



Preface

This preface describes the audience, organization, and conventions of the *Cisco Nexus 7000 Series NX-OS MPLS Configuration Guide*. It also provides information on how to obtain related documentation.

This chapter includes the following sections:

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Audience

This publication is for experienced network administrators who configure and maintain Cisco NX-OS devices.

Document Organization



Note

As part of our constant endeavor to remodel our documents to meet our customers' requirements, we have modified the manner in which we document configuration tasks. As a result of this, you may find a deviation in the style used to describe these tasks, with the newly included sections of the document following the new format.

This document is organized into the following chapters:

Title	Description
Chapter 1, "Overview"	Provides an overview of the Multiprotocol Label Switching (MPLS) protocol.
Chapter 2, "Configuring the MPLS Feature Set"	Describes how to install and enable the MPLS feature set on Cisco NX-OS devices

Title	Description
Chapter 3, “Configuring the MPLS Label Distribution Protocol”	Provides an overview of the MPLS Label Distribution Protocol (LDP) and describes how to configure it on Cisco NX-OS devices.
Chapter 4, “Configuring MPLS LDP Autoconfiguration”	Describes how to configure MPLS LDP autoconfiguration on Cisco NX-OS devices.
Chapter 5, “Configuring MPLS LDP Session Protection”	Describes how to configure MPLS LDP session protection on Cisco NX-OS devices.
Chapter 6, “Configuring MPLS LDP IGP Synchronization”	Describes how to configure MPLS LDP IGP synchronization on Cisco NX-OS devices.
Chapter 7, “Configuring MPLS LDP Lossless MD5 Session Authentication”	Describes how to configure MPLS LDP lossless MD5 session authentication on Cisco NX-OS devices.
Chapter 8, “Configuring MPLS LDP Label Filtering”	Describes how to configure MPLS LDP label filtering on Cisco NX-OS devices.
Chapter 9, “Configuring MPLS Static Label Binding”	Describes how to configure MPLS static label binding on Cisco NX-OS devices.
Chapter 10, “Configuring MPLS LDP Graceful Restart”	Describes how to configure MPLS LDP graceful restart on Cisco NX-OS devices.
Chapter 11, “Configuring Basic MPLS TE”	Describes how to configure MPLS traffic engineering (TE) on Cisco NX-OS devices.
Chapter 12, “Configuring Automatic Bandwidth Adjustment for MPLS TE Tunnels”	Describes how to configure MPLS Resource Reservation Protocol (RSVP) on Cisco NX-OS devices.
Chapter 13, “Configuring MPLS RSVP TE”	Describes how to configure MPLS Resource Reservation Protocol (RSVP) on Cisco NX-OS devices.
Chapter 14, “Configuring the Path Selection Metric for MPLS TE Tunnels”	Describes how to configure the path selection metric for MPLS TE tunnels on Cisco NX-OS devices.
Chapter 15, “Configuring LSP Attributes for MPLS TE”	Describes how to configure label switched path (LSP) attributes for path options associated with MPLS TE tunnels on Cisco NX-OS devices.
Chapter 16, “Configuring MPLS TE Verbatim Paths”	Describes how to configure an MPLS TE verbatim path on Cisco NX-OS devices.
Chapter 17, “Configuring MPLS TE Forwarding Adjacency”	Describes how to configure MPLS TE forwarding adjacency on Cisco NX-OS devices.
Chapter 18, “Configuring MPLS TE Class-Based Tunnel Selection”	Describes how to configure MPLS TE class-based tunnel selection on Cisco NX-OS devices.
Chapter 19, “Configuring MPLS TE Path Protection”	Describes how to configure MPLS TE path protection on Cisco NX-OS devices.
Chapter 20, “Configuring MPLS TE Fast Reroute Link and Node Protection”	Describes how to configure MPLS TE fast reroute link and node protection on Cisco NX-OS devices.

Title	Description
Chapter 21, “Configuring MPLS Quality of Service”	Describes how to configure MPLS quality of service (QoS) on Cisco NX-OS devices.
Chapter 22, “Configuring MPLS Layer 3 VPNs”	Describes how to configure MPLS Layer 3 virtual private networks (VPNs) on Cisco NX-OS devices.
Chapter 23, “Configuring MPLS Layer 3 VPN Label Allocation”	Describes how to configure label allocation for MPLS Layer 3 VPNs on Cisco NX-OS devices.
Chapter 24, “Configuring MPLS Layer 3 VPN Load Balancing”	Describes how to configure load balancing for MPLS Layer 3 VPNs on Cisco NX-OS devices.
Chapter 34, “Configuring MVPNs”	Describes how to configure multicast VPNs on Cisco NX-OS devices.
Chapter 35, “Verifying Connectivity with MPLS LSP Ping and Traceroute”	Describes how to troubleshoot MPLS connectivity with MPLS ping and traceroute.
Chapter 36, “Configuring MPLS LSP Multipath Tree Trace”	Describes how to troubleshoot MPLS connectivity with the MPLS LSP Multipath Tree Trace feature.
Appendix A, “Configuration Limits for Cisco NX-OS MPLS”	Lists the maximum configuration limits for MPLS.

Document Conventions

Command descriptions use these conventions:

Convention	Description
boldface font	Commands and keywords are in boldface.
<i>italic font</i>	Arguments for which you supply values are in italics.
[]	Elements in square brackets are optional.
[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.

Screen examples use these conventions:

<code>screen font</code>	Terminal sessions and information that the switch displays are in screen font.
<code>boldface screen font</code>	Information that you must enter is in boldface screen font.
<i><code>italic screen font</code></i>	Arguments for which you supply values are in italic screen font.
< >	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.

This document uses the following conventions:



Note

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



Caution

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

Related Documentation

[Cisco NX-OS](#) includes the following documents:

Release Notes

Cisco Nexus 7000 Series NX-OS Release Notes, Release 6.x

NX-OS Configuration Guides

Cisco Nexus 2000 Series Fabric Extender Software Configuration Guide

Cisco Nexus 7000 Series NX-OS Configuration Examples

Cisco Nexus 7000 Series NX-OS FabricPath Configuration Guide

Configuring Feature Set for FabricPath

Cisco Nexus 7000 Series NX-OS Fundamentals Configuration Guide

Cisco Nexus 7000 Series NX-OS High Availability and Redundancy Guide

Cisco Nexus 7000 Series NX-OS Interfaces Configuration Guide

Cisco Nexus 7000 Series NX-OS IP SLAs Configuration Guide

Cisco Nexus 7000 Series NX-OS Layer 2 Switching Configuration Guide

Cisco Nexus 7000 Series NX-OS LISP Configuration Guide

Cisco Nexus 7000 Series NX-OS MPLS Configuration Guide

Cisco Nexus 7000 Series NX-OS Multicast Routing Configuration Guide

Cisco Nexus 7000 Series NX-OS OTV Configuration Guide

Cisco Nexus 7000 Series OTV Quick Start Guide

Cisco Nexus 7000 Series NX-OS Quality of Service Configuration Guide

Cisco Nexus 7000 Series NX-OS SAN Switching Configuration Guide

Cisco Nexus 7000 Series NX-OS Security Configuration Guide

Cisco Nexus 7000 Series NX-OS System Management Configuration Guide

Cisco Nexus 7000 Series NX-OS Unicast Routing Configuration Guide

Cisco Nexus 7000 Series NX-OS Verified Scalability Guide

Cisco Nexus 7000 Series NX-OS Virtual Device Context Configuration Guide

Cisco Nexus 7000 Series NX-OS Virtual Device Context Quick Start

Cisco NX-OS FCoE Configuration Guide for Cisco Nexus 7000 and Cisco MDS 9500

NX-OS Command References

Cisco Nexus 7000 Series NX-OS Command Reference Master Index
Cisco Nexus 7000 Series NX-OS FabricPath Command Reference
Cisco Nexus 7000 Series NX-OS Fundamentals Command Reference
Cisco Nexus 7000 Series NX-OS High Availability Command Reference
Cisco Nexus 7000 Series NX-OS Interfaces Command Reference
Cisco Nexus 7000 Series NX-OS IP SLAs Command Reference
Cisco Nexus 7000 Series NX-OS Layer 2 Switching Command Reference
Cisco Nexus 7000 Series NX-OS LISP Command Reference
Cisco Nexus 7000 Series NX-OS MPLS Command Reference
Cisco Nexus 7000 Series NX-OS Multicast Routing Command Reference
Cisco Nexus 7000 Series NX-OS OTV Command Reference
Cisco Nexus 7000 Series NX-OS Quality of Service Command Reference
Cisco Nexus 7000 Series NX-OS SAN Switching Command Reference
Cisco Nexus 7000 Series NX-OS Security Command Reference
Cisco Nexus 7000 Series NX-OS System Management Command Reference
Cisco Nexus 7000 Series NX-OS Unicast Routing Command Reference
Cisco Nexus 7000 Series NX-OS Virtual Device Context Command Reference
Cisco NX-OS FCoE Command Reference for Cisco Nexus 7000 and Cisco MDS 9500

Other Software Documents

Cisco NX-OS Licensing Guide
Cisco Nexus 7000 Series NX-OS MIB Quick Reference
Cisco Nexus 7000 Series NX-OS Software Upgrade and Downgrade Guide
Cisco NX-OS System Messages Reference
Cisco Nexus 7000 Series NX-OS Troubleshooting Guide
Cisco NX-OS XML Interface User Guide

Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, please send your comments to nexus7k-docfeedback@cisco.com. We appreciate your feedback.

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](#).

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the [What's New in Cisco Product Documentation RSS feed](#). The RSS feeds are a free service.