



About This Guide

This section describes the objectives, audience, organization, and conventions of this software configuration guide. It contains the following sections:

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Document Revision History

The Document Revision History table below records technical changes to this document.

Document Number	Date	Change Summary
OL-26894-02	December 2012	Cisco MWR 2941 Release 3.5.1, Cisco IOS Release 15.1(3)MRA introduces support for the following: <ul style="list-style-type: none">• IEEE 802.3ad Link Aggregation Control Protocol (LACP) EtherChannel Configuration• ANSI T1.403 Line and Payload Remote Loopback Support

Document Number	Date	Change Summary
OL-26894-01	September 2012	<p>Initial release for Release 15.1(3)MR.</p> <p>Cisco MWR 2941 Release 3.5, Cisco IOS Release 15.1(3)MR, introduces the following new and enhanced features:</p> <ul style="list-style-type: none"> • IEEE 1588 Master Support • RTP Header Compression over Satellite Links (Distributed IPHC) • Traffic Storm Control • MLPPP Ingress DSCP Marking (Enhanced Packet Marking) • IPv6 BFD Support for IPv6 BGP (BFD IPv6 Encapsulation Support) • Ethernet Loopback Message/Loopback Reply

Objectives

This guide explains how to configure software features on the Cisco MWR 2941-DC and MWR 2941-DC-A routers. Unless otherwise stated, features described in this guide apply to both the Cisco MWR 2941-DC and the Cisco MWR 2941-DC-A.

Audience

This publication is for the person responsible for configuring the router. This guide is intended for the following audiences:

- Customers with technical networking background and experience
- System administrators who are familiar with the fundamentals of router-based internetworking, but who may not be familiar with Cisco IOS software
- System administrators who are responsible for installing and configuring internetworking equipment, and who are familiar with Cisco IOS software

Organization

The major sections of this software configuration guide are listed in the following table:

Chapter	Title	Description
	About This Guide	
Chapter 1	Cisco MWR 2941 Router Overview	Describes the purpose of the Cisco MWR 2941 router and its unique software features
Chapter 2	Cisco IOS Software Basics	Describes what you need to know about the Cisco IOS software
Chapter 3	First-Time Configuration	Describes the actions to take before turning on your router for the first time

Chapter	Title	Description
Chapter 4	Configuring Gigabit Ethernet Interfaces	Describes how to configure Gigabit Ethernet interfaces on the router
Chapter 5	Configuring Layer 2 Interfaces	Describes how to configure Layer 2 interfaces on the router
Chapter 6	Configuring HWIC-D-9ESW Interfaces	Describes how to configure interfaces on the HWIC-D-9ESW
Chapter 7	Configuring VLANs	Describes how to configure VLANs on the router
Chapter 8	Configuring IEEE 802.1Q Tunneling and Layer 2 Protocol Tunneling	Describes how to configure 802.1Q and L2TP on the router
Chapter 9	Configuring STP	Describes how to configure Spanning Tree Protocol (STP)
Chapter 10	Configuring MSTP	Describes how to configure Multiple STP on the router
Chapter 11	Configuring Optional Spanning-Tree Features	Describes how to configure additional STP features
Chapter 12	Managing the MAC Address Table	Describes how to manage the MAC address table
Chapter 13	Configuring Cisco Express Forwarding	Describes how to configure Cisco Express Forwarding
Chapter 14	Configuring Resilient Ethernet Protocol	Describes how to configure Resilient Ethernet Protocol
Chapter 15	Configuring Ethernet OAM, CFM, and E-LMI	Describes how to configure carrier Ethernet features including Ethernet OAM, CFM, and E-LMI
Chapter 16	Configuring Clocking and Timing	Describes how to configure clocking and timing features
Chapter 17	Configuring Synchronous Ethernet ESMC and SSM	Describes how to configure ESMC and SSM
Chapter 18	Configuring MLPPP Backhaul	Describes how to configure MLPPP backhaul
Chapter 19	Configuring Multiprotocol Label Switching	Describes how to configure MPLS
Chapter 20	Configuring Routing Protocols	Describes how to configure routing
Chapter 21	Configuring IPv6	Describes how to configure IPv6 features
Chapter 22	Configuring Bidirectional Forwarding Detection	Describes how to configure BFD
Chapter 23	Configuring Pseudowire	Describes how to configure pseudowire
Chapter 24	Configuring MPLS VPNs	Describes how to configure MPLS VPNs, also known as L3VPNs
Chapter 25	Configuring Quality of Service	Describes how to configure QoS features on the router
Chapter 26	Configuring Link Noise Monitor	Describes how to configure Link Noise Monitor
Chapter 27	Configuring Cisco Discovery Protocol	Describes how to configure Cisco Discovery Protocol

Chapter	Title	Description
Chapter 28	Configuring Traffic Storm Control	Describes how to configure traffic storm control on the Cisco MWR 2941.
Chapter 29	Configuring IEEE 802.3ad LACP EtherChannels on the Cisco MWR 2941	Describes how to configure IEEE 802.3ad Link Aggregation Control Protocol (LACP) EtherChannels.
Chapter 28	Monitoring and Managing the Cisco MWR 2941 Router	Describes how to configure monitoring and network management features

Conventions

This publication uses the following conventions to convey instructions and information.

Convention	Description
boldface font	Commands and keywords.
<i>italic font</i>	Variables for which you supply values.
[]	Keywords or arguments that appear within square brackets are optional.
{x y z}	A choice of required keywords appears in braces separated by vertical bars. You must select one.
screen font	Examples of information displayed on the screen.
boldface screen font	Examples of information the user enters.
< >	Nonprinting characters, for example passwords, appear in angle brackets.
[]	Default responses to system prompts appear in square brackets.



Note

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



Timesaver

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



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 do something that could result in equipment damage or loss of data.

Related Documentation

The following list includes documentation related to your product by implementation.

- Cisco MWR 2941 Mobile Wireless Edge Router Documents
 - *Cisco MWR 2941 Router Command Reference, Release 15.1(3)MR*
 - *Cisco MWR 2941 Mobile Wireless Edge Router Hardware Installation Guide*
 - *Regulatory Compliance and Safety Information for the Cisco MWR 2941 Routers*
- Cisco Interface Cards Installation Guides
 - *Quick Start Guide: Interface Cards*
 - *Cisco Interface Cards Installation Guide*
- Release Notes
 - *Release Notes for Cisco MWR 2941 Mobile Wireless Edge Router for Cisco IOS Release 15.1(1)MR*



Note

To obtain the latest information, access the online documentation.

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, 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>

