



License Installation

A license is required for all features except for sample plan files used in the Cisco WAE Design application. If you have questions about obtaining a license, contact your Cisco support representative or system administrator.

Cisco WAE supports Cisco Smart Licensing and traditional licensing. If you would like to convert from a traditional license to Smart Licensing, see your Cisco WAE account representative. For information on the differences between the two types of licensing, refer to the [Cisco Smart Licensing Overview](#) on Cisco.com.

Cisco Smart Licensing

Cisco offers Smart Licensing, which enables you to monitor Cisco WAE software licenses and endpoint license consumption easily and efficiently through a simple registration and license consumption reporting process instead of having to install node-locked license files. Details of all Cisco products and licenses that you have purchased are maintained in a centralized database called the Cisco Smart Software Manager (CSSM).

Smart Licensing Configuration Workflow

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- Step 1** Create a Smart Account with Cisco Systems. To do this, go to [Smart Account Request](#) and follow the instructions on the web site.
 - Step 2** [Enable Smart Licensing in Cisco WAE.](#)
 - Step 3** [Register Cisco WAE with the Cisco Smart Software Manager.](#)
 - Step 4** (Optional) By default, the Smart License information is sent directly to the cloud. To change this, follow the steps outlined in [Configure the Transport Mode Between Cisco WAE and the CSSM.](#)
 - Step 5** (Optional) If using WAE Design, enable Smart Licensing using the WAE Design GUI or CLI in your local WAE Design setup (Windows, Mac, or Linux).
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Enable Smart Licensing in Cisco WAE

Before You Begin

Confirm that you have a Smart Account. If not, go to [Smart Account Request](#) and follow the instructions on the web site.



Note

You can disable Smart Licensing at any time by clicking **Disable Smart Software Licensing** from the drop-down list available on the top right of the Smart Software Licensing page.

Step 1 From the Cisco WAE UI, navigate to **System > Licenses**.

Step 2 Click **Enable Smart Software Licensing**.

Step 3 Click **OK** to confirm that you are enabling Smart Licensing. The Smart Licensing page appears.

Step 4 Do one of the following:

- If you have not registered Cisco WAE with the CSSM on Cisco.com, Cisco WAE will be in evaluation mode (which expires in 90 days). Register Cisco WAE as described in [Register Cisco WAE with the Cisco Smart Software Manager](#).
- If you have registered Cisco WAE with the CSSM, select the licenses you want to use.



Note

To enable Smart Licensing for WAE Design, see the *Cisco WAE Design GUI Installation Guide*.

Register Cisco WAE with the Cisco Smart Software Manager

To register Cisco WAE with the Cisco Smart Software Manager (CSSM), you must obtain a token from the CSSM and enter it into the WAE UI. This is a one-time requirement. If Cisco WAE is already registered, you must deregister the product, then register it again. For information on how to use the CSSM, including renewing license registration and authorization, refer to the [Cisco Smart Software Manager User Guide](#). You can also access these operations within the WAE UI using the Smart Licensing page.

Before You Begin

- Confirm that you have a Smart Account. If not, go to [Smart Account Request](#) and follow the instructions on the web site.
- Confirm that Smart Licensing is enabled in Cisco WAE. If not, see [Enable Smart Licensing in Cisco WAE](#).

Step 1 Go to the [Cisco Software Central](#) web site.

Step 2 Obtain your tokens. If you already have tokens (for example, you converted traditional licensing PAKs to Smart entitlements), proceed to the next step.

Step 3 If you are re-registering your product instance, copy your token (it is listed in the CSSM user interface), and use it again. If your token is no longer valid, you can obtain a new token using this procedure.

- a. On Cisco Software Central, choose **License > Smart Software Licensing**.
 - b. Select the appropriate virtual account.
 - c. Click the **General** tab, then click **New Token**.
 - d. Follow the instructions to provide a name and duration. If you need to create a restricted token to enable export control functions, you can click the **Allow Export-Controlled Functionality** button.
 - e. Click **Create Token**.
 - f. Copy the Token ID to your clipboard and proceed to the next step.
- Step 4** From the WAE UI, click **Register**. The Smart Software Licensing Product Registration window appears.
- Step 5** Enter the Token ID you just copied in Step 3 to register the product instance. The Smart Software Licensing Status page appears.
- Step 6** Click **Choose License...**
- Step 7** Click all applicable licenses from the license table and enter the corresponding number of license instances.
- Step 8** Click **OK** to save the changes. The Smart License Usage table is updated with the changes. By default, data is refreshed every 15 seconds. You can also click the Refresh icon on the top of the page.
- Step 9** (Optional) Enable Smart Licensing for WAE Design. For information, see the *Cisco WAE Design GUI Installation Guide*.

Smart License Registration and Authorization Statuses

Registration Status

The license registration status reflects whether Cisco WAE is properly registered with Cisco Smart Software Licensing on Cisco.com.

License Registration Status	Description
Unregistered	<p>Smart Software Licensing is enabled on Cisco WAE, but Cisco WAE is not registered with the CSSM.</p> <p>By default, registration renewal happens automatically every 30 days. If you want to manually renew it, click Renew Registration Now from the drop-down list available on the top right of the Smart Software Licensing page.</p>
Registered	<p>Cisco WAE is registered with the CSSM. Cisco WAE has received an ID certificate that will be used for future communication with the Cisco licensing authority.</p> <p>To unregister, click Deregister from the drop-down list available on the top right of the Smart Software Licensing page.</p>

License Registration Status	Description
Registration Expired	Cisco WAE did not successfully renew its registration prior to the expiration date and has been removed from the CSSM.
Registration Pending	The Smart Licensing Agent is trying to automatically register the license.
Registration Failed	The Smart Licensing Agent could not register to the CSSM.

License Authorization Status

The License Authorization status reflects license usage against purchased licenses, and whether you are in compliance with Cisco Smart Licensing. If you exceed the number of purchased license, the product will be Out of Compliance.

License Authorization Status	Description
Evaluation Mode	Cisco WAE is running in evaluation mode (expires in 90 days).
Authorized	Cisco WAE has a valid Smart Account and is registered. All licenses requested by Cisco WAE are authorized for use.
Out of Compliance	Cisco WAE has exceeded the number of licenses that were purchased. (Specifically, the virtual account for the product instance has a shortage of one or more licenses types.)
Evaluation Expired	The evaluation period has expired and Cisco WAE is in the unlicensed state.
Authorization Expired	Cisco WAE did not successfully renew its license authorization prior to the authorization expiration date. To renew a authorization, click Renew Authorization Now from the drop-down list available on the top right of the Smart Software Licensing page.
Not in Use	A license is not in use.

Configure the Transport Mode Between Cisco WAE and the CSSM

By default, the Smart License information directly to the cloud. To change this, perform the following steps:

- Step 1** From the Smart Software Licensing page, click **View/Edit** from the Transport Settings field. The Transport Settings window appears.
- Step 2** Select a communication mode:

- Direct mode—Send license information directly to the cloud. This is the default. You cannot edit this URL.
 - Transport Gateway—Use a Cisco Call Home transport gateway or a Cisco Smart Licensing Software satellite. (A satellite is installed on customer premises and provides a subset of CCSM functionality.)
 - HTTP Proxy—Use an HTTP/HTTPS proxy for communication between and the cloud. Enter the proxy IP address and port.
 - Click **Save**.
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Enable Smart Licensing in WAE Design

This section describes how to enable Smart Licensing in your local WAE Design setup.

Enable Smart Licensing Using the WAE Design GUI

Before You Begin

- Confirm that you enabled Smart Licensing in the server. See [Smart Licensing Configuration Workflow](#).

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- Step 1** From the WAE Design, choose **File > License > Install**.
 - Step 2** Choose the **Specify smart license service information** option. Enter the hostname (which has Smart Licensing enabled) and the port being used. The default port is 8443.
 - Step 3** Click **OK** to confirm the license installation.
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Enable Smart Licensing Using the CLI

To enable Smart Licensing on your local WAE Design setup using the CLI, you must include the server hostname and port for the Smart License service. If a port number is not entered, the default value is 8443.

```
license_install -smart-license-service-host <smart_license_service_hostname>  
-smart-license-service-port <port_number>
```

For example:

```
license_install -smart-license-service-host sl.cisco.com -smart-license-service-port
```

Traditional Licensing

There are three methods of installing a traditional license, and the method used depends on the type of license you are installing.

- Standalone Cisco WAE Design—Use either the Cisco WAE Design GUI or the CLI method. Both methods enable you to install dedicated and floating licenses. Floating licenses are only for use by Cisco WAE Design.
- Cisco WAE Collector and web applications—Use either the web UI or the CLI method.
- Cisco WAE Core—Use the CLI method.



Note

All instructions and examples assume you used `/opt/cariden` as the default installation directory. If you did not, substitute your installation directory for `/opt/cariden`.

License Location Restrictions

The CLI gives you the option to store the license file in one of three locations.

- `$HOME/.cariden/etc`
- `/opt/cariden/etc`
- `/opt/cariden/software/mate/<package>/etc`

Both the Cisco WAE Design GUI and the web UI put licenses only in `$HOME/.cariden/etc`.

- If installing dedicated licenses for both WAE Core and non-WAE Core, you must install the licenses in the same directory and merge both license files into a single license.
- If installing a dedicated license for WAE Core and a floating license for Cisco WAE Design on the same server, you must install the licenses in different directories.
- You cannot install both a Cisco WAE Design dedicated and a Cisco WAE Design floating license.

Install License from the Web UI



Note

Do not use the web UI for WAE Core licenses or stand-alone WAE Design installations.

Step 1 Start the web server if it is not running.

```
service wae-web-server start
```

Step 2 Choose **System > Licenses**.

Step 3 Click **Upload Traditional License**.

Step 4 Click **Select Licenses**.

- Browse to the location or enter the name of the license file (.lic extension), and click **Open**.
- If there is already a license installed, the default is to overwrite the existing license. To merge the two licenses instead, select the merge option. If you are uncertain whether you have a complete set of desired features in the new license, best practice is to merge the licenses.
- Click **Upload License**.

Step 5 Verify the license installed correctly by locating it on the System > Licenses page.

Install License from the CLI

You can use the CLI to install licenses for all products.



Note

If you are installing both a WAE Core and a non-WAE Core license, you must use the default method that merges the licenses. You are given an option on where to put the license. Choose the same location for both licenses.

- For each license you are installing, run the `license_install` tool, passing it the name of the license file (.lic extension). By default, the tool merges the features granted by the new license with those in an existing license.

```
license_install -file <path>/<filename>.lic
```

When prompted, enter the number associated with the directory in which you want to install the license.

By default, when using `license_install -file`, the tool merges the features granted by the new license with those in an existing license. If you are using only non-WAE Core licenses, you can overwrite the existing license using the `-existing-lic overwrite` option. Before executing this option, be certain that the new license contains all the necessary features because previous features will no longer be available. Do not use this overwrite option if installing licenses for both non-WAE Core and WAE Core.

```
license_install -file <path>/<filename>.lic -existing-lic overwrite
```

Example: `license_install -file acme/setup/MATEDEDICATED12345678910111213.lic -existing-lic overwrite`

- If you are installing a floating license (for WAE Design only) from the license server (that is, you do not have the license file), use both the `-server-host` and `-server-mac` options. The MAC address must be a 12-digit hexadecimal number without any colon (:) separators.

```
license_install -server-host <license_server_hostname> -server-mac <license_server_MAC_address>
```

If the `-server-port` option is not specified, ports 27000-27009 are scanned to find the license server port and connect to it. Optionally, you can enter the license server's TCP port number using a range of 1024 to 65535. The default license server port is 27000.

Cisco WAE Design Licenses

To use the WAE Design GUI, you need either a dedicated license, floating license, or a Smart License subscription. **Regardless of the license type or method of installation, you need only install it one time.**

For information on enabling Smart License for WAE Design, see the *Cisco WAE Design GUI Installation Guide*.

Dedicated Licenses	Checked Out Floating Licenses	Borrowed Floating
<ul style="list-style-type: none"> Each license is unique to a specific device. Always available (until expiration). No network connectivity is required. Must be downloaded to an accessible device. 	<p>The FlexNet Publisher license server must be set up (usually by a system administrator). For information on setting up this license server, see WAE Design Floating License Server.</p> <ul style="list-style-type: none"> A single license is shared amongst users who have permission from the license server. You must have connectivity to the license server. There are a maximum number of licenses, and you cannot check out one if they are all in use. You must either download the floating license to an accessible device, or know the hostname and MAC address of the license server. To connect to a different port, you need to know the license server's port number. Regardless of the method used, you must install the license one time. Thereafter, it is automatically checked out from the server when starting the GUI or any CLI tool. When the GUI is closed or the tool stops, the license is checked in to the license server for use by others. 	<ul style="list-style-type: none"> Users borrow licenses that are stored on the license server for a user-specified number of days. Other users cannot use the borrowed license. You must install the license one time. Thereafter, it is available for borrowing. After borrowing the license file once, it is available until you return it or until the number of days for which it is borrowed expires. If you do not return it, the license expires. Connectivity to the license server is required to borrow a license, but is not required when using a borrowed license. You must also have connectivity if returning a borrowed license prior to its expiration date. You cannot borrow a license if a dedicated license is already installed.

Install License from Cisco WAE Design GUI

To use the Cisco WAE Design GUI, you need either a dedicated or a floating license. **Regardless of the license type or method of installation, you need only install it one time.** If it is a floating license, thereafter when you start Cisco WAE Design, the floating license will be available for checking out or borrowing.

To verify a license and its features, select **File > License > Check**.



Note

If you have installed a license for use by the WAE Core modules, do not use the overwrite option when installing a Cisco WAE Design license.

Before You Begin

For a dedicated or floating license, confirm that you have the license on an accessible device.

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- Step 1** From the WAE Design, choose **File > License > Install**.
- Step 2** Choose **From license file**.
- Step 3** Browse to the location or enter the name of the license file (.lic extension), and click **Open**.

- Step 4** Click **OK** to confirm the license installation. If there is already a license installed, you are prompted to either merge or replace the existing license. If you are uncertain whether you have a complete set of desired features in the new license, the best practice is to merge the licenses.
- Step 5** Do one of the following:
- If you are installing a dedicated license, choose **From license file**. Click **Browse** to navigate to the location or enter the name of the license file (.lic extension).
 - If you are installing a floating license from the license server (that is, you do not have the license file), choose **Specify license server**. Enter both the hostname and the MAC address of the license server. The MAC address must be a 12-digit hexadecimal number without any colon (:) separators. If the port is not specified, ports 27000-27009 are scanned to find the license server port and connect to it. Optionally, you can enter the license server's TCP port number using a range of 1024 to 65535. The default license server port is 27000. If using Windows, it is recommended that you specify the port.
 - If you are enabling Smart Licensing, click **Specify smart license service information**. Enter the hostname of the server and the port being used. The default port is 8443.
- Step 6** Click **OK** to confirm the license installation.
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Borrow and Return Floating Licenses

If you have installed a floating license, you can borrow a license from the server for up to 30 days. The license is automatically returned to the license server at 11:59 PM on the last day (based on the local time on the floating license server).

You must have connectivity to the floating license server to borrow a license or to return it prior to the specified date. Connectivity is not required, however, during the period of time for which you are borrowing the license.

The number of remaining available days for the license is listed directly in the File > License > Borrow menu. To determine the exact date on which the license will expire, use the File > License > Check menu.

Using the WAE Design GUI

To borrow a license, follow these steps.

- Step 1** From the Cisco WAE Design GUI, select **File > License > Borrow**.
- Step 2** Enter the number of days you want to borrow the license (integer from 1 to 30), and click **OK**.
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To return a borrowed license, follow these steps.

- Step 1** From the Cisco WAE Design GUI, select **File > License > Borrow**.
- Step 2** Click **OK** in the confirmation message.
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Using the CLI

To determine the number of days before the license expires and the exact date on which the license expires, use the `license_check` command.

To borrow a license, use the `license_borrow` command and specify the number of days (integer from 1 to 30).

Example: `license_borrow -num-days 23`

To return a license, use the `license_return` command. There are no required or optional options.

Example: `license_install -server-host lic.cisco.com -server-mac 1a2b3c4d5e6f
-server-port 27000`

To verify a license and its features, run the `license_check` tool. To see descriptions of the license features, use the `-detail` option (which defaults to `true`).

Example: `license_check -detail`