Configuring Cisco Right-To-Use License

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Finding Feature Information

Your software release may not support all the features documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the Feature Information for Cisco Right-To-Use License, page 13.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to http://www.cisco.com/go/cfn. An account on Cisco.com is not required.

Contents

- Prerequisites for Cisco Right-To-Use License, page 1
- Restrictions for Cisco Right-To-Use License, page 2
- Information About Cisco Right-To-Use License, page 2
- Configuration Examples for Right-To-Use Supported Software Licenses, page 5
- Additional References, page 11
- Feature Information for Cisco Right-To-Use License, page 13

Prerequisites for Cisco Right-To-Use License

- You must obtain the device certificate from the Cisco licensing infrastructure before starting.
- You must have a CCO user login account.
Restrictions for Cisco Right-To-Use License

The restrictions and limitations for the Right-To-Use license include:

On the Cisco ASR 1001 Router, if you downgrade from IOS XE.3.6.0S image to a prior release, all the installed licenses become invalid and you cannot use the associated features.

If you upgrade from prior IOS XE releases to IOS XE 3.6.0S and above, all the license are converted automatically. If you downgrade and then upgrade back to IOS XE 3.6.0S, the license are not converted. Licenses installed in the downgrade versions are not visible.

Information About Cisco Right-To-Use License

- Overview, page 2
- Right-To-Use Supported Software Licenses, page 2
- Evaluation and Right-To-Use Licenses, page 3

Overview

Cisco licensing mechanism provides flexibility to run a device at different technology package levels. This mechanism is referred to as Technology Package licensing. Technology package licensing leverages the universal technology package based licensing solution. A universal image containing all levels of a software package is loaded on to the device. During startup, the device determines the highest level of license and loads the corresponding software features or subsystems.

The Cisco ASR 1001 and ASR 1002-X Routers support technology package based licenses that are not node locked. Technology packages and feature licenses are activated using evaluation licenses that are built-in. Evaluation licenses are limited period metered licenses that are valid for 60 days. When the time allowed for an evaluation licenses expires, the evaluation licenses automatically upgrade to Right-To-Use (RTU) license. Once the RTU licenses are activated, there is no expiration, it is valid for a life-time.

To enable the evaluation licence you have to accept the global end user license agreement (EULA).


Right-To-Use Supported Software Licenses

This section describes various RTU supported software licenses.

Note

Permanent licenses are not affected by IOS XE release upgrades.

An evaluation license is required to activate the licensed features. When the router enters the configuration mode, a check is performed to verify the license. Feature configurations are allowed, only if, valid licenses are available. If a Permanent license does not exist, IOS activates an RTU license when you accept the EULA agreement and the corresponding IOS functionality will be available.

The RTU license supported software features include:
You have to accept the EULA to activate the feature. Migration of permanent license from previous versions of the software images are seamless. For information on accepting the EULA, see Example: Accepting Global EULA, page 6.

## Evaluation and Right-To-Use Licenses

Table 1 lists the Evaluation and Right-To-Use licenses available on the Cisco ASR 1000 Series Routers.

<table>
<thead>
<tr>
<th>License name</th>
<th>License Description</th>
<th>Evaluation License</th>
<th>Right-To-Use License</th>
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<tbody>
<tr>
<td>FLS-ASR1001-5G</td>
<td>Upgrade from 2.5G to 5G license for ASR1001</td>
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<td>No</td>
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<td>FLSASR1-IOSRED</td>
<td>SW Redundancy License for ASR1000 Series</td>
<td>Yes</td>
<td>Yes</td>
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<td>FLSASR1-IPSEC</td>
<td>IPSEC License for ASR1000 Series</td>
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<td>Yes</td>
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<td>FLSASR1-FW</td>
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<tr>
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<td>Flex. Pack. Insp License for ASR1000 Series</td>
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<td>Yes</td>
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<tr>
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<td>Firewall/NAT Stateful Inter-Chassis Redundancy License</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>FLSASR1-LI</td>
<td>Lawful Intercept License for ASR1000 Series</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>FLSASR1-BB</td>
<td>Broadband License for ASR1000 Series</td>
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<td>Yes</td>
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<td>FLSASR1-BB-4K</td>
<td>Broadband 4K Sessions for ASR1000 Series</td>
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<tr>
<td>FLSASR1-BB-16K</td>
<td>Broadband 16K Sessions for ASR1000 Series</td>
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<td>Yes</td>
</tr>
<tr>
<td>FLSASR1-BB-32K</td>
<td>Broadband 32K Sessions for ASR1000 Series</td>
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<td>Yes</td>
</tr>
<tr>
<td>FLSASR1-CS-250P</td>
<td>CUBE(SP) 250 Session License for ASR1000 Series</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>FLSASR1-CS-2KP</td>
<td>CUBE(SP) 2K Session License for ASR1000 Series</td>
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<td>Yes</td>
</tr>
<tr>
<td>FLSASR1-CS-4KP</td>
<td>CUBE(SP) 4K Session License for ASR1000 Series</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>FLSASR1-CS-16KP</td>
<td>CUBE(SP) 16K Session License for ASR1000 Series</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>FLSASR1-CS-32KP</td>
<td>CUBE(SP) 32K Session License for ASR1000 Series</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>FLSASR1-CS-LAB</td>
<td>CUBE(SP) Lab Use Only Lic for ASR1000 Series</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>FLSASR1-CS-TPEX</td>
<td>CUBE(SP) License for ASR1000 in Video/B2BTP Ex</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>SLASR1-AIS</td>
<td>Cisco ASR 1000 Advanced IP Services License</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>SLASR1-AES</td>
<td>Cisco ASR 1000 Advanced Enterprise Services License</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
How to Activate an Evaluation License

To activate an evaluation license for the technology package perform the steps detailed in this section. For more information on activating the feature licenses, see Configuration Examples for Right-To-Use Supported Software Licenses, page 5.

Evaluation Right-To-Use licenses automatically changes to Right-To-Use licenses after the evaluation period of 60 days.

Evaluation licenses are activated using the `license boot level {adventerprise | advipservices | ipbase}` command.

**SUMMARY STEPS**

1. `enable`
2. `configure terminal`
3. `license boot level {adventerprise | advipservices | ipbase}`
4. `exit`
5. `copy running-config startup-config`
6. `reload`

**DETAILED STEPS**

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
</table>
| **Step 1** `enable` | Enables privileged EXEC mode.  
  * Enter your password if prompted.  |
| **Example:** Router>enable | |
| **Step 2** `configure terminal` | Enters global configuration mode. |
| **Example:** Router#configure terminal | |
### Example

The following example shows how to activate an evaluation license:

```
Router>enable
Router#configure terminal
Router(config)#license boot level adventerprise
% use ‘write’ command to make license boot config take effect on next boot
Router(config)#exit
Router#copy running-config startup-config
Router#reload
```

### Configuration Examples for Right-To-Use Supported Software Licenses

This section provides the following configuration examples:

- Configuring Throughput, page 6
- Example: Accepting Global EULA, page 6
- Example: Accepting EULA for Software Redundancy License, page 6
- Example: Accepting EULA for Inter-Chassis Redundancy License, page 7
- Example: Accepting EULA for Lawful Intercept License, page 8
Configuring Throughput

You can upgrade the throughput of the ESP from 2.5 Gbps to 5 Gbps by activating the right-to-use license.

For information on configuring throughput on the Cisco ASR 1001 Router, see Cisco ASR 1001 Router Quick Start Guide.

For information on configuring throughput on the Cisco ASR 1002-X Router, see Cisco ASR 1001 Router Quick Start Guide.

Example: Accepting Global EULA

When activating the evaluation license, accept the global EULA. Once accepted, the global EULA will be valid for all the future license activations including the RTU.

Perform the following actions when required:

Router(config)#license accept end user agreement

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Your acceptance of this agreement for the software features on one product shall be deemed your acceptance with respect to all such software on all Cisco products you purchase which includes the same software. (The foregoing notwithstanding, you must purchase a license for each software feature you use past the 60 days evaluation period, so that if you enable a software feature on 1000 devices, you must purchase 1000 licenses for use past the 60 day evaluation period.)

Activation of the software command line interface will be evidence of your acceptance of this agreement.

ACCEPT? (yes/[no]): Yes
Router(config)#

*Jul 6 09:36:11.293: %LICENSE-6-EULA_ACCEPT_ALL: The Right to Use End User License Agreement is accepted

Example: Accepting EULA for Software Redundancy License

The following examples shows the acceptance of EULA for software redundancy feature
Example: Accepting EULA for Inter-Chassis Redundancy License

The following examples shows the acceptance of EULA for application redundancy feature

Router(config-red)#application redundancy

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Activation of the software command line interface will be evidence of your acceptance of this agreement.

ACCEPT? (yes/[no]): yes

Router(config-red)#
responsibility to determine when the evaluation period is complete and you are required to make payment to Cisco for your use of the product feature beyond the evaluation period.

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Activation of the software command line interface will be evidence of your acceptance of this agreement.
ACCEPT? (yes/[no]): yes

Example: Accepting EULA for Lawful Intercept License

The following MIBs are required to activate lawful intercept feature:

- `snmp-server view INTERCEPT_VIEW ciscoIpTapMIB`
- `snmp-server view INTERCEPT_VIEW cisco802TapMIB`
- `snmp-server view INTERCEPT_VIEW ciscoTap2MIB`

The following examples shows the acceptance of EULA for lawful intercept feature

```
Router(config-red)#snmp-server view INTERCEPT_VIEW ciscoIpTapMIB included
```

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Activation of the software command line interface will be evidence of your acceptance of this agreement.
ACCEPT? (yes/[no]): yes
Example: Sample output for Show Commands

In the following examples, the output is displayed for show commands:

**Sample Output for the show license EULA Command**

```
Router# show license EULA
Feature name     EULA Accepted
---------------  ---------------
adventerprise   yes
advipservices    no
ipbase          n/a
avc             n/a
broadband       n/a
broadband_4k    n/a
cube_250        n/a
cube_250_red    n/a
cube_ent_100    n/a
cube_ent_100_red n/a
cube_lab        n/a
cube_video_b2btp n/a
cube_video_b2btp_red n/a
firewall        n/a
fpi             n/a
fwnat_red       no
gtp_addon_aic   n/a
internal_service n/a
ipsec           no
lawful_intr     no
lisp            n/a
nat64_stateful_2m n/a
otv             n/a
sgt_fw          n/a
sw_redundancy   yes
throughput_10g  no
throughput_20g  no
throughput_36g  no
vpls            n/a
```

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Your acceptance of this agreement for the software features on one product shall be deemed your acceptance with respect to all such software on all Cisco products you purchase which includes the same software. (The foregoing notwithstanding, you must purchase a license for each software feature you use past the 60 days evaluation period, so that if you enable a software feature on 1000 devices, you must purchase 1000 licenses for use past the 60 day evaluation period.)

Activation of the software command line interface will be evidence of your acceptance of this agreement.

Sample Output for the show license all Command

Router#show license all
License Store: Primary License Storage
License Store: Built-In License Storage
StoreIndex: 0  Feature: adventerprise Version: 1.0
  License Type: EvalRightToUse
  License State: Active, In Use
  Evaluation total period: 8 weeks 4 days
  Evaluation period left: 6 weeks 2 days
  Period used: 2 weeks 1 day
  Transition date: Aug 24 2012 05:14:39
  License Count: Non-Counted
  License Priority: Low
StoreIndex: 1  Feature: advipservices Version: 1.0
  License Type: EvalRightToUse
  License State: Active, Not in Use, EULA not accepted
  Evaluation total period: 8 weeks 4 days
  Evaluation period left: 8 weeks 4 days
  Period used: 0 minute 0 second
  License Count: Non-Counted
  License Priority: None
StoreIndex: 2  Feature: fwmnat_red Version: 1.0
  License Type: EvalRightToUse
  License State: Active, Not in Use, EULA not accepted
  Evaluation total period: 8 weeks 4 days
  Evaluation period left: 8 weeks 4 days
  Period used: 0 minute 0 second
  License Count: Non-Counted
  License Priority: None
StoreIndex: 3  Feature: ipsec Version: 1.0
  License Type: EvalRightToUse
  License State: Active, Not in Use, EULA not accepted
  Evaluation total period: 8 weeks 4 days
  Evaluation period left: 8 weeks 4 days
  Period used: 0 minute 0 second
  License Count: Non-Counted
  License Priority: None
StoreIndex: 4  Feature: lawful_intr Version: 1.0
  License Type: EvalRightToUse
  License State: Active, Not in Use, EULA not accepted
  Evaluation total period: 8 weeks 4 days
  Evaluation period left: 8 weeks 4 days
  Period used: 0 minute 0 second
  License Count: Non-Counted
  License Priority: None
StoreIndex: 5  Feature: sw_redundancy Version: 1.0
  License Type: RightToUse
  License State: Active, In Use
License Count: Non-Counted  
License Priority: Low  
StoreIndex: 6  Feature: throughput_10g  Version: 1.0  
License Type: EvalRightToUse  
License State: Active, Not in Use, EULA not accepted  
Evaluation total period: 8 weeks 4 days  
Evaluation period left: 8 weeks 4 days  
Period used: 0 minute 0 second  
License Count: Non-Counted  
License Priority: None  
StoreIndex: 7  Feature: throughput_20g  Version: 1.0  
License Type: EvalRightToUse  
License State: Active, Not in Use, EULA not accepted  
Evaluation total period: 8 weeks 4 days  
Evaluation period left: 8 weeks 4 days  
Period used: 0 minute 0 second  
License Count: Non-Counted  
License Priority: None  
StoreIndex: 8  Feature: throughput_36g  Version: 1.0  
License Type: EvalRightToUse  
License State: Active, Not in Use, EULA not accepted  
Evaluation total period: 8 weeks 4 days  
Evaluation period left: 8 weeks 4 days  
Period used: 0 minute 0 second  
License Count: Non-Counted  
License Priority: None

Additional References

Related Documents

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<tr>
<th>Related Topic</th>
<th>Document Title</th>
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<tr>
<td>Cisco IOS commands</td>
<td><em>Cisco IOS Master Commands List, All Releases</em></td>
</tr>
<tr>
<td>Cisco IOS Software Activation Commands</td>
<td><em>Cisco IOS Software Activation Command Reference</em></td>
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MIBs

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<th>MIBs Link</th>
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<td><code>snmp-server view INTERCEPT_VIEW ciscoIpTapMIB</code></td>
<td>To locate and download MIBs for selected platforms, Cisco software releases, and feature sets, use Cisco MIB Locator found at the following URL:</td>
</tr>
<tr>
<td><code>snmp-server view INTERCEPT_VIEW ciscoTap2MIB</code></td>
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## Technical Assistance

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<td>The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.</td>
<td><a href="http://www.cisco.com/cisco/web/support/index.html">http://www.cisco.com/cisco/web/support/index.html</a></td>
</tr>
</tbody>
</table>
Feature Information for Cisco Right-To-Use License

Table 2 lists the release history for this feature.

Use Cisco Feature Navigator to find information about platform support and software image support. Cisco Feature Navigator enables you to determine which software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to http://www.cisco.com/go/cfn. An account on Cisco.com is not required.

Table 2 lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

<table>
<thead>
<tr>
<th>Feature Name</th>
<th>Releases</th>
<th>Feature Information</th>
</tr>
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</table>
| Configuring Cisco Right-To-Use License | IOS XE 3.7 | The Cisco ASR 1001 and ASR 1002-X Routers support technology package based licenses that are not node locked. In Cisco IOS XE Release 3.7, this feature was introduced on the Cisco ASR 1000 Series Router. The following sections provide information about this feature:  
  - Information About Cisco Right-To-Use License, page 2  
  - Configuration Examples for Right-To-Use Supported Software Licenses, page 5 |

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