

Broadband Smart Licensing

The Broadband Smart Licensing feature supports broadband Lite sessions during the deployment of ASR1000 Aggregation Services Routers.

- Information About Broadband Smart Licensing, on page 1
- Managing Smart Licenses, on page 1
- Restrictions for Broadband Smart Licensing, on page 2
- How to Configure Broadband Smart Licensing, on page 2
- Configuration Examples for Broadband Smart Licensing, on page 4
- Additional References for Broadband Smart Licensing, on page 6
- Feature Information for Broadband Smart Licensing, on page 7

Information About Broadband Smart Licensing

In traditional licenses, you have a limited view on license that you own. It requires manual registration to product activation key, where each user has to visit website to register licenses for each product individually.

In smart licenses, customers and partners have a complete view on the licenses. To view these licenses, you need log in to software.cisco.com. After registering to the smart account, the product registration allows easy activation.

Broadband licensing feature is all about moving from traditional licensing to broadband smart licensing where you purchase licenses only for the number of broadband sessions that you brought up during the deployment of Cisco ASR 1000 Series Aggregation Services Routers. For information about smart licensing, see Smart Licensing Using Policy for Cisco Enterprise Routing Platforms.

Managing Smart Licenses

The following procedure shows how to manage smart licenses:

1. Buy licenses from the Cisco commerce workspace and assign to a customer smart account.
2. Log in to sofware.cisco.com and view available license pool in Cisco Smart Software Manager(CSSM).
3. Generate the token for the ASR1K device which we are going to use and register the device in CSSM.
4. Configure the smart license in ASR1K device.

After you perform this procedure, you are ready to consume the broadband licenses on a registered device.

Restrictions for Broadband Smart Licensing

- The Broadband Smart Licensing feature is supported only on AR1K running Polaris 16.5 release and above.
- The feature does not support boradband Lite sessions.
- The stand-by RP does not have an account.
- Only broadband smart licenses that are multiples of two can be requested, 1 license = 2 thousand sessions.

How to Configure Broadband Smart Licensing

Configuring the Subscriber License

To configure broadband smart licensing, configure the **subscriber license** command before starting a broadband session.

Before you begin

Do the following:

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **subscriber license**
4. **exit**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	• Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 3	**subscriber license**	Configures the subscriber license.

	Command or Action	Purpose

	Example:
	`Device(config)# subscriber license`
		Note
		• The following configurations are essential to establish a connection between the ASR1000 and the licensing server.
		  • License Smart Enable
		  • Call Home
		  • Device Registration
		• If the **subscriber license** command is configured before bringing up a broadband session, irrespective of any earlier broadband license request failure, the range of the license to be requested must be between 2 – 128K (range of subscriber license). When the session count exceeds the procured broadband license count by 100, a request is sent for a new license.
		Ensure that there is no failure of license procurement in the last 24 hours.
		• Use the **no subscriber license** command to release all the procured licenses and reset the value to default, that is, zero licenses. You can use this command only when there are no active sessions.

Step 4	**exit** **Example:** `Device(config)# exit`	Exits global configuration mode.

Clearing the Subscriber License

SUMMARY STEPS

1. **clear subscriber license**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	**clear subscriber license**	Releases the licenses. **Note** The **clear** command releases the licenses based on the active sessions and procured licenses.

Verifying Broadband Smart Licensing

SUMMARY STEPS

1. **Debug subscriber license**

DETAILED STEPS

Procedure

Debug subscriber license

Configuration Examples for Broadband Smart Licensing

Example: Configuring Smart License

The following example shows how to configure smart license in Cisco ASR 1000 Series Aggregation Services Routers.

```
UUT#config
UUT(config)#service internal
UUT(config)#license smart transport smart
UUT(config)#license smart url https://smartreceiver-stage.cisco.com/licservice/license
UUT(config)#license smart url smart  https://smartreceiver.cisco.com/licservice/license
```

Example: Configuring License Boot Level

For UniversalK9 image, there are three types of License Boot level:

- adventerprise (AES)
- advipservices (AIS)
- ipbase (IPB)

When your router is booted with UniversalK9 image, there must be one boot level present on the router.

To activate boot level, run the following commands:

```
UUT#config
UUT(config)#license boot level adventerprise
% use 'write' command to make license boot config take effect on next boot
UUT(config)#write
UUT(config)#end
UUT#
UUT#reload
```

After reloading the chassis, you can see the license in box:

```
UUT#sh license summary
License Usage:
    License                 Entitlement Tag               Count Status
    -----------------------------------------------------------------------------
    adventerprise           (ASR_1000_AdvEnterprise)          1 IN USE
```

Example: show subscriber license

The **show subscriber license** command tracks the number of procured broadband licenses, the configured value of broadband licenses, current session count on the router, the highest session count reached since the last license request was sent to the server and the time at which it was procured.

The following is sample output of the **show subscriber license** command

```
Device# show subscriber license
Broadband Smart License Compliance              : In Compliance

Total Number of Broadband Licenses Procured     : 0

Broadband Licenses Configured                   : 0

Current Broadband Session Count                 : 0

Time of Last License Procurement                : No License Procured

Sessions Peak Count Since Last Procurement      : 0
```

Disable Subscriber License

Use the **no subscriber license** command to release all the procured licenses and reset the value to default, that is, zero licenses.

```
Device# no subscriber license
```

Example: Show license summary

To display the license summary, use the **show license summary** command.

```
Device# show license summary
License Usage:
  License                Entitlement Tag               Count Status
  -----------------------------------------------------------------------------
  broadband              (ASR_1000_BroadBand_2K)          16 IN USE
  adventerprise          (ASR_1000_AdvEnterprise)          1 IN USE
UUT#
UUT#sh subscriber license
Broadband Smart License Compliance              : In Compliance
Total Number of Broadband Licenses Procured     : 2000
Broadband Licenses Configured                   : 0
Current Broadband Session Count                 : 32000
Time of Last License Procurement                : Mon Sep 27 11:32:07 2021
Sessions Peak Count Since Last Procurement      : 32000
```

Example: Clear subscriber license

```
Device# clear subscriber license

*Jul 10 10:24:27.217: %SSSMGR-5-BB_LICENSE_REQUEST_SENT: Broadband license request sent for
 0 license with configured license count 0

*Jul 10 10:24:27.217: %SSSMGR-5-BB_LICENSE_RELEASE_SUCCESS: Successfully released all
BroadBand licenses


Sessions: ISG session, except for the lite session
```

Additional References for Broadband Smart Licensing

Related Documents

Related Topic	Document Title
Smart Licensing Using Policy for Cisco Enterprise Routing Platforms	https://www.cisco.com/c/en/us/td/docs/routers/sl_using_policy/b-sl-using-policy.html

MIBs

MIB	MIBs Link
• CISCO-SMI • CISCO-TC	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

Technical Assistance

Description	Link
The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for Broadband Smart Licensing

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

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

Table 1: Feature Information for Broadband Smart Licensing

Feature Name	Releases	Feature Information
Broadband Smart Licensing	Cisco IOS XE Everest 16.6.1	The Broadband Smart Licensing feature enables to purchase licenses for any number of broadband sessions that are active during the deployment of Cisco ASR 1000 Series Aggregation Services Routers. The following commands were introduced or modified: **subscriber license**, **show subscriber license**