57_7_0_8_9   (Ipsbuild)   2013-06-07T07:02:26
-0500 Running
CollaborationApp    B-2013_06_07_06_57_7_0_8_9   (Ipsbuild)   2013-06-07T07:02:26
-0500 Running
CLI                  B-2013_06_07_06_57_7_0_8_9   (Ipsbuild)   2013-06-07T07:02:26
-0500

Upgrade History:

  IPS-NME-K9-7.0-9-E4   23:20:07 UTC Sun Jan 27 2013

Recovery Partition Version 1.1 - 7.0(9)E4

Host Certificate Valid from: 30-Jun-2013 to 01-Jul-2015
sensor#

```

For More Information

- For the procedure for locating software on Cisco.com, see [Obtaining Software on Cisco.com](#), page 8.
- For a list of the specific software filenames, see [IPS File List](#), page 2.
- For the procedure for enabling and disabling heartbeat reset on the AIM IPS and the NME IPS, refer to [Enabling and Disabling Heartbeat Reset](#).

- For the procedure for reimaging sensors, refer to [Upgrading, Downgrading, and Installing System Images](#).
- For the procedure for configuring automatic updates, for the CLI refer to [Configuring Automatic Updates](#), for the IDM refer to [Configuring Automatic Update](#), and for the IME refer to [Configuring Automatic Update](#).
- For the procedure for disabling global correlation, for the CLI refer to [Configuring Global Correlation Inspection and Reputation Filtering](#), for the IDM refer to [Configuring Global Correlation Inspection and Reputation Filtering](#), and for the IME refer to [Configuring Global Correlation Inspection and Reputation Filtering](#).
- For the procedure for omitting global correlation from the overall sensor health status, for the CLI refer to [Configuring Health Status Information](#), for the IDM refer to [Configuring Sensor Health](#), and for the IME refer to [Configuring Sensor Health](#).

CSM Update Instructions



Note

CSM support for IPS 7.0(9) will be introduced in CSM 4.4 SP2, which will be released shortly

To apply the 7.0(9)E4 service pack to sensors using CSM 4.4 SP2, follow these steps:

-
- Step 1** Download the service pack ZIP file, IPS-CSM-K9-7.0-9-E4.zip, to the <CSM-install-dir>/MDC/ips/updates directory.
 - Step 2** Launch the IPS Update Wizard from **Tools > Apply IPS Update**.
 - Step 3** Select Sensor Updates from the drop-down menu, and select the IPS-CSM-K9-7.0-9-E4.zip file.
 - Step 4** Click **Next**.
 - Step 5** Select the device(s) to which you want to apply the service pack, then click **Finish**.
 - Step 6** Create a deployment job and deploy to sensors using Deployment Manager. Deployment Manager can be launched from **Tools > Deployment Manager**.
 - Step 7** Click **Deploy** in the popup and follow instructions.
-

After Upgrading to Cisco IPS 7.0(9)E4

This section provides information about what to do after you install IPS 7.0(9)E4. It contains the following topics:

- [Comparing Configurations, page 18](#)
- [Importing a New SSL Certificate, page 18](#)
- [Logging In to the IDM, page 18](#)
- [Installing and Uninstalling the Sensor License, page 19](#)

Comparing Configurations

Compare your backed up and saved previous IPS configuration with the output of the **show configuration** command after upgrading to 7.0(9)E4 to verify that all the configuration has been properly converted.



Caution

If the configuration is not properly converted, check the caveats for IPS 7.0(9)E4 or check Cisco.com for any upgrade issues that have been found. Contact the TAC if no DDTs refers to your situation.

For More Information

For a list of the caveats associated with this release, see [Caveats](#), page 32.

Importing a New SSL Certificate

If necessary import the new SSL certificate for the upgraded sensor in to each tool being used to monitor the sensor.

For More Information

For the procedures for configuring TLS/SSL, for the CLI refer to [Configuring TLS](#), for the IDM refer to [Configuring Trusted Hosts](#), and for the IME refer to [Configuring Trusted Hosts](#).

Logging In to the IDM

The IDM is a web-based, Java Web Start application that enables you to configure and manage your sensor. The web server for the IDM resides on the sensor. You can access it through Internet Explorer or Firefox web browsers.



Note

The IDM is already installed on the sensor.

To log in to the IDM, follow these steps:

Step 1 Open a web browser and enter the sensor IP address. A Security Alert dialog box appears.

`https://sensor_ip_address`



Note

The default IP address is 192.168.1.2/24, 192.168.1.1, which you change to reflect your network environment when you initialize the sensor. When you change the web server port, you must specify the port in the URL address of your browser when you connect to the IDM in the format `https://sensor_ip_address:port` (for example, `https://10.1.9.201:1040`).

Step 2 Click **Yes** to accept the security certificate. The Cisco IPS Device Manager Version window appears.

Step 3 To launch the IDM, click **Run IDM**. The JAVA loading message box appears. The Warning - Security dialog box appears.

- Step 4** To verify the security certificate, check the Always trust content from this publisher check box, and click **Yes**. The JAVA Web Start progress dialog box appears. The IDM on *ip_address* dialog box appears. To create a shortcut for the IDM, click **Yes**. The Cisco IDM Launcher dialog box appears.



Note You must have JRE 1.5 (JAVA 5) installed to create shortcuts for the IDM. If you have JRE 1.6 (JAVA 6) installed, the shortcut is created automatically.

- Step 5** To authenticate the IDM, enter your username and password, and click **OK**. The IDM begins to load. If you change panes from Home to Configuration or Monitoring before the IDM has complete initialization, a Status dialog box appears with the following message:

Please wait while IDM is loading the current configuration from the sensor.

The main window of the IDM appears.



Note Both the default username and password are **cisco**. You were prompted to change the password during sensor initialization.



Note If you created a shortcut, you can launch the IDM by double-clicking the IDM shortcut icon. You can also close the The Cisco IPS Device Manager Version window. After you launch the IDM, is it not necessary for this window to remain open.

Installing and Uninstalling the Sensor License

This section describes how to obtain a license key, how to license the sensor using the CLI, the IDM, or the IME, and how to remove the license. It contains the following topics:

- [Understanding the License, page 19](#)
- [Service Programs for IPS Products, page 20](#)
- [Obtaining and Installing the License Key, page 20](#)
- [Uninstalling the License Key, page 24](#)

Understanding the License

Although the sensor functions without the license key, you must have a license key to obtain signature updates and use the global correlation features. To obtain a license key, you must have the following:

- Cisco Service for IPS service contract—Contact your reseller, Cisco service or product sales to purchase a contract.
- Your IPS device serial number—To find the IPS device serial number in the IDM or the IME, for the IDM choose **Configuration > Sensor Management > Licensing**, and for the IME choose **Configuration > sensor_name > Sensor Management > Licensing**, or in the CLI use the **show version** command.
- Valid Cisco.com username and password

Trial license keys are also available. If you cannot get your sensor licensed because of problems with your contract, you can obtain a 60-day trial license that supports signature updates that require licensing. You can obtain a license key from the Cisco.com licensing server, which is then delivered to the sensor. Or, you can update the license key from a license key provided in a local file. Go to <http://www.cisco.com/go/license> and click **IPS Signature Subscription Service** to apply for a license key.

You can view the status of the license key in these places:

- IDM Home window Licensing section on the Health tab
- IDM Licensing pane (**Configuration > Licensing**)
- IME Home page in the Device Details section on the Licensing tab
- License Notice at CLI login

Whenever you start the IDM, the IME, or the CLI, you are informed of your license status—whether you have a trial, invalid, or expired license key. With no license key, an invalid license key, or an expired license key, you can continue to use the IDM, the IME, and the CLI, but you cannot download signature updates.

If you already have a valid license on the sensor, you can click **Download** on the License pane to download a copy of your license key to the computer that the IDM or the IME is running on and save it to a local file. You can then replace a lost or corrupted license, or reinstall your license after you have reimaged the sensor.

Service Programs for IPS Products

You must have a Cisco Services for IPS service contract for any IPS product so that you can download a license key and obtain the latest IPS signature updates. If you have a direct relationship with Cisco Systems, contact your account manager or service account manager to purchase the Cisco Services for IPS service contract. If you do not have a direct relationship with Cisco Systems, you can purchase the service account from a one-tier or two-tier partner.

When you purchase the following IPS products you must also purchase a Cisco Services for IPS service contract:

- AIM IPS
- IDSM2
- NME IPS

Cisco Services for IPS provides IPS signature updates, operating system updates, access to Cisco.com, access to TAC, and hardware replacement NBD on site. If you ever send your product for RMA, the serial number changes. You must then get a new license key for the new serial number.

Obtaining and Installing the License Key

You can install the license key through the CLI, the IDM, or the IME. This section describes how to obtain and install the license key, and contains the following topics:


- [Using the IDM or the IME, page 21](#)
- [Using the CLI, page 22](#)

Using the IDM or the IME



Note In addition to a valid Cisco.com username and password, you must also have a Cisco Services for IPS service contract before you can apply for a license key.

To obtain and install the license key, follow these steps:

-
- Step 1** Log in to the IDM or the IME using an account with administrator privileges.
- Step 2** For the IDM choose **Configuration > Sensor Management > Licensing**. For the IME choose **Configuration > sensor_name > Sensor Management > Licensing**. The Licensing pane displays the status of the current license. If you have already installed your license, you can click **Download** to save it if needed.
- Step 3** Obtain a license key by doing one of the following:
- Click the **Cisco.com** radio button to obtain the license from Cisco.com. The IDM or the IME contacts the license server on Cisco.com and sends the server the serial number to obtain the license key. This is the default method. Go to Step 4.
 - Click the **License File** radio button to use a license file. To use this option, you must apply for a license key at this URL: www.cisco.com/go/license. The license key is sent to you in e-mail and you save it to a drive that the IDM or the IME can access. This option is useful if your computer cannot access Cisco.com. Go to Step 7.
- Step 4** Click **Update License**, and in the Licensing dialog box, click **Yes** to continue. The Status dialog box informs you that the sensor is trying to connect to Cisco.com. An Information dialog box confirms that the license key has been updated.
- Step 5** Click **OK**.
- Step 6** Go to www.cisco.com/go/license. Fill in the required fields. Your license key will be sent to the e-mail address you specified.
-
-  **Caution** You must have the correct IPS device serial number because the license key only functions on the device with that number.
-
- Step 7** Save the license key to a hard-disk drive or a network drive that the client running the IDM or the IME can access.
- Step 8** Log in to the IDM or the IME.
- Step 9** For the IDM choose **Configuration > Sensor Management > Licensing**. For the IME choose **Configuration > sensor_name > Sensor Management > Licensing**.
- Step 10** Under Update License, click the **License File** radio button.
- Step 11** In the Local File Path field, specify the path to the license file or click **Browse Local** to browse to the file.
- Step 12** Browse to the license file and click **Open**.
- Step 13** Click **Update License**.
-

Using the CLI

**Note**

You cannot install an older license key over a newer license key.

Use the **copy source-url license_file_name license-key** command to copy the license key to your sensor.

The following options apply:

- *source-url*—The location of the source file to be copied. It can be a URL or keyword.
- *destination-url*—The location of the destination file to be copied. It can be a URL or a keyword.
- **license-key**—The subscription license file.
- *license_file_name*—The name of the license file you receive.

The exact format of the source and destination URLs varies according to the file. Here are the valid types:

- **ftp:**—Source URL for an FTP network server. The syntax for this prefix is:

```
ftp://[[username@]location][relativeDirectory]/filename
```

```
ftp://[[username@]location][absoluteDirectory]/filename
```

**Note**

You are prompted for a password.

- **scp:**—Source URL for the SCP network server. The syntax for this prefix is:

```
scp://[[username@]location][relativeDirectory]/filename
```

```
scp://[[username@]location][absoluteDirectory]/filename
```

**Note**

You are prompted for a password. You must add the remote host to the SSH known hosts list.

- **http:**—Source URL for the web server. The syntax for this prefix is:

```
http://[[username@]location][directory]/filename
```

**Note**

The directory specification should be an absolute path to the desired file.

- **https:**—Source URL for the web server. The syntax for this prefix is:

```
https://[[username@]location][directory]/filename
```

**Note**

The directory specification should be an absolute path to the desired file. The remote host must be a TLS trusted host.

Installing the License Key

To install the license key, follow these steps:

Step 1 Apply for the license key at this URL: www.cisco.com/go/license.



Note In addition to a valid Cisco.com username and password, you must also have a Cisco Services for IPS service contract before you can apply for a license key.

Step 2 Fill in the required fields. Your Cisco IPS Signature Subscription Service license key will be sent by e-mail to the e-mail address you specified.



Note You must have the correct IPS device serial number because the license key only functions on the device with that number.

Step 3 Save the license key to a system that has a Web server, FTP server, or SCP server.

Step 4 Log in to the CLI using an account with administrator privileges.

Step 5 Copy the license key to the sensor.

```
sensor# copy scp://user@192.168.1.2/24://tftpboot/dev.lic license-key
Password: *****
```

Step 6 Verify the sensor is licensed.

```
sensor# show version
Application Partition:

Cisco Intrusion Prevention System, Version 7.0(9)E4

Host:
  Realm Keys          key1.0
Signature Definition:
  Signature Update    S697.0           2013-02-15
OS Version:          2.6.14-Cavium-Octeon
Platform:             NME-IPS-K9
Serial Number:       FOC134824BR
Licensed, expires:   <07-Aug-2013 UTC >
Sensor up-time is 4 days.
Using 112414720 out of 454148096 bytes of available memory (24% usage)
system is using 22.4M out of 80.0M bytes of available disk space (28% usage)
application-data is using 47.2M out of 213.0M bytes of available disk space (23%
usage)
boot is using 55.1M out of 114.8M bytes of available disk space (51% usage)
application-log is using 61.8M out of 513.0M bytes of available disk space (12%
usage)

MainApp              B-2013_06_07_06_57_7_0_8_9   (Ipsbuild)   2013-06-07T07:02:26
-0500 Running
AnalysisEngine       B-2013_06_07_06_57_7_0_8_9   (Ipsbuild)   2013-06-07T07:02:26
-0500 Running
CollaborationApp     B-2013_06_07_06_57_7_0_8_9   (Ipsbuild)   2013-06-07T07:02:26
-0500 Running
CLI                  B-2013_06_07_06_57_7_0_8_9   (Ipsbuild)   2013-06-07T07:02:26
-0500
```

Upgrade History:

IPS-NME-K9-7.0-9-E4 23:20:07 UTC Sun Jan 27 2013

Recovery Partition Version 1.1 - 7.0(9)E4

Host Certificate Valid from: 30-Jun-2013 to 01-Jul-2015
sensor#

Uninstalling the License Key

Use the **erase license-key** command to uninstall the license key on your sensor. This allows you to delete an installed license key from a sensor without restarting the sensor or logging into the sensor using the service account.

To uninstall the license key, follow these steps:

Step 1 Log in to the CLI using an account with administrator privileges.

Step 2 Uninstall the license key on the sensor.

```
sensor# erase license-key
```

Warning: Executing this command will remove the license key installed on the sensor.

You must have a valid license key installed on the sensor to apply the Signature Updates and use the Global Correlation features.

```
Continue? []: yes  
sensor#
```

Step 3 Verify the sensor key has been uninstalled.

```
sensor# show version
```

Application Partition:

Cisco Intrusion Prevention System, Version 7.0(9)E4

Host:

```
  Realm Keys          key1.0  
Signature Definition:  
  Signature Update    S697.0          2013-02-15  
OS Version:          2.6.14-Cavium-Octeon  
Platform:            NME-IPS-K9  
Serial Number:       FOC134824BR
```

No license present

Sensor up-time is 4 days.

```
Using 112414720 out of 454148096 bytes of available memory (24% usage)  
system is using 22.4M out of 80.0M bytes of available disk space (28% usage)  
application-data is using 47.2M out of 213.0M bytes of available disk space (23%  
usage)  
boot is using 55.1M out of 114.8M bytes of available disk space (51% usage)  
application-log is using 61.8M out of 513.0M bytes of available disk space (12%  
usage)
```

```
MainApp          B-2013_06_07_06_57_7_0_8_9  (Ipsbuild)  2013-06-07T07:02:26  
-0500  Running  
AnalysisEngine  B-2013_06_07_06_57_7_0_8_9  (Ipsbuild)  2013-06-07T07:02:26  
-0500  Running  
CollaborationApp B-2013_06_07_06_57_7_0_8_9  (Ipsbuild)  2013-06-07T07:02:26
```



```
-0500    Running
CLI      B-2013_06_07_06_57_7_0_8_9    (Ipsbuild)    2013-06-07T07:02:26
-0500
```

Upgrade History:

```
IPS-NME-K9-7.0-9-E4    23:20:07 UTC Sun Jan 27 2013
```

Recovery Partition Version 1.1 - 7.0(9)E4

Host Certificate Valid from: 30-Jun-2013 to 01-Jul-2015

Cisco Security Intelligence Operations

The Cisco Security Intelligence Operations site on Cisco.com provides intelligence reports about current vulnerabilities and security threats. It also has reports on other security topics that help you protect your network and deploy your security systems to reduce organizational risk.

You should be aware of the most recent security threats so that you can most effectively secure and manage your network. Cisco Security Intelligence Operations contains the top ten intelligence reports listed by date, severity, urgency, and whether there is a new signature available to deal with the threat.

Cisco Security Intelligence Operations contains a Security News section that lists security articles of interest. There are related security tools and links.

You can access Cisco Security Intelligence Operations at this URL:

<http://tools.cisco.com/security/center/home.x>

Cisco Security Intelligence Operations is also a repository of information for individual signatures, including signature ID, type, structure, and description.

You can search for security alerts and signatures at this URL:

<http://tools.cisco.com/security/center/search.x>

Restrictions and Limitations

The following restrictions and limitations apply to Cisco IPS 7.0(9)E4 software and the products that run it:

- IPS 7.0(9)E4 does not support the 4200 series sensors. We recommend you upgrade to IPS 7.(x)E4.
- IPS 7.0(9)E4 does not support the AIM SSC-5, which is only supported in IPS 6(x)E4.
- In IPS 7.0(9)E4 the default value of the Cisco server IP address has been changed from 198.133.219.25 to 72.163.4.161 in the Auto Update URL configuration. If you have automatic update configured on your sensor, you may need to update firewall rules to allow the sensor to connect to this new IP address.
- If you get an unauthorized error message while configuring an automatic update, make sure you have the correct ports open on any firewalls between the sensor and Cisco.com. For example, you need port 443 for the initial automatic update connection to www.cisco.com, and you need port 80

to download the chosen package from a Cisco file server. The IP address may change for the Cisco file server, but you can find it in the lastDownloadAttempt section in the output of the show statistics host command.

- For IPS 5.0 and later, you can no longer remove the **cisco** account. You can disable it using the **no password cisco** command, but you cannot remove it. To use the **no password cisco** command, there must be another administrator account on the sensor. Removing the **cisco** account through the service account is not supported. If you remove the **cisco** account through the service account, the sensor most likely will not boot up, so to recover the sensor you must reinstall the sensor system image.
- Anomaly detection does not support IPv6 traffic; only IPv4 traffic is directed to the anomaly detection processor.
- IPv6 does not support the following event actions: Request Block Host, Request Block Connection, or Request Rate Limit.
- The AIM IPS and the NME IPS do not support the IPv6 features, because the router in which they are installed does not send them IPv6 data. IPv6 inspection is also not supported on the IDSM2. The switch is able to send IPv6 packets to the IDSM2, but this has not been tested and is not officially supported. There is no support for IPv6 on the management (command and control) interface. With ASA 8.2.1, the AIP SSM supports IPv6 features.
- VACLs on Catalyst switches do not have IPv6 support. The most common method for copying traffic to a sensor configured in promiscuous mode is to use VACL capture. If you want to have IPv6 support, you can use SPAN ports.
- ICMP signature engines do not support ICMPv6, they are IPv4-specific, for example, the Traffic ICMP signature engine. ICMPv6 is covered by the Atomic IP Advanced signature engine.
- CSM and MARS do not support IPv6.
- The AIM IPS and the NME IPS do not support virtualization.
- When you reload the router, the AIM IPS and the NME IPS also reload. To ensure that there is no loss of data on the AIM IPS or the NME IPS, make sure you shut down the module using the **shutdown** command before you use the **reload** command to reboot the router.
- Do not deploy IOS IPS and the and the NME IPS at the same time.
- When the AIM IPS and the NME IPS are used with an IOS firewall, make sure SYN flood prevention is done by the IOS firewall.

The AIM IPS, the NME IPS, and the IOS firewall complement abilities of each other to create security zones in the network and inspect traffic in those zones. Because the AIM IPS, the NME IPS, and the IOS firewall operate independently, sometimes they are unaware of the activities of the other. In this situation, the IOS firewall is the best defense against a SYN flood attack.

- Cisco access routers only support one IDS/IPS per router.
- An IPS appliance can support both promiscuous and inline monitoring at the same time; however you must configure each physical interface in either promiscuous or inline mode. The sensor must contain at least two physical sensing interfaces to perform both promiscuous and inline monitoring.
- When deploying an IPS sensor monitoring two sides of a network device that does TCP sequence number randomization, we recommend using a virtual sensor for each side of the device.
- After you upgrade any IPS software on your sensor, you must restart the IDM to see the latest software features.

- The IDM does not support any non-English characters, such as the German umlaut or any other special language characters. If you enter such characters as a part of an object name through the IDM, they are turned into something unrecognizable and you will not be able to delete or edit the resulting object through the IDM or the CLI.

This is true for any string that is used by CLI as an identifier, for example, names of time periods, inspect maps, server and URL lists, and interfaces.

- You can only install eight IDSM2s per switch chassis.
- When the SensorApp is reconfigured, there is a short period when the SensorApp is unable to respond to any queries. Wait a few minutes after reconfiguration is complete before querying the SensorApp for additional information.
- The IDM and the IME launch MySDN from the last browser window you opened, which is the default setting for Windows. To change this default behavior, in Internet Explorer, choose **Tools > Internet Options**, and then click the **Advanced** tab. Scroll down and uncheck the **Reuse windows for launching shortcuts** check box.

For More Information

- For detailed information on RADIUS authentication, for the IDM refer to [Configuring Authentication and Users](#), and for the CLI refer to [Configuring User Parameters](#).
- For the procedure for using the **unlock** command to unlock a locked user account, refer to [Unlocking Locked Accounts](#).
- For more information on interoperability between modules, refer to [Interoperability With Other IPS Modules](#).
- For more information about IPv6, switches, and lack of VACL capture, see [IPv6, Switches, and Lack of VACL Capture](#).

Recovering the Password

This section describes how to recover the password for the sensor. It contains the following topics:

- [Understanding Password Recovery, page 27](#)
- [Recovering the IDSM2 Password, page 28](#)
- [Recovering the AIM IPS Password, page 29](#)
- [Recovering the NME IPS Password, page 29](#)
- [Disabling Password Recovery, page 30](#)
- [Verifying the State of Password Recovery, page 31](#)
- [Troubleshooting Password Recovery, page 31](#)

Understanding Password Recovery

Password recovery implementations vary according to IPS platform requirements. Password recovery is implemented only for the cisco administrative account and is enabled by default. The IPS administrator can then recover user passwords for other accounts using the CLI. The cisco user password reverts to **cisco** and must be changed after the next login.

**Note**

Administrators may need to disable the password recovery feature for security reasons.

Table 3 lists the password recovery methods according to platform.

Table 3 Password Recovery Methods According to Platform

Platform	Description	Recovery Method
IDSM2	Switch IPS module	Password recovery image file
AIM IPS NME IPS	Router IPS modules	Bootloader command

For More Information

For more information on when and how to disable password recovery, see [Disabling Password Recovery](#), page 30.

Recovering the IDSM2 Password

To recover the password for the IDSM2, you must install a special password recovery image file. This installation only resets the password, all other configuration remains intact. The password recovery image is version-dependent and can be found on the Cisco Download Software site. For IPS 6.x, download WS-SVC-IDSM2-K9-a-6.0-password-recovery.bin.gz. For IPS 7.x, download WS-SVC-IDSM2-K9-a-7.0-password-recovery.bin.gz.

FTP is the only supported protocol for image installations, so make sure you put the password recovery image file on an FTP server that is accessible to the switch. You must have administrative access to the Cisco 6500 series switch to recover the password on the IDSM2.

During the password recovery image installation, the following message appears:

```
Upgrading will wipe out the contents on the hard disk.
Do you want to proceed installing it [y|n]:
```

This message is in error. Installing the password recovery image does not remove any configuration, it only resets the login account.

Once you have downloaded the password recovery image file, follow the instructions to install the system image file but substitute the password recovery image file for the system image file. The IDSM2 should reboot into the primary partition after installing the recovery image file. If it does not, enter the following command from the switch:

```
hw-module module module_number reset hdd:1
```

**Note**

The password is reset to **cisco**. Log in to the CLI with username **cisco** and password **cisco**. You can then change the password.

For More Information

- For the procedures for reimaging IDSM2, refer to [Installing the IDSM2 System Image](#).
- For more information on downloading Cisco IPS software, see [Obtaining Software on Cisco.com](#), page 8.

Recovering the AIM IPS Password

To recover the password for the AIM IPS, use the **clear password** command. You must have console access to the AIM IPS and administrative access to the router.

To recover the password for the AIM IPS, follow these steps:

Step 1 Log in to the router.

Step 2 Enter privileged EXEC mode on the router.

```
router> enable
```

Step 3 Confirm the module slot number in your router.

```
router# show run | include ids-sensor
interface IDS-Sensor0/0
router#
```

Step 4 Session in to the AIM IPS.

```
router# service-module ids-sensor slot/port session
```

Example:

```
router# service-module ids-sensor 0/0 session
```

Step 5 Press **Control-shift-6** followed by **x** to navigate to the router CLI.

Step 6 Reset the AIM IPS from the router console:

```
router# service-module ids-sensor 0/0 reset
```

Step 7 Press **Enter** to return to the router console.

Step 8 When prompted for boot options, enter ******* quickly. You are now in the bootloader.

Step 9 Clear the password.

```
ServicesEngine boot-loader# clear password
```

The AIM IPS reboots. The password is reset to **cisco**. Log in to the CLI with username **cisco** and password **cisco**. You can then change the password.

Recovering the NME IPS Password

To recover the password for the NME IPS, use the **clear password** command. You must have console access to the NME IPS and administrative access to the router.

To recover the password for NME IPS, follow these steps:

Step 1 Log in to the router.

Step 2 Enter privileged EXEC mode on the router.

```
router> enable
```

Step 3 Confirm the module slot number in your router.

```
router# show run | include ids-sensor
```

```
interface IDS-Sensor1/0
router#
```

Step 4 Session in to the NME IPS.

```
router# service-module ids-sensor slot/port session
```

Example

```
router# service-module ids-sensor 1/0 session
```

Step 5 Press **Control-shift-6** followed by **x** to navigate to the router CLI.

Step 6 Reset the NME IPS from the router console.

```
router# service-module ids-sensor 1/0 reset
```

Step 7 Press **Enter** to return to the router console.

Step 8 When prompted for boot options, enter ******* quickly. You are now in the bootloader.

Step 9 Clear the password.

```
ServicesEngine boot-loader# clear password
```

The NME IPS reboots. The password is reset to **cisco**. Log in to the CLI with username **cisco** and password **cisco**. You can then change the password.

Disabling Password Recovery



Caution

If you try to recover the password on a sensor on which password recovery is disabled, the process proceeds with no errors or warnings; however, the password is not reset. If you cannot log in to the sensor because you have forgotten the password, and password recovery is set to disabled, you must reimagine your sensor.

Password recovery is enabled by default. You can disable password recovery through the CLI or the IDM.

Disabling Password Recovery Using the CLI

To disable password recovery in the CLI, follow these steps:

Step 1 Log in to the CLI using an account with administrator privileges.

Step 2 Enter global configuration mode.

```
sensor# configure terminal
```

Step 3 Enter host mode.

```
sensor(config)# service host
```

Step 4 Disable password recovery.

```
sensor(config-hos)# password-recovery disallowed
```

Disabling Password Recovery Using the IDM

To disable password recovery in the IDM, follow these steps:

-
- Step 1** Log in to the CLI using an account with administrator privileges.
 - Step 2** Choose **Configuration > Sensor Setup > Network**. The Network pane appears.
 - Step 3** To disable password recovery, uncheck the **Allow Password Recovery** check box.
-

For More Information

- If you are not certain about whether password recovery is enabled or disabled, see [Verifying the State of Password Recovery, page 31](#).
- For more information on reimaging sensors, refer to [Upgrading, Downgrading, and Installing System Images](#).

Verifying the State of Password Recovery

Use the **show settings | include password** command to verify whether password recovery is enabled.

To verify whether password recovery is enabled, follow these steps:

-
- Step 1** Log in to the CLI.
 - Step 2** Enter service host submode.


```
sensor# configure terminal
sensor (config)# service host
sensor (config-hos)#
```
 - Step 3** Verify the state of password recovery by using the **include** keyword to show settings in a filtered output.


```
sensor(config-hos)# show settings | include password
  password-recovery: allowed <defaulted>
sensor(config-hos)#
```
-

Troubleshooting Password Recovery

To troubleshoot password recovery, pay attention to the following:

- You cannot determine whether password recovery has been disabled in the sensor configuration from the ROMMON prompt, GRUB menu, switch CLI, or router CLI. If password recovery is attempted, it always appears to succeed. If it has been disabled, the password is not reset to **cisco**. The only option is to reimage the sensor.
- You can disable password recovery in the host configuration. For the platforms that use external mechanisms, such as the AIM IPS and NME IPS bootloader, ROMMON, and the maintenance partition for the IDSM2, although you can run commands to clear the password, if password recovery is disabled in the IPS, the IPS detects that password recovery is not allowed and rejects the external request.
- To check the state of password recovery, use the **show settings | include password** command.

- When performing password recovery on the IDSM2, you see the following message: `Upgrading will wipe out the contents on the storage media. You can ignore this message. Only the password is reset when you use the specified password recovery image.`

For More Information

- For more information on reimaging sensors, refer to [Upgrading, Downgrading, and Installing System Images](#).
- For the procedure for disabling password recovery, see [Disabling Password Recovery, page 30](#).
- For the procedure for verifying the state of password recovery, see [Verifying the State of Password Recovery, page 31](#).

Caveats

This section lists the resolved caveats, relevant unresolved caveats, and contains the following topics:

- [Resolved Caveats, page 32](#)
- [Relevant Unresolved Caveats, page 32](#)

Resolved Caveats

The following known issues were recently found and resolved in the 7.0(9)E4 release:

- CSCud05850—IDSM-2 Module stops after GC update.
- CSCud29486—Timer Task locks causing IPS auto-update process to stop updating.
- CSCtl67047—SensorApp aborts and runs out of space,issue with EventStore
- CSCua47230—IPS sends user credential in clear text during automatic sign. update
- CSCtw78565—ENH - Warn users when enabling AIC Engine
- CSCuc99007—IDS: Summarize/throttle sensorApp/E errUnacceptableValue aic-web-ports
- CSCub75688—sig update sensorApp abort in libhoard dlmalloc
- CSCtt18382—ENH: IDS Web Server Should Not Break Comm With RFC 5746 Clients
- CSCuf20148—IPS: CT Data Corruption Leads to AuthenticationMgr mainApp Process Hang

Relevant Unresolved Caveats

The following known issue exists in the 7.0(9)E4 release:

- CSCuh66943—if attemptLimit is reached, there is no way to reset the account

Related Documentation

For more information on Cisco IPS, refer to the following documentation found at this URL:

http://www.cisco.com/en/US/products/hw/vpndevc/ps4077/tsd_products_support_series_home.html

- *Documentation Roadmap for Cisco Intrusion Prevention System for IPS 7.0*
- *Cisco Intrusion Prevention System Device Manager Configuration Guide for IPS 7.0*
- *Cisco Intrusion Prevention System Manager Express Configuration Guide for IPS 7.0*
- *Cisco Intrusion Prevention System Command Reference for IPS 7.0*
- *Cisco Intrusion Prevention System Sensor CLI Configuration Guide for IPS 7.0*
- *Cisco Intrusion Prevention System Appliance and Module Installation Guide for IPS 7.0*

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at: <http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>.

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