



Cisco ISE Licenses

This chapter describes the licensing mechanism and schemes that are available for Cisco ISE and how to add and upgrade licenses.

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Cisco ISE Licenses

Cisco ISE licensing provides the ability to manage the application features and access, such as the number of concurrent endpoints that can use Cisco ISE network resources.

To maximize economy for customers, licensing in Cisco ISE is supplied in different packages as Base, Plus, Apex, and Mobility Upgrade.

All Cisco ISE appliances are supplied with a 90-day Evaluation license. To continue to use Cisco ISE services after the 90-day Evaluation license expires, and to support more than 100 concurrent endpoints on the network, you must obtain and register Base licenses for the number of concurrent users on your system. If you require additional functionality, you will need Plus and/or Apex licenses to enable that functionality.

Licenses are uploaded to the Primary Administration node and propagated to the other Cisco ISE nodes in the cluster. Licenses are centrally managed by the Administration node, the other nodes do not require separate licenses. If you have two Administration nodes deployed in a high-availability pair, you must ensure that each of them have the same license capabilities. Generate licenses with both UDIs and then add the licenses while each node is in a standalone or primary state.

After you install the Cisco ISE software and initially configure the appliance as the primary Administration node, you must obtain a license for Cisco ISE and then register that license. You register all licenses to the Cisco ISE primary Administration node via the primary and secondary Administration node hardware UID. The primary Administration node then centrally manages all the licenses that are registered for your deployment.

Cisco recommends installing both Base and Plus or Apex licenses at the same time.

- Using a Plus or Apex license requires also using a Base license. However, you do not need a Plus license in order to have an Apex license or vice versa, since there is no overlap in their functionality.
- When you install a Base or Mobility Upgrade license, Cisco ISE continues to use the default Evaluation license as a separate license for the remainder of its duration.

- You cannot upgrade the Evaluation license to an Plus and/or Apex license without first installing the Base license.
- Cisco ISE allows you to use more Plus and/or Apex licenses on the system than Base licenses. For example, you can have 100 Base licenses and Plus licenses.
- When you install a Mobility Upgrade license, Cisco ISE enables all Wired, Wireless, and VPN services.

Table 1: Cisco ISE License Packages

ISE License Packages	Perpetual/Subscription (Terms Available)	ISE Functionality Covered	Notes
Base	Perpetual	<ul style="list-style-type: none"> • Basic network access: AAA, IEEE-802.1X • Guest management • Link encryption (MACSec) • TrustSec • ISE Application Programming Interfaces 	
Plus	Subscription (1, 3, or 5 years)	<ul style="list-style-type: none"> • Bring Your Own Device (BYOD) with built-in Certificate Authority Services • Profiling and Feed Services • Endpoint Protection Service (EPS) • Cisco pxGrid 	Does not include Base services; a Base license is required to install the Plus license.
Apex	Subscription (1, 3, or 5 years)	<ul style="list-style-type: none"> • Third Party Mobile Device Management (MDM) • Posture Compliance 	Does not include Base services; a Base license is required to install the Apex license.
Mobility	Subscription (1, 3, or 5 years)	Combination of Base, Plus, and Apex for wireless and VPN endpoints	Cannot coexist on a Cisco Administration node with Base, Plus, or Apex Licenses.

Mobility Upgrade	Subscription (1, 3, or 5 years)	Provides wired support to Mobility license	You can only install a Mobility Upgrade License on top of an existing Mobility license.
Evaluation	Temporary (90 days)	Full Cisco ISE functionality is provided for 100 endpoints.	All Cisco ISE appliances are supplied with an Evaluation license.

License Consumption

You purchase licenses for the number of concurrent users on the system. A Cisco ISE user consumes a license during an active session (always a Base; and a Plus and an Apex license, if you use the functionality covered by these licenses). Once the session ends, the license is released for reuse by other users.



Restriction

Cisco ISE license architecture consumption logic relies on authorization policy constructs. Cisco ISE uses the dictionaries and attributes within authorization rules to determine the license to use.

The Cisco ISE license is counted as follows:

- A Base license is consumed for every active session. The same endpoint also consumes Plus and Apex licenses depending on the features that it is using.



Note

TACACS+ sessions do not consume a base license, but RADIUS sessions consume a base license.

- The endpoint consumes the Base license before it consumes a Plus and Apex license.
- The endpoint consumes the Plus license before it consumes an Apex license.
- One Plus license is consumed per endpoint for any assortment of the license's features. Likewise, one Apex license is consumed per endpoint for any assortment of its features.
- Licenses are counted against concurrent, active sessions.
- Licenses are released for all features when the endpoint's session ends.
- A Plus license turns on the pxGrid feature. This feature does not consume licenses.
- One AnyConnect Apex user license is consumed by each user who uses AnyConnect regardless of the number of devices that the user owns and whether or not the user has an active connection to the network.
- You can enable the TACACS+ service by adding a Device Administration license on top of an existing Base or Mobility license. This feature does not consume licenses.

To avoid service disruption, Cisco ISE continues to provide services to endpoints that exceed license entitlement. Cisco ISE instead relies on RADIUS accounting functions to track concurrent endpoints on the network and generates an alarm when the endpoint count of the previous day exceeded the amount of licenses.

View License Consumption

You can view your system's current license consumption from the Licensing dashboard at: **Administration > System > Licensing**. The License Consumption graph, in the **License Usage** area, is updated every 30 minutes. This window also displays the type of licenses purchased, the total number of concurrent users permitted on the system, and the expiry date of subscription services.

If you want to see your system's license consumption over multiple weeks, click **Usage Over Time**. Each bar in the graph shows the maximum number of licenses used during a period of one week.

Unregistered License Consumption

Problem

License consumption relies on the attributes used in the authorization policy with which the endpoint is matched.

Consider you only have a Base license registered on your system (you deleted the 90-day Evaluation license). You will be able to see and configure the corresponding Base menu items and features.

If you configure (mis-configure) an authorization policy to use a feature (for example: Session:PostureStatus) that requires an Apex license, and if an endpoint matches this authorization policy then:

- The endpoint will consume an Apex license, despite the fact that an Apex license has not been registered on the system.
- Notifications to this effect will appear whenever you log in.
- Cisco ISE will give notifications and alarms "Exceeded license usage than allowed" (technically, this is to be expected as there are no registered Apex licenses on the system, but an endpoint is never-the-less consuming one).

Possible Causes

Due to authorization policy mis-configuration, the Licensing dashboard can show that Cisco ISE is consuming a license you have not purchased and registered. Before you purchase Plus and Apex licenses, the ISE user interface does not display the functionality covered by those licenses. However, once you have purchased these licenses, the user interface continues to display their functionality even after the license has expired or exceeded its endpoint consumption. Thus, you are able to configure them even if you do not have a valid license for them.

Solution

Choose **Policy > Authorization**, identify the rule that is using the feature(s) for which you do not have a registered license, and reconfigure that rule.

Manage License Files

This section explains how to register, re-host, renew, migrate, upgrade, and remove ISE licenses:

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- [Re-Host Licenses](#), on page 6
- [Renew Licenses](#), on page 6
- [Migrate and Upgrade Licenses](#), on page 6
- [Remove Licenses](#), on page 7

Register Licenses

Before You Begin

Consult your Cisco partner/account team about the types of licenses and number of concurrent users you require for your installation, together with the various packages you can purchase to maximize economy.

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- Step 1** From the ordering system (Cisco Commerce Workspace - CCW) on Cisco's website www.cisco.com, order the required licenses.
After about an hour, an email confirmation containing the Product Authorization Key (PAK) is sent.
- Step 2** From the Cisco ISE Administration portal, choose the Licensing dashboard **Administration > System > Licensing**. Make a note of the node information in the **Licensing Details** section: Product Identifier (PID), Version Identifier (VID), and Serial Number (SN).
- Step 3** Go to www.cisco.com/go/licensing, and where prompted, enter the PAK of the license you received, the node information, and some details about your company.
After one day, Cisco sends you the license file.
- Step 4** Save this license file to a known location on your system.
- Step 5** From the Cisco ISE Administration portal, choose **Administration > System > Licensing**. In the **License Files** section, click the **Import License** button.
- Step 6** Click **Choose File** and select the license file you previously stored on your system.
- Step 7** Click **Import**.
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The new license is now installed on your system.

What to Do Next

Choose the licensing dashboard, **Administration > System > Licensing**, and verify that the newly-entered license appears with the correct details.

Re-Host Licenses

Re-hosting means moving a license from one Cisco ISE node to another. From the licensing portal, you select the PAK of the license you want to move and follow the instructions for re-hosting. After one day, you are sent an email with a new PAK. You then register this new PAK for the new node, and remove the old license from the original Cisco ISE node.

Renew Licenses

Subscription licenses, such as Plus and Apex licenses, are issued for 1, 3 or 5 years. Cisco ISE sends an alarm when licenses are near their expiration date and again when the licenses expire.

Licenses must be renewed after they expire. This process is carried out by your Cisco partner or account team only.

Migrate and Upgrade Licenses

Cisco licensing policy supports migration from previous Cisco ISE versions, upgrading from wireless and VPN only to include wired deployments, and adding concurrent users and functionality. Existing Wireless/Wireless Upgrade deployment will be migrated to Mobility/Mobility Upgrade package during upgrade from Cisco ISE version 1.2 to 1.3. You can also purchase bundles of licenses to minimize your ongoing expenses. These scenarios are all covered in the [licensing site](#), or for more information contact your Cisco partner/account team.



Note If you have migrated from Cisco ISE version 1.2, your Advanced license covers all the features in both Plus and Apex licenses.



Note After upgrading from Cisco ISE version 1.2, the system will show the default Evaluation license only if it existed on the system prior to upgrade.



Note Mobility/Mobility Upgrade license is always displayed as Base/Plus/Apex in the user interface with its corresponding number of end points.

If your Cisco ISE node needs to support:

- A larger number of concurrent users than the number for which you have licenses
- Wired (LAN) access, and your system has only the Mobility license

You will need to upgrade your license(s) for that node. This process is carried out by your Cisco partner or account team only.

Remove Licenses

Before You Begin

Keep the following in mind before attempting to remove a license:

- If you have installed a Mobility Upgrade license after a Mobility license, you must remove the Mobility Upgrade license before you can remove the underlying Mobility license.
- If you install a combined license, all related installations in the Base, Plus, and Apex packages are also removed.

Step 1 Choose **Administration > System > Licensing**

Step 2 In the **License Files** section, click the check next to the relevant file name, and click **Delete License**.

Step 3 Click **OK**.
