

## Cisco's Integrated Services Routers Generation Two Licensing and Packaging

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## Software Activation Quick Start

Cisco's Integrated Services Routers Generation 2 (ISR G2), built for the next wave of branch office evolution, enables services on demand through the use of software licensing which enables customers to realize operational savings through ease of software ordering and management. The audience for this document is partners, customers, network operators and administrators who deal with procuring, upgrading and replacing software on Integrated Services Routers.

When you order a new ISR G2 platform, the router is shipped with a single universal IOS software image and the corresponding permanent technology and feature licenses that were configured at the time of ordering from Cisco. License activation is not necessary for factory ordered preconfigured licenses prior to use. Licenses are not tied to a particular software image version, therefore once a license is installed on the router migration from release to release can occur without the need to obtain new licenses.

While the predominant licensing and feature activation method for the ISR G2's will be through Cisco Software Activation, there will also be a few features for which Right to Use licensing will still be provided, which are trust based and do not require any activation.

The following prerequisites apply if you are upgrading or installing a new software activation license on Cisco ISR G2:

- If you do not have a cisco.com username and password, get your username and password by registering at Cisco.com.
- It is recommended that you familiarize yourself with the Cisco software licensing concepts detailed in the Cisco Software Activation Conceptual Overview chapter in the [Cisco IOS Software Activation Configuration Guide](#).

The following steps outline how to install Software Activation licenses for upgrades after initial purchase.

1. Buy Cisco Product Number for the Software Upgrade (e.g. SL-XX-DATA-K9) for upgrading ISR G2 with DATA technology package functionality
2. Cisco will provide the user with a Product Authorization Key (11 digit alphanumeric key)
3. Access the Cisco Licensing portal at [www.cisco.com/go/license](http://www.cisco.com/go/license) and provide the PAK, Serial Number and Product Id of the device to generate a unique license file for the device that can be downloaded or emailed to you.
4. Install the license on the device and reboot to upgrade the software functionality on the router.

When an RMA is conducted, Software Activation licenses other than IP Base, will need to be transferred from the failed device to the replacement device to achieve equivalent software functionality on the replacement router. One needs to know the Product Id and Serial number of the failed and replacement device and needs to interact with Cisco licensing portal to transfer licenses from failed device to replacement device.

### Options for Managing Software Activation Licenses

There are multiple options for generating and managing the software activation licenses on your router.

- [Cisco License Manager](#): Software application that lets you generate, register, install, and manage software licenses on multiple devices on your network.
- [Cisco License Call Home](#): Lets you interact with the Cisco Product License Registration portal directly from your router CLI to generate, install, and manage your licenses.

- [Cisco Product License Registration Portal](#): Lets you manually generate and register software licenses through a registration web portal. These licenses can then be copied to, installed and managed directly on your devices using Cisco IOS CLI.

## Software Activation Overview

Cisco IOS Software has traditionally been covered by a right-to-use license with one license associated with each device. When a customer began using a Cisco product, the usage automatically constituted acceptance of the license agreement and validated the license for that customer. While this practice made it relatively easy to deploy and begin using the Cisco product, it had implications for tracking hardware and software systems, adding service features, updating and upgrading images, and transferring licenses.

A new software activation approach, introduced with the ISR G2, addresses these issues. Users will now be able to integrate software activation and licensing into their business processes, as well as benefit from the ability to automate and easily track new license deployments across their infrastructures. The ISR G2 will have a universal Cisco IOS Software image installed encompassing all IOS functionality. This means that a consistent image is deployed and only one archive image must be maintained per device. This presents a significant reduction in the number of images that need to be qualified and approved for any network.

A Software Activation License is also preinstalled on the device, which activates the specific functionality that the user procures. Each Software Activation License is unique to a specific device and functions only with that device. The Software Activation License includes that router's product ID number, serial number, and a Product Authorization Key (PAK). When a user purchases new software capabilities for a deployed router, the user receives a PAK—a short alphanumeric string provided by Cisco as a “proof of purchase” when a software feature set is purchased from Cisco. This PAK is used for generating software licenses on specific routers. A new license is needed only when adding new feature sets. For example, advancing a device from the IP base feature set to DATA technology package feature set requires a new Software Activation License. However, migrating software images from one release to another (e.g. from 15.0(1)T to 15.0(2)T) does not require a new license.

When the device is powered on, the Software Activation License is examined by Cisco IOS Software, which activates the appropriate feature sets. Unlike previous right-to-use licenses, the new approach helps users simplify deployment of new routers and maintain an accurate record of the specific image, functionality, and additional features that are activated on each device by providing a definitive mechanism that ensures the correct software features are licensed on every device.

## Software Activation Terminology and Details

### Universal Image

Each 1900, 2900 and 3900 system is loaded with a universal Cisco IOS image. Universal IOS image contains all Cisco IOS features. The level of Cisco IOS functionality available is determined by the combination of one or more licenses installed on the device.

There will be two versions of universal images supported on the next generation ISRs.

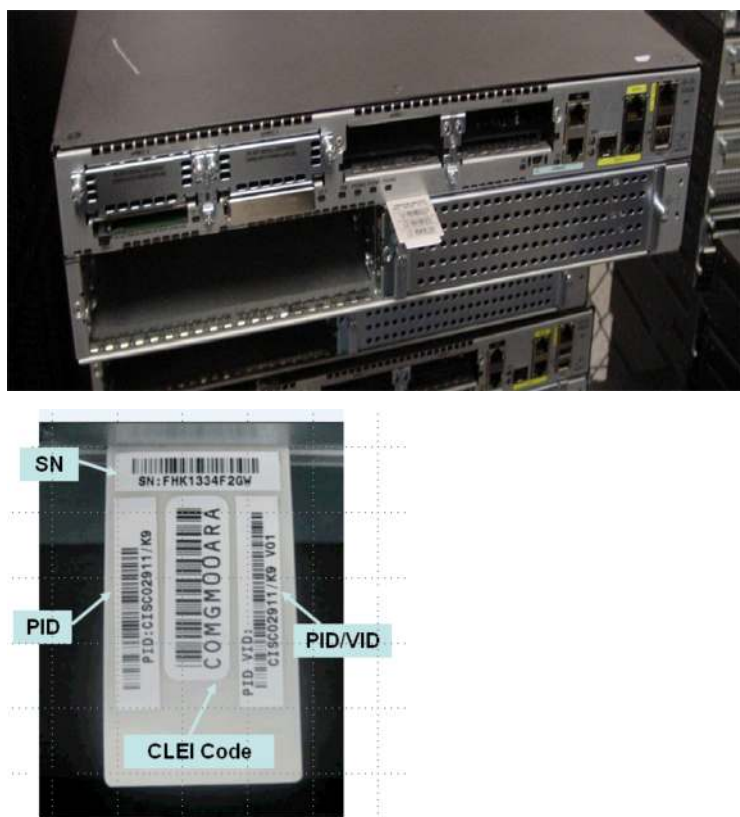
1. Universal images with the “universalk9” designation in the image name: This universal image offers all the Cisco IOS features including strong crypto features such as VPN payload, Secure UC etc.
2. Universal images with the universalk9\_npe” designation in the image name: The robust licensing encryption solution provided by Cisco Software Activation satisfies requirements for the export of encryption capabilities. However, some countries have import requirements that require that the device does not support any strong crypto functionality such as VPN payload etc. in any form. To satisfy the import requirements of those countries,

this universal image does not support any strong payload encryption such as VPN payload, secure voice etc. This image supports threat defense features through SECNPE-K9 license.

### Unique Device Identifier (UDI)

The Unique Device Identifier is made up of two components: the Product ID (PID) and Serial Number (SN). Serial Number is an 11 digit number which uniquely identifies a device. The Product ID identifies the type of device. This information can be found using the “show license UDI” command on the router CLI. This information is also present on a pull-out label tray found on the device. You may have to remove "V01" that follows the PID. eg. use only "CISCO2921/K9", instead of "CISCO2921/K9 V01".

Figure 1.



### Software Activation License (SAL)

A Software Activation License is provided by Cisco by specifying the Product Id, Serial Number of the device and the Product Activation Key (PAK). i.e. Product ID + Serial Number + PAK = Software Activation License. New devices are shipped with Software Activation License pre-installed for features ordered with the router. New functionality can be enabled with a new SAL. A Software Activation License (SAL) enables specific functionality e.g. DATA technology package license enables DATA technology functionality in the IOS Universal image. Each SAL is unique to a particular device and cannot be used on a different device. A technology package or feature set is purchased via a “Product Activation Key” (PAK).

A Software Activation License is an XML text file with a .lic extension(example below).

Figure 2.

```
<?xml version="1.0" encoding="UTF-8"?><CISCO_WT_ARTIFACTS
  version="1.0"><CISCO_WT_LICENSE
    version="1.0"><FEATURE_NAME>datak9</FEATURE_NAME><FEATURE_VERSION>1.0</FEATURE_VERSION><UDI><PID><
    ISCO2951</PID><SN>FHH1216P06Z</SN></UDI><SOURCE>CISCO
    HQ</SOURCE><CREATE_DATE>2009-07-16T17:55:23</CREATE_DATE><LICENSE_LINE_HASH
    hashAlgo="SHA1">VP3m+D/24ixBmUJy1Yg04sEpMD0=</LICENSE_LINE_HASH><TYPE>PERMANENT</TYPE><LICENSE_LIN
    E><![CDATA[11 datak9 1.0 LONG NORMAL STANDALONE EXCL INFINITE_KEYS INFINITE_KEYS NEVER NEVER NIL
    SLM_CODE CLM_NO_LCK NIL *126MQ23F8S6U3Q2400 N4L N4L N4L 5_MINS
    <UDI><PID>CISCO2951</PID><SN>FHH1216P06Z</SN></UDI>
    Lpape5mLPHbwkvc:523x12y00y07q,Pe5hxyPV73vLL1m02buz7mL0x1Uy0rE-wxL2sL63A56y:vgL1A1W3Cwky7kqly
    yDT03P520L::D72tkcg4swm3GM9hdNLCa$<KWC>AQEDICAC77420RkX2BuJ_7uc2mVc0wCznR22CR7A6pcF4Rr0Ecm7FehG
    wq7HrA-hihLUuq]LeRqW1nX03s+hsLU7r0ldX01x72Au3LmLJ+M-zsq]hr0JW]PyeEg5H2LVHLjvbr0u0gy1Wsy1Jm8A4k
    <UDI>CISCO2951</UDI><SN>FHH1216P06Z</SN><KWC>AQEDICAC77420RkX2BuJ_7uc2mVc0wCznR22CR7A6pcF4Rr0Ecm7FehG
    length."></LICENSE_LINE><USER_MODIFIABLE_COMMENT
    (1) Product Name="Max 89-AS-TT-Data-K9s" in
    </USER_MODIFIABLE_COMMENT></CISCO_WT_LICENSE>
  </CISCO_WT_ARTIFACTS>
```

### Product Activation Key (PAK)

A PAK is an 11 digit alphanumeric key created by Cisco manufacturing that identifies a specific software purchase. PAKs are not tied to a specific device until they are used to generate a software activation license. PAKs can be ordered independently for feature upgrades. PAKs do not have an expiration date and can be redeemed any time after purchase.

Delivery of PAKs can be paper based or electronic. Paper based PAKs begin with SL- for technology package licenses and FL- for Feature licenses. Customers ordering paper based PAKs are sent a software claim certificate by mail identifying their PAK string. Below is the example of a PAK.

Product Name: SL-XX-DATA-K9=

Product Qty: 1

Product Authorization Key: 4XCSSL26588E

Electronic PAKs begin with L-SL for technology package licenses and L-FL for Feature licenses. Customers ordering an electronic PAK receive an email which points to a secure portal where they can download a pdf file containing the PAK information shown above. This information is sent to the customer in a matter of minutes after purchase.

### Cisco License Manager

Cisco<sup>®</sup> License Manager is a free software application that helps system administrators easily acquire and deploy Cisco IOS<sup>®</sup> Software licenses on Cisco devices—as well as manage the status of licenses for an entire network. CLM version 3.0 fully supports the ISR G2.

For more details and to download CLM, please visit <http://www.cisco.com/go/clm>.

### License Types Available on the ISR G2

#### Permanent Licenses

Permanent licenses are valid for the life of the device on which it is installed. Some examples of permanent licenses are IOS Technology Packages (IPB, UC, SEC, DATA), Feature Licenses such as SSL VPN etc.

#### Temporary Licenses

Temporary licenses are used for evaluating new capabilities or in emergency situations. A temporary license allows a feature set to be used for 60 days of actual usage. When the 60-day period expires, the device will continue to operate normally until reloaded. After the reload, the device will default to the original functionality before the

temporary license was enabled. Only actual time that the temporary license is enabled counts towards the 60 day limit. The Cisco Technical Assistance Center (TAC) can provide an extension license for longer trials or other circumstances.

### **Feature Licenses**

Some individual features can be enabled or disabled by license keys. These features check for their licenses before enabling themselves. A feature license will typically have a prerequisite before it will function such as a requirement for a Universal Communication license before a CUBE feature license will function. Some examples of feature licenses are CME, CUBE etc.

There are two types of Feature licenses.

### **Software Activation Feature Licenses**

These are typically upgrades to one or more technology Package Licenses and can be included on new routers or upgraded through Cisco Software Activation. These licenses are enforced through Cisco Software Licensing framework.

### **Right to Use Feature Licenses**

These licenses follow the traditional licensing model and do not use Cisco Software Activation. They can be ordered when the router is initially purchased or at a later date.

### **Subscription Licenses**

Subscription licenses are time-based licenses that require the subscriber to periodically renew or the license will expire after an agreed-upon time. Some examples of Subscription license are URL Filtering and IPS.

### **Counted Licenses**

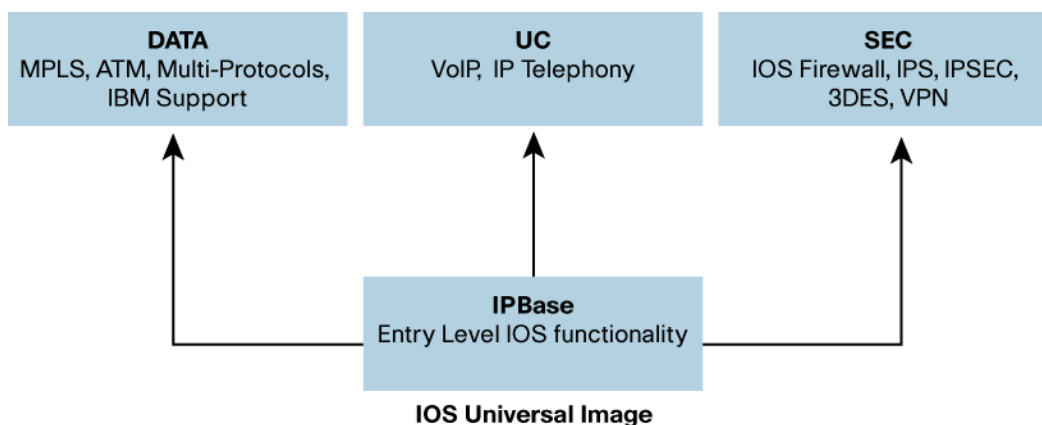
Feature licenses can be either uncounted licenses or counted licenses. Uncounted licenses do not have any count and simply enable the unrestricted feature on the router when activated. Counted licenses enable a defined number of uses e.g. CME User Licenses

## **Universal IOS Packaging Overview**

The Cisco ISR 1900, 2900 and 3900 Series adopt the Universal IOS image model enabling customers to future proof their networks. This revolutionary software module offers a simplified choice of software technology packages providing operational efficiencies and reduced test cycles to enable faster deployment of services. Unlocking of feature sets in the universal image is supported by using Cisco Software license keys.

The simplified packaging model will simplify Software Management through four IOS enforceable technology package licenses that enable full suite of IOS software functionality. IOS technology package upgrades can be done by enabling a new license key, reducing the need for truck-rolls to remote offices. The model supports the “pay as you grow” model by allowing purchase of upgrade as you need via Cisco Software Licensing.

The Universal IOS image is loaded by Cisco manufacturing on all shipped routers. IOS Universal Image contains all IOS features. Feature sets in the universal image are unlocked using licensing keys i.e. the level of IOS functionality available is determined by the license applied to the device. A new license only needs to be applied to upgrade IOS functionality on the router .Maintenance upgrades of IOS i.e. moving from one IOS universal image version to another does not require a new licensing key. Reboot of router is also licensing transparent.

**Figure 3.** IOS Packaging Model for 1900, 2900 and 3900 ISRs

Each device ships with Universal image. IPBase, DATA, UC (Unified Communications) and SEC (Security) technology packages are enabled in the universal image via Cisco Software Activation licensing keys. Each licensing Key is unique to a particular device and is obtained from Cisco by providing the product ID and serial number of the router and a Product Activation Key (PAK), which is provided by Cisco at time of Software purchase. Cisco installs license key(s) for software specified at time of initial router purchase.

On each shipped device IPBase software activation key is installed by default. Additional keys are installed by manufacturing depending on the customer order.

The details of each technology package license can be found in the table below. The new ISR routers also offer Software Activation feature license and Right to Use Feature licenses. The Software Activation feature licenses use the same Software Activation model as the Technology package licenses, while Right to Use Feature licenses are not enforced. Feature licenses work in conjunction with technology package licenses e.g. SSLVPN feature license requires SEC technology package license.

| Technology Package | Details   | Software Activation Feature Licenses  | Right to Use Feature Licenses   |
|--------------------|---|---|---|
| <b>IPBaseK9</b>    | Offers features found in IPBase IOS image on ISR 1800,2800 and 3800 + Flexible Netflow + IPV6 parity for IPV4 features present in IPBase. Some of the key feature are AAA BGP, OSPF, EIGRP, ISIS, RIP PBR IGMP, Multicast DHCP HSRP, GLBP NHRP HTTP HQF QoS ACL, NBAR GRE CDP, ARP NTP PPP PPPoA PPPoE RADIUS TACACS SCTP SMDS SNMP STP VLAN DTP IGMP Snooping SPAN WCCP ISDN ADSL over ISDN NAT—Basic X.25, RSVP, NTP, Flexible Netflow etc. | None  | None  |
| <b>SECK9</b>       | Offers the security features found in Advanced Security IOS image on ISR 1800,2800 and 3800 e.g. IKE v1 / IPsec / PKI, IPsec/GRE, Easy VPN w/ DVTI, DMVPN, Static VTI, Firewall, Network Foundation Protection,GETVPN etc.  | SSLVPN (counted)<br>Intrusion Prevention (Subscription)<br>Content Filtering (Subscription) | None  |
| <b>UC</b>          | Offers the UC Features found in IPVoice IOS image on ISR 1800,2800 and 3800 e.g. TDM/PSTN Gateway, Video Gateway[H320/324],Voice Conferencing, Codec Transcoding, RSVP Agent (voice), FAX T.37/38, CAC/QOS, Hoot-n-Holler etc.  | Gatekeeper  | Land Mobile Radio<br>CME: Voice & Video (counted)<br>SRST: Voice & Video (Counted)<br>VXML/IVR Gateway (Counted)<br>CUBE [IPIP Gateway] (Counted) |
| <b>DATA</b>        | Data features found in SP Services and Enterprise Services IOS image on ISR 1800,2800 and 3800 e.g. MPLS, BFD, RSVP ,L2VPN, L2TPv3 ,Layer 2 Local Switching , Mobile IP, Multicast Authentication,FHRP—GLBP ,IP SLAs, PFR ,DECnet, RSRB, BIP, DLSw+, FRAS, Token Ring ,ISL, IPX ,STUN, SNTP, SDLC, QLLC etc.  | SNA Switching   | None  |

## Migration to Simplified packaging on Next Generation ISRs

The table below outlines the suggested migration from reformation packaging in ISRs to Simplified packaging on Next generation ISRs. The transition matrix outlines transition with feature parity in mind across transitions.

| IOS Reformation Packaging    | Suggested Transition                                       |
|------------------------------|--|
| IPBase                       | IPBase   |
| IP Voice                     | UC   |
| Enterprise Base              | DATA   |
| Enterprise Services          | DATA + UC  |
| SP Services                  | DATA + UC (for feature parity and Enterprise Features)     |
| Advanced Security            | SEC  |
| Advanced IP Services         | SEC+ UC +DATA (for feature parity and Enterprise Features) |
| Advanced Enterprise Services | SEC+ UC + DATA   |

## Introduction to Cisco Licensing Portal

The Cisco licensing portal can be found at <http://www.cisco.com/go/license>. The portal can be used to:

- Convert a PAK to a license
- Manage and look up licenses on a given router by providing the PID and Serial number of the router
- Transfer licenses from a failed device to a replacement device as part of the RMA process
- Request temporary trial licenses for technology packages and features

## Software Activation Use Cases

### Ordering a PAK

Summary Steps:

1. Go to [Cisco order portal](#) to order a PAK just like any Cisco product
2. PAK will be delivered by mail or electronically (eDelivery) depending on which SKU you choose

### Installing a License

Prerequisites:

- Obtain the necessary PAK, which is a 11 digit ID that can be delivered by mail or electronically
- Need to have a valid Cisco username/password
- Retrieve serial number and PID with “show license udi” command or from the router label tray

### Generating and Installing a License with Cisco’s Licensing Portal

The Cisco Product License Registration Portal is a self-serve portal on Cisco.com where you can obtain product licenses and perform other license related operations.

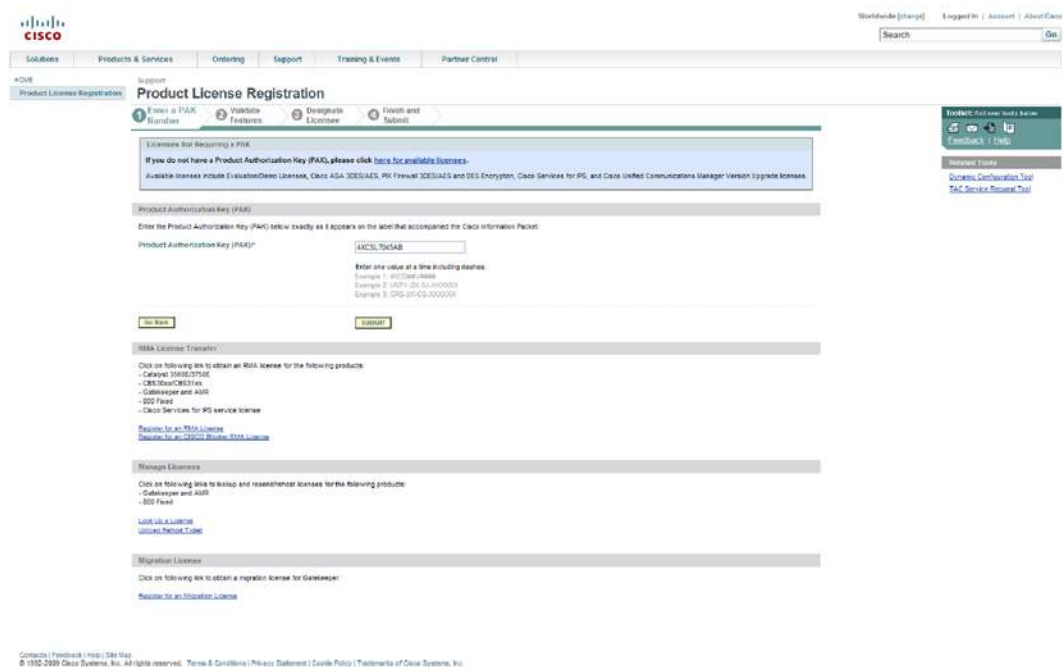
Summary Steps:

1. Have the purchased PAK and device UDI available.
2. Log in to Cisco’s [licensing portal](#) with Cisco username and password.
3. Fill in and verify necessary information and submit the license registration.
4. Download the license from web site directly or obtain from Cisco’s email.

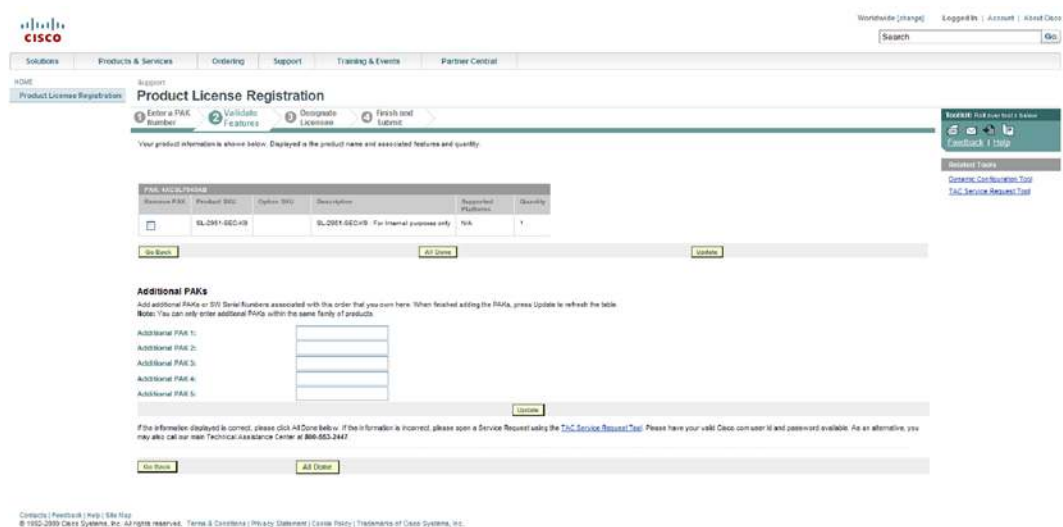


Detailed Steps:

1. Log into [Cisco license web portal](#) with a Cisco.com username and password.
2. Enter a previously purchased Product Authorization Key (PAK) and click "SUBMIT" button.



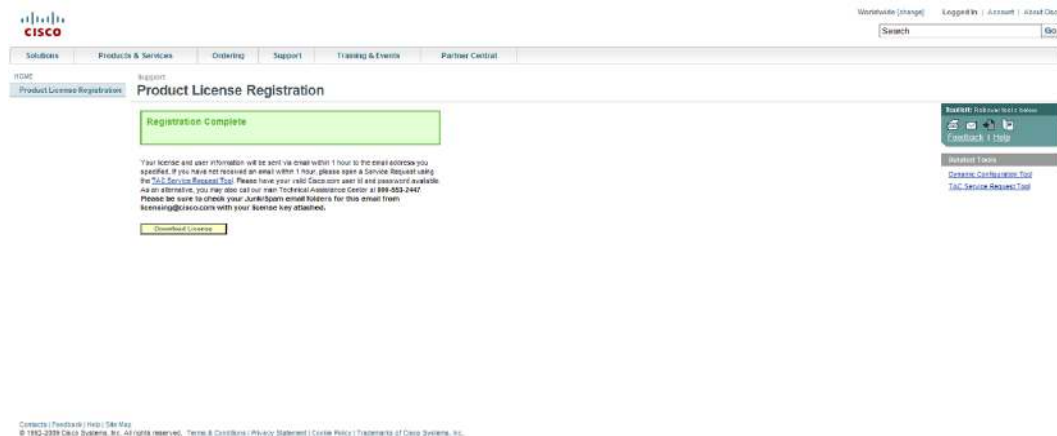
3. Enter additional PAKs if needed to combine multiple features into a single license file. Click the "All Done" button under Product Information table when complete.



4. Enter the "Product Id" and "Serial Number" from the target router you're generating licenses for. Read the End-User License Agreement and check the "Agreement" box. Edit/Verify "Registration Information" and "End User Information". This is important to ensure that the license file reaches the correct email address. Click "Continue".

5. Verify "Summarized Information" and click "Submit".

6. Registration and license generation is now complete. Download the license either from the web site by clicking “Download License” button or from the attachment of the email sent from Cisco.



7. Copy the license file to the target router and install the new license on the device with “license install” command.

```
c2951-lic1#copy tftp flash0:
Address or name of remote host []? 223.255.254.254
Source filename []? /tftpboot/lmxiang/FHH1216P07R_20090528163510702.lic
Destination filename [FHH1216P07R_20090528163510702.lic]?

Accessing
tftp://223.255.254.254//tftpboot/lmxiang/FHH1216P07R_20090528163510702.lic...
Loading /tftpboot/lmxiang/FHH1216P07R_20090528163510702.lic from 223.255.254.254 (via
GigabitEthernet0/0): !

[OK-1149 bytes]

1149 bytes copied in 0.548 secs (2097 bytes/sec)

c2951-lic1#license install flash0:FHH1216P07R_20090528163510702.lic
Installing licenses from "flash0:FHH1216P07R_20090528163510702.lic"
Installing...Feature:securityk9...Successful:Supported
1/1 licenses were successfully installed
0/1 licenses were existing licenses
0/1 licenses were failed to install

c2951-lic1#
*May 28 16:27:28.861 PDT: %LICENSE-6-INSTALL: Feature securityk9 1.0 was installed in
this device. UDI=CISCO2951:FHH1216P07R; StoreIndex=2:Primary License Storage
```

### Installing a License with IOS “call home”

You can interact with Cisco Product License Registration directly from the device using the Cisco License Call Home interface. The Cisco License Call Home feature works as a client/server model. Each transaction requires a separate connection to the Cisco licensing infrastructure.

## Prerequisites:

- The router must have an Internet connection with https access to Cisco.com. Please refer [http://www.cisco.com/en/US/docs/ios/csa/configuration/guide/csa\\_callhome\\_ps6441\\_TSD\\_Products\\_Configuration\\_Guide\\_Chapter.html](http://www.cisco.com/en/US/docs/ios/csa/configuration/guide/csa_callhome_ps6441_TSD_Products_Configuration_Guide_Chapter.html) for details.
- Obtain the desired PAK from Cisco.

## Summary Steps:

1. Download and install the licenses with "license call-home install pak xxxxxx" command.

## Detailed Steps:

1. Install the license with "license call-home install pak" command, select the correct SKU(s) and then provide the user's detail. Licenses will be downloaded and installed automatically.

```
c2951-lic1#license call-home install pak 4XCSL17E380
```

```
CCO User name : CiscoUser
```

```
CCO password :
```

```
!
```

```
.....
```

```
Pak Number : 4XCSL17E380
```

```
Pak Fulfillment type: PARTIAL
```

```
SKU Name : L-2900-LIC
```

```
SKU Type : NOMAPPING
```

```
Description : L-2900-LIC :
```

```
Ordered Qty : 1
```

```
Platform Supported : N/A
```

```
1. SKU Name : L-29-DATA-K9
```

```
SKU Type : Feature
```

```
Description : L-29-DATA-K9 :
```

```
Ordered Qty : 1
```

```
Available Qty : 1
```

```
Feature List :
```

```
Feature name: datak9 Count: Uncounted
```

```
Platform Supported : N/A
```

```
Select SKU to install [1-1] or Quit: 1
```

```
Selected SKU is : L-29-DATA-K9
```

Please enter the user's detail:

First Name : YourFirstName

Last Name : YourLastName

Title : YourTitle

Company Name : YourCompanyName

Address1 : YourAddress

Address2 [Optional]:

City : YourCity

State : YourState

Province [Optional]:

Zipcode : 95134

Country : U.S.A

Phone : (408)123-4567

Fax [Optional]:

Email : YourEmail@YourCompany.com

!.

.....

Installing...Feature:datak9...Successful:Supported

1/1 licenses were successfully installed

0/1 licenses were existing licenses

0/1 licenses were failed to install

c2951-lic1#

\*Jun 25 11:18:20.234: %LICENSE-6-INSTALL: Feature datak9 1.0 was installed in this device. UDI=CISCO2951:FHH1216P07R; StoreIndex=0:Primary License Storage

\*Jun 25 11:18:20.386: %IOS\_LICENSE\_IMAGE\_APPLICATION-6-LICENSE\_LEVEL: Module name = c2951 Next reboot level = datak9 and License = datak9

#### Installing a License with an EEM Script

This EEM script was developed internally by Cisco and is essentially a wrapper over the IOS call home capability described in the previous section. This script can be used to automate the deployment of licenses on the ISR G2 platform. It allows you to create a file in flash with a list of required files and runs the "license call-home install pak" command to install one or many licenses from a single or different PAKs. It can be used in two ways:

1. Fully automatic in which all parameters are supplied including CCO username and password then run from cron on boot to install permanent licenses.
2. Semi-automatic mode for added security which require CCO username and password using the included InstallLicense.tcl tool

## Where to get the script

The script can be downloaded from <http://www.cisco.com/go/ciscobeyond> at this direct link:  
<http://forums.cisco.com/eforum/servlet/EEM?page=eem&fn=script&scriptId=2221>

## Installing and running the script

**Note:** The G2 must be properly configured for license call home which is not shown.

Step 1. Step 1: Create a directory to place the scripts in and copy them to that directory

```
mkdir flash0:/TCL
```

Step 2. Enable EEM and register the EEM script

```
event manager directory user policy "flash0:/TCL"
event manager policy no_licinst.tcl type user
```

Step 3. Optionally create a command alias for the InstallLicense Tool

```
alias exec licinst tclsh flash:/TCL/InstallLicense.tcl
```

Step 4. Create the license data file and populate the responses.

Step 4a: Create the responses file manually and copy it to the box

- Or -

Step 4b: Use the InstallLicense Tool to do it

```
InstallLicense.tcl -c [filename]
```

Note: Default filename is "flash0:/datafile.txt" which can be changed with LIC\_FILE environment variable.  
 See the script header for an example.

Step 5. Run the installer

```
licinst
```

```

ISR G2
-----
megatron-lic1>enable
megatron-lic1#licinst
Username : jepalmer
Password : *****
PAK Name :

*Apr 7 20:35:43.011: %HA_EM-7-LOG: no_licinst.tcl: Starting License Installer
*Apr 7 20:35:43.375: %HA_EM-7-LOG: no_licinst.tcl: Contacting License Server
*Apr 7 20:35:44.899: CRYPTO_PKI: Can not select private key (megatron-lic1.cisco.com)
*Apr 7 20:35:45.535: CRYPTO_PKI: Can not select private key (megatron-lic1.cisco.com)
*Apr 7 20:35:56.603: CRYPTO_PKI: Can not select private key (megatron-lic1.cisco.com)
*Apr 7 20:35:57.435: CRYPTO_PKI: Can not select private key (megatron-lic1.cisco.com)
megatron-lic1#
*Apr 7 20:36:24.003: %HA_EM-6-LOG: no_licinst.tcl: LICENSE INSTALL FXPAKAD11DC -> L-VL-X-39-SEC-K9
FINISH(ERROR): MSG_CODE_FEATURE_EXIST_ON_DEVICE (One or more Uncounted features exists on given device:
securityk9)
*Apr 7 20:36:24.007: %HA_EM-6-LOG: no_licinst.tcl: REINSTALL LICENSES IS REQUIRED!!!
*Apr 7 20:36:24.343: %HA_EM-7-LOG: no_licinst.tcl: Contacting License Server
*Apr 7 20:36:26.059: CRYPTO_PKI: Can not select private key (megatron-lic1.cisco.com)
*Apr 7 20:36:26.795: CRYPTO_PKI: Can not select private key (megatron-lic1.cisco.com)
*Apr 7 20:36:53.007: %LICENSE-6-EULA_ACCEPTED: EULA for feature SSL_VPN 1.0 has been accepted. UDI-C390
0-SPE100/K9:FHH13030035; StoreIndex=0;Primary License Storage
*Apr 7 20:36:57.375: %HA_EM-7-LOG: no_licinst.tcl: Finished License Installer
megatron-lic1#

```

**Example of script generated EMAIL**

0/1 Licenses Installs were successful

```
INSTALL FXPAKAD11DC      -> L-VL-X-39-SEC-K9: MSG_CODE_FEATURE_EXIST_ON_DEVICE (One or
more Uncounted features exists on given device:  securityk9)
```

0/3 licenses were successfully installed

3/3 licenses were existing licenses

0/3 licenses were failed to install

Index: 4 Feature: datak9 Version: 1.0

License Type: Permanent

License State: Active, Not in Use

License Count: Non-Counted

License Priority: Medium

Store Index: 2

Store Name: Primary License Storage

Index: 7 Feature: securityk9 Version: 1.0

License Type: Permanent

License State: Active, Not in Use

License Count: Non-Counted

License Priority: Medium

Store Index: 1

Store Name: Primary License Storage

**Example License Datafile**

UserName CCOUserName

Password CCOPassword

FirstName FirstName

LastName LastName

Title Title

Company Company

Address1 Address1

Address2 Address2

City City

State State

Province Province

Zip Zip

Country Country

|         |                  |
|---------|------------------|
| Phone   | 555-555-5555     |
| Fax     | 555-555-5555     |
| Email   | user@company.com |
| ereport | user@company.com |
| mailsvr | 192.168.1.1      |
| Install | PAC1 SKU1        |
| Install | PAC2 SKU2        |
| Reboot  | N                |

Note 1: ereport and mailsvr is required only if you want an email report generate.

Note 2: There can be as many Install directives as you want. If you use the liceinst tool and specify a PAC, it will also ask for the SKU and ignore the directive in the file.

### **Installing a License with Cisco License Manager (CLM)**

The Cisco License Manager (CLM) is a secure client-server application for automating Cisco software activation and license management that scales for network-wide deployments. CLM builds an inventory of licensed features deployed in the network by securely communicating with the license agent embedded in the Cisco IOS software.

#### Prerequisites:

- Have the appropriate CLM account/privilege to launch CLM and execute necessary functions
- CLM has Internet connectivity to the Cisco licensing servers via https.
- CLM has previously been used to automatically discover the network or manually add devices to it so that CLM builds a device inventory.

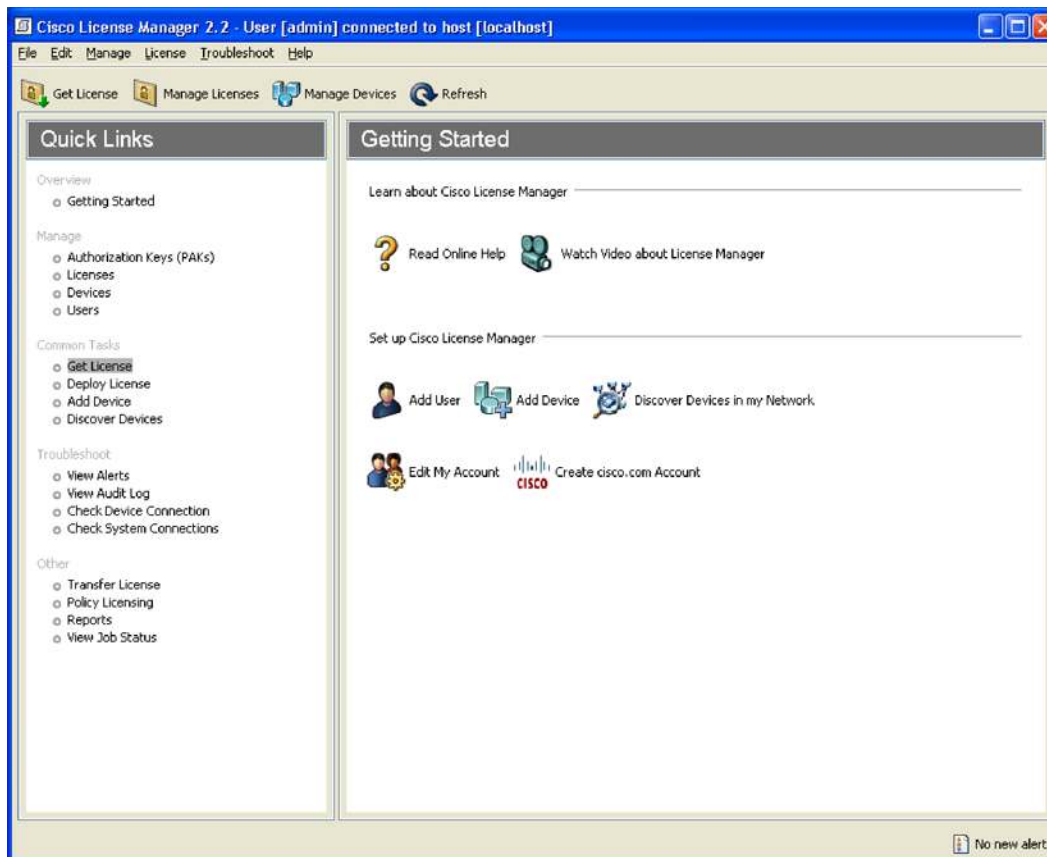
#### Summary Steps:

1. Launch "License Assistant" wizard.
2. Follow the procedures to select PAKs (SKU) and the targeted devices.
3. CLM downloads the licenses and deploys them onto the devices automatically.

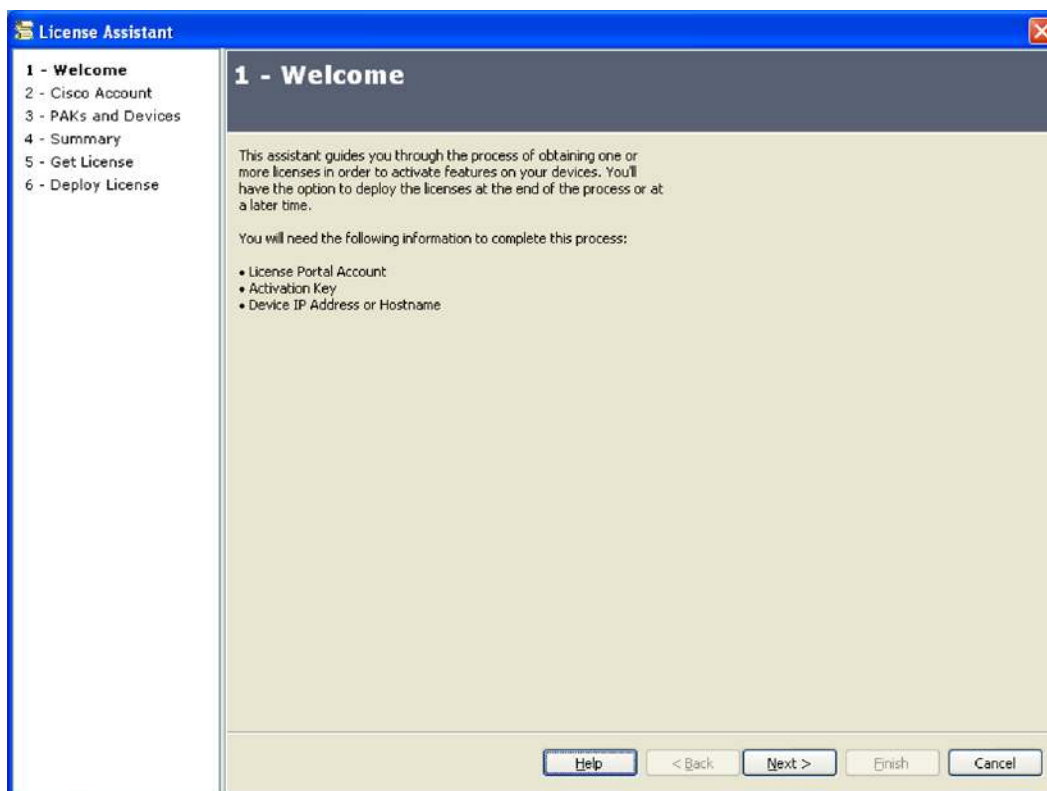


## Detailed Steps:

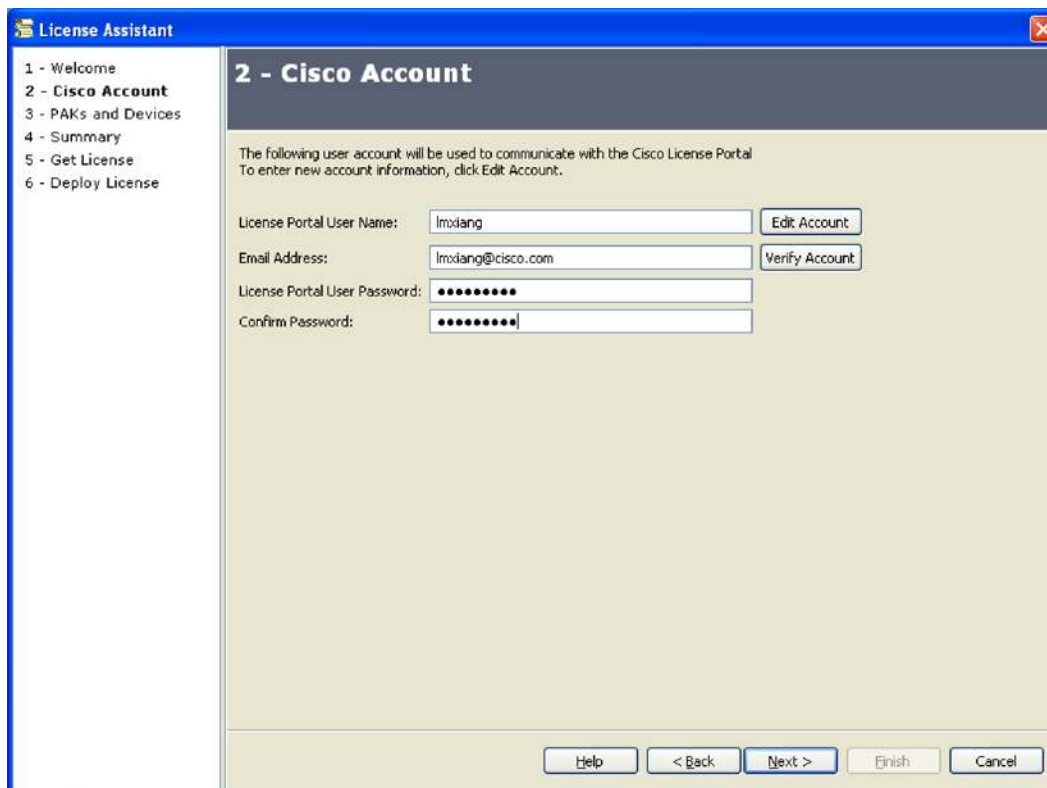
1. Select "Get License" under "Common Tasks" to launch "License Assistant" wizard.



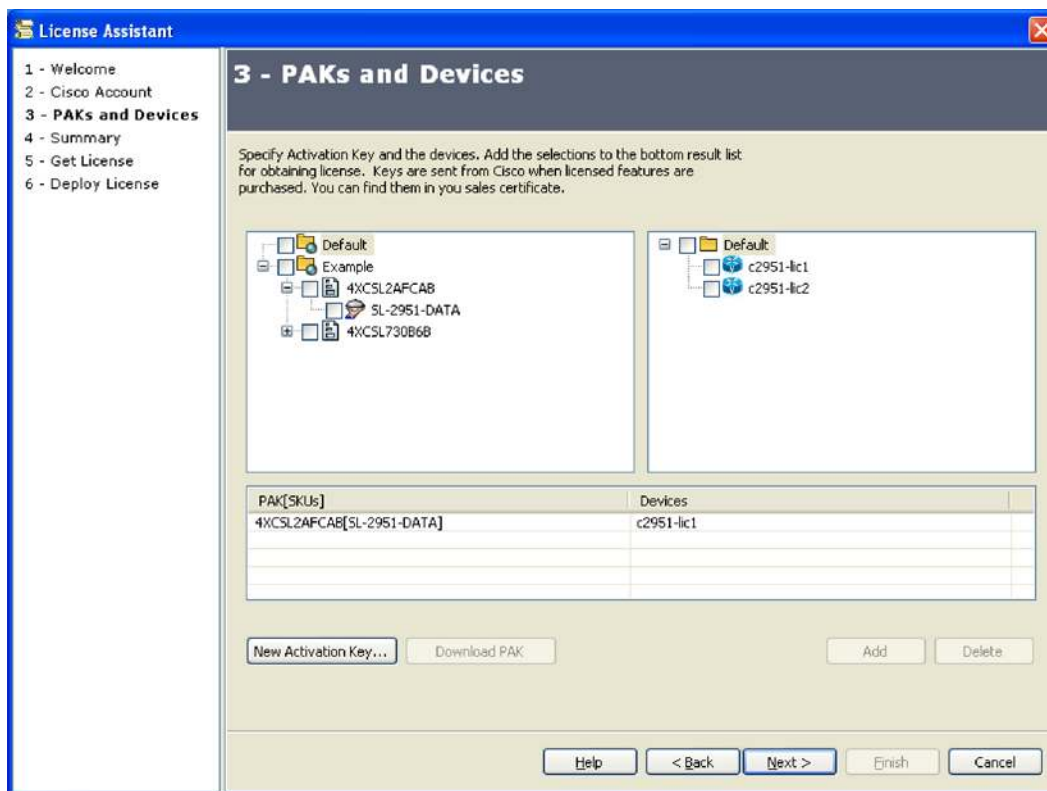
2. Click "Next" button in "1-Welcome" of "License Assistant".



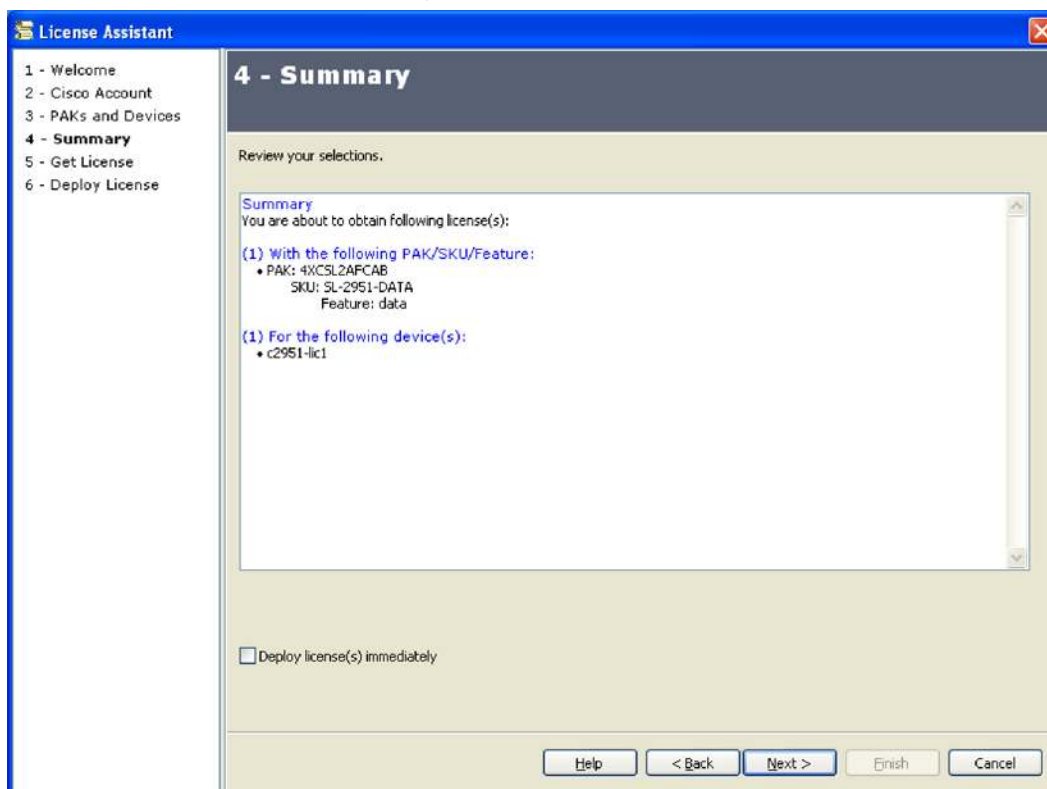
3. Enter/Edit Cisco.com Username, Email Address and Password in "2-Cisco Account" of "License Assistant".



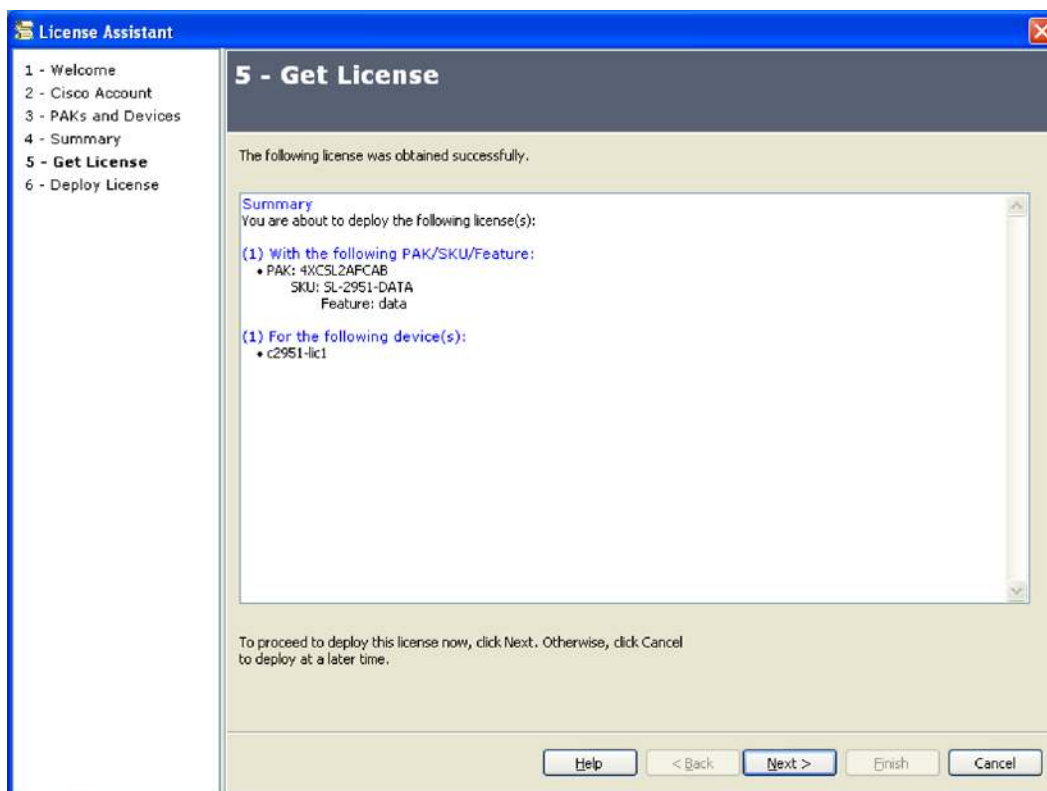
4. Add new activation keys if needed. Select PAK (SKUs) and the target devices and click “Next” button in “3 – PAKs and Devices” of “License Assistant”.



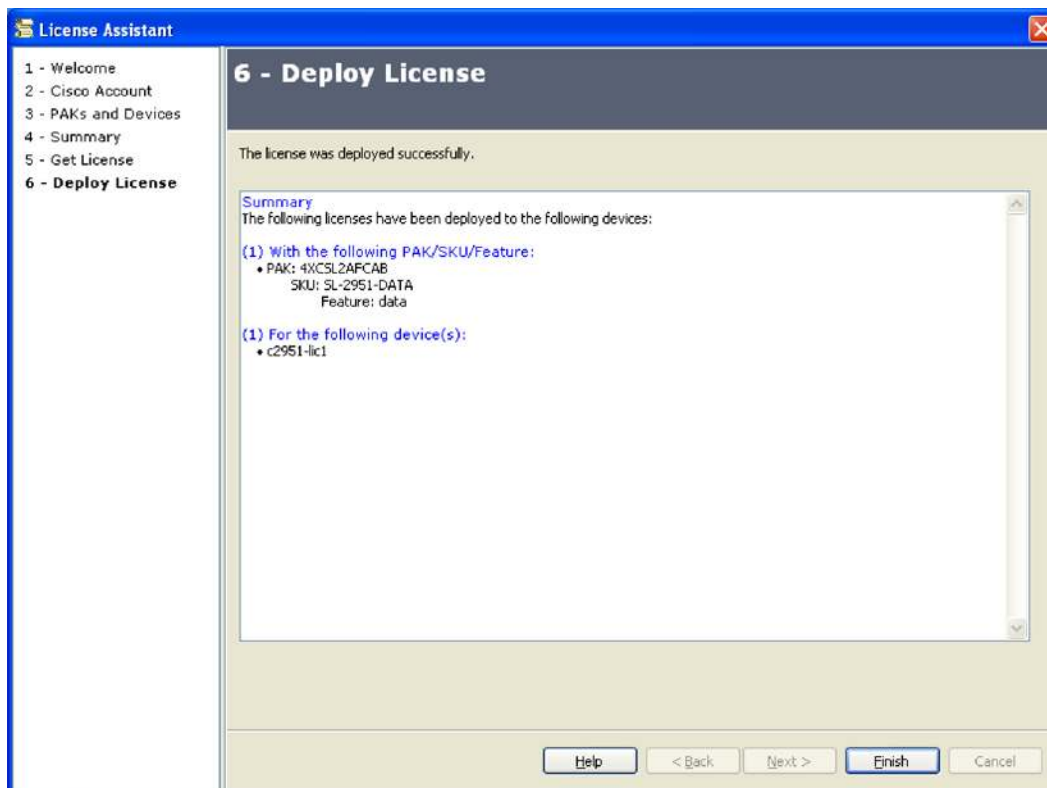
5. Click “Next” button in “4 – Summary” of “License Assistant”.



6. Click “Next” button in “5 – Get License” of “License Assistant”.



7. Click “Finish” button in “6 – Deploy License” of “License Assistant”.



## Rehosting a License

### Prerequisites:

- Valid Cisco.com account (username/password)
- Retrieve Product Id and Serial Number with either the IOS “show license udi” command or label tray from both the source and destination devices.
- Retrieve Source Device Credentials by issue the following IOS commands in exec mode:
  - license save credential flash0:CredentialFileName
  - more flash0:CredentialFileName
- The source device has rehostable licenses.

## Rehosting a License with Cisco’s Licensing Portal

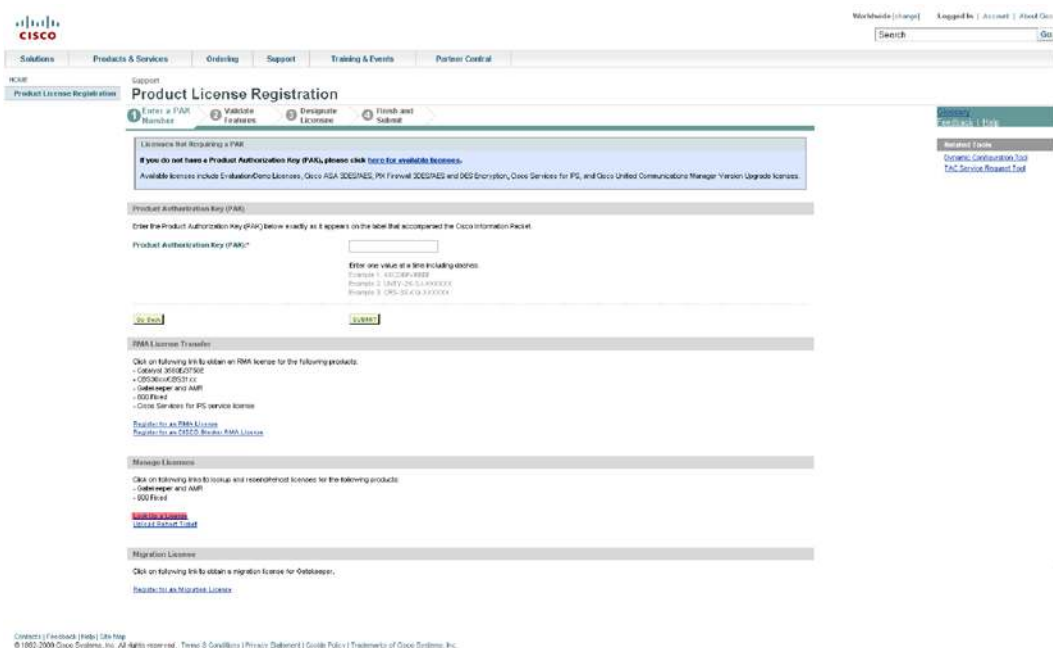
This process can be used when the source and the destination device cannot communicate directly with Cisco licensing portal

### Summary Steps:

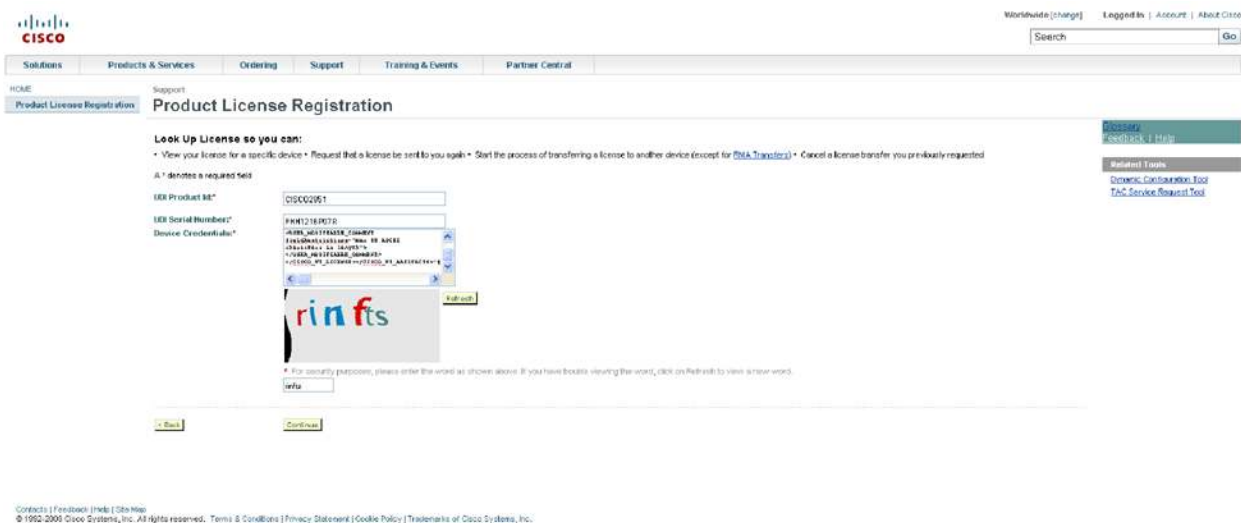
1. Obtain UDI and device credentials from the source and destination devices using IOS CLI commands
2. Contact the Product License Registration page on Cisco.com and enter the source Device Credentials and UDI into the license transfer portal tool.
3. The portal will display licenses that can be transferred from the source device.
4. Select the licenses that need to be transferred. A permission ticket is issued. You can use this permission ticket to start the rehost process using Cisco IOS commands.
5. Apply the permissions ticket to the source device using the license revoke command. The source device will then provide a rehost ticket indicating proof of revocation. A sixty day grace period license is also installed on the device to allow enough time to transfer the licenses to destination device.
6. Enter the rehost ticket into the license transfer portal tool on Cisco.com along with destination device UDI.
7. Receive the license key via E-mail
8. Install the license key on the destination device.

Detailed Steps:

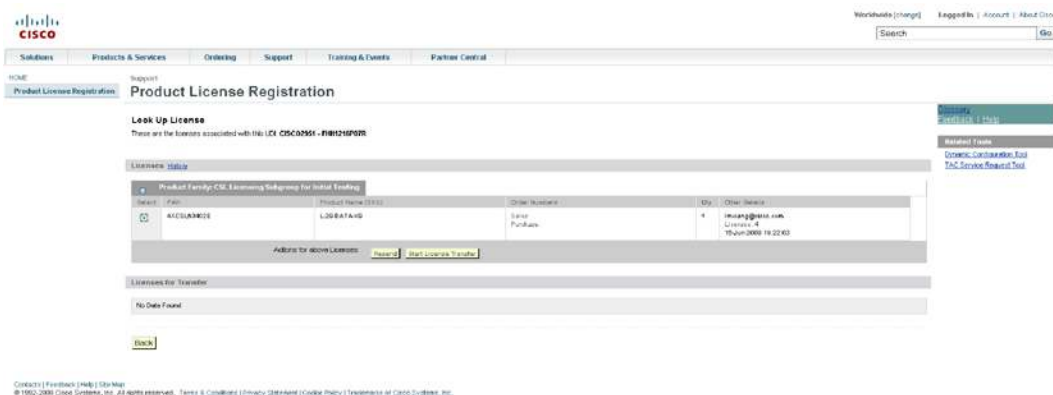
1. Log into [Cisco Licensing Portal](#) with Cisco.com username and password. Select “Look Up a License” under “Manage License” section.



2. Enter UDI Product ID, UDI Serial Number, and Device Credential from the source device. Enter the Security Key as displayed and click “Continue” button.



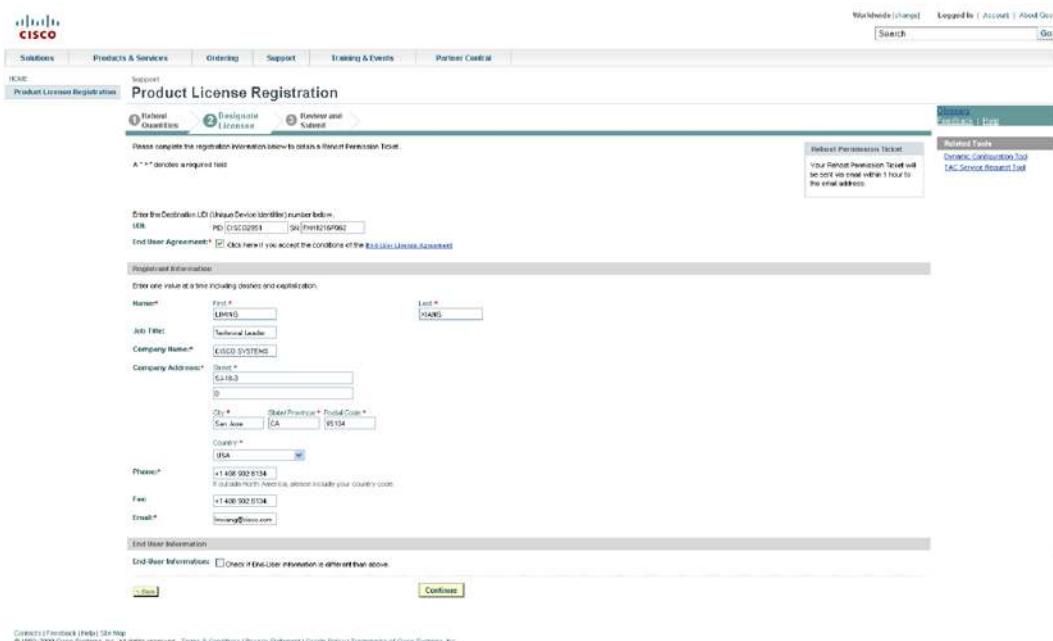
3. Select the license to transfer and click “Start License Transfer” button.



4. Enter the quantity of licenses to be rehosted and click “Continue” button.



5. Enter UDI Product ID (PID) and UDI Serial Number (SN) from the destination device. Check “End User Agreement”. Verify/Edit “Registration Information” and “End User Information”. Click “Continue” button.



6. Verify “Product Information” and “Licensee Information”. Click “Submit” button.

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Product License Registration

Product License Registration

Rehost Permission | Designate Licensee | Review and Submit

Product Information

|                       |             |                 |                           |
|-----------------------|-------------|-----------------|---------------------------|
| Source ID:            | FHH1216P07R | SR: FHH1216P07R | SR: FHH1216P07R           |
| Default License ID:   | FHH1216P07R | SR: FHH1216P07R | SR: FHH1216P07R           |
| Rehost Permission ID: | CSC02951    | Description:    | For license purposes only |
| Quantity:             | 1           |                 |                           |

Licensee Information

Rehost Information:

Name: LARRY BANG  
 Job Title: Technical Leader  
 Company Name: CISCO SYSTEMS, INC.  
 Company Address: 1700  
 San Jose, CA 95134  
 USA  
 Phone: +1 408 553 8133  
 Fax: +1 408 553 8133  
 Email Address: larryb@cisco.com

Final Host Information:

Name: LARRY BANG  
 Job Title: Technical Leader  
 Company Name: CISCO SYSTEMS, INC.  
 Company Address: 1700  
 San Jose, CA 95134  
 USA  
 Phone: +1 408 553 8133  
 Fax: +1 408 553 8133  
 Email Address: larryb@cisco.com

Submit Cancel

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7. License registration completes. Download the Rehost Permission Ticket (FHH1216P07R\_20090625144907620.lic in this example) either from the web portal by clicking on “Download Permission Ticket” button or from the attachment of the email sent by Cisco.

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Product License Registration

Product License Registration

Rehost Permission | Designate Licensee | Review and Submit

Download Your Rehost Permission Ticket

Download Permission Ticket

Optional Next Steps

View License Details: Contact your license administrator for the license ID (CSC02951 - FHH1216P07R)

View All Available Licenses: Filter by license ID

Return to the Product License Registration home page

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8. Upload the Rehost Permission Ticket to the flash of the source device.

```
c2951-lic1#copy tftp flash0:
```

```
Address or name of remote host []? 192.168.1.2
```

```
Source filename []? lmxiang/FHH1216P07R_20090625144907620.lic
```

```
Destination filename [FHH1216P07R_20090625144907620.lic]?
```

```
Accessing tftp:// 192.168.1.2/lmxiang/FHH1216P07R_20090625144907620.lic...
```

```
Loading lmxiang/FHH1216P07R_20090625144907620.lic from 192.168.1.2 (via GigabitEthernet0/0): !
```

```
[OK-3831 bytes]
```

```
3831 bytes copied in 0.456 secs (8401 bytes/sec)
```



9. Issue "license call-home revoke flash0:RehostTicketName permission-ticket flash0:RehostPermissionTicket" command on the source device. Accept the End User License Agreement (EULA). The source device will then provide a rehost ticket indicating proof of revocation. A sixty day grace period license is also installed on the device to allow enough time to transfer the licenses to destination device. The rehost license will be saved at flash0: RehostTicketName.

```
c2951-lic1#license call-home revoke flash0:SampleRehostTicket permission-ticket  
flash0:FHH1216P07R_20090716133230980.lic
```

```
CCO User name : lmxiang
```

```
CCO password :
```

```
Following Permanent license(s) will be revoked from this device
```

```
Feature Name: datak9 : Uncounted
```

```
Following Extension license(s) will be installed on this device
```

```
Feature Name: datak9 : Uncounted
```

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You hereby acknowledge and agree that the product feature license is terminable and that the product feature enabled by such license may be shut down or terminated by Cisco after expiration of the applicable term of the license (e.g., 30-day trial period). Cisco reserves the right to terminate or shut down any such product feature electronically or by any other means available. While alerts or such messages may be provided, it is your sole responsibility to monitor your terminable usage of any product feature enabled by the license and to ensure that your systems and networks are prepared for the shut down of the product feature. You acknowledge and agree that Cisco will not have any liability whatsoever for any damages, including, but not limited to, direct, indirect, special, or consequential damages related to any product feature being shutdown or terminated. By clicking the "accept" button or typing "yes" you are indicating you have read and agree to be bound by all the terms provided herein.

```
ACCEPT? [yes/no]: yes
```

Output file saved ..... to flash0:SampleRehostTicket

Rehost ticket is saved into 'flash0:SampleRehostTicket'

Please use 'license call-home revoke udi <target\_udi> <revoke\_license\_URL> rehost-ticket <saved\_rehost\_tkt\_URL> to get the revoked license

c2951-lic1#

\*Jul 16 10:39:46.922: %LICENSE-6-EULA\_ACCEPTED: EULA for feature datak9 1.0 has been accepted. UDI=CISCO2951:FHH1216P07R; StoreIndex=-1:Primary License Storage

\*Jul 16 10:39:47.418: %LICENSE-6-REVOKED: License for feature datak9 1.0 has been revoked. UDI=CISCO2951:FHH1216P07R; StoreIndex=0:Primary License Storage

10. Enter the rehost ticket into the license transfer portal tool on Cisco.com along with destination device UDI , choose the licenses to transfer and obtain the license file.

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HOME | Support | Product License Registration

### Product License Registration

1 Enter a PAR Number | 2 Validate Features | 3 Designate Licensee | 4 Finish and Submit

[Help](#) | [Contact Us](#)

**Licenses Not Requiring a PAR**

If you do not have a Product Authorization Key (PAK), please click [here for available licenses](#).

Available licenses include Evaluation/Demo Licenses, Cisco ASA 3065SAS, PIX Firewall 3065SAS and DES Encryption, Cisco Services for IPS, and Cisco Unified Communications Manager Version Upgrade Licenses.

**Product Authorization Key (PAK)**

Enter the Product Authorization Key (PAK) below exactly as it appears on the label that accompanied the Cisco Information Packet.

Product Authorization Key (PAK):

Enter one value at a time including dashes.  
Example 1: KXCJFFVFPF  
Example 2: UN7Y 2G 2L00000X  
Example 3: CRS-3G-CG000000

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**RMA License Transfer**

Click on following link to obtain an RMA license for the following products:

- Catalyst 2500/3500E
- CBS300/CBS310x
- Catalyst and AMR
- 800 Fixed
- Cisco Services for IPS service license

[Request for an RMA License](#)  
[Request for an IUCO Router RMA License](#)

**Manage Licenses**

Click on following links to lookup and rehost/licenses for the following products:

- Catalyst and AMR
- 800 Fixed

[Lookup Licenses](#)  
[Request Support Ticket](#)

**Migration License**

Click on following link to obtain a migration license for Catalyst.

[Request for an Migration License](#)

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Product License Registration
Product License Registration

1 Upload Ticket
2 Validate Features
3 Designate Licenses
4 Review and Submit

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Please complete the registration information below to obtain a Request Permission Ticket.

**A \* \* \* denotes a required field**

Enter the Destination UDI (Unique Device Identifier) number below.

UDI\*

End User Agreement\*  [Click here if you accept the conditions of the End User License Agreement](#)

**Request License Key**

Your Request License Key will be sent via email within 1 hour to the email address.

**Registrant Information**

Enter one value at a time including dashes and capitalization.

Name\*

Job Title:

Company Name\*:

Company Address\*:

City\*:  State/Province\*:  Postal Code\*:

Country\*:

Phone\*:  If outside North America, please include your country code.

Fax:

Email\*:

**End User Information**

End-User Information:  Check if End-User information is different than above

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Product License Registration

1 Upload Ticket
2 Validate Features
3 Designate Licenses
4 Review and Submit

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**Product Information**

|                     |                             |   |             |
|---------------------|-----------------------------|---|-------------|
| Source UDI:         | PID: CISCO00551             | SN: FPH1216P07R                         |             |
| Destination UDI:    | PID: CISCO00551             | SN: FPH1216P06Z                         |             |
| Request Quantities: | SKU: SL-28-DATA-RGB-Feature | Description: For Internal purposes only | Quantity: 1 |
|                     | SKU: 06183                  |   |             |

**Licensee Information**

Registrant Information: [Edit details](#)

Name: LIMING XIANG

Job Title: Technical Leader

Company Name: CISCO SYSTEMS

Company Address: SA-16-3, 0, San Jose, CA 95134, USA

Phone: +1 408 902 8134

Fax: +1 408 902 8134

Email Address: lxwang@cisco.com

End User Information: [Edit details](#)

Name: LIMING XIANG

Job Title: Technical Leader

Company Name: CISCO SYSTEMS

Company Address: SA-16-3, 0, San Jose, CA 95134, USA

Phone: +1 408 902 8134

Fax: +1 408 902 8134

Email Address: lxwang@cisco.com

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Product License Registration

**Your registration is complete.**  
 Your Refresh License Key will be sent via email within 1 hour to lmxiang@cisisco.com.  
 If you have not received an email within 1 hour, please open a Service Request using the [TAC Service Request Tool](#). Please have your valid Cisco.com user id and password available. As an alternative, you may also call our main Technical Assistance Center at **800-553-2447**. Please be sure to check your Junk/Spam email folders for this email from lmxiang@cisisco.com with your license key attached.

[Download Your License:](#)  
[Download License](#)

**Optional Next Steps:**  
[Return to the Product License Registration Home page](#)

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**Related Tools:**  
[Dynamic Configuration Tool](#)  
[TAC Service Request Tool](#)

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11. Install the license key on the destination device.

```
c2951-lic2#copy tftp flash0:
```

```
Address or name of remote host []?192.168.1.2
```

```
Source filename []? lmxiang/FHH1216P06Z_20090716135523960.lic
```

```
Destination filename [FHH1216P06Z_20090716135523960.lic]?
```

```
Accessing tftp:// 192.168.1.2/lmxiang/FHH1216P06Z_20090716135523960.lic...
```

```
Loading lmxiang/FHH1216P06Z_20090716135523960.lic from 192.168.1.2 (via  
GigabitEthernet0/0): !
```

```
[OK-1141 bytes]
```

```
1141 bytes copied in 0.496 secs (2300 bytes/sec)
```

```
c2951-lic2#license install flash0:FHH1216P06Z_20090716135523960.lic
```

```
Installing licenses from "flash0:FHH1216P06Z_20090716135523960.lic"
```

```
Installing...Feature:datak9...Successful:Supported
```

```
1/1 licenses were successfully installed
```

```
0/1 licenses were existing licenses
```

```
0/1 licenses were failed to install
```

```
c2951-lic2#
```

```
%LICENSE-6-INSTALL: Feature datak9 1.0 was installed in this device.
```

```
UDI=CISCO2951:FHH1216P06Z; StoreIndex=0:Primary License Storage
```

```
%IOS_LICENSE_IMAGE_APPLICATION-6-LICENSE_LEVEL: Module name = c2951 Next reboot level  
= datak9 and License = datak9
```

## Rehosting a License with IOS “Call Home”

### Prerequisites:

- The router must have an Internet connection with https access to Cisco.com. Please refer [http://www.cisco.com/en/US/docs/ios/csa/configuration/guide/csa\\_callhome\\_ps6441\\_TSD\\_Products\\_Configuration\\_Guide\\_Chapter.html](http://www.cisco.com/en/US/docs/ios/csa/configuration/guide/csa_callhome_ps6441_TSD_Products_Configuration_Guide_Chapter.html) for details.
- Obtain the license certificate from the Cisco licensing infrastructure.

### Summary Steps:

1. Execute “license call-home revoke” command on the source device to get the rehost license file.
2. Install the rehost license file on the destination device with “license install” command.

### Detailed Steps:

1. Issue “license call-home revoke udi DestinationDeviceUDI flash0:RehostLicenseFileName” command on the source device. Enter CCO username and password. Select the license to be rehosted. Accept the EULA and provide user’s detail. The rehost license will be saved at flash0:RehostLicenseFileName.

```
c2951-lic1#license call-home revoke udi CISCO2951:FHH1216P06Z
flash0:SampleRehostLicense

CCO User name : lmxiang
CCO password :
```

```
Retrieving the sku from Cisco Licensing Portal .....
```

```
!.
```

```
.....
```

```
1. SKU Name : L-29-DATA-K9
```

```
SKU Type : Feature
```

```
Description :
```

```
Ordered Qty : 1
```

```
Available Qty : 1
```

```
Feature List :
```

```
Feature name: datak9 Count: Uncounted
```

```
Platform Supported : N/A
```

```
Are you sure you want to continue to revoke? (yes/[no]): yes
```

```
Retrieving the permission ticket from Cisco Licensing Portal .....!.
```

```
.....
```

```
Output file saved ..... to flash0:SampleRehostLicense
```

```
Retrieving the rehost ticket from the device .....
```

```
Following Permanent license(s) will be revoked from this device
```

Feature Name: datak9 : Uncounted

Following Extension license(s) will be installed on this device

Feature Name: datak9 : Uncounted

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ACCEPT? [yes/no]: yes

Output file saved ..... to flash0:SampleRehostLicense

Retrieving the revoked license line from the Cisco Licensing Portal .....

Please enter the user's detail:

First Name :

\*Jun 25 12:18:14.041: %LICENSE-6-EULA\_ACCEPTED: EULA for feature datak9 1.0 has been accepted. UDI=CISCO2951:FHH1216P07R; StoreIndex=-1:Primary License Storage

\*Jun 25 12:18:14.541: %LICENSE-6-REVOKED: License for feature datak9 1.0 has been revoked. UDI=CISCO2951:FHH1216P07R; StoreIndex=0:Primary License Storage

```
% No defaulting allowed
First Name : YourFirstName
Last Name  : YourLastName
Title     : YourTitle
Company Name : YourCompany
Address1  : YourAddress
Address2 [Optional]:
City     : YourCity
State    : YourState
Province [Optional]:
Zipcode  : 95123
Country  : U.S.A
Phone    : (408)123-4567
Fax [Optional]:
Email    : YourEmail@YourCompany.com
```

```
!.
```

```
.....
```

```
Output file saved ..... to flash0:SampleRehostLicense
```

2. Transfer the rehost license (flash0:SampleRehostLicense in this example) from the source device to the destination device. Install the rehost license with “license install” command on the destination device (Please refer to “Installing a License” section for installation instructions).

### **Rehosting a License with CLM**

#### **Prerequisites:**

- Have the appropriate CLM account/privilege to launch CLM and execute necessary functions
- CLM has the proper Internet connection to Cisco Licensing Portal.
- CLM has previously been used to automatically discover the network or manually add devices to it so that CLM builds a device inventory

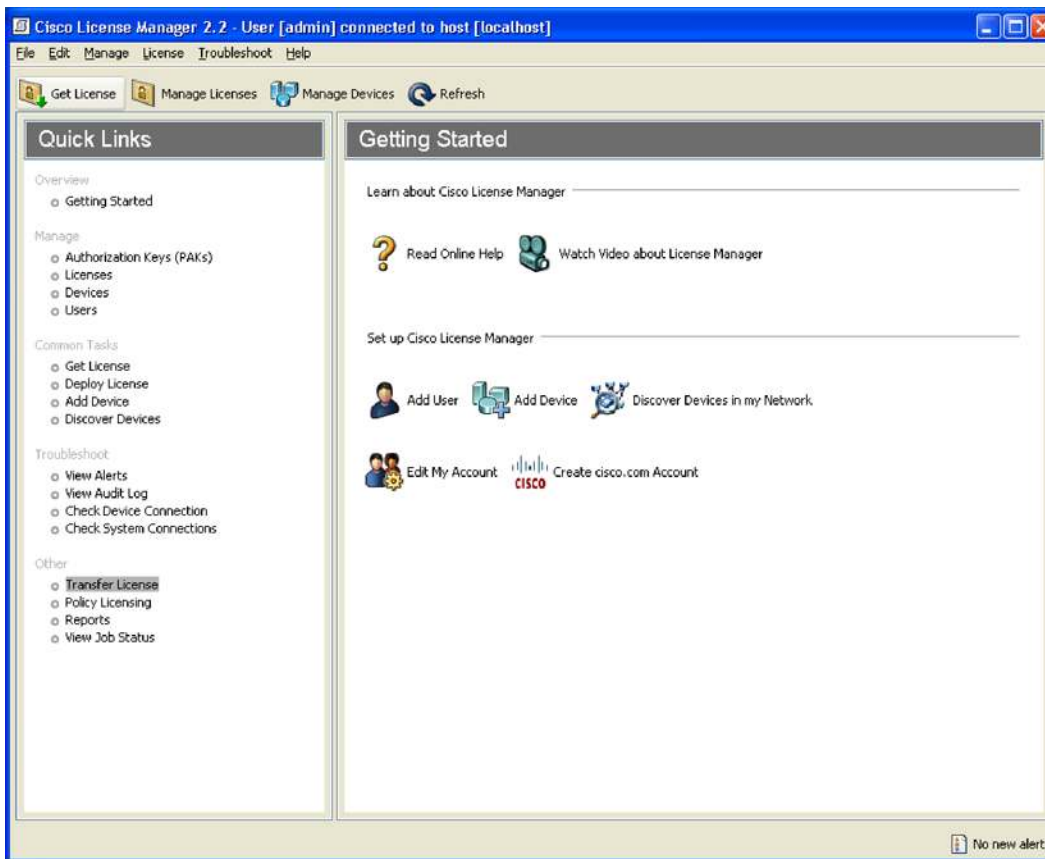
#### **Summary Steps:**

1. Launch “License Transfer Assistant” wizard
2. Follow the steps to select PAKs(SKU) and the targeted devices
3. CLM downloads the licenses and deploys them onto the devices automatically

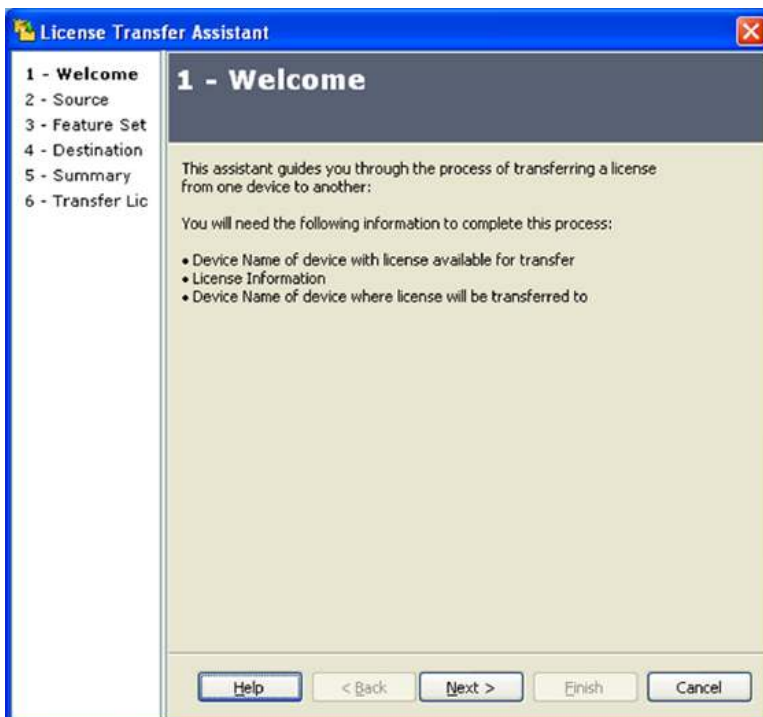


## Detailed Steps:

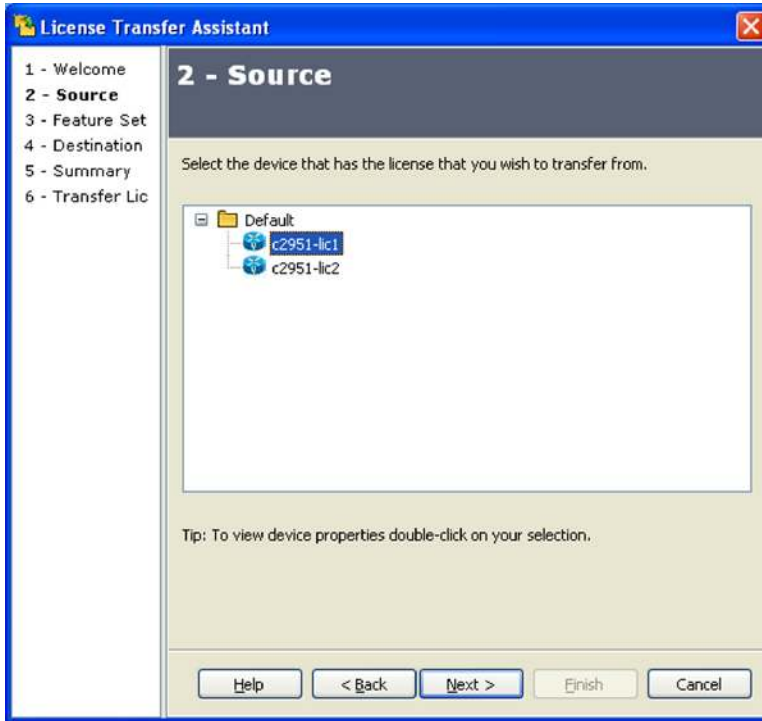
1. Select "Transfer License" under section "Other" to launch "License Transfer Assistant".



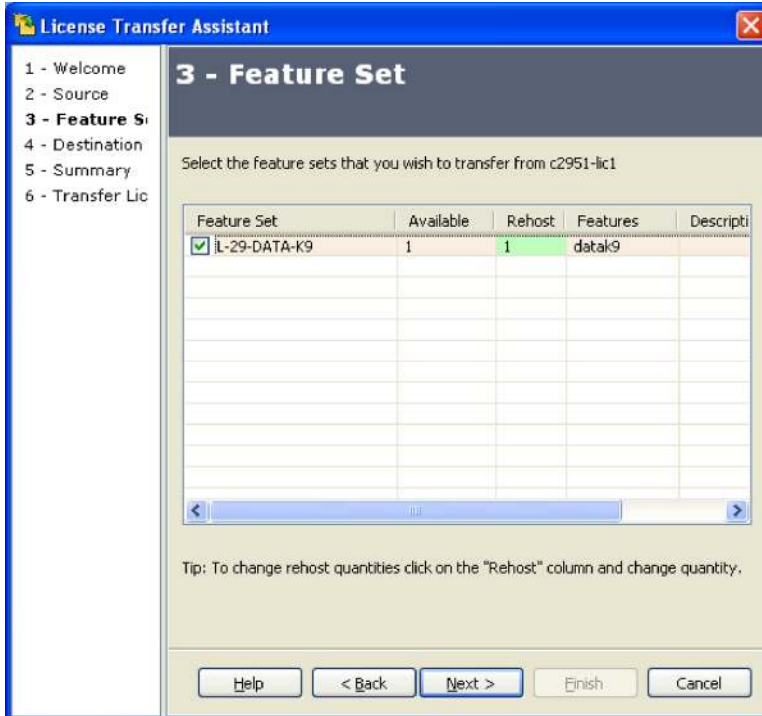
2. Click "Next" button in "1-Welcome" of "License Transfer Assistant".



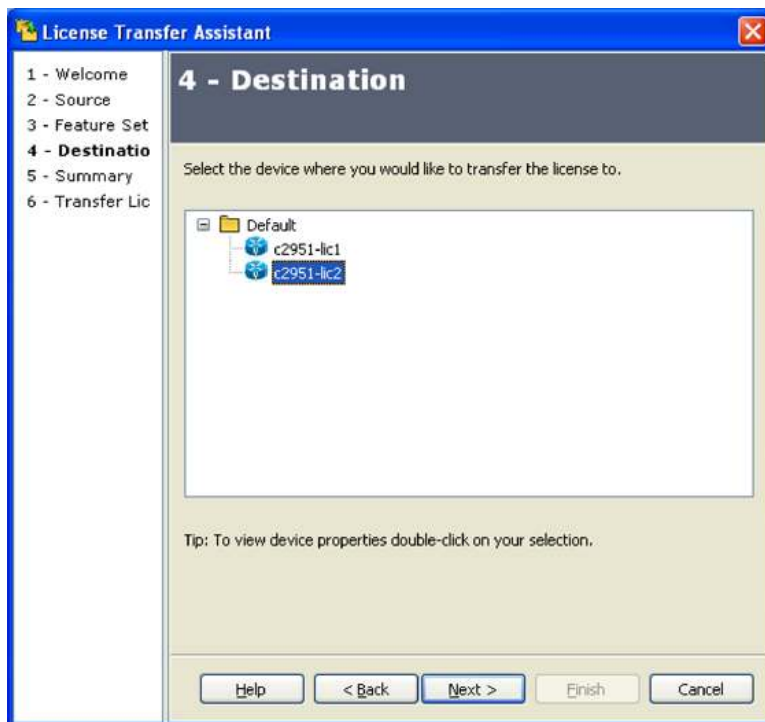
3. Select the source device in “2-Source” of “License Transfer Assistant” and click “Next” button.



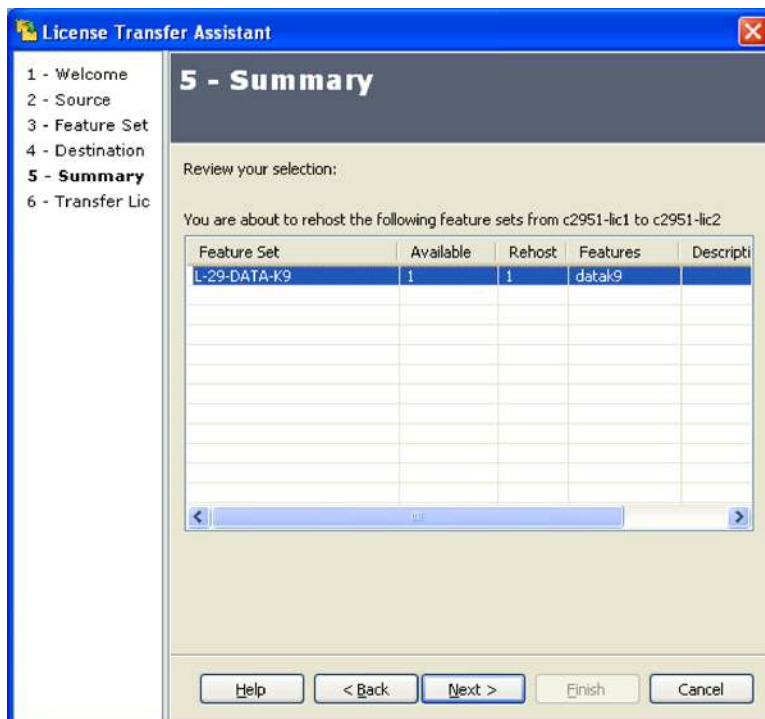
4. Select the feature set to be transferred in “3-Feature Set” of “License Transfer Assistant”. Change the rehost quantity if necessary and click “Next” button.



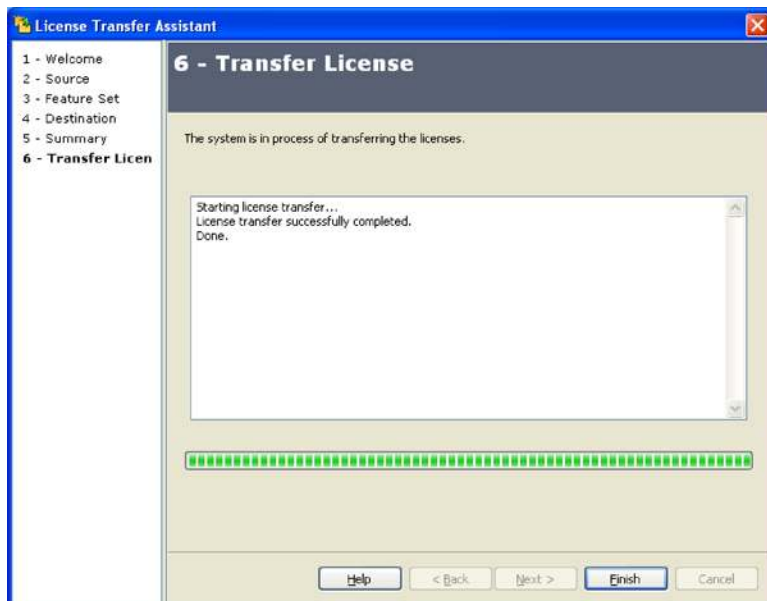
5. Select the destination device in “4-Destination” of “License Transfer Assistant” and click “Next” button.



6. Review the rehost summary in “5-Summary” of “License Transfer Assistant” and click “Next” button.



7. Wait until the license transfer is complete. Click “Finish” button in “6-Transfer License” of “License Transfer Assistant”.



## RMA

### Prerequisites:

- Need to have a valid CCO username/password
- Retrieve UDI Product Id and UDI Serial Number from both the source (faulty) and destination (replacement) devices. The Serial Number and Product Id can be retrieved from the label tray on the router or with IOS “show license udi” command.
- The source device has rehostable licenses

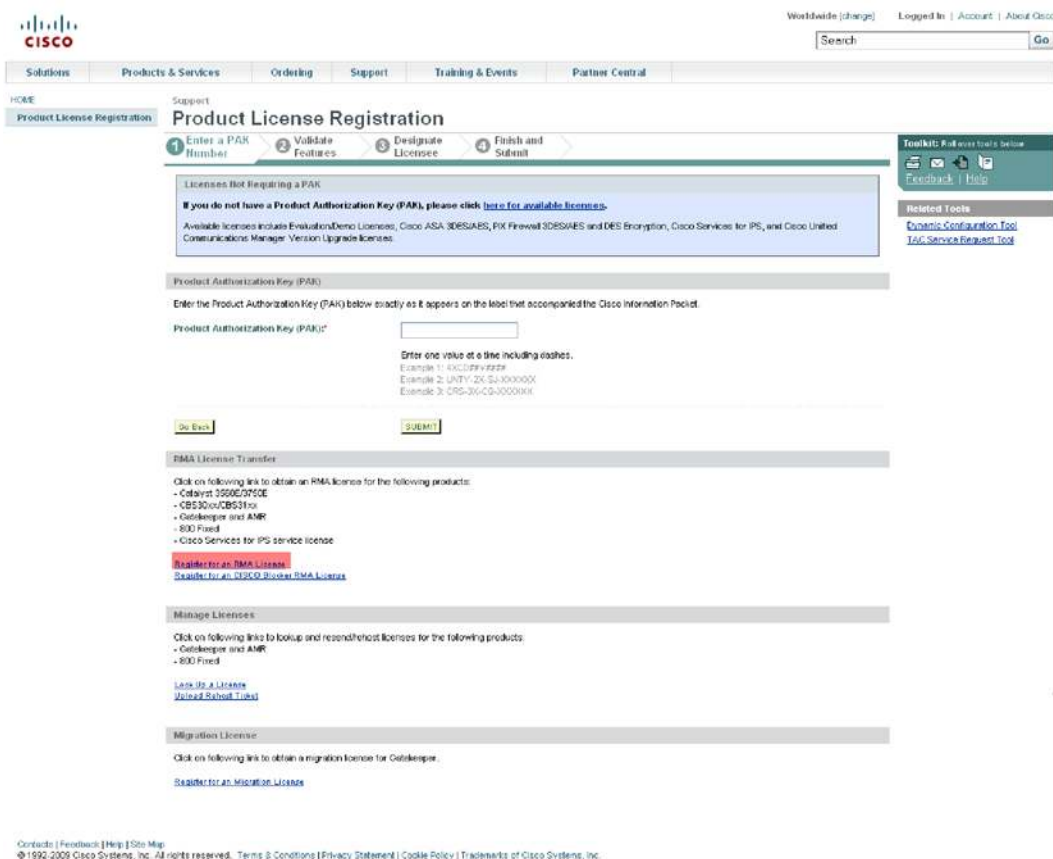
## Without CLM

### Summary Steps:

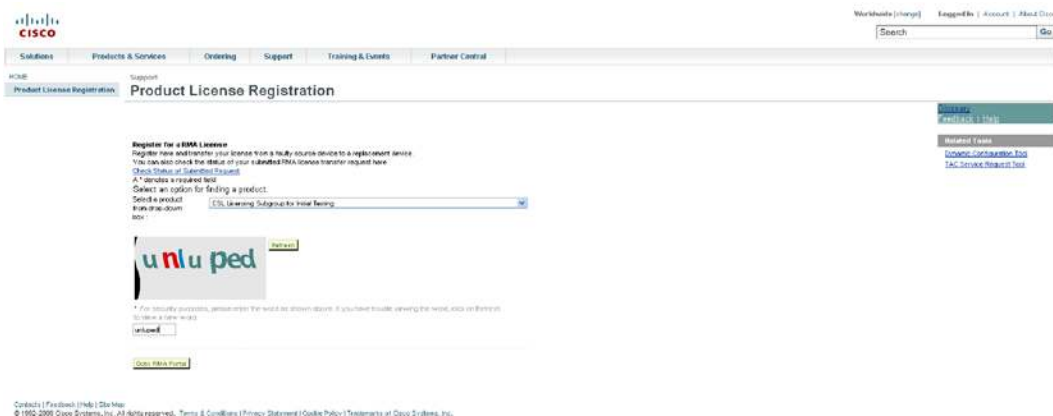
1. Log into [Cisco Licensing web portal](#) with Cisco.com username and password.
2. Follow the procedures and provide necessary information (including PID and SN from both the source and destination devices). Verify the licenses to be transferred and user’s information.
3. Once the rehost registration is complete, download the rehost license.
4. Install the rehost license on the replacement (destination) device.

Detailed Steps:

1. Log into [Cisco Licensing web portal](#) with CCO username and password. Select “Register for an RMA License” under “RMA License Transfer”.



2. Select a product from the drop-down box and enter the security key displayed.



3. Enter the UDI Product ID and UDI Serial Number from the source device. Enter Return Material Authorization Number if it is available.

Workbooks | Change | Logged In | Account | About Cisco

Solutions | Products & Services | Ordering | Support | Training & Events | Partner Central

Product License Registration

Product License Registration

1 License Transfer | 2 Validate Features | 3 Designate Licenses | 4 Review and Submit

Use this page to transfer a license from a faulty device to a replacement device during the Return Material Authorization (RMA) process.

A - Device A Required Step

Product ID:

Serial Number:

Return Material Authorization Number:

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4. Verify the licenses installed on the source device and click “Continue” button.

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Solutions | Products & Services | Ordering | Support | Training & Events | Partner Central

Product License Registration

Product License Registration

1 License Transfer | 2 Validate Features | 3 Designate Licenses | 4 Review and Submit

These are all the licenses associated with this UDI: FH11216P0Z

| Product Family | License Name               | Description | Quantity |
|----------------|----------------------------|-------------|----------|
| L30-DATA-ACC   | For Internal purposes only |             | 1        |

Confirm that the information above is correct and click on the "Continue" button below.  
If an error message is received, please open a Service Request using the TAC Service Request Tool. Please have your valid Cisco.com user ID and password available. As an alternative, you may also call our main Technical Assistance Center at 800 553 2447. If you would like to enter a different UDI, click on the "Back" button below to return to the previous page.

Contacts | Feedback | Help | Site Map  
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5. Enter the UDI Product ID and UDI Serial Number from the destination device. Check “End User Agreement”. Edit/Verify “Registration Information” and “End User Information”. Click “Continue” button.

Workbooks | Change | Logged In | Account | About Cisco

Solutions | Products & Services | Ordering | Support | Training & Events | Partner Central

Product License Registration

Product License Registration

1 License Transfer | 2 Validate Features | 3 Designate Licenses | 4 Review and Submit

Please complete the registration information below to either a RMA license.

Enter the replacement UDI (Source Device Identifier) number below:

Product ID:

Serial Number:

End User Agreement:  Click here if you accept the contents of the [End User License Agreement](#)

Registration Information

Enter new value at a time including dashes and capitalization.

Name:

Job Title:

Company Name:

Company Address:

Phone:   
If outside North America, please include your country code.

Fax:

Email:

End User Information

End User Information:  Check if End User information is different than above.

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6. Verify Product Information and License Information. Click “Submit” button.

Workloads (Change) Logged In | Account | About Cisco

Solutions Products & Services Ordering Support Training & Events Partner Central

Product License Registration

Product Information

Source ID: FID: C5020011 S/N: FHH1216P06Z  
 Destination ID: FID: C5020011 S/N: FHH1216P06Z  
 L2K-DATA-639

Product Family: CME, Licensing Subgroup: for Initial Testing

| Product Name | Feature | Description               | Quantity |
|--------------|---------|---------------------------|----------|
| L2K-DATA-639 | 639     | For Feature licenses only | 1        |

License Information

Registrant Information:

|                 |                     |
|-----------------|---------------------|
| Name            | LIMBO RUIBO         |
| Job Title       | Technical Leader    |
| Company Name    | CISCO SYSTEMS, INC. |
| Company Address | 1700 S              |
|                 | San Jose, CA 95134  |
|                 | USA                 |
| Phone           | +1 408 552 9134     |
| Fax             | +1 408 552 9134     |
| Email Address   | limbo@cisco.com     |

End User Information:

|                 |                     |
|-----------------|---------------------|
| Name            | LIMBO RUIBO         |
| Job Title       | Technical Leader    |
| Company Name    | CISCO SYSTEMS, INC. |
| Company Address | 1700 S              |
|                 | San Jose, CA 95134  |
|                 | USA                 |
| Phone           | +1 408 552 9134     |
| Fax             | +1 408 552 9134     |
| Email Address   | limbo@cisco.com     |

Submit Cancel

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7. License registration completes. Download the license either from the Cisco Licensing web portal by clicking “Download License” button or from the attachment of the email sent by Cisco.

Workloads (Change) Logged In | Account | About Cisco

Solutions Products & Services Ordering Support Training & Events Partner Central

Product License Registration

Your registration is complete.  
 Use the License Key within 90 days of the date shown in your following email.  
 If you have not received an email within 1 hour, please open a Service Request using the TAC Service Request Tool. Please have your valid Cisco.com user ID and password available. As an alternative, you may also call our main Technical Assistance Center at 800 552 2444. Please be sure to check your Junk/Spam email folders for this email from licensing@cisco.com with your license key attached.

Download Your License

Download License

Optional Next Steps

Request for Initial PDU License

Return to the Product License Registration page

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8. Download the revoke license (FHH1216P06Z\_20090625164813374.lic in this example) from either the Cisco Licensing portal or the email sent by Cisco.

9. Upload the revoke license to the destination router and install it with “license install” command.

```
c2951-lic2#copy tftp flash0:
```

```
Address or name of remote host [ ]?192.168.1.2
```

```
Source filename [ ]? lmxiang/FHH1216P06Z_20090625164813374.lic
```

```
Destination filename [FHH1216P06Z_20090625164813374.lic]?
```

```
Accessing tftp:// 192.168.1.2/lmxiang/FHH1216P06Z_20090625164813374.lic...
```

```
Loading lmxiang/FHH1216P06Z_20090625164813374.lic from 192.168.1.2 (via GigabitEthernet0/0): !
```

```
[OK-1140 bytes]
```

```
1140 bytes copied in 0.488 secs (2336 bytes/sec)
```

```
c2951-lic2#license install flash0:FHH1216P06Z_20090625164813374.lic
Installing licenses from "flash0:FHH1216P06Z_20090625164813374.lic"
Installing...Feature:datak9...Successful:Supported
1/1 licenses were successfully installed
0/1 licenses were existing licenses
0/1 licenses were failed to install
```

```
c2951-lic2#
%LICENSE-6-INSTALL: Feature datak9 1.0 was installed in this device.
UDI=CISCO2951:FHH1216P06Z; StoreIndex=0:Primary License Storage
%IOS_LICENSE_IMAGE_APPLICATION-6-LICENSE_LEVEL: Module name = c2951 Next reboot level
= datak9 and License = datak9
```

### Using CLM

#### Prerequisites:

- Have the appropriate CLM account/privilege to launch CLM and execute necessary functions
- CLM has the proper Internet connection to Cisco Licensing Portal.
- Use CLM to automatically discover the network or manually add devices to it so that CLM builds a device inventory

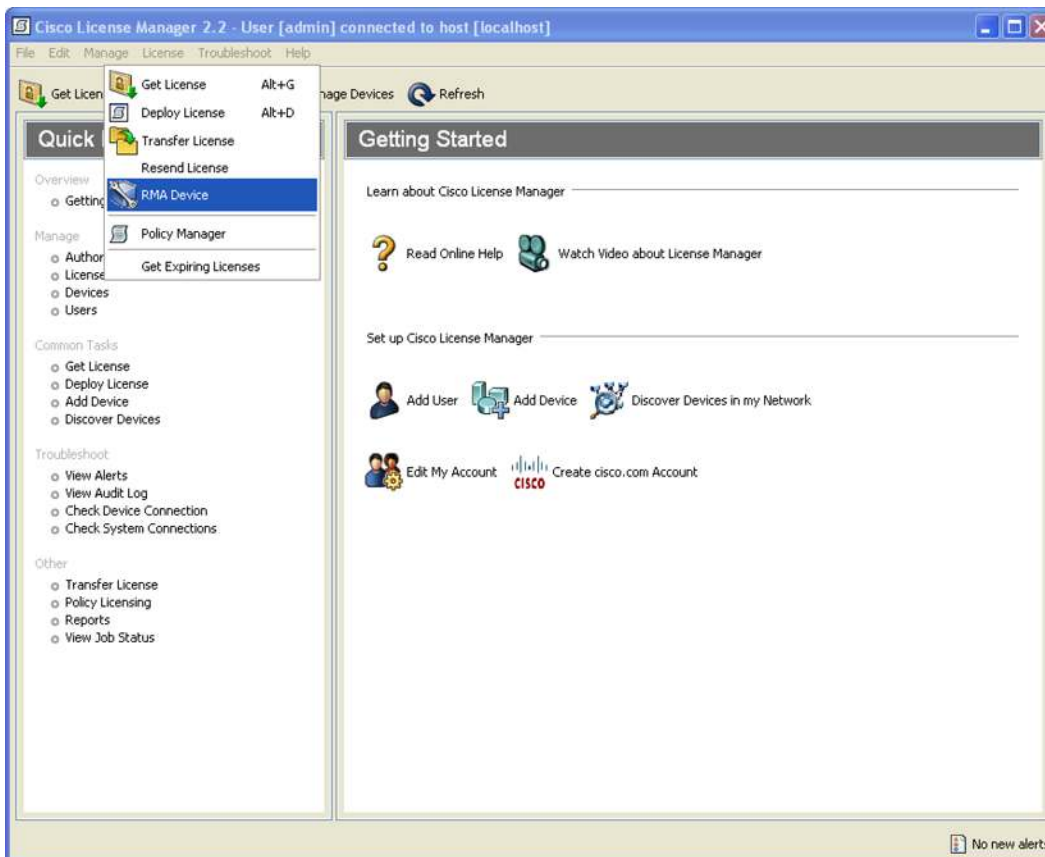
#### Summary Steps:

1. Select "RMA Device" at "License" menu to launch "RMA Device Assistant".
2. Follow the procedures to select source and destination devices.
3. Wait until RMA license transfer completes.

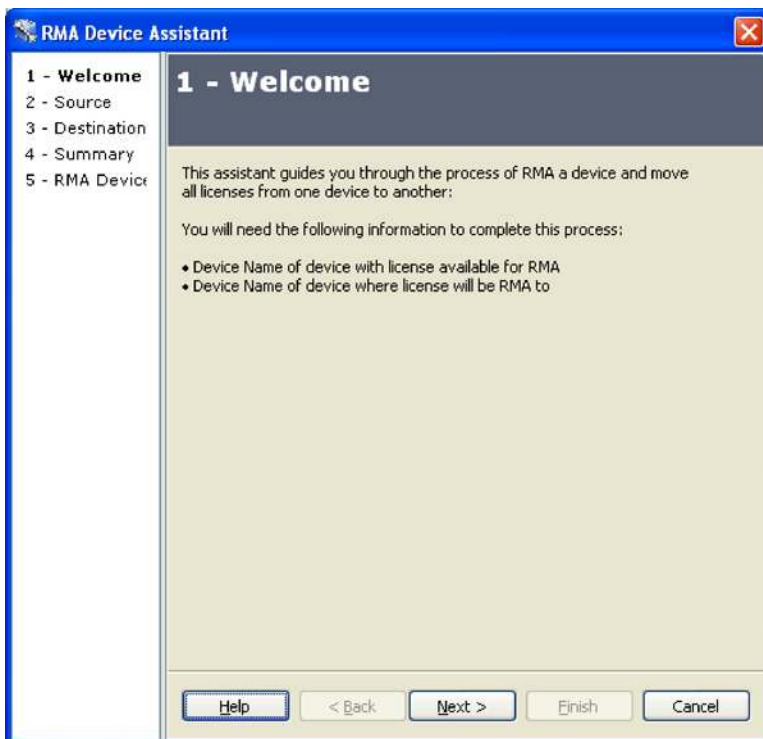


## Detailed Steps:

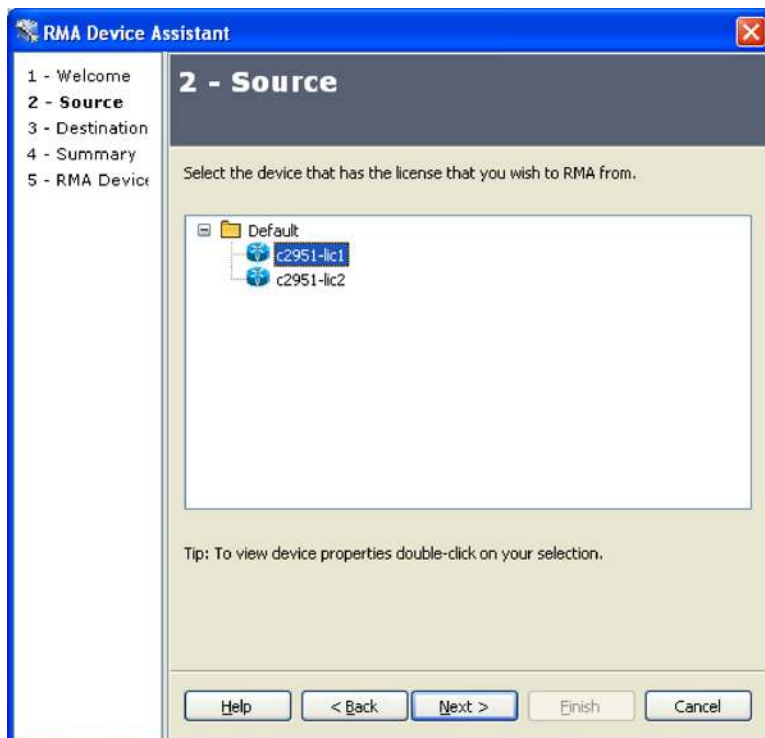
1. Select "RMA Device" at "License" menu to launch "RMA Device Assistant".



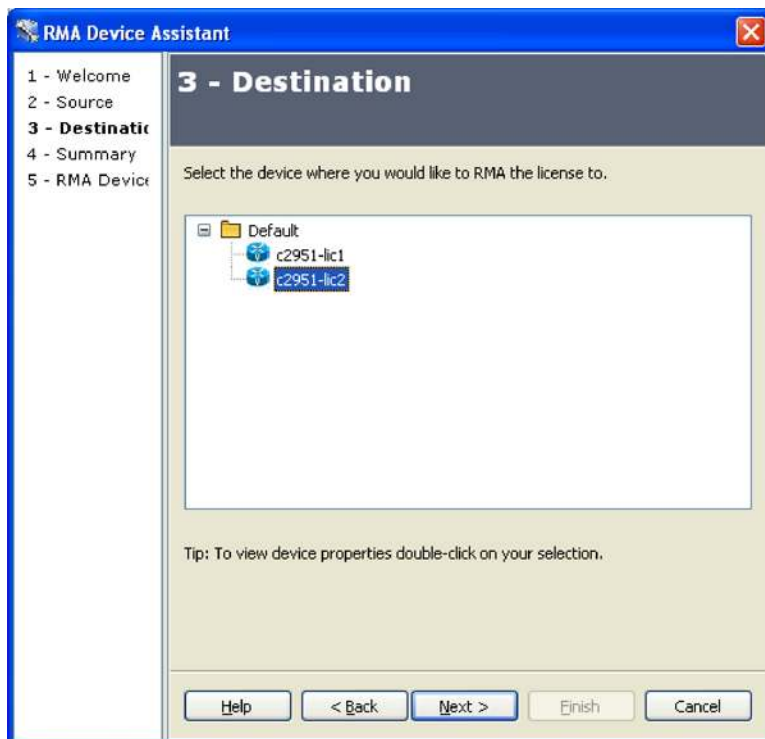
2. Click "Next" button in "1-Welcome" of "RMA Device Assistant".



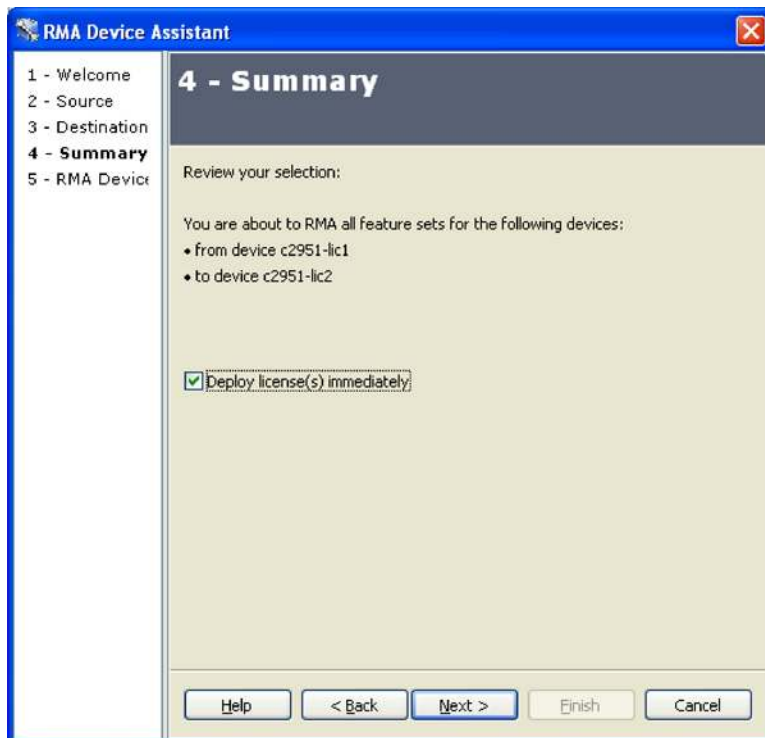
3. Select the source (faulty) device in "2-Source" of "RMA Device Assistant".



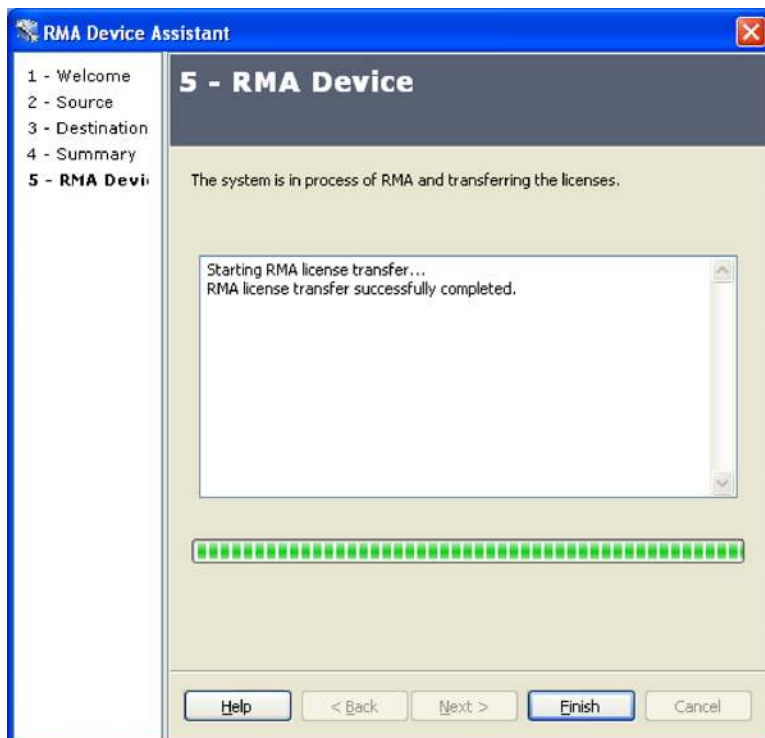
4. Select the destination (replacement) device in "3-Destination" of "RMA Device Assistant".



5. Verify the summary in “4-Summary” of “RMA Device Assistant”. Check “Deploy license(s) immediately”. Click “Next” button.



6. Wait until RMA license transfer completes.



## Changing IOS Software Version

Changing IOS Software Version on a device (i.e. upgrading to 15.1(3) T from 15.1(2) T or downgrading to 15.1(1) T from 15.1(2)T) is licensing transparent. Once the new IOS version is loaded on the device, the IOS recognizes the licenses installed on the device and enables corresponding functionality. No user intervention is required.

## Rebooting a Device

Rebooting a device is licensing transparent. Once a device comes up, the IOS on the device recognizes the licenses installed on the device and enables corresponding functionality. No user intervention is required.

## Software Activation Deployment

### Maintenance Provider Guidelines for Managing Software Activation

Customers have been requesting easier ways to track their software systems, add service features, and upgrade images. Now Cisco is helping maintenance providers simplify these tasks for their customers. With the new software activation model, each network device has a universal Cisco IOS Software image already installed. The universal image contains all software features available for the device and the software version, all in one binary. A software activation license key preinstalled in the device prior to shipping from Cisco or loaded after deployment activates specific functionality. Each software activation license key is unique to a specific device. More details can be found at [http://www.cisco.com/en/US/prod/collateral/iosswrel/ps6537/ps9677/white\\_paper\\_maintenance\\_activation.html](http://www.cisco.com/en/US/prod/collateral/iosswrel/ps6537/ps9677/white_paper_maintenance_activation.html).

### Channel Partners Guidelines for Managing Software Activation

The new software activation deployment model helps to:

- Simplify New Feature and Software Upgrade Purchases  
Software activation license keys activate new features, eliminating the need for channel partners to perform multiple site visits or deliver multiple equipment configurations.
- Reduce Upgrade Inventory  
Software activation keys for most products can be delivered instantly, using e-mail. eDelivery eliminates the need for channel partners to stock software upgrades, reducing inventory costs.
- Increased Customer Engagement  
The new Cisco software activation process encourages customers to work with the channel partner to purchase and activate software before it is downloaded and used.

More details can be found at

[http://www.cisco.com/en/US/prod/collateral/iosswrel/ps6537/ps9677/white\\_paper\\_cisco\\_sw\\_activation.html](http://www.cisco.com/en/US/prod/collateral/iosswrel/ps6537/ps9677/white_paper_cisco_sw_activation.html).

## Software Licenses Available on the ISR G2

### Technology Package Licenses

Next Generation ISRs offer the following IOS technology package licenses. These licenses are enforced through Cisco Software Licensing framework.

**Table 1.** Technology Package Licenses for 19xx ISRs

|                 |   |                     |
|-----------------|---|---------------------|
| SL-19-IPB-K9    | IP Base License for Cisco 1941  | Ordered with System |
| SL-19-DATA-K9   | Data License for Cisco 1941   | Ordered with System |
| SL-19-SEC-K9    | Security License for Cisco 1941. Works with universalk9 image           | Ordered with System |
| SL-19-SECNPE-K9 | SEC No Payload License for Cisco 1941. Works with universalk9_npe image | Ordered with System |

|                    |   |   |
|--------------------|---|---|
| SL-19-DATA-K9=     | Data Paper PAK for Cisco 1941   | Paper PAK. Can only be ordered as a Spare       |
| SL-19-SEC-K9=      | Security Paper PAK for Cisco 1941. Works with universalk9 image                           | Paper PAK. Can only be ordered as a Spare       |
| SL-19-SECNPE-K9=   | SEC No Payload Encryption Paper PAK for Cisco 1941. Works with universalk9_npe image      | Paper PAK. Can only be ordered as a Spare       |
| L-SL-19-DATA-K9=   | Data E-Delivery PAK for Cisco 1941  | Electronic PAK. Can only be ordered as a Spare. |
| L-SL-19-SEC-K9=    | Security E-Delivery PAK for Cisco 1941. Works with universalk9 image                      | Electronic PAK. Can only be ordered as a Spare. |
| L-SL-19-SECNPE-K9= | SEC No Payload Encryption E-Delivery PAK for Cisco 1941. Works with universalk9_npe image | Electronic PAK. Can only be ordered as a Spare. |

**Table 2.** Technology Package Licenses for 29xx ISRs

|                    |  |   |
|--------------------|--|---|
| SL-29-IPB-K9       | IP Base License for Cisco 2901-2951  | Ordered with System                             |
| SL-29-DATA-K9      | Data License for Cisco 2901-2951   | Ordered with System                             |
| SL-29-UC-K9        | Unified Commn. License for Cisco 2901-2951   | Ordered with System                             |
| SL-29-SEC-K9       | Security License for Cisco 2901-2951. Works with universalk9 image                             | Ordered with System                             |
| SL-29-SECNPE-K9    | SEC No Payload Encryption License for Cisco 2901-2951. Works with universalk9_npe image        | Ordered with System                             |
| SL-29-DATA-K9=     | Data Paper PAK for Cisco 2901-2951   | Paper PAK. Can only be ordered as a Spare       |
| SL-29-UC-K9=       | Unified Commn. Paper PAK for Cisco 2901-2951   | Paper PAK. Can only be ordered as a Spare       |
| SL-29-SEC-K9=      | Security Paper PAK for Cisco 2901-2951. Works with universalk9 image                           | Paper PAK. Can only be ordered as a Spare       |
| SL-29-SECNPE-K9=   | SEC No Payload Encryption Paper PAK for Cisco 2901-2951. Works with universalk9_npe image      | Paper PAK. Can only be ordered as a Spare       |
| L-SL-29-DATA-K9=   | Data E-Delivery PAK for Cisco 2901-2951  | Electronic PAK. Can only be ordered as a Spare. |
| L-SL-29-UC-K9=     | Unified Commn. E-Delivery PAK for Cisco 2901-2951  | Electronic PAK. Can only be ordered as a Spare. |
| L-SL-29-SEC-K9=    | Security E-Delivery PAK for Cisco 2901-2951. Works with universalk9 image                      | Electronic PAK. Can only be ordered as a Spare. |
| L-SL-29-SECNPE-K9= | SEC No Payload Encryption E-Delivery PAK for Cisco 2901-2951. Works with universalk9_npe image | Electronic PAK. Can only be ordered as a Spare. |

**Table 3.** Technology Package Licenses for 39xx ISRs

|                    |  |   |
|--------------------|--|---|
| SL-39-IPB-K9       | IP Base License for Cisco 3925/3945  | Ordered with System                             |
| SL-39-DATA-K9      | Data License for Cisco 3925/3945   | Ordered with System                             |
| SL-39-UC-K9        | Unified Commn. License for Cisco 3925/3945   | Ordered with System                             |
| SL-39-SEC-K9       | Security License for Cisco 3925/3945. Works with universalk9 image                             | Ordered with System                             |
| SL-39-SECNPE-K9    | SEC No Payload Encryption License for Cisco 3925/3945. Works with universalk9_npe image        | Ordered with System                             |
| SL-39-DATA-K9=     | Data Paper PAK for Cisco 3925/3945   | Paper PAK. Can only be ordered as a Spare       |
| SL-39-UC-K9=       | Unified Commn. Paper PAK for Cisco 3925/3945   | Paper PAK. Can only be ordered as a Spare       |
| SL-39-SEC-K9=      | Security Paper PAK for Cisco 3925/3945. Works with universalk9 image                           | Paper PAK. Can only be ordered as a Spare       |
| SL-39-SECNPE-K9=   | SEC No Payload Encryption Paper PAK for Cisco 3925/3945. Works with universalk9_npe image      | Paper PAK. Can only be ordered as a Spare       |
| L-SL-39-DATA-K9=   | Data E-Delivery PAK for Cisco 3925/3945  | Electronic PAK. Can only be ordered as a Spare. |
| L-SL-39-UC-K9=     | Unified Commn. E-Delivery PAK for Cisco 3925/3945  | Electronic PAK. Can only be ordered as a Spare. |
| L-SL-39-SEC-K9=    | Security E-Delivery PAK for Cisco 3925/3945. Works with universalk9 image                      | Electronic PAK. Can only be ordered as a Spare. |
| L-SL-39-SECNPE-K9= | SEC No Payload Encryption E-Delivery PAK for Cisco 3925/3945. Works with universalk9_npe image | Electronic PAK. Can only be ordered as a Spare. |

## Feature Licenses

### Software Activation Feature Licenses

These are typically upgrades to one or more technology Package Licenses and can be included on new routers or upgraded through Cisco Software Activation. These licenses are enforced through Cisco Software Licensing framework.

| Feature License Name | Prerequisites                            | License Types     |
|----------------------|--|-------------------|
| SSLVPN               | IP Base & Security (SECK9 only)          | Feature (Counted) |
| Intrusion Prevention | IP Base & Security (SEC-K9 or SECK9-NPE) | Subscription      |
| Content Filtering    | IP Base & Security                       | Subscription      |
| SNA Switching        | IP Base & Data                           | Feature           |
| Gatekeeper           | IP Base & UC                             | Feature           |
| CUE                  | IP Base & UC                             | Feature (Counted) |
| Lawful Intercept     | IP Base, Security, UC & Data             | Feature           |

### Right to Use Feature Licenses

Please see the most updated information about Right to Use Licenses here:

[http://www.cisco.com/en/US/docs/routers/access/sw\\_activation/SA\\_on\\_ISR.html](http://www.cisco.com/en/US/docs/routers/access/sw_activation/SA_on_ISR.html)

The following licenses do not Cisco software activation and you can begin using the features upon receipt of the Right to Use Notification

| Feature License Name | Prerequisites | License Types     |
|----------------------|---------------|-------------------|
| CME                  | IP Base & UC  | Feature (Counted) |
| SRST                 | IP Base & UC  | Feature (Counted) |
| VXML Gateway         | IP Base & UC  | Feature (Counted) |
| CUBE                 | IP Base & UC  | Feature (Counted) |
| Land Mobile Radio    | IP Base & UC  | Feature           |

### Subscription Licenses

Next Generation ISRs support subscription licenses which are licenses that are tied to a determined time period (term).

| Feature License Name | Prerequisites      | License Types |
|----------------------|--------------------|---------------|
| Intrusion Prevention | IP Base & Security | Subscription  |
| Content Filtering    | IP Base & Security | Subscription  |

### Feature License Details

The Feature license SKUs supported by Next Generation ISRs can be found below.

#### Software Activation Feature Licenses:

These licenses are enforced through Cisco Software Licensing Framework.

The HSEC-K9 license removes the curtailment enforced by the U.S. government export restrictions on the encrypted tunnel count and encrypted throughput. HSEC-K9 is available only on the Cisco 2921, Cisco 2951, Cisco 3925, Cisco 3945, Cisco 3925E, and Cisco 3945E. With the HSEC-K9 license, the ISR G2 router can go over the curtailment limit of 225 tunnels maximum for IP Security (IPsec) and encrypted throughput of 85-Mbps unidirectional traffic in or out of the ISR G2 router, with a bidirectional total of 170 Mbps.

The Cisco 1941, 2901, and 2911 already have maximum encryption capacities within export limits. The HSEC license requires the universalk9 image and the SEC license pre-installed.

| Feature License  | Description  | Platform       | Pre- Requisites         | Type                        |
|------------------|--|----------------|-------------------------|-----------------------------|
| FL-29-SNA        | SNA Feature License for Cisco 2901-2951                  | ISR 29xx       | IPBase and DATA package | License ordered with System |
| FL-39-SNA        | SNA Feature License for Cisco 3925/3945                  | ISR 39xx       | IPBase and DATA package | License ordered with System |
| FL-29-SNA=       | SNA Feature Paper PAK for Cisco 2901-2951                | ISR 29xx       | IPBase and DATA package | Spare Paper PAK             |
| FL-39-SNA=       | SNA Feature Paper PAK for Cisco 3925/3945                | ISR 39xx       | IPBase and DATA package | Spare Paper PAK             |
| L-FL-29-SNA=     | SNA Feature E-Delivery PAK for Cisco 2901-2951           | ISR 29xx       | IPBase and DATA package | Spare Electronic PAK        |
| L-FL-39-SNA=     | SNA Feature E-Delivery PAK for Cisco 3925/3945           | ISR 29xx       | IPBase and DATA package | Spare Electronic PAK        |
| FL-CUE-MBX-5     | Cisco Unity Express—5 mailbox License                    | ISR 29xx, 39xx | IPBase and UC package   | License ordered with System |
| FL-CUE-PORT-2    | Cisco Unity Express—2 port License                       | ISR 29xx, 39xx | IPBase and UC package   | License ordered with System |
| FL-CUE-IVR-2     | Cisco Unity Express—2 IVR session License                | ISR 29xx, 39xx | IPBase and UC package   | License ordered with System |
| FL-TCV-USER-1    | Cisco Unity Express—1 time card view user License        | ISR 29xx, 39xx | IPBase and UC package   | License ordered with System |
| FL-GK-2901       | Gatekeeper Feature License for Cisco 2901                | ISR 29xx, 39xx | IPBase and UC package   | License ordered with System |
| FL-GK-2911       | Gatekeeper Feature License for Cisco 2911                | ISR 29xx, 39xx | IPBase and UC package   | License ordered with System |
| FL-GK-2921       | Gatekeeper Feature License for Cisco 2921                | ISR 29xx, 39xx | IPBase and UC package   | License ordered with System |
| FL-GK-2951       | Gatekeeper Feature License for Cisco 2951                | ISR 29xx, 39xx | IPBase and UC package   | License ordered with System |
| FL-GK-3945       | Gatekeeper Feature License for Cisco 3945                | ISR 29xx, 39xx | IPBase and UC package   | License ordered with System |
| FL-GK-3925       | Gatekeeper Feature License for Cisco 3925                | ISR 29xx, 39xx | IPBase and UC package   | License ordered with System |
| FL-CUE-MBX-5=    | Cisco Unity Express—5 mailbox Paper PAK                  | ISR 29xx, 39xx | IPBase and UC package   | Spare Paper PAK             |
| FL-CUE-PORT-2=   | Cisco Unity Express—2 port Paper PAK                     | ISR 29xx, 39xx | IPBase and UC package   | Spare Paper PAK             |
| FL-CUE-IVR-2=    | Cisco Unity Express—2 IVR session Paper PAK              | ISR 29xx, 39xx | IPBase and UC package   | Spare Paper PAK             |
| FL-TCV-USER-1=   | Cisco Unity Express—1 time card view user Paper PAK      | ISR 29xx, 39xx | IPBase and UC package   | Spare Paper PAK             |
| FL-GK-2901=      | Gatekeeper Feature Paper PAK for Cisco 2901              | ISR 29xx, 39xx | IPBase and UC package   | Spare Paper PAK             |
| FL-GK-2911=      | Gatekeeper Feature Paper PAK for Cisco 2911              | ISR 29xx, 39xx | IPBase and UC package   | Spare Paper PAK             |
| FL-GK-2921=      | Gatekeeper Feature Paper PAK for Cisco 2921              | ISR 29xx, 39xx | IPBase and UC package   | Spare Paper PAK             |
| FL-GK-2951=      | Gatekeeper Feature Paper PAK for Cisco 2951              | ISR 29xx, 39xx | IPBase and UC package   | Spare Paper PAK             |
| FL-GK-3945=      | Gatekeeper Feature Paper PAK for Cisco 3945              | ISR 29xx, 39xx | IPBase and UC package   | Spare Paper PAK             |
| FL-GK-3925=      | Gatekeeper Feature Paper PAK for Cisco 3925              | ISR 29xx, 39xx | IPBase and UC package   | Spare Paper PAK             |
| L-FL-CUE-MBX-5=  | Cisco Unity Express—5 mailbox E-Delivery PAK             | ISR 29xx, 39xx | IPBase and UC package   | Spare Electronic PAK        |
| L-FL-CUE-PORT-2= | Cisco Unity Express—2 port E-Delivery PAK                | ISR 29xx, 39xx | IPBase and UC package   | Spare Electronic PAK        |
| L-FL-CUE-IVR-2=  | Cisco Unity Express—2 IVR session E-Delivery PAK         | ISR 29xx, 39xx | IPBase and UC package   | Spare Electronic PAK        |
| L-FL-TCV-USER-1= | Cisco Unity Express—1 time card view user E-Delivery PAK | ISR 29xx, 39xx | IPBase and UC package   | Spare Electronic PAK        |
| L-FL-GK-2901=    | Gatekeeper Feature PAK for Cisco 2901 E-Delivery PAK     | ISR 2901       | IPBase and UC package   | Spare Electronic PAK        |

| Feature License    | Description  | Platform              | Pre- Requisites           | Type                        |
|--------------------|--|-----------------------|---------------------------|-----------------------------|
| L-FL-GK-2911=      | Gatekeeper Feature PAK for Cisco 2911 E-Delivery PAK                       | ISR 2911              | IPBase and UC package     | Spare Electronic PAK        |
| L-FL-GK-2921=      | Gatekeeper Feature PAK for Cisco 2921 E-Delivery PAK                       | ISR 2921              | IPBase and UC package     | Spare Electronic PAK        |
| L-FL-GK-2951=      | Gatekeeper Feature PAK for Cisco 2951 E-Delivery PAK                       | ISR 2951              | IPBase and UC package     | Spare Electronic PAK        |
| L-FL-GK-3945=      | Gatekeeper Feature PAK for Cisco 3945 E-Delivery PAK                       | ISR 3945              | IPBase and UC package     | Spare Electronic PAK        |
| L-FL-GK-3925=      | Gatekeeper Feature PAK for Cisco 3925 E-Delivery PAK                       | ISR 3925              | IPBase and UC package     | Spare Electronic PAK        |
| FL-SSLVPN10-K9     | Cisco SSLVPN Clientless Feature License -10 Clientless Users               | ISR 19xx,29xx,39xx    | IPBase and SEC-K9 package | License ordered with System |
| FL-SSLVPN25-K9     | Cisco SSLVPN Clientless Feature License—25 Clientless Users                | ISR 19xx,29xx,39xx    | IPBase and SEC package    | License ordered with System |
| FL-SSLVPN100-K9    | Cisco SSLVPN Clientless Feature License—100 Clientless Users               | ISR 19xx,29xx,39xx    | IPBase and SEC package    | License ordered with System |
| FL-SSLVPN10-K9=    | Cisco SSLVPN Clientless Feature Paper PAK—10 Clientless Users              | ISR 19xx,29xx,39xx    | IPBase and SEC-K9 package | Spare Paper PAK             |
| FL-SSLVPN25-K9=    | Cisco SSLVPN Clientless Feature Paper PAK—25 Clientless Users              | ISR 19xx,29xx,39xx    | IPBase and SEC package    | Spare Paper PAK             |
| FL-SSLVPN100-K9=   | Cisco SSLVPN Clientless Feature Paper PAK—100 Clientless Users             | ISR 19xx,29xx,39xx    | IPBase and SEC package    | Spare Paper PAK             |
| L-FL-SSLVPN10-K9=  | Cisco SSLVPN Clientless Feature PAK (E-Delivery)—10 Clientless Users       | ISR 19xx,29xx,39xx    | IPBase and SEC package    | Spare Electronic PAK        |
| L-FL-SSLVPN25-K9=  | Cisco SSLVPN Clientless Feature PAK (E-Delivery)—25 Clientless Users       | ISR 19xx,29xx,39xx    | IPBase and SEC package    | Spare Electronic PAK        |
| L-FL-SSLVPN100-K9= | Cisco SSLVPN Clientless Feature PAK (E-Delivery)—100 Clientless Users      | ISR 19xx,29xx,39xx    | IPBase and SEC package    | Spare Electronic PAK        |
| FL-19-CNFIL-1Y     | IOS Content Filtering 1 YR Subscription License for Cisco 1941-1941W       | ISR 19xx              | IPBase and SEC package    | License ordered with System |
| FL-29-CNFIL-1Y     | IOS Content Filtering 1 YR Subscription License for Cisco 2901-2951        | ISR 29xx              | IPBase and SEC package    | License ordered with System |
| FL-39-CNFIL-1Y     | IOS Content Filtering 1 YR Subscription License for Cisco 3925-3945        | ISR 39xx              | IPBase and SEC package    | License ordered with System |
| FL-19-CNFIL-1Y=    | IOS Content Filtering 1 YR Subscription Paper PAK for Cisco 1941-1941W     | ISR 19xx              | IPBase and SEC package    | Spare Paper PAK             |
| FL-29-CNFIL-1Y=    | IOS Content Filtering 1 YR Subscription Paper PAK for Cisco 2901-2951      | ISR 29xx              | IPBase and SEC package    | Spare Paper PAK             |
| FL-39-CNFIL-1Y=    | IOS Content Filtering 1 YR Subscription Paper PAK for Cisco 3925-3945      | ISR 39xx              | IPBase and SEC package    | Spare Paper PAK             |
| L-FL-19-CNFIL-1Y=  | IOS Content Filtering 1 YR Subscription E-Delivery PAKfor Cisco 1941-1941W | ISR 19xx              | IPBase and SEC package    | Spare Electronic PAK        |
| L-FL-29-CNFIL-1Y=  | IOS Content Filtering 1 YR Subscription E-Delivery PAKfor Cisco 2901-2951  | ISR 29xx              | IPBase and SEC package    | Spare Electronic PAK        |
| L-FL-39-CNFIL-1Y=  | IOS Content Filtering 1 YR Subscription E-Delivery PAKfor Cisco 3925-3945  | ISR 39xx              | IPBase and SEC package    | Spare Electronic PAK        |
| FL-29-HSEC-K9      | U.S. Export Restriction Compliance license for 2921/2951                   | ISR 2921 and ISR 2951 | SEC-K9 License            | License ordered with System |
| FL-29-HSEC-K9=     | U.S. Export Restriction Compliance license for 2921/2951                   | ISR 2921 and ISR 2951 | SEC-K9 License            | Spare Paper PAK             |
| L-FL-29-HSEC-K9=   | U.S. Export Restriction Compliance license for 2921/2951                   | ISR 2921 and ISR 2951 | SEC-K9 License            | Spare Electronic PAK        |
| FL-39-HSEC-K9      | U.S. Export Restriction Compliance license for 3925/3945                   | ISR 3925and ISR 3945  | SEC-K9 License            | License ordered with System |
| FL-39-HSEC-K9=     | U.S. Export Restriction Compliance license for 3925/3945                   | ISR 3925and ISR 3945  | SEC-K9 License            | Spare Paper PAK             |



| Feature License   | Description   | Platform                | Pre- Requisites | Type                           |
|-------------------|---|-------------------------|-----------------|--------------------------------|
| L-FL-39-HSEC-K9=  | U.S. Export Restriction Compliance license for 3925/3945          | ISR 3925and<br>ISR 3945 | SEC-K9 License  | Spare Electronic<br>PAK        |
| FL-39E-HSEC-K9    | U.S. Export Restriction Compliance license for 3900E series       | ISR 3925E and<br>3945E  | SEC-K9 License  | License ordered with<br>System |
| FL-39E-HSEC-K9=   | U.S. Export Restriction Compliance license spare for 3900E series | ISR 3925E and<br>3945E  | SEC-K9 License  | Spare Paper PAK                |
| L-FL-39E-HSEC-K9= | U.S. Export Restriction Compliance license spare for 3900E series | ISR 3925E and<br>3945E  | SEC-K9 License  | Spare Electronic<br>PAK        |

## Right to Use License

The following licenses do not Cisco software activation and you can begin using the features upon receipt of the Right to Use Notification Document.

| Feature License | Description  | Platform       | Pre- Requisites       | Type   |
|-----------------|--|----------------|-----------------------|--|
| FL-CME          | Cisco Call Manager Express (Paper) Feature License                           | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use<br>Feature License.<br>Can be ordered as<br>system or spare |
| FL-SRST         | Cisco Survivable Remote Site Telephony (Paper) Feature License               | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use<br>Feature License.<br>Can be ordered as<br>system or spare |
| FL-CME-SRST-5   | Cisco CME or SRST - 5 seat Paper Feature License                             | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use<br>Feature License.<br>Can be ordered as<br>system or spare |
| FL-CME-SRST-25  | Cisco CME or SRST - 25 seat Paper Feature License                            | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use<br>Feature License.<br>Can be ordered as<br>system or spare |
| FL-CME-SRST-100 | Cisco CME or SRST - 100 seat Paper Feature License                           | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use<br>Feature License.<br>Can be ordered as<br>system or spare |
| FL-VXML-1       | VXML—1 session Paper Feature License   | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use<br>Feature License.<br>Can be ordered as<br>system or spare |
| FL-VXML-12      | VXML—12 session Paper Feature License  | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use<br>Feature License.<br>Can be ordered as<br>system or spare |
| FL-CUBEE-5      | Cisco Unified Border Element Paper Feature License-Enterprise—5 Sessions     | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use<br>Feature License.<br>Can be ordered as<br>system or spare |
| FL-CUBEE-25     | Cisco Unified Border Element Paper Feature License -Enterprise—25 Sessions   | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use<br>Feature License.<br>Can be ordered as<br>system or spare |
| FL-CUBEE-100    | Cisco Unified Border Element Paper Feature License -Enterprise—100 Sessions  | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use<br>Feature License.<br>Can be ordered as<br>system or spare |
| FL-CUBEE-500    | Cisco Unified Border Element Paper Feature License -Enterprise—500 Sessions  | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use<br>Feature License.<br>Can be ordered as<br>system or spare |
| FL-CUBEE-1000   | Cisco Unified Border Element Paper Feature License -Enterprise—1000 Sessions | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use<br>Feature License.<br>Can be ordered as<br>system or spare |

| Feature License    | Description  | Platform       | Pre- Requisites       | Type  |
|--------------------|--|----------------|-----------------------|---|
| FL-LMR             | Land Mobile Radio Paper Feature License  | ISR 29xx, 39xx | IPBase and UC package | Paper Right to Use Feature License. Can be ordered as system or spare |
| L-FL-CME=          | Cisco Call Manager Express E-Delivery Feature License                              | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |
| L-FL-SRST=         | Cisco Survivable Remote Site Telephony E-Delivery Feature License                  | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |
| L-FL-CME-SRST-5=   | Cisco CME or SRST - 5 seat E Delivery Feature License                              | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |
| L-FL-CME-SRST-25=  | Cisco CME or SRST - 25 seat E Delivery Feature License                             | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |
| L-FL-CME-SRST-100= | Cisco CME or SRST - 100 seat E Delivery Feature License                            | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |
| L-FL-VXML-1=       | VXML—1 session E- Delivery Feature License   | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |
| L-FL-VXML-12=      | VXML—12 session E- Delivery Feature License  | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |
| L-FL-CUBEE-5=      | Cisco Unified Border Element -Enterprise—5 Sessions E- Delivery Feature License    | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |
| L-FL-CUBEE-25=     | Cisco Unified Border Element -Enterprise—25 Sessions E- Delivery Feature License   | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |
| L-FL-CUBEE-100=    | Cisco Unified Border Element -Enterprise—100 Sessions E- Delivery Feature License  | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |
| L-FL-CUBEE-500=    | Cisco Unified Border Element -Enterprise—500 Sessions E- Delivery Feature License  | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |
| L-FL-CUBEE-1000=   | Cisco Unified Border Element -Enterprise—1000 Sessions E- Delivery Feature License | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |
| L-FL-LMR=          | Land Mobile Radio E- Delivery Feature License                                      | ISR 29xx, 39xx | IPBase and UC package | Electronic Right to Use Feature License Spare                         |

## Licensing and Packaging Q&A on ISR G2

### Q. What is Cisco Software Activation?

- A.** Cisco Software Activation (CSA) is the mechanism used to activate software features and components on next-generation ISR G2. CSA is used to generate a unique license key for a feature set or technology package on a specific device and activate that functionality on the ISR.

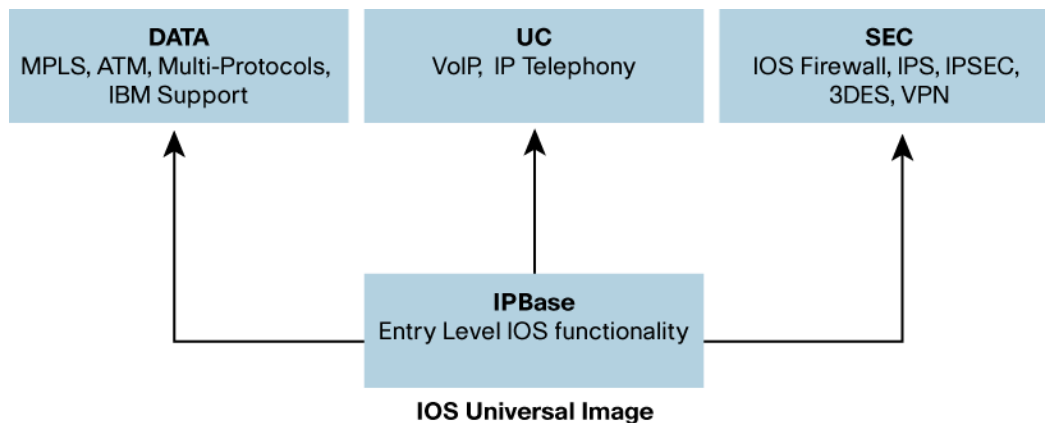
Cisco Software Activation has previously been available on several products from Cisco including the latest additions to the 800 Series portfolio. Additional information can be found at <http://www.cisco.com/go/sa>.

### Q. How has feature packaging changed with the next-generation ISRs?

- A.** With the introduction of the new wave of ISRs, Cisco is taking the opportunity to change the way IOS software was previously packaged. Previously, each platform and release version would result in between seven and eleven different IOS images with different features and capabilities in every image.

Cisco Software Activations enables a much more practical approach to software packaging. With the new wave of ISRs, all features are included in a single Universal Image. Premium features beyond what is included in the default IP Base package are generally grouped into three major Technology Packages: Data, Security and Unified Communications. These three packages represent the vast majority of features available in IOS.

In addition to the three major Technology Packages, additional Feature Licenses are available for premium features requiring subscription services or counted quantities.



**Q. Does the IOS Software packaging change on the existing ISR 1800, ISR 2800 and ISR 3800 product families?**

**A.** The software packaging on the ISR 1800, ISR 2800 and ISR 3800 product families will remain unchanged and will not adopt the licensing, packaging and universal image concept outlined for the ISR G2 family.

**Q. What are the different types of licenses available for the next-generation ISRs?**

**A.**

- **Permanent:** A Permanent License is a license that never expires. Once a permanent license is installed on a router, it is good for that particular feature set for the life of the router even across IOS versions. For example, once a UC, Security or Data license is installed on a router, the subsequent features for that license will be activated even if the router is upgraded to a new IOS release. A permanent license is the most common license type used when a feature set is purchased for a device.
- **Temporary:** A Temporary License is a license good for a limited amount of time. ISR G2 includes a full set of 60 day Temporary Licenses for the Data, UC and Security feature sets. These can be activated and deactivated at any time to evaluate a feature set before making the decision to purchase and upgrade to a Permanent License. They also provide a mechanism that gives the user some flexibility when they actually need to upgrade to a Permanent License. The only the time a Temporary License is active is counted against the available time on the license. Once a Temporary License expires it cannot be extended. However, in certain cases Cisco Technical Assistance Center (TAC) can issue new temporary Licenses to aid in troubleshooting a problem.
- **Counted:** A Counted License is a license that actually counts something in the router. A typical example would be the number of SSLVPN connections possible on a router. These are analogous to the counted paper licenses used with routers in the past. However, with the new Cisco Software Activation infrastructure the management of these licenses is greatly simplified.
- **Subscription:** A Subscription License is a license that allows access to a feature or capability for a given amount of time unless the subscription is renewed. Subscription Licenses typically relate to regular updates from a third party service such as a Content Filtering License which provides regular updates from a filtering database.

**Q. Are there any trust-based/ Right to Use licenses available on the new ISRs?**

**A.** While the primary licensing and feature activation method for the ISR G2 will be Cisco Software Activation, there will also be a few features for which Right to Use licensing will still be provided. This approach gives customers even more flexibility in the way they are able to configure and pay for features in their network.

**Q. What licenses will be available on the new ISRs?****A.**

- **Technology Package Licenses:** These will be delivered with new routers or available as an upgrade through Cisco Software Activation.

| Technology Package Name | Prerequisites | License Types        |
|-------------------------|---------------|----------------------|
| IP Base                 | None          | Permanent            |
| Security                | IP Base       | Permanent, Temporary |
| Unified Communication   | IP Base       | Permanent, Temporary |
| Data                    | IP Base       | Permanent, Temporary |

- **Software Activation Feature Licenses:** These are typically upgrades to one or more Technology Package Licenses and can be included on new routers or upgraded through Cisco Software Activation

| Feature License Name | Prerequisites                | License Types            |
|----------------------|------------------------------|--------------------------|
| SSLVPN               | IP Base & Security           | Counted                  |
| Intrusion Prevention | IP Base & Security           | Subscription             |
| Content Filtering    | IP Base & Security           | Subscription             |
| SNA Switching        | IP Base & Data               | Feature                  |
| Gatekeeper           | IP Base & UC                 | Feature                  |
| CUE                  | IP Base & UC                 | Counted                  |
| Lawful Intercept     | IP Base, Security, UC & Data | Feature (only Permanent) |

- **Right to Use Feature Licenses:** The following licenses do not Cisco software activation and you can begin using the features upon receipt of the Right to Use Notification

| Feature License Name | Prerequisites | License Types |
|----------------------|---------------|---------------|
| CME                  | IP Base & UC  | Counted       |
| SRST                 | IP Base & UC  | Counted       |
| VXML Gateway         | IP Base & UC  | Counted       |
| CUBE                 | IP Base & UC  | Counted       |
| Land Mobile Radio    | IP Base & UC  | Permanent     |

**Q. Where can I learn more about Cisco Software Activation?**

**A.** <http://www.cisco.com/go/sa>

**Universal Image****Q. What is a universal image?**

**A.** Universal IOS image contains all Cisco IOS features. The level of Cisco IOS functionality available is determined by the license applied to the device. A Software Activation License (SAL) enables specific functionality e.g. DATA technology package license enables DATA technology functionality in the IOS Universal image.

**Q. What kind of universal images are supported on next generation ISRs?**

**A.** Next generation offers two universal images on each platform

1. Universal images with the “universalk9” designation in the image name: This universal image offers all the Cisco IOS features including strong crypto features such as VPN payload, Secure UC etc. The strong enforcement of encryption capabilities provided by Cisco Software Activation satisfies requirements for the export of encryption capabilities
2. Universal images with the universalk9\_npe” designation in the image name: Some countries have import requirements that require that the device does not support any strong crypto functionality such as VPN payload etc. in any form. To satisfy the import requirements of those countries, this universal image does not support any strong payload encryption such as VPN payload, secure voice etc.

**Q. What technology package licenses are supported on both the universal images?**

**A.**

| Technology Package License                                  | universalk9 | universalk9_npe |
|---|-------------|-----------------|
| IP Base (IPB-K9)  | Yes         | Yes             |
| Data (DATA-K9)  | Yes         | Yes             |
| Unified Communications (UC-K9)                              | Yes         | Yes (w/o SRTP)  |
| Security (SEC-K9)   | Yes         | No              |
| Security (SECNPE-K9) with no support for Payload Encryption | No          | Yes             |
| Temporary licenses for payload crypto                       | Yes         | No              |

**PAK**

**Q. What is a PAK?**

**A.** PAK stands for Product Authorization Key. A PAK is an 11 digit alpha numeric key created by Cisco manufacturing and defines the Feature Set associated with the PAK. PAK is not tied to a specific device until the license is created.

**Q. How is a PAK delivered?**

**A.** Delivery of PAKs can be paper based or electronic. Paper based PAKs begin with SL- for technology package licenses and FL- for Feature licenses. Paper based PAKs are sent on a piece of paper by postal mail to customers.

**Q. What is an e-delivery PAK?**

**A.** e-delivery is Cisco's process for electronic fulfillment and subsequent asset management of customer orders for software license entitlement documentation. With eDelivery, users will be able to manage and download their Product Authorization Keys (PAKs). Once a customer has placed an order for an eDelivery product, they receive an email containing a link to the eDelivery application. Customers access the application using their Cisco.com user profile, user ID and password and download a claim certificate in pdf format. The Claim Certificate contains the Product Authorization Key (PAK) number.

Electronic PAKs begin with L-SL for technology package licenses and L-FL for Feature licenses.

**Q. Where can I find more information about e-delivery?**

**A.** Please visit <https://edelivery.cisco.com/esd/faq.do?view> for more details.

**Q. Do PAKs expire?**

**A.** No. PAKs do not expire.

**Q. Can one PAK be used for activating multiple license keys?**

**A.** Yes, a PAK can be purchased that generates any specified number of licenses. The total number of licenses the PAK can generate is specified during the ordering process. Regardless of the number of upgrades purchased,

the customer will only receive one PAK per router family type. Such PAKs are called multi-use PAKs or Bulk PAKs.

**Q. What types of multi-use PAKs are supported on ISR G2?**

- A.** Multi-use PAKs for paper and e-delivery PAKs are supported on ISRs for each ISR G2 product family i.e. 1900,2900 and 3900 ISRs.

The SKUs for the Bulk PAKs are:

L-SLFL-800=

L-SLFL-19=

L-SLFL-29=

L-SLFL-39=

### Licenses

**Q. Do I need to install licenses for software purchased with the router?**

- A.** Cisco installs license(s) for software at time of initial router purchase

**Q. What kind of documentation do I receive with my router for licenses and PAKs?**

- A.** Licensing documentation included with the 3900, 2900, and 1900 Series ISRs commonly includes two types of licenses, depending on the configuration ordered at the time of purchase: Software Claim Certificates and Right to Use Notifications.

#### Software Claim Certificate

Software Claim Certificates are used for licenses that require software activation. The claim certificate provides the Product Activation Key (PAK) for your license and important information regarding the Cisco End User License Agreement.

In most cases, Cisco or your Cisco partner will have already activated the licenses ordered at the time of purchase and no Software Claim Certificate will be provided. You can determine the licenses activated on your system by issuing the *show license feature* command on the router CLI or with a Cisco management application such as Cisco Configuration Professional, or Cisco License Manager.

Any licenses that are not installed can be activated with Cisco Configuration Professional, Cisco License Manager or via the router CLI. In order to activate the license, you will need your router's product ID (PID), serial number (SN), and PAK. The PID and SN are available on the platform label tray or via IOS CLI. The PAK is located on your Software Claim Certificate. Further information regarding the license activation process can be found at [www.cisco.com/go/sa](http://www.cisco.com/go/sa). It is recommended that you retain your Software Claim Certificate for your records.

#### Right to Use Notification

Right to Use licenses do not require software activation. You may begin using the licensed features upon receipt of the Right to Use Notification. Keep the Right to Use Notification for your records as proof of your license purchase.

**Q. When does customer need to install licenses on the device?**

- A.** Upgrade of IOS software functionality on an already purchased router will require customer to purchase & activate license(s) e.g. adding DATA functionality to an already deployed device will require customer to install DATA license on the device.

In the case of failed routers requiring replacement, customers will need to transfer software license(s) from the failed router to the replacement router. see RMA section below)

**Q. What is required to obtain a license?**

**A.** Product Activation Key (PAK), the Product ID (PID) and the Serial Number (SN) are required for key generation functions.

**Q. What is PID and Serial Number (SN) and where can I find it?**

**A.** Serial Number is a 11 digit key which uniquely identifies a device. Product Id identifies the Product family to which the product belongs to. This information can be found using "show license UDI" command.

A label tray on the router provides barcode scan-able labels for PID and Serial Number as well.

**Q. Where do customers go to obtain a software license key once they have a PAK?**

**A.** They should go to the Software License Registration page on cisco.com. If they are using Cisco License Manager (CLM) then this can be used to collect the license key(s) (see section below on CLM).

**Q. What happens if I mistype my serial number / PID on the licensing portal?**

**A.** Cisco backend checks for mistyped PID and Serial Number.

**Q. I generated the license with the UDI information from a different device than the one on which license is being installed. What happens?**

**A.** IOS will not allow install of license on a device generated with a different device UDI than that of the device. Cisco TAC can generate licenses in case of error in generating licenses

**Q. Does license installation require a reboot of the device to activate new functionality?**

**A.** A router needs to be rebooted after installing a technology package license to activate the new functionality. A reboot is not required though if the router is already using temporary license for the newly installed technology package license. For feature licenses reload of the router is not required after installation of the feature license.

**Q. Do ISR G2 support temporary licenses?**

**A.** ISR G2 support temporary license which are valid for 60 days of usage. Temporary licenses are built into the device for UC, SEC and DATA technology package licenses.

Customers can also get temporary licenses (valid for 60 days of use) for trial by going to <http://www.cisco.com/go/license>.

**Q. Is there any functional difference between temporary and permanent licenses?**

**A.** Temporary licenses, in general offer the same functionality as permanent licenses.

One notable exception is the temporary license for the SEC-K9 technology package. The temporary license for the SEC-K9 technology package will restrict the encrypted payload (i.e. VPN payload, secure voice) throughput to 110Mbps aggregate (55Mbps flowing into the device and 55Mbps flowing out of the device) on the next generation ISR platforms. The evaluation license for SEC-K9 will support a maximum of 200 concurrent encrypted tunnels (SRTP, SSL VPN, IPSEC VPN etc) and a maximum of 1000 TLS sessions for Secure Voice.

The evaluation license for SEC-K9 is restricted for encrypted payload and encrypted tunnels to meet the U.S. Export Control Laws.

**Q. How can a customer go beyond 200 concurrent encrypted tunnels on the ISR G2 platform?**

**A.** The HSEC-K9 license removes the curtailment enforced by the U.S. government export restrictions on the encrypted tunnel count and encrypted throughput. HSEC-K9 is available only on the Cisco 2921, Cisco 2951, Cisco 3925, Cisco 3945, Cisco 3925E, and Cisco 3945E. The Cisco 1941, 2901, and 2911 already have maximum encryption capacities within export limits. For more information on HSEC-K9 licensing please refer to the following document: [http://www.cisco.com/en/US/docs/routers/access/sw\\_activation/SA\\_on\\_ISR.html](http://www.cisco.com/en/US/docs/routers/access/sw_activation/SA_on_ISR.html)

**Q. How is the time remaining on temporary licenses calculated?**

**A.** Temporary licenses are usage based and are valid for 60 days e.g. if a customer uses the temporary license for 40 days and then shut downs the router he/she will still have 20 days left on the temporary license.

**Q. Do temporary licenses get removed automatically when a permanent license is installed? Or does the temporary license have to be removed before the permanent license can be activated and installed?**

**A.** Temporary licenses will remain after the permanent license is installed and activated. If permanent license is activated in the router, then temporary license will automatically become inactive.

**Q. Do I need to reboot my device if I move from temporary license to permanent license for a technology package or feature?**

**A.** No, A reboot of the device is not required if the device moves from temporary to permanent license for a technology package or feature.

**Q. How long does license key generation take?**

**A.** When using the Software License Registration page on cisco.com license key generation is instant.

**Q. What is the format of the license key?**

**A.** The license is in the form of a file with a ".lic" extension. Adding this file to the appropriate Cisco device will activate the purchased IOS Feature Set. The contents of the .lic file must not be altered in any way, this will render it useless. If a customer wishes to add their own notes to the license file (ie: PO numbers, user information, etc.) then this can be done via the device CLI.

The license file can be installed using the IOS Command Line Interface (CLI) or the Cisco License Manager. Instructions for using the CLI are included in the email.

**Q. How are licenses handled during RMA process?**

**A.** Cisco will ship replacement device with IPBase license. All licenses, except IPBase need to be transferred from the faulty device to replacement device to get a functionally equivalent replacement device.

**Q. How are licenses transferred during RMA process?**

**A.** Customer can use CLM or can go to Cisco licensing portal (<http://www.cisco.com/go/license>) to transfer licenses from faulty device to replacement device. When an in service device fails, its software license can be transferred by using the "Register for an RMA License" function on the Cisco licensing portal. Five pieces of information must be gathered before initiating the license transfer: a valid service contract number (optional) , the PID and SN of the returned router, the PID and SN of the replacement router.

**Q. What happens if I cannot transfer my licenses right away to the replacement device?**

**A.** Each device comes with temporary licenses which can be used to have the desired functionality on the device for 60 days.

**Q. Is there MIB support for Licensing?**

**A.** Yes. CISCO-LICENSE-MGMT-MIB provides support for licensing information for permanent, subscription, temporary and counted licenses.

**Q. Where can I find more information about Cisco License Call Home?**

**A.** Please refer to

[http://www.cisco.com/en/US/docs/ios/csa/configuration/guide/csa\\_callhome\\_ps6441\\_TSD\\_Products\\_Configuration\\_Guide\\_Chapter.html](http://www.cisco.com/en/US/docs/ios/csa/configuration/guide/csa_callhome_ps6441_TSD_Products_Configuration_Guide_Chapter.html).

**Q. What is CLM?**

**A.** CLM stands for Cisco Licensing Manager. Cisco License Manager is a standalone application from Cisco that helps you rapidly deploy multiple Cisco software licenses across their networks. Cisco License Manager can discover network devices, view their license information, and acquire and deploy licenses from Cisco. The application provides a graphical user interface (GUI) that simplifies installation and helps enable you to automate license acquisition, as well as perform multiple licensing tasks from a central location. You can also



use the Cisco License Manager application programming interface (API) to create your own programs for performing licensing tasks.

**Q. How much does CLM cost?**

**A.** CLM is free.

**Q. Which Version of CLM will support ISR G2?**

**A.** CLM 3.0 will support ISR G2.

**Q. How many devices can CLM support?**

**A.** CLM 3.0 can support 500,000 devices.

**Q. Where can I find more information about CLM?**

**A.** Visit <http://www.cisco.com/go/clm> to find more details.

**Q. What UDI should I use for licenses on the 3900 Series Integrated Services Routers?**

**A.** The 3900 Series Integrated Services Routers have a modular motherboard. Use the “show license udi” command to display the UDI of the motherboard. This UDI must be used. Do NOT use the UDI of the chassis for the 3900 Series Integrated Services Routers.

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