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, on page 1
- Configure the DHCP server, on page 6
- Add the default route, on page 7
- Configure NAT, on page 10
- Configure an access control rule, on page 13
- Deploy the configuration, on page 15

Configure Interfaces

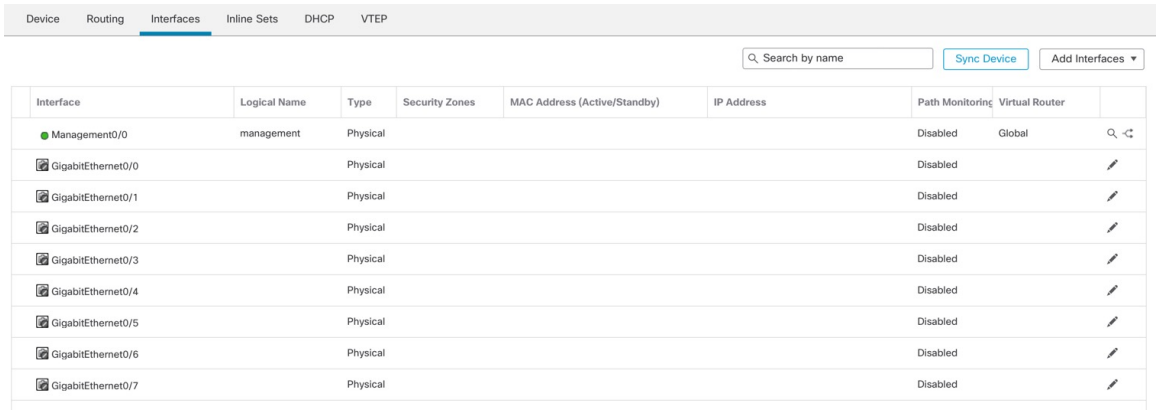
The following example configures a routed-mode inside interface with a static address and a routed-mode outside interface using DHCP. It also adds a DMZ interface for an internal web server.

Procedure

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

Step 2 Click **Interfaces**.

Figure 1: Interfaces

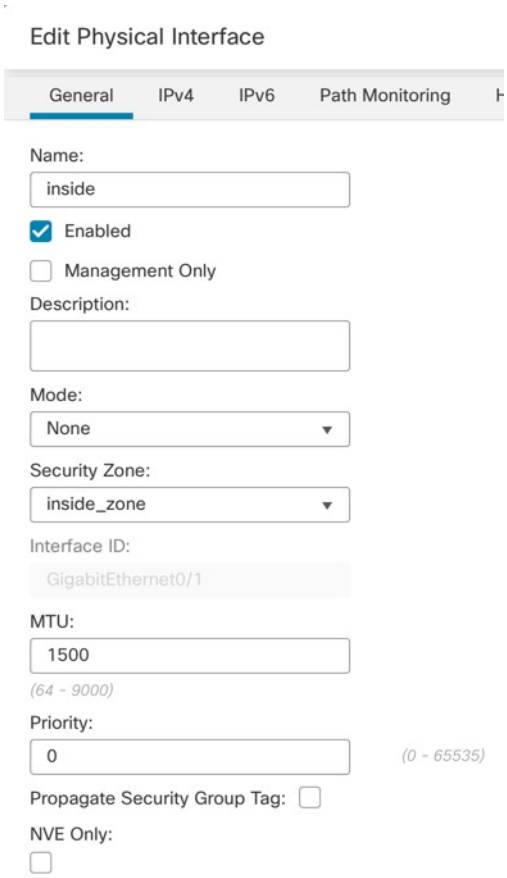


Step 3 To create breakout ports from a 40-Gb or larger interface, click the **Break** icon for the interface.

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 2: General Tab



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.

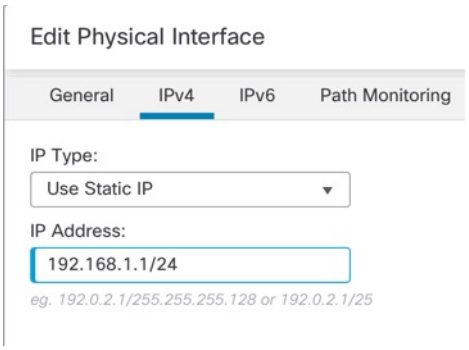
d) Leave the **Mode** set to **None**.

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.

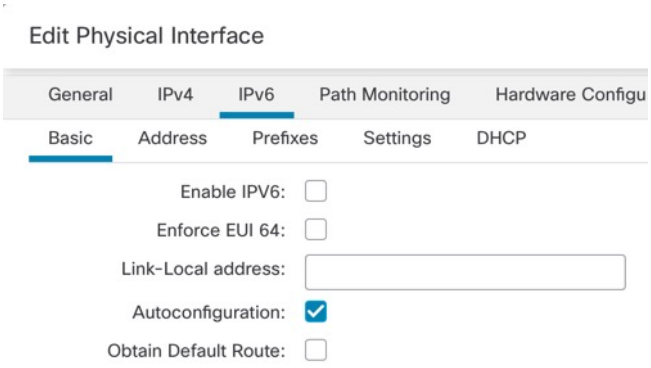
  For example, enter **192.168.1.1/24**

Figure 3: IPv4 Tab



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

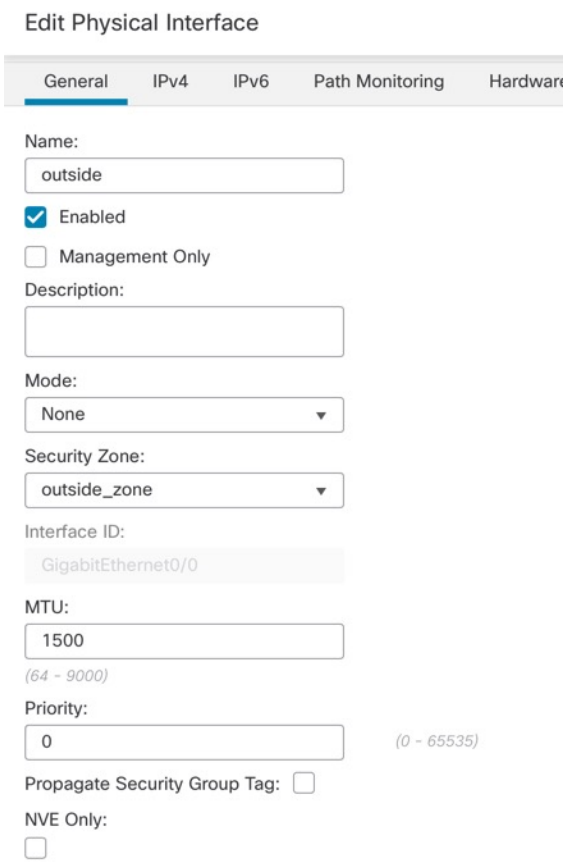
Figure 4: IPv6 Tab



f) Click **OK**.

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

Figure 5: General Tab



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**.

   If the outside interface was pre-configured, the rest of these fields are optional.

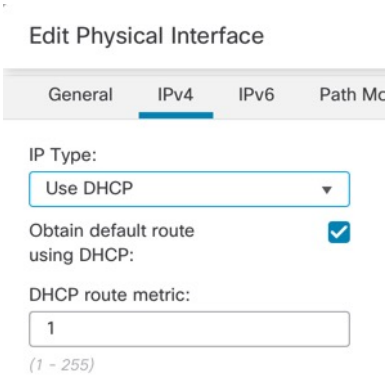
b) Enter a **Name** up to 48 characters in length.

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

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

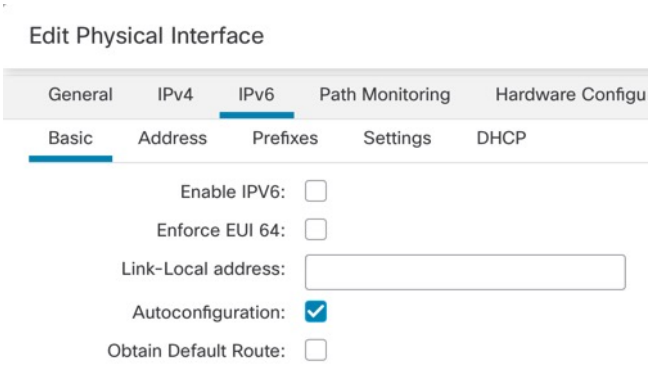
   - **IPv4**—Choose **Use DHCP**, and configure the following optional parameters:
     - **Obtain default route using DHCP**—Obtains the default route from the DHCP server.
     - **DHCP route metric**—Assigns an administrative distance to the learned route, between 1 and 255. The default administrative distance for the learned routes is 1.

Figure 6: IPv4 Tab



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

Figure 7: IPv6 Tab



f) 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

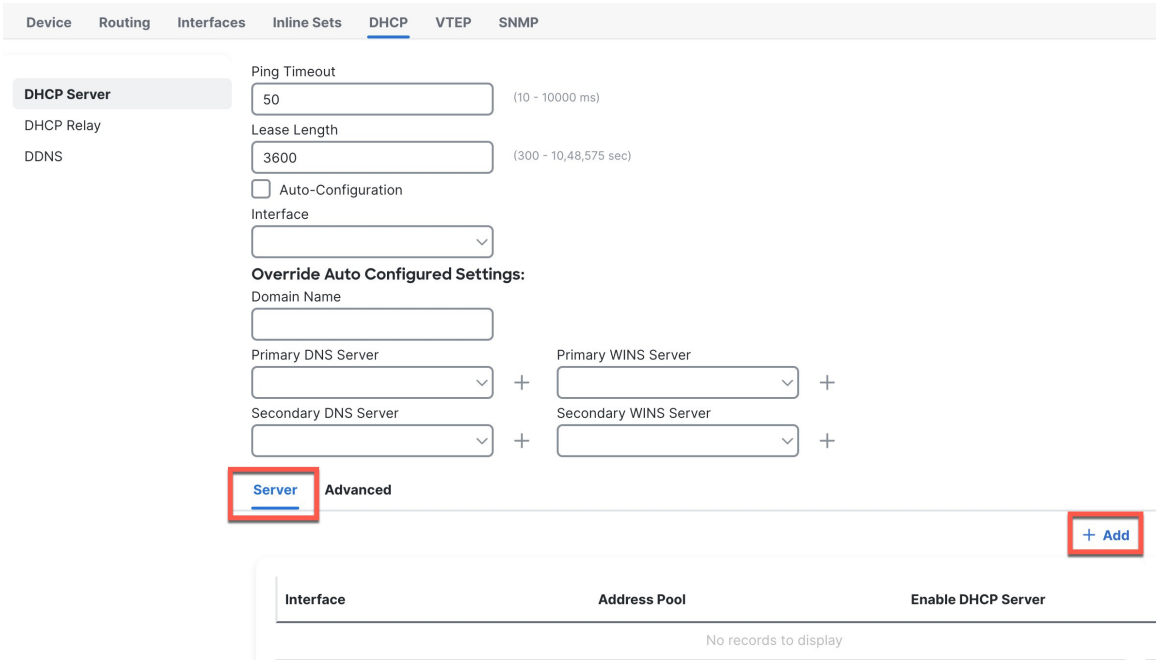
Enable the DHCP server if you want clients to use DHCP to obtain IP addresses from the firewall.

Procedure

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

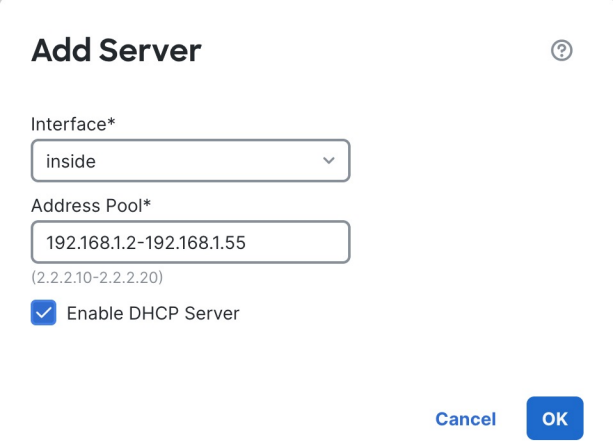
Step 2 Choose **DHCP** > **DHCP Server**.

Figure 8: DHCP Server



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

Figure 9: Add 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**.

Add the default route

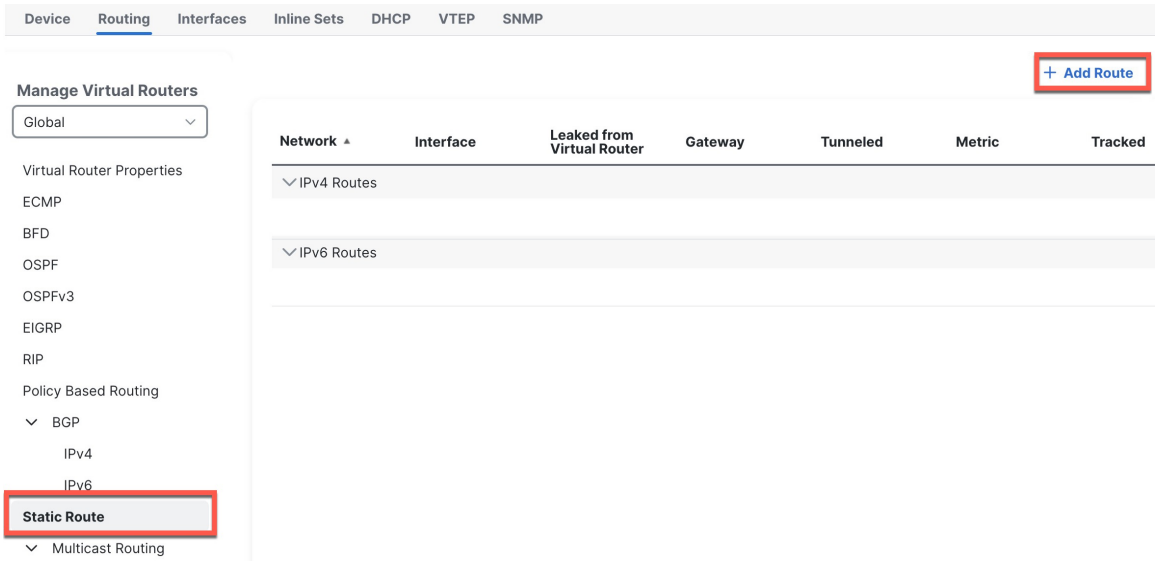
The default route normally points to the upstream router reachable from the outside interface. If you obtained the outside address from DHCP, your device might have already received a default route. If you need to manually add the route, complete this procedure.

Procedure

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

Step 2 Choose **Routing** > **Static Route**.

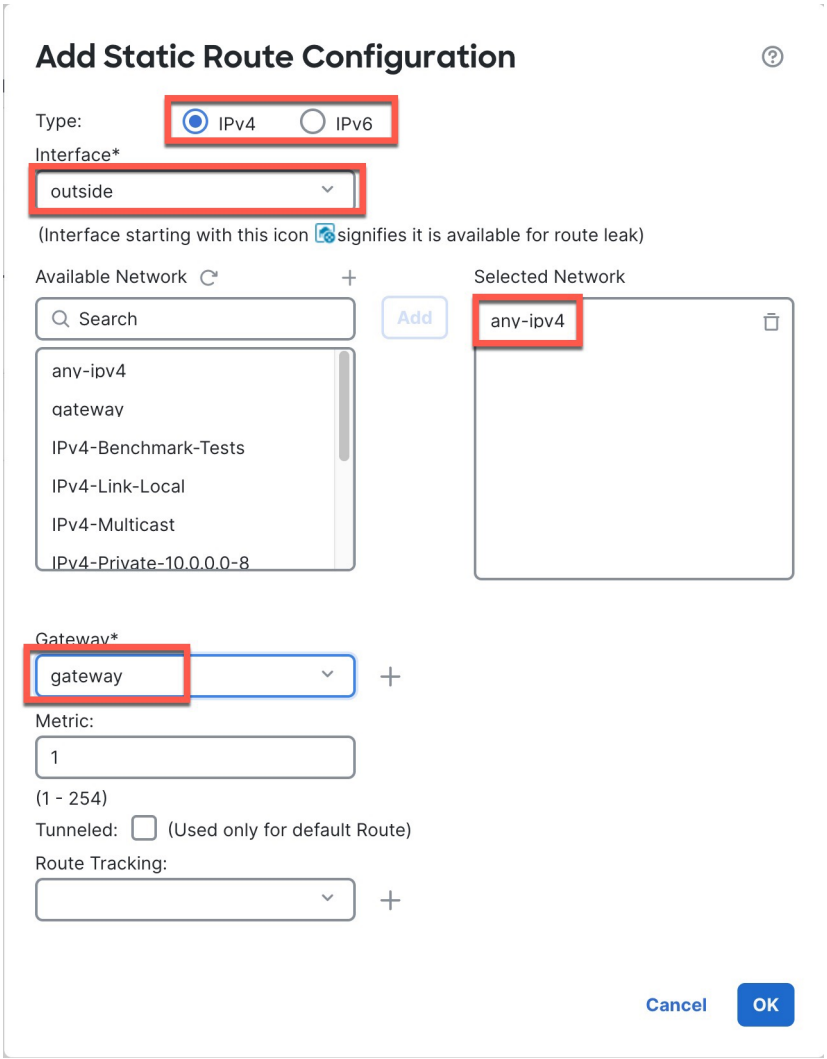
Figure 10: Static Route



If you received a default route from the DHCP server, it will show in this table.

Step 3 Click **Add Route**, and set the following options.

Figure 11: Add Static Route Configuration



- **Type**—Click the **IPv4** or **IPv6** radio button depending on the type of static route that you are adding.
- **Interface**—Choose the egress interface; typically the outside interface.
- **Available Network**—Choose **any-ipv4** for an IPv4 default route, or **any-ipv6** for an IPv6 default route, and click **Add** to move it to the **Selected Network** list.
- **Gateway** or **IPv6 Gateway**—Enter or choose the gateway router that is the next hop for this route. You can provide an IP address or a Networks/Hosts object.

Step 4 Click **OK**.

The route is added to the static route table.

Step 5 Click **Save**.

Configure NAT

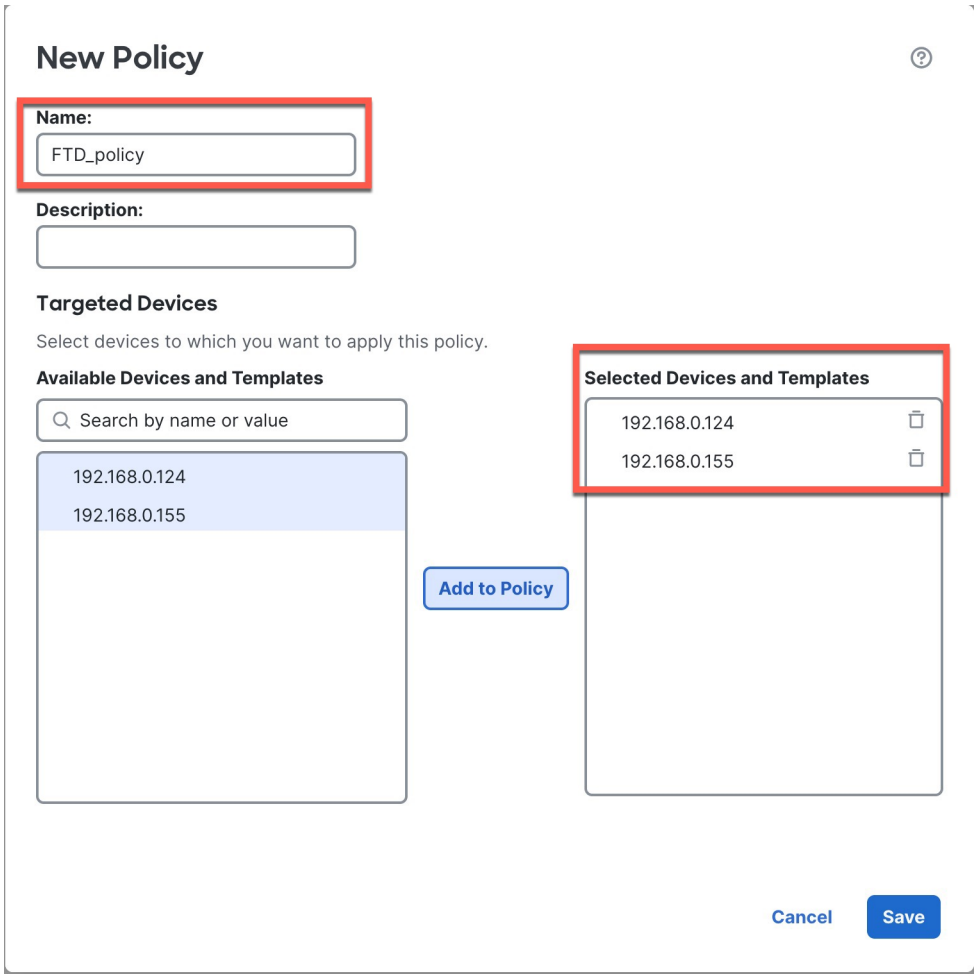
This procedure creates a NAT rule for internal clients to convert the internal addresses to a port on the outside interface IP address. This type of NAT rule is called *interface Port Address Translation (PAT)*.

Procedure

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

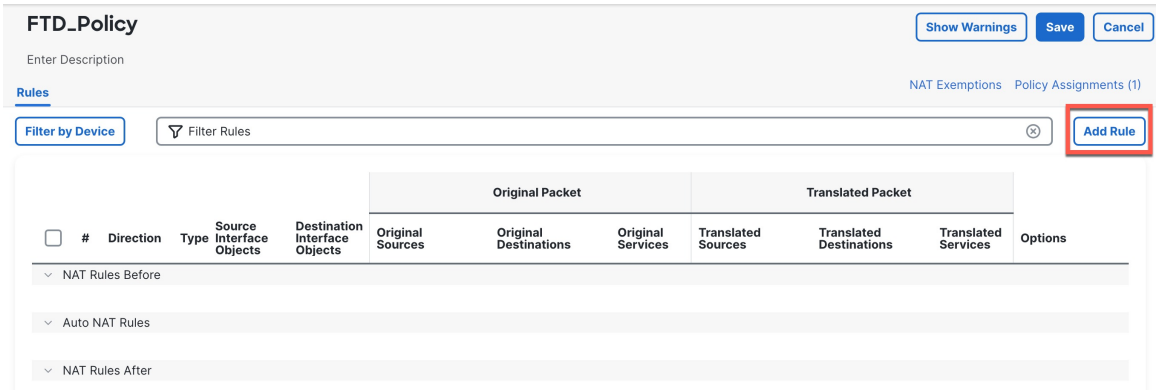
Step 2 Name the policy, select the devices that you want to use the policy, and click **Save**.

Figure 12: New Policy



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

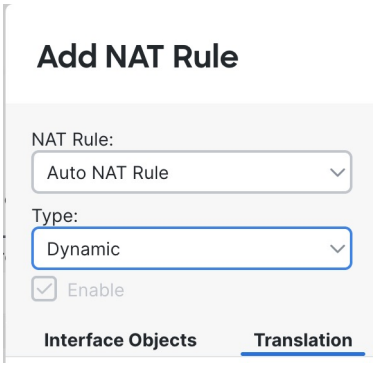
Figure 13: NAT Policy



Step 3 Click **Add Rule**.

Step 4 Configure the basic rule options:

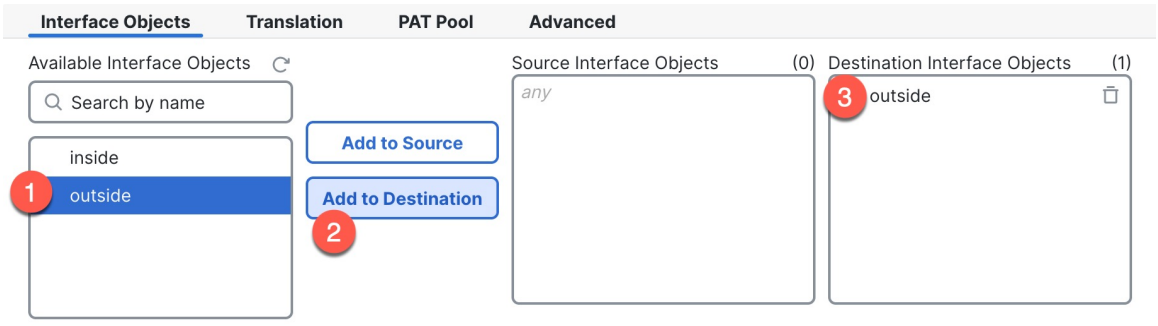
Figure 14: Basic Rule Options



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

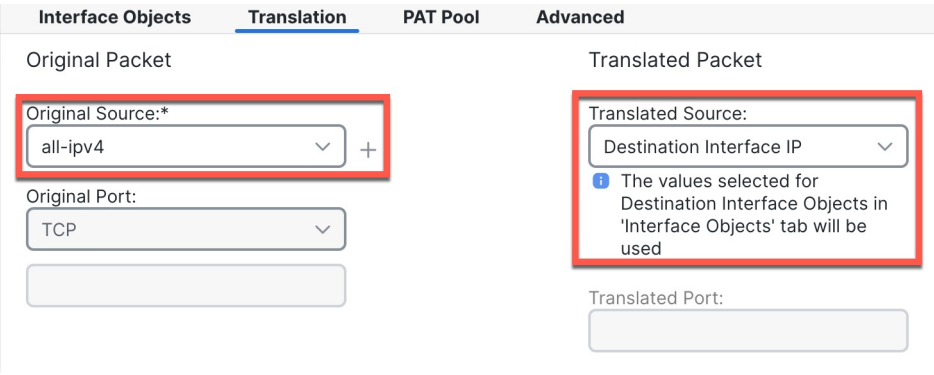
Step 5 On the **Interface Objects** page, add the outside zone from the **Available Interface Objects** area to the **Destination Interface Objects** area.

Figure 15: Interface Objects



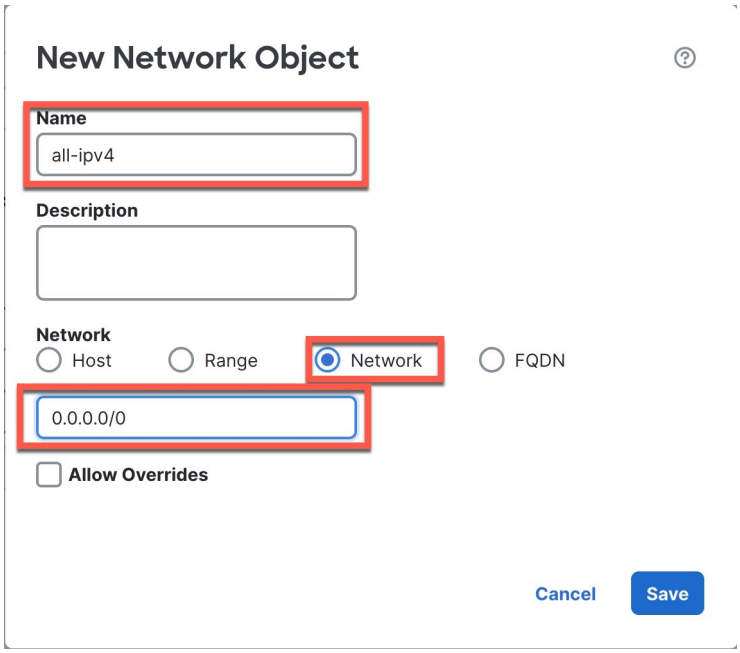
Step 6 On the **Translation** page, configure the following options:

Figure 16: Translation



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

Figure 17: New Network Object



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.

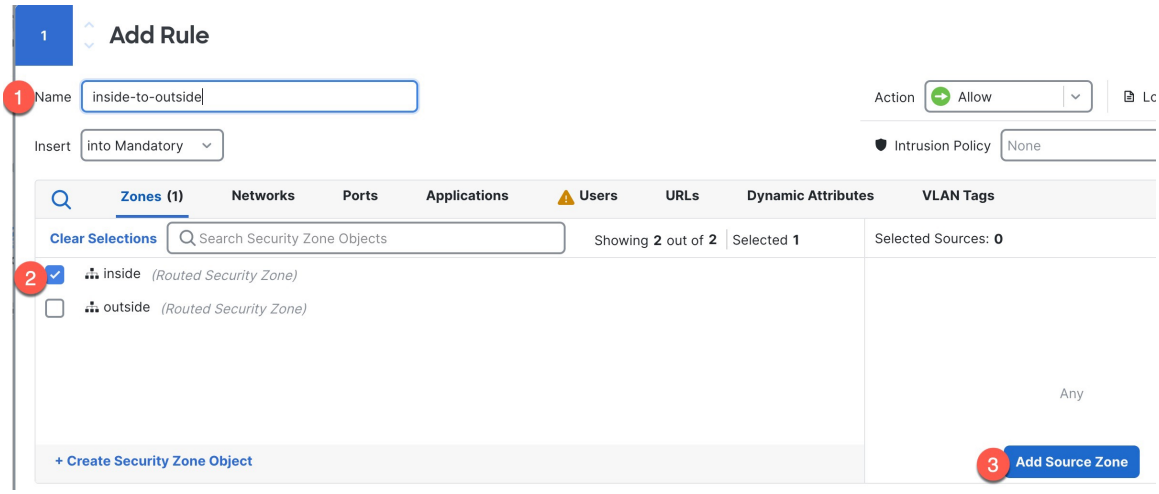
This procedure creates an access control rule to allow all traffic from the inside zone to the outside zone.

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 18: Source Zone

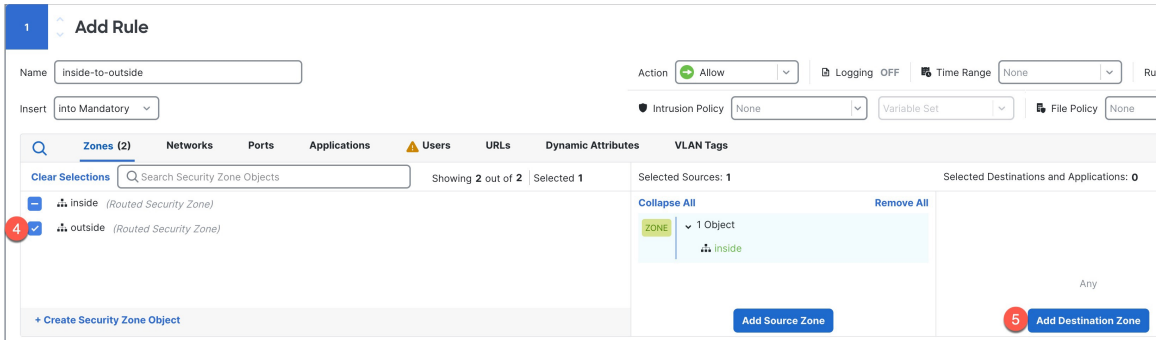


1. Name this rule, for example, **inside-to-outside**.

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

3. Click **Add Source Zone**.

Figure 19: Destination 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 20: 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.

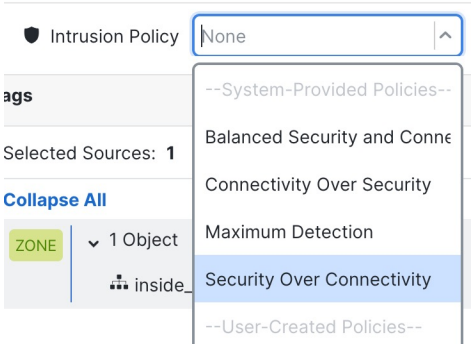
- **Identity**—Identity is not applied by default. You can require a user to authenticate before allowing traffic to be processed by the access control policy.

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 21: System-Provided Intrusion Policies

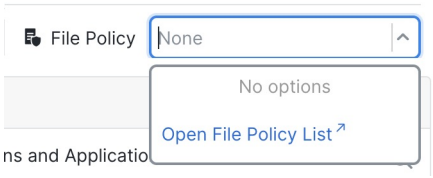


b) Choose one of the system-provided policies from the list.

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 22: 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**.

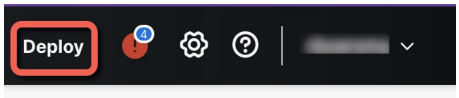
Deploy the configuration

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

Procedure

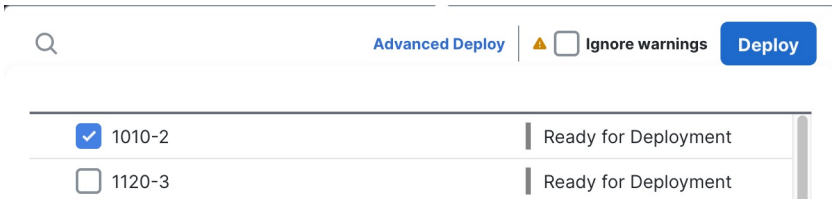
Step 1 Click **Deploy** in the upper right.

Figure 23: Deploy



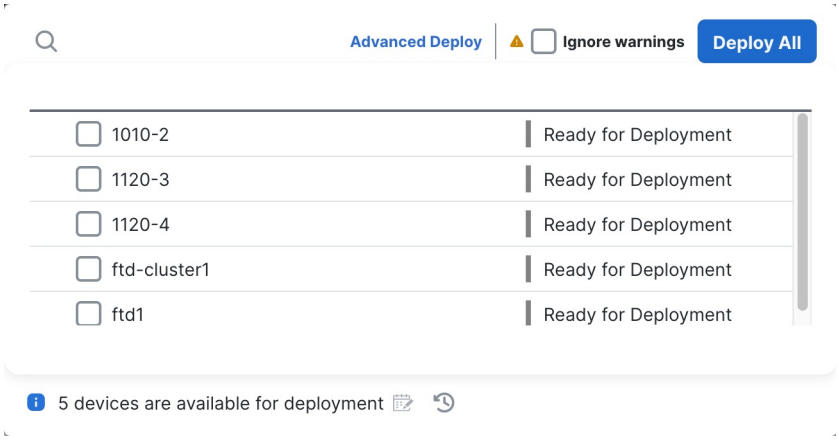
Step 2 For a quick deployment, check specific devices and then click **Deploy**.

Figure 24: Deploy Selected



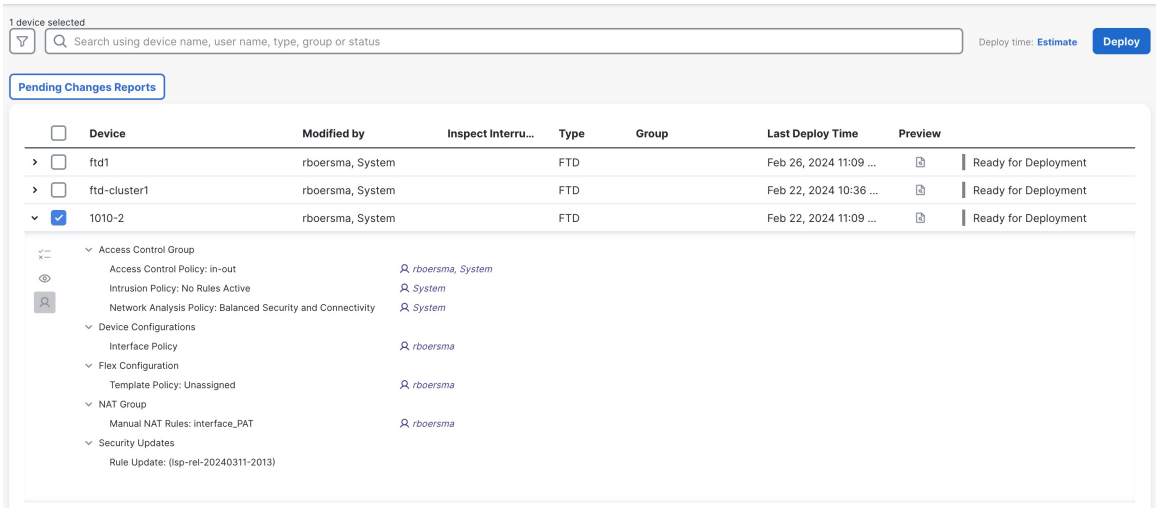
Or click **Deploy All** to deploy to all devices.

Figure 25: Deploy All



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

Figure 26: Advanced Deployment



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.

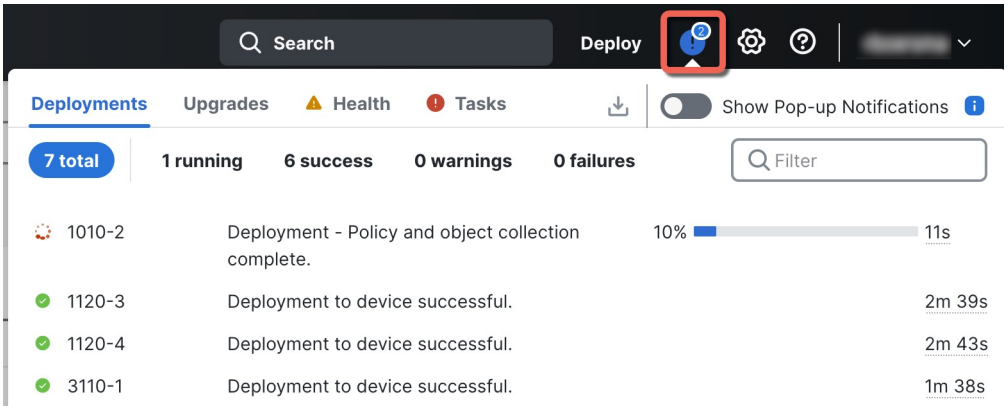



Figure 27: Deployment Status