# Secure Firewall 6100 Threat Defense Getting Started: Firewall Management Center at a Central Headquarters

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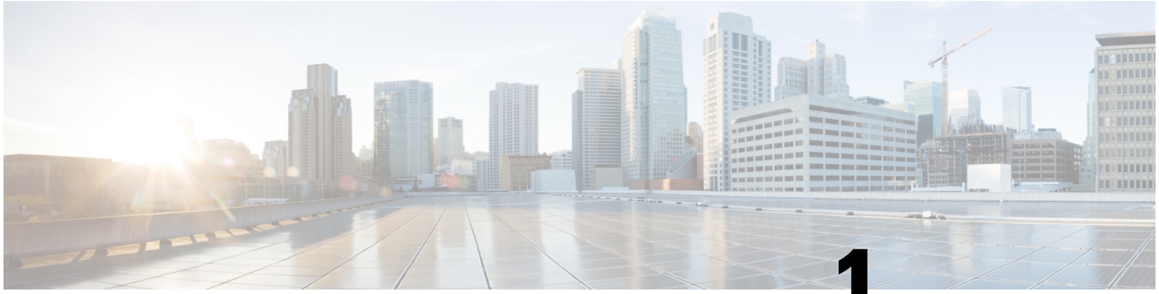


CHAPTER 1

# Before You Begin

Install the firewall at a branch office and manage it on the outside interface using a central Secure Firewall Management Center.

**Note** For high availability if you use zero-touch provisioning, we recommend using the Management interface. If you use zero-touch provisioning on outside and want to use high availability, you will have to change the outside IP address to a static address after registration.

## Power on the firewall

System power is controlled by a power button located on the rear of the firewall. The power button provides a soft notification 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 firewall, Firewall Threat Defense initialization can take approximately 15 to 30 minutes.

### Before you begin

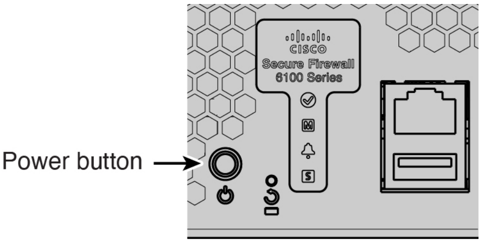
It's important that you provide reliable power for your firewall (for example, using an uninterruptable power supply (UPS)). Loss of power without first shutting down can cause serious file system damage. There are many processes running in the background all the time, and losing power does not allow the graceful shutdown of your system.

### Procedure

**Step 1** Attach the power cord to the firewall, and connect it to an electrical outlet.

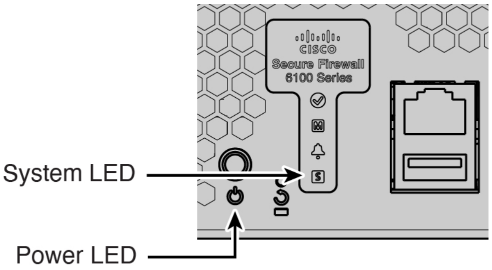
**Step 2** Turn the power on using the power button located on the rear of the chassis, adjacent to the power cord.

*Figure 1: Power button*



**Step 3** Check the LEDs for the current status.

*Figure 2: LEDs*



- Power LED—Solid green means the firewall is powered on.
- System (S) LED—See the following behavior:

*Table 1: System (S) LED Behavior*

| LED Behavior | Description | Time After Device Powered On (minutes:seconds) |
|---|---|---|
| Fast flashing green | Booting up | 01:00 |
| *Fast flashing amber (error condition)* | Failed to boot up | 01:00 |
| Solid green | Application loaded | 15:00 - 30:00 |
| *Solid amber (error condition)* | Application failed to load | 15:00 - 30:00 |

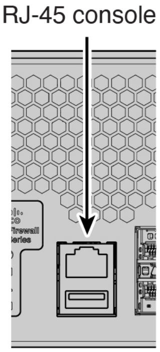
# Which application is installed: Firewall Threat Defense or ASA?

Both applications, Firewall Threat Defense or ASA, are supported on the hardware. Connect to the console port and determine which application was installed at the factory.

### Procedure

**Step 1** Connect to the console port.

*Figure 3: Console port*



**Step 2** See the CLI prompts to determine if your firewall is running Firewall Threat Defense or ASA.

**Firewall Threat Defense**

You see the firepower login (FXOS) prompt. You can disconnect without logging in and setting a new password. If you need to log in all the way, see Access the Firewall Threat Defense CLI, on page 3.

```
firepower login:
```

**ASA**

You see the ASA prompt.

```
ciscoasa>
```

**Step 3** If you are running the wrong application, see Cisco Secure Firewall ASA and Secure Firewall Threat Defense Reimage Guide.

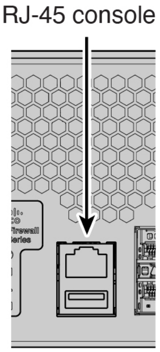
# Access the Firewall Threat Defense CLI

You might need to access the CLI for configuration or troubleshooting.

## Procedure

**Step 1** Connect to the console port.

*Figure 4: Console port*



**Step 2** You connect to FXOS. Log in to the CLI using the **admin** username and the password (the default is **Admin123**). The first time you log in, you are prompted to change the password.

```
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 3** Change to the Firewall Threat Defense CLI.

**connect ftd**

The first time you connect to the Firewall Threat Defense CLI, you are prompted to complete initial setup.

**Example:**

```
firepower# connect ftd
>
```

To exit the Firewall Threat Defense CLI, enter the **exit** or **logout** command. This command returns you to the FXOS prompt.

**Example:**

```
> exit
```

```
firepower#
```

# Check the version and reimage

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.

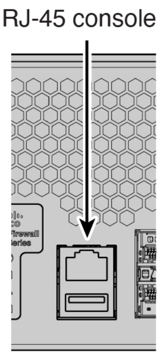
**What version should I run?**

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.

## Procedure

**Step 1** Connect to the console port.

*Figure 5: Console port*



**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) By default, the Management interface uses DHCP. If you need to set a static IP address for the Management interface, enter the following commands.

**scope fabric-interconnect a**

**set out-of-band static ip** *ip* **netmask** *netmask* **gw** *gateway*

**commit-buffer**

b) Perform the reimage procedure in the FXOS troubleshooting guide.

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

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.

d) Shut down the firewall. See (If Needed) Power off the firewall, on page 7.

# Obtain licenses

When you bought your device from Cisco or a reseller, your licenses should have been linked to your Smart Software License account. If you don't have an account on the Smart Software Manager, click the link to set up a new account.

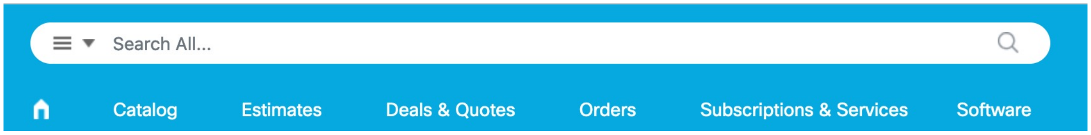
If you have not already done so, register the Firewall Management Center with the Smart Software Manager. Registering requires you to generate a registration token in the Smart Software Manager. See the Cisco Secure Firewall Management Center Administration Guide for detailed instructions.

The Firewall Threat Defense has the following licenses:

- Essentials—Required
- IPS
- Malware Defense
- URL Filtering
- Cisco Secure Client
- Carrier—Diameter, GTP/GPRS, M3UA, SCTP

1. If you need to add licenses yourself, go to Cisco Commerce Workspace and use the **Search All** field.

*Figure 6: License Search*



2. Search for the following license PIDs.

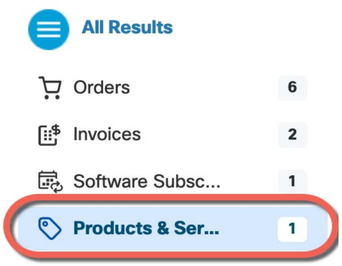
**Note** If a PID is not found, you can add the PID manually to your order.

- IPS, Malware Defense, and URL combination:
  - CSF_6160_TD_TMC
  - CSF_6170_TD_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:
  - CSF_6160_TD_TMC-1Y
  - CSF_6160_TD_TMC-3Y
  - CSF_6160_TD_TMC-5Y
  - CSF_6170_TD_TMC-1Y
  - CSF_6170_TD_TMC-3Y
  - CSF_6170_TD_TMC-5Y
- Carrier:
  - CSF_6100_FTD_CARRIER
- Cisco Secure Client—See the Cisco Secure Client Ordering Guide.

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

*Figure 7: Results*



# (If Needed) 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. 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.

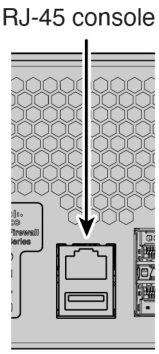
# Power off the firewall at the CLI

You can use the FXOS CLI to safely shut down the system and power off the firewall.

### Procedure

**Step 1** Connect to the console port.

*Figure 8: Console port*



**Step 2** In the FXOS CLI, connect to local-mgmt mode.

firepower # **connect local-mgmt**

**Step 3** Shut down the system.

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 4** Monitor the system prompts as the firewall shuts down. When the shutdown is complete, 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 5** 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 using the Firewall Management Center

Shut down your system properly using the Firewall Management Center.

### Procedure

**Step 1** Shut down the firewall.

a) Choose **Devices** > **Device Management**.

b) Next to the device that you want to restart, click **Edit** (✎).

c) Click the **Device** tab.

d) Click **Shut Down Device** (⏻) in the **System** section.

e) When prompted, confirm that you want to shut down the device.

**Step 2** If you have a console connection to the firewall, monitor the system prompts as the firewall shuts down. When shutdown is complete, 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.

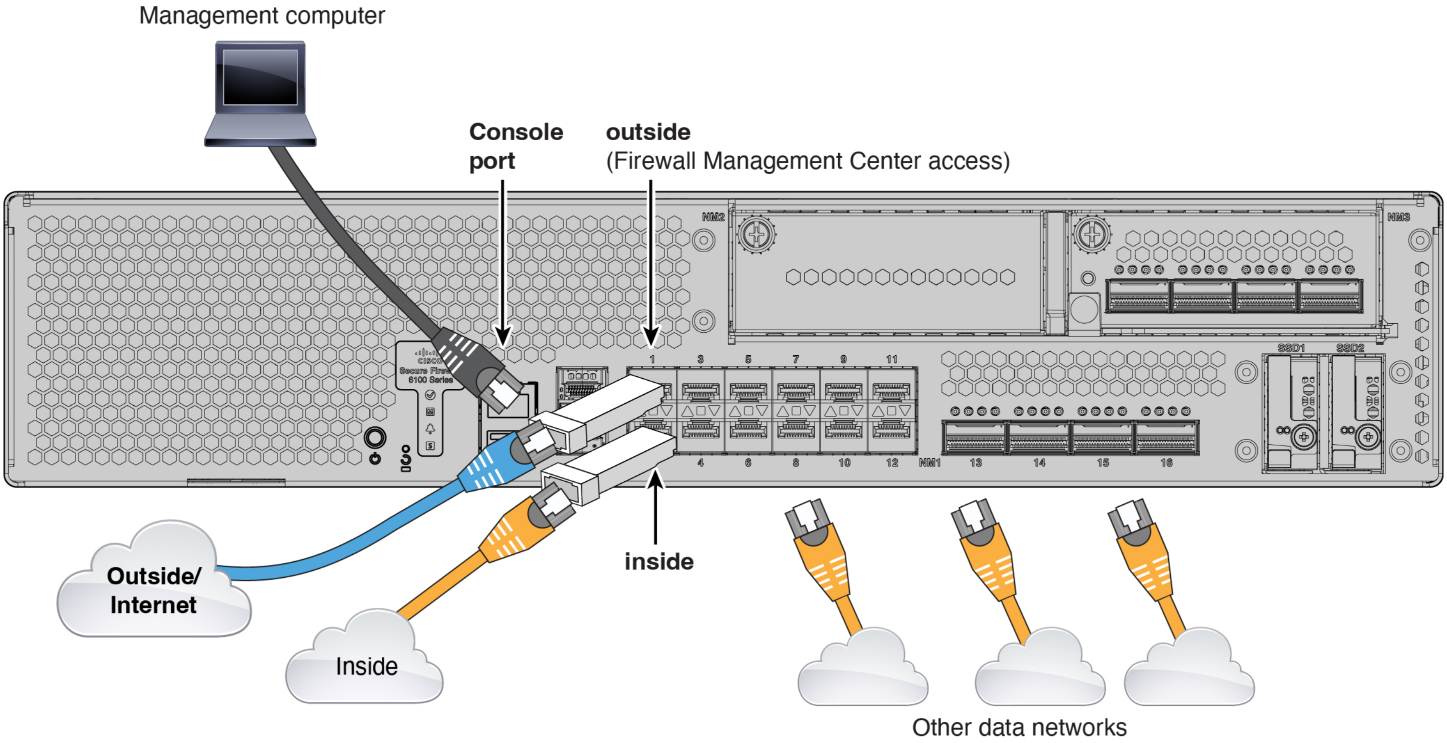
CHAPTER 2

# Cable and Register the Firewall

Cable the firewall and then register the firewall to the Firewall Management Center.

## Cable the firewall

- Obtain a console cable—The firewall does not ship with a console cable by default, so you will need to buy a third-party USB-to-RJ-45 serial cable, for example.
- Install SFPs into the data interface ports—Ethernet 1/1 to 1/12 fixed ports are 1/10/25/50-Gbps SFP28 ports that require SFP/SFP+/SFP28 modules; Ethernet 1/13 through 1/16 are 1/10/25/50-Gbps QSFP28 ports that require SFP/SFP+/QSFP+/SFP28/QSFP28 modules.
- See the hardware installation guide for more information.



# Perform Initial Configuration

Set the dedicated Management IP address, gateway, and other basic networking settings using the CLI setup script.

### Procedure

**Step 1** Connect to the console port and access the Firewall Threat Defense CLI. See Access the Firewall Threat Defense CLI, on page 3.

**Step 2** Complete the CLI setup script for the Management interface settings.

**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.

```
You must accept the EULA to continue.
Press <ENTER> to display the EULA:
Cisco General Terms
[...]

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.
```

```
Configure at least one of IPv4 or IPv6 unless managing via data interfaces.
Do you want to configure IPv4? (y/n) [y]:
Do you want to configure IPv6? (y/n) [y]: n
```

**Guidance:** Enter **y** for at least one of these types of addresses. Although you do not plan to use the Management interface, you must set an IP address, for example, a private address.

```
Configure IPv4 via DHCP or manually? (dhcp/manual) [manual]:
```

**Guidance:** Choose **manual**. DHCP is not supported when using the outside interface for manager access. Make sure this interface is on a different subnet from the manager access interface to prevent routing issues.

```
Enter an IPv4 address for the management interface [192.168.45.61]: 10.89.5.17
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]:
```

**Guidance:** Set the gateway to be **data-interfaces**. This setting forwards management traffic over the backplane so it can be routed through the outside interface.

```
Enter a fully qualified hostname for this system [firepower]: 1010-3
Enter a comma-separated list of DNS servers or 'none' [208.67.222.222,208.67.220.220,2620:119:35::35]:
Enter a comma-separated list of search domains or 'none' []: cisco.com
If your networking information has changed, you will need to reconnect.
Disabling IPv6 configuration: management0
Setting DNS servers: 208.67.222.222,208.67.220.220,2620:119:35::35
Setting DNS domains:cisco.com
```

**Guidance:** Set the Management interface DNS servers. These will probably match the outside interface DNS servers you set later, since they are both accessed from the outside interface.

```
Setting hostname as 1010-3
Setting static IPv4: 10.89.5.17 netmask: 255.255.255.192 gateway: data on management0
Updating routing tables, please wait...
All configurations applied to the system. Took 3 Seconds.
Saving a copy of running network configuration to local disk.
For HTTP Proxy configuration, run 'configure network http-proxy'

Setting hostname as 1010-3
Setting static IPv4: 10.89.5.17 netmask: 255.255.255.192 gateway: data on management0
Updating routing tables, please wait...
All configurations applied to the system. Took 3 Seconds.
Saving a copy of running network configuration to local disk.
For HTTP Proxy configuration, run 'configure network http-proxy'
```

**Guidance:** Enter **routed**. Outside manager access is only supported in routed firewall mode.

```
Configuring firewall mode ...


Device is in OffBox mode - disabling/removing port 443 from iptables.
Update policy deployment information
    - add device configuration
    - add network discovery
    - add system policy

You can register the sensor to a Firepower Management Center and use the
Firepower Management Center to manage it. Note that registering the sensor
to a Firepower Management Center disables on-sensor Firepower Services
management capabilities.

When registering the sensor to a Firepower Management Center, a unique
alphanumeric registration key is always required.  In most cases, to register
a sensor to a Firepower Management Center, you must provide the hostname or
the IP address along with the registration key.
'configure manager add [hostname | ip address ] [registration key ]'
```

```
However, if the sensor and the Firepower Management Center are separated by a
NAT device, you must enter a unique NAT ID, along with the unique registration
key.
'configure manager add DONTRESOLVE [registration key ] [ NAT ID ]'

Later, using the web interface on the Firepower Management Center, you must
use the same registration key and, if necessary, the same NAT ID when you add
this sensor to the Firepower Management Center.
>
```

**Step 3** Configure the outside interface for manager access.

**configure network management-data-interface**

You are then prompted to configure basic network settings for the outside interface.

**Manual IP Address**

```
> configure network management-data-interface
Data interface to use for management: ethernet1/1
Specify a name for the interface [outside]: internet
IP address (manual / dhcp) [dhcp]: manual
IPv4/IPv6 address: 10.10.6.7
Netmask/IPv6 Prefix: 255.255.255.0
Default Gateway: 10.10.6.1
Comma-separated list of DNS servers [none]: 208.67.222.222,208.67.220.220
```

**Guidance:** To retain the outside DNS servers after registration, you need to re-configure the DNS Platform Settings in the Firewall Management Center.

```
DDNS server update URL [none]:
Do you wish to clear all the device configuration before applying ? (y/n) [n]:

Configuration done with option to allow manager access from any network, if you wish to change the
manager access network
use the 'client' option in the command 'configure network management-data-interface'.

Setting IPv4 network configuration.
Network settings changed.

>
```

**IP Address from DHCP**

```
> configure network management-data-interface
Data interface to use for management: ethernet1/1
Specify a name for the interface [outside]:
IP address (manual / dhcp) [dhcp]:
DDNS server update URL [none]:
https://dwinchester:pa$$w0rd17@domains.example.com/nic/update?hostname=<h>&myip=<a>
Do you wish to clear all the device configuration before applying ? (y/n) [n]:

Configuration done with option to allow manager access from any network, if you wish to change the
manager access network
use the 'client' option in the command 'configure network management-data-interface'.

Setting IPv4 network configuration.
Network settings changed.

>
```

**Step 4** Identify the Firewall Management Center.

**configure manager add** {*hostname* | *IPv4_address* | *IPv6_address* | **DONTRESOLVE**} *reg_key nat_id*

- {*hostname* | *IPv4_address* | *IPv6_address* | **DONTRESOLVE**}—Specifies either the FQDN or IP address of the Firewall Management Center. If the Firewall Management Center is not directly addressable, use **DONTRESOLVE**, in which case the firewall must have a reachable IP address or hostname.
- *reg_key*—Specifies a one-time registration key of your choice that you will also specify on the Firewall Management Center when you register the Firewall Threat Defense. The registration key must be between 2 and 36 characters. Valid characters include alphanumerical characters (A–Z, a–z, 0–9) and the hyphen (-).
- *nat_id*—Specifies a unique, one-time string of your choice that you will also specify on the Firewall Management Center. The NAT ID must be between 2 and 36 characters. Valid characters include alphanumerical characters (A–Z, a–z, 0–9) and the hyphen (-). This ID cannot be used for any other devices registering to the Firewall Management Center.

**Example:**

```
> configure manager add fmc-1.example.com regk3y78 natid56
Manager successfully configured.
```

**Step 5** Shut down the Firewall Threat Defense so you can send the device to the remote branch office.

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 system.

a) Enter the **shutdown** command.
b) Observe the Power LED and Status LED to verify that the chassis is powered off (appear unlit).
c) After the chassis has successfully powered off, you can then unplug the power to physically remove power from the chassis if necessary.

# Register the firewall with the Firewall Management Center

Register the firewall to the Firewall Management Center.

### Procedure

**Step 1** Log into the Firewall Management Center.

a) Enter the following URL.

   **https://***fmc_ip_address*

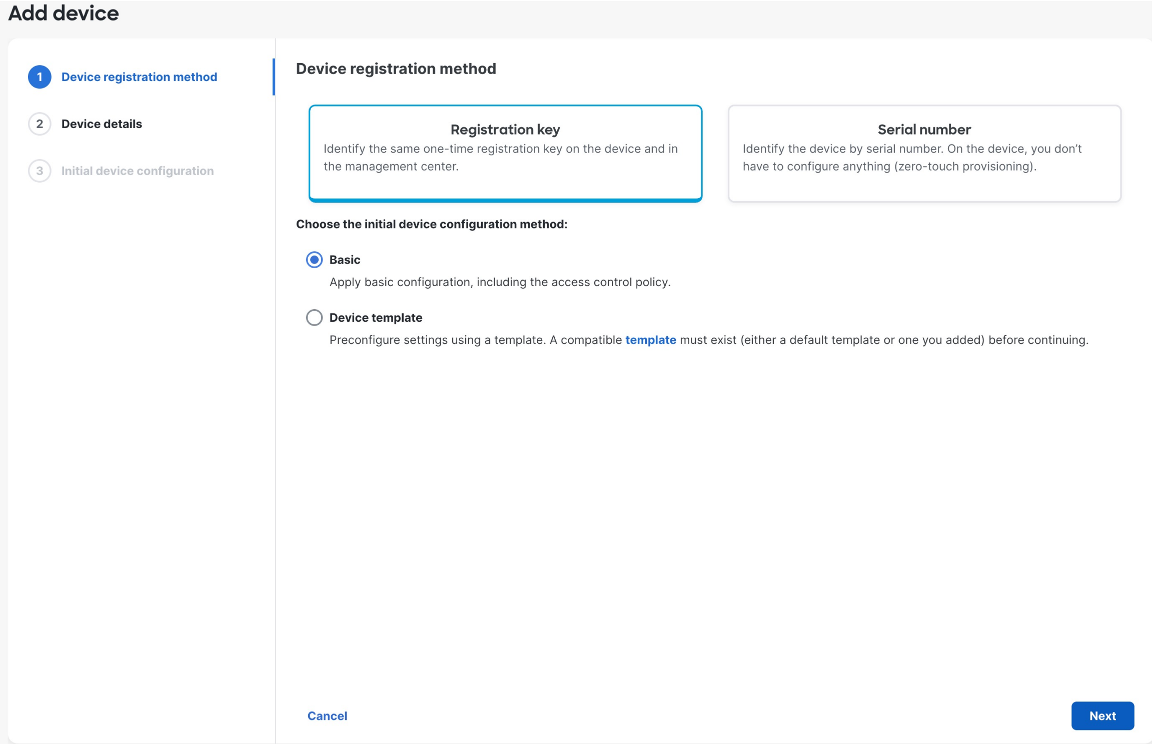
b) Enter your username and password.
c) Click **Log In**.

**Step 2** Choose **Devices** > **Device Management**.

**Step 3** From the **Add** drop-down menu, choose **Device**.

**Step 4** Click **Registration Key**, click **Basic**, and then click **Next**.

*Figure 9: Device Registration Method*



Add device

1 Device registration method

2 Device details

3 Initial device configuration

Device registration method

Registration key
Identify the same one-time registration key on the device and in the management center.

Serial number
Identify the device by serial number. On the device, you don't have to configure anything (zero-touch provisioning).

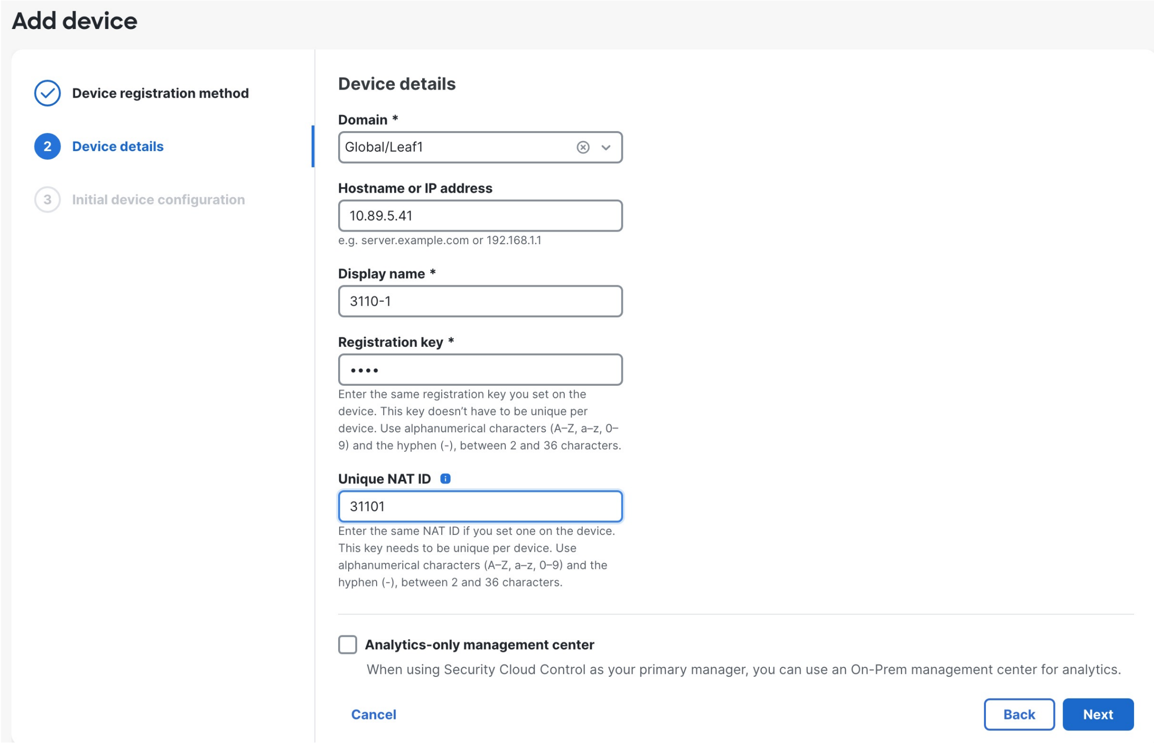
Choose the initial device configuration method:

● Basic
Apply basic configuration, including the access control policy.

○ Device template
Preconfigure settings using a template. A compatible template must exist (either a default template or one you added) before continuing.

**Step 5** Configure the device details and click **Next**.

*Figure 10: Device Details*



Add device

✓ Device registration method

2 Device details

3 Initial device configuration

Device details

Domain *

Global/Leaf1

Hostname or IP address

10.89.5.41

e.g. server.example.com or 192.168.1.1

Display name *

3110-1

Registration key *

••••

Enter the same registration key you set on the device. This key doesn't have to be unique per device. Use alphanumerical characters (A–Z, a–z, 0–9) and the hyphen (-), between 2 and 36 characters.

Unique NAT ID

31101

Enter the same NAT ID if you set one on the device. This key needs to be unique per device. Use alphanumerical characters (A–Z, a–z, 0–9) and the hyphen (-), between 2 and 36 characters.

☐ Analytics-only management center

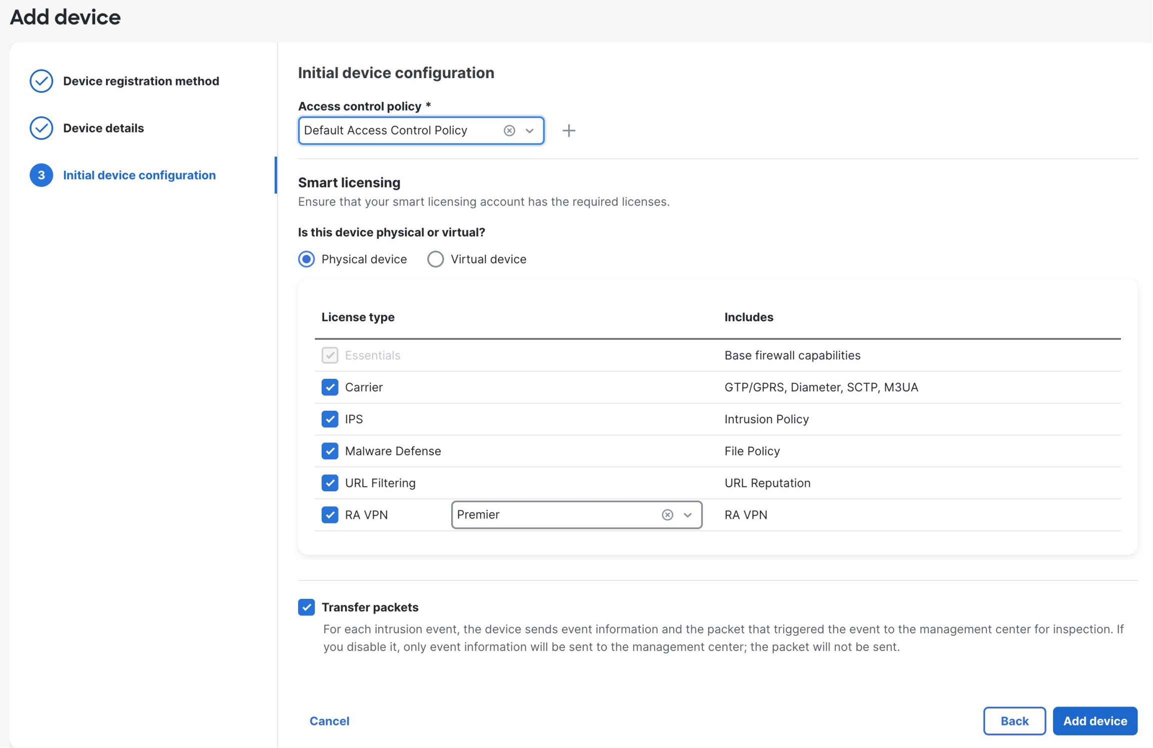
When using Security Cloud Control as your primary manager, you can use an On-Prem management center for analytics.

Cancel Back Next

- **Domain**—In a multidomain environment, choose the leaf domain.
- **Device group**—In a single domain environment, add the device to a **Device group**.
- **Hostname or IP address**—Enter the IP address or the hostname of the device you want to add. Leave this field blank if you don't know the device IP address (for example, it's behind NAT).
- **Display name**—Enter a name for the device as you want it to display in the Firewall Management Center. You cannot change this name later.
- **Registration key**—Enter the same registration key from your initial configuration.
- **Unique NAT ID**—Enter the same ID from your initial configuration.
- **Analytics-only management center**—Leave this unchecked.

**Step 6** Configure the initial device configuration.

*Figure 11: Initial Device Configuration*



Add device

Initial device configuration

Access control policy *

Default Access Control Policy

Smart licensing

Ensure that your smart licensing account has the required licenses.

Is this device physical or virtual?

● Physical device ○ Virtual device

| License type | | Includes |
|---|---|---|
| ☑ Essentials | | Base firewall capabilities |
| ☑ Carrier | | GTP/GPRS, Diameter, SCTP, M3UA |
| ☑ IPS | | Intrusion Policy |
| ☑ Malware Defense | | File Policy |
| ☑ URL Filtering | | URL Reputation |
| ☑ RA VPN | Premier | RA VPN |

☑ Transfer packets

For each intrusion event, the device sends event information and the packet that triggered the event to the management center for inspection. If you disable it, only event information will be sent to the management center; the packet will not be sent.

- **Access control policy**—Choose an initial policy to deploy to the device at registration, or create a new policy. Unless you already have a customized policy you know you need to use, choose **Add** (+), and choose **Block all traffic**. You can change this later to allow traffic.
- **Smart licensing**—Choose your licenses.
  - **Is this device physical or virtual?**—Choose **Physical device**
  - **License type**—Check each license type to assign to the device.

  You can also apply licenses after you add the device.
- **Transfer packets**—Enable this option so that for each intrusion event, the device transfers the packet to the Firewall Management Center for inspection.

  For each intrusion event, the device sends event information and the packet that triggered the event to the Firewall Management Center for inspection. If you disable it, only event information will be sent to the Firewall Management Center; the packet will not be sent.

**Step 7** Click **Add device**.

It may take up to two minutes for the Firewall Management Center to verify the device’s heartbeat and establish communication. If the registration succeeds, the device is added to the list. If it fails, you will see an error message. If the device fails to register, check the following items:

- Ping—Access the device CLI, and ping the Firewall Management Center IP address using the following command:

  **ping system** *ip_address*

If the ping is not successful, check your network settings using the **show network** command. If you need to change the device IP address, use the **configure network** {**ipv4** | **ipv6**} **manual** command.

- Registration key, NAT ID, and Firewall Management Center IP address—Make sure you are using the same registration key, and if used, NAT ID, on both devices. You can set the registration key and NAT ID on the device using the **configure manager add** command.

For more troubleshooting information, see https://cisco.com/go/fmc-reg-error.

CHAPTER 3

# Configure a Basic Policy

Configure a basic security policy with the following settings:

- Inside and outside interfaces—Assign a static IP address to the inside interface, and use DHCP for the outside interface.
- DHCP server—Use a DHCP server on the inside interface for clients.
- Default route—Add a default route through the outside interface.
- NAT—Use interface PAT on the outside interface.
- Access control—Allow traffic from inside to outside.

You can also ccustomize your security policy to include more advanced inspections.

# Configure Interfaces

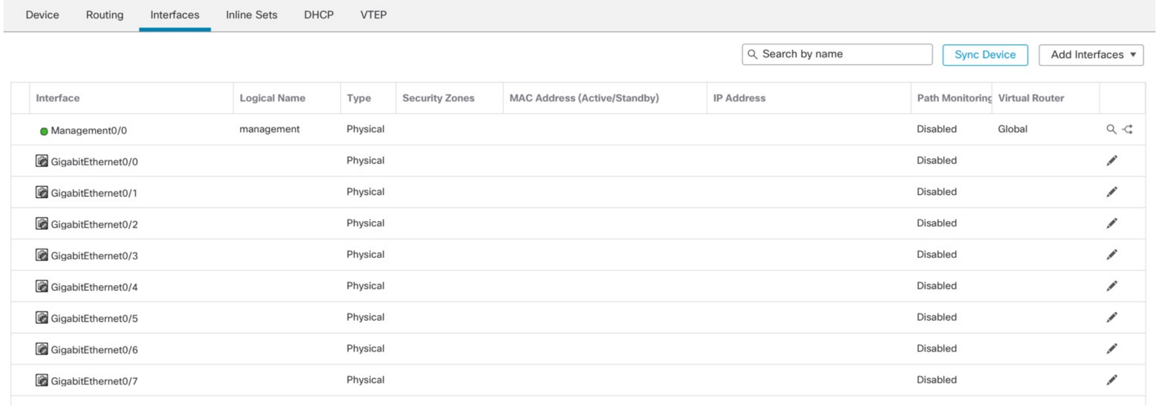
The following example configures a routed-mode inside interface with a static address and a routed-mode outside interface using DHCP. It also adds a DMZ interface for an internal web server.

### Procedure

**Step 1** Choose **Devices** > **Device Management**, and click **Edit** (✎) for the firewall.

**Step 2** Click **Interfaces**.

*Figure 12: Interfaces*



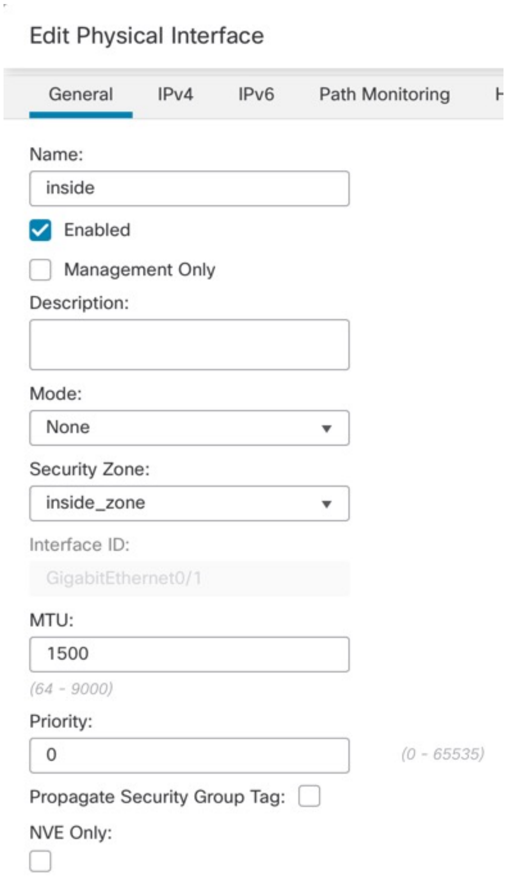
| Interface | Logical Name | Type | Security Zones | MAC Address (Active/Standby) | IP Address | Path Monitoring | Virtual Router | |
|---|---|---|---|---|---|---|---|---|
| ● Management0/0 | management | Physical | | | | Disabled | Global | |
| GigabitEthernet0/0 | | Physical | | | | Disabled | | |
| GigabitEthernet0/1 | | Physical | | | | Disabled | | |
| GigabitEthernet0/2 | | Physical | | | | Disabled | | |
| GigabitEthernet0/3 | | Physical | | | | Disabled | | |
| GigabitEthernet0/4 | | Physical | | | | Disabled | | |
| GigabitEthernet0/5 | | Physical | | | | Disabled | | |
| GigabitEthernet0/6 | | Physical | | | | Disabled | | |
| GigabitEthernet0/7 | | Physical | | | | Disabled | | |

**Step 3** To create breakout ports from a 40-Gb or larger interface, click the **Break** icon for the interface.

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

**Step 4** Click **Edit** (✎) for the interface that you want to use for inside.

*Figure 13: General Tab*



Name: inside

☑ Enabled

□ Management Only

Description:

Mode: None

Security Zone: inside_zone

Interface ID: GigabitEthernet0/1

MTU: 1500 (64 - 9000)

Priority: 0 (0 - 65535)

Propagate Security Group Tag: □

NVE Only: □

a) From the **Security Zone** drop-down list, choose an existing inside security zone or add a new one by clicking **New**.

For example, add a zone called **inside_zone**. You apply your security policy based on zones or groups. For example, configure your access control policy to enable traffic to go from the inside zone to the outside zone, but not from outside to inside.

If the inside interface was preconfigured, the rest of these fields are optional.

b) Enter a **Name** up to 48 characters in length.

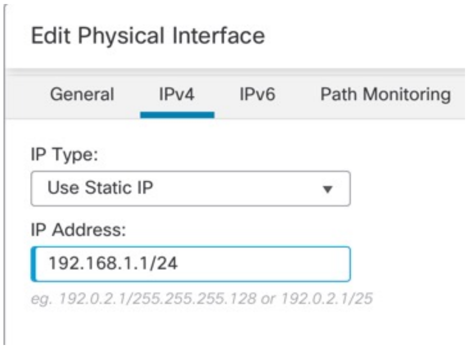
For example, name the interface **inside**.

c) Check the **Enabled** check box.
d) Leave the **Mode** set to **None**.
e) Click the **IPv4** and/or **IPv6** tab.

- **IPv4**—Choose **Use Static IP** from the drop-down list, and enter an IP address and subnet mask in slash notation.

  For example, enter **192.168.1.1/24**

  *Figure 14: IPv4 Tab*

  Edit Physical Interface

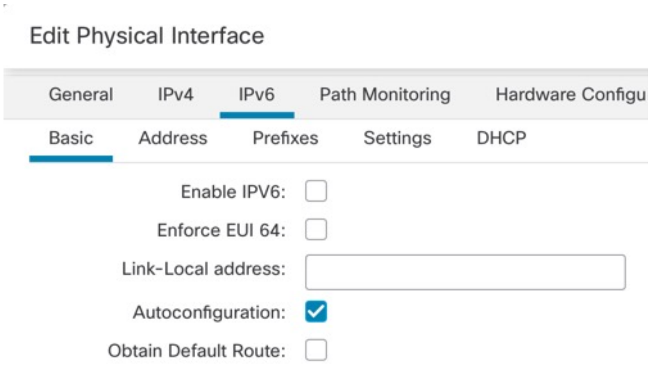
  IP Type: Use Static IP

  IP Address: 192.168.1.1/24

  eg. 192.0.2.1/255.255.255.128 or 192.0.2.1/25

- **IPv6**—Check the **Autoconfiguration** check box for stateless autoconfiguration.

  *Figure 15: IPv6 Tab*

  Edit Physical Interface

  Enable IPV6: □

  Enforce EUI 64: □

  Link-Local address:

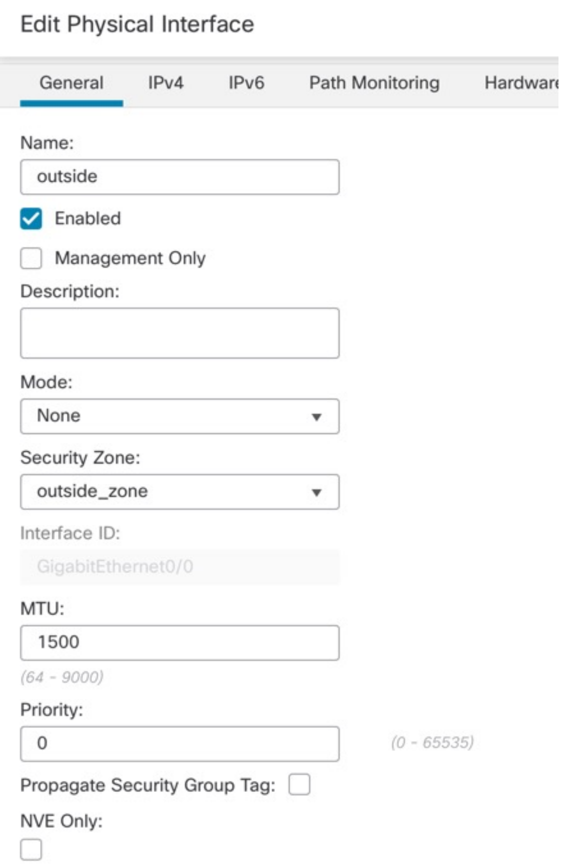
  Autoconfiguration: ☑

  Obtain Default Route: □

f) Click **OK**.

**Step 5** Click **Edit** (✎) for the interface that you want to use for outside.

*Figure 16: General Tab*



Edit Physical Interface

Name: outside

☑ Enabled

□ Management Only

Description:

Mode: None

Security Zone: outside_zone

Interface ID: GigabitEthernet0/0

MTU: 1500 (64 - 9000)

Priority: 0 (0 - 65535)

Propagate Security Group Tag: □

NVE Only: □

a) From the **Security Zone** drop-down list, choose an existing outside security zone or add a new one by clicking **New**.

For example, add a zone called **outside_zone**.

You should not alter any other basic settings because doing so will disrupt the Firewall Management Center management connection.

b) Click **OK**.

**Step 6** Configure a DMZ interface to host a web server, for example.

a) Click **Edit** (✎) for the interface you want to use.
b) From the **Security Zone** drop-down list, choose an existing DMZ security zone or add a new one by clicking **New**.

For example, add a zone called **dmz_zone**.

c) Enter a **Name** up to 48 characters in length.

For example, name the interface **dmz**.

d) Check the **Enabled** check box.
e) Leave the **Mode** set to **None**.
f) Click the **IPv4** and/or **IPv6** tab and configure the IP address as desired.
g) Click **OK**.

**Step 7** Click **Save**.

# Configure the DHCP server

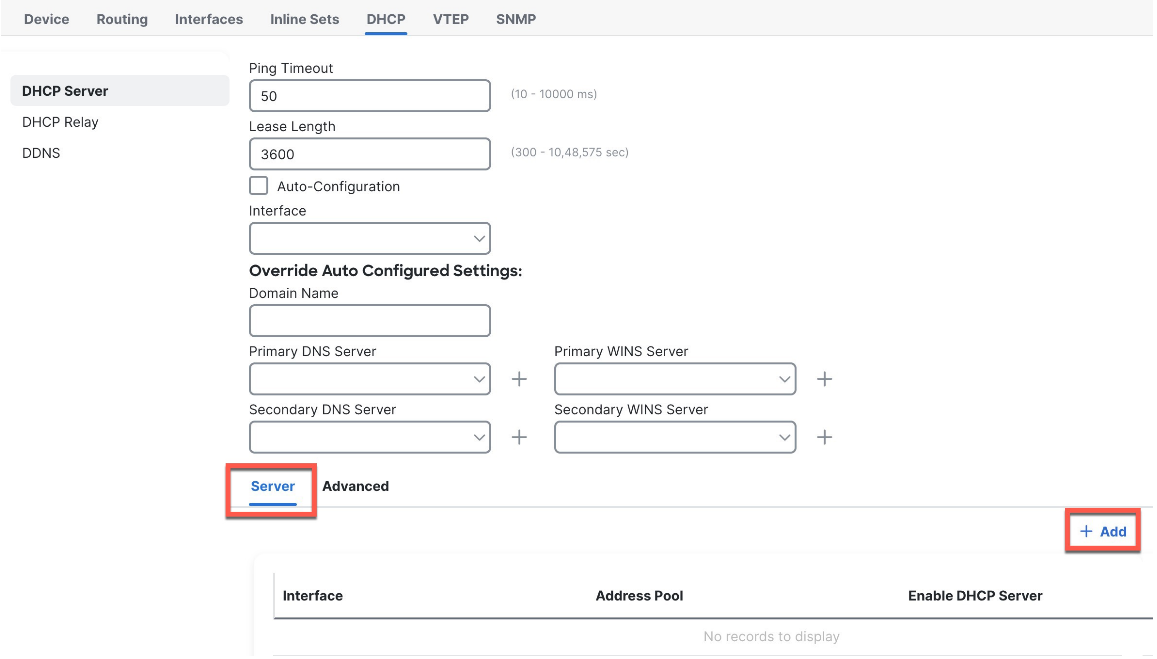
Enable the DHCP server if you want clients to use DHCP to obtain IP addresses from the firewall.

## Procedure

**Step 1** Choose **Devices** > **Device Management**, and click **Edit** (✎) for the device.

**Step 2** Choose **DHCP** > **DHCP Server**.

*Figure 17: DHCP Server*



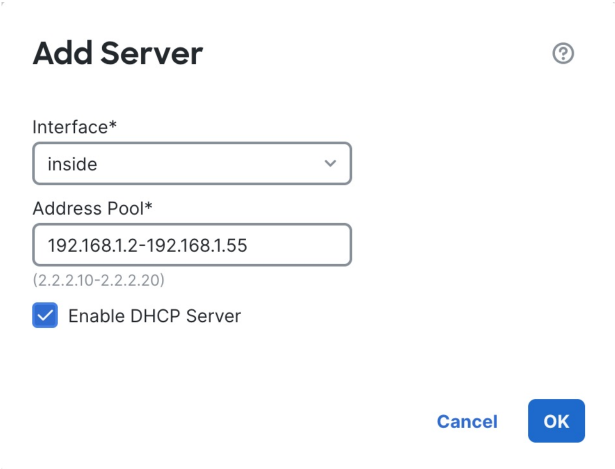
Ping Timeout: 50 (10 - 10000 ms)

Lease Length: 3600 (300 - 10,48,575 sec)

☐ Auto-Configuration

**Step 3** In the **Server** area, click **Add** and configure the following options.

*Figure 18: Add Server*



Add Server

Interface*: inside

Address Pool*: 192.168.1.2-192.168.1.55
(2.2.2.10-2.2.2.20)

☑ Enable DHCP Server

- **Interface**—Choose the interface name from the drop-down list.
- **Address Pool**—Set the range of IP addresses. The IP addresses must be on the same subnet as the selected interface and cannot include the IP address of the interface itself.
- **Enable DHCP Server**—Enable the DHCP server on the selected interface.

**Step 4** Click **OK**.

**Step 5** Click **Save**.

# Configure NAT

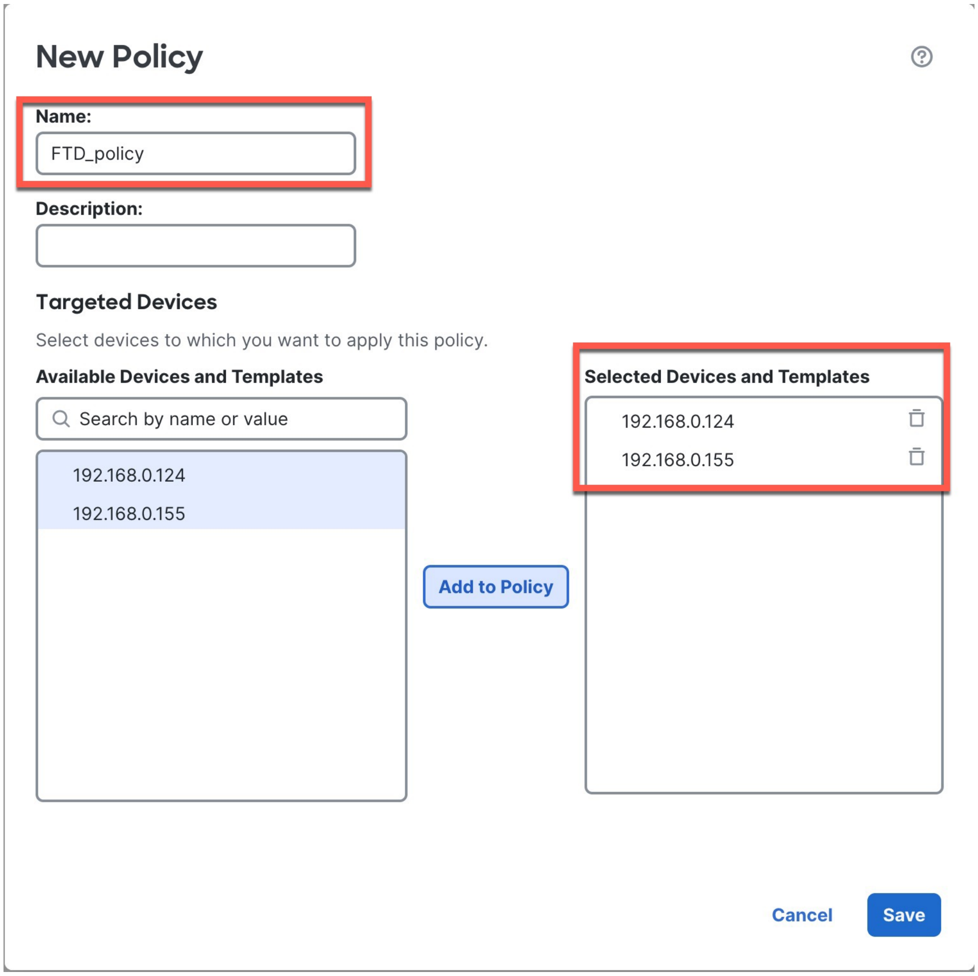
This procedure creates a NAT rule for internal clients to convert the internal addresses to a port on the outside interface IP address. This type of NAT rule is called *interface Port Address Translation (PAT)*.

### Procedure

**Step 1** Choose **Devices** > **NAT**, and click **New Policy**.

**Step 2** Name the policy, select the devices that you want to use the policy, and click **Save**.

*Figure 19: New Policy*



New Policy

Name: FTD_policy

Description:

Targeted Devices

Select devices to which you want to apply this policy.

Available Devices and Templates

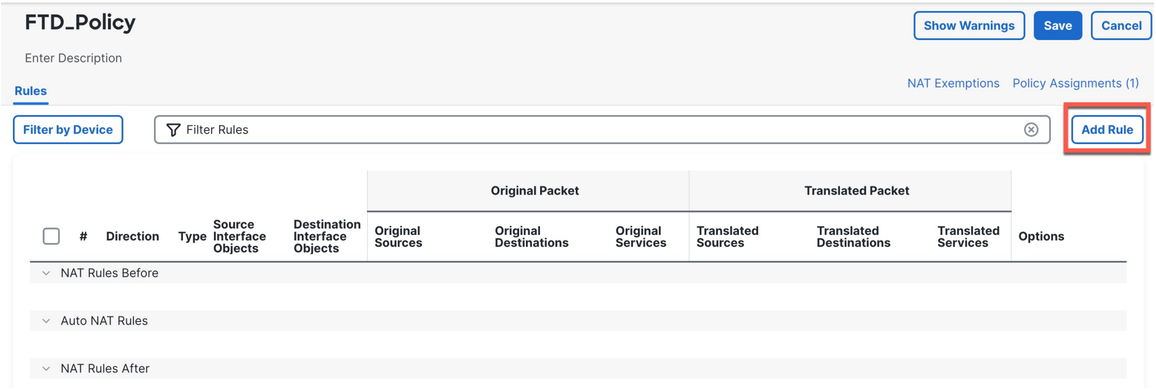
- 192.168.0.124
- 192.168.0.155

Selected Devices and Templates

- 192.168.0.124
- 192.168.0.155

The policy is added the Firewall Management Center. You still have to add rules to the policy.

*Figure 20: NAT Policy*



FTD_Policy

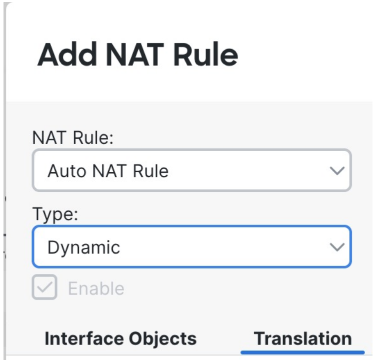
Enter Description

| | | | | | | Original Packet | | | Translated Packet | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| □ | # | Direction | Type | Source Interface Objects | Destination Interface Objects | Original Sources | Original Destinations | Original Services | Translated Sources | Translated Destinations | Translated Services | Options |
| NAT Rules Before | | | | | | | | | | | | |
| Auto NAT Rules | | | | | | | | | | | | |
| NAT Rules After | | | | | | | | | | | | |

**Step 3** Click **Add Rule**.

**Step 4** Configure the basic rule options:

*Figure 21: Basic Rule Options*



Add NAT Rule

NAT Rule: Auto NAT Rule

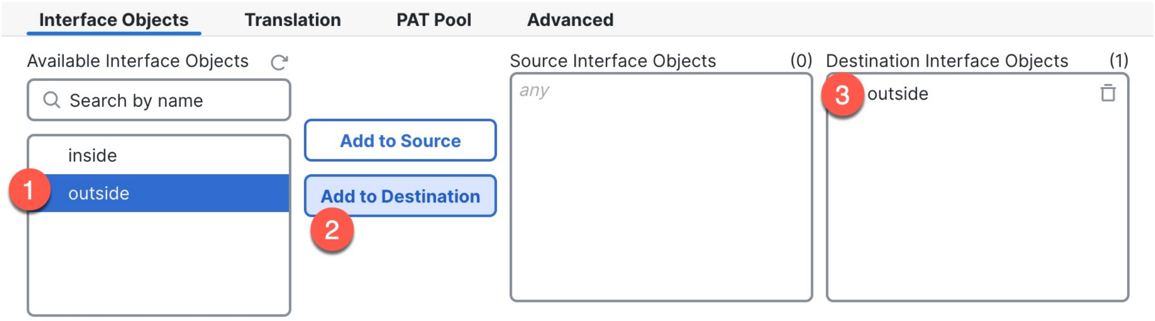
Type: Dynamic

☑ Enable

- **NAT Rule**—Choose **Auto NAT Rule**.
- **Type**—Choose **Dynamic**.

**Step 5** On the **Interface Objects** page, add the outside zone from the **Available Interface Objects** area to the **Destination Interface Objects** area.

*Figure 22: Interface Objects*



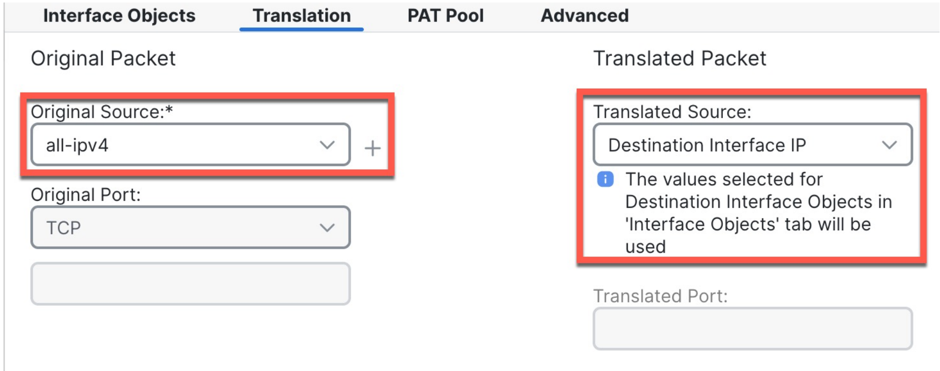
Available Interface Objects: inside, outside

Source Interface Objects (0): any

Destination Interface Objects (1): outside

**Step 6** On the **Translation** page, configure the following options:

*Figure 23: Translation*



Original Packet

Original Source:* all-ipv4

Original Port: TCP

Translated Packet

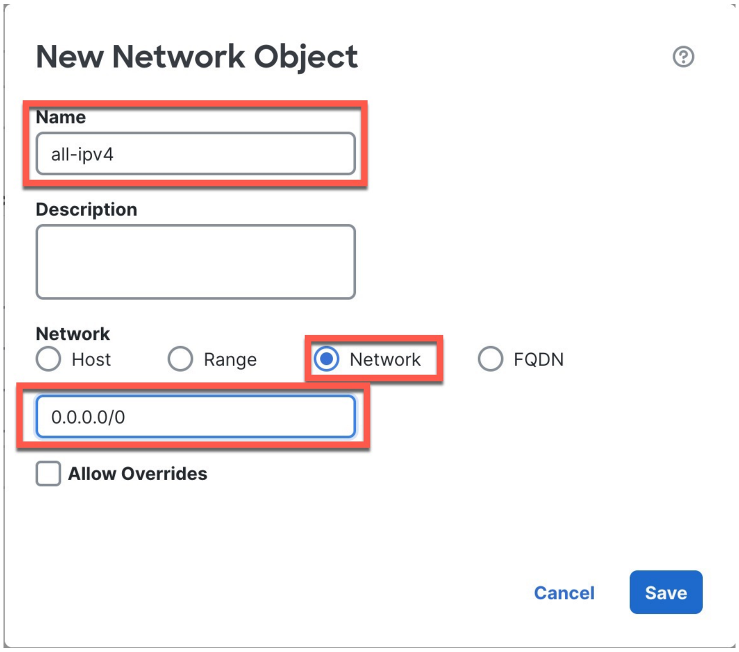
Translated Source: Destination Interface IP

The values selected for Destination Interface Objects in 'Interface Objects' tab will be used

Translated Port:

- **Original Source**—Click **Add** (+) to add a network object for all IPv4 traffic (**0.0.0.0/0**).

*Figure 24: New Network Object*



New Network Object

Name: all-ipv4

Description:

Network: ○ Host ○ Range ● Network ○ FQDN

0.0.0.0/0

□ Allow Overrides

**Note**
You cannot use the system-defined **any-ipv4** object, because Auto NAT rules add NAT as part of the object definition, and you cannot edit system-defined objects.

- **Translated Source**—Choose **Destination Interface IP**.

**Step 7** Click **Save** to add the rule.

The rule is saved to the **Rules** table.

**Step 8** Click **Save** on the **NAT** page to save your changes.

# Configure an access control rule

If you created a basic **Block all traffic** access control policy when you registered the device, then you need to add rules to the policy to allow traffic through the device. The access control policy can include multiple rules that are evaluated in order.

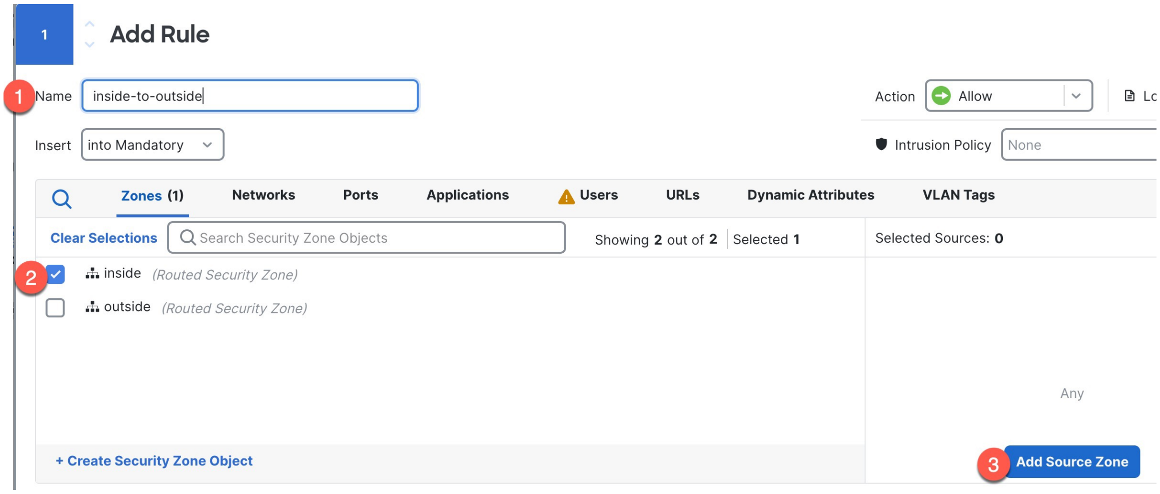
This procedure creates an access control rule to allow all traffic from the inside zone to the outside zone.

### Procedure

**Step 1** Choose **Policies** > **Security policies** > **Access Control**, and click **Edit** (✎) for the access control policy assigned to the device.

**Step 2** Click **Add Rule**, and set the following parameters.

*Figure 25: Source Zone*



Name: inside-to-outside

Insert: into Mandatory

Action: Allow

Intrusion Policy: None

☑ inside (Routed Security Zone)

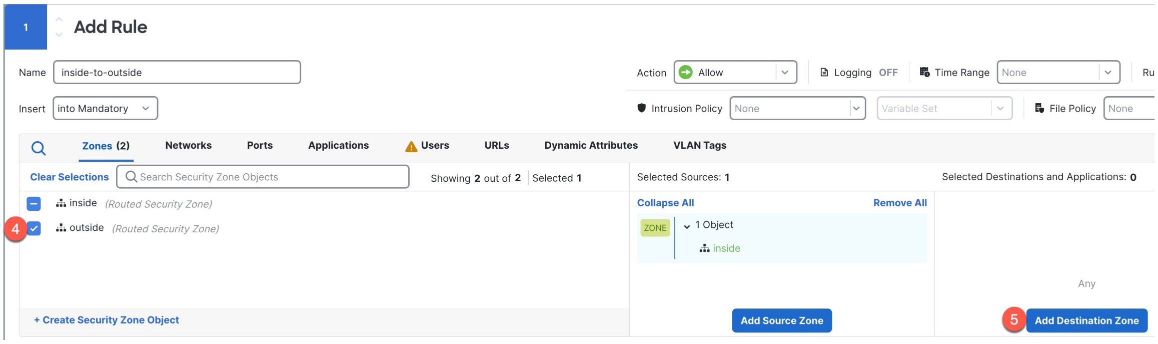
□ outside (Routed Security Zone)

1. Name this rule, for example, **inside-to-outside**.

2. Select the inside zone from **Zones**

3. Click **Add Source Zone**.

*Figure 26: Destination Zone*



Name: inside-to-outside

Insert: into Mandatory

Action: Allow

Logging: OFF

Time Range: None

Intrusion Policy: None

Variable Set

File Policy: None

☐ inside (Routed Security Zone)

☑ outside (Routed Security Zone)

4. Select the outside zone from **Zones**.

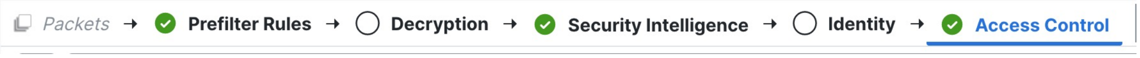
5. Click **Add Destination Zone**.

Leave the other settings as is.

**Step 3** (Optional) Customize associated policies by clicking on the policy type in the packet flow diagram.

Prefilter, Decryption, Security Intelligence, and Identity policies are applied before an access control rule. Customizing these policies is not required, but after you know your network's needs, they let you improve network performance by either fastpathing trusted traffic (bypassing processing) or blocking traffic so no further processing is required.

*Figure 27: Policies Applied Before Access Control*



- **Prefilter Rules**—The Default Prefilter Policy passes all traffic for the other rules to act on (analyzes). The only change to the default policy you can make is to **block** tunnel traffic. Otherwise, you can create a new prefilter policy to associate with the access control policy that can analyze (pass on), fastpath (bypass further checks) or block.

  Prefiltering lets you improve performance by dealing with traffic before it gets any further, by either blocking or fastpathing. In a new policy, you can add *tunnel* rules and *prefilter* rules. A tunnel rule lets you fastpath, block, or rezone plaintext (non-encrypted), passthrough tunnels. A prefilter rule lets you fastpath or block non-tunneled traffic identified by IP address, port, and protocol.

  For example, if you know you want to block all FTP traffic on your network, but fastpath SSH traffic from an administrator, you can add a new prefilter policy.

- **Decryption**—Decryption is not applied by default. Decryption is a way to expose network traffic to deep inspection. In most cases, you don't want to decrypt traffic, and can only do so if it is legally allowed. For maximum network protection, a decryption policy might be a good idea for traffic going to critical servers or coming from untrusted network segments.

- **Security Intelligence**—(Requires the IPS license) Security Intelligence is enabled by default. Security Intelligence is another early defense against malicious activity applied before passing connections to the access control policy for further processing. Security Intelligence uses reputation intelligence to quickly block connections to or from IP addresses, URLs, and domain names provided by Talos, the threat intelligence organization at Cisco. You can add or delete additional IP addresses, URLs, or domains if desired.

  **Note**
  If you do not have the IPS license, this policy will not be deployed even though it shows in your access control policy as enabled.

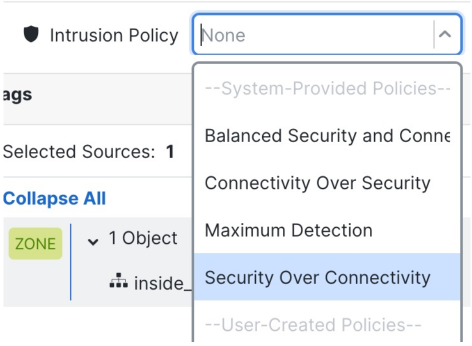
- **Identity**—Identity is not applied by default. You can require a user to authenticate before allowing traffic to be processed by the access control policy.

**Step 4** (Optional) Add an Intrusion policy that is applied after the access control rule.

The Intrusion policy is a defined set of intrusion detection and prevention configurations that inspects traffic for security violations. The Firewall Management Center includes many system-provided policies you can enable as-is or that you can customize. This step enables a system-provided policy.

a) Click the **Intrusion Policy** drop-down list.

***Figure 28: System-Provided Intrusion Policies***

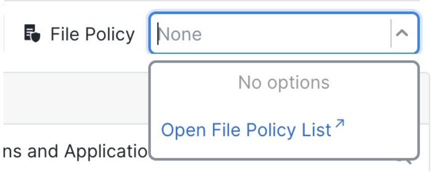

Intrusion Policy
None
ags
Selected Sources: 1
Collapse All
ZONE
1 Object
inside_
--System-Provided Policies--
Balanced Security and Conne
Connectivity Over Security
Maximum Detection
Security Over Connectivity
--User-Created Policies--

b) Choose one of the system-provided policies from the list.

**Step 5** (Optional) Add a File policy that is applied after the access control rule.

a) Click the **File Policy** drop-down list and choose either an existing policy or add one by choosing the **Open File Policy List**.

*Figure 29: File Policy*



For a new policy, the **Policies** > **Security policies** > **Malware & File** page opens in a separate tab.

b) See the Cisco Secure Firewall Device Manager Configuration Guide for details on creating the policy.

c) Return to the **Add Rule** page and select the newly created policy from the drop-down list.

**Step 6** Click **Apply**.

The rule is added to the **Rules** table.

**Step 7** Click **Save**.

# Enable SSH on the outside interface

This section describes how to enable SSH connections to the outside interface.

By default, you can use the **admin** user for which you configured the password during initial setup.

### Procedure

**Step 1** Choose **Devices** > **Platform Settings** and create or edit the Firewall Threat Defense policy.

**Step 2** Select **SSH Access**.

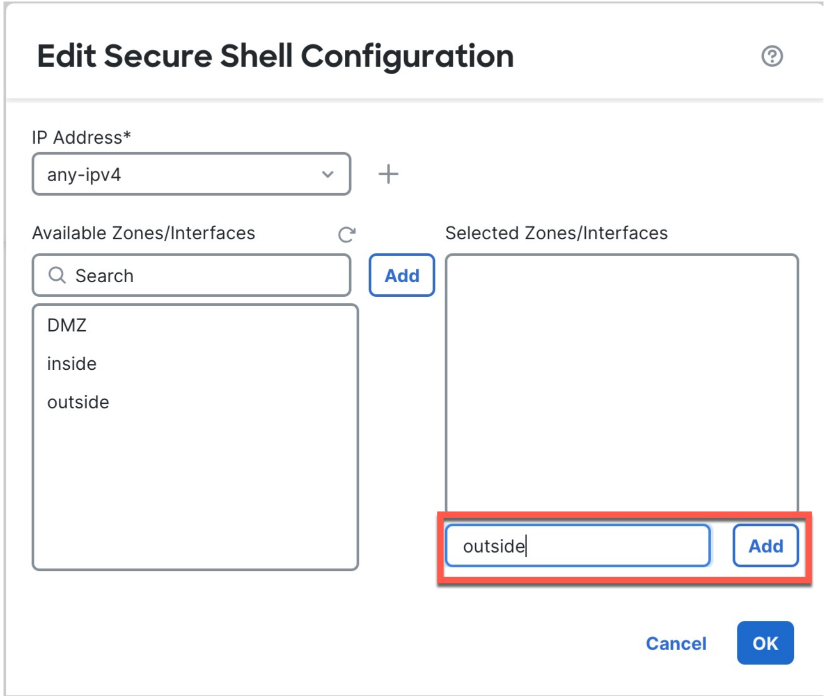
**Step 3** Identify the outside interface and IP addresses that allow SSH connections.

a) Click **Add** to add a new rule, or click **Edit** to edit an existing rule.

b) Configure the rule properties:

- **IP Address**—The network object or group that identifies the hosts or networks you are allowing to make SSH connections. Choose an object from the drop-down menu, or click + to add a new network object.
- **Available Zones/Interfaces**—Add the outside zone or type the **outside** interface name into the field below the **Selected Zones/Interfaces** list and click **Add**.

*Figure 30: Enable SSH on the Outside Interface*



Edit Secure Shell Configuration

IP Address*

any-ipv4

Available Zones/Interfaces

Search

DMZ

inside

outside

Selected Zones/Interfaces

outside

c) Click **OK**.

**Step 4** Click **Save**.

You can now go to **Deploy** > **Deploy** and deploy the policy to assigned devices. The changes are not active until you deploy them.

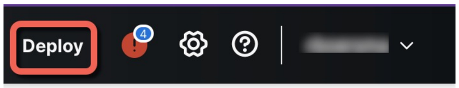
# Deploy the configuration

Deploy the configuration changes to the device; none of your changes are active on the device until you deploy them.

## Procedure

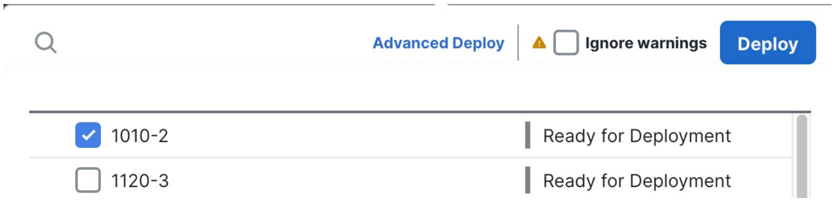
**Step 1** Click **Deploy** in the upper right.

*Figure 31: Deploy*



**Step 2** For a quick deployment, check specific devices and then click **Deploy**.

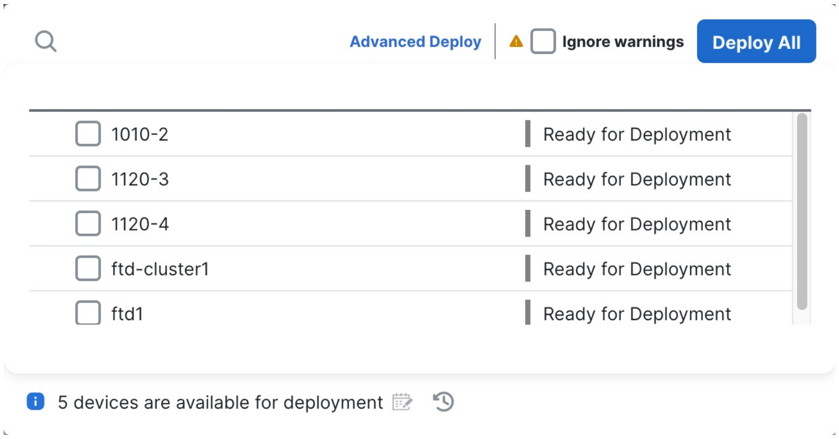
*Figure 32: Deploy Selected*



|   |   |
|---|---|
| ☑ 1010-2 | Ready for Deployment |
| □ 1120-3 | Ready for Deployment |

Or click **Deploy All** to deploy to all devices.

*Figure 33: Deploy All*

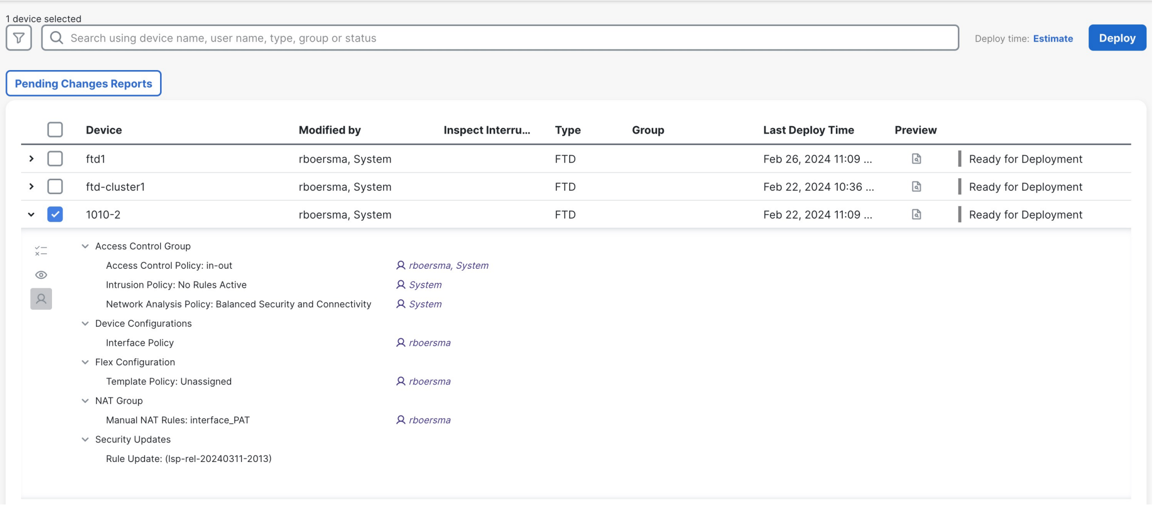


|   |   |
|---|---|
| □ 1010-2 | Ready for Deployment |
| □ 1120-3 | Ready for Deployment |
| □ 1120-4 | Ready for Deployment |
| □ ftd-cluster1 | Ready for Deployment |
| □ ftd1 | Ready for Deployment |

5 devices are available for deployment

Otherwise, for additional deployment options, click **Advanced Deploy**.

*Figure 34: Advanced Deployment*



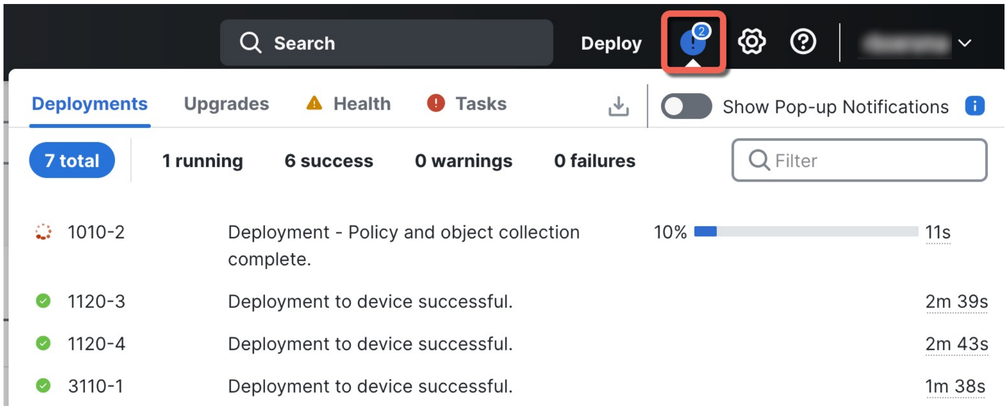
1 device selected

|   | Device | Modified by | Inspect Interru... | Type | Group | Last Deploy Time | Preview |   |
|---|---|---|---|---|---|---|---|---|
| □ | ftd1 | rboersma, System |  | FTD |  | Feb 26, 2024 11:09 ... |  | Ready for Deployment |
| □ | ftd-cluster1 | rboersma, System |  | FTD |  | Feb 22, 2024 10:36 ... |  | Ready for Deployment |
| ☑ | 1010-2 | rboersma, System |  | FTD |  | Feb 22, 2024 11:09 ... |  | Ready for Deployment |

- Access Control Group
  - Access Control Policy: in-out — rboersma, System
  - Intrusion Policy: No Rules Active — System
  - Network Analysis Policy: Balanced Security and Connectivity — System
- Device Configurations
  - Interface Policy — rboersma
- Flex Configuration
  - Template Policy: Unassigned — rboersma
- NAT Group
  - Manual NAT Rules: interface_PAT — rboersma
- Security Updates
  - Rule Update: (lsp-rel-20240311-2013)

**Step 3** Ensure that the deployment succeeds. Click the icon to the right of the **Deploy** button in the menu bar to see status for deployments.

*Figure 35: Deployment Status*



| | | | |
|---|---|---|---|
| 1010-2 | Deployment - Policy and object collection complete. | 10% | 11s |
| 1120-3 | Deployment to device successful. | | 2m 39s |
| 1120-4 | Deployment to device successful. | | 2m 43s |
| 3110-1 | Deployment to device successful. | | 1m 38s |