



Preface

Revised: November 24, 2010, OL-17665-04

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 operations and maintenance information that is specific to the Cisco ASR 1000 Series Aggregation Services Routers. It does not repeat operations information that is standard for all Cisco routers, such as setting up a syslog server to monitor alarms and other messages sent to the system console.

Document Revision History

This Document Revision History table records technical changes to this document.

Release Number	Date	Change Summary
Cisco IOS XE 2.2	October, 2008	Initial publication, including the following chapters: <ul style="list-style-type: none"> • Verifying Hardware Installation • Automatic Shutdown • Monitoring Hardware Using Alarms
Cisco IOS XE 2.2	December, 2008	Modified the number of minutes from two to five for the router to shut down when a fan fails, per CSCsr59868. “Automatic Shutdown” chapter.
Cisco IOS XE 2.4	June, 2009	Added the following chapters: <ul style="list-style-type: none"> • Monitoring the Control Plane • Performing File System Cleanups • Upgrading System Software
Cisco IOS XE 3.2S	November, 2010	Added the following chapter: Configuring the Common Criteria Tcl Scripts

Audience

This document is intended for network operators who monitor and maintain networks for Cisco enterprise and service provider customers. Users of this document need a broad understanding of networks in general, networking principles, network configuration, and routing protocols.

Organization

This document contains the following sections:

Chapter	Title	Description
1	Verifying Hardware Installation	Using LEDs and show commands to verify successful installation, and what to check if installation is unsuccessful.
2	Automatic Shutdown	Conditions under which the router and power supplies automatically shut down.
3	Monitoring Hardware Using Alarms	Using visual alarms, audible alarms, alarm messages sent to the console or syslog, and SNMP alarm notification to monitor hardware.
4	Configuring the Common Criteria Tcl Scripts	Configuring the Common Criteria Tcl scripts to monitor the packet drop event on the ASR 1000 Series Router.

Chapter	Title	Description
5	Monitoring the Control Plane	Verifying the overall health of the system by monitoring control plane resources.
6	Monitoring File Systems	Maintaining proper router operation by performing cleanups of core, trace, crashinfo, and sub-package files .
7	Upgrading System Software	Upgrading software packages, including offline and in-service software upgrades. (Referred to the appropriate chapters in the <i>Cisco ASR 1000 Series Aggregation Services Routers Software Configuration Guide</i> .)

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>

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