



Preface

This Cisco ASR 9001 and Cisco ASR 9001-S Routers Hardware Installation Guide preface contains these sections:

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Changes to This Document

This table lists the technical changes made to this document since it was first developed.

Table 1: Changes to This Document

Date	Summary
March 2015	Updated rear mounting installing sections and fan tray sections to meet NEBS compliance requirements. Added new section on installing and removing the air filter.
October 2014	Added new optics supported in IOS XR Release 5.2.2.
September 2014	Added new optics supported in IOS XR Release 5.1.2.
June 2014	Added new optics supported in IOS XR Release 5.2.0.

Date	Summary
January 2014	<p>Added information about how to install optional air baffle accessory kit on the Cisco ASR 9001 Router.</p> <p>Added information about the new Fast Ethernet SFP modules, 10-GE SFP+ transceivers, and DWDM SFP+ transceivers.</p>
May 2013	Added information about Cisco ASR 9001-S Router.
June 2012	Initial release of this document.

Audience

This guide is written for hardware installers and system administrators of Cisco routers.

These users must have a substantial background in installing and configuring router and switch-based hardware. Also, they should be familiar with electronic circuitry and wiring practices, and have experience as an electronic or electromechanical technician.

Purpose

This installation guide contains procedures for installing the router hardware, creating a basic startup configuration file, and powering the router on for the first time.

Document Organization

This installation guide is organized into these chapters and appendixes:

- [Preparing for Installation](#), describes safety considerations, required tools and equipment, an overview of the installation, and procedures to perform before installation.
- [Unpacking and Installing the Chassis](#), provides instructions for installing the chassis into a rack.
- [Installing Modules and Cables in the Chassis](#), provides instructions for installing the cards and modules into the chassis after it is mounted in a rack, and for connecting external network interface cables.
- [Troubleshooting the Installation](#), provides guidelines for troubleshooting the router hardware installation.
- [Replacing Cisco ASR 9001 Router Components](#), provides removal and replacement procedures for primary router components and field-replaceable units (FRUs).
- [Technical Specifications](#), provides a summary of physical, electrical, and environmental specifications for the router.
- [Site Log](#), provides a sample site log that can be used to record actions relevant to the operation and maintenance of the router.

Documentation Conventions

This publication uses these conventions:

- **Ctrl** represents the key labeled Control. For example, the key combination *Ctrl-Z* means hold down the Control key while you press the Z key.

Command descriptions use these conventions:

- Examples that contain system prompts denote interactive sessions, indicating the commands that you should enter at the prompt. For example:

```
RP/0/RSP0/CPU0:router#
```

Convention	Description
bold font	Commands and keywords and user-entered text appear in bold font .
<i>Italic font</i>	Document titles, new or emphasized terms, and arguments for which you supply values are in <i>italic font</i> .
[]	Elements in square brackets are optional.
{x y z}	Required alternative keywords are grouped in braces and separated by vertical bars.
[x y z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
<code>courier font</code>	Terminal sessions and information the system displays appear in <code>courier font</code> .
	Indicates a variable for which you supply values, in context where italics cannot be used.
<>	Nonprinting characters such as passwords are in angle brackets.
[]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

**Note**

Means reader take note. Notes contain helpful suggestions or references to material not covered in the manual.

**Tip**

Means the following information will help you solve a problem. The tips information might not be troubleshooting or even an action, but could be useful information, similar to a Timesaver.

**Caution**

Means reader be careful. In this situation, you might perform an action that could result in equipment damage or loss of data.

**Warning****IMPORTANT SAFETY INSTRUCTIONS**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

SAVE THESE INSTRUCTIONS

**Warning**

Statements using this symbol are provided for additional information and to comply with regulatory and customer requirements.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation*, at: <http://www.cisco.com/c/en/us/td/docs/general/whatsnew/whatsnew.html>.

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