

Cisco IOS XE Software Licensing

PB448292

This product bulletin describes the licensing strategy for the Cisco® ASR 1000 Series Aggregation Services Router with Cisco IOS® XE Software.

Cisco has introduced an updated software licensing strategy with the introduction of the Cisco ASR 1000 Series Routers. This licensing strategy provides a simplified and easy-to-follow schema for determining appropriate software and feature licenses.

Cisco ASR 1000 Series Router Software Licensing Overview

The Cisco ASR 1000 Series Router has a permanent software licensing model. Software and licenses purchased individually or as part of a system bundle do not expire. You can upgrade Cisco IOS XE Software to your purchased licenses as part of the one-time initial purchase price.

Cisco IOS XE Software Consolidated Package Options

Cisco IOS XE Software is available in six consolidated package options: IP Base (without cryptography), IP Base, Advanced IP Services, Advanced Enterprise Services (without cryptography), and Advanced Enterprise Services. Each of these consolidated package options comes in a 32-bit version (for the Cisco ASR 1000 Series Route Processor 1 [RP1]) and a 64-bit version (for the Cisco ASR 1000 Series Route Processor 2 [RP2]). The Cisco ASR 1002 Fixed and Cisco ASR 1002 chassis have the RP1 integrated and therefore use the RP1 consolidated packages. The Cisco ASR 1001 chassis also has the route processor integrated, and respective Cisco ASR 1001 consolidated packages need to be used. At first customer shipment (FCS), software activation is supported on the ASR 1001 for some licenses. These licenses enforce consolidated packages such as the software feature sets for K9 and non-K9 IP Base, Advanced IP Services, and Advanced Enterprise Services, as well as the performance upgrade from 2.5 Gbps (default) to 5 Gbps.

Table 1 describes the available Cisco IOS XE Software consolidated packages.

Table 1. Cisco IOS XE Software Consolidated Package Options¹

Cisco IOS XE Software Consolidated Packages	Image Type	Part Number	Description
Cisco ASR 1000 Series RP1 IP Base without crypto	32-bit (RP1)	SASR1R1-IPB	<ul style="list-style-type: none"> Offers low-cost base image Offers only basic IP feature support Satisfies export requirements for non-cryptographic software
Cisco ASR 1000 Series RP2 IP Base without crypto NOTE: The ASR1000-RP2 route processor is supported as of IOS XE 2.3. Therefore, the consolidated packages for RP2 are available as of IOS XE 2.3.	64-bit (RP2)	SASR1R2-IPB	
Cisco ASR 1000 Series RP1 IP Base	32-bit (RP1)	SASR1R1-IPBK9	<ul style="list-style-type: none"> Offers low-cost base image Offers only basic IP feature support, including Secure Shell (SSH) protocol support
Cisco ASR 1000 Series RP2 IP Base	64-bit (RP2)	SASR1R2-IPBK9	

¹ Please refer to Cisco Feature Navigator for details on feature support in specific Cisco IOS XE Software releases and consolidated packages. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.

Cisco IOS XE Software Consolidated Packages	Image Type	Part Number	Description
Cisco ASR 1000 Series RP1 Advanced IP Services	32-bit (RP1)	SASR1R1-AISK9	<ul style="list-style-type: none"> Targeted for service provider customers Supports all features, including encryption (SSH, IP Security [IPsec]² Triple Digital Encryption Standard [3DES], and Advanced Encryption Standard [AES]), lawful intercept, and session border controller (SBC) Does not include support for legacy protocols
Cisco ASR 1000 Series RP2 Advanced IP Services	64-bit (RP2)	SASR1R2-AISK9	
Cisco ASR 1000 Series RP1 Advanced Enterprise Services without crypto	32-bit (RP1)	SASR1R1-AES	<ul style="list-style-type: none"> Targeted for export restricted customers Supports all features, including lawful intercept, and session border controller (SBC), as well as legacy protocols Does not support encryption (SSH, IPsec 3DES and AES)
Cisco ASR 1000 Series RP2 Advanced Enterprise Services without crypto	64-bit (RP2)	SASR1R2-AES	
Cisco ASR 1000 Series RP1 Advanced Enterprise Services	32-bit (RP1)	SASR1R1-AESK9	<ul style="list-style-type: none"> Targeted for enterprise customers Supports all features, including encryption (SSH, IPsec 3DES and AES), lawful intercept, and session border controller (SBC), as well as legacy protocols
Cisco ASR 1000 Series RP2 Advanced Enterprise Services	64-bit (RP2)	SASR1R2-AESK9	

The availability of these six individual software consolidated packages greatly simplifies the process of selecting an appropriate software consolidated package. Each available consolidated package provides a clear, linear, and incremental step in feature support.

Cisco IOS XE Software Feature License Types

Cisco IOS XE Software also offers you a granular licensing schema. You can select individual feature licenses based on your specific feature support requirements. Specific feature licenses are provided in right-to-use (RTU), number-of-sessions (NOS), or both formats, depending on the type of feature being licensed. An NOS license is for the maximum number of simultaneous sessions that are allowed on the Cisco ASR 1000 Series platform. At FCS the following features are licensed separately: IP Security (IPsec) encryption, Firewall, Flexible Packet Inspection (including Network-Based Application Recognition [NBAR] and Flexible Packet Matching), Broadband Aggregation, and Cisco Unified Border Element (SP Edition) (also known as Session Border Controller [SBC]). Licenses are not required for Network Address Translation (NAT), NetFlow, generic routing encapsulation (GRE), or basic routing services.

Table 2 describes available Cisco IOS XE Software feature licenses.

Table 2. Available Cisco IOS XE Software Feature Licenses

Feature License	Application	Part Number	Type	Sessions (if applicable)
IP Sec	Required to enable DMVPN, EasyVPN, GETVPN, Site-to-Site and Remote-Access IP Sec features.	FLASR1-IPSEC-RTU	Right-To-Use	-
Firewall	Required to enable firewall features.	FLASR1-FW-RTU	Right-To-Use	-
Firewall/NAT Inter-Chassis Redundancy	Required to enable Stateful Inter-Chassis Redundancy for the Firewall and NAT features.	FLASR1-FWNAT-RED	Right-To-Use	-
Packet Inspection	Required to enable Network Based Application Recognition (NBAR) and Flexible Packet Matching (FPM) features.	FLASR1-FPI-RTU	Right-To-Use	-
High Availability	Required to enable IOS XE redundancy on single route processor systems (Cisco ASR 1002 and Cisco ASR 1004).	FLASR1-IOSRED-RTU	Right-To-Use	-
Broadband	Required to enable Broadband Aggregation features. Must be purchased in conjunction with a Broadband Number-Of-Sessions license.	FLASR1-BB-RTU	Right-To-Use	-
Broadband	Required for licensing of the maximum number of user sessions utilizing Broadband Aggregation features.	FLASR1-BB-4K	Number-Of-Sessions	4,000

² This product includes software developed by Cavium Networks.

Feature License	Application	Part Number	Type	Sessions (if applicable)
Broadband	Required for licensing of the maximum number of user sessions utilizing Broadband Aggregation features.	FLASR1-BB-16K	Number-Of-Sessions	16,000
Broadband	Required for licensing of the maximum number of user sessions utilizing Broadband Aggregation features.	FLASR1-BB-32K	Number-Of-Sessions	32,000
Cisco Unified Border Element (SP Edition)	Required for licensing of sessions utilizing Cisco Unified Border Element (SP Edition) features.	FLASR1-CUBES-250P	Number-Of-Sessions	250
Cisco Unified Border Element (SP Edition)	Required for licensing of sessions utilizing Cisco Unified Border Element (SP Edition) features.	FLASR1-CUBES-2KP	Number-Of-Sessions	2,000
Cisco Unified Border Element (SP Edition)	Required for licensing of sessions utilizing Cisco Unified Border Element (SP Edition) features.	FLASR1-CUBES-4KP	Number-Of-Sessions	4,000
Cisco Unified Border Element (SP Edition)	Required for licensing of sessions utilizing Cisco Unified Border Element (SP Edition) features.	FLASR1-CUBES-16KP	Number-Of-Sessions	16,000
Cisco Unified Border Element (SP Edition)	Required for licensing of sessions utilizing Cisco Unified Border Element (SP Edition) features.	FLASR1-CUBES-32KP	Number-Of-Sessions	32,000
Cisco Unified Border Element (SP Edition)	Required to license use of Cisco Unified Border Element (SP Edition) features on ASR 1000 deployed in a service provider TelePresence Exchange enabling Business-to-Business Cisco TelePresence solution.	FLASR1-CUBES-TPEX	Right-To-Use	-

The feature licenses listed in Table 2 apply to a single Cisco ASR 1000 Series Router platform. You must order broadband RTU licenses in combinations with NOS licenses for the feature use and number of simultaneous sessions.

For More Information

Please refer to product bulletin PB448387, "Cisco IOS XE Software for Cisco ASR 1000 Series Routers" (http://www.cisco.com/en/US/prod/collateral/routers/ps9343/product_bulletin_c25-448387.html), for more information about the overall software release strategy for the Cisco ASR 1000 Series products.

Please refer to product bulletin PB448862, "Cisco ASR 1000 Series Aggregation Services Routers Ordering Guide" (http://www.cisco.com/en/US/prod/collateral/routers/ps9343/product_bulletin_c07-448862.html), for more information about how to configure and order Cisco ASR 1000 Series products.

For more information about the Cisco ASR 1000 Series Routers, visit or contact your local Cisco account representative.

For information about Cisco service and support programs and benefits, please visit:

http://www.cisco.com/public/Support_root.shtml.



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

Cisco and the Cisco Logo are trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at www.cisco.com/go/trademarks. Third party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1005R)