Preface

This preface describes the objectives, audience, organization, conventions of this guide, and the references that accompany this document set. The following sections are provided:

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- Audience, page iii
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Objectives

This guide provides an overview and explains how to configure the various features for the Cisco 1900 series, Cisco 2900 series, and Cisco 3900 series integrated services routers generation 2 (ISR G2). Some information may not apply to your particular router model.

Audience

This document is written for experienced technical workers who install, monitor, and troubleshoot routers under a service contract, or who work for an information technology (IT) department.

Organization

This guide is divided into three parts:

- Part 1—Configuring the Router
- Part 2—Configuring the Access Point
- Part 3—Appendix

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Part 1	Configuring the Router	Description
Module 1	Overview of Hardware and Software	Describes new hardware and software features in this release, features by platform, new slots, common ports, and getting started tasks.
Module 2	Basic Router Configuration	Describes how to perform the basic router configuration, interface configuration, and routing configuration.
Module 3	Configuring Backup Data Lines and Remote Management	Describes how to configure backup interfaces, dial backup, and remote management.
Module 4	Configuring Power Efficiency Management	Describes the hardware and software power efficiency management features on the router. See *Cisco EnergyWise Configuration Guide* for information about configuring power efficiency management on modules and interface.
Module 5	Configuring Security Features	Describes how to configure security features.
Module 6	Unified Communications on Cisco Integrated Services Routers	Describes voice application services that are supported on these routers.
Module 7	Configuring Next-Generation High-Density PVDM3 Modules	Describes how to configure the new next-generation PVDM3[1] installed on your router.
Module 8	Multi-Gigabit Fabric Communication	Describes how modules and interface cards inter-communicate using the MGF[2] on the router.
Module 9	Upgrading the Cisco IOS Software	Describes how to upgrade the Cisco IOS software image on the router or the access point.
Part 2	Configuring the Access Point	Description
Module 1	Wireless Overview	Describes the autonomous image and recovery image shipped on the Cisco 1941W access point flash. Explains the default autonomous mode and Cisco Unified mode.
Module 2	Configuring the Wireless Device	Describes how to configure the autonomous wireless device, how to upgrade the autonomous software to Cisco Unified software, and how to configure a Unified wireless device.
Module 3	Configuring the Radio Settings	Describes how to configure the radio settings for the wireless device.
Module 4	Administering the Wireless Device	Describes many administration tasks for the wireless device.
Part 3	Appendix	Description
Appendix A	Cisco IOS CLI for Initial Configuration	Describes how to perform the initial configuration of the router using the Cisco IOS CLI, and additional configuration procedures for the router.

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Appendix B	Using CompactFlash Memory Cards	Describes how to use Advanced Capability CF[3] memory cards on the router.
Appendix C	Using ROM Monitor	Describes how to use the ROM monitor to manually load a system image, upgrade the system image when there are no TFTP servers or network connections, or prepare for disaster recovery.
Appendix D	Changing the Configuration Register Settings	Describes the 16-bit configuration register in NVRAM and how to make changes to the register settings using the Cisco IOS CLI.

1. PVDM3 = packet voice/data module

2. MGF = Multi-Gigabit Fabric.

3. CF = CompactFlash.

Conventions

This document uses the following conventions:

Convention	Indication
bold font	Commands and keywords and user-entered text appear in **bold** font.
italic font	Document titles, new or emphasized terms, and arguments for which you supply values are in *italic* font.
[ ]	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.
courier font	Terminal sessions and information the system displays appear in courier font.
< >	Non-printing 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*.

Tip Means *the following information will help you solve a problem*.

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

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Timesaver   Means *the described action saves time*. You can save time by performing the action described in the paragraph.

Warning   Means *reader be warned*. **In this situation, you might perform an action that could result in bodily injury.**

Related Documentation

In addition to the Cisco 1900 series, Cisco 2900 series, and Cisco 3900 series ISR Software Configuration Guide (this document), the following reference guides are included:

Type of Document	Links
Hardware	• Read Me First for the Cisco 1900 Series, 2900 Series, and 3900 Series Integrated Services Routers.
	• *Regulatory Compliance and Safety Information for Cisco 1900 Series Integrated Services Routers.*
	• *Cisco 2900 Series and 3900 Series Integrated Services Routers Hardware Installation Guide*
	• *Cisco 1900 Series Integrated Services Routers Hardware Installation Guide.*
	• *Cisco Modular Access Router Cable Specifications*
	• *Installing, Replacing, and Upgrading Components in Cisco Modular Access Routers and Integrated Services Routers*
	• *Overview of Cisco Network Modules for Cisco Access Routers*
	• *Cisco Interface Cards for Cisco Access Routers*
	• *Installing Cisco Network Modules in Cisco Access Routers*
	• *Installing Cisco Interface Cards in Cisco Access Routers*
Regulatory Compliance	• *Declarations of Conformity and Regulatory Information for Cisco Access Products with 802.11a/b/g and 802.11b/g Radios*
	• *Regulatory Compliance and Safety Information for Cisco 2900 Series Integrated Services Routers*
	• *Regulatory Compliance and Safety Information for Cisco 3900 Series Integrated Services Routers*
Software Activation	• *Software Activation for Cisco Integrated Services Routers*
	• *Cisco IOS Software Activation Configuration Guide*
Configuration	• *Cisco CP Express User's Guide*

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Type of Document	Links
Cisco Internet Operating System Software (IOS)	Cisco IOS software release 15.0 is the next IOS release following the Cisco IOS 12.4(24)T release. For information about new features in Cisco IOS software release 15.0, see the Cisco IOS software pages at Cisco.com. Go here to read a product bulletin that specifies the software feature sets available for Cisco 1900, 2900 and 3900 Series Integrated Services Routers in release 15.0. It also issues recommendations for Flash and DRAM memory configuration. *http://www.cisco.com/en/US/prod/collateral/iosswrel/ps8802/ps5460/ product_bulletin_c25-566278_ps10537_Products_Bulletin.html*
Wireless	• *Cisco IOS Command Reference for Cisco Aironet Access Points and Bridges, versions 12.4(10b) JA and 12.3(8) JEC* • *Wireless LAN Controllers* • *Unified Wireless LAN Access Points*
Voice	• *Cisco IOS Voice Port Configuration Guide* • *SCCP Controlled Analog (FXS) Ports with Supplementary Features in Cisco IOS Gateways*
Modules	• *Cisco SRE Internal Service Modules Configuration Guide.* • *Cisco Services Ready Engine Configuration Guide.* • *Cisco SRE Service Modules Configuration Guide.* • *Connecting Cisco EtherSwitch Service Modules to the Network.* • *Cisco EtherSwitch Service Modules Feature Guide.*

Searching Cisco Documents

To search a Hyper Text Markup Language (HTML) document using a web browser, press **Ctrl-F** (Windows) or **Cmd-F** (Apple). In most browsers, the option to search whole words only, invoke case sensitivity, or search forward and backward is also available.

To search a PDF document in Adobe Reader, use the basic Find toolbar **(Ctrl-F)** or the Full Reader Search window **(Shift-Ctrl-F)**. Use the Find toolbar to find words or phrases within a specific document. Use the Full Reader Search window to search multiple PDF files simultaneously and to change case sensitivity and other options. Adobe Reader's online help has more information about how to search PDF documents.

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