



System Requirements for Cisco ASR 1000 Series Aggregation Services Routers

The following sections describe the system requirements for Cisco ASR 1000 Series Aggregation Services Routers:

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Software Packaging

Cisco ASR 1000 Series Aggregation Services Routers run Cisco IOS XE 3S and use a software packaging model that consists of the following components:

- Consolidated packages
- Individual software subpackages within a consolidated package
- Optional software subpackages outside the consolidated packages

Each consolidated package contains a collection of individual software subpackages. Each individual software subpackage is an individual software file that controls a different element or elements of the router. Some individual subpackages may be installed per element, for example, per SPA.



Note

The subpackage functionality is intended for both upgrade and field support. However, not all combinations of subpackages are supported.

Each individual software subpackage can be upgraded individually, or all individual software subpackages for a specific Cisco IOS XE 3S consolidated package can be upgraded as part of a complete Cisco IOS XE 3S consolidated package upgrade.



Importantly, IOS (the RPIOS individual software subpackage) is considered one of the individual software subpackages that makes up the complete Cisco IOS XE 3S consolidated package.

The following are the individual software subpackages within a consolidated package:

- Route Processor
 - RPBase: Provides the RP operating system.
 - RPControl: Provides the control plane processes that interface between Cisco IOS software and the rest of the platform.
 - RPIOS: Provides the Cisco IOS software kernel, which is where Cisco IOS software features are stored and run. Each consolidated image variant has a different RPIOS subpackage: RPIOS-ipbase, RPIOS-ipbasek9, RPIOS-advipservices, RPIOS-advipservicesk9, RPIOS-adventservices, and RPIOS-adventservicesk9.



Note The RPIOS-advipservices and RPIOS-adventservices subpackages are available from Cisco IOS XE Release 2.2.1 onward. These two subpackages are not available with Cisco IOS XE Release 2.1.2 and earlier releases.

- RPAccess: Provides components to manage enhanced router access functionality.
- ESP
 - ESPBase: Provides the ESP operating system and control processes, and the Cisco QuantumFlow Processor client, driver, and ucode.
- SIP
 - SIPBase: Provides the SIP operating system and control processes
 - SIPSPA: Provides the SPA drivers and the associated field-programmable device (FPD) images (SPA FPGA images)

A Cisco IOS XE 3S consolidated package allows users to upgrade all the individual software subpackages on a router with a single Cisco IOS XE 3S image download. The Cisco IOS XE 3S consolidated packages that are available vary based on the RP (RP1 or RP2) installed in the system and the Cisco IOS XE 3S release.

The following are the RP1 consolidated packages:

- Cisco ASR 1000 Series Aggregation Services Routers RP1 IP BASE W/O CRYPTO
- Cisco ASR 1000 Series Aggregation Services Routers RP1 IP BASE
- Cisco ASR 1000 Series Aggregation Services Routers RP1 ADVANCED IP SERVICES
- Cisco ASR 1000 Series Aggregation Services Routers RP1 ADVANCED IP SERVICES W/O CRYPTO
- Cisco ASR 1000 Series Aggregation Services Routers RP1 ADVANCED ENTERPRISE SERVICES
- Cisco ASR 1000 Series Aggregation Services Routers RP1 ADVANCED ENTERPRISE SERVICES W/O CRYPTO

The following are the RP2 consolidated packages:

- Cisco ASR 1000 Series Aggregation Services Routers RP2 IP BASE W/O CRYPTO
- Cisco ASR 1000 Series Aggregation Services Routers RP2 IP BASE
- Cisco ASR 1000 Series Aggregation Services Routers RP2 ADVANCED IP SERVICES

- Cisco ASR 1000 Series Aggregation Services Routers RP2 ADVANCED IP SERVICES W/O CRYPTO
- Cisco ASR 1000 Series Aggregation Services Routers RP2 ADVANCED ENTERPRISE SERVICES
- Cisco ASR 1000 Series Aggregation Services Routers RP2 ADVANCED ENTERPRISE SERVICES W/O CRYPTO

The individual software subpackages within the consolidated packages cannot be downloaded from cisco.com; only the Cisco IOS XE S consolidated packages and optional subpackages can be downloaded. Users who want to run the router using individual software subpackages must first download the consolidated package from cisco.com and extract the individual software subpackages from the consolidated package.

In addition to the individual software subpackages within a consolidated package, optional software subpackages that are not part of a consolidated package are available. Optional software subpackages can be downloaded separately from cisco.com; their installation is similar to the installation of an individual software subpackage using a provisioning file. The optional subpackage must be located in the same directory with the provisioning file and the other individual subpackage files. The optional software subpackages that are available vary based on the RP installed in the system: RP1 or RP2:

- For RP1, the optional software subpackage available is the Cisco ASR 1000 Series Aggregation Services Routers RP1 WebEx Node (asr1000rp1-sipspawmak9.version.pkg)
- For RP2, the optional software subpackage available is the Cisco ASR 1000 Series Aggregation Services Routers RP2 WebEx Node (asr1000rp2-sipspawmak9.version.pkg)

**Note**

The Cisco ASR 1000 Series Aggregation Services Routers RP1 WebEx Node and Cisco ASR 1000 Series Aggregation Services Routers RP2 WebEx Node optional software subpackages are available only from Cisco IOS XE Release 2.4.0 onward and are supported only in conjunction with a related RP-based Cisco ASR 1000 Series Aggregation Services Routers RPx IP BASE, Cisco ASR 1000 Series Aggregation Services Routers RPx ADVANCED IP SERVICES, or Cisco ASR 1000 Series Aggregation Services Routers RPx ADVANCED ENTERPRISE SERVICES consolidated package. These optional software subpackages are not supported with earlier Cisco IOS XE releases or with any of the non-CRYPTO consolidated packages.

**Note**

ISSU operation on the Cisco ASR 1002 Router, Cisco ASR 1002-X Router and Cisco ASR 1004 Router requires the router to be operating in subpackage mode.

**Note**

USB (or any other removable media) cannot be used to boot the system in the subpackage mode.

For more information about the advantages and disadvantages of running individual subpackages or a complete Cisco IOS XE 3S consolidated package, and the process of extracting the individual subpackages, see *Cisco ASR 1000 Series Aggregation Services Router Software Configuration Guide* at the following location:

<http://www.cisco.com/en/US/docs/routers/asr1000/configuration/guide/chassis/asrswcfg.html>

Cisco ASR 1000 Series Aggregation Services Routers Software Package Compatibility for ISSU

Cisco IOS XE Release 3.1S is an ISSU break release. ISSU upgrade and subpackage software upgrade from Cisco IOS XE Release 2.x to Cisco IOS XE Release 3.xS, including Release 3.1S, is not supported. ISSU downgrade from Cisco IOS XE Release 3.xS, including Release 3.1S to Release 2.x, is not supported either.

Support for ISSU upgrade and subpackage software upgrade has been resumed from Cisco IOS XE Release 3.1S onward. Therefore, rebuilds and releases after Cisco IOS XE Release 3.1S will support ISSU and software upgrade and downgrade, based on the ISSU compatibility matrix tables. For example, ISSU upgrade and downgrade between Cisco IOS XE Release 3.10S (15.0(1)S) to Cisco IOS XE Release 3.xS are supported.

This document describes the Cisco ASR 1000 Series Aggregation Services Routers Software Package Compatibility for ISSU [ASR 1000 ISSU Compatibility Matrix](#).

For information about Cisco IOS XE 2.x releases that support ISSU and software upgrade and downgrade, based on the ISSU compatibility matrix tables in Cisco IOS XE Release 2, see the “Cisco IOS XE Release Compatibility Tables” section in *Release Notes for Cisco ASR 1000 Series Aggregation Services Routers for Cisco IOS XE Release 2*.



Note

Cisco IOS XE software compatibility is supported only between images that are of the same type, for example, advipservicesk9 to advipservicesk9, adventerprisek9 to adventerprisek9, and so on. Cross-image-type upgrades or installations are not supported in the ISSU process. For example, you cannot upgrade ipbase to advipservicesk9 or advipservices to advipservicesk9.

RP Memory Recommendations

The Cisco IOS XE 3S images and packages that are available vary based on the RP (either RP1 or RP2) installed in the system:

- [Table 1](#) describes the RP1 consolidated package images, their individual software subpackage contents, and their memory recommendations.
- [Table 2](#) describes the RP1 optional subpackage images and their memory recommendations.
- [Table 3](#) describes the RP2 consolidated package images, their individual software subpackage contents, and their memory recommendations.
- [Table 4](#) describes the RP2 optional subpackage images and their memory recommendations.

Each Cisco IOS XE 3S image also contains two provisioning files: `asr1000rpx-packages.image.version.conf` and `packages.conf`. A provisioning file is used for booting only in scenarios where individual modules are extracted from the Cisco IOS XE 3.1S image and then used to run the router. Any one of the provisioning files can be used.

Table 1 *RP1 Memory Recommendations for the Cisco ASR 1000 Series Aggregation Services Routers Consolidated Package Images*

Platforms	Image Name	Software Image	Individual Subpackage Contents	DRAM Memory
Cisco ASR 1002 Router Cisco ASR 1004 Router Cisco ASR 1006 Router	Cisco ASR 1000 Series RP1 IP BASE W/O CRYPTO	asr1000rp1-ipbase. <i>version</i> .bin	asr1000rp1-rpbase. <i>version</i> .pkg	4 GB (for Cisco ASR 1002 Router) 2–4 GB (for Cisco ASR 1004 and Cisco ASR 1006 routers)
			asr1000rp1-rpcontrol. <i>version</i> .pkg	
			asr1000rp1-rpaccess. <i>version</i> .pkg	
			asr1000rp1-rpios-ipbase. <i>version</i> .pkg	
			asr1000rp1-espbase. <i>version</i> .pkg	
			asr1000rp1-sipbase. <i>version</i> .pkg	
			asr1000rp1-sipspace. <i>version</i> .pkg	
			asr1000rp1-packages-ipbase. <i>version</i> .conf packages.conf	
Cisco ASR 1002 Router Cisco ASR 1004 Router Cisco ASR 1006 Router	Cisco ASR 1000 Series RP1 IP BASE	asr1000rp1-ipbasek9. <i>version</i> .bin	asr1000rp1-rpbase. <i>version</i> .pkg	4 GB (for Cisco ASR 1002 Router) 2–4 GB (for Cisco ASR 1004 and Cisco ASR 1006 routers)
			asr1000rp1-rpcontrol. <i>version</i> .pkg	
			asr1000rp1-rpaccess. <i>version</i> .pkg	
			asr1000rp1-rpios-ipbasek9. <i>version</i> .pkg	
			asr1000rp1-espbase. <i>version</i> .pkg	
			asr1000rp1-sipbase. <i>version</i> .pkg	
			asr1000rp1-sipspace. <i>version</i> .pkg	
			asr1000rp1-packages-ipbasek9. <i>version</i> .conf packages.conf	
Cisco ASR 1002 Router Cisco ASR 1004 Router Cisco ASR 1006 Router	Cisco ASR 1000 Series RP1 ADVANCED IP SERVICES W/O CRYPTO	asr1000rp1-advipservices. <i>version</i> .bin	asr1000rp1-rpbase. <i>version</i> .pkg	4 GB (for Cisco ASR 1002 Router) 2–4 GB (for Cisco ASR 1004 and Cisco ASR 1006 routers)
			asr1000rp1-rpcontrol. <i>version</i> .pkg	
			asr1000rp1-rpaccess. <i>version</i> .pkg	
			asr1000rp1-rpios-advipservices. <i>version</i> .pkg	
			asr1000rp1-espbase. <i>version</i> .pkg	
			asr1000rp1-sipbase. <i>version</i> .pkg	
			asr1000rp1-sipspace. <i>version</i> .pkg	
			asr1000rp1-packages-advipservices. <i>version</i> .conf packages.conf	

Table 1 *RP1 Memory Recommendations for the Cisco ASR 1000 Series Aggregation Services Routers Consolidated Package Images (continued)*

Platforms	Image Name	Software Image	Individual Subpackage Contents	DRAM Memory
Cisco ASR 1002 Router Cisco ASR 1004 Router Cisco ASR 1006 Router	Cisco ASR 1000 Series RP1 ADVANCED IP SERVICES	asr1000rp1-advipservicesk9.version.bin	asr1000rp1-rpbase.version.pkg	4 GB (for Cisco ASR 1002 Router) 2–4 GB (for Cisco ASR 1004 and Cisco ASR 1006 routers)
			asr1000rp1-rpcontrol.version.pkg	
			asr1000rp1-rpaccess.version.pkg	
			asr1000rp1-rpios-ipbasek9.version.pkg	
			asr1000rp1-espbase.version.pkg	
			asr1000rp1-sipbase.version.pkg	
			asr1000rp1-sipspa.version.pkg	
			asr1000rp1-packages-advipservicesk9.version.conf packages.conf	
Cisco ASR 1002 Router Cisco ASR 1004 Router Cisco ASR 1006 Router	Cisco ASR 1000 Series RP1 ADVANCED ENTERPRISE SERVICES W/O CRYPTO	asr1000rp1-adventservices.version.bin	asr1000rp1-rpbase.version.pkg	4 GB (for Cisco ASR 1002 Router) 2–4 GB (for Cisco ASR 1004 and Cisco ASR 1006 routers)
			asr1000rp1-rpcontrol.version.pkg	
			asr1000rp1-rpaccess.version.pkg	
			asr1000rp1-rpios-adventservices.version.pkg	
			asr1000rp1-espbase.version.pkg	
			asr1000rp1-sipbase.version.pkg	
			asr1000rp1-sipspa.version.pkg	
			asr1000rp1-packages-adventservices.version.conf packages.conf	
Cisco ASR 1002 Router Cisco ASR 1004 Router Cisco ASR 1006 Router	Cisco ASR 1000 Series RP1 ADVANCED ENTERPRISE SERVICES	asr1000rp1-adventservicesk9.version.bin	asr1000rp1-rpbase.version.pkg	4 GB (for Cisco ASR 1002 Router) 2–4 GB (for Cisco ASR 1004 and Cisco ASR 1006 routers)
			asr1000rp1-rpcontrol.version.pkg	
			asr1000rp1-rpaccess.version.pkg	
			asr1000rp1-rpios-adventservicesk9.version.pkg	
			asr1000rp1-espbase.version.pkg	
			asr1000rp1-sipbase.version.pkg	
			asr1000rp1-sipspa.version.pkg	
			asr1000rp1-packages-adventservicesk9.version.conf packages.conf	

Table 2 *RP1 Memory Recommendations for the Cisco ASR 1000 Series Routers Optional Subpackage Image*

Platforms	Image Name	Software Image	Flash Memory
Cisco ASR 1002 Router Cisco ASR 1004 Router Cisco ASR 1006 Router	Cisco ASR 1000 Series Aggregation Services Routers RP1 WebEx Node ¹	asr1000rp1-sipspawmak9.version.XND.pkg	100 MB

1. The Cisco ASR 1000 Series Aggregation Services Routers RP1 WebEx Node (asr1000rp1-sipspawmak9.version.pkg) optional software subpackage is available only from Cisco IOS XE Release 2.4.0 and is supported only in conjunction with the Cisco ASR 1000 Series Aggregation Services Routers RP1 IP BASE, Cisco ASR 1000 Series Aggregation Services Routers RP1 ADVANCED IP SERVICES, or Cisco ASR 1000 Series Aggregation Services Routers RP1 ADVANCED ENTERPRISE SERVICES consolidated package. This subpackage is not supported in Cisco IOS XE releases prior to Release 2.4.0 or with any of the non-CRYPTO consolidated packages.



Note RP2 images are available from Cisco IOS XE Release 2.3.0.

Table 3 *RP2 Memory Recommendations for the Cisco ASR 1000 Series Aggregation Services Routers Consolidated Package Images*

Platforms	Image Name	Software Image	Individual Subpackage Contents	DRAM Memory
Cisco ASR 1004 Router Cisco ASR 1006 Router Cisco ASR 1013 Router	Cisco ASR 1000 Series RP2 IP BASE W/O CRYPTO	asr1000rp2-ipbase.version.bin	asr1000rp2-rpbase.version.pkg asr1000rp2-rpcontrol.version.pkg asr1000rp2-rpaccess.version.pkg asr1000rp2-rpios-ipbase.version.pkg asr1000rp2-espbase.version.pkg asr1000rp2-sipbase.version.pkg asr1000rp2-sipspa.version.pkg asr1000rp2-packages-ipbase.version.conf packages.conf	8–16 GB (for Cisco ASR 1004 Router, Cisco ASR 1006 Router, and Cisco ASR 1013 Router)

Table 3 *RP2 Memory Recommendations for the Cisco ASR 1000 Series Aggregation Services Routers Consolidated Package Images (continued)*

Platforms	Image Name	Software Image	Individual Subpackage Contents	DRAM Memory
Cisco ASR 1004 Router Cisco ASR 1006 Router Cisco ASR 1013 Router	Cisco ASR 1000 Series RP2 IP BASE	asr1000rp2-ipbasek9. <i>version</i> .bin	asr1000rp2-rpbase. <i>version</i> .pkg	8–16 GB (for Cisco ASR 1004 Router, Cisco ASR 1006 Router, and Cisco ASR 1013 Router)
			asr1000rp2-rpcontrol. <i>version</i> .pkg	
			asr1000rp2-rpaccess. <i>version</i> .pkg	
			asr1000rp2-rpios-ipbasek9. <i>version</i> .pkg	
			asr1000rp2-espbase. <i>version</i> .pkg	
			asr1000rp2-sipbase. <i>version</i> .pkg	
			asr1000rp2-sipspa. <i>version</i> .pkg	
			asr1000rp2-packages-ipbasek9. <i>version</i> .conf packages.conf	
Cisco ASR 1004 Router Cisco ASR 1006 Router Cisco ASR 1013 Router	Cisco ASR 1000 Series RP2 ADVANCED IP SERVICES W/O CRYPTO	asr1000rp2-advipservices. <i>version</i> .bin	asr1000rp2-rpbase. <i>version</i> .pkg	8–16 GB (for Cisco ASR 1004 Router, Cisco ASR 1006 Router, and Cisco ASR 1013 Router)
			asr1000rp2-rpcontrol. <i>version</i> .pkg	
			asr1000rp2-rpaccess. <i>version</i> .pkg	
			asr1000rp2-rpios-advipservices. <i>version</i> .pkg	
			asr1000rp2-espbase. <i>version</i> .pkg	
			asr1000rp2-sipbase. <i>version</i> .pkg	
			asr1000rp2-sipspa. <i>version</i> .pkg	
			asr1000rp2-packages-advipservices. <i>version</i> .conf packages.conf	
Cisco ASR 1004 Router Cisco ASR 1006 Router Cisco ASR 1013 Router	Cisco ASR 1000 Series RP2 ADVANCED IP SERVICES	asr1000rp2-advipservicesk9. <i>version</i> .bin	asr1000rp2-rpbase. <i>version</i> .pkg	8–16 GB (for Cisco ASR 1004 Router, Cisco ASR 1006 Router, and Cisco ASR 1013 Router)
			asr1000rp2-rpcontrol. <i>version</i> .pkg	
			asr1000rp2-rpaccess. <i>version</i> .pkg	
			asr1000rp2-rpios-advipservicesk9. <i>version</i> .pkg	
			asr1000rp2-espbase. <i>version</i> .pkg	
			asr1000rp2-sipbase. <i>version</i> .pkg	
			asr1000rp2-sipspa. <i>version</i> .pkg	
			asr1000rp2-packages-advipservicesk9. <i>version</i> .conf packages.conf	

Table 3 *RP2 Memory Recommendations for the Cisco ASR 1000 Series Aggregation Services Routers Consolidated Package Images (continued)*

Platforms	Image Name	Software Image	Individual Subpackage Contents	DRAM Memory
Cisco ASR 1004 Router Cisco ASR 1006 Router Cisco ASR 1013 Router	Cisco ASR 1000 Series RP2 ADVANCED ENTERPRISE SERVICES W/O CRYPTO	asr1000rp2-adventservices. <i>version</i> .bin	asr1000rp2-rpbase. <i>version</i> .pkg	8–16 GB (for Cisco ASR 1004 Router, Cisco ASR 1006 Router, and Cisco ASR 1013 Router)
			asr1000rp2-rpcontrol. <i>version</i> .pkg	
			asr1000rp2-rpaccess. <i>version</i> .pkg	
			asr1000rp2-rpios-adventservices. <i>version</i> .pkg	
			asr1000rp2-espbase. <i>version</i> .pkg	
			asr1000rp2-sipbase. <i>version</i> .pkg	
			asr1000rp2-sipspa. <i>version</i> .pkg	
			asr1000rp2-packages-adventservices. <i>version</i> .conf packages.conf	
Cisco ASR 1004 Router Cisco ASR 1006 Router Cisco ASR 1013 Router	Cisco ASR 1000 Series RP2 ADVANCED ENTERPRISE SERVICES	asr1000rp2-adventservicesk9. <i>version</i> .bin	asr1000rp2-rpbase. <i>version</i> .pkg	8–16 GB (for Cisco ASR 1004 Router, Cisco ASR 1006 Router, and Cisco ASR 1013 Router)
			asr1000rp2-rpcontrol. <i>version</i> .pkg	
			asr1000rp2-rpaccess. <i>version</i> .pkg	
			asr1000rp2-rpios-adventservicesk9. <i>version</i> .pkg	
			asr1000rp2-espbase. <i>version</i> .pkg	
			asr1000rp2-sipbase. <i>version</i> .pkg	
			asr1000rp2-sipspa. <i>version</i> .pkg	
			asr1000rp2-packages-adventservicesk9. <i>version</i> .conf packages.conf	

Table 4 *RP2 Memory Recommendations for the Cisco ASR 1000 Series Routers Optional Subpackage Image*

Platforms	Image Name	Software Image	Flash Memory
Cisco ASR 1004 Router Cisco ASR 1006 Router Cisco ASR 1013 Router	Cisco ASR 1000 Series Aggregation Services Routers RP2 WebEx Node ¹	asr1000rp2-sipspawmak9. <i>version</i> .XND.pkg	100 MB

- The Cisco ASR 1000 Series Aggregation Services Routers RP2 WebEx Node (asr1000rp2-sipspawmak9.*version*.pkg) optional software subpackage is available only from Cisco IOS XE Release 2.4.0 and is supported only in conjunction with the Cisco ASR 1000 Series Aggregation Services Routers RP2 IP BASE, Cisco ASR 1000 Series Aggregation Services Routers RP2 ADVANCED IP SERVICES, or Cisco ASR 1000 Series Aggregation Services Routers RP2 ADVANCED ENTERPRISE SERVICES consolidated package. This subpackage is not supported in Cisco IOS XE releases prior to Release 2.4.0 or in any of the non-CRYPTO consolidated packages.

Hardware Supported

Cisco IOS XE 3S releases support the following Cisco ASR 1000 Series Routers:

- Cisco ASR 1001 Router
- Cisco ASR 1001-X Router
- Cisco ASR 1002 Router
- Cisco ASR 1002-F Router
- Cisco ASR 1002-X Router
- Cisco ASR 1004 Router
- Cisco ASR 1006 Router
- Cisco ASR 1009-X Router
- Cisco ASR 1013 Router

ROMmon Release Requirements

Table 5 provides information about the field-replaceable units (FRUs) of the Cisco ASR 1000 Series Aggregation Services Routers supported by each ROMmon release.

Table 5 Available ROMmon Release

FRU	ROMmon Release																				
	XN	XN1	XN2	XNB	XNC	XNC0	XND	XND1	15.0 (1r) S	15.2 (1r) S	15.2 (4r) S	15.2 (4r) S1	15.3 (1r) S	15.3 (3r) S	15.3 (3r) S1	15.4 (2r) S	15.5 (3r) S1	16.2 (1r)	16.3 (2r)	16.7 (1r)	
—	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	—
ASR1000 RP1	—	—	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	Yes	—
ASR1002 RP1	—	—	—	—	—	Yes	Yes	—	Yes	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	Yes	—
ASR1000 RP2	—	—	—	—	—	—	—	—	Yes	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	Yes	—
ASR1001	—	—	—	—	—	—	—	—	Yes	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	Yes	—
ASR1001- X	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes	Yes	Yes	Yes	Yes	—
ASR1002- X	—	—	—	—	—	—	—	—	—	—	—	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	Yes	Yes

Table 5 Available ROMmon Release (continued)

FRU	ROMmon Release																			
	XN	XN1	XN2	XNB	XNC	XNCO	XND	XND1	15.0 (1r) S	15.2 (1r) S	15.2 (4r) S	15.2 (4r) S1	15.3 (1r) S	15.3 (3r) S	15.3 (3r) S1	15.4 (2r) S	15.5 (3r) S1	16.2 (1r)	16.3 (2r)	16.7 (1r)
ASR1000-ESP5	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	—
ASR1000-ESP10	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	—
ASR1000-ESP20	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	—
ASR1000-ESP40	—	—	—	—	—	—	—	—	Yes	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	—
ASR1000-ESP100	—	—	—	—	—	—	—	—	—	—	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	—
ASR1000-ESP200	—	—	—	—	—	—	—	—	—	—	—	—	Yes	Yes	—	Yes	Yes	Yes	Yes	—
ASR1000-SIP10	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	—	—	—	—	Yes	Yes	—	Yes	Yes	Yes	Yes	—
ASR1000-SIP40	—	—	—	—	—	—	—	—	Yes	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	Yes	Yes	—
ASR1000-2T+ 20x1GE	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes	Yes	Yes	Yes	Yes	Yes	—
ASR1000-6TGE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes	Yes	Yes	Yes	—
ASR1000-MIP100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Yes	Yes	Yes	—

Table 6 lists the minimum ROMmon release supported for RP and ESP FRUs, for each Cisco IOS XE release. Table 7 lists the minimum ROMmon release supported for other FRUs, for each Cisco IOS XE release.

Table 6 Minimum ROMmon Release Supported for RP and ESP FRUs

Cisco IOS XE Release	FRU								
	ASR 1000 RP1	ASR 1002 RP1	ASR 1000 RP2	ASR 1000-ESP5	ASR 1000-ESP10	ASR1000-ESP20	ASR1000-ESP40	ASR1000-ESP100	ASR1000-ESP200
—	XNC	—	—	—	XNC	—	—	—	—
2.0.x	XNC	—	—	—	XNC	—	—	—	—
2.1.x	XNC	XNC	—	XNC	XNC	—	—	—	—
2.2.0	XNC	XNC	—	XNC	XNC	—	—	—	—
2.2.1	XNC	XNC	—	XNC	XNC	XNC	—	—	—
2.2.2	XNC	XNC	—	XNC	XNC	XNC	—	—	—
2.3.0	XNC	XNC	XNC0	XNC	XNC	XNC	—	—	—
2.3.1	XNC	XNC	XNC0	XNC	XNC	XNC	—	—	—
2.3.2	XNC	XNC	XNC0	XNC	XNC	XNC	—	—	—
2.4.x	XND1	XND1	XND	XNC	XNC	XNC	—	—	—
2.5.x	XND1	XND1	XND	XNC	XNC	XNC	—	—	—
2.6.x	XND1	XND1	XND	XNC	XNC	XNC	—	—	—
3.1.x	XND1	XND1	XND	XNC	XNC	XNC	15.0(1r)S	—	—
3.2.x	XND1	XND1	XND	XNC	XNC	XNC	15.0(1r)S	—	—
3.3.x	XND1	XND1	XND	XNC	XNC	XNC	15.0(1r)S	—	—
3.4.x	XND1	XND1	XND	XNC	XNC	XNC	15.0(1r)S	—	—
3.5.x	XND1	XND1	XND	XNC	XNC	XNC	15.0(1r)S	—	—
3.6.x	XND1	XND1	XND	XNC	XNC	XNC	15.0(1r)S	—	—
3.7.x	XND1	XND1	XND	XNC	XNC	XNC	15.0(1r)S	15.3(1r)S	—
3.8.x	XND1	XND1	15.2(1r)S	XNC	XNC	XNC	15.0(1r)S	15.3(1r)S	—
3.9.x	XND1	XND1	15.2(1r)S	XNC	XNC	XNC	15.0(1r)S	15.3(1r)S	—
3.10.x	XND1	XND1	15.2(1r)S	XNC	XNC	XNC	15.0(1r)S	15.3(1r)S	15.3(1r)S
3.11.x	XND1	XND1	15.2(1r)S	XNC	XNC	XNC	15.0(1r)S	15.3(1r)S	15.3(1r)S
3.12.x	XND1	XND1	15.2(1r)S	XNC	XNC	XNC	15.0(1r)S	15.3(1r)S	15.3(1r)S
3.13.x	XND1	XND1	15.2(1r)S	XNC	XNC	XNC	15.0(1r)S	15.3(1r)S	15.3(1r)S
3.14.x	XND1	XND1	15.2(1r)S	XNC	XNC	XNC	15.0(1r)S	15.3(1r)S	15.3(1r)S
3.15.x	XND1	XND1	15.2(1r)S	XNC	XNC	XNC	15.0(1r)S	15.3(1r)S	15.3(1r)S
3.16.x	XND1	XND1	15.2(1r)S	XNC	XNC	XNC	15.0(1r)S	15.3(1r)S	15.3(1r)S
3.17.x	XND1	XND1	15.2(1r)S	XNC	XNC	XNC	15.0(1r)S	15.3(1r)S	15.3(1r)S

Table 7 Minimum ROMmon Release Supported for Other FRUs

Cisco IOS XE Release	FRU							
	ASR 1001	ASR 1001-X	ASR 1002-X	ASR1000-2T+20x1GE	ASR1000-6TGE	ASR1000-MIP100	ASR1000-SIP10	ASR1000-SIP40
—	—	—	—	—	—	—	XNC	—
2.0.x	—	—	—	—	—	—	XNC	—
2.1.x	—	—	—	—	—	—	XNC	—
2.2.0	—	—	—	—	—	—	XNC	—
2.2.1	—	—	—	—	—	—	XNC	—
2.2.2	—	—	—	—	—	—	XNC	—
2.3.0	—	—	—	—	—	—	XNC	—
2.3.1	—	—	—	—	—	—	XNC	—
2.3.2	—	—	—	—	—	—	XNC	—
2.4.x	—	—	—	—	—	—	XNC	—
2.5.x	—	—	—	—	—	—	XNC	—
2.6.x	—	—	—	—	—	—	XNC	—
3.1.x	—	—	—	—	—	—	XNC	—
3.2.x	15.0(1r)S	—	—	—	—	—	XNC	15.0(1r)S
3.3.x	15.0(1r)S	—	—	—	—	—	XNC	15.0(1r)S
3.4.x	15.0(1r)S	—	—	—	—	—	XNC	15.0(1r)S
3.5.x	15.0(1r)S	—	—	—	—	—	XNC	15.0(1r)S
3.6.x	15.0(1r)S	—	—	—	—	—	XNC	15.0(1r)S
3.7.x	15.0(1r)S	—	15.3(1r)S	—	—	—	XNC	15.0(1r)S
3.8.x	15.0(1r)S	—	15.3(1r)S	—	—	—	XNC	15.0(1r)S
3.9.x	15.0(1r)S	—	15.3(1r)S	—	—	—	XNC	15.0(1r)S
3.10.x	15.0(1r)S	—	15.3(1r)S	15.3(3r)S1	—	—	XNC	15.0(1r)S
3.11.x	15.0(1r)S	—	15.3(1r)S	15.3(3r)S1	—	—	XNC	15.0(1r)S
3.12.x	15.0(1r)S	15.4(2r)S	15.3(1r)S	15.3(3r)S1	15.4(2r)S	—	XNC	15.0(1r)S
3.13.x	15.0(1r)S	15.4(2r)S	15.3(1r)S	15.3(3r)S1	15.4(2r)S	—	XNC	15.0(1r)S
3.14.x	15.0(1r)S	15.4(2r)S	15.3(1r)S	15.3(3r)S1	15.4(2r)S	—	XNC	15.0(1r)S
3.15.x	15.0(1r)S	15.4(2r)S	15.3(1r)S	15.3(3r)S1	15.4(2r)S	—	XNC	15.0(1r)S
3.16.x	15.0(1r)S	15.4(2r)S	15.3(1r)S	15.3(3r)S1	15.4(2r)S	15.5(3r)S1	XNC	15.0(1r)S
3.17.x	15.0(1r)S	15.4(2r)S	15.3(1r)S	15.3(3r)S1	15.4(2r)S	15.5(3r)S1	XNC	15.0(1r)S

[Table 8](#) lists the recommended ROMmon release for RP and ESP FRUs, for each Cisco IOS XE release.

[Table 9](#) lists the recommended ROMmon release for other FRUs, for each Cisco IOS XE release

Table 8 Recommended ROMmon Release for RP and ESP FRUs

Cisco IOS XE Release	FRU								
	ASR1000 RP1	ASR 1002 RP1	ASR1000 RP2	ASR 1000-ESP5	ASR 1000-ESP10	ASR1000-ESP20	ASR1000-ESP40	ASR1000-ESP100	ASR1000-ESP200
2.0.x	XNC	—	—	15.5(3r)S1	15.5(3r)S1	—	—	—	—
2.1.x	XNC	XNC	—	15.5(3r)S1	15.5(3r)S1	—	—	—	—
2.2.0	XNC	XNC	—	15.5(3r)S1	15.5(3r)S1	—	—	—	—
2.2.1	XNC	XNC	—	15.5(3r)S1	15.5(3r)S1	16.2(1r)	—	—	—
2.2.2	XNC	XNC	—	15.5(3r)S1	15.5(3r)S1	16.2(1r)	—	—	—
2.3.0	XNC ¹	XNC	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	—	—	—
2.3.1	XNC	XNC	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	—	—	—
2.3.2	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	—	—	—
2.4.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	—	—	—
2.5.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	—	—	—
2.6.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	—	—	—
3.1.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	—	—
3.2.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	—	—
3.3.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	—	—
3.4.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	—	—
3.5.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	—	—
3.6.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	—	—
3.7.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	16.2(1r)	—
3.8.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	16.2(1r)	—
3.9.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	16.2(1r)	—
3.10.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	16.2(1r)	16.2(1r)
3.11.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	16.2(1r)	16.2(1r)
3.12.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	16.2(1r)	16.2(1r)
3.13.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	16.2(1r)	16.2(1r)
3.14.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	16.2(1r)	16.2(1r)
3.15.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	16.2(1r)	16.2(1r)
3.16.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	16.2(1r)	16.2(1r)
3.17.x	15.5(3r)S1	15.5(3r)S1	16.2(1r)	15.5(3r)S1	15.5(3r)S1	16.2(1r)	16.2(1r)	16.2(1r)	16.2(1r)

1. For Cisco IOS XE Release 2.3.0d and Release 2.3.0e, ROMmon Release 15.2(1r)S is the recommended release.

Table 9 Recommended ROMmon Release for Other FRUs

Cisco IOS XE Release	FRU							
	ASR1001	ASR 1001-X	ASR1002-X	ASR1000-2T+20x1GE	ASR1000-6TGE	ASR1000-MIP100	ASR1000-SIP10	ASR1000-SIP40
—	—	—	—	—	—	—	16.3(2r)	—
2.0.x	—	—	—	—	—	—	16.3(2r)	—
2.1.x	—	—	—	—	—	—	16.3(2r)	—
2.2.0	—	—	—	—	—	—	16.3(2r)	—
2.2.1	—	—	—	—	—	—	16.3(2r)	—
2.2.2	—	—	—	—	—	—	16.3(2r)	—
2.3.0	—	—	—	—	—	—	16.3(2r)	—
2.3.1	—	—	—	—	—	—	16.3(2r)	—
2.3.2	—	—	—	—	—	—	16.3(2r)	—
2.4.x	—	—	—	—	—	—	16.3(2r)	—
2.5.x	—	—	—	—	—	—	16.3(2r)	—
2.6.x	—	—	—	—	—	—	16.3(2r)	—
3.1.x	—	—	—	—	—	—	16.3(2r)	—
3.2.x	16.3(2r)	—	—	—	—	—	16.3(2r)	16.3(2r)
3.3.x	16.3(2r)	—	—	—	—	—	16.3(2r)	16.3(2r)
3.4.x	16.3(2r)	—	—	—	—	—	16.3(2r)	16.3(2r)
3.5.x	16.3(2r)	—	—	—	—	—	16.3(2r)	16.3(2r)
3.6.x	16.3(2r)	—	—	—	—	—	16.3(2r)	16.3(2r)
3.7.x	16.3(2r)	—	16.7(1r)	—	—	—	16.3(2r)	16.3(2r)
3.8.x	16.3(2r)	—	16.7(1r)	—	—	—	16.3(2r)	16.3(2r)
3.9.x	16.3(2r)	—	16.7(1r)	—	—	—	16.3(2r)	16.3(2r)
3.10.x	16.3(2r)	—	16.7(1r)	16.3(2r)	—	—	16.3(2r)	16.3(2r)
3.11.x	16.3(2r)	—	16.7(1r)	16.3(2r)	—	—	16.3(2r)	16.3(2r)
3.12.x	16.3(2r)	16.3(2r)	16.7(1r)	16.3(2r)	16.3(2r)	—	16.3(2r)	16.3(2r)
3.13.x	16.3(2r)	16.3(2r)	16.7(1r)	16.3(2r)	16.3(2r)	—	16.3(2r)	16.3(2r)
3.14.x	16.3(2r)	16.3(2r)	16.7(1r)	16.3(2r)	16.3(2r)	—	16.3(2r)	16.3(2r)
3.15.x	16.3(2r)	16.3(2r)	16.7(1r)	16.3(2r)	16.3(2r)	—	16.3(2r)	16.3(2r)
3.16.x	16.3(2r)	16.3(2r)	16.7(1r)	16.3(2r)	16.3(2r)	16.3(2r)	16.3(2r)	16.3(2r)
3.17.x	16.3(2r)	16.3(2r)	16.7(1r)	16.3(2r)	16.3(2r)	16.3(2r)	16.3(2r)	16.3(2r)

Determining the Release Number of the Installed Software

This section provides information about determining the release number of the installed software.

Determining the Version of the Consolidated Package

To determine the version of the Cisco IOS XE Software (consolidated package) running on your router, log in to the router and enter the **show version** EXEC command.

The following is sample output of the **show version** command. The actual output displayed when you run the command will vary depending on the version of the product that you are using.

```
Router# show version
```

```
Cisco IOS Software, IOS-XE Software (X86_64_LINUX_IOSD-ADVENTERPRISEK9-M), Version  
15.2(1)S, RELEASE SOFTWARE (fc1)  
Technical Support: http://www.cisco.com/techsupport  
Copyright (c) 1986-2011 by Cisco Systems, Inc.  
Compiled Sun 27-Nov-11 21:19 by mcpre
```

```
Cisco IOS-XE software, Copyright (c) 2005-2011 by cisco Systems, Inc.  
All rights reserved. Certain components of Cisco IOS-XE software are  
licensed under the GNU General Public License ("GPL") Version 2.0. The  
software code licensed under GPL Version 2.0 is free software that comes  
with ABSOLUTELY NO WARRANTY. You can redistribute and/or modify such  
GPL code under the terms of GPL Version 2.0. For more details, see the  
documentation or "License Notice" file accompanying the IOS-XE software,  
or the applicable URL provided on the flyer accompanying the IOS-XE  
software.
```

```
ROM: IOS-XE ROMMON
```

```
Router uptime is 1 minute  
Uptime for this control processor is 3 minutes  
System returned to ROM by reload  
System restarted at 22:07:05 UTC Sun Nov 27 2011  
System image file is "tftp://auto/tftp-smoke2/mcpdt-rp2-14/vmlinux"  
Last reload reason: PowerOn
```

```
This product contains cryptographic features and is subject to United  
States and local country laws governing import, export, transfer and  
use. Delivery of Cisco cryptographic products does not imply  
third-party authority to import, export, distribute or use encryption.  
Importers, exporters, distributors and users are responsible for  
compliance with U.S. and local country laws. By using this product you  
agree to comply with applicable laws and regulations. If you are unable  
to comply with U.S. and local laws, return this product immediately.
```

```
A summary of U.S. laws governing Cisco cryptographic products may be found at:  
http://www.cisco.com/wvl/export/crypto/tool/stqrg.html
```

```
If you require further assistance please contact us by sending email to  
export@cisco.com.
```

```
cisco ASR1006 (RP2) processor with 4252282K/6147K bytes of memory.  
5 Gigabit Ethernet interfaces  
2 Channelized T3 ports  
32768K bytes of non-volatile configuration memory.  
8388608K bytes of physical memory.  
1925119K bytes of eUSB flash at bootflash:.  
78085207K bytes of SATA hard disk at harddisk:.
```

```
Configuration register is 0x2102
```

Determining the Version of the Individual Subpackages

To determine the version of the individual subpackages running on your router, log in to the router and enter the **show version installed** command in the User EXEC, Privileged EXEC, or Diagnostic mode.

The following is sample output of the **show version installed** command. The actual output displayed when you run the command will vary depending on the version of the product that you are using.

```
Router# show version installed
```

```
Package: Provisioning File, version: n/a, status: active  
File: consolidated:packages.conf, on: RP0  
Built: n/a, by: n/a  
File SHA1 checksum: 96de495067ade7bb7e17f833fb3e4136adddf0a7
```

Package: rpbased, version: 03.05.00.S.152-1.S, status: active
 File: consolidated:asr1000rp2-rpbased.03.05.00.S.152-1.S.pkg, on: RP0
 Built: 2011-11-27_15.35, by: mcpre
 File SHA1 checksum: aadf1bfa5ff97720c3eeaed32e4d9941e54b0ea8

Package: rpcontrol, version: 03.05.00.S.152-1.S, status: active
 File: consolidated:asr1000rp2-rpcontrol.03.05.00.S.152-1.S.pkg, on: RP0/0
 Built: 2011-11-27_15.35, by: mcpre
 File SHA1 checksum: 57f1f2c5536098d761d228d3a4d5031bf1f885fb

Package: rpios-adventerprisek9, version: 03.05.00.S.152-1.S, status: active
 File: consolidated:asr1000rp2-rpios-adventerprisek9.03.05.00.S.152-1.S.pkg, on: RP0/0
 Built: 2011-11-27_15.41, by: mcpre
 File SHA1 checksum: 632836be203f1f5a94d7cbb4eb042890649d5b0d

Package: rpaccess, version: 03.05.00.S.152-1.S, status: active
 File: consolidated:asr1000rp2-rpaccess.03.05.00.S.152-1.S.pkg, on: RP0/0
 Built: 2011-11-27_15.35, by: mcpre
 File SHA1 checksum: adc4045026a793a1523431f10860b6bf1fa1fb2c

Package: rpcontrol, version: 03.05.00.S.152-1.S, status: n/a
 File: consolidated:asr1000rp2-rpcontrol.03.05.00.S.152-1.S.pkg, on: RP0/1
 Built: 2011-11-27_15.35, by: mcpre
 File SHA1 checksum: 57f1f2c5536098d761d228d3a4d5031bf1f885fb

Package: rpios-adventerprisek9, version: 03.05.00.S.152-1.S, status: n/a
 File: consolidated:asr1000rp2-rpios-adventerprisek9.03.05.00.S.152-1.S.pkg, on: RP0/1
 Built: 2011-11-27_15.41, by: mcpre
 File SHA1 checksum: 632836be203f1f5a94d7cbb4eb042890649d5b0d

Package: rpaccess, version: 03.05.00.S.152-1.S, status: n/a
 File: consolidated:asr1000rp2-rpaccess.03.05.00.S.152-1.S.pkg, on: RP0/1
 Built: 2011-11-27_15.35, by: mcpre
 File SHA1 checksum: adc4045026a793a1523431f10860b6bf1fa1fb2c

Package: rpbased, version: 03.05.00.S.152-1.S, status: n/a
 File: consolidated:asr1000rp2-rpbased.03.05.00.S.152-1.S.pkg, on: RP1
 Built: 2011-11-27_15.35, by: mcpre
 File SHA1 checksum: aadf1bfa5ff97720c3eeaed32e4d9941e54b0ea8

Package: rpcontrol, version: 03.05.00.S.152-1.S, status: n/a
 File: consolidated:asr1000rp2-rpcontrol.03.05.00.S.152-1.S.pkg, on: RP1/0
 Built: 2011-11-27_15.35, by: mcpre
 File SHA1 checksum: 57f1f2c5536098d761d228d3a4d5031bf1f885fb

Package: rpios-adventerprisek9, version: 03.05.00.S.152-1.S, status: n/a
 File: consolidated:asr1000rp2-rpios-adventerprisek9.03.05.00.S.152-1.S.pkg, on: RP1/0
 Built: 2011-11-27_15.41, by: mcpre
 File SHA1 checksum: 632836be203f1f5a94d7cbb4eb042890649d5b0d

Package: rpaccess, version: 03.05.00.S.152-1.S, status: n/a
 File: consolidated:asr1000rp2-rpaccess.03.05.00.S.152-1.S.pkg, on: RP1/0
 Built: 2011-11-27_15.35, by: mcpre
 File SHA1 checksum: adc4045026a793a1523431f10860b6bf1fa1fb2c

Package: rpcontrol, version: 03.05.00.S.152-1.S, status: n/a
 File: consolidated:asr1000rp2-rpcontrol.03.05.00.S.152-1.S.pkg, on: RP1/1
 Built: 2011-11-27_15.35, by: mcpre
 File SHA1 checksum: 57f1f2c5536098d761d228d3a4d5031bf1f885fb

Package: rpios-adventerprisek9, version: 03.05.00.S.152-1.S, status: n/a
 File: consolidated:asr1000rp2-rpios-adventerprisek9.03.05.00.S.152-1.S.pkg, on: RP1/1
 Built: 2011-11-27_15.41, by: mcpre
 File SHA1 checksum: 632836be203f1f5a94d7cbb4eb042890649d5b0d

Package: rpaccess, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-rpaccess.03.05.00.S.152-1.S.pkg, on: RP1/1
Built: 2011-11-27_15.35, by: mcpre
File SHA1 checksum: adc4045026a793a1523431f10860b6bf1fa1fb2c

Package: espbase, version: 03.05.00.S.152-1.S, status: active
File: consolidated:asr1000rp2-espbase.03.05.00.S.152-1.S.pkg, on: ESP0
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 6867ebbf53d4e17b88c45859175ad70891c49f05

Package: esp86base, version: 03.05.00.S.152-1.S, status: inactive
File: consolidated:asr1000rp2-esp86base.03.05.00.S.152-1.S.pkg, on: ESP0
Built: 2011-11-27_15.35, by: mcpre
File SHA1 checksum: 6d11715ea722191f6d5e8bec077512fd22c473ae

Package: espbase, version: 03.05.00.S.152-1.S, status: active
File: consolidated:asr1000rp2-espbase.03.05.00.S.152-1.S.pkg, on: ESP1
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 6867ebbf53d4e17b88c45859175ad70891c49f05

Package: esp86base, version: 03.05.00.S.152-1.S, status: inactive
File: consolidated:asr1000rp2-esp86base.03.05.00.S.152-1.S.pkg, on: ESP1
Built: 2011-11-27_15.35, by: mcpre
File SHA1 checksum: 6d11715ea722191f6d5e8bec077512fd22c473ae

Package: sipbase, version: 03.05.00.S.152-1.S, status: active
File: consolidated:asr1000rp2-sipbase.03.05.00.S.152-1.S.pkg, on: SIP0
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 216029d6fb614f3b65225015008d25e70b513169

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP0/0
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP0/1
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: active
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP0/2
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: active
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP0/3
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipbase, version: 03.05.00.S.152-1.S, status: active
File: consolidated:asr1000rp2-sipbase.03.05.00.S.152-1.S.pkg, on: SIP1
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 216029d6fb614f3b65225015008d25e70b513169

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP1/0
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

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Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
  File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP1/1
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
  File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP1/2
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
  File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP1/3
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipbase, version: 03.05.00.S.152-1.S, status: active
  File: consolidated:asr1000rp2-sipbase.03.05.00.S.152-1.S.pkg, on: SIP2
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 216029d6fb614f3b65225015008d25e70b513169

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
  File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP2/0
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
  File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP2/1
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
  File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP2/2
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
  File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP2/3
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipbase, version: 03.05.00.S.152-1.S, status: n/a
  File: consolidated:asr1000rp2-sipbase.03.05.00.S.152-1.S.pkg, on: SIP3
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 216029d6fb614f3b65225015008d25e70b513169

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
  File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP3/0
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
  File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP3/1
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
  File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP3/2
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
  File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP3/3
  Built: 2011-11-27_15.14, by: mcpre
  File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

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Package: sipbase, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipbase.03.05.00.S.152-1.S.pkg, on: SIP4
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 216029d6fb614f3b65225015008d25e70b513169

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP4/0
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP4/1
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP4/2
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP4/3
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipbase, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipbase.03.05.00.S.152-1.S.pkg, on: SIP5
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 216029d6fb614f3b65225015008d25e70b513169

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP5/0
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP5/1
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP5/2
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Package: sipspa, version: 03.05.00.S.152-1.S, status: n/a
File: consolidated:asr1000rp2-sipspa.03.05.00.S.152-1.S.pkg, on: SIP5/3
Built: 2011-11-27_15.14, by: mcpre
File SHA1 checksum: 58250807ef37ef9da6c3952babce9a9a5b5e29b5

Upgrading to a New Software Release

Only Cisco IOS XE 3S consolidated packages can be downloaded from cisco.com; users who want to run a router using individual subpackages must first download the image from cisco.com and extract the individual subpackages from the consolidated package.

For information about upgrading to a new software release, see *Cisco ASR 1000 Series Aggregation Services Router Software Configuration Guide* at the following location:

<http://www.cisco.com/en/US/docs/routers/asr1000/configuration/guide/chassis/asrswcfg.html>