



Threat Defense Deployment with the Device Manager

Is This Chapter for You?

To see all available applications and managers, see [Which Application and Manager is Right for You?](#). This chapter applies to the threat defense with the device manager.

About the Firewall

The hardware can run either threat defense software or ASA software. Switching between threat defense and ASA requires you to reimage the device. You should also reimage if you need a different software version than is currently installed. See [Cisco Secure Firewall ASA and Secure Firewall Threat Defense Reimage Guide](#).

The firewall runs an underlying operating system called the Secure Firewall eXtensible Operating System (FXOS). The firewall does not support the FXOS Secure Firewall chassis manager; only a limited CLI is supported for troubleshooting purposes. See the [Cisco FXOS Troubleshooting Guide for the Firepower 1000/2100 and Secure Firewall 3100/4200 with Firepower Threat Defense](#) for more information.

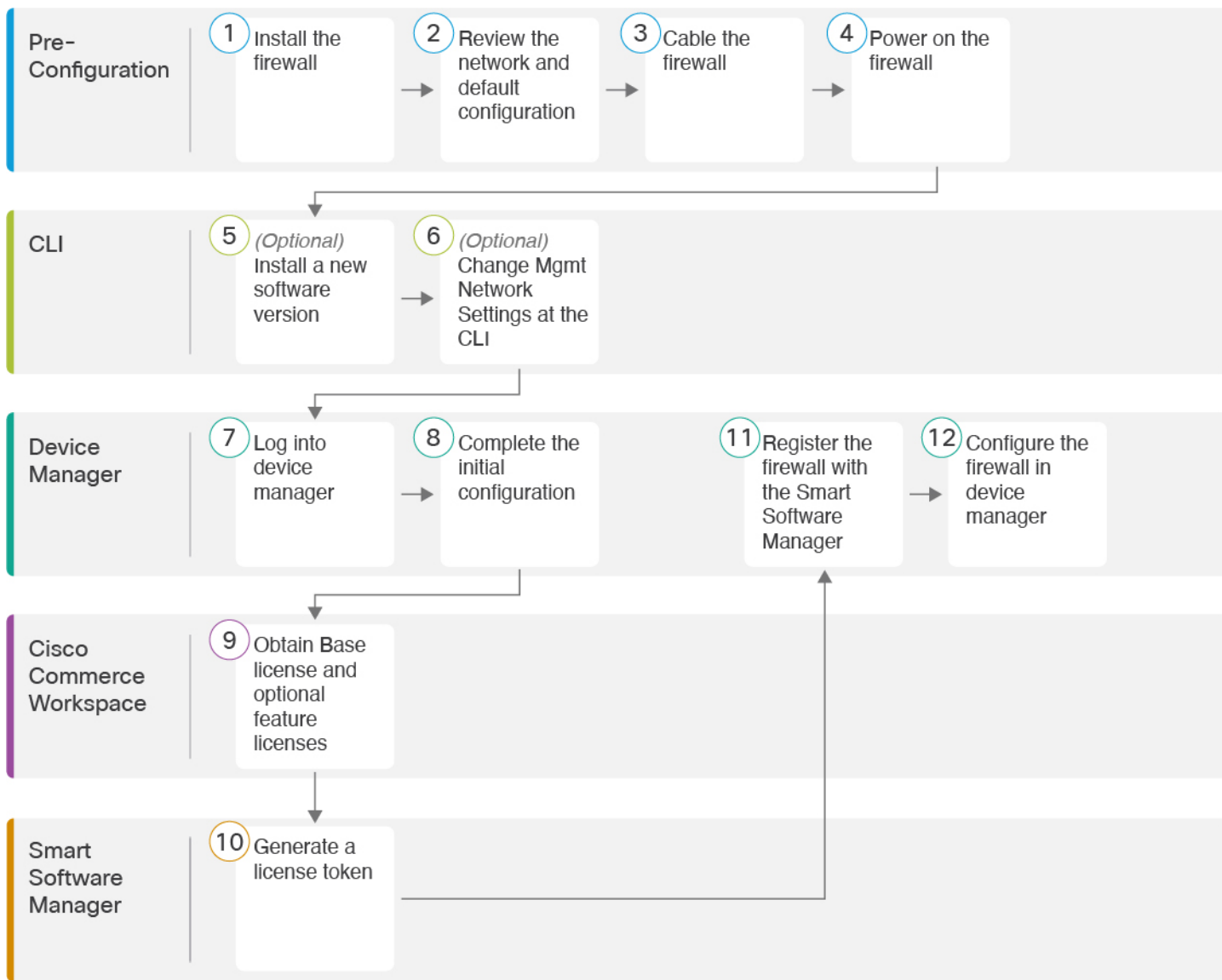
Privacy Collection Statement—The firewall does not require or actively collect personally identifiable information. However, you can use personally identifiable information in the configuration, for example for usernames. In this case, an administrator might be able to see this information when working with the configuration or when using SNMP.

- [End-to-End Tasks, on page 2](#)
- [Review the Network Deployment and Default Configuration, on page 3](#)
- [Cable the Firewall, on page 5](#)
- [Power on the Firewall, on page 6](#)
- [\(Optional\) Check the Software and Install a New Version, on page 7](#)
- [\(Optional\) Change Management Network Settings at the CLI, on page 9](#)
- [Log Into the Device Manager, on page 11](#)
- [Complete the Initial Configuration, on page 11](#)
- [Configure Licensing, on page 13](#)
- [Configure the Firewall in the Device Manager, on page 20](#)
- [Access the Threat Defense and the FXOS CLI, on page 23](#)
- [Power Off the Firewall, on page 25](#)
- [What's Next?, on page 26](#)

End-to-End Tasks

See the following tasks to deploy the threat defense with the device manager on your chassis.

Figure 1: End-to-End Procedure



1	Pre-Configuration	Install the firewall. See the hardware installation guide .
2	Pre-Configuration	Review the Network Deployment and Default Configuration, on page 3.
3	Pre-Configuration	Cable the Firewall, on page 5.

4	Pre-Configuration	Power on the Firewall, on page 6.
5	CLI	(Optional) Check the Software and Install a New Version, on page 7.
6	CLI	(Optional) Change Management Network Settings at the CLI, on page 9.
7	Device Manager	Log Into the Device Manager, on page 11.
8	Device Manager	Complete the Initial Configuration, on page 11.
9	Cisco Commerce Workspace	Obtain the Base license and optional feature licenses (Configure Licensing, on page 13).
10	Smart Software Manager	Generate a license token (Configure Licensing, on page 13).
11	Device Manager	Register the firewall with the Smart Licensing Server (Configure Licensing, on page 13).
12	Device Manager	Configure the Firewall in the Device Manager, on page 20.

Review the Network Deployment and Default Configuration

You can manage the threat defense using the device manager from either the Management 1/1 interface or the inside interface. The dedicated Management interface is a special interface with its own network settings.

The following figure shows the recommended network deployment. If you connect the outside interface directly to a cable modem or DSL modem, we recommend that you put the modem into bridge mode so the threat defense performs all routing and NAT for your inside networks. If you need to configure PPPoE for the outside interface to connect to your ISP, you can do so after you complete initial setup in device manager.



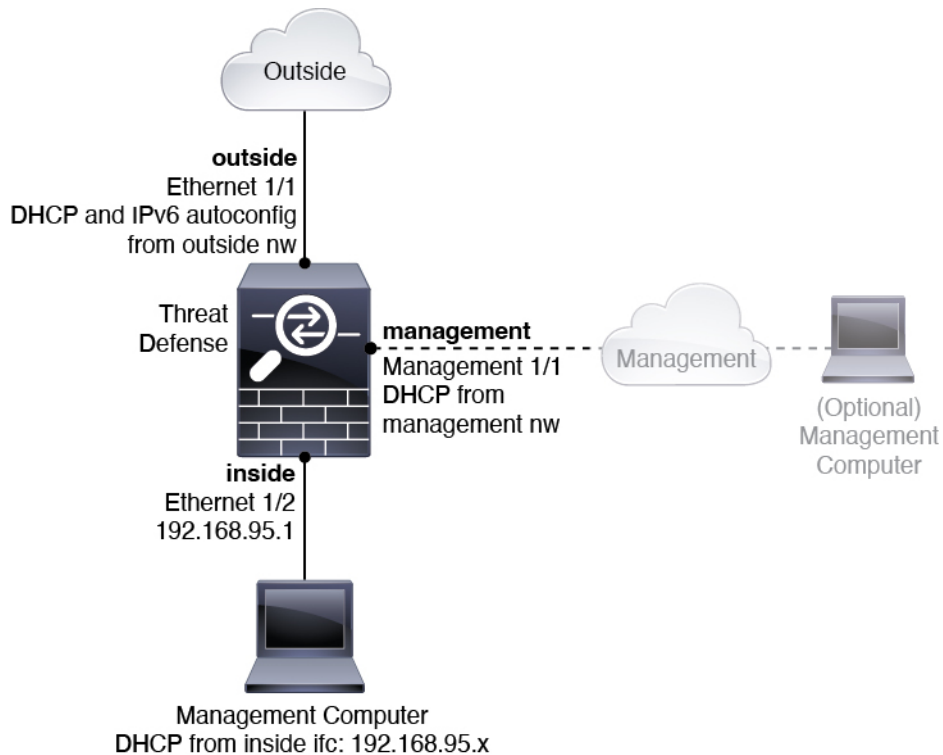
Note If you cannot use the default management IP address (for example, your management network does not include a DHCP server), then you can connect to the console port and perform initial setup at the CLI, including setting the Management IP address, gateway, and other basic networking settings.

If you need to change the inside IP address, you can do so after you complete initial setup in the device manager. For example, you may need to change the inside IP address in the following circumstances:

- The inside IP address is 192.168.95.1.
- If you add the threat defense to an existing inside network, you will need to change the inside IP address to be on the existing network.

The following figure shows the default network deployment for the threat defense using the device manager with the default configuration.

Figure 2: Suggested Network Deployment



Default Configuration

The configuration for the firewall after initial setup includes the following:

- **inside**—Ethernet 1/2, IP address 192.168.95.1.
- **outside**—Ethernet 1/1, IP address from IPv4 DHCP and IPv6 autoconfiguration
- **inside**→**outside** traffic flow
- **management**—Management 1/1 (management), IP address from DHCP



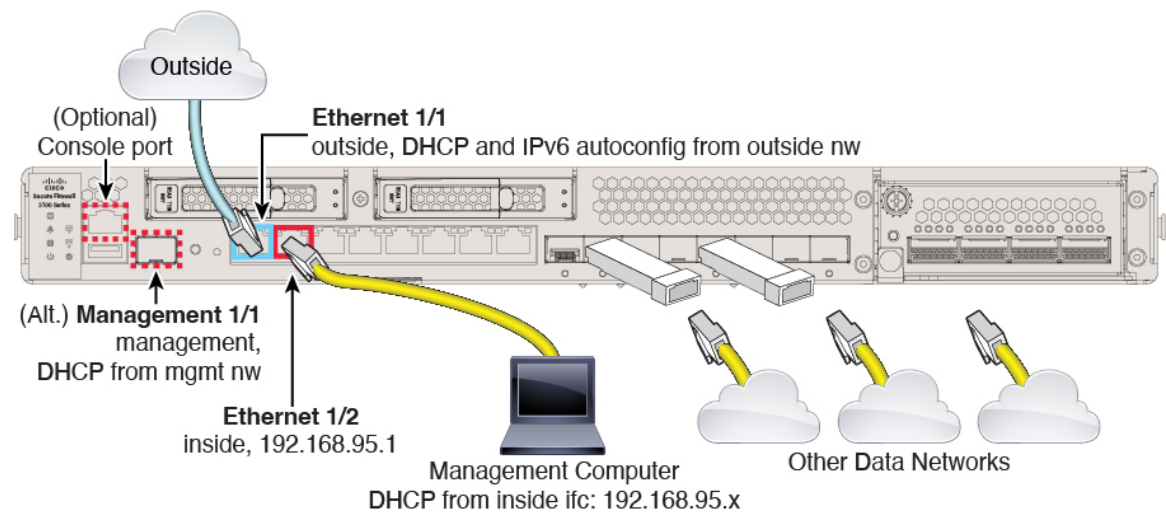
Note The Management 1/1 interface is a special interface separate from data interfaces that is used for management, Smart Licensing, and database updates. The physical interface is shared with a second logical interface, the Diagnostic interface. Diagnostic is a data interface, but is limited to other types of management traffic (to-the-device and from-the-device), such as syslog or SNMP. The Diagnostic interface is not typically used. See the [Cisco Secure Firewall Device Manager Configuration Guide](#) for more information.

- **DNS server for management**—OpenDNS: (IPv4) 208.67.222.222, 208.67.220.220; (IPv6) 2620:119:35::35, or servers you specify during setup. DNS servers obtained from DHCP are never used.
- **NTP**—Cisco NTP servers: 0.sourcefire.pool.ntp.org, 1.sourcefire.pool.ntp.org, 2.sourcefire.pool.ntp.org, or servers you specify during setup
- **Default routes**
 - **Data interfaces**—Obtained from outside DHCP, or a gateway IP address you specify during setup
 - **Management interface**—Obtained from management DHCP. If you do not receive a gateway, then the default route is over the backplane and through the data interfaces.

Note that the Management interface requires internet access for licensing and updates, either over the backplane or using a separate internet gateway. Note that only traffic originating on the Management interface can go over the backplane; otherwise, Management does not allow through traffic for traffic entering Management from the network.
- **DHCP server**—Enabled on the inside interface
- **Device Manager access**—All hosts allowed on Management and the inside interface.
- **NAT**—Interface PAT for all traffic from inside to outside

Cable the Firewall

Figure 3: Cabling the Secure Firewall 3100



Manage the Secure Firewall 3100 on either Management 1/1 or Ethernet 1/2. The default configuration also configures Ethernet1/1 as outside.

Before you begin

- (Optional) Install an SFP for the Management port—The Management port is a 1/10-Gb SFP port that requires an SFP module.

- (Optional) Obtain a console adapter—The Secure Firewall 3100 ships with a DB-9 to RJ-45 serial cable, so you may need to buy a third party DB-9-to-USB serial cable to make the connection.

Procedure

Step 1 Install the chassis. See the [hardware installation guide](#).

Step 2 Connect your management computer to either of the following interfaces:

- Ethernet 1/2—Connect your management computer directly to Ethernet 1/2 for initial configuration, or connect Ethernet 1/2 to your inside network. Ethernet 1/2 has a default IP address (192.168.95.1) and also runs a DHCP server to provide IP addresses to clients (including the management computer), so make sure these settings do not conflict with any existing inside network settings (see [Default Configuration, on page 4](#)).
- Management 1/1—Connect Management 1/1 to your management network, and make sure your management computer is on—or has access to—the management network. Management 1/1 obtains an IP address from a DHCP server on your management network; if you use this interface, you must determine the IP address assigned to the firewall so that you can connect to the IP address from your management computer.

If you need to change the Management 1/1 IP address from the default to configure a static IP address, you must also cable your management computer to the console port. See [\(Optional\) Check the Software and Install a New Version, on page 7](#).

You can later configure device manager management access from other interfaces; see the [FDM configuration guide](#).

Step 3 Connect the outside network to the Ethernet1/1 interface.

By default, the IP address is obtained using IPv4 DHCP and IPv6 autoconfiguration, but you can set a static address during initial configuration.

Step 4 Connect other networks to the remaining interfaces.

Power on the Firewall

System power is controlled by a rocker power switch located on the rear of the firewall. The power switch is implemented as a soft notification switch that supports graceful shutdown of the system to reduce the risk of system software and data corruption.



Note The first time you boot up the threat defense, initialization can take approximately 15 to 30 minutes.

Before you begin

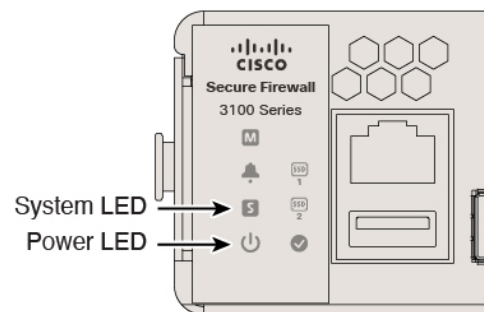
It's important that you provide reliable power for your firewall (for example, using an uninterruptible power supply (UPS)). Loss of power without first shutting down can cause serious file system damage. There are

many processes running in the background all the time, and losing power does not allow the graceful shutdown of your system.

Procedure

-
- Step 1** Attach the power cord to the firewall, and connect it to an electrical outlet.
 - Step 2** Turn the power on using the standard rocker-type power on/off switch located on the rear of the chassis, adjacent to the power cord.
 - Step 3** Check the Power LED on the back of the firewall; if it is solid green, the firewall is powered on.

Figure 4: System and Power LEDs



- Step 4** Check the System LED on the back of the firewall; after it is solid green, the system has passed power-on diagnostics.

Note When the switch is toggled from ON to OFF, it may take several seconds for the system to eventually power off. During this time, the Power LED on the front of the chassis blinks green. Do not remove the power until the Power LED is completely off.

(Optional) Check the Software and Install a New Version

To check the software version and, if necessary, install a different version, perform these steps. We recommend that you install your target version before you configure the firewall. Alternatively, you can perform an upgrade after you are up and running, but upgrading, which preserves your configuration, may take longer than using this procedure.

What Version Should I Run?

Cisco recommends running a Gold Star release indicated by a gold star next to the release number on the software download page. You can also refer to the release strategy described in <https://www.cisco.com/c/en/us/products/collateral/security/firewalls/bulletin-c25-743178.html>; for example, this bulletin describes short-term release numbering (with the latest features), long-term release numbering (maintenance releases and patches for a longer period of time), or extra long-term release numbering (maintenance releases and patches for the longest period of time, for government certification).

Procedure

Step 1

Connect to the console port. See [Access the Threat Defense and the FXOS CLI, on page 23](#) for more information.

Log in with the **admin** user and the default password, **Admin123**.

You connect to the FXOS CLI. The first time you log in, you are prompted to change the password. This password is also used for the threat defense login for SSH.

Note If the password was already changed, and you do not know it, you must perform a factory reset to reset the password to the default. See the [FXOS troubleshooting guide](#) for the [factory reset procedure](#).

Example:

```
firepower login: admin
Password: Admin123
Successful login attempts for user 'admin' : 1

[...]

Hello admin. You must change your password.
Enter new password: *****
Confirm new password: *****
Your password was updated successfully.

[...]

firepower#
```

Step 2

At the FXOS CLI, show the running version.

scope ssa

show app-instance

Example:

```
Firepower# scope ssa
Firepower /ssa # show app-instance

Application Name      Slot ID   Admin State   Operational State   Running Version Startup
Version Cluster Oper State
-----
ftd                   1         Enabled       Online               7.6.0.65          7.6.0.65
                    Not Applicable
```

Step 3

If you want to install a new version, perform these steps.

- a) If you need to set a static IP address for the Management interface, see [\(Optional\) Change Management Network Settings at the CLI, on page 9](#). By default, the Management interface uses DHCP.

You will need to download the new image from a server accessible from the Management interface.

- b) Perform the [reimage procedure](#) in the [FXOS troubleshooting guide](#).

After the firewall reboots, you connect to the FXOS CLI again.

- c) At the FXOS CLI, you are prompted to set the admin password again.

(Optional) Change Management Network Settings at the CLI

If you cannot use the default management IP address, then you can connect to the console port and perform initial setup at the CLI, including setting the Management IP address, gateway, and other basic networking settings. You can only configure the Management interface settings; you cannot configure inside or outside interfaces, which you can later configure in the GUI.



Note You cannot repeat the CLI setup script unless you clear the configuration; for example, by reimaging. However, all of these settings can be changed later at the CLI using **configure network** commands. See [Cisco Secure Firewall Threat Defense Command Reference](#).

Procedure

Step 1 Connect to the threat defense console port. See [Access the Threat Defense and the FXOS CLI, on page 23](#) for more information.

Log in with the **admin** user and the default password, **Admin123**.

You connect to the FXOS CLI. The first time you log in, you are prompted to change the password. This password is also used for the threat defense login for SSH.

Note If the password was already changed, and you do not know it, you must perform a factory reset to reset the password to the default. See the [FXOS troubleshooting guide](#) for the [factory reset procedure](#).

Example:

```
firepower login: admin
Password: Admin123
Successful login attempts for user 'admin' : 1

[...]

Hello admin. You must change your password.
Enter new password: *****
Confirm new password: *****
Your password was updated successfully.

[...]

firepower#
```

Step 2 Connect to the threat defense CLI.

connect ftd

Example:

```
firepower# connect ftd
>
```

Step 3 The first time you log into the threat defense, you are prompted to accept the End User License Agreement (EULA). You are then presented with the CLI setup script.

Defaults or previously-entered values appear in brackets. To accept previously entered values, press **Enter**.

See the following guidelines:

- **Enter the IPv4 default gateway for the management interface**—If you set a manual IP address, enter either **data-interfaces** or the IP address of the gateway router. The **data-interfaces** setting sends outbound management traffic over the backplane to exit a data interface. This setting is useful if you do not have a separate Management network that can access the internet. Traffic originating on the Management interface includes license registration and database updates that require internet access. If you use **data-interfaces**, you can still use the device manager (or SSH) on the Management interface if you are directly-connected to the Management network, but for remote management for specific networks or hosts, you should add a static route using the **configure network static-routes** command. Note that the device manager management on data interfaces is not affected by this setting. If you use DHCP, the system uses the gateway provided by DHCP and uses the **data-interfaces** as a fallback method if DHCP doesn't provide a gateway.
- **If your networking information has changed, you will need to reconnect**—If you are connected with SSH to the default IP address but you change the IP address at initial setup, you will be disconnected. Reconnect with the new IP address and password. Console connections are not affected.
- **Manage the device locally?**—Enter **yes** to use the device manager. A **no** answer means you intend to use the on-premises or cloud-delivered management center to manage the device.

Example:

```
You must accept the EULA to continue.
Press <ENTER> to display the EULA:
End User License Agreement
[...]

Please enter 'YES' or press <ENTER> to AGREE to the EULA:

System initialization in progress. Please stand by.
You must configure the network to continue.
You must configure at least one of IPv4 or IPv6.
Do you want to configure IPv4? (y/n) [y]:
Do you want to configure IPv6? (y/n) [n]:
Configure IPv4 via DHCP or manually? (dhcp/manual) [manual]:
Enter an IPv4 address for the management interface [192.168.45.45]: 10.10.10.15
Enter an IPv4 netmask for the management interface [255.255.255.0]: 255.255.255.192
Enter the IPv4 default gateway for the management interface [data-interfaces]: 10.10.10.1
Enter a fully qualified hostname for this system [firepower]: ftd-1.cisco.com
Enter a comma-separated list of DNS servers or 'none' [208.67.222.222,208.67.220.220]:
Enter a comma-separated list of search domains or 'none' []:
If your networking information has changed, you will need to reconnect.
For HTTP Proxy configuration, run 'configure network http-proxy'

Manage the device locally? (yes/no) [yes]: yes

>
```

- Step 4** Log into the device manager on the new Management IP address.
-

Log Into the Device Manager

Log into the device manager to configure your threat defense.

Procedure

- Step 1** Enter the following URL in your browser.
- Inside (Ethernet 1/2)—**https://192.168.95.1**.
 - Management—**https://management_ip**. The Management interface is a DHCP client, so the IP address depends on your DHCP server. If you changed the Management IP address at the CLI setup, then enter that address.
- Step 2** Log in with the username **admin**, and the default password **Admin123**.
-

What to do next

- Run through the device manager setup wizard; see [Complete the Initial Configuration, on page 11](#).

Complete the Initial Configuration

Use the setup wizard when you first log into the device manager to complete the initial configuration. After you complete the setup wizard, you should have a functioning device with a few basic policies in place:

- An outside (Ethernet1/1) and an inside interface (Ethernet1/2).
- Security zones for the inside and outside interfaces.
- An access rule trusting all inside to outside traffic.
- An interface NAT rule that translates all inside to outside traffic to unique ports on the IP address of the outside interface.
- A DHCP server running on the inside interface.



Note If you performed any initial setup at the CLI, then some of these tasks, specifically changing the admin password and configuring the outside and management interfaces, should have already been completed.

Procedure

Step 1 You are prompted to read and accept the End User License Agreement and change the admin password. You must complete these steps to continue.

Step 2 Configure the following options for the outside and management interfaces and click **Next**.

Note Your settings are deployed to the device when you click **Next**. The interface will be named “outside” and it will be added to the “outside_zone” security zone. Ensure that your settings are correct.

a) **Outside Interface**—This is the data port that you connected to your gateway router. You cannot select an alternative outside interface during initial device setup. The first data interface is the default outside interface.

Configure IPv4—The IPv4 address for the outside interface. You can use DHCP or manually enter a static IP address, subnet mask, and gateway. You can also select **Off** to not configure an IPv4 address. You cannot configure PPPoE using the setup wizard. PPPoE may be required if the interface is connected to a DSL modem, cable modem, or other connection to your ISP, and your ISP uses PPPoE to provide your IP address. You can configure PPPoE after you complete the wizard.

Configure IPv6—The IPv6 address for the outside interface. You can use DHCP or manually enter a static IP address, prefix, and gateway. You can also select **Off** to not configure an IPv6 address.

b) **Management Interface**

DNS Servers—The DNS server for the system's management address. Enter one or more addresses of DNS servers for name resolution. The default is the OpenDNS public DNS servers. If you edit the fields and want to return to the default, click **Use OpenDNS** to reload the appropriate IP addresses into the fields.

Firewall Hostname—The hostname for the system's management address.

Step 3 Configure the system time settings and click **Next**.

a) **Time Zone**—Select the time zone for the system.

b) **NTP Time Server**—Select whether to use the default NTP servers or to manually enter the addresses of your NTP servers. You can add multiple servers to provide backups.

Step 4 (Optional) Configure the smart licenses for the system.

Your purchase of the threat defense device automatically includes a Base license. All additional licenses are optional.

You must have a smart license account to obtain and apply the licenses that the system requires. Initially, you can use the 90-day evaluation license and set up smart licensing later.

To register the device now, click the link to log into your Smart Software Manager account, and see [Configure Licensing, on page 13](#).

To use the evaluation license, select **Start 90 day evaluation period without registration**.

Step 5 Click **Finish**.

What to do next

- Although you can continue using the evaluation license, we recommend that you register and license your device; see [Configure Licensing, on page 13](#).
- You can also choose to configure the device using the device manager; see [Configure the Firewall in the Device Manager, on page 20](#).

Configure Licensing

The threat defense uses Smart Software Licensing, which lets you purchase and manage a pool of licenses centrally.

When you register the chassis, the Smart Software Manager issues an ID certificate for communication between the chassis and the Smart Software Manager. It also assigns the chassis to the appropriate virtual account.

For a more detailed overview on Cisco Licensing, go to cisco.com/go/licensingguide

Smart Licensing does not prevent you from using product features that you have not yet purchased. You can start using a license immediately, as long as you are registered with the Smart Software Manager, and purchase the license later. This allows you to deploy and use a feature, and avoid delays due to purchase order approval. See the following licenses:

- **Essentials**—(Required) Essentials license.
- **IPS**—Security Intelligence and Next-Generation IPS
- **Malware Defense**—Malware defense
- **URL Filtering**—URL Filtering
- **Cisco Secure Client**—Secure Client Advantage, Secure Client Premier, or Secure Client VPN Only
- **Carrier**—Diameter, GTP/GPRS, M3UA, SCTP

Before you begin

- Have an account on the [Smart Software Manager](#).

If you do not yet have an account, click the link to [set up a new account](#). The Smart Software Manager lets you create an account for your organization.

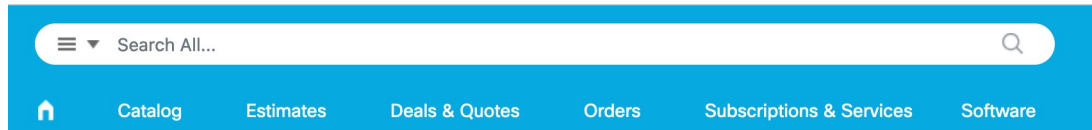
- Your Smart Software Licensing account must qualify for the Strong Encryption (3DES/AES) license to use some features (enabled using the export-compliance flag).

Procedure

Step 1 Make sure your Smart Licensing account contains the available licenses you need.

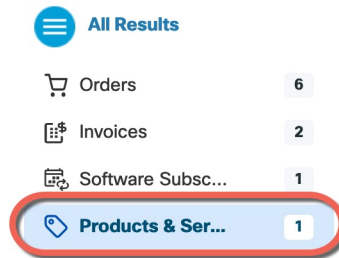
When you bought your device from Cisco or a reseller, your licenses should have been linked to your Smart Software License account. However, if you need to add licenses yourself, use the **Search All** field on the [Cisco Commerce Workspace](#).

Figure 5: License Search



Choose **Products & Services** from the results.

Figure 6: Results



Search for the following license PIDs:

Note If a PID is not found, you can add the PID manually to your order.

- Essentials license:
 - L-FPR3110-BSE=
 - L-FPR3120-BSE=
 - L-FPR3130-BSE=
 - L-FPR3140-BSE=
- IPS, Malware Defense, and URL license combination:
 - L-FPR3110T-TMC=
 - L-FPR3120T-TMC=
 - L-FPR3130T-TMC=
 - L-FPR3140T-TMC=

When you add one of the above PIDs to your order, you can then choose a term-based subscription corresponding with one of the following PIDs:

- L-FPR3110T-TMC-1Y
- L-FPR3110T-TMC-3Y
- L-FPR3110T-TMC-5Y
- L-FPR3120T-TMC-1Y
- L-FPR3120T-TMC-3Y
- L-FPR3120T-TMC-5Y

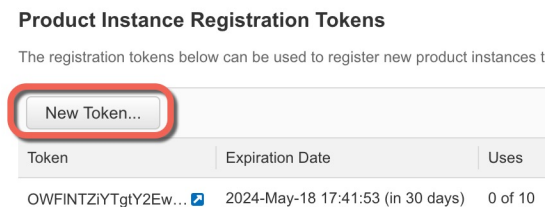
- L-FPR3130T-TMC-1Y
 - L-FPR3130T-TMC-3Y
 - L-FPR3130T-TMC-5Y
 - L-FPR3140T-TMC-1Y
 - L-FPR3140T-TMC-3Y
 - L-FPR3140T-TMC-5Y
- Carrier license:
 - L-FPR3K-FTD-CAR=
 - Cisco Secure Client—See the [Cisco Secure Client Ordering Guide](#).

Step 2 In the [Smart Software Manager](#), request and copy a registration token for the virtual account to which you want to add this device.

a) Click **Inventory**.



b) On the **General** tab, click **New Token**.



c) On the **Create Registration Token** dialog box enter the following settings, and then click **Create Token**:

Create Registration Token ? x

This will create a token that is used to register product instances, so that they can use licenses from this virtual account. Once it's created, go to the Smart Licensing configuration for your products and enter the token, to register them with this virtual account.

Virtual Account: XXXXXXXXXX

Description:

* Expire After: Days

Between 1 - 365, 30 days recommended

Max. Number of Uses:

The token will be expired when either the expiration or the maximum uses is reached

Allow export-controlled functionality on the products registered with this token i

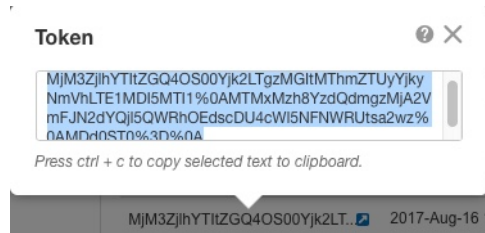
- **Description**
- **Expire After**—Cisco recommends 30 days.
- **Max. Number of Uses**
- **Allow export-controlled functionality on the products registered with this token**—Enables the export-compliance flag if you are in a country that allows for strong encryption. You must select this option now if you plan to use this functionality. If you enable this functionality later, you will need to re-register your device with a new product key and reload the device. If you do not see this option, your account does not support export-controlled functionality.

The token is added to your inventory.

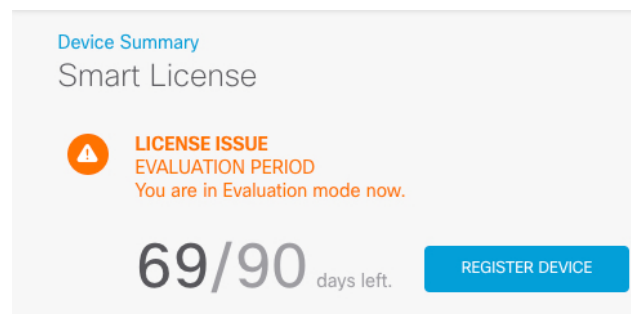
- d) Click the arrow icon to the right of the token to open the **Token** dialog box so you can copy the token ID to your clipboard. Keep this token ready for later in the procedure when you need to register the threat defense.

Figure 7: View Token

General	Licenses	Product Instances	Event Log								
<h4 style="margin: 0;">Virtual Account</h4> <p style="margin: 5px 0 0 0;">Description: XXXXXXXXXX</p> <p style="margin: 5px 0 0 0;">Default Virtual Account: No</p>											
<h4 style="margin: 0;">Product Instance Registration Tokens</h4> <p style="font-size: 0.8em; margin: 5px 0 0 0;">The registration tokens below can be used to register new product instances to this virtual account.</p> <div style="margin: 5px 0 0 0;"> <input style="border: 1px solid #ccc; padding: 2px 5px;" type="button" value="New Token..."/> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th style="width: 30%;">Token</th> <th style="width: 30%;">Expiration Date</th> <th style="width: 15%;">Uses</th> <th style="width: 25%;">Export-Controlled</th> </tr> </thead> <tbody> <tr> <td>OWFINTZIYTgtY2Ew...</td> <td>2024-May-18 17:41:53 (in 30 days)</td> <td>0 of 10</td> <td>Allowed</td> </tr> </tbody> </table>				Token	Expiration Date	Uses	Export-Controlled	OWFINTZIYTgtY2Ew...	2024-May-18 17:41:53 (in 30 days)	0 of 10	Allowed
Token	Expiration Date	Uses	Export-Controlled								
OWFINTZIYTgtY2Ew...	2024-May-18 17:41:53 (in 30 days)	0 of 10	Allowed								

Figure 8: Copy Token

- Step 3** In the device manager, click **Device**, and then in the **Smart License** summary, click **View Configuration**. You see the **Smart License** page.
- Step 4** Click **Register Device**.



Then follow the instructions on the **Smart License Registration** dialog box to paste in your token:

Smart License Registration
✕

- 1 Create or log in into your [Cisco Smart Software Manager](#) account.

↓
- 2 On your assigned virtual account, under “General tab”, click on “**New Token**” to create token.

↓
- 3 Copy the token and paste it here:

MGY2NzMwOGIiODJiZi00NzFiLWjiniitYWMwNzU0ODY2ZGVILTE1NiUz
 NzIv%0AODQ5Mzh8SUQ5Vm5XbzZiSmN5M3I6K3owZ3oyVmpmc3Vtal
 JLQ2FFeGhFWmlW%0AWC9WTT0%3D%0A
- 4 Select Region

When you register the device, you are also registered with Cisco Security Services Exchange (SSE). Please select the region in which your device is operating. You will be able to see your device in the device list of the regional SSE portal.

Region

SSE US Region
▼
i
- 5 Cisco Success Network

Cisco Success Network enablement provides usage information and statistics to Cisco which are essential for Cisco to provide technical support. This information also allows Cisco to improve the product and to make you aware of unused available features so that you can maximize the value of the product in your network.

Check out the [Sample Data](#) that will be sent to Cisco. [See more](#) ▼

Enable Cisco Success Network

CANCEL
REGISTER DEVICE

Step 5 Click **Register Device**.

You return to the **Smart License** page. While the device registers, you see the following message:

Registration request sent on 10 Jul 2019. Please wait. Normally, it takes about one minute to complete the registration. You can check the task status in [Task List](#). Refresh this page to see the updated status.

After the device successfully registers and you refresh the page, you see the following:

Device Summary

Smart License

✓

CONNECTED
SUFFICIENT LICENSE

Last sync: 10 Jul 2019 11:39 AM

Next sync: 10 Jul 2019 11:49 AM

i

Step 6 Click the **Enable/Disable** control for each optional license as desired.

SUBSCRIPTION LICENSES INCLUDED

IPS ENABLE

Disabled by user

This License allows you to perform intrusion detection and prevention and file control. You must have this license to apply intrusion policies in access rules. You also must have this license to apply file policies that control files based on file type.

Includes: Intrusion Policy

Malware Defense ENABLE

Disabled by user

This license lets you perform malware defense. You must have this license to apply file policies that detect and block malware in files transmitted over your network.

Includes: File Policy

URL ENABLE

Disabled by user

This license allows you to control web access based on URL categories and reputations, rather than by individual URL alone. You must have this license to deploy access rules that filter web traffic based on category and reputation.

Includes: URL Reputation

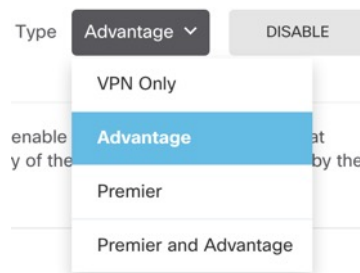
Cisco Secure Client Type: Advantage ▾ ENABLE

Disabled by user

Please select the license type that you purchased to enable remote access VPN. Note that Secure Firewall device manager does not support any of the advanced features covered by the Advantage license.

Includes: RA-VPN

- **Enable**—Registers the license with your Cisco Smart Software Manager account and enables the controlled features. You can now configure and deploy policies controlled by the license.
- **Disable**—Unregisters the license with your Cisco Smart Software Manager account and disables the controlled features. You cannot configure the features in new policies, nor can you deploy policies that use the feature.
- If you enabled the **Cisco Secure Client** license, select the type of license you want to use: **Advantage**, **Premier**, **VPN Only**, or **Premier and Advantage**.



After you enable features, if you do not have the licenses in your account, you will see the following non-compliance message after you refresh the page:

Device Summary

Smart License

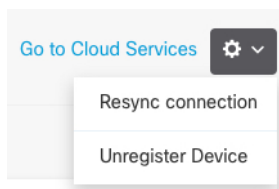
LICENSE ISSUE Last sync: 10 Jul 2019 11:47 AM

OUT OF COMPLIANCE Next sync: 10 Jul 2019 11:57 AM

There is no available license for the device. Licensed features continue to work. However, you must either purchase or free up additional licenses to be in compliance.

[GO TO LICENSE MANAGER](#) [Need help?](#)

- Step 7** Choose **Resync Connection** from the gear drop-down list to synchronize license information with Cisco Smart Software Manager.



Configure the Firewall in the Device Manager

The following steps provide an overview of additional features you might want to configure. Please click the help button (?) on a page to get detailed information about each step.

Procedure

Step 1 To create 4 x 10-Gb breakout interfaces from a 40-Gb interface (available on some models), choose **Device**, and then click the link in the **Interfaces** summary. Then click the breakout icon for the interface.

If you already used the 40-Gb interface in your configuration, you will have to remove the configuration before you can proceed with the breakout.

Step 2 If you wired other interfaces, choose **Device**, and then click the link in the **Interfaces** summary.

Click the edit icon (🔧) for each interface to set the mode and define the IP address and other settings.

The following example configures an interface to be used as a “demilitarized zone” (DMZ), where you place publicly-accessible assets such as your web server. Click **Save** when you are finished.

Figure 9: Edit Interface

 A screenshot of the "Edit Physical Interface" configuration page. The page has a blue header with the title "Edit Physical Interface". Below the header, there are several fields:

- Interface Name:** A text input field containing "dmz".
- Status:** A toggle switch that is currently turned "On" (blue).
- Description:** A large, empty text area.
- Navigation tabs:** Three tabs are visible: "IPv4 Address" (selected), "IPv6 Address", and "Advanced Options".
- Type:** A dropdown menu set to "Static".
- IP Address and Subnet Mask:** Two input fields. The first contains "192.168.6.1" and the second contains "24".
- Example text:** Below the IP fields, there is small text: "e.g. 192.168.5.15/17 or 192.168.5.15/255.255.128.0".

Step 3 If you configured new interfaces, choose **Objects**, then select **Security Zones** from the table of contents.

Edit or create new zones as appropriate. Each interface must belong to a zone, because you configure policies based on security zones, not interfaces. You cannot put the interfaces in zones when configuring them, so you must always edit the zone objects after creating new interfaces or changing the purpose of existing interfaces.

The following example shows how to create a new dmz-zone for the dmz interface.

Figure 10: Security Zone Object

Add Security Zone

Name
dmz-zone

Description

Interfaces
+
dmz

Step 4 If you want internal clients to use DHCP to obtain an IP address from the device, choose **Device > System Settings > DHCP Server**, then select the **DHCP Servers** tab.

There is already a DHCP server configured for the inside interface, but you can edit the address pool or even delete it. If you configured other inside interfaces, it is very typical to set up a DHCP server on those interfaces. Click + to configure the server and address pool for each inside interface.

You can also fine-tune the WINS and DNS list supplied to clients on the **Configuration** tab. The following example shows how to set up a DHCP server on the inside2 interface with the address pool 192.168.4.50-192.168.4.240.

Figure 11: DHCP Server

Add Server

Enabled DHCP Server

Interface
inside2

Address Pool
192.168.4.50-192.168.4.240
e.g. 192.168.45.46-192.168.45.254

Step 5 Choose **Device**, then click **View Configuration** (or **Create First Static Route**) in the **Routing** group and configure a default route.

The default route normally points to the upstream or ISP router that resides off the outside interface. A default IPv4 route is for any-ipv4 (0.0.0.0/0), whereas a default IPv6 route is for any-ipv6 (:::0/0). Create routes for each IP version you use. If you use DHCP to obtain an address for the outside interface, you might already have the default routes that you need.

Note The routes you define on this page are for the data interfaces only. They do not impact the management interface. Set the management gateway on **Device > System Settings > Management Interface**.

The following example shows a default route for IPv4. In this example, `isp-gateway` is a network object that identifies the IP address of the ISP gateway (you must obtain the address from your ISP). You can create this object by clicking **Create New Network** at the bottom of the **Gateway** drop-down list.

Figure 12: Default Route

The screenshot shows the 'Add Static Route' configuration page. It has a blue header with the text 'Add Static Route'. Below the header, there are several sections:

- Protocol:** Two radio buttons are present. 'IPv4' is selected (indicated by a blue circle), and 'IPv6' is unselected (indicated by a grey circle).
- Gateway:** A text input field containing the value 'isp-gateway'.
- Interface:** A text input field containing the value 'outside'.
- Metric:** A text input field containing the value '1'.
- Networks:** A section with a '+' icon and a list item 'any-ipv4'.

Step 6 Choose **Policies** and configure the security policies for the network.

The device setup wizard enables traffic flow between the inside-zone and outside-zone, and interface NAT for all interfaces when going to the outside interface. Even if you configure new interfaces, if you add them to the inside-zone object, the access control rule automatically applies to them.

However, if you have multiple inside interfaces, you need an access control rule to allow traffic flow from inside-zone to inside-zone. If you add other security zones, you need rules to allow traffic to and from those zones. These would be your minimum changes.

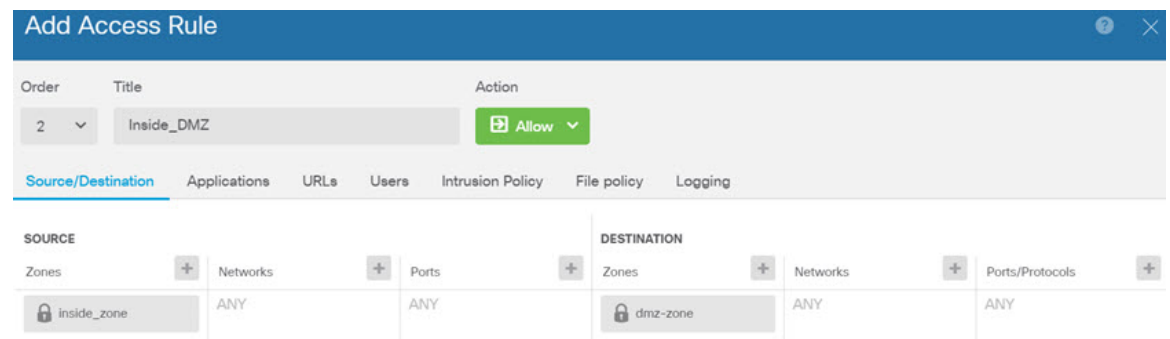
In addition, you can configure other policies to provide additional services, and fine-tune NAT and access rules to get the results that your organization requires. You can configure the following policies:

- **SSL Decryption**—If you want to inspect encrypted connections (such as HTTPS) for intrusions, malware, and so forth, you must decrypt the connections. Use the SSL decryption policy to determine which connections need to be decrypted. The system re-encrypts the connection after inspecting it.
- **Identity**—If you want to correlate network activity to individual users, or control network access based on user or user group membership, use the identity policy to determine the user associated with a given source IP address.
- **Security Intelligence**—Use the Security Intelligence policy to quickly drop connections from or to blacklisted IP addresses or URLs. By blacklisting known bad sites, you do not need to account for them in your access control policy. Cisco provides regularly updated feeds of known bad addresses and URLs so that the Security Intelligence blacklist updates dynamically. Using feeds, you do not need to edit the policy to add or remove items in the blacklist.

- **NAT (Network Address Translation)**—Use the NAT policy to convert internal IP addresses to externally routeable addresses.
- **Access Control**—Use the access control policy to determine which connections are allowed on the network. You can filter by security zone, IP address, protocol, port, application, URL, user or user group. You also apply intrusion and file (malware) policies using access control rules. Use this policy to implement URL filtering.
- **Intrusion**—Use the intrusion policies to inspect for known threats. Although you apply intrusion policies using access control rules, you can edit the intrusion policies to selectively enable or disable specific intrusion rules.


The following example shows how to allow traffic between the inside-zone and dmz-zone in the access control policy. In this example, no options are set on any of the other tabs except for **Logging**, where **At End of Connection** is selected.

Figure 13: Access Control Policy



- Step 7** Choose **Device**, then click **View Configuration** in the **Updates** group and configure the update schedules for the system databases.

If you are using intrusion policies, set up regular updates for the Rules and VDB databases. If you use Security Intelligence feeds, set an update schedule for them. If you use geolocation in any security policies as matching criteria, set an update schedule for that database.

- Step 8** Click the **Deploy** button in the menu, then click the Deploy Now button (), to deploy your changes to the device.

Changes are not active on the device until you deploy them.

Access the Threat Defense and the FXOS CLI

Use the command-line interface (CLI) to set up the system and do basic system troubleshooting. You cannot configure policies through a CLI session. You can access the CLI by connecting to the console port.

You can also access the FXOS CLI for troubleshooting purposes.



Note You can alternatively SSH to the Management interface of the threat defense device. Unlike a console session, the SSH session defaults to the threat defense CLI, from which you can connect to the FXOS CLI using the **connect fxos** command. You can later connect to the address on a data interface if you open the interface for SSH connections. SSH access to data interfaces is disabled by default. This procedure describes console port access, which defaults to the FXOS CLI.

Procedure

Step 1 To log into the CLI, connect your management computer to the console port. The Secure Firewall 3100 ships with a DB-9 to RJ-45 serial cable, so you may need to buy a third party DB-9-to-USB serial cable to make the connection. Be sure to install any necessary USB serial drivers for your operating system. The console port defaults to the FXOS CLI. Use the following serial settings:

- 9600 baud
- 8 data bits
- No parity
- 1 stop bit

You connect to the FXOS CLI. Log in to the CLI using the **admin** username and the password you set at initial setup (the default is **Admin123**).

Example:

```
firepower login: admin
Password:
Last login: Thu May 16 14:01:03 UTC 2019 on ttyS0
Successful login attempts for user 'admin' : 1

firepower#
```

Step 2 Access the threat defense CLI.

connect ftd

Example:

```
firepower# connect ftd
>
```

After logging in, for information on the commands available in the CLI, enter **help** or **?**. For usage information, see [Cisco Secure Firewall Threat Defense Command Reference](#).

Step 3 To exit the threat defense CLI, enter the **exit** or **logout** command.

This command returns you to the FXOS CLI prompt. For information on the commands available in the FXOS CLI, enter **?**.

Example:


```
> exit
firepower#
```

Power Off the Firewall

It's important that you shut down your system properly. Simply unplugging the power or pressing the power switch can cause serious file system damage. Remember that there are many processes running in the background all the time, and unplugging or shutting off the power does not allow the graceful shutdown of your firewall system.

You can power off the firewall using device manager, or you can use the FXOS CLI.

Power Off the Firewall Using the Device Manager

Shut down your system properly using the device manager.

Procedure

- Step 1** Use the device manager to shut down the firewall.
- Click **Device**, then click the **System Settings > Reboot/Shutdown** link.
 - Click **Shut Down**.
- Step 2** If you have a console connection to the firewall, monitor the system prompts as the firewall shuts down. You will see the following prompt:
- ```
System is stopped.
It is safe to power off now.

Do you want to reboot instead? [y/N]
```
- If you do not have a console connection, wait approximately 3 minutes to ensure the system has shut down.
- Step 3** You can now turn off the power switch and unplug the power to physically remove power from the chassis if necessary.
- 

## Power Off the Firewall at the CLI

You can use the FXOS CLI to safely shut down the system and power off the firewall. You access the CLI by connecting to the console port; see [Access the Threat Defense and the FXOS CLI, on page 23](#).

### Procedure

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- Step 1** In the FXOS CLI, connect to local-mgmt:

```
firepower # connect local-mgmt
```

**Step 2** Issue the **shutdown** command:

```
firepower(local-mgmt) # shutdown
```

**Example:**

```
firepower(local-mgmt) # shutdown
This command will shutdown the system. Continue?
Please enter 'YES' or 'NO': yes
INIT: Stopping Cisco Threat Defense.....ok
```

**Step 3** Monitor the system prompts as the firewall shuts down. You will see the following prompt:

```
System is stopped.
It is safe to power off now.
Do you want to reboot instead? [y/N]
```

**Step 4** You can now turn off the power switch and unplug the power to physically remove power from the chassis if necessary.

---

## What's Next?

To continue configuring your threat defense, see the documents available for your software version at [Navigating the Cisco Firepower Documentation](#).

For information related to using the device manager, see [Cisco Firepower Threat Defense Configuration Guide for Firepower Device Manager](#).