



Preface

This preface describes the objectives and organization of this document and explains how to find additional information on related products and services. This preface contains the following sections:

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Objectives

This document provides an overview of software functionality that is specific to the Cisco ASR 1000 Series Aggregation Services Routers. It is not intended as a comprehensive guide to all of the software features that can be run using the Cisco ASR 1000 Series Routers, but only the software aspects that are specific to these routers.

For information on general software features that are also available on the Cisco ASR 1000 Series Routers, see the Cisco IOS XE technology guide for that specific software feature.

Document Revision History

The Document Revision History records technical changes to this document. The table shows the Cisco IOS XE software release number and document revision number for the change, the date of the change, and a brief summary of the change

| Release No. | Date | Change Summary |
|-------------|--------------------|---|
| IOS XE 2.3 | February 27, 2009 | Updated “Cisco IOS XE Software Package Compatibility for ISSU” chapter with new compatibility information. |
| IOS XE 2.2 | November 20, 2008 | Updated “Cisco IOS XE Software Package Compatibility for ISSU” chapter with new compatibility information. |
| IOS XE 2.2 | November 3, 2008 | Added new content to document compatibility of different versions of Cisco IOS XE software in the “Cisco IOS XE Software Package Compatibility for ISSU” chapter. |
| IOS XE 2.2 | October 3, 2008 | Updated book to document ISSU procedures for Cisco IOS XE Release 2.2. Removed ISSU procedures from the “Consolidated Packages and Sub-Package Management” chapter of the book and created the “In Service Software Upgrades (ISSU)” chapter. |
| IOS XE 2.2 | September 23, 2008 | Added troubleshooting information for Cisco ASR 1000 Embedded Services Processor 10G Non Crypto Capable New Feature |
| IOS XE 2.1 | July 2nd, 2008 | Added the “Configuring and Accessing the Web User Interface” section to the book. Added Appendix B to the book. |
| IOS XE 2.1 | May 2nd, 2008 | First release. |

Organization

This document contains the following chapters:

| Chapter | Title | Description |
|-----------|--|--|
| Chapter 1 | Using Cisco IOS XE Software | Provides an introduction to accessing the command-line interface (CLI) and using the Cisco software and related tools. |
| Chapter 2 | Software Packaging and Architecture | Provides an introduction to Cisco ASR 1000 Series Routers software packaging, processes, and file systems. |
| Chapter 3 | Consolidated Packages and Sub-Package Management | Provides information on downloading, installing, and running the software on the Cisco ASR 1000 Series Routers. |

| Chapter | Title | Description |
|------------|--|---|
| Chapter 4 | Cisco IOS XE Software Package Compatibility for ISSU | Provides information on the compatibility of different versions of Cisco IOS XE software. |
| Chapter 5 | In Service Software Upgrades (ISSU) | Provides information on performing limited downtime software upgrades on the Cisco ASR 1000 Series Routers. |
| Chapter 6 | High Availability Overview | Provides an overview of the High Availability architecture, behavior, and features on the Cisco ASR 1000 Series Routers. |
| Chapter 7 | Console Port, Telnet, and SSH Handling | Provides an overview and configuration options for the handling of incoming console port, telnet, and SSH traffic on the Cisco ASR 1000 Series Routers. |
| Chapter 8 | Using the Management Ethernet Interface | Provides an overview and configuration options for the Management Ethernet interface on the Cisco ASR 1000 Series Routers. |
| Chapter 9 | Tracing and Trace Management | Provides an overview of tracing on the Cisco ASR 1000 Series Router, and how to manage the tracing process and files. |
| Chapter 10 | Configuring and Accessing the Web User Interface | Provides an overview of the Cisco ASR 1000 Series Router web user interface, and information on configuring and accessing the web user interface. |

Related Documentation

This section refers you to other documentation that also might be useful as you configure your Cisco ASR 1000 Series Router. The documentation listed below is available online.

Cisco ASR 1000 Series Routers Documentation

The Cisco ASR 1000 Series has a documentation roadmap that provides listings to a broad range of documentation available for the Cisco ASR 1000 Series Routers. See the [Cisco ASR 1000 Series Router Documentation Roadmap](#) at:

http://cisco.com/en/US/products/ps9343/products_documentation_roadmaps_list.html

The documentation homepage for the Cisco ASR 1000 Series Routers contains a wide variety of hardware and software information for the Cisco ASR 1000 Series Routers and can be viewed at:

http://cisco.com/en/US/products/ps9343/tsd_products_support_series_home.html

The documentation homepage for Cisco IOS XE contains Cisco IOS XE technology guides and feature documentation and can be viewed at:

http://cisco.com/en/US/products/ps9587/tsd_products_support_series_home.html

For information on commands, see one of the following resources:

- [Cisco IOS XE Software Command References](#)
- [Command Lookup Tool](#) (cisco.com login required)

Document Conventions

This documentation uses the following conventions:

| Convention | Description |
|-------------------------|--|
| ^ or Ctrl | The ^ and Ctrl symbols represent the Control key. For example, the key combination ^D or Ctrl-D means hold down the Control key while you press the D key. Keys are indicated in capital letters but are not case sensitive. |
| <i>string</i> | A string is a nonquoted set of characters shown in italics. For example, when setting an SNMP <i>community</i> string to <i>public</i> , do not use quotation marks around the string or the string will include the quotation marks. |

Command syntax descriptions use the following conventions:

| Convention | Description |
|----------------|---|
| bold | Bold text indicates commands and keywords that you enter exactly as shown. |
| <i>italics</i> | Italic text indicates arguments for which you supply values. |
| [x] | Square brackets enclose an optional element (keyword or argument). |
| | A vertical line indicates a choice within an optional or required set of keywords or arguments. |
| [x y] | Square brackets enclosing keywords or arguments separated by a vertical line indicate an optional choice. |
| {x y} | Braces enclosing keywords or arguments separated by a vertical line indicate a required choice. |

Nested sets of square brackets or braces indicate optional or required choices within optional or required elements. For example:

| Convention | Description |
|-------------|--|
| [x {y z}] | Braces and a vertical line within square brackets indicate a required choice within an optional element. |

Examples use the following conventions:

| Convention | Description |
|--------------------|--|
| screen | Examples of information displayed on the screen are set in Courier font. |
| bold screen | Examples of text that you must enter are set in Courier bold font. |
| < > | Angle brackets enclose text that is not printed to the screen, such as passwords. |
| ! | An exclamation point at the beginning of a line indicates a comment line. (Exclamation points are also displayed by the Cisco IOS software for certain processes.) |
| [] | Square brackets enclose default responses to system prompts. |

The following conventions are used to attract the attention of the reader:

**Caution**

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

**Note**

Means *reader take note*. Notes contain helpful suggestions or references to materials that may not be contained in this manual.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

