



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 customize your security policy to include more advanced inspections.

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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

Device

Routing

Interfaces

Inline Sets

DHCP

VTEP

Search by name

Sync Device

Add 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 2: General Tab

Edit Physical Interface

General
IPv4
IPv6
Path Monitoring

Name:

☒ Enabled

☐ Management Only

Description:

Mode:

Security Zone:

Interface ID:

MTU:

(64 - 9000)

Priority:

(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 3: IPv4 Tab

Edit Physical Interface

General IPv4 IPv6 Path Monitoring

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 4: IPv6 Tab

Edit Physical Interface

General IPv4 IPv6 Path Monitoring Hardware Configu

Basic Address Prefixes Settings DHCP

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 5: General Tab

Edit Physical Interface

General IPv4 IPv6 Path Monitoring Hardware

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**.
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

Edit Physical Interface

General IPv4 IPv6 Path Mc

IP Type:
Use DHCP

Obtain default route using DHCP: ☒

DHCP route metric:
1
(1 - 255)

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

Figure 7: IPv6 Tab

Edit Physical Interface

General IPv4 IPv6 Path Monitoring Hardware Configu

Basic Address Prefixes Settings DHCP

Enable IPv6: ☐

Enforce EUI 64: ☐

Link-Local address:

Autoconfiguration: ☒

Obtain Default Route: ☐

f) Click **OK**.

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

- Click **Edit** (🔗) for the interface you want to use.
- 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**.

- Enter a **Name** up to 48 characters in length.

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

- Check the **Enabled** check box.
- Leave the **Mode** set to **None**.
- Click the **IPv4** and/or **IPv6** tab and configure the IP address as desired.
- 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

The screenshot displays the DHCP Server configuration page. The top navigation bar includes tabs for Device, Routing, Interfaces, Inline Sets, DHCP (selected), VTEP, and SNMP. On the left, a sidebar lists DHCP Server, DHCP Relay, and DDNS. The main configuration area includes fields for Ping Timeout (50 ms), Lease Length (3600 sec), and an unchecked Auto-Configuration checkbox. Below these is an Interface dropdown menu. The 'Override Auto Configured Settings' section contains fields for Domain Name, Primary DNS Server, Secondary DNS Server, Primary WINS Server, and Secondary WINS Server, each with a dropdown menu and a plus sign for adding more servers. At the bottom, there is a 'Server' tab (highlighted with a red box) and an 'Advanced' section. A '+ Add' button (also highlighted with a red box) is located in the top right corner. Below the configuration fields is a table with columns for Interface, Address Pool, and Enable DHCP Server. The table is currently empty, displaying 'No records to display'.

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

Figure 9: 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

Cancel OK

- **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

The screenshot shows the 'Routing' configuration page. In the left sidebar, under 'Manage Virtual Routers', the 'Static Route' option is selected. The main content area displays a table for managing static routes. The table has the following columns: Network, Interface, Leaked from Virtual Router, Gateway, Tunneled, Metric, and Tracked. There are two expandable sections: 'IPv4 Routes' and 'IPv6 Routes'. An 'Add Route' button is located in the top right corner of the main content area.

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

Add Static Route Configuration

Type: ☒ IPv4 ☐ IPv6

Interface*
outside

(Interface starting with this icon signifies it is available for route leak)

Available Network +

Search

any-ipv4
gateway
IPv4-Benchmark-Tests
IPv4-Link-Local
IPv4-Multicast
IPv4-Private-10.0.0.0-8

Add

Selected Network

any-ipv4

Gateway*
gateway +

Metric:
1
(1 - 254)

Tunneled: ☐ (Used only for default Route)

Route Tracking:
+

Cancel OK

- **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

New Policy ⓘ

Name:
FTD_policy

Description:

Targeted Devices
Select devices to which you want to apply this policy.

Available Devices and Templates
Search by name or value

192.168.0.124
192.168.0.155

Selected Devices and Templates

192.168.0.124	✕
192.168.0.155	✕

Add to Policy

Cancel Save

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

Figure 13: NAT Policy

FTD_Policy Show Warnings Save Cancel

Enter Description

[Rules](#) NAT Exemptions Policy Assignments (1)

Filter by Device Filter Rules Add Rule

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

Step 3 Click **Add Rule**.

Step 4 Configure the basic rule options:

Figure 14: Basic Rule Options

Add NAT Rule

NAT Rule:
Auto NAT Rule

Type:
Dynamic

☒ Enable

Interface Objects **Translation**

- **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

Interface Objects **Translation** **PAT Pool** **Advanced**

Available Interface Objects Search by name

inside
outside

1

Add to Source

Add to Destination

2

Source Interface Objects (0)
any

Destination Interface Objects (1)
3 outside

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

Figure 16: Translation

Interface Objects	Translation	PAT Pool	Advanced
Original Packet		Translated Packet	
Original Source:* all-ipv4 +		Translated Source: Destination Interface IP	
Original Port: TCP			
		Translated Port: 	

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

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

Figure 17: New Network Object

New Network Object

Name

Description

Network
☐ Host ☐ Range ☒ Network ☐ FQDN

☐ Allow Overrides

Cancel Save

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 firewall, then you need to add rules to the policy to allow traffic through the firewall. 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

The screenshot shows the 'Add Rule' configuration page. The rule name is 'inside-to-outside'. The 'Zones' tab is selected, showing a list of zones: 'inside' (Routed Security Zone) and 'outside' (Routed Security Zone). The 'inside' zone is selected. The 'Add Source Zone' button is highlighted.

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

The screenshot shows the 'Add Rule' configuration page. The rule name is 'inside-to-outside'. The 'Zones' tab is selected, showing a list of zones: 'inside' (Routed Security Zone) and 'outside' (Routed Security Zone). The 'outside' zone is selected. The 'Add Destination Zone' button is highlighted.

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

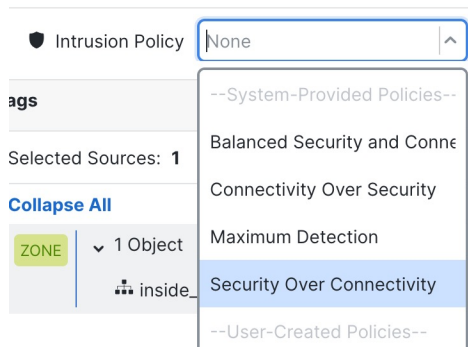
If you do not have the IPS license, this policy will not be deployed even though it shows in your access control policy as enabled.

- **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.

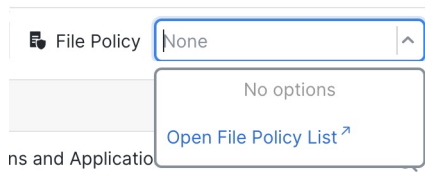
Figure 21: System-Provided Intrusion Policies

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

We recommend **Balanced Security and Connections** for most use cases.

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**.

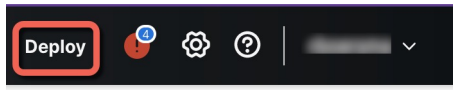
Deploy the configuration

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

Procedure

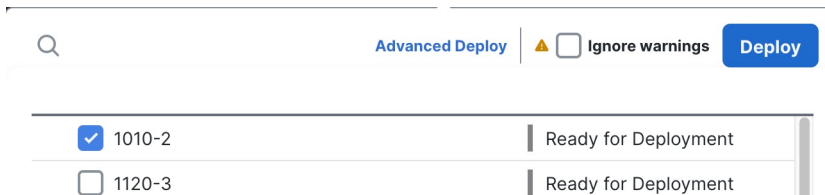
Step 1 Click **Deploy** in the upper right.

Figure 23: Deploy



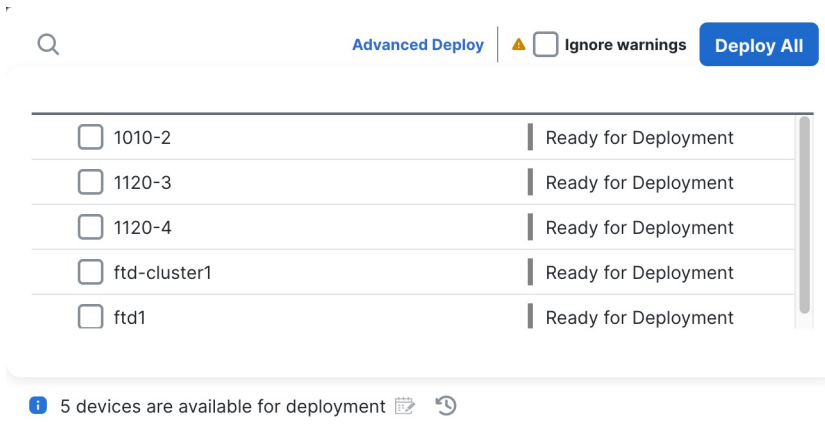
Step 2 For a quick deployment, check specific devices and then click **Deploy**.

Figure 24: Deploy Selected



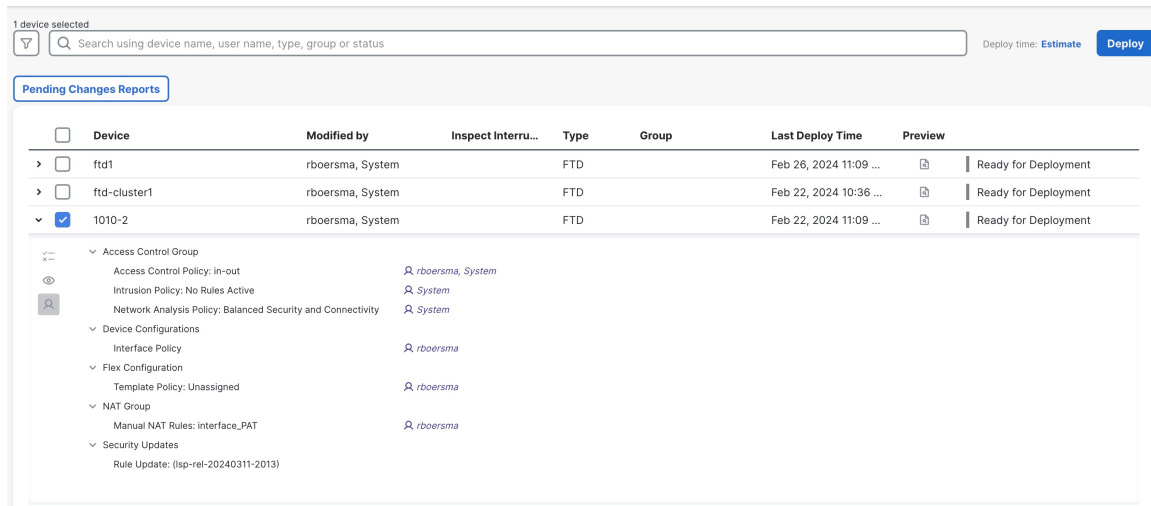
Or click **Deploy All** to deploy to all devices.

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

