



Licensing the System

The following topics explain how to license the FTD device.

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- [Managing Smart Licenses, on page 4](#)

Smart Licensing for the Firewall System

Cisco Smart Licensing is a flexible licensing model that provides you with an easier, faster, and more consistent way to purchase and manage software across the Cisco portfolio and across your organization. And it's secure—you control what users can access. With Smart Licensing you get:

- **Easy Activation:** Smart Licensing establishes a pool of software licenses that can be used across the entire organization—no more PAKs (Product Activation Keys).
- **Unified Management:** My Cisco Entitlements (MCE) provides a complete view into all of your Cisco products and services in an easy-to-use portal, so you always know what you have and what you are using.
- **License Flexibility:** Your software is not node-locked to your hardware, so you can easily use and transfer licenses as needed.

To use Smart Licensing, you must first set up a Smart Account on Cisco Software Central (software.cisco.com).

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

Cisco Smart Software Manager

When you purchase one or more licenses for the FTD device, you manage them in the Cisco Smart Software Manager: <https://software.cisco.com/#SmartLicensing-Inventory>. The Cisco Smart Software Manager lets you create a primary account for your organization.

By default, your licenses are assigned to the Default Virtual Account under your primary account. As the account administrator, you can create additional virtual accounts; for example, for regions, departments, or subsidiaries. Multiple virtual accounts help you manage large numbers of licenses and appliances.

Licenses and appliances are managed per virtual account; only that virtual account's appliances can use the licenses assigned to the account. If you need additional licenses, you can transfer an unused license from another virtual account. You can also transfer appliances between virtual accounts.

When you register a device with Cisco Smart Software Manager, you create a Product Instance Registration Token in the manager, and then enter it in FDM. A registered device becomes associated with a virtual account based on the token that is used.

For more information about the Cisco Smart Software Manager, see the online help for the manager.

Periodic Communication with the License Authority

When you use a Product Instance Registration Token to register the FTD device, the device registers with the Cisco License Authority. The License Authority issues an ID certificate for communication between the device and the License Authority. This certificate is valid for one year, although it will be renewed every six months. If an ID certificate expires (usually in nine months or a year with no communication), the device reverts to a de-registered state and licensed feature usage is suspended.

The device communicates with the License Authority on a periodic basis. If you make changes in the Cisco Smart Software Manager, you can refresh the authorization on the device so the changes immediately take effect. You also can wait for the device to communicate as scheduled. Normal license communication occurs every 12 hours, but with the grace period, your device will operate for up to 90 days without calling home. You must contact the License Authority before 90 days have passed.

Smart License Types

The following table explains the licenses available for the FTD device.

Your purchase of a FTD device automatically includes a Base license. All additional licenses are optional.

Table 1: Smart License Types

License	Duration	Granted Capabilities
Base	Perpetual	All features not covered by the optional term licenses. The Base license is automatically added to your account when you register. You must also specify whether to Allow export-controlled functionality on the products registered with this token . You can select this option only if your country meets export-control standards. This option controls your use of advanced encryption and the features that require advanced encryption.
Threat	Term-based	Required to use the following policies: <ul style="list-style-type: none"> • Intrusion • File (the Malware is also required) • Security Intelligence
Malware	Term-based	File policies (the Threat is also required).

License	Duration	Granted Capabilities
URL	Term-based	Category and reputation-based URL filtering. You can perform URL filtering on individual URLs without this license.
RA VPN: <ul style="list-style-type: none"> • AnyConnect Plus • AnyConnect Apex • AnyConnect VPN Only 	Term-based or perpetual based on license type.	Remote access VPN configuration. Your base license must allow export-controlled functionality to configure RA VPN. You select whether you meet export requirements when you register the device. The FDM can use any valid AnyConnect Client license. The available features do not differ based on license type. If you have not already purchased one, see Licensing Requirements for Remote Access VPN . Also see <i>Cisco AnyConnect Ordering Guide</i> , http://www.cisco.com/c/dam/en/us/products/collateral/security/anyconnect-og.pdf .

Impact of Export Control Setting on Encryption Features

When you register a device, you must also specify whether to **Allow export-controlled functionality on the products registered with this token**. You can select this option only if your country meets export-control standards. This option controls your use of advanced encryption and the features that require advanced encryption.

Evaluation mode is treated the same as registering using a non-export-compliant account. That means that you cannot configure remote access VPN, or use advanced encryption algorithms, when running in evaluation mode.

Most particularly, the DES standard is available only in evaluation or non-export-compliant mode.

Thus, if you configure encrypted features, such as site-to-site VPN, or encrypt the failover connection in a high availability group, you might end up with connection problems after registering in an export-compliant account. If the feature was using DES in evaluation mode, that configuration will be broken after you register the account.

Consider the following recommendations for avoiding encryption-related problems:

- Avoid configuring encrypted features, such as site-to-site VPN and encrypted failover connections, until after you register the device.
- After registering the device using an export-compliant account, edit all encrypted features that you configured in evaluation mode and select more secure encryption algorithms. Test and verify each of these features to ensure they are functioning correctly.



Note If you configured HA failover encryption in evaluation mode, you will also need to reboot both devices in the HA group to start using stronger encryption. We recommend you remove the encryption first to avoid a split-brain situation, where both devices consider themselves the active unit.

Impact of Expired or Disabled Optional Licenses

If one of the following optional licenses expires, you can continue using features that require the license. However, the license is marked out of compliance and you need to purchase the license and add it to your account to bring the license back into compliance.

If you disable an optional license, the system reacts as follows:

- **Malware**—The system stops querying the Secure Malware Analytics Cloud, and also stops acknowledging retrospective events sent from the Secure Malware Analytics Cloud. You cannot re-deploy existing access control policies if they include file policies. Note that for a very brief time after a Malware license is disabled, the system can use existing cached file dispositions. After the time window expires, the system assigns a disposition of Unavailable to those files.
- **Threat**—The system no longer applies intrusion or file policies. For Security Intelligence policies, the system no longer applies the policy and stops downloading feed updates. You cannot re-deploy existing policies that require the license.
- **URL**—Access control rules with URL category conditions immediately stop filtering URLs, and the system no longer downloads updates to URL data. You cannot re-deploy existing access control policies if they include rules with category and reputation-based URL conditions.
- **RA VPN**—You cannot edit the remote access VPN configuration, but you can remove it. Users can still connect using the RA VPN configuration. However, if you change the device registration so that the system is no longer export compliant, the remote access VPN configuration stops immediately and no remote users can connect through the VPN.

Managing Smart Licenses

Use the Smart License page to view the current license status for the system. The system must be licensed.

The page shows you whether you are using the 90-day evaluation license, or if you have registered with the Cisco Smart Software Manager. Once registered, you can see the status of the connection to the Cisco Smart Software Manager as well as the status for each type of license.

Usage Authorization identifies the Smart License Agent status:

- **Authorized** (“Connected,” “Sufficient Licenses”)—The device has contacted and registered successfully with the License Authority, which has authorized the license entitlements for the appliance. The device is now In-Compliance.
- **Out-of-Compliance**—There is no available license entitlement for the device. Licensed features continue to work. However, you must either purchase or free up additional entitlements to become In-Compliance.
- **Authorization Expired**—The device has not communicated with the Licensing Authority in 90 or more days. Licensed features continue to work. In this state, the Smart License Agent retries its authorization requests. If a retry succeeds, the agent enters either an Out-of-Compliance or Authorized state, and begins a new Authorization Period. Try manually synchronizing the device.



Note Click the **i** button next to the Smart License status to view the virtual account, export-controlled features, and get a link to open the Cisco Smart Software Manager. Export-Controlled Features control software that is subject to national security, foreign policy, and anti-terrorism laws and regulations.

The following procedure provides an overview of how to manage licenses for the system.

Procedure

Step 1 Click **Device**, then click **View Configuration** in the Smart License summary.

Step 2 Register the device.

You must register with the Cisco Smart Software Manager before you can assign the optional licenses. Register before the end of the evaluation period.

See [Registering the Device, on page 5](#).

Note When you register, you elect whether to send usage data to Cisco. You can change your election by clicking the **Go To Cisco Success Network** link next to the gear icon.

Step 3 Request and manage the optional feature licenses.

You must register the optional licenses to use the features controlled by the license. See [Enabling or Disabling Optional Licenses, on page 6](#).

Step 4 Maintain system licensing.

You can do the following tasks:

- [Synchronizing with the Cisco Smart Software Manager, on page 7](#)
 - [Unregistering the Device, on page 7](#)
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Registering the Device

Your purchase of the FTD device automatically includes the Base license. The Base license covers all features not covered by the optional licenses. It is a perpetual license.

During initial system setup, you are prompted to register the device with Cisco Smart Software Manager. If you instead elected to use the 90-day evaluation license, you must register the device before the end of the evaluation period.

When you register the device, your virtual account allocates the license to the device. Registering the device also registers any optional licenses that you have enabled.

Before you begin

When you register a device, only that device is registered. If the device is configured for high availability, you must log into the other unit in the high availability pair to register that unit.

Procedure

Step 1 Click **Device**, then click **View Configuration** in the Smart License summary.

Step 2 Click **Register Device** and follow the instructions.

- a) Click the link to open the [Cisco Smart Software Manager](#) and log into your account, or create a new one if necessary.
- b) Generate a new token.

When you create the token, you specify the amount of time the token is valid for use. The recommended expiration period is 30 days. This period defines the expiration date of the token itself, and has no impact on the device that you register using the token. If the token expires before you can use it, you can simply generate a new token.

You must also specify whether to **Allow export-controlled functionality on the products registered with this token**. You can select this option only if your country meets export-control standards. This option controls your use of advanced encryption and the features that require advanced encryption.

- c) Copy and paste the token into the edit box on the Smart License Registration dialog box.
- d) Decide whether to send usage data to Cisco.

Read the information in the Cisco Success Network step, click the **Sample Data** link to view the actual data that is collected, then decide whether to leave the **Enable Cisco Success Network** option selected. Even if you do not enable the connection, you are registered with the Cisco Cloud Services server so that you can enable cloud services as you need them.

- e) Click **Register Device**.
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Enabling or Disabling Optional Licenses

You can enable (register) or disable (release) optional licenses. You must enable a license to use the features controlled by the license.

If you no longer want to use the features covered by an optional term license, you can disable the license. Disabling the license releases it in your Cisco Smart Software Manager account, so that you can apply it to another device.

You can also enable evaluation versions of these licenses when running in evaluation mode. In evaluation mode, the licenses are not registered with Cisco Smart Software Manager until you register the device. However, you cannot enable the RA VPN license in evaluation mode.

Before you begin

Before disabling a license, ensure that you are not using it. Rewrite or delete any policies that require the license.

For units operating in a high availability configuration, you enable or disable licenses on the active unit only. The change is reflected on the standby unit the next time you deploy the configuration, when the standby unit requests (or frees) the necessary licenses. When enabling licenses, you must ensure that your Cisco Smart Software Manager account has sufficient licenses available, or you could have one unit compliant while the other unit is non-compliant.

Procedure

- Step 1** Click **Device**, then click **View Configuration** in the Smart License summary.
- Step 2** Click the **Enable/Disable** control for each optional license as desired.
- **Enable**—Registers the license with your Cisco Smart Software Manager account and enables the controlled features. You can now configure and deploy policies controlled by the license.
 - **Disable**—Unregisters the license with your Cisco Smart Software Manager account and disables the controlled features. You cannot configure the features in new policies, nor can you deploy policies that use the feature.
- Step 3** If you enabled the **RA VPN** license, select the type of license you have available in your account. You can use any of the AnyConnect licenses: **Plus**, **Apex**, or **VPN Only**. You can select **Plus and Apex** if you have both licenses and you want to use them both.
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Synchronizing with the Cisco Smart Software Manager

The system periodically synchronizes license information with Cisco Smart Software Manager. Normal license communication occurs every 30 days, but with the grace period, your appliance will operate for up to 90 days without calling home.

However, if you make changes in the Cisco Smart Software Manager, you can refresh the authorization on the device so the changes immediately take effect.

Synchronization gets the current status of licenses, and renews authorization and the ID certificate.

Procedure

- Step 1** Click **Device**, then click **View Configuration** in the Smart License summary.
- Step 2** Select **Resync Connection** from the gear drop-down list.
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Unregistering the Device

If you no longer want to use the device, you can unregister it from the Cisco Smart Software Manager. When you unregister, the Base license and all optional licenses associated with the device are freed in your virtual account. Optional licenses are available to be assigned to other devices.

After unregistering the device, the current configuration and policies on the device continue to work as-is, but you cannot make or deploy any changes.

Before you begin

When you unregister a device, only that device is unregistered. If the device is configured for high availability, you must log into the other unit in the high availability pair to unregister that unit.

Procedure

- Step 1** Click **Device**, then click **View Configuration** in the Smart License summary.
- Step 2** Select **Unregister Device** from the gear drop-down list.
- Step 3** Read the warning and click **Unregister** if you really want to unregister the device.
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