Cable and Onboard the Firewall

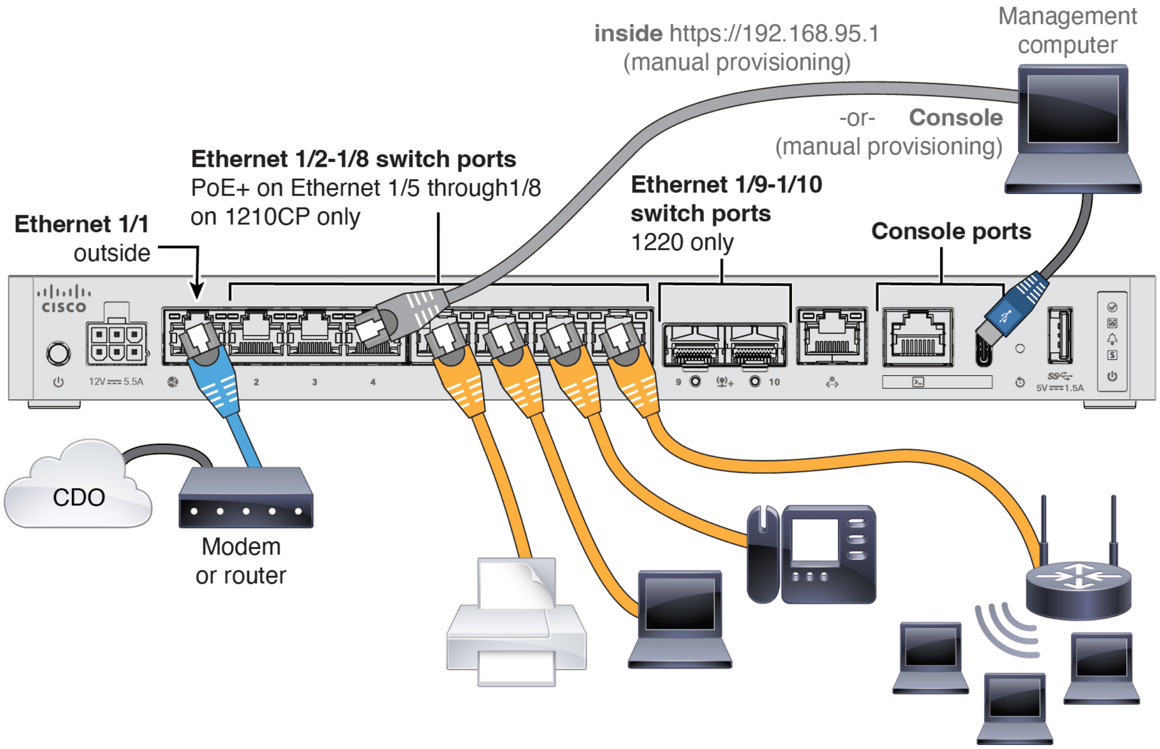
Cable and onboard the firewall to CDO.

Cable the Firewall

- For the Secure Firewall 1220, install SFPs into ports Ethernet 1/9 and 1/10. The ports are 1/10-Gb SFP+ ports that require SFP/SFP+ modules.

- See the hardware installation guide for more information.

- Do not cable the Management interface unless you are using high availability with zero-touch provisioning. In this case, see Managing Firewall Threat Defense with Cloud-Delivered Firewall Management Center in Cisco Defense Orchestrator. This guide covers only the outside interface for zero-touch provisioning.



Onboard the Firewall to CDO

Onboard the firewall using zero-touch provisioning or manual provisioning.

Onboard the Firewall with Zero-Touch Provisioning

Onboard the threat defense using zero-touch provisioning and the device serial number.

Procedure

Step 1 In the CDO navigation pane, click **Inventory**, then click the blue plus button (+) to **Onboard** a device.

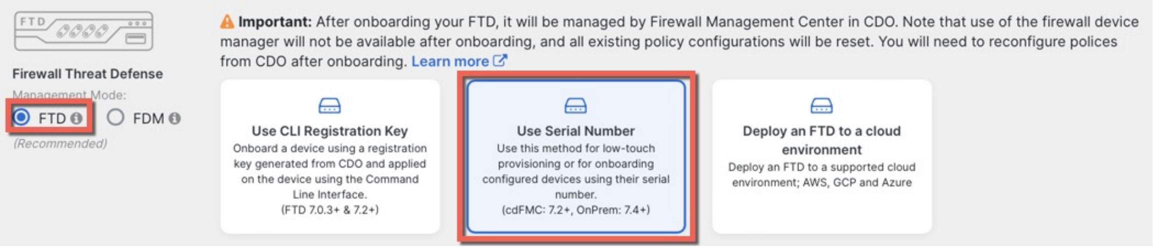
Step 2 Select the **FTD** tile.

Step 3 Under **Management Mode**, be sure **FTD** is selected.

At any point after selecting **FTD** as the management mode, you can click **Manage Smart License** to enroll in or modify the existing smart licenses available for your device. See Obtain Licenses to see which licenses are available.

Step 4 Select **Use Serial Number** as the onboarding method.

Figure 1: Use Serial Number



Important: After onboarding your FTD, it will be managed by Firewall Management Center in CDO. Note that use of the firewall device manager will not be available after onboarding, and all existing policy configurations will be reset. You will need to reconfigure polices from CDO after onboarding. Learn more

Firewall Threat Defense

Management Mode: ● FTD (Recommended) ○ FDM

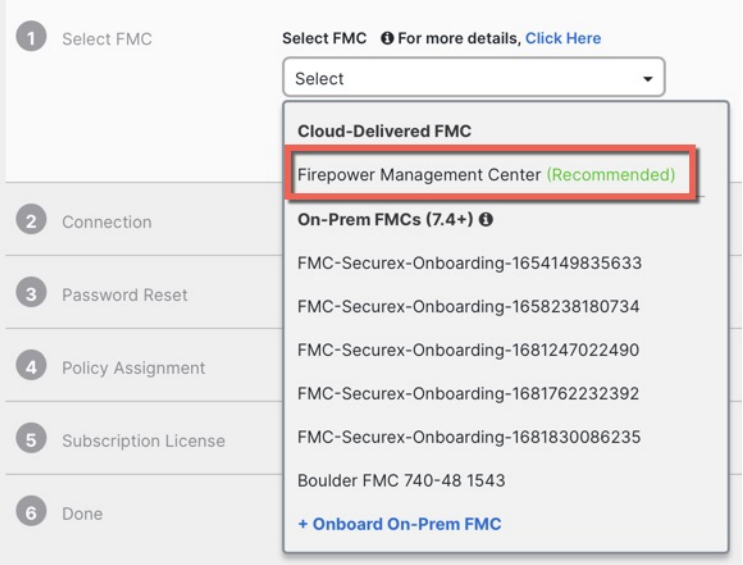
Use CLI Registration Key – Onboard a device using a registration key generated from CDO and applied on the device using the Command Line Interface. (FTD 7.0.3+ & 7.2+)

Use Serial Number – Use this method for low-touch provisioning or for onboarding configured devices using their serial number. (cdFMC: 7.2+, OnPrem: 7.4+)

Deploy an FTD to a cloud environment – Deploy an FTD to a supported cloud environment; AWS, GCP and Azure

Step 5 In **Select FMC**, choose the **Cloud-Delivered FMC** > **Firewall Management Center** from the list, and click **Next**.

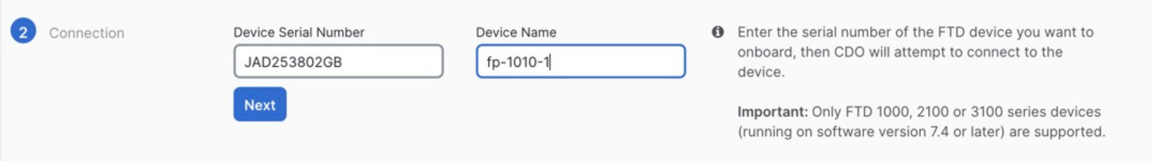
Figure 2: Select FMC



1 Select FMC
2 Connection
3 Password Reset
4 Policy Assignment
5 Subscription License
6 Done
Select FMC For more details, Click Here
Select
Cloud-Delivered FMC
Firepower Management Center (Recommended)
On-Prem FMCs (7.4+)
FMC-Securex-Onboarding-1654149835633
FMC-Securex-Onboarding-1658238180734
FMC-Securex-Onboarding-1681247022490
FMC-Securex-Onboarding-1681762232392
FMC-Securex-Onboarding-1681830086235
Boulder FMC 740-48 1543
+ Onboard On-Prem FMC

Step 6 In the **Connection** area, enter the **Device Serial Number** and the **Device Name** and then click **Next**.

Figure 3: Connection



2 Connection

Device Serial Number: JAD253802GB

Device Name: fp-1010-1

Enter the serial number of the FTD device you want to onboard, then CDO will attempt to connect to the device.

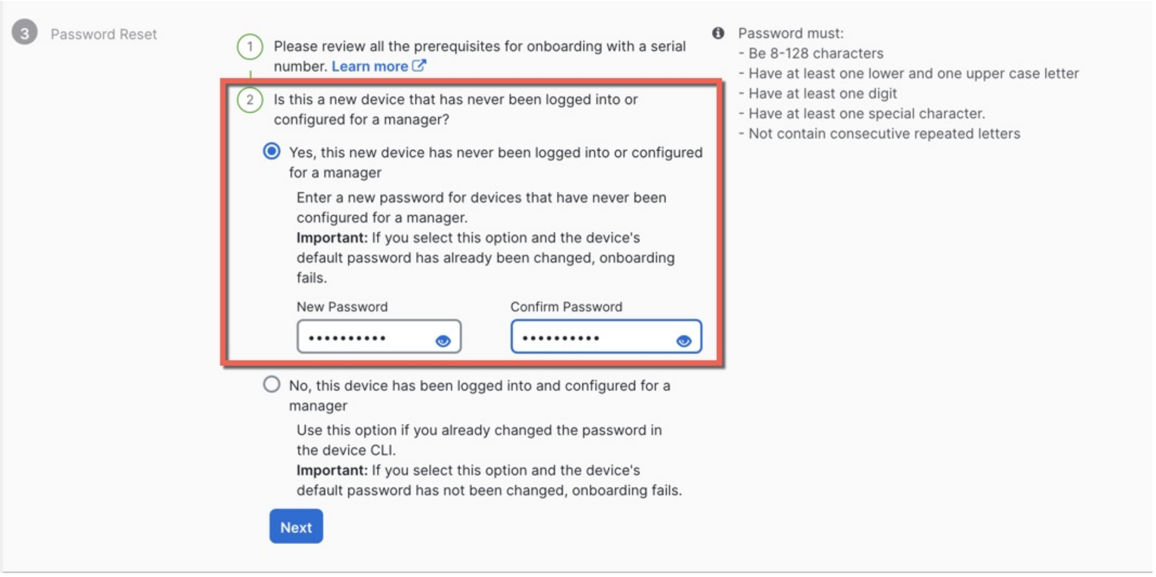
Important: Only FTD 1000, 2100 or 3100 series devices (running on software version 7.4 or later) are supported.

Step 7 In **Password Reset**, click **Yes...**. Enter a new password and confirm the new password for the device, then click **Next**.

For zero-touch provisioning, the device must be brand new or has been reimaged.

Note If you logged into the device and reset the password, and you did not change the configuration in a way that would disable zero-touch provisioning, then you should choose the **No...** option. There are a number of configurations that disable zero-touch provisioning provisioning, so we don't recommend logging into the device unless you need to, for example, to perform a reimage.

Figure 4: Password Reset



3 Password Reset

1 Please review all the prerequisites for onboarding with a serial number. Learn more

2 Is this a new device that has never been logged into or configured for a manager?

● Yes, this new device has never been logged into or configured for a manager

Enter a new password for devices that have never been configured for a manager.
Important: If you select this option and the device's default password has already been changed, onboarding fails.

New Password: ••••••••••

Confirm Password: ••••••••••

○ No, this device has been logged into and configured for a manager

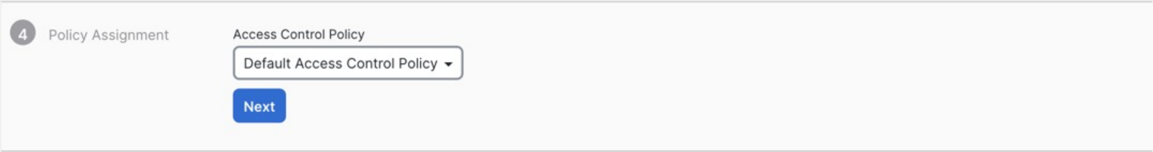
Use this option if you already changed the password in the device CLI.
Important: If you select this option and the device's default password has not been changed, onboarding fails.

Next

Password must:
- Be 8-128 characters
- Have at least one lower and one upper case letter
- Have at least one digit
- Have at least one special character.
- Not contain consecutive repeated letters

Step 8 For the **Policy Assignment**, use the drop-down menu to choose an access control policy for the device. If you have no policies configured, choose the **Default Access Control Policy**.

Figure 5: Policy Assignment



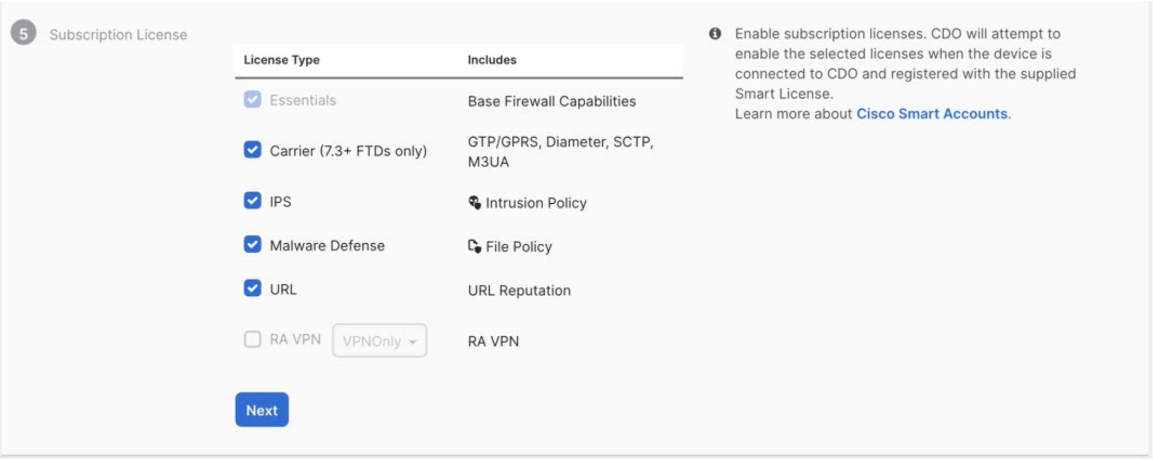
4 Policy Assignment

Access Control Policy: Default Access Control Policy

Next

Step 9 For the **Subscription License**, check each of the feature licenses you want to enable. Click **Next**.

Figure 6: Subscription License



5 Subscription License

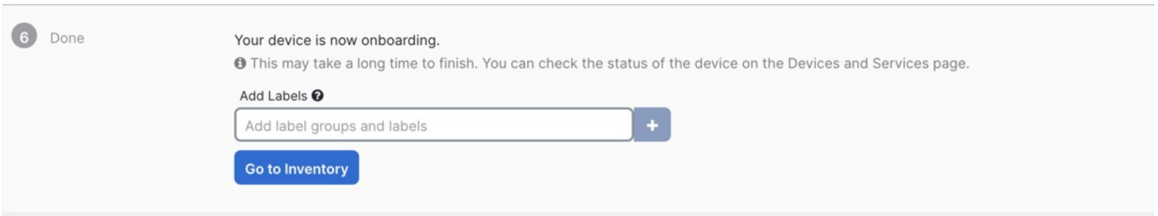
License Type	Includes
☑ Essentials	Base Firewall Capabilities
☑ Carrier (7.3+ FTDs only)	GTP/GPRS, Diameter, SCTP, M3UA
☑ IPS	Intrusion Policy
☑ Malware Defense	File Policy
☑ URL	URL Reputation
□ RA VPN VPNOnly	RA VPN

Next

Enable subscription licenses. CDO will attempt to enable the selected licenses when the device is connected to CDO and registered with the supplied Smart License.
Learn more about Cisco Smart Accounts.

Step 10 (Optional) Add labels to your device to help sort and filter the **Inventory** page. Enter a label and select the blue plus button (+). Labels are applied to the device after it's onboarded to CDO.

Figure 7: Done



6 Done

Your device is now onboarding.

ℹ This may take a long time to finish. You can check the status of the device on the Devices and Services page.

Add Labels ❓

Add label groups and labels

What to do next

From the **Inventory** page, select the device you just onboarded and select any of the option listed under the **Management** pane located to the right.

Onboard the Firewall with Manual Provisioning

Onboard the firewall using a CLI registration key.

Procedure

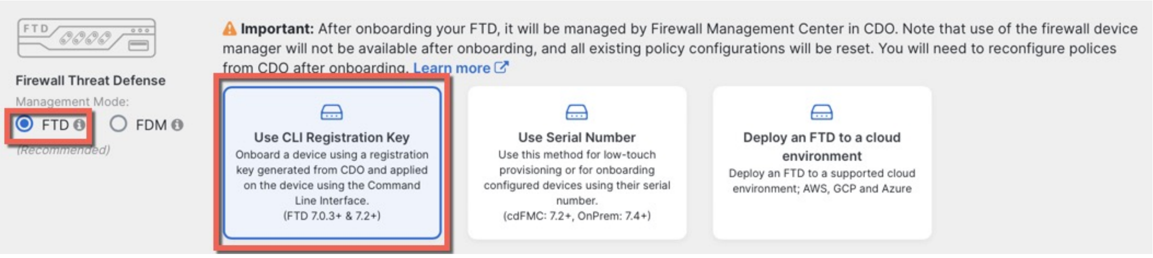
Step 1 In the CDO navigation pane, click **Inventory**, then click the blue plus button (+) to **Onboard** a device.

Step 2 Click the **FTD** tile.

Step 3 Under **Management Mode**, be sure **FTD** is selected.

Step 4 Select **Use CLI Registration Key** as the onboarding method.

Figure 8: Use CLI Registration Key



⚠ **Important:** After onboarding your FTD, it will be managed by Firewall Management Center in CDO. Note that use of the firewall device manager will not be available after onboarding, and all existing policy configurations will be reset. You will need to reconfigure polices from CDO after onboarding. Learn more

Firewall Threat Defense

Management Mode:

● FTD ℹ (Recommended) ○ FDM ℹ

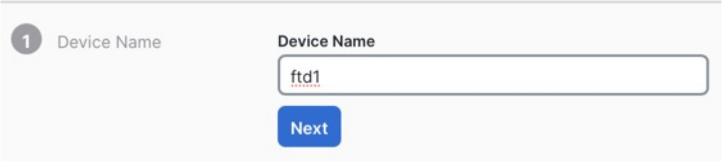
Use CLI Registration Key
Onboard a device using a registration key generated from CDO and applied on the device using the Command Line Interface.
(FTD 7.0.3+ & 7.2+)

Use Serial Number
Use this method for low-touch provisioning or for onboarding configured devices using their serial number.
(cdFMC: 7.2+, OnPrem: 7.4+)

Deploy an FTD to a cloud environment
Deploy an FTD to a supported cloud environment; AWS, GCP and Azure

Step 5 Enter the **Device Name** and click **Next**.

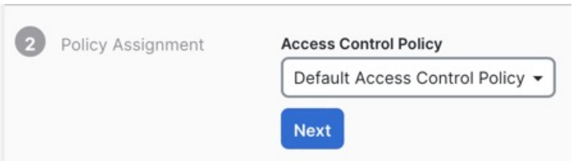
Figure 9: Device Name



Device Name: ftd1

Step 6 For the **Policy Assignment**, use the drop-down menu to choose an access control policy for the device. If you have no policies configured, choose the **Default Access Control Policy**.

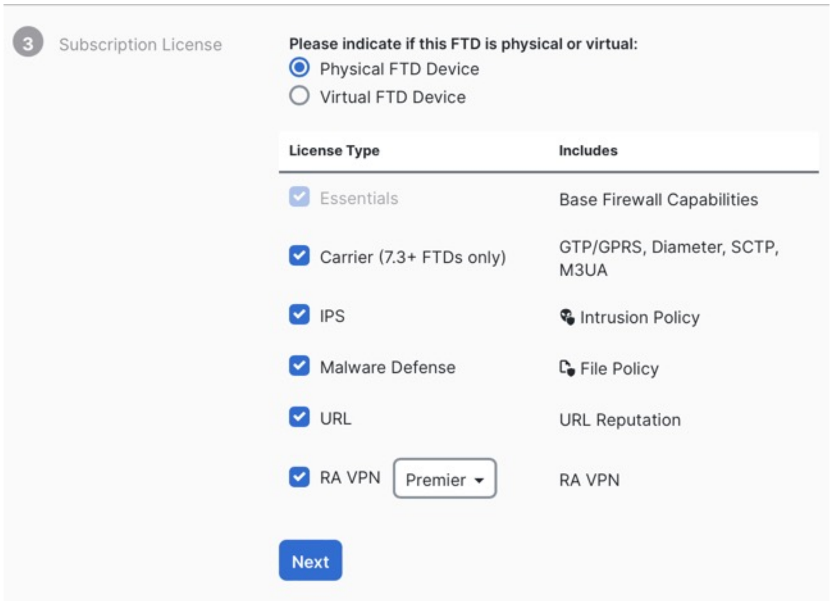
Figure 10: Access Control Policy



Access Control Policy: Default Access Control Policy

Step 7 For the **Subscription License**, click the **Physical FTD Device** radio button, and then check each of the feature licenses you want to enable. Click **Next**.

Figure 11: Subscription License



Please indicate if this FTD is physical or virtual:

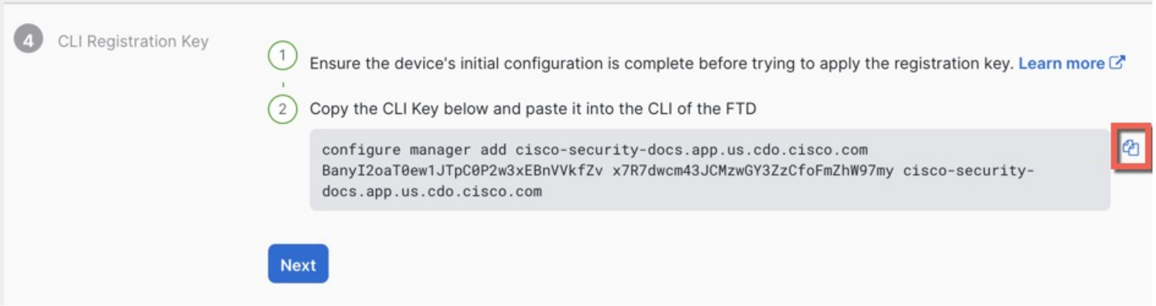
● Physical FTD Device

○ Virtual FTD Device

License Type	Includes
☑ Essentials	Base Firewall Capabilities
☑ Carrier (7.3+ FTDs only)	GTP/GPRS, Diameter, SCTP, M3UA
☑ IPS	Intrusion Policy
☑ Malware Defense	File Policy
☑ URL	URL Reputation
☑ RA VPN Premier	RA VPN

Step 8 For the **CLI Registration Key**, CDO generates a command with the registration key and other parameters. You must copy this command and use it in the intial configuration of the threat defense.

Figure 12: CLI Registration Key



1. Ensure the device's initial configuration is complete before trying to apply the registration key. Learn more
2. Copy the CLI Key below and paste it into the CLI of the FTD

```
configure manager add cisco-security-docs.app.us.cdo.cisco.com
BanyI2oaT0ew1JTpC0P2w3xEBnVVkfZv x7R7dwcm43JCMzwGY3ZzCfoFmZhW97my cisco-security-
docs.app.us.cdo.cisco.com
```

configure manager add *cdo_hostname registration_key nat_id display_name*

Complete initial configuration at the CLI or using the device manager:

- Initial Configuration: CLI, on page 14—Copy this command at the threat defense CLI after you complete the startup script.
- Initial Configuration: Device Manager, on page 8—Copy the *cdo_hostname*, *registration_key*, and *nat_id* parts of the command into the **Management Center/CDO Hostname/IP Address**, **Management Center/CDO Registration Key**, and **NAT ID** fields.

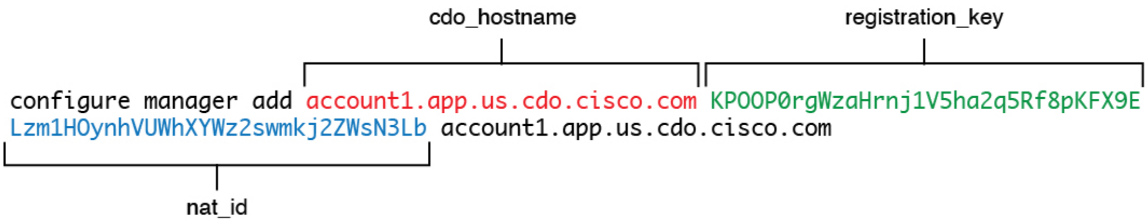
Example:

Sample command for CLI setup:

```
configure manager add account1.app.us.cdo.cisco.com KPOOP0rgWzaHrnj1V5ha2q5Rf8pKFX9E
Lzm1HOynhVUWhXYWz2swmkj2ZWsN3Lb account1.app.us.cdo.cisco.com
```

Sample command components for GUI setup:

Figure 13: configure manager add command components

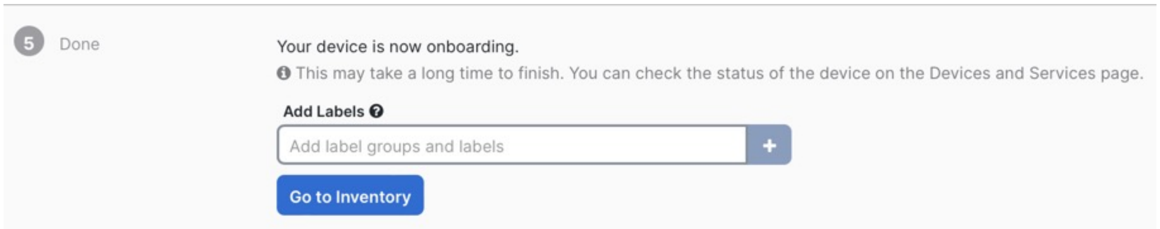


```
configure manager add account1.app.us.cdo.cisco.com KPOOP0rgWzaHrnj1V5ha2q5Rf8pKFX9E
Lzm1HOynhVUWhXYWz2swmkj2ZWsN3Lb account1.app.us.cdo.cisco.com
```

Step 9 Click **Next** in the onboarding wizard to start registering the device.

Step 10 (Optional) Add labels to your device to help sort and filter the **Inventory** page. Enter a label and select the blue plus button (+). Labels are applied to the device after it's onboarded to CDO.

Figure 14: Done



5 Done

Your device is now onboarding.

ℹ This may take a long time to finish. You can check the status of the device on the Devices and Services page.

Perform Initial Configuration (Manual Provisioning)

For manual provisioning, perfom initial configuration of the firewall using the Secure Firewall device manager or using the CLI.

Initial Configuration: Device Manager

Using this method, after you register the firewall, the following interfaces will be preconfigured in addition to the Management interface:

- Ethernet 1/1—**outside**, IP address from DHCP, IPv6 autoconfiguration
- VLAN1— **inside**, 192.168.95.1/24
- Default route—Obtained through DHCP on the outside interface
- Additional interfaces—Any interface configuration from the device manager is preserved.

Other settings, such as the DHCP server on inside, access control policy, or security zones, are not preserved.

Procedure

Step 1 Connect your computer to the inside interface (Ethernet 1/2 through 1/8 or for the Secure Firewall 1220, 1/2 through 1/10).

Step 2 Log into the device manager.

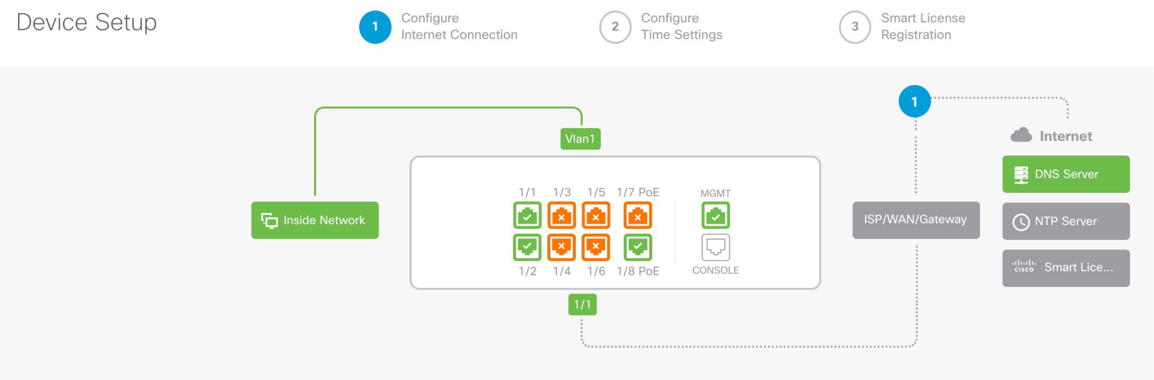
a) Go to https://192.168.95.1.

b) Log in with the username **admin** and the default password **Admin123**.

c) You are prompted to read and accept the General Terms and change the admin password.

Step 3 Use the setup wizard.

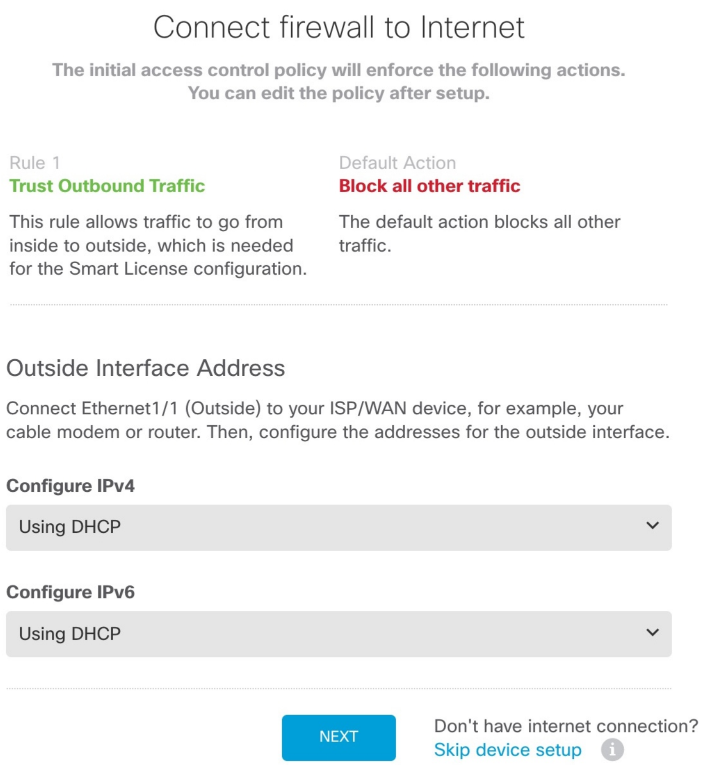
Figure 15: Device Setup



Note The exact port configuration depends on your model.

a) Configure the outside and management interfaces.

Figure 16: Connect firewall to internet



Connect firewall to Internet

The initial access control policy will enforce the following actions.
You can edit the policy after setup.

Rule 1
Trust Outbound Traffic

This rule allows traffic to go from inside to outside, which is needed for the Smart License configuration.

Default Action
Block all other traffic

The default action blocks all other traffic.

Outside Interface Address

Connect Ethernet1/1 (Outside) to your ISP/WAN device, for example, your cable modem or router. Then, configure the addresses for the outside interface.

Configure IPv4

Using DHCP

Configure IPv6

Using DHCP

1. **Outside Interface Address**—Use a static IP address if you plan for high availability. You cannot configure PPPoE using the setup wizard; you can configure PPPoE after you complete the wizard.
2. **Management Interface**—The Management interface settings are used even though you are using manager access on the outside interface. For example, management traffic that is routed over the backplane through the outside

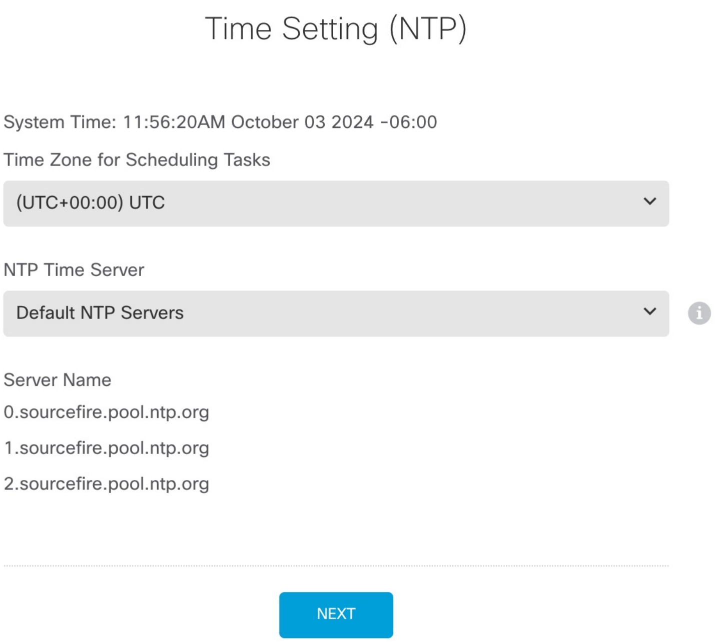
interface will resolve FQDNs using these Management interface DNS servers, and not the outside interface DNS servers.

DNS Servers—The DNS server for the system's management address. The default is the OpenDNS public DNS servers. These will probably match the outside interface DNS servers you set later since they are both accessed from the outside interface.

Firewall Hostname

b) Configure the **Time Setting (NTP)** and click **Next**.

Figure 17: Time Setting (NTP)



Time Setting (NTP)

System Time: 11:56:20AM October 03 2024 -06:00

Time Zone for Scheduling Tasks

(UTC+00:00) UTC

NTP Time Server

Default NTP Servers

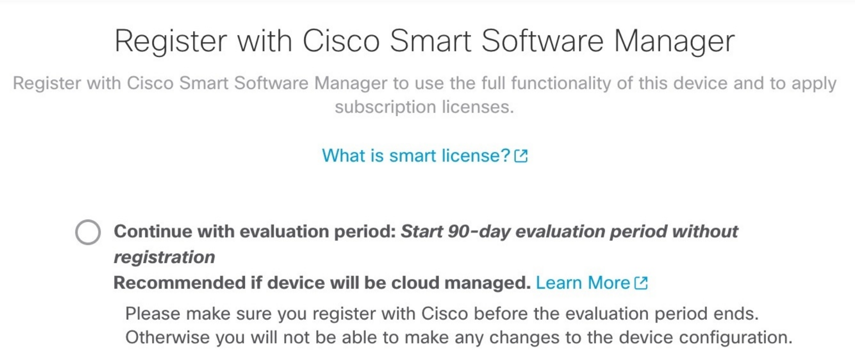
Server Name

0.sourcefire.pool.ntp.org

1.sourcefire.pool.ntp.org

2.sourcefire.pool.ntp.org

c) Select **Start 90 day evaluation period without registration**.



Register with Cisco Smart Software Manager

Register with Cisco Smart Software Manager to use the full functionality of this device and to apply subscription licenses.

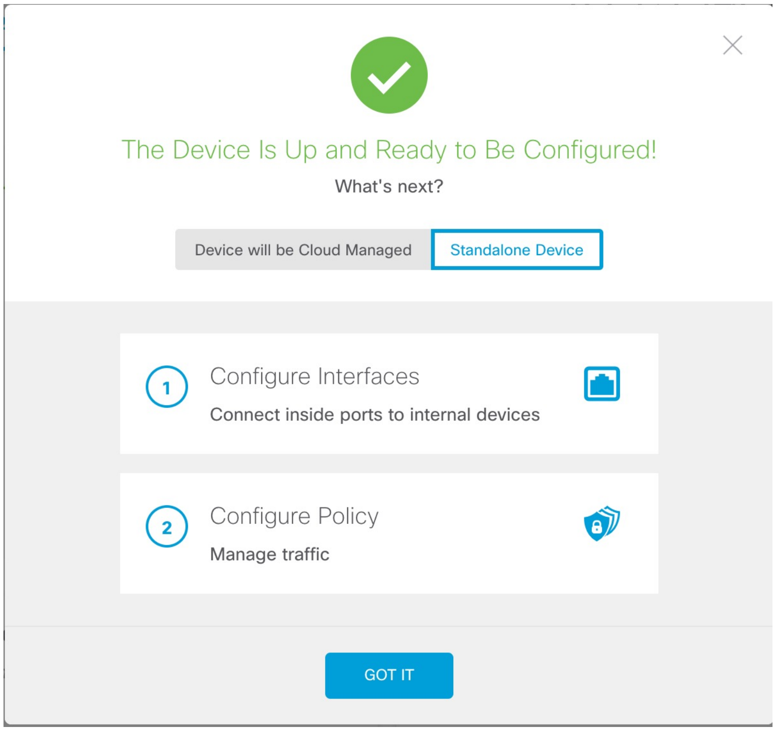
What is smart license?

○ **Continue with evaluation period:** ***Start 90-day evaluation period without registration***
Recommended if device will be cloud managed. Learn More
Please make sure you register with Cisco before the evaluation period ends.
Otherwise you will not be able to make any changes to the device configuration.

Do not register the threat defense with the Smart Software Manager; all licensing is performed on the CDO.

d) Click **Finish**.

Figure 18: What's Next



The Device Is Up and Ready to Be Configured!

What's next?

Device will be Cloud Managed | Standalone Device

1 Configure Interfaces

Connect inside ports to internal devices

2 Configure Policy

Manage traffic

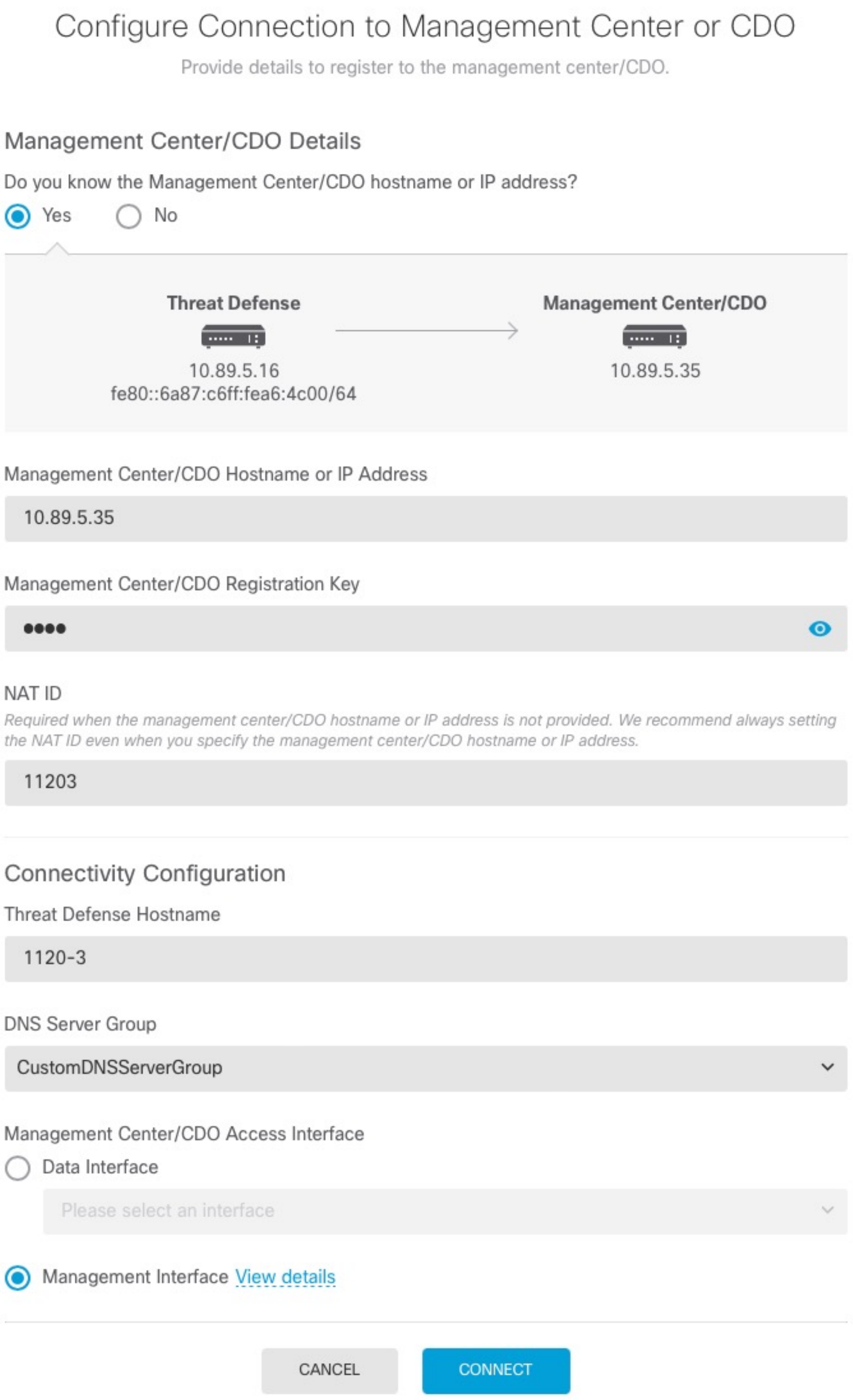
e) Choose **Standalone Device**, and then **Got It**.

Step 4 If you want to configure additional interfaces, choose **Device**, and then click the link in the **Interfaces** summary.

Step 5 Register with the CDO by choosing **Device** > **System Settings** > **Central Management** and clicking **Proceed**

Configure the **Management Center/CDO Details**.

Figure 19: Management Center/CDO Details



Configure Connection to Management Center or CDO

Provide details to register to the management center/CDO.

Management Center/CDO Details

Do you know the Management Center/CDO hostname or IP address?

● Yes ○ No

Management Center/CDO Hostname or IP Address

10.89.5.35

Management Center/CDO Registration Key

••••

NAT ID

Required when the management center/CDO hostname or IP address is not provided. We recommend always setting the NAT ID even when you specify the management center/CDO hostname or IP address.

11203

Connectivity Configuration

Threat Defense Hostname

1120-3

DNS Server Group

CustomDNSServerGroup

Management Center/CDO Access Interface

○ Data Interface

Please select an interface

● Management Interface View details

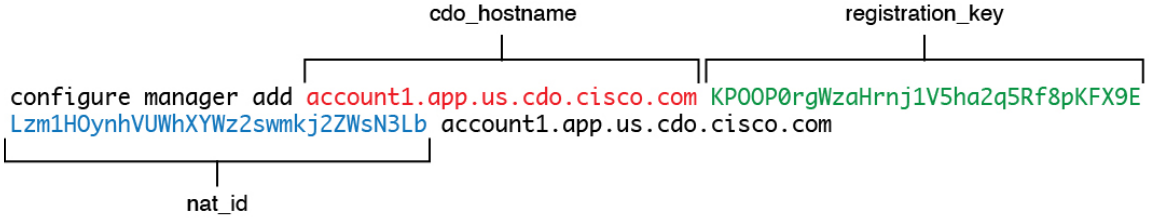
a) For **Do you know the Management Center/CDO hostname or IP address**, click **Yes**.

CDO generates the **configure manager add** command. See Onboard the Firewall with Manual Provisioning, on page 5 to generate the command.

configure manager add *cdo_hostname registration_key nat_id display_name*

Example:

Figure 20: configure manager add command components



```
configure manager add account1.app.us.cdo.cisco.com KPOOP0rgWzaHrnj1V5ha2q5Rf8pKFX9E
Lzm1HOynhVUWhXYWz2swmkj2ZWsN3Lb account1.app.us.cdo.cisco.com
```

b) Copy the *cdo_hostname*, *registration_key*, and *nat_id* parts of the command into the **Management Center/CDO Hostname/IP Address**, **Management Center/CDO Registration Key**, and **NAT ID** fields.

Step 6 Configure the **Connectivity Configuration**.

a) Specify the **Threat Defense Hostname**.

This FQDN will be used for the outside interface.

b) Specify the **DNS Server Group**.

Choose an existing group, or create a new one. The default DNS group is called **CiscoUmbrellaDNSServerGroup**, which includes the OpenDNS servers.

To retain the outside DNS server setting after registration, you need to re-configure the DNS Platform Settings in the management center.

c) For the **Management Center/CDO Access Interface**, click **Data Interface**, and then choose **outside**.

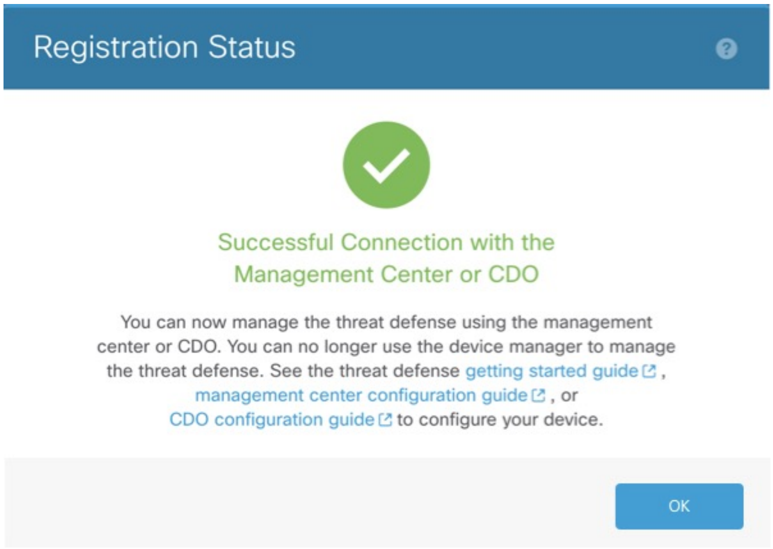
Step 7 (Optional) Click **Add a Dynamic DNS (DDNS) method**.

DDNS ensures the management center can reach the threat defense at its FQDN if the threat defense's IP address changes.

Step 8 Click **Connect**.

The **Registration Status** dialog box shows the current status of the CDO registration.

Figure 21: Successful Connection



Registration Status

Successful Connection with the Management Center or CDO

You can now manage the threat defense using the management center or CDO. You can no longer use the device manager to manage the threat defense. See the threat defense getting started guide, management center configuration guide, or CDO configuration guide to configure your device.

Step 9 After the **Saving Management Center/CDO Registration Settings** step on the status screen, go to the CDO and add the firewall. See Onboard the Firewall with Manual Provisioning, on page 5.

Initial Configuration: CLI

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 threat defense CLI. See Access the Threat Defense CLI.

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'

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

Guidance: Enter **no** to use the management center.

```
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 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 CDO that will manage this threat defense using the **configure manager add** command that CDO generated. See Onboard the Firewall with Manual Provisioning, on page 5 to generate the command.

Example:

```
> configure manager add account1.app.us.cdo.cisco.com KPOOP0rgWzaHrnj1V5ha2q5Rf8pKFX9E
Lzm1HOynhVUWhXYWz2swmkj2ZWsN3Lb account1.app.us.cdo.cisco.com
Manager successfully configured.
```

Step 5 Shut down the 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.