



## Introduction

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This manual describes the commands used to configure wide-area networking features with Cisco IOS software. For information about configuration, refer to the *Cisco IOS Wide-Area Networking Configuration Guide*, Release 12.3.

Some commands required for configuring wide-area networking protocols and broadband access are in other Cisco IOS command references. Use the master list of commands or search online to find these commands.

This manual contains commands for configuring the following technologies and features:

- ATM
- Broadband Access: PPP over ATM, PPP over Ethernet, and Routed Bridge Encapsulation
- Frame Relay
- Frame Relay-ATM Interworking
- Layer 2 Tunnel Protocol Version 3 (L2TPv3)
- SMDS
- X.25 and LAPB

This manual is organized alphabetically.

## ATM

ATM commands are used to configure ATM interfaces and to configure serial interfaces for ATM access.

For ATM configuration information and examples, refer to the “Configuring ATM” section of the *Cisco IOS Wide-Area Networking Configuration Guide*.

## Broadband Access: PPP over ATM, PPP over Ethernet, and Routed Bridge Encapsulation

Broadband access commands are used to configure broadband access on aggregation and client devices that use PPP over ATM (PPPoA), PPP over Ethernet (PPPoE), and routed bridge encapsulation.

For information about configuring broadband access using PPPoA, PPPoE, and routed bridge encapsulation, refer to the “Configuring Broadband Access: PPP and Routed Bridge Encapsulation” module in the *Cisco IOS Wide-Area Networking Configuration Guide*.

# Frame Relay

Frame Relay commands are used to configure access to Frame Relay networks.

For Frame Relay configuration information and examples, refer to the “Configuring Frame Relay” module in the *Cisco IOS Wide-Area Networking Configuration Guide*.

## Frame Relay-ATM Interworking

The Frame Relay-ATM interworking commands are used to configure FRF.5 Frame Relay-ATM Network Interworking and FRF.8 Frame Relay-ATM Service Interworking.

For Frame Relay-ATM configuration information and examples, refer to the “Configuring Frame Relay-ATM Interworking” module in the *Cisco IOS Wide-Area Networking Configuration Guide*.

## Layer 2 Tunnel Protocol Version 3 (L2TPv3)

L2TPv3 is an Internet Engineering Task Force (IETF) Layer Two Tunneling Protocol Extensions (l2tpext) working group draft that provides several enhancements to L2TP for the capability to tunnel any Layer 2 payload over L2TP. L2TPv3 defines the L2TP protocol for tunneling Layer 2 payloads over an IP core network using Layer 2 virtual private networks (VPNs).

For L2TPv3 configuration information and examples, refer to the “L2TPv3: Layer 2 Tunnel Protocol Version 3” new-feature document for Cisco IOS Release 12.3(2)T.

## SMDS

SMDS commands are used to configure Switched Multimegabit Data Service (SMDS), which is a wide-area networking service offered by some regional Bell operating companies (RBOCs) and MCI.

For SMDS configuration information and examples, refer to the “Configuring SMDS” module in the *Cisco IOS Wide-Area Networking Configuration Guide*.

## X.25 and LAPB

X.25 and LAPB commands are used to configure the following:

- Link Access Procedure, Balanced (LAPB)
- X.25 services (X.25, X.25 over TCP [XOT] and Connection-Mode Network Service [CMNS])
- Defense Data Network (DDN) X.25
- Blacker Front End (BFE)

For X.25 and LAPB configuration information and examples, refer to the “Configuring X.25 and LAPB” module in the *Cisco IOS Wide-Area Networking Configuration Guide*.

For information on translating between X.25 and another protocol, refer to the “Configuring Protocol Translation and Virtual Asynchronous Devices” module in the *Cisco IOS Terminal Services Configuration Guide*.