# **Configure Permanent License Reservation on CSRv - Offline License Activation**

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# Introduction

This document describes how to activate CSRv licensing with the use of the Permanent License Reservation (PLR) offline method.

# **Prerequisites**

With the assumption that a CSRv is hosted in a virtual environment.

### Requirements

Cisco recommends that you have knowledge of these topics:

- Console access to the CSRv
- Smart Account / Virtual Account
- Purchase necessary licenses or privileges to add the licenses

### **Components Used**

The information in this document is based on CSR1000v 17.3.3.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

# **Background Information**

Often on a public cloud or when you test, you need to test your deployment that requires throughput over 1Mbps. The default trial throughput of CSR1000v is throttled at 1Mbps.

This document also guides with a workaround to copy authorization code in which a file transfer is restricted or unavailable.

# Configure

Step 1. Decide on Licensing

Reference the link;

https://www.cisco.com/c/en/us/td/docs/routers/csr1000/software/configuration/b\_CSR1000v\_Configuration\_Guide/b\_CSR1000v\_Configuration\_Guide\_chapter\_01000.html#con\_1055118 and navigate to Table 4. in this link "Cisco CSR 1000v Network Stack Licenses". Choose or purchase your desired license.

For this guide, you choose CSR-500M-AX. The difference between each package and Tier is found here;

https://www.cisco.com/c/en/us/td/docs/routers/csr1000/software/configuration/b\_CSR1000v\_Configuration\_Guide/b\_CSR1000v\_Configuration\_Guide\_chapter\_01000.html#con\_993810

License Mapping Based on Package CSR 1000v or Cisco ISRv License Package Cisco DNA License Package

IP Base, Security	Network Essentials
APPX, AX	Network Advantage

License Mapping Based on Throughput

 Throughput
 Tier

 10 Mbps
 Tier 0 (T0)

 50 Mbps, 100 Mbps
 Tier 1 (T1)

 250 Mbps, 500 Mbps, 1 Gbps
 Tier 2 (T2)

 2.5 Gbps, 5 Gbps, 10 Gbps
 Tier 3 (T3)

Step 2. Add the decided license to the smart account Navigate to <u>https://software.cisco.com/software/smart-licensing/activity</u>.

**Note**: This link is not available based on your privilege, if the link is not accessible raise an SR, and TAC/Account team would help you out.

Click Add Licenses. Search for license SKU.

https://sof	ware.cisco.com/software/smart-licensing/activity					<b>=</b> Ω
=	Cisco Software Central		aha) cisco	1. D		
	Cisco Software Central > Smart Software Licensing Smart Software Licensing Alerts Inventory Convert to Smart Licensing Activity License Transactions Event Log Add Licenses	Add Licenses • License SKU: • Number to Add: Description: Virtual Account: • License Term: Subscription Id: Notes:	CSR-500M-AX L-CSR-500M-AX= L-CSR-500M-AX-3Y= L-CSR-500M-AX-T= L-CSR-500M-AX-1Y= L-CSR-500M-AX-3S= L-CSR-500M-AX-1S=	60 Days	×	Cisco Feedba Virtual Account or Order Numbh
	Transaction Date License SKU 2022-May-12 23:05:58 L-CSR-500M-AX=			Apply & Close Apply	Cancel	Action Remove Lik
	2022-May-12 20:23:53 L-CSR-250M-STD= 2022-May-12 20:17:46 L-CSR-250M-A	CSR 1KV IP B 2	1 2023-May-27 (Term) -1 2022-Jul-11 (Demo)	Amod Devices	Manual Entry Manual Entry	Remove Lik

Step 3. Enable smart reservation and generate request code Log in to CSRv and configure these configurations to enable smart reservation.

Branch\_WAN(config)#license smart enable Branch\_WAN(config)#license smart reservation
Generate request code.

Branch\_WAN#license smart reservation request all Enter this request code in the Cisco Smart Software Manager portal: UDI: PID:CSR1000V,SN:91T54Q\*\*\*3W Request code: CB-ZCSR1000V:91T54Q\*\*\*W-AB5n\*\*\*t-5E

### Step 4. Generate Authorization Code

Navigate to <u>https://software.cisco.com/software/smart-licensing/inventory</u>. Choose the appropriate Virtual account and click **License Reservation**.

Cisco Software Central > Smart Software Licensing Smart Software Licensing						0	Cisco H	Support Help
Alerts Inventory Convert to Smart Licensing R	teports   Prefer	ences   On-Pre	m Accounts   Activity					
Virtual Account: Amod Devices -								
General Licenses Product Instances	Event Log					в	y Name By	Tag
Available Actions - Manage Licens	se Tags	icense Reserva	tion	Show Licer	se Transactions	Search by License		
								্
							Advanced	o, Search ✓
License	Billing	Purchased.4	In Use	Substitution	Balance	Alerts	Advanced Actio	o, Search ✓ ns
CSR 1KV IP BASE 250M	Billing Prepaid	Purchased #	In Use 1 (1 Reserved)	Substitution	Balance 0	Alerts	Advanced 3 Actio	o, Search ✓ ns
<ul> <li>License</li> <li>CSR 1KV IP BASE 250M</li> <li>CSR 1KV AX 500M</li> </ul>	Billing Prepaid Prepaid	Purchased A 1 20	In Use 1 (1 Reserved) 0	Substitution -	Balance 0 +20	Alerts	Advanced 3 Action Action	o, Search ✓ ns ns ✓

Follow the wizard.

	STEP 2	STEP 3	STEP 4	
Enter Request Code	Select Licenses	Review and Confirm	Authorization Code	
You can reserve licenses for You will begin by generating To learn how to generate this Once you have generated th 1) Enter the Reservation 2) Select the licenses to 3) Generate a Reservation 4) Enter the Reservation	product instances that cannot conne a Reservation Request Code from th code, see the configuration guide fo e code: Request Code below be reserved in Authorization Code Authorization Code on the product in	ct to the Internet for security reasons. e product instance. r the product being licensed. stance to activate the features		
Reservation Request Code	.5E			
CB-ZCSR1000X:91754	2004			
CR-ZCSR1000V.91154	2004			

#### Smart License Reservation

STEP 1 🗸	STEP 2 Select Licenses	STEP 3 Review and Confirm	STEP 4	Code		
Product Instance Detai	ils					
Product Type: UDI PID: UDI Serial Number: Licenses to Reserve In order to continue, ensure that Reserve a specific license	CSR1KV CSR1000V 91T54 you have a surplus of the licenses yo	u want to reserve in the Virtual A	ccount.			
License		E	Expires	Purchased	Available	Reserve
CSR 1KV AX 500M			2027-Apr-16	20	19	1
						Cancel

STEP V	STEP Z V	STEP 3 V	STEP 4	
Enter Request Code	Select Licenses	Review and Confirm	Authorization Code	
The Reservation Authoriza	tion Code below has been generate	ed for this product instance. Enter this	code into the Smart Licensing setting	is for the product, to enable the licensed feature
Product Instance Details	i i			
Product Type:	CSR1KV			
UDI PID:	CSR1000V			
UDI Serial Number:	91T54			
Authorization Code:				
<specificplr><authorizationco< td=""><td>de&gt;<flag>A</flag><version>C</version>CCC<td>sion&gt;<pid>45062b1</pid></td><td>/piid&gt;<timestamp></timestamp></td><td>1652411011165<entitlements></entitlements></td></td></authorizationco<></specificplr>	de> <flag>A</flag> <version>C</version> CCC <td>sion&gt;<pid>45062b1</pid></td> <td>/piid&gt;<timestamp></timestamp></td> <td>1652411011165<entitlements></entitlements></td>	sion> <pid>45062b1</pid>	/piid> <timestamp></timestamp>	1652411011165 <entitlements></entitlements>
UTC <licensetype>1</licensetype>	ERM <displayname< td=""><td>&gt;CSR 1KV AX 500M</td><td><agdescription>CSR 1KV AX 500M&lt;</agdescription></td><td>/tagDescription&gt;<subscriptionid></subscriptionid></td></displayname<>	>CSR 1KV AX 500M	<agdescription>CSR 1KV AX 500M&lt;</agdescription>	/tagDescription> <subscriptionid></subscriptionid>
	authorizationCode>	IHHiyo+2w9AnECNonj/	WX7minYhBkfMQPvPcfxvn/YK <td>nature&gt;<udi>P:CSR1000V,S:91T54QSDQ3W<!--</td--></udi></td>	nature> <udi>P:CSR1000V,S:91T54QSDQ3W<!--</td--></udi>
<br <signature>MEYCIQCOjRogPG </signature>				
<signature>MEYCIQCOJRogPG </signature>	to the coefficientian quide for the ne	nduct heine licensed		
<br <signature>MEYCIQCOJRogPG  To learn how to enter this code. so</signature>	se the configuration guide for the pr	oduct being licensed		

Make a note of this code or download it as a file.

Step 5. Install Authorization code.

Smart License Reservation

Transfer the file to CSRv and follow the command as shown to activate CSRv to the purchased throughput.

Branch\_WAN#license smart reservation install file bootflash:auth.lic % use 'platform hardware throughput level MB' CLI to request throughput license Reservation install file successful Last Confirmation code UDI: PID:CSR1000V,SN:91T54\*\*\*3W Confirmation code: 3c3\*\*c2 Branch\_WAN# Change throughput to the appropriate purchase license level.

Branch\_WAN(config)#platform hardware throughput level MB 500 Branch\_WAN(config)# \*May 13 03:28:47.159: %SMART\_LIC-5-SLR\_IN\_COMPLIANCE: The entitlement regid.2014-05.com.cisco.ax\_500M,1.0\_66e10795-1655-4d32-81c4-7d34821c7412 in use on this device is authorized \*May 13 03:28:47.162: %VXE\_THROUGHPUT-6-LEVEL: Throughput level has been set to 500000 kbps

# Verify

### Verify your license.

# Workaround

Use this workaround in case you cannot move the file or paste the authorization code completely. Cisco terminal has a fixed width limit, which can cause the authorization code to be truncated. Use the workaround as shown. Avoid any whitespaces or new lines. Split your authorization code into

#### four sessions with a maximum of 200 characters.

Branch\_WAN#tclsh puts [open "bootflash:auth.lic" w+]
{<specificPLR><authorizationCode><flag>A</flag><version>C</version><piid>45062b90-173e-4720ac08-

\*\*\*\*\*\*</piid><timestamp>1652411011165</timestamp><entitlements><entitlement><tag>regid.201405.com.cisco.ax\_} tclquit Branch\_WAN#tclsh puts [open "bootflash:auth.lic" a]

{500M,1.0\_66e10795-1655-4d32-81c4-\*\*\*\*\*\*</tag><count>1</count><startDate>2022-May-12

UTC</startDate><endDate>\*\*\*\*-Apr-16 UTC</endDate><licenseType>TERM</licenseType><displayName>CSR 1KV AX 500M</displayName>} tclquit Branch\_WAN#tclsh puts [open "bootflash:auth.lic" a] {<tagDescription>CSR 1KV AX

500M</tagDescription><subscriptionID></subscriptionID></entitlement></entitlements></authorizati
onCode><signature>MEYCIQCOj\*\*\*\*/} tclquit Branch\_WAN#tclsh puts [open "bootflash:auth.lic" a]
{wcMH1MzKKroKhbATxQik2hUDIElrlbD4XgIh\*\*\*\*o+2w9AnECNonjAWX7minYhBkfMQ\*\*\*\*\*\*/YK</signature><udi>
P:CSR1000V,S:91T54Q\*\*\*W</udi></specificPLR>} tclquit Branch\_WAN#more bootflash:auth.lic