Image Management

About Image Management

The Firepower 9300 chassis uses two basic types of images:

Note
All images are digitally signed and validated through Secure Boot. Do not modify the image in any way or you will receive a validation error.

- Platform Bundle—The Firepower platform bundle is a collection of multiple independent images that operate on the Firepower Supervisor and Firepower security module/engine. The platform bundle is a Firepower eXtensible Operating System software package.

- Application—Application images are the software images you want to deploy on the security module/engine of the Firepower 9300 chassis. Application images are delivered as Cisco Secure Package files (CSP) and are stored on the supervisor until deployed to a security module/engine as part of logical device creation or in preparation for later logical device creation. You can have multiple different versions of the same application image type stored on the Firepower Supervisor.

Note
If you are upgrading both the Platform Bundle image and one or more Application images, you must upgrade the Platform Bundle first.

Downloading Images from Cisco.com

Download FXOS and application images from Cisco.com so you can upload them to the Firepower chassis.

Before you begin

You must have a Cisco.com account.

Procedure

Step 1   Using a web browser, navigate to http://www.cisco.com/go/firepower9300-software or http://www.cisco.com/go/firepower4100-software.
The software download page for the Firepower 9300 chassis is opened in the browser.

Step 2   Find and then download the appropriate software image to your local computer.

Uploading an Image to the Firepower Security Appliance

You can upload FXOS and application images to the chassis.

Before you begin

Make sure the image you want to upload is available on your local computer.

Procedure

Step 1   Choose **System** > **Updates**.
The Available Updates page shows a list of the Firepower eXtensible Operating System platform bundle images and application images that are available on the chassis.

Step 2   Click **Upload Image** to open the Upload Image dialog box.

Step 3   Click **Choose File** to navigate to and select the image that you want to upload.

Step 4   Click **Upload**.
The selected image is uploaded to the Firepower 9300 chassis.

Step 5   For certain software images you will be presented with an end-user license agreement after uploading the image. Follow the system prompts to accept the end-user license agreement.

Verifying the Integrity of an Image

The integrity of the image is automatically verified when a new image is added to the Firepower 9300 chassis. If needed, you can use the following procedure to manually verify the integrity of an image.

Procedure

Step 1 Choose **System** > **Updates**.
The Available Updates page shows a list of the Firepower eXtensible Operating System platform bundle images and application images that are available on the chassis.

Step 2 Click **Verify** (check mark icon) for the image you want to verify.

The system will verify the integrity of the image and display the staus in the Image Integrity field.

Upgrading the Firepower eXtensible Operating System Platform Bundle

Before you begin

Download the platform bundle software image from Cisco.com (see Downloading Images from Cisco.com, on page 2) and then upload that image to the Firepower 9300 chassis (see Uploading an Image to the Firepower Security Appliance, on page 2).

Procedure

Step 1 Choose **System** > **Updates**.
The Available Updates page shows a list of the Firepower eXtensible Operating System platform bundle images and application images that are available on the chassis.

Step 2 Click **Upgrade** for the FXOS platform bundle to which you want to upgrade.

The system will first verify the software package that you want to install. It will inform you of any incompatibility between currently installed applications and the specified FXOS platform software package. It will also warn you that any existing sessions will be terminated and that the system will need to be rebooted as part of the upgrade.

Step 3 Click **Yes** to confirm that you want to proceed with installation, or click **No** to cancel the installation.

The Firepower eXtensible Operating System unpacks the bundle and upgrades/reloads the components.

Updating the Image Version for a Logical Device

Use this procedure to upgrade the ASA application image to a new version, or set the Firepower Threat Defense application image to a new startup version that will be used in a disaster recovery scenario.

When you change the startup version on an ASA logical device, the ASA upgrades to that version and all configuration is restored. Use the following workflows to change the ASA startup version, depending on your configuration:

ASA High Availability -

1. Change the logical device image version(s) on the standby unit.

2. Make the standby unit active.

3. Change the application version(s) on the other unit.

ASA Inter-Chassis Cluster -

1. Change the startup version on the slave unit.

2. Make the slave unit the master unit.

3. Change the startup version on the original master unit (now slave).

Before you begin

Download the application image you want to use for the logical device from Cisco.com (see Downloading Images from Cisco.com, on page 2) and then upload that image to the Firepower 9300 chassis (see Uploading an Image to the Firepower Security Appliance, on page 2).

If you are upgrading both the Platform Bundle image and one or more Application images, you must upgrade the Platform Bundle first.

Procedure

Step 1 Choose **Logical Devices** to open the Logical Devices page.
The Logical Devices page shows a list of configured logical devices on the chassis. If no logical devices have been configured, a message stating so is shown instead.

Step 2 Click **Update Version** for the logical device that you want to update to open the **Update Image Version** dialog box.

Step 3 For the **New Version**, choose the software version.

Step 4 Click **OK**.

Firmware Upgrade

Use the following procedure to upgrade the firmware on your Firepower 9300 chassis.

Procedure

Step 1 Using a web browser, navigate to http://www.cisco.com/go/firepower9300-software or http://www.cisco.com/go/firepower4100-software.
The software download page for the Firepower 9300 chassis is opened in the browser.

Step 2 Find and then download the appropriate firmware package from Cisco.com to a server that you can access from the Firepower 9300 chassis.

Step 3 On the Firepower 9300 chassis, enter firmware mode:

Firepower-chassis # **scope firmware**

Step 4   Download the FXOS firmware image to the Firepower 9300 chassis:

Firepower-chassis /firmware # **download   image**   *URL*

Specify the URL for the file being imported using one of the following syntax:

- **ftp**:// *username@hostname* / *path*

- **scp**:// *username@hostname* / *path*

- **sftp**:// *username@hostname* / *path*

- **tftp**:// *hostname* : *port-num* / *path*

Step 5   To monitor the download process:

Firepower-chassis /firmware # **show   download-task**   *image_name*   **detail**

Step 6   After the download has completed, you can enter the following command to view the contents of the firmware package:

Firepower-chassis /firmware # **show   package**   *image_name*   **expand**

Step 7   You can enter the following command to view the version number of the firmware package:

Firepower-chassis /firmware # **show   package**

This version number is used in the following step when installing the firmware package.

Step 8   To install the firmware package:
a)   Enter firmware-install mode:

  Firepower-chassis /firmware # **scope   firmware-install**

b)   Install the firmware package:

  Firepower-chassis /firmware/firmware-install # **install   firmware   pack-version**   *version_number*

  The system will verify the firmware package and will notify you that the verification process can take several minutes to complete.
c)   Enter **yes** to proceed with the verification.
  After verifying the firmware package, the system will notify you that the installation process can take several minutes to complete and that the system will reboot during the update process.
d)   Enter **yes** to proceed with the installation. Do not power cycle the Firepower 9300 chassis during the upgrade process.

Step 9   To monitor the upgrade process:

Firepower-chassis /firmware/firmware-install # **show   detail**

Step 10   After the installation has completed, you can enter the following commands to view the current firmware version:

Firepower-chassis /firmware/firmware-install # **top**

Firepower-chassis # **scope   chassis 1**

Firepower-chassis /firmware # **show sup version**

Example

The following example upgrades the firmware to version 1.0.10:

```
Firepower-chassis# scope firmware
Firepower-chassis /firmware # download image
tftp://10.10.10.1/fxos-k9-fpr9k-firmware.1.0.10.SPA
Firepower-chassis /firmware # show download-task fxos-k9-fpr9k-firmware.1.0.10.SPA detail

Download task:
    File Name: fxos-k9-fpr9k-firmware.1.0.10.SPA
    Protocol: Tftp
    Server: 10.10.10.1
    Port: 0
    Userid:
    Path:
    Downloaded Image Size (KB): 2104
    Time stamp: 2015-12-04T23:51:57.846
    State: Downloading
    Transfer Rate (KB/s): 263.000000
    Current Task: unpacking image fxos-k9-fpr9k-firmware.1.0.10.SPA on primary(
FSM-STAGE:sam:dme:FirmwareDownloaderDownload:UnpackLocal)

Firepower-chassis /firmware # show package fxos-k9-fpr9k-firmware.1.0.10.SPA expand

Package fxos-k9-fpr9k-firmware.1.0.10.SPA:
    Images:
        fxos-k9-fpr9k-fpga.1.0.5.bin
        fxos-k9-fpr9k-rommon.1.0.10.bin

Firepower-chassis /firmware # show package

Name                                       Version
------------------------------------------ -------
fxos-k9-fpr9k-firmware.1.0.10.SPA          1.0.10

Firepower-chassis /firmware # scope firmware-install
Firepower-chassis /firmware/firmware-install # install firmware pack-version 1.0.10

Verifying FXOS firmware package 1.0.10. Verification could take several minutes.
Do you want to proceed? (yes/no):yes

FXOS SUP ROMMON: Upgrade from 1.0.10 to 1.0.10
FXOS SUP FPGA  : Upgrade from 1.04 to 1.05

This operation upgrades SUP firmware on Security Platform.
Here is the checklist of things that are recommended before starting the install operation
(1) Review current critical/major faults
(2) Initiate a configuration backup

Attention:
   The system will be reboot to upgrade the SUP firmware.
   The upgrade operation will take several minutes to complete.
   PLEASE DO NOT POWER RECYCLE DURING THE UPGRADE.
Do you want to proceed? (yes/no):yes

Upgrading FXOS SUP firmware software package version 1.0.10
```

```
command executed
```