

Smart Licensing Using Policy (SLP)

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SLP Overview

Smart Licensing Using Policy (SLP) is the default mode starting with IOS-XE release 17.4.1. SLP was previously referred to as Smart Licensing Enhanced (SLE), which replaced Smart Software Licensing. The ESR6300 can seamlessly transition from pre-17.3.3 releases, no additional workflows are required. Previously installed Authorization Code with HSEC licenses for export-control requirements still remain intact.

Some of the feature differences are:

- An Authorization Code is required only for export control requirement
- Throughput greater than 250MB requires an HSEC license
- No more EVAL licenses. Authorized status has changed to In Use or Not In Use with an Enforcement Type class.
- Cisco Smart Licensing Utility (CSLU) is a new tool interfacing between the devices and Cisco Smart Software Manager (CSSM) in specific customer topologies.

License Enforcement Types

A given license belongs to one of three enforcement types. The enforcement type indicates if the license requires authorization before use, or not.

• Unenforced or Not Enforced

The vast majority of licenses belong to this enforcement type. Unenforced licenses do not require authorization before use in air-gapped networks, or registration, in connected networks. The terms of use for such licenses are as per the end user license agreement (EULA).

• Enforced

Licenses that belong to this enforcement type require authorization before use. The required authorization is in the form of an authorization code, which must be installed in the corresponding product instance.

An example of an enforced license is the Media Redundancy Protocol (MRP) Client license, which is available on Industrial Ethernet Switches.

Export-Controlled

Licenses that belong to this enforcement type are export-restricted by U.S. trade-control laws and these licenses require authorization before use. The required authorization code must be installed in the corresponding product instance for these licenses as well. Cisco may pre-install export-controlled licenses when ordered with hardware purchase.

An example of an export-controlled license is the High Security (HSEC) license, which is available on certain Cisco Routers.

SLP Architecture

This section explains the various components that can be part of your SLP implementation.

Product Instance

A product instance is a single instance of a Cisco product, identified by a Unique Device Identifier (UDI).

A product instance records and reports license usage (RUM reports), and provides alerts and system messages about overdue reports, communication failures, etc. The RUM reports and usage data are also stored securely in the product instance.

A Resource Utilization Measurement report (RUM report) is a license usage report, which fulfils reporting requirements as specified by the policy. RUM reports are generated by the product instance and consumed by CSSM. The product instance records license usage information and all license usage changes in an open RUM report. At system-determined intervals, open RUM reports are closed and new RUM reports are opened to continue recording license usage. A closed RUM report is ready to be sent to CSSM.

A RUM acknowledgement (RUM ACK or ACK) is a response from CSSM and provides information about the status of a RUM report. Once the ACK for a report is available on the product instance, it indicates that the corresponding RUM report is no longer required and can be deleted.

CSSM displays license usage information as per the last received RUM report.

Cisco Smart Software Manager (CSSM)

CSSM is a portal that enables you to manage all your Cisco software licenses from a centralized location. CSSM helps you manage current requirements and review usage trends to plan for future license requirements.

You can access CSSM at https://software.cisco.com . Under the License tab, click the Smart Software Licensing link.

In CSSM you can:

- · Create, manage, or view virtual accounts.
- Create and manage Product Instance Registration Tokens.
- Transfer licenses between virtual accounts or view licenses.

- Transfer, remove, or view product instances.
- Run reports against your virtual accounts.
- Modify your email notification settings.
- View overall account information.

Prior to using CSSM, please view a short video about how to use the portal found here:

https://www.cisco.com/c/en/us/buy/smart-accounts/software-manager.html

Click on the View Video button.

Cisco Smart Licensing Utility (CSLU)

CSLU is a Windows-based reporting utility that provides aggregate licensing work-flows. It helps you administer all your licenses and their associated product instances from your premises instead of having to connect to CSSM.

This utility performs the following key functions:

- Provides the options relating to how work-flows are triggered. The work-flows can be triggered by CSLU
 or by the product instance
- Collects usage reports from the product instance and upload these usage reports to the corresponding smart account or virtual account – online, or offline, using files. Similarly, the RUM report ACK is collected online, or offline, and provided back to the product instance.
- Sends authorization code requests to CSSM and receives authorization codes from CSSM.

CSLU can be part of your SLP topology in the following ways:

- Install the windows application, to use CSLU as a standalone tool and connect it to CSSM.
- Install the windows application, to use CSLU as a standalone tool and not connect it to CSSM. With this option, the required usage information is downloaded to a file and then uploaded to CSSM. This is suited to air-gapped networks.
- Embed it in a controller such as Cisco DNA Center.

Customer Topologies

IoT Routing platforms use two different topologies.

- Full Offline Access
- CSLU has No Access to CSSM

The following figure illustrates the Full Offline Access:



In this topology, devices do not have connectivity to CSSM (software.cisco.com). The user must copy and paste information between Cisco products and CSSM to manually check in and out licenses.

The following figure illustrates the CSLU having No Access to CSSM:



In this topology the devices are connected to the CSLU controller, but there is no connectivity between CSLU and CSSM (Cisco Smart Software Manager – software.cisco.com).

Cisco devices will send usage information to a locally installed CSLU. The user must copy and paste information between the CSLU and CSSM to manually check-in and check-out licenses.

License Installation Procedure - Full Offline Access Topology

This procedure requires a manual exchange of required information between the router and CSSM.

Refer to the following graphic for the flow of information:



1. Generate a License Usage Data file or AuthCode Request.

- 2. Export to CSSM.
- 3. Upload License Usage Data or AuthCode Request.
- 4. Export ACK/AuthRequest file to Router.
- 5. Upload ACK file or AuthRequestAuthCode

Procedure to Register Product Instance in CSSM

Step 1	Generate a license usage file from the Router.
	In exec mode, perform the following:
	Example:
	Router# license smart save usage all file flash:slp
Step 2	Export the license usage file (slp) to your host laptop/PC.
Step 3	Importing the license usage file to CSSM on Cloud. Click on the Usage Data Files tab.
	Figure 1: Usage Data File
	Cisco Software Central > Smart Software Licensing
	Smart Software Licensing
	Alerts Inventory Convert to Smart Licensing Reports Preferences On-Prem Accounts Activity
	Reports

Report	Usage Data Files	Reporting Policy	
Name			Description
Licenses			Includes a summary of current license counts and usage over selected virtual accounts.
License Sul	bscriptions		Includes a summary of current subscription license counts and usage over selected virtual accounts
Product Ins	tances		Includes count and listing of current product instances for selected virtual accounts.

Step 4 The Upload Usage Data window appears. Click Browse, and navigate to where the file is.Step 5 Click on Upload Data.

Figure 2: Browse and Upload

I		Upload Usage Data	
Cisco Software Smart S Alerts Inve	Central > Smart Software Software Licens	Please select the Usage File you wish to uploat • Usage Data File: Browse sie unsin	5 SA-Switching-Polaris - Feedback Support Help
Reports			
Report	Usage Data Files	Reporting Policy	
Devices car This usage	be configured to report the for the former the former that the former the former that the form	itures that they are using. are needed, in order to be compliant.	

Step 6 Select the Virtual Account.

Figure 3: Select Account

	Select Virtual Accounts		×	
Cisco Software Central > Smart Software Licens Smart Software Licensing Alerts Inventory Convert to Smart Licensing	Some of the usage data files do not include th virtual account is unrecognized. Please select an account:	he name of the virtual account that the data refers t Select VA	to, or the	Ell SA-Switching-Polaris - Feedback Support He
Reports Report Usage Data Files Report Devices can be configured to report the features the fe	hat they are using.	Ok	Cancel	

Step 7 From the pull-down, select your respective virtual account.

Figure 4: Select Your Account

		alaala		
	Select Virtual Accounts		× Select your respective	virtual accoun
Cisco Software Central > Smart Software Licens	Some of the usage data files do not include virtual account is unrecognized.	the name of the virtual account that the data refers to, or	r the	
Smart Software Licensing	Please select an account:		Feedback Support Hel	p
Alerts Inventory Convert to Smart Licensin	Select one account for all files: Select a virtual account per file:	DEFAULT	*	
Reports				
Report Usage Data Files Repo		Ok Can	cel	
Devices can be configured to report the features This usage then determines which licenses are	that they are using. needed, in order to be compliant.		8	

Step 8 Click Ok.

L

Step 9 Observe the Smart Software Licensing window. Initially, the Reporting Status state will be **Pending**. Wait until the window reflects **No Errors** before continuing.

Figure 5: Reporting Status

Smart Software	e Licensing				IIII SA-Switching-Polaris ▼ Feedback Support Help
lerts Inventory Conve	ert to Smart Licensing R	eports Prefer	ences On-Prem Accour	nts Activity	
leports				Initially w	vill be in pending state
Report Usage Dat	to report the features that the swhich licenses are needed	olicy ey are using. I, in order to be con	npliant.	9	
Upload Usage Data				earch by File	e Name, Virtual Account
 Usage Data File 		Reported	Virtual Account	Reporting Status	Devices Acknowledgem It
					Developed

- **Step 10** Click **Download** to download the ACK file.
- **Step 11** Check under the **Product Instances** tab to verify your device is listed.

Figure 6: Product Instances

uthorize License-Enforced Features		Search	by Name, Product Type	্
ne	Product Type	Last Contact	Alerts	Actions
PID:ESR-6300-CON-K9; UDI_SN:FOC23032UWF;	5900	2020-Sep-24 20:23:59 (Reser	ved Licenses)	Actions -
PID:ESR-6300-CON-K9; UDI_SN:SJC19700415;	5900	2020-Sep-24 20:41:41 (Reser	ved Licenses)	Actions -
_PID:IR1101-K9; UDI_SN:FCW24150J0F;	IR1100	2020-Jul-30 02:22:04		Actions -

Step 12 Import the ACK file from CSSM to your device using the command line interface.

Importing the ACK file from CSSM to your Device

Step 1 Copy the ACK file from CSSM to your host laptop or usbflash device. In exec mode on the device:

Example:

```
Router#license smart import <flash: | usbflash0:> ACK_slp
Import Data Successful
Router#
*Sep 1 21:12:58.576: %SIP-1-LICENSING: SIP service is Up. License report acknowledged.
*Sep 1 21:12:58.616: %SMART_LIC-6-POLICY_INSTALL_SUCCESS: A new licensing policy was successfully
installed
```

Step 2 Verify Product Instance has imported the data

Example:

Router# show license usage

```
License Authorization:

Status: Not Applicable

network-advantage_250M (ESR6300_P_250M_A):

Description: network-advantage_250M

Count: 1

Version: 1.0

Status: IN USE

Export status: NOT RESTRICTED

Feature Name: network-advantage_250M

Feature Description: network-advantage_250M

Enforcement type: NOT ENFORCED
```

Step 3 Verify the license is in use.

Example:

```
Router# show license summary
License Usage:
 License
                                         Entitlement tag
                                                                     Count Status
 -----
 network-advantage 250M (ESR6300 P 250M A) 1 IN USE
Router#
Router#show license all | beg Usage Reporting:
Usage Reporting:
 Last ACK received: Sep 01 21:12:58 2020 UTC
 Next ACK deadline: <none>
 Reporting Interval: 0 (no reporting)
 Next ACK push check: <none>
 Next report push: <none>
 Last report push: <none>
 Last report file write: <none>
Trust Code Installed: Sep 01 00:28:48 2020 UTC
```

Removing the Device from CSSM

Step 1 Navigate back to the product instances tab. Locate your device.

Figure 7: Product Instances

Product instances	vent Log			
Authorize License-Enforced Features		Search	by Name, Product Type	Q
lame	Product Type	Last Contact	Alerts	Actions
JDI_PID:ESR-6300-CON-K9; UDI_SN:FOC23032UWF;	5900	2020-Sep-24 20:23:59 (Reser	ved Licenses)	Actions -
JDI_PID:ESR-6300-CON-K9; UDI_SN:SJC19700415;	5900	2020-Sep-24 20:41:41 (Reser	ved Licenses)	Transfer
JDI_PID:IR1101-K9; UDI_SN:FCW24150J0F;	IR1100	2020-Jul-30 02:22:04		Update Reserved Licenses Remove

Step 2 Click on Actions beside your device, and from those options click Remove.

The Confirm Remove Product Instance window appears.

Figure 8: Confirm Remove Product Instance

Confirm Remove Product Instance	×
If you continue, the product instance "UDI_PID: <pre>product> UDI_SN:<serial number=""></serial></pre> " will no longer appear in the Smart Software Manager and will no longer be consuming any licenses. In order to bring it back, you will need to re- register the product instance.	
Remove Product Instance Canc	el

Step 3 Click Remove Product Instance.

License Installation Procedure - CSLU has No Access to CSSM

This procedure performs an online exchange of required information between the Router and CSLU. Refer to the following graphic for the flow of information:





- **Step 2** Export the AuthCode file to CSSM.
- **Step 3** Upload the AuthCode to CSSM SA/VA account.
- **Step 4** Export the AuthRequestAuthcode file to CSLU.
- **Step 5** Upload ACK file or AuthRequestAuthCode

Procedure when devices are connected to the CSLU

First, perform these steps on the router using the CLI to get a license UDI:

```
Router#show license summary
License Reservation is ENABLED License Usage:
License Entitlement tag Count Status
network-advantage_250M (ESR6300 _P_250M_A) 1 IN USE
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#platform hardware throughput level 2G
% 2G throughput level requires hseck9 license!
Router(config)#end
Router#sh license udi
UDI: PID:ESR-6300-CON-K9,SN:FOC23032UVB
```

Step 1 Open the Cisco Smart License Utility (CSLU).

Step 2 Navigate to the **Product Instances** tab, then click on the UDI.

Figure 9: Select UDI

0	Devices Preferences		
Devic	es		
Add	Single Device Actions for Selected Refresh Device List		
-	Device	Last Contacted	Alerts 🕈
	Filter By Host/IP, SN or PID	Filter By Last Contacted	Filter By Alerts
	172.27.167.69 SN: FCW2150TH0F PID: IR1101-K9	10-Aug-2020 11:40	COMPLETE Usage report from product instance
	172.27.167.58 SN. FCW24100HHE PID. IR1101-K9	10-Aug-2020 11:39	COMPLETE Usage report from product instance
	172.27.167.56 SN: FCW24150JBK	04-Aug-2020 08:22	COMPLETE Usage report from product instance
2	172.27.167.71 SN: FOC23032UV8 PID: ESR-6300-CON-K9	28-Aug-2020 17:01	COMPLETE Usage report from product instance
~	172.27.167.68 SN: F0C223232KC7 PID: ESR-6306-CON-K3	28-Aug-2020 17:01	COMPLETE Usage report from product instance
1			literns ner nane 5 💌 1=5 c/5 1/2 / 2

Step 3 The **Edit Single Product Instance** window appears.

Figure 10: Edit Single Product Instance

Produ	ict Instances	Edit Single Product Instance		
Add	Single Product Actions for Selected Pattern Product	Ear ongie rituder materice		
	Note	Details	General	
	Friter The Houstoff, Table of PPD	Hunt 172.27.168.71	Host Identifier	
	COLUMN MERCHANIK COLUMPOOR SAME	Unar region. CISCO	MAC ADDIE15	DLC request cent to CSSM
۵	UDL/PC/Phats-ix UDL/bin-equilabilitz	Parsent	SIM	Usage report from product instance
	UDLED PTIESER UDLERFONDATIETTE	Convert Methine CSUM Initiated - REST API	+0 65R-6300-CON-K9	Lisage report upscaded to CSSM
	LOL POIEDA AND COMPRILOL INFOCINIZINA		F/0C230321644	Usage report uploaded to CDDM
			VD	darma per paga 🔥 💌 1-
-			Uup	_
		Save Cancel		

Step 4The Edit Multiple Devices window appears. Supply your account password and click Save.Figure 11: Edit Multiple Devices

	Device	Last Contacted		Alerts	
	Filter By Host/IP, SN or PID	Filter By Last Contacted		Filter Ry Alertic	-
2	172.27.167.69 SN: FCW2150TH0F PID: IR1101-K9	Edit Multiple Devices			eport from product instance
2	172.27.167.58 SN: FCW24160HHE PID: JR1101-K9	Details Host 172,27,167,71	Unique Device Identifier (UDI) Host Identifier		aport from product instance
2	172.27.167.56 SN: FCW24150JBK PID: IR1101-K9	User Name admin Passend	MAC Address SUVI		eport from product instance
2	172.27.167.71 SN: FOC23032UVB PID: ESR-6300-CON-K9	CSLU Initiated - REST API	Pic ESR-6300-CON-K9 Serial Number		eport from product instance
	172.27.167.70 SN: FOC23232KC7 PID: ESR-6300-CON-K9		FOC23032UVB VID		eport from product instance
			UUID		
		Saira Cancel			

Step 5 In the **Product Instances** window, click on the **Actions for Selected Devices** Tab.

Figure 12: Actions for Selected Devices

ł

	Devices	Preferences		
evic	ces			
Add	Device	Remove	Last Contacted	Alerts 🕈
	Filter By HostilP, S	Edit	Filter By Last Contacted	Filter By Alerts
כ	172.27.167.69 SN: FCW2150TH0 PID: IR1101-K9	Collect Usage	10-Aug-2020 11:40	COMPLETE Usage report from product instance
)	172 27.167.58 SN: FCW24160HH PID: IR1101-K9	E	10-Aug-2020 11:39	COMPLETE Usage report from product instance
	172 27 167 56 SN FCW24150JBH PID: IR1101-K9	<	04-Aug-2020 08:22	COMPLETE Usage report from product instance
	172.27.167.71 SN: F0C23032UVE PID: ESR-6300-C0	8 3N-K9	26-Aug-2020 17:06	COMPLETE Usage report from product instance
	172.27.167.68 SN: F0C23232KC1 PD: ESB-6300-CC	7	26-Aug-2020 17:06	COMPLETE Usage report from product instance

- **Step 6** Select Authorization Code Request.
- **Step 7** The Authorization Request Information window appears. Read the contents and then click Accept.

Figure 13: Authorization Request Information

Authorization Request Information



Step 8 The CSLU downloads a Authorization Request file to your laptop. Click **Save**.

Figure 14: Authorization Request File

Cisco Smart License Utility				
blob:file:///ed160eab-5216-4c02-a3f0-21249da01f89				
00 - 🔒 + at		• 4 Search SLE	٩	
Organize 👻 New folder			H • 0	
Y Favorites	Date modified Type	Size		
E Desktop AuthRequest	9/17/2828 127 AM CSV File	118		
Libraries Documents Music Discussed				Akrts
Videos				Filber ByAlerts
I Computer Local Disk (C:) KINGSTON (E:)				COMPLETE DLC request sent to CSSM
File name: AuthRequest_Aventus			•	COMPLETE Acknowledgement received from CSSM
Hide Folders		Save	Cancel	ltems per page: <u>5</u>

Exporting the AuthRequest File to CSSM

The next step is to take the Authorization Request file you just saved, and export it into Cisco Smart Software Manager (CSSM).

Launch CSSM.

Click on the Inventory Tab, select your Virtual Account.

- Step 1 Click on the Product Instances Tab.
- Step 2 Click on Authorize License-Enforced Features.

Figure 15: Authorize License-Enforced Features

← → O A https://software-stage0.cisco.com/software/csws/ws/platform/home?locale=en_US#SmartLicensing-Inventory										
Cisco Sof	tware Central		cisco			Q	M	₩ ^{US} EN		
	Cisco Software Central > Smart Software Licensing Smart Software Licensing				tills SA-IOT-Polaris ▼ Feedback Support Help					
	Alerts Inventory Convert to Smart Licensing Reports	Preferences On-Prem A	ccounts Activity							
	Virtual Account: VA-Blackheart -			2 Ma	jor (1) Minor Hide Alerts					
	General Licent 2 Product Instances	Event Log								
	Authorize License-Enforced Features		Search by	Name, Product Type	٩					
	Name	Product Type	Last Contact	Alerts	Actions					
	UDI_PID:ESR-6300-CON-K9; UDI_SN:FOC23032UVB;	5900	2020-Aug-26 00:37:52		Actions -					
	UDI_PID:ESR-6300-CON-K9; UDI_SN:FOC23232KC7;	5900	2020-Aug-26 01:10:34		Actions +					
	UDL_PID:IR1101-K9; UDL_SN:FCW24150J0F;	IR1100	2020-Jul-30 02 22:04		Actions -					
	UDI_PID:IR1101-K9; UDI_SN:FCW24150JBK;	IR1100	2020-Jul-30 04:24:13		Actions •					
	UDL_PID:IR1101-K9; UDL_SN.FCW24160HHE;	IR1100	2020-Jul-30 18:19:59		Actions +					
					Showing All 7 Records					

The Authorize License-Enforced Features window appears.

Figure 16: Authorize License-Enforced Features

Ciaco Softw			a de a de s			-	0	AUS
	Authorize License-Enfo	rced Features				×.		EN
	STEP 1	STEP 2	STEP 3	STEP 4				
	Enter Request Code	Select Licenses	Review and confirm	Authorization Code				
	Choose Devices					2		
	Some advanced or export-contro to the device to enable the featur Generating an authorization code h need.	Iled features must be licensed in es. Learn More ere is only required for devices that	advance, before they can be enabled do not connect to the Smart Software h	I on the device. After the licenses are re fanager directly, or through the Cisco Lice	rserved, an authorization code is uploaded insing Manager, to report the features they			
	Single Device		~					
	Single Device Multiple Devices		5					
	UUID:							
	Serial Number:							
	PID:							
	Version ID:							
	Host ID:							
	MAC Address:							
	Virtual ID/SUMY					•		
					Cancel Nex	t		

Step 3 Choose **Multiple** or **Single** devices from the pull-down.

Step 4 The window changes to an option to select a device file. Click on **Choose File**.

Cisco Softwa			ne waran				
	Authorize License-Enfor	Authorize License-Enforced Features					
	STEP 1	STEP 2	STEP 3	STEP 4			
	Choose Devices Sona abased or a sport control the division to insuffic the futures. Control of the sonal sport of the sonal Matter Overson Matter Overson	ted fastures must be licensed in Learn More are a only required for devices that includes to be licensed	advance, before they can be enabled do not correct to the Smart Software I y	I on the device. After the licenses	are reserved, an authorization code is upbaaded to a Licenting Manager, to report the features they need.		
					Cancel Next		
	the second						

Step 5 A popup window opens to navigate to where you saved your Authorization Request file on your laptop.

File Home Share View		~ 💡
Pin to Quick Copy Paste Copy path access Copy Copy Copy Copy Copy Copy Copy Copy	Move Copy to to to Organize Copy	Image: Open with the select all Properties Image: History Open Select
← → 🕐 🛧 ≽ > This PC > Downloa	ds	✓ ט Search Downloads
 OneDrive Pictures Saved Games Searches Videos This PC 3D Objects Desktop Documents Documents Downloads Music Pictures Videos 	^ Name ■ Auth_Request.xlsx	Select a file to preview.
V 🔒 Libraries		
1 item		

Figure 17: Open File Navigation Window

Step 6 Select your file, and then click **Open**.

Step 7 The authorization file loads, and the window changes to present your devices.

Figure 18: Present Devices

-		-	0				
Cisco Software Central	Authorize License-Enfo	×	Q				
	STEP 1 Enter Request Code	STEP 2 Select Licenses	STEP 3 Review and confirm	STEP 4 Authorization Code			
	Choose Devices Some advanced or export contro the director enable the features Generating an authorization code need. Multiple Devices Upload a file hait contains the set Device File: Choose File: AuthR Deveload a tempiate	Illed features must be licensed in a Learn More here is only required for devices that of devices to be licensed. equest_Aventus.cov	whence, before they can be enable to onot connect to the Smart Softwar r	d on the device. After the licenses a re Manager directly, or through the Cic	e reserved, an authorization code is uploaded to co Licensing Manager, to report the features they	*	
	Device		s	itatus		Ш	
	Device			Select Status	*	Ш	
	SNL FHH2416P00Z		e	Success		H	
	Selected: 1				Success: 1 Errors: 0		
					Cancel Nex		

- Step 8 When successful, click Next.
- Step 9 The Select Licenses Tab opens.

Figure 19: Select Licenses

9						
* ~					rced Features	Authorize License-Enfo
		1	STEP Z	STEP 3	STEP 2	STEP 1 V
		on Code	Authorizati	Review and confirm	Select Licenses	Enter Request Code
					I the Features	Select the Licenses to Enabled
Device Selected 2	,			inses will be reserved on the device	I enable the desired features. The lic	Select the set of licenses that will
Total Quantity	Total Quantit	Quantity per Device	ed Available	Purch		License
2	2	1	30	32	tiomers accessing 2508,thes analyted with encou	ESR6300_HSEC_License
0	0	0	10	10		IR 1800 HSEC
Cancel Back Terrer	Cancel					

Step 10 Under **Quantity per Device**, enter the number you wish.

Figure 20: Enter Number

Cieco Softwa				.1.				
CISCO GOILWE	Authorize License-Enfo	rced Features						×
	STEP 1 🗸	STEP 2	STEP 3		STEP	L.		
	Enter Request Code	Select Licenses	Review and confirm	n.	Authorizatio	in Code		
	Select the Licenses to Enabled	I the Features						
	Select the set of licenses that will	I enable the desired features. The licer	ises will be reserved on th	e devices			Davice Selected: 2	
	License			Purchased	Available	Quantity per Device	Total Quantity	
	ESR6300_HSEC_License HSEC license required for authroliced out	stomers exceeding 2505/bps enabled with encryptic		32	30	1	2	
	IR1800 HSEC			10	10	0	0	
							Cancel Back Next	
							Showing All 7 Records	

Step 11 If CSSM cannot identify your device from the identifying information, you can select it manually.

Figure 21: Select a Device Type

Cicco Softwar		- de de		
CISCO SOITWA	Authorize License-Enforced Fe	sturae	×	CC CMY WEN
	STEP 1 - S Enter Request Code St	Select a Device Type ×		
	Select the Licenses to Enabled the Featur Select the set of licenses that will enable the	Please select a device type. Device Type:		
		Unidentified Devices.	Device Selected: 2	
	License	Device	Total Quantity	•
	ESR6300_HSEC_License HSEC loanse required for authroized customers exceed	Search	2	
	IR1800 HSEC HSEC loanse required for sufficient outcomers access	ы посазахие по свяжавська ы посазахия по свяжавська по свяжавська	0	
		Selected 2 If you want to enable features on different types of devices, you must perform this operation separately for each type.		
		Continue Cancel	Cancel Back Next	
			Showing All 7 Records	

Step 12 Click Continue, and the window changes to Review and Confirm.

Figure 22: Review and Confirm

Cisco Softw	Authorize License-Enforced Features		×	Q 🕅		
	STEP 1 ~ STEP 2 ~ Enter Request Cole Select Licenses	STEP 3 Review and confirm	STEP 4 Authorization Code			
	Devices				- 1	
	Device	Device T	(pa			
	Device	Select	Device Type		¥	
	SN FOC23832UVB FID: ESR-6388-CON-K9	5900				
	SN. FOC22223KC7 PID: ESR 4398-CON-K9	5900				
	Selected: 2					
	Licenses to Reserve				- 11	
	License	Quantity pe	Device	Total Quantity to Reserve		
	ESR6300_HSEC_License HSEC license required for addressed sustainers ecoeoding 250Mbge enabled with encryption	1		2		
				Cancel Back Res	erve Licenses	
				Show	ning All 7 Records	

Step 13 Click on **Reserve Licenses**, and CSSM generates feature authorization codes.

Figure 23: Feature Authorization Codes

- Ciaco Cotto							0		
	Authorize License-Enforced Features							EM	(EN
	STEP 1 🗸	STEP 2 ~ Select Licenses	STEP 3 ~ Review and confirm	STEP 4 Authorization Code					
	Peature Authorization Codes Have Been Generated Feature authorization codes have been generated for the devices, and the locences are reserved in your inventory.								
	Download Authorization Codes								•
	If you are using the Clock Li If you are configuring the de To learn how to enter this co	censing Utility, upload the file to the uti- loce arcech, oreal the file, coop the as do, see the configuration guide for the do, see the configuration guide for the	it, to enable the features on your de Mencration code for a device, then e product.	intes Inter the code into the Smart Licensing se	tings of that device, to enable the features.				
					CI	se			
					Showing All 7 Rev	ords			

 Step 14
 Click Download Authorization Codes, and a window opens to navigate to where you wish to save the codes.

 Figure 24: Save Authorization Code

Navigation Details pane	Extra large icons	Large icons Small icons Details	Sort by •	 ☐ Item check boxes ✓ File name extension ✓ Hidden items 	ns Hide selected items	tions
Panes	Layo	ut	Current view	Show/h	ide	
\leftrightarrow \rightarrow \sim \uparrow 🏊 \rightarrow This	s PC > Downloads			ٽ ~	Search Downloads	
OneDrive		^ Name				
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🐌 Downloads						
🔥 Music						
🔚 Pictures						
📳 Videos						
🥩 OSDisk (C:)						
ຢ OSDisk (C:)		V <				

Step 15

Uploading the Authorization Request Code file into CSLU

- **Step 1** Open the Cisco Smart License Utility (CSLU).
- Step 2 Navigate to Product Instances, and then select Upload From Cisco.

Figure 25: Upload From Cisco

Devices Dov Upli	s CSLU-API Edit Help wnload Device List Ctrl+S load Device List Ctrl+U		
Sen Dov	d To CSSM Ctrl-Enter wnload For CSSM Ctrl-Shift+5 0ed From CSSM Ctrl-Shift+1		
Add	d Single Device Actions for Selected Refresh Device Li	at .	
	Device	Last Contacted	Alerts 🕈
	Filter By HostiP, SN or PID	Filter By Last Contacted	Filter By Alerts
•	172.27.167.69 SN: FCW2150TH0F PID: IR1101-K9	10-Aug-2020 11 40	COMPLETE Usage report from product instance
0	172 27.167.56 SR: #CW24100HHE PID: IR1101-K9	10-Aug-2020 11.39	COMPLETE Usage report from product instance
0	172.27.167.56 SN: FCW24150JBK PID: IR1101-K9	04-Aug-2020 08 22	COMPLETE Usage report from product instance
	172.27.167.71 SN: FOC23032UVB PID: ESR-6309-CON-K9	26-Aug-2020 18:56	COMPLETE Usage report from product instance
	172.27.167.68 SN F0023232607 FID: ESR-6306-C0N-K9	26-Aup-2020 18:56	COMPLETE Usage report from product instance
			tems per page: 5 → 1 - 5 of 5 < < > >

Step 3 There are two options to load your file. **Drag and Drop**, or **Browse** to where you saved your file. This example shows Browse.

Figure 26: Browse to File

Cisco Smart License Utility		– a ×
🐌 🕑 📒 🖛 Downloads	- 0 ×	
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← → · ↑ 🖡 > This PC > Downloads	✓ Ŏ Search Downloads	
OneDrive Name		
Pictures Auth_Request_Auth_Codes_SLEx8	x	
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Videos		Filter By Alerts
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Destop		COMPLETE Usage report from product instance
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SDisk (C)	51	
H Libraries	rop a File	
1 tem	🔃 📰 your computer.	COMPLETE Usage report from product instance
PUT IKTIOL-KA		
172.27.167.71		
SN. FOC23032UVB		COMPLETE Usage report from product instance
PID: ESR-6300-CON-K9		
1/2.2/.16/.86		
SN: F0C23232KC7	26-Aug-2020 19:01	COMPLETE Usage report from product instance
PID: ESR-6300-CON-K9		
		Rems per page 5 → 1 - 5 of 5 (ζ ζ > >)

Step 4 Select your authorization code file, and then click **Open**. The system uploads the authorization code file, then a successful upload message appears.

Figure 27: Successful Upload

mit	ut Instances			
Alt	Single Product Actions for Selected Parkesh Product Instance List			
•	Name	Last Contact	Alerts .	
	The Newson Stratto	The blactone	Filter Dynamic	
0	COLVER FROM THE LEGENSTER COLUMN	11-10-10	COMPLETE DLC request service CSDM	
0	UDUFO/RHISHA,UDUINTHONIPHIZ	Upload From Cisco	COMPLETE Usage report from product instance	
	COLFORNISHE COLEMPTICATION	Automedian Canary construction and the services can devote a procession.	COMPLETE Usage report uplituded to CODM	
UDL/PO-2006-6200-CON-412-COL_STN FOC 220033344		Drag & Drop a File or Browse from your computer.	COMPLETE Usage report acknowledgement to product instance	
			Danie par z naje S 💌 1 – 4 stra 🛛 🖓	

License Installation Process in the Router

Perform the following from the command line interface.

```
Router#show license summary
License Reservation is ENABLED
License Usage:
 License Entitlement tag Count Status
 network-advantage_250M (ESR6300_P_250M_E) 1 IN USE
 hseck9 (ESR6300 HSEC) 1 IN USE
Router#show license usage
License Authorization:
 Status: Not Applicable
network-advantage_250M (ESR6300_P_250M_A):
 Description: network-advantage 250M
  Count: 1
 Version: 1.0
 Status: IN USE
 Export status: NOT RESTRICTED
 Feature Name: network-advantage_250M
 Feature Description: network-advantage 250M
 Enforcement type: NOT ENFORCED
hseck9 (ESR6300 HSEC License):
 Description: hseck9
 Count: 1
  Version: 1.0
  Status: IN USE
 Export status: RESTRICTED - ALLOWED
 Feature Name: hseck9
 Feature Description: hseck9
 Enforcement type: EXPORT RESTRICTED
Router(config) #platform hardware throughput level 2G
% Please write mem and reload
% The config will take effect on next reboot
```

Router#					
*Sep 30 18:05:55.654: %SYS	S-5-CONFIG I: Configured	from co	onsole by	cisco o	n console
Router#show license summar	- Y				
License Reservation is ENA	ABLED License Usage:				
License	Entitlement tag	Count	Status		
network-advantage_250M	(ESR6300_P_250M_A)	1	IN USE		
hseck9	(ESR6300 HSEC License)	1	IN USE		
network-advantage 2G	(ESR6300 P 2G A)	1	IN USE		

Removing the License from CSSM

Perform the following task to remove the license from CSSM when the authorization code is installed.

Step 1 Launch CSSM and click on the **Inventory** Tab, select your Virtual Account.

Step 2 Select the license you wish to remove, and click Actions. From the pull-down, select Remove.

Cisco Software Centra	al cisco					
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Smart Software Licensing					Feedback Dassed Hey	
	Auto Investory Connects IntelConnect Repub	Paternare Outrest	courts Adults			
	Virtual Account: VA-Blackheart *				O Wrow Hole Marts	
	General Linnies ProductionEncos	DeerLog				
	Authorize License Enforced Features.			Search by Illane, Peopled Spe	٩)	
	Name	Polici Tex	Last Certact	Auto	Actions	
	UDUPD ESH 4300-CONFRI UDUDO/OC33822694	1800	2025-No+18 20:25	12 (Readyed Lanes	Actions +	
	10,70 PTIS 43,10,047042185420	#110	2020-Nov-17 20.44	10 Paterial Latric.	Transfer, Update Penamed Linescen,	

Step 3 The **Remove Reservation** window appears.

					Cisco Software Central	
	×		nove Reservation	- Cisco Soltware Central		
E SA 107-Poten Feedback Support Help	es one again sale by the Product of nation Cancel	reserved licenses and make Bose license net in the Reservation Return Code genera- enation Return Code, contact Clicks Dispos Enter the Reservation Return Code Enter the Reservation Return Code	To remove a Product Instance that has reserved learness and make hose any any advectory of the reserved on the Reserved on Redun Code instance. If you cannot penerate a Reservation Redun Code, contact Clisco • Reservation Return Code:			
٩	arch by Name, Product Type	Sear	i i	Authorize License-Enforced Features		
Actions	Alerta	Last Contact	Product Type	Name		
Actions -	leserved Licens	2020-Nov-18 20 35:12 (Re	6900	UDI_PID ESR-6300-CON-K9, UDI_SN F0C23032		
Actions -	tesewed Licens	2020-Nov-17 20:44:03 (Re	IR1100	UDI_PID3R1101-K9; UDI_BN/FCW2135TH2D;		

Step 4 Execute the following command to get a license return code:

ESR6300#license smart reservation return all
Do you want to continue? [yes/no]: yes
Enter this return code in Cisco Smart Software Manager portal:
UDI: PID:ESR-6300-CON-K9, SN:FOC23032UX4
 Return code: CtSrRo-HB4Xzk-YDrCD8-tnjCNd-XeAoHS-SogpFY-rjmrhL-d7VDUq-K7D
ESR6300#
*Nov 18 21:04:59.920: %SMART_LIC-6-AUTHORIZATION_REMOVED:
A licensing authorization code has been removed from PID:ESR-6300-CON-K9, SN:FOC23032UX4.

Step 5 You can verify the license is not in use:

ESR6300#**sh license summary** License Reservation is ENABLED

License Usage:

License Entitlement Tag Count Status network-essentials_50M (ESR6300_P_50M_E) 1 IN USE ESR6300_HSEC_License (ESR6300_HSEC_License) 0 NOT IN USE

Step 6 Copy the license return code and paste it into the **Reservation Return** window.

Cisco Sottware Central Sn Vid	Citics Editors Creat - Small Software Licen Smart Software Licensing And Intentity Canadits Small Lines Virtual Account: VA-Blackheart + Conser Lines Product be	Remove 3) renews a l restance fro + Reservable	Reservation Product Instance that the Product Instance to Land generate all an Renard Code:	has inserved locates and more hold in proceedings and to the first-and-to fistance (see proceeded for Reservation Reson Code, costant Code Stagend Database Reson Code (see Stagend St	x span to Prestant	E SAUTAwas Feedback Europe resp Other MakeAses
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Step 7 Click **Remove Reservation**, and then verify the removal was successful.

ESR6300**#sh license summary**

License Reservation is ENABLED

License Usage:		
License	Entitlement Tag	Count Status
network-essentials_50M	(ESR6300_P_50M_E)	1 IN USE