Configure Permanent License Reservation on CSRv - Offline License Activation

Contents

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 https://software.cisco.com/software/smart-licensing/activity.

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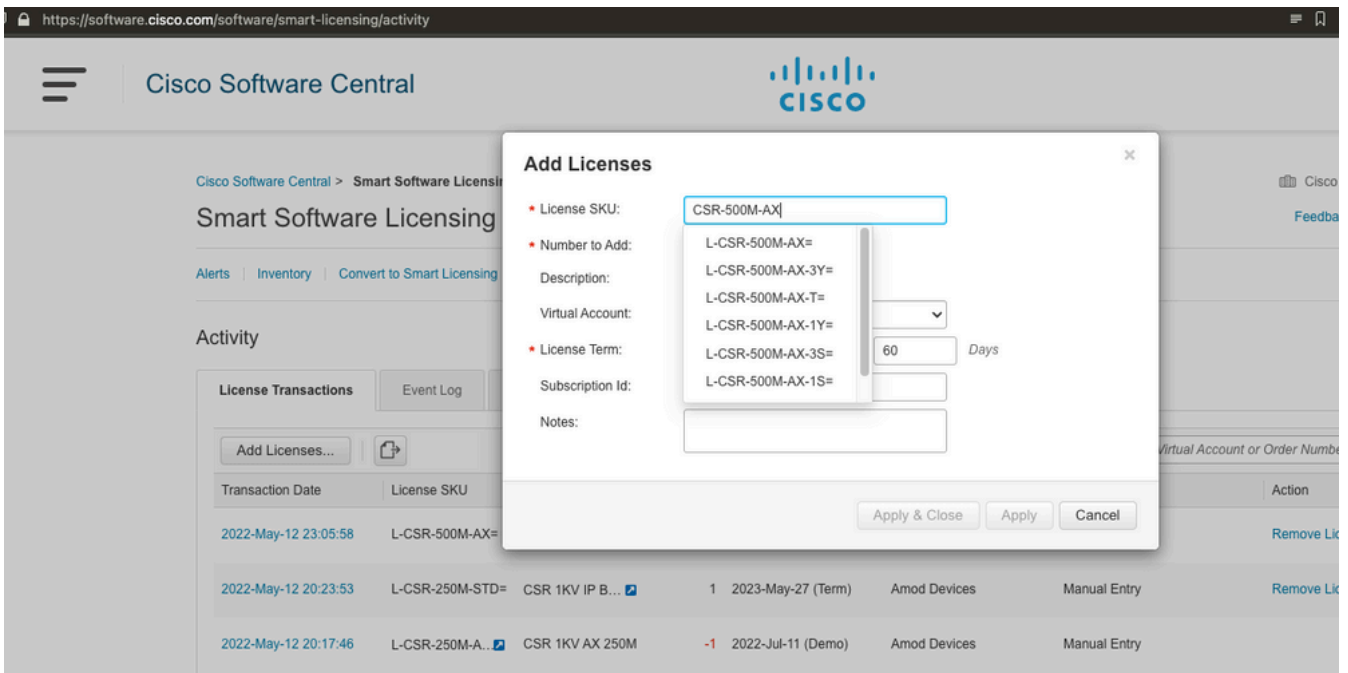
Step 3. Enable smart reservation and generate request code
Log in to CSRv and configure these configurations to enable smart reservation.

```
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 https://software.cisco.com/software/smart-licensing/inventory. Choose the appropriate
Virtual account and click **License Reservation**.
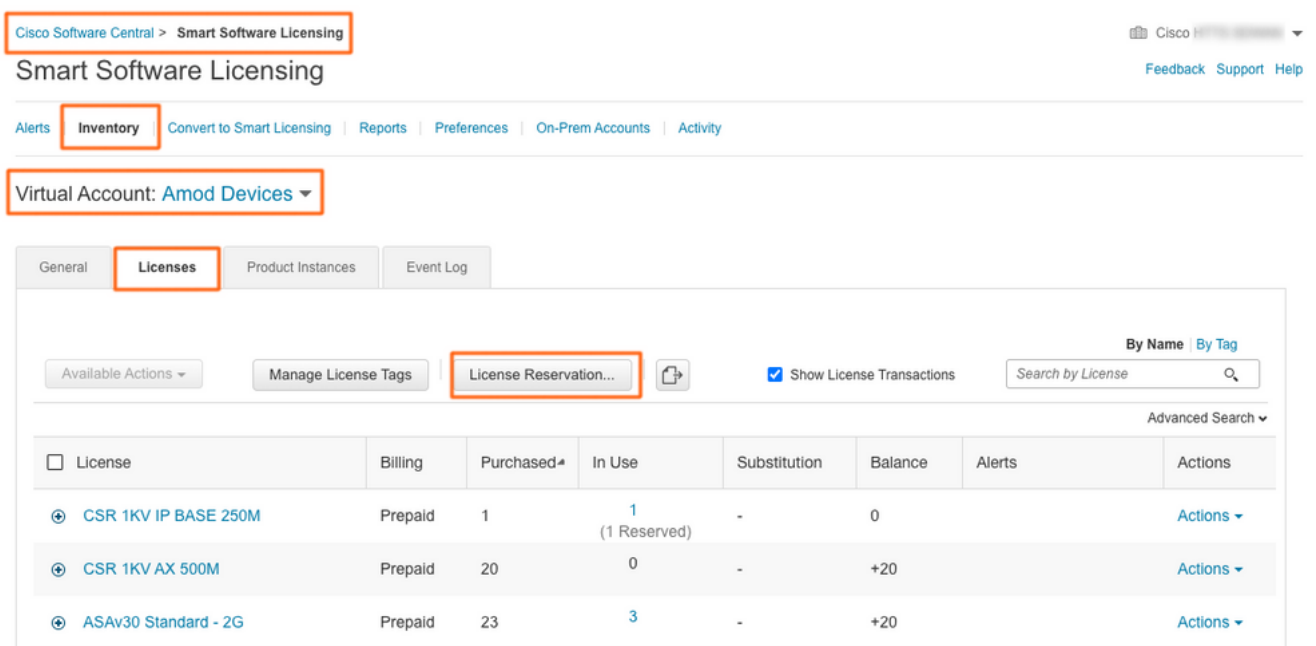
Follow the wizard.

Smart License Reservation

STEP 1	STEP 2	STEP 3	STEP 4
Enter Request Code	Select Licenses	Review and Confirm	Authorization Code

You can reserve licenses for product instances that cannot connect to the Internet for security reasons.
You will begin by generating a Reservation Request Code from the product instance.
To learn how to generate this code, see the configuration guide for the product being licensed.

Once you have generated the code:

    1) Enter the Reservation Request Code below

    2) Select the licenses to be reserved

    3) Generate a Reservation Authorization Code

    4) Enter the Reservation Authorization Code on the product instance to activate the features

* Reservation Request Code:

CB-ZCSR1000V:91T54   :5E

Upload File		Browse	Upload

Cancel Next

Smart License Reservation

STEP 1 ✓	STEP 2	STEP 3	STEP 4
Enter Request Code	Select Licenses	Review and Confirm	Authorization Code

Product Instance Details

Product Type:	CSR1KV
UDI PID:	CSR1000V
UDI Serial Number:	91T54

Licenses to Reserve

In order to continue, ensure that you have a surplus of the licenses you want to reserve in the Virtual Account.

◉ Reserve a specific license

License	Expires	Purchased	Available	Reserve
CSR 1KV AX 500M	2027-Apr-16	20	19	1
CSR 1KV AX 500M				

Cancel Next

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

Step 5. Install Authorization code.

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.

```
Branch_WAN#show license summary Smart Licensing is ENABLED License Reservation is ENABLED
Registration: Status: REGISTERED - SPECIFIC LICENSE RESERVATION Export-Controlled Functionality:
ALLOWED License Authorization: Status: AUTHORIZED - RESERVED License Usage: License Entitlement
Tag Count Status ----------------------------------------------------------------------
prem_500M (ax_500M) 1 AUTHORIZED Branch_WAN#show platform hardware throughput level The current
throughput level is 500000 kb/s
```

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-4720-
ac08-
******</piid><timestamp>1652411011165</timestamp><entitlements><entitlement><tag>regid.2014-
05.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
```