



Start Here: Cisco IOS Software Release Specifics for IPv6 Features

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This document lists the IP version 6 (IPv6) features supported in the 12.xT, 12.2S, 12.2SY, 12.3, 12.4, 15.0, 15.0S, 15.0SY, and 15.1 Cisco IOS software release trains.

The IPv6 for Cisco IOS software feature documentation provides implementation and command reference information for IPv6 features supported in the Cisco IOS software. This Start Here document details only the Cisco IOS software release specifics for IPv6 features. Not all IPv6 features may be supported in your Cisco IOS software release. We strongly recommend that you read this entire document before reading the other IPv6 for Cisco IOS software feature documentation.

Finding Feature Information

Use Cisco Feature Navigator to find information about platform support and Cisco IOS software image support. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.

The *Cisco IOS IPv6 Command Reference* is located at the following website:

http://www.cisco.com/en/US/docs/ios/ipv6/command/reference/ipv6_book.html

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Americas Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

Cisco IOS Software Platform Dependencies and Restrictions

IPv6 features are supported in the 12.0S, 12.xT, 12.2S, 12.2SB, 12.2SE, 12.2SR, 12.2SX, 12.2SY, 12.3, 12.4, 15.0, 15.0SY, and 15.1 Cisco IOS software release trains, starting at Cisco IOS Release 12.0(22)S, 12.2(2)T, 12.2(14)S, 12.2(28)SB, 12.2(25)SEA, 12.2(33)SRA, 12.2(17a)SX1, 12.2(50)SY, 12.3, 12.4, 15.0(1)M, 15.0(1)SY, and 15.1(1)S, respectively. See [Table 1](#) to determine which IPv6 features are supported in each release of the Cisco IOS software trains.



Note

For information about IPv6 features in Cisco IOS XE software releases, see “[Start Here: Cisco IOS XE Software Release Specifics for IPv6 Features](#).”

- IPv6 was introduced on the 12.0(21)ST Cisco IOS software release train, which was merged with the 12.0S Cisco IOS software release train starting at Cisco IOS Release 12.0(22)S. The 12.0S Cisco IOS software release train provides IPv6 support on Cisco 12000 series Internet routers and Cisco 10720 Internet routers only.
- The 12.2S Cisco IOS release train comprises a family of release trains, each supporting different platforms as follows:
 - The 12.2SB Cisco IOS release train comprises the Cisco 10000, 7304, 7301, and 7200 series. As of Cisco IOS Release 12.2(33)SB, the Cisco 7200 and 7301 series are not supported on the 12.2SB release train.

The 12.2SE Cisco IOS release train consists of the Cisco Catalyst 3560, 3750, 3560E, 3750E series, and the Cisco Catalyst 3750 Metro series.

- The 12.2SG Cisco IOS release train consists of the Cisco Catalyst 4500 and Cisco Catalyst 4900 series.
- The 12.2SR Cisco IOS release train consists of the Cisco 7600 and 7200 series routers.
- The 12.2SX Cisco IOS release train consists of the Cisco Catalyst 6500. Before the 12.2SR Cisco IOS release train, the 12.2SX release train also included the Cisco 7600 series.
- The 15.0M and 15.1T Cisco IOS release trains are a continuation of the 12.2, 12.3, and 12.4 Cisco IOS release trains.
- IPv6 is also supported in some special software release trains.

Cisco IOS IPv6 Features and Supported Software Releases

[Table 1](#) lists the IPv6 features supported in the 12.0S, 12.xT, 12.2S, 12.2SB, 12.2SR, 12.2SX, 12.3, 12.4, and 15.0M Cisco IOS software release trains.



Note

[Table 1](#) identifies the earliest release for each software release train in which the feature became available. Unless noted otherwise in [Table 1](#), subsequent releases of that Cisco IOS software release train also support that feature.

Table 1 Supported IPv6 Feature

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6							
IPv6—Base Protocols High Availability	Implementing IPv6 Addressing and Basic Connectivity	—	—	—	—	12.2(33) SRE	—
IPv6—CNS Agents for IPv6	Implementing IPv6 for Network Management	12.4(20)	15.0	—	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(50)SY
IPv6 Device Tracking	Implementing First Hop Security in IPv6	—	—	—	—	—	12.2(50)SY
Enhanced IPv6 Neighbor Discovery Cache Management	Implementing IPv6 Addressing and Basic Connectivity	—	—	—	—	—	12.2(33)SXI7
IPv6—Full Selective Packet Discard Support	Implementing Selective Packet Discard in IPv6	15.1(3)	—	—	—	—	—
IPv6—HTTP(S) IPv6 Support (Infrastructure)	Implementing IPv6 for Network Management	12.4(20)	—	12.2(44)SE	12.2(44)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(50)SY
IPv6—ICMP Rate Limiting	Implementing IPv6 Addressing and Basic Connectivity	12.2(8)	12.3	12.2(25)SE	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6—ICMPv6	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	12.2(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6—ICMPv6 Redirect	Implementing IPv6 Addressing and Basic Connectivity	12.2(4)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6—IPv6 ICMP RFC 4443	Implementing IPv6 Addressing and Basic Connectivity	12.4(9)T	—	12.2(52)	12.2(50)SG 3.2.0SG 15.0(2)SG	—	12.2(33)SXI
IPv6—IP SLAs for IPv6	Implementing IPv6 for Network Management	12.4(20)	15.0	—	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(50)SY
IPv6—IPv6 ACL Extensions for Mobile IPv6	Implementing Mobile IPv6	12.4(2)	—	—	—	12.2(33)SRB	12.2(33)SXI

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6—IPv6 Default Router Preferences	Implementing IPv6 Addressing and Basic Connectivity	12.4(2)	15.0	(46)	12.2(46)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(33)SXH
IPv6—IPv6 for Config Logger	Implementing IPv6 for Network Management	12.4(20)	15.0	—	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(50)SY
IPv6—IPv6 MTU Path Discovery	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6—IPv6 Neighbor Discovery	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6—IPv6 NETCONF Support	Implementing IPv6 for Network Management	12.4(20)	15.0	—	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(50)SY
IPv6—IPv6 Stateless Autoconfiguration	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6—IPv6 Stateless Address Autoconfiguration RFC 4862	Implementing IPv6 Addressing and Basic Connectivity	12.4(9)T	—	12.2(52)	12.2(50)SG 3.2.0SG 15.0(2)SG	—	12.2(33)SXI
IPv6—IPv6 Static Cache Entry for Neighbor Discovery	Implementing IPv6 Addressing and Basic Connectivity	12.2(8)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6—Per-Interface Neighbor Discovery Cache Limit	Implementing IPv6 Addressing and Basic Connectivity	15.1(3)	—	—	—	—	—
IPv6—IPv6 Support for TCL	Implementing IPv6 for Network Management	12.4(20)	15.0	—	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(50)SY
IPv6—IPv6 Support in SOAP	Implementing IPv6 for Network Management	12.4(20)	15.0	—	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(50)SY
TACACS+ over IPv6	Implementing ADSL and Deploying Dial Access for IPv6	15.2(1)	—	(58)	—	15.1(1)S	12.2(33)SXJ

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6—IPv6 VPN over MPLS	Implementing IPv6 VPN over MPLS	12.4(20)	15.0	—	—	12.2(33)SRB	12.2(33)SXI
IPv6—Mobile IP—Mobile v6—Basic NEMO	Implementing Mobile IPv6	12.4(20)	15.0	—	—	—	—
IPv6—Mobile IPv6 Home Agent	Implementing Mobile IPv6	12.3(14)	12.4	—	—	—	—
IPv6—MPLS VPN 6VPE Support over IP Tunnels	Implementing IPv6 VPN over MPLS	—	—	—	—	12.2(33)SRB1	12.2(33)SXI
BGP IPv6 PIC Edge for IP/MPLS	Implementing IPv6 VPN over MPLS	—	—	—	—	15.1(2)S	—
BGP IPv6 Client for Single-Hop BFD	Configuring BGP Neighbor Session Options	—	—	—	—	15.1(2)S	—
IPv6—Neighbor Discovery Duplicate Address Detection	Implementing IPv6 Addressing and Basic Connectivity	12.2(4)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SXI
IPv6 ND Inspection	Implementing First Hop Security in IPv6	—	—	—	—	—	12.2(50)SY
IPv6—NetFlow—NetFlow v9 Replaces IPv6 NetFlow	NetFlow v9 for IPv6	12.4(20)	15.0	—	—	—	—
IPv6—NetFlow for IPv6 Unicast Traffic	NetFlow v9 for IPv6	12.3(7)	12.4	—	—	12.2(33)SRB	12.2(33)SXH
IPv6—no ipv6 source-route command	Cisco IOS IPv6 Command Reference	12.3(4)	12.4	—	—	12.2(33)SRB1	—
IPv6—Ping	Implementing IPv6 for Network Management	12.2(2)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SXI
IPv6—syslog over IPv6	Implementing IPv6 for Network Management	12.4(4)	15.0	(44)	12.2(44)SG 3.2.0SG 15.0(2)SG	12.2(33)SRB	12.2(33)SXI

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6—Telnet, DNS, TFTP Client, Traceroute	Implementing IPv6 Addressing and Basic Connectivity, Implementing IPv6 for Network Management	12.2(2)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6—uRPF	Implementing IPv6 Addressing and Basic Connectivity	—	—	—	—	—	12.2(50)SY
IPv6 Address Types—Anycast	Implementing IPv6 Addressing and Basic Connectivity	12.3(4)	12.4	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(33)SXH
IPv6 Address Types—Unicast	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	(25)SEA	—	12.2(33)SRA	12.2(17a)SX1
IPv6 PACL Support	Implementing First Hop Security in IPv6	—	—	(46)	12.2(54)SG 3.2.0SG 15.0(2)SG	—	12.2(33)SX14
IPv6 RA Guard	Implementing First Hop Security in IPv6	—	—	—	12.2(54)SG 3.2.0SG 15.0(2)SG	—	12.2(33)SX14
IPv6 Selective Packet Discard	Implementing Selective Packet Discard in IPv6	—	—	—	—	12.2(33)SRC	12.2(33)SXH
IPv6 Support on BVI Interfaces	Implementing IPv6 Addressing and Basic Connectivity	15.1(2)	—	—	—	—	—
TFTP IPv6 Support	Implementing IPv6 for Network Management	15.2(1)	—	—	—	15.1(3)S	—

IPv6 Switching Services

CEFv6 Switched Configured IPv6 over IPv6 Tunnels	Implementing Tunneling for IPv6	15.1(3)	—	—	—	—	—
CEFv6 Switched Configured IPv6 over IPv6 GRE Tunnels	Implementing Tunneling for IPv6	15.1(3)	—	—	—	—	—

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6 Switching— CEFv6 Switched Automatic IPv4- Compatible Tunnels	Implementing Tunneling for IPv6	12.3(2)	12.4	—	—	12.2(33)SRA	12.2(17a)SX1
IPv6 Switching— CEFv6 Switched Configured IPv6 over IPv4 Tunnels	Implementing Tunneling for IPv6	12.2(13)	12.4	—	—	12.2(33)SRA	12.2(18)SXE
IPv6 Switching— CEFv6 Switched ISATAP	Implementing Tunneling for IPv6	12.3(2)	12.4	—	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6 Switching— Cisco Express Forwarding/ Distributed Cisco Express Forwarding Support	Implementing IPv6 Addressing and Basic Connectivity	12.2(13)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6 Switching— Provider Edge Router over MPLS (6PE) ^{1 2}	Implementing IPv6 over MPLS	12.2(15)	12.3	—	—	12.2(33)SRA	12.2(17b)SXA

IPv6 Routing

BFD IPv6 Encapsulation Support	Implementing Bidirectional Forwarding Detection for IPv6	15.1(2)	—	—	—	12.2(33)SRE	15.0(1)SY
EIGRP IPv6 VRF-Lite	Implementing EIGRP for IPv6	—	—	—	—	15.1(1)S	—
IPv6 Routing— EIGRP Support	Implementing EIGRP for IPv6	12.4(6)	—	(40)	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRB	12.2(33)SXI
IPv6 Routing— IPv6 Policy-Based Routing	Implementing Policy-Based Routing for IPv6	12.3(7)	12.4	—	—	—	12.2(33)SXI4
IPv6 Routing— IS-IS Multitopology Support for IPv6	Implementing IS-IS for IPv6	12.2(15)	12.3	—	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Routing— IS-IS Support for IPv6	Implementing IS-IS for IPv6	12.2(8)	12.3	—	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6 Routing—IS-IS Local RIB	Implementing IS-IS for IPv6	12.3(4)T	12.4	—	—	12.2(33)SRA	12.2(33)SXH

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6 Routing— Multiprotocol BGP Extensions for IPv6	Implementing Multiprotocol BGP for IPv6	12.2(2) ³	12.3	—	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6 Routing— Multiprotocol BGP Link-Local Address Peering	Implementing Multiprotocol BGP for IPv6	12.2(4)	12.3	—	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6 Routing—NSF and Graceful Restart for MP-BGP IPv6 Address Family	Implementing Multiprotocol BGP for IPv6	—	—	—	—	12.2(33)SRE	15.0(1)SY
IPv6 Routing— OSPFv3 Fast Convergence - LSA and SPF Throttling	Implementing OSPFv3	—	15.0(1)	—	—	12.2(33)SRC	15.0(1)SY
IPv6 Routing— OSPF for IPv6 (OSPFv3)	Implementing OSPFv3	12.2(15)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6 Routing— OSPF for IPv6 Authentication Support with IPsec	Implementing OSPFv3	12.3(4)	12.4	—	—	—	—
IPv6 Routing—OSPF IPv6 (OSPFv3) IPSec ESP Encryption and Authentication	Implementing OSPFv3	12.4(9)	15.0	—	—	—	—
IPv6 Routing— RIP for IPv6 (RIPng)	Implementing RIP for IPv6	12.2(2) ⁴	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6 Routing—RIPng Nonstop Forwarding	Implementing RIP for IPv6	—	—	—	—	12.2(33)SRE	15.0(1)SY
IPv6 Routing— Route Redistribution	Implementing IS-IS for IPv6, Implementing RIP for IPv6	12.2(2)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Routing— Static Routing	Implementing Static Routes for IPv6	12.2(2)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
OSPFv3 Address Families	Implementing OSPFv3	15.2(1)	—	—	—	15.1(3)S	—
OSPFv3 Dynamic Interface Cost Support	Implementing OSPFv3	12.4(15)	15.0	—	—	—	—

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
OSPFv3 External Path Preference Option	Implementing OSPFv3	—	—	—	—	15.1(3)S	—
OSPFv3 for BFD	Implementing OSPFv3, Implementing Bidirectional Forwarding Detection for IPv6	15.1(2)	—	—	—	12.2(33)SRE	15.0(1)SY
OSPFv3 Graceful Restart	Implementing OSPFv3	—	15.0(1)M	(58)	—	12.2(33)SRE	15.0(1)SY
OSPFv3 Manet Extensions	OSPFv3 Extensions for Mobile Ad Hoc Networks	15.2(1)	—	—	—	—	—
OSPFv3 Max-Metric Router LSA	Implementing OSPFv3	—	—	—	—	15.1(3)S	—
Static Route Support for BFD over IPv6	Implementing Bidirectional Forwarding Detection for IPv6	15.1(2)	—	—	—	—	—
VRF Lite Support for IPv6	Implementing Multiprotocol BGP for IPv6	—	—	(58)	—	—	—

IPv6 Services and Management

ACL - Hardware and Software Counters Granularity for IPv4 and IPv6 ACL Statistics	Implementing Traffic Filters and Firewalls for IPv6 Security	—	—	—	—	—	12.2(50)SY
IPsec IPv6 Phase 2 Support	Implementing IPsec in IPv6 Security	12.4(4)	15.0	—	—	—	—
IPv6 Secure Neighbor Discovery (SeND)	Implementing First Hop Security in IPv6	12.4(24)	15.0	—	—	—	—
IPv6 Services— AAAA DNS Lookups over an IPv4 Transport	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6 Services— Cisco Discovery Protocol— IPv6 Address Family Support for Neighbor Information	Implementing IPv6 Addressing and Basic Connectivity	12.2(8)	12.3	(25)SEE	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Services— CISCO-IP-FORWA RDING-MIB Support	Implementing IPv6 for Network Management	12.2(15)	12.3	(25)SEE	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Services— CISCO-IP-MIB Support	Implementing IPv6 for Network Management	12.2(15)	12.3	(25)SEE	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Services— DNS Lookups over an IPv6 Transport	Implementing IPv6 Addressing and Basic Connectivity	12.2(8)	12.3	(25)SED	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRE2	12.2(17a)SX1
IPv6 Services— Extended Access Control Lists ²	Implementing Traffic Filters and Firewalls for IPv6 Security	12.2(13)	12.3	(25)SED	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6 Services— FHRP - GLBP for IPv6	Configuring First Hop Redundancy Protocols in IPv6	12.4(6)	15.0	(58)	—	—	12.2(33)SXI
IPv6 Services— Generic Prefix	Implementing IPv6 Addressing and Basic Connectivity	12.3(4)	12.4	—	—	—	—
IPv6 Services— HSRP for IPv6	Configuring First Hop Redundancy Protocols in IPv6	12.4(4)	15.0	(46)	12.2(52)SG 3.2.0SG 15.0(2)SG	12.2(33)SRB	12.2(33)SXI
HSRP—Global IPv6 Address	Configuring First Hop Redundancy Protocols in IPv6	—	—	—	—	—	12.2(33)SXI4
SSO - HSRP	Configuring First Hop Redundancy Protocols in IPv6	—	—	—	12.2(52)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(33)SXH
ISSU - HSRP	Configuring First Hop Redundancy Protocols in IPv6	—	—	—	12.2(52)SG 3.2.0SG 15.0(2)SG	—	12.2(33)SXI
IPv6 Services— IOS Zone-Based Firewall	Implementing Traffic Filters and Firewalls for IPv6 Security	15.1(2)	—	—	—	—	—

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6 Services— IPv6 ACL Extensions for IPsec Authentication Header	Implementing Traffic Filters and Firewalls for IPv6 Security	12.4(20)	15.0	—	—	—	—
IPv6 Services— IPv6 IOS Firewall	Implementing Traffic Filters and Firewalls for IPv6 Security	12.3(7)	12.4	—	—	—	—
IPv6 Services— IPv6 IOS Firewall FTP Application Support	Implementing Traffic Filters and Firewalls for IPv6 Security	12.3(11)	—	—	—	—	—
IPv6 Services— IPv6 IPsec VPN	Implementing IPSec in IPv6 Security	12.4(4)	15.0	—	—	—	—
IPv6 Services— IPv6 over DMVPN	Implementing Dynamic Multipoint VPN over IPv6	12.4(20)	15.0	—	—	—	—
IPv6 Transport for DMVPN	Implementing Dynamic Multipoint VPN over IPv6	15.2(1)	—	—	—	—	—
IPv6 Services— RFC 4293 IP-MIB (IPv6 Only) and RFC 4292 IP-FORWARD-MIB (IPv6 Only)	Implementing IPv6 for Network Management	15.1(3)	—	(58)	12.2(54)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(50)SY
IPv6 Services— Secure Shell (SSH) Support over IPv6	Implementing IPv6 for Network Management	12.2(8)	12.3	(25)SEE	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6 Services— SNMP over IPv6 ⁵	Implementing IPv6 for Network Management	12.3(14)	12.4	(44)	12.2(44)SG 3.2.0SG 15.0(2)SG	12.2(33)SRB	12.2(33)SXI
IPv6 Services— Standard Access Control Lists	Implementing Traffic Filters and Firewalls for IPv6 Security	12.2(2)	12.3	(25)SED	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IKEv2 Headend Support for Remote Access Clients	Configuring Internet Key Exchange Version 2 and FlexVPN	15.2(1)	—	—	—	—	—

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
NBAR IPv6 Transition Mechanism Detection		15.1(3)	—	—	—	—	—
NTPv4	Implementing NTPv4 in IPv6	12.4(20)	—	12.2(58)SE	—	15.1(2)S	12.2(33)SXJ
SNMPv3 - 3DES and AES Encryption Support	Implementing IPv6 for Network Management	12.4(2)	15.0	(52)	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRB	12.2(33)SXI

IPv6 Broadband Access

Broadband IPv6 Counter Support at LNS	Implementing ADSL and Deploying Dial Access for IPv6	12.2(13)	12.3	—	—	12.2(33)SRC	—
IPv6 Access Services— AAA Support for Cisco VSA IPv6 Attributes	Implementing ADSL and Deploying Dial Access for IPv6	12.2(13)	12.3	—	—	12.2(33)SRC ⁶	—
IPv6 Access Services— AAA Support for RFC 3162 IPv6 RADIUS Attributes	Implementing ADSL and Deploying Dial Access for IPv6	12.3(4)	12.4	(58)	—	12.2(33)SRC ⁶	—
IPv6 Access Services— PPPoA	Implementing ADSL and Deploying Dial Access for IPv6	12.2(13)	12.3	—	—	12.2(33)SRC ⁶	—
IPv6 Access Services— PPPoE	Implementing ADSL and Deploying Dial Access for IPv6	12.2(13)	12.3	—	—	12.2(33)SRC ⁶	—
IPv6 Access Services— Prefix Pools	Implementing ADSL and Deploying Dial Access for IPv6	12.2(13)	12.3	—	—	12.2(33)SRC ⁶	—
IPv6 Access Services— RBE	Implementing IPv6 Addressing and Basic Connectivity	12.3(4)	12.4	—	—	12.2(33)SRC ⁶	—
RADIUS over IPv6	Implementing ADSL and Deploying Dial Access for IPv6	15.2(1)	—	(58)	—	—	—

DHCP for IPv6

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
DHCP— DHCPv6 Individual Address Assignment	Implementing DHCP for IPv6	12.4(24)	—	(46)	—	—	—
DHCP— DHCPv6 Relay SSO/ISSU	Implementing DHCP for IPv6	—	—	—	—	12.2(33)SRE	—
DHCPv6 Bulk Lease Query	Implementing DHCP for IPv6	—	—	—	—	15.1(1)S	—
DHCPv6 Relay - Source Configuration	Implementing DHCP for IPv6	—	—	(58)	—	12.2(33)SRE	—
IPv6 Access Services— DHCP for IPv6 Relay Agent	Implementing DHCP for IPv6	12.3(11)	12.4	(46)	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(33)SXI
IPv6 Access Services— DHCPv6 Client Information Refresh Option	Implementing DHCP for IPv6	12.4(15)	15.0	—	—	—	—
IPv6 Access Services— DHCPv6 Ethernet Remote ID Option	Implementing DHCP for IPv6	—	—	(46)	12.2(52)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(33)SXI
IPv6 Access Services— DHCPv6 Prefix Delegation	Implementing DHCP for IPv6, Implementing ADSL and Deploying Dial Access for IPv6	12.3(4)	12.4	—	—	12.2(33)SRA	12.2(18)SXE
IPv6 Access Services— DHCPv6 Prefix Delegation via AAA	Implementing ADSL and Deploying Dial Access for IPv6	12.3(14)	12.4	—	—	—	—
IPv6 Access Services— DHCPv6 Relay Agent Notification for Prefix Delegation ⁷	Implementing DHCP for IPv6	—	—	(46)	12.2(52)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(33)SXI
IPv6 Access Services— DHCPv6 Relay - Reload Persistent Interface ID Option	Implementing DHCP for IPv6	—	—	(46)	12.2(52)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(33)SXI

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6 Access Services—DHCPv6 Server Stateless Auto Configuration	Implementing DHCP for IPv6	12.4(15)	—	(46)	12.2(52)SG 3.2.0SG 15.0(2)SG	12.2(33)SRC	12.2(33)SXI
IPv6 Access Services—Stateless DHCPv6	Implementing DHCP for IPv6	12.3(4)	12.4	—	—	12.2(33)SRA	12.2(18)SXE
DHCPv6 Server - MPLS VPN Support	Implementing DHCP for IPv6	—	—	—	—	15.1(2)S	—
DHCPv6 Server-Relay-Client Support in a VRF Lite Environment	Implementing DHCP for IPv6	—	—	(58)	—	—	—

IPv6 Multicast

IPv6 Multicast—Address Family Support for Multiprotocol Border Gateway Protocol (MBGP)	Implementing IPv6 Multicast	12.3(4)	12.4	—	—	12.2(33)SRA	12.2(33)SXH
IPv6 Multicast—Address Group Range Support	Implementing IPv6 Multicast	—	15.0(1)M	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRE	12.2(33)SXI
IPv6 Multicast—Bandwidth-Based Call Admission Control (CAC)	Implementing IPv6 Multicast	—	—	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRE	—
IPv6 Multicast—Explicit Tracking of Receivers	Implementing IPv6 Multicast	12.3(7)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(33)SXH
IPv6 Multicast—IPv6 Bidirectional PIM	Implementing IPv6 Multicast	12.3(7)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	—
IPv6 Multicast—IPv6 BSR	Implementing IPv6 Multicast	12.3(11)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Multicast—IPv6 BSR—Ability to Configure RP Mapping	Implementing IPv6 Multicast	12.4(2)	—	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRE	12.2(50)SY
IPv6 Multicast—IPv6 BSR Bidirectional Support	Implementing IPv6 Multicast	12.3(14)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRE	—

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6 Multicast—IPv6 BSR Scoped-Zone Support	Implementing IPv6 Multicast	12.3(14)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	—	—
IPv6 Multicast—MFIB Display Enhancements	Implementing IPv6 Multicast	12.3(7)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	—	—
IPv6 Multicast—Multicast Listener Discovery (MLD) Protocol, versions 1 and 2	Implementing IPv6 Multicast	12.3(2)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Multicast—MLD Access Group	Implementing IPv6 Multicast	12.3(4)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(33)SXH
IPv6 Multicast—MLD Group Limits	Implementing IPv6 Multicast	12.4(2)	—	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRE	12.2(50)SY
IPv6 Multicast—MLD Proxy	Implementing IPv6 Multicast	15.1(2)	—	—	—	—	—
IPv6 Multicast—MLD Snooping	Implementing IPv6 Multicast	—	—	(25)SED	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRB	12.2(18)SXE
IPv6 Multicast—Multicast User Authentication and Profile Support	Implementing IPv6 Multicast	12.4(4)	—	—	12.2(40)SG 3.2.0SG 15.0(2)SG	—	—
IPv6 Multicast—PIM Accept Register	Implementing IPv6 Multicast	12.3(4)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(33)SXH
IPv6 Multicast—PIM Source Specific Multicast (PIM-SSM)	Implementing IPv6 Multicast	12.3(2)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Multicast—PIM Sparse Mode (PIM-SM)	Implementing IPv6 Multicast	12.3(2)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Multicast—Scope Boundaries	Implementing IPv6 Multicast	12.3(2)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Multicast—PIM Embedded RP Support	Implementing IPv6 Multicast	12.3(4)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(33)SXH
IPv6 Multicast—Routable Address Hello Option	Implementing IPv6 Multicast	12.3(4)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(33)SXH

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6 Multicast— RPF Flooding of Bootstrap Router (BSR) Packets	Implementing IPv6 Multicast	12.3(4)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(33)SXH
IPv6 Multicast— SSM Mapping for MLDv1 SSM	Implementing IPv6 Multicast	12.4(2)	—	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Multicast— Static Multicast Routing (mroute)	Implementing IPv6 Multicast	12.3(4)	12.4	—	12.2(40)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(33)SXH
IPv6 Multicast VRF Lite	Implementing IPv6 Multicast	—	15.1(4)M	—	—	—	—
ISSU - IPv6 Multicast	Implementing IPv6 Multicast	—	—	—	—	—	15.0(1)SY
NSF/SSO— IPv6 Multicast	Implementing IPv6 Multicast	—	—	—	—	12.2(33)SRE	15.0(1)SY
PIMv6—Anycast RP Solution	Implementing IPv6 Multicast	—	—	—	—	15.1(3)S	—
NAT Protocol Translation (NAT-PT)		12.2(13)	12.3	—	—	—	—
NAT-PT—Support for DNS ALG	Implementing NAT Protocol Translation	12.2(13)	12.3	—	—	—	—
NAT-PT—Support for FTP ALG	Implementing NAT Protocol Translation	12.3(2)	12.4	—	—	—	—
NAT-PT—Support for Fragmentation	Implementing NAT Protocol Translation	12.3(2)	12.4	—	—	—	—
NAT-PT—Support for Overload (PAT)	Implementing NAT Protocol Translation	12.3(2)	12.4	—	—	—	—

IPv6 Tunnel Services

IPv6 Rapid Deployment	Implementing Tunneling for IPv6	15.1(3)	—	—	—	—	—
IPv6 Tunneling— Automatic 6to4 Tunnels	Implementing Tunneling for IPv6	12.2(2)	12.3	—	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Tunneling— Automatic IPv4- Compatible Tunnels	Implementing Tunneling for IPv6	12.2(2)	12.3	—	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Tunneling— CEF Switched Automatic 6to4 Tunnels	Implementing Tunneling for IPv6	12.3(2)	12.3	—	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6 Tunneling— CLNS Support for GRE IPv6 and IPv4 Tunnels	Implementing Tunneling for IPv6	12.3(7)	12.4	—	—	12.2(33)SRA	12.2(33)SXH
IPv6 Tunneling—IP over IPv6 GRE Tunnels	Implementing Tunneling for IPv6	12.3(7)	12.4	—	—	—	—
IPv6 Tunneling— IPv6 over IPv4 GRE Tunnels	Implementing Tunneling for IPv6	12.2(4)	12.3	—	—	12.2(33)SRA	12.2(17a)SX1
IPv6 Tunneling— IPv6 over IPv6 Tunnels	Implementing Tunneling for IPv6	12.3(7)	12.4	—	—	—	—
IPv6 Tunneling— IPv6 over UTI Using a Tunnel Line Card ⁸	Implementing Tunneling for IPv6	—	—	—	—	—	—
IPv6 Tunneling— ISATAP Tunnel Support	Implementing Tunneling for IPv6	12.2(15)	12.3	—	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
IPv6 Tunneling— Manually Configured IPv6 over IPv4 Tunnels	Implementing Tunneling for IPv6	12.2(2)	12.3	—	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(17a)SX1
mGRE Tunnel support over IPv6	Implementing Tunneling for IPv6	15.2(1)	—	—	—	—	—

IPv6 Quality of Service (QoS)

IPv6—QoS Trust	Configuring QoS	—	—	(52)	12.2(50)SG 3.2.0SG 15.0(2)SG	—	—
IPv6 QoS—MQC Packet Classification	Implementing QoS for IPv6	12.2(13)	12.3	—	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 QoS—MQC Packet Marking/Re- Marking	Implementing QoS for IPv6	12.2(13)	12.3	—	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 QoS—MQC Traffic Policing	Implementing QoS for IPv6	12.2(13)	12.3	—	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 QoS—MQC Traffic Shaping	Implementing QoS for IPv6	12.2(13)	12.3	—	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 QoS—MQC Weighted Random Early Detection (WRED)-Based Drop	Implementing QoS for IPv6	12.2(13)	12.3	—	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6 QoS—Queueing	Implementing QoS for IPv6	12.2(13)	12.3	—	12.2(50)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE

IPv6 Voice

CUBE RTCP Voice Pass-Through for IPv6		15.2(1)	—	—	—	—	—
RTP/RTCP Over IPv6	Implementing Voice over IPv6	12.4(22)	—	—	—	—	—
T.38 Fax Support on CUBE for IPv6		15.2(1)	—	—	—	—	—

IPv6 Data Link Layer

IPv6 Data Link— ATM PVC and ATM LANE	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	—	—	12.2(33)SRA	—
IPv6 Data Link— Dynamic Packet Transport (DPT)	Implementing IPv6 Addressing and Basic Connectivity	—	—	—	—	—	—
IPv6 Data Link— Ethernet, Fast Ethernet, Gigabit Ethernet, and 10-Gigabit Ethernet	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	—
IPv6 Data Link— Frame Relay PVC	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	—	—	12.2(33)SRA	—
IPv6 Data Link— High-Level Data Link Control	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	—	—	12.2(33)SRA	—
IPv6 Data Link—PPP Service over Packet over SoNET, ISDN, and Serial (Synchronous and Asynchronous) Interfaces	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	—	—	12.2(33)SRA	—

Feature	Where Documented	12.xT/ 15.xT Release	12.xM/15.xM Release	12.2SE Release	12.2SG, 15.xSG, and 3.x SG Release	12.2SR/ 15S Release	12.2SX/ 12.2SY/ 15.0SY Release
IPv6 Data Link—VLANs Using Cisco Inter-Switch Link (ISL)	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE
IPv6 Data Link—VLANs Using IEEE 802.1Q Encapsulation	Implementing IPv6 Addressing and Basic Connectivity	12.2(2)	12.3	(25)SEA	12.2(25)SG 3.2.0SG 15.0(2)SG	12.2(33)SRA	12.2(18)SXE

1. The Cisco 10720 Internet router is supported in Cisco IOS Release 12.0(26)S.
2. IPv6 extended access control lists and IPv6 provider edge routers over MPLS are implemented with IPv6 hardware acceleration on the Cisco 12000 series Internet router IP service engine (ISE) line cards in Cisco IOS routers in Cisco IOS Release 12.0(25)S and later releases.
3. Enhancements were made to several multiprotocol BGP commands.
4. The RIP for IPv6 feature was updated in Cisco IOS Release 12.2(13)T.
5. SNMP versions 1, 2, and 3 are supported over an IPv6 transport.
6. IPv6 Broadband Access features are on Cisco IOS 7200 series routers only in the 12.2(33)SRC release.
7. Support for this feature is provided in Cisco IOS Release 12.2(33)SCA (see [Table 3](#)).
8. Feature is supported on the Cisco 12000 series Internet router only.

Cisco Platforms Supporting IPv6 Hardware Forwarding

Supported Platforms

[Table 2](#) lists the Cisco platforms that have IPv6 hardware forwarding and the Cisco IOS software release trains that introduce the feature.



Note

[Table 2](#) lists only the Cisco IOS software release that introduced support for a given feature in a given Cisco IOS software release train. Unless noted otherwise in [Table 2](#), subsequent releases of that Cisco IOS software release train also support that feature.

Table 2 Minimum Required Release for Cisco Platforms Supporting IPv6 Hardware Forwarding

Hardware and Feature	Cisco IOS Software Release
Cisco 12000 Series	
IP ISE line card IPv6 forwarding	12.0(23)S
IP ISE line card extended ACLs	12.0(25)S
IP ISE line card IPv6 over MPLS (6PE)	12.0(25)S
IP ISE line card IPv6 Multicast assist	12.0(26)S
IP ISE line card IPv6 QoS	12.0(28)S
Engine 5 line card IPv6 hardware forwarding	12.0(31)S
IP Receive ACL for IPv6 traffic	12.0(32)S

Table 2 Minimum Required Release for Cisco Platforms Supporting IPv6 Hardware Forwarding

Hardware and Feature	Cisco IOS Software Release
Cisco 10000 Series	
Cisco 10000 series Performance Routing Engine 2 (PRE-2)	12.2(28)SB
Cisco 10000 series PRE-3	12.2(31)SB
Cisco 10000 series 6PE support	12.2(31)SB
Cisco 10000 series PRE-4	12.2(33)SB
Cisco 10720 Series	
PxF accelerated for IPv6 forwarding	12.0(26)S, 12.2(28)SB
PxF accelerated for IPv6 extended ACLs	12.0(26)S
PxF accelerated for IPv6 over MPLS (6PE)	12.0(26)S
PRE-2 hardware forwarding	12.2(28)SB
Cisco 7600 Series, Cisco Catalyst 6500, Cisco Catalyst 3700, and Cisco Catalyst 3500	
IPv6: Express setup	12.2(35)SE
Cisco Catalyst 3560 series	12.2(25)SEA
Cisco Catalyst 3750 series	12.2(25)SEA
IPv6: IPv6 and IPv4 TCAM templates	12.2(25)SEA
IPv6: IPv6 neighbor discovery throttling	12.2(25)SEA
Cisco Catalyst 3560E series	12.2(35)SE2
Cisco Catalyst 3570E series	12.2(35)SE2
Cisco Catalyst 3560 series: IPv6 multicast hardware layer	12.2(25)SED
Supervisor Engines 720 and 720-3bxl	12.2(33)SRA
Route/switch processor 720 on Cisco 7600 series	12.2(33)SRB
Supervisor Engine 720 IPv6 forwarding	12.2(17a)SX1
Supervisor Engine 720 IPv6 extended ACLs	12.2(17a)SX1
Supervisor Engine 720 IPv6 over MPLS (6PE)	12.2(17b)SXA
Supervisor Engine 720 IPv6 multicast hardware forwarding	12.2(18)SXE
Supervisor Engine 720 IPv6 multicast RPR/RPR+ support	12.2(18)SXE
Supervisor Engine 720 IPv6 multicast hardware-assisted egress replication	12.2(18)SXE
Supervisor Engine 32/MSFC2A	12.2(18)SXF

Additional 12.2S Release Trains

Several early-deployment Cisco IOS software Release 12.2S trains synchronize to the Cisco IOS software mainline Release 12.2S train. The following table lists information about the release trains on which IPv6 hardware is used.

Table 3 Minimum Required Release for IPv6 Hardware on Early-Deployment 12.2S Cisco IOS Software Release Trains

Early-Deployment Cisco IOS Software Release and Hardware	Release Description
12.2(28)SB and 12.2(33)SB on Cisco 10000 series	Not all features for Cisco IOS Release 12.2(28)SB or Cisco IOS Release 12.2(33)SB are supported on the Cisco 10000 series routers. For further information on Cisco IOS Release 12.2(28)SB or Cisco IOS Release 12.2(33)SB, see the release notes at the following URLs: http://www.cisco.com/en/US/products/ps6566/prod_release_notes_list.html
12.2(25)SEA on Cisco Catalyst 3560 and 3570 series	12.2(25)SEA supports a subset of the 12.2S IPv6 feature set. IPv6 multicast is not supported.
12.2(33)SRA on Cisco 7600 series	12.2(33)SRA includes all IPv6 features from Cisco IOS software releases 12.2S and 12.2SX.
12.2SX on Cisco Catalyst 6500	12.2(17)SX includes the entire Cisco IOS software Release 12.2(14)S feature set, plus OSPFv3.
12.2(17d)SXB on Cisco Catalyst 6500 Supervisor Engine 2/MSFC2	IPv6 support provided on 12.2(17)SXB for Cisco Catalyst 6500 Supervisor Engine 2/MSFC2.
12.2(18)SXE on Cisco Catalyst 6500 and Cisco 7600 series	12.2(18)SXE supports IPv6 multicast hardware forwarding.
12.2(18)SXF on Supervisor Engine 32/MSFC2A	NA
12.2(35)SE2 on Cisco Catalyst 3560E and 3570E series	NA
12.2(40)SE on Cisco Catalyst 2960	IPv6 support provided for MLD snooping.
12.2(33)SCA on UBR	Support is provided for DHCPv6 relay agent notification for prefix delegation.

Additional References

Related Documents

Related Topic	Document Title
IPv6 commands: complete command syntax, command mode, defaults, usage guidelines, and examples	Cisco IOS IPv6 Command Reference

RFCs

RFCs	Title
RFC 1195	<i>Use of OSI IS-IS for Routing in TCP/IP and Dual Environments</i>
RFC 1267	<i>A Border Gateway Protocol 3 (BGP-3)</i>
RFC 1305	<i>Network Time Protocol (Version 3) Specification, Implementation and Analysis</i>
RFC 1583	<i>OSPF version 2</i>
RFC 1772	<i>Application of the Border Gateway Protocol in the Internet</i>
RFC 1886	<i>DNS Extensions to Support IP version 6</i>
RFC 1918	<i>Address Allocation for Private Internets</i>
RFC 1981	<i>Path MTU Discovery for IP version 6</i>
RFC 2080	<i>RIPng for IPv6</i>
RFC 2281	<i>Cisco Hot Standby Router Protocol (HSRP)</i>
RFC 2332	<i>NBMA Next Hop Resolution Protocol (NHRP)</i>
RFC 2373	<i>IP Version 6 Addressing Architecture</i>
RFC 2374	<i>An Aggregatable Global Unicast Address Format</i>
RFC 2375	<i>IPv6 Multicast Address Assignments</i>
RFC 2401	<i>Security Architecture for the Internet Protocol</i>
RFC 2402	<i>IP Authentication Header</i>
RFC 2404	<i>The Use of Hash Message Authentication Code Federal Information Processing Standard 180-1 within Encapsulating Security Payload and Authentication Header</i>
RFC 2406	<i>IP Encapsulating Security Payload (ESP)</i>
RFC 2407	<i>The Internet Security Domain of Interpretation for ISAKMP</i>
RFC 2408	<i>Internet Security Association and Key Management Protocol</i>
RFC 2409	<i>Internet Key Exchange (IKE)</i>
RFC 2427	<i>Multiprotocol Interconnect over Frame Relay</i>
RFC 2428	<i>FTP Extensions for IPv6 and NATs</i>
RFC 2460	<i>Internet Protocol, Version 6 (IPv6) Specification</i>
RFC 2461	<i>Neighbor Discovery for IP Version 6 (IPv6)</i>

RFCs	Title
RFC 2462	<i>IPv6 Stateless Address Autoconfiguration</i>
RFC 2463	<i>Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification</i>
RFC 2464	<i>Transmission of IPv6 Packets over Ethernet</i>
RFC 2467	<i>Transmission of IPv6 Packets over FDDI</i>
RFC 2472	<i>IP Version 6 over PPP</i>
RFC 2473	<i>Generic Packet Tunneling in IPv6 Specification</i>
RFC 2474	<i>Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers</i>
RFC 2475	<i>An Architecture for Differentiated Services Framework</i>
RFC 2492	<i>IPv6 over ATM</i>
RFC 2545	<i>Use of BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing</i>
RFC 2590	<i>Transmission of IPv6 Packets over Frame Relay Specification</i>
RFC 2597	<i>Assured Forwarding PHB</i>
RFC 2598	<i>An Expedited Forwarding PHB</i>
RFC 2640	<i>Internet Protocol, Version 6 Specification</i>
RFC 2684	<i>Multiprotocol Encapsulation over ATM Adaptation Layer 5</i>
RFC 2697	<i>A Single Rate Three Color Marker</i>
RFC 2698	<i>A Two Rate Three Color Marker</i>
RFC 2710	<i>Multicast Listener Discovery (MLD) for IPv6</i>
RFC 2711	<i>IPv6 Router Alert Option</i>
RFC 2732	<i>Format for Literal IPv6 Addresses in URLs</i>
RFC 2765	<i>Stateless IP/ICMP Translation Algorithm (SIIT)</i>
RFC 2766	<i>Network Address Translation–Protocol Translation (NAT-PT)</i>
RFC 2858	<i>Multiprotocol Extensions for BGP-4</i>
RFC 2893	<i>Transition Mechanisms for IPv6 Hosts and Routers</i>
RFC 3056	<i>Connection of IPv6 Domains via IPv4 Clouds</i>
RFC 3068	<i>An Anycast Prefix for 6to4 Relay Routers</i>
RFC 3095	<i>RObust Header Compression (ROHC): Framework and Four Profiles: RTP, UDP, ESP, and Uncompressed</i>
RFC 3107	<i>Carrying Label Information in BGP-4</i>
RFC 3137	<i>OSPF Stub Router Advertisement</i>
RFC 3147	<i>Generic Routing Encapsulation over CLNS</i>
RFC 3152	<i>Delegation of IP6.ARPA</i>
RFC 3162	<i>RADIUS and IPv6</i>
RFC 3315	<i>Dynamic Host Configuration Protocol for IPv6 (DHCPv6)</i>
RFC 3319	<i>Dynamic Host Configuration Protocol (DHCPv6) Options for Session Initiated Protocol (SIP) Servers</i>

RFCs	Title
RFC 3392	<i>Capabilities Advertisement with BGP-4</i>
RFC 3414	<i>User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)</i>
RFC 3484	<i>Default Address Selection for Internet Protocol version 6 (IPv6)</i>
RFC 3513	<i>Internet Protocol Version 6 (IPv6) Addressing Architecture</i>
RFC 3576	<i>Change of Authorization</i>
RFC 3587	<i>IPv6 Global Unicast Address Format</i>
RFC 3590	<i>Source Address Selection for the Multicast Listener Discovery (MLD) Protocol</i>
RFC 3596	<i>DNS Extensions to Support IP Version 6</i>
RFC 3633	<i>DHCP IPv6 Prefix Delegation</i>
RFC 3646	<i>DNS Configuration options for Dynamic Host Configuration Protocol for IPv6 (DHCPv6)</i>
RFC 3697	<i>IPv6 Flow Label Specification</i>
RFC 3736	<i>Stateless DHCP Service for IPv6</i>
RFC 3756	<i>IPv6 Neighbor Discovery (ND) Trust Models and Threats</i>
RFC 3759	<i>RObust Header Compression (ROHC): Terminology and Channel Mapping Examples</i>
RFC 3775	<i>Mobility Support in IPv6</i>
RFC 3810	<i>Multicast Listener Discovery Version 2 (MLDv2) for IPv6</i>
RFC 3846	<i>Mobile IPv4 Extension for Carrying Network Access Identifiers</i>
RFC 3879	<i>Deprecating Site Local Addresses</i>
RFC 3898	<i>Network Information Service (NIS) Configuration Options for Dynamic Host Configuration Protocol for IPv6 (DHCPv6)</i>
RFC 3954	<i>Cisco Systems NetFlow Services Export Version 9</i>
RFC 3956	<i>Embedding the Rendezvous Point (RP) Address in an IPv6 Multicast Address</i>
RFC 3963	<i>Network Mobility (NEMO) Basic Support Protocol</i>
RFC 3971	<i>SEcure Neighbor Discovery (SEND)</i>
RFC 3972	<i>Cryptographically Generated Addresses (CGA)</i>
RFC 4007	<i>IPv6 Scoped Address Architecture</i>
RFC 4075	<i>Simple Network Time Protocol (SNTP) Configuration Option for DHCPv6</i>
RFC 4087	<i>IP Tunnel MIB</i>
RFC 4091	<i>The Alternative Network Address Types (ANAT) Semantics for the Session Description Protocol (SDP) Grouping Framework</i>
RFC 4092	<i>Usage of the Session Description Protocol (SDP) Alternative Network Address Types (ANAT) Semantics in the Session Initiation Protocol (SIP)</i>
RFC 4109	<i>Algorithms for Internet Key Exchange version 1 (IKEv1)</i>

RFCs	Title
RFC 4191	<i>Default Router Preferences and More-Specific Routes</i>
RFC 4193	<i>Unique Local IPv6 Unicast Addresses</i>
RFC 4214	<i>Intra-Site Automatic Tunnel Addressing Protocol (ISATAP)</i>
RFC 4242	<i>Information Refresh Time Option for Dynamic Host Configuration Protocol for IPv6 (DHCPv6)</i>
RFC 4282	<i>The Network Access Identifier</i>
RFC 4283	<i>Mobile Node Identifier Option for Mobile IPv6</i>
RFC 4285	<i>Authentication Protocol for Mobile IPv6</i>
RFC 4291	<i>IP Version 6 Addressing Architecture</i>
RFC 4292	<i>IP Forwarding Table MIB</i>
RFC 4293	<i>Management Information Base for the Internet Protocol (IP)</i>
RFC 4302	<i>IP Authentication Header</i>
RFC 4306	<i>Internet Key Exchange (IKEv2) Protocol</i>
RFC 4308	<i>Cryptographic Suites for IPsec</i>
RFC 4364	<i>BGP MPLS/IP Virtual Private Networks (VPNs)</i>
RFC 4382	<i>MPLS/BGP Layer 3 Virtual Private Network (VPN) Management Information Base</i>
RFC 4443	<i>Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification</i>
RFC 4552	<i>Authentication/Confidentiality for OSPFv3</i>
RFC 4594	<i>Configuration Guidelines for DiffServ Service Classes</i>
RFC 4601	<i>Protocol Independent Multicast - Sparse Mode (PIM-SM): Protocol Specification</i>
RFC 4610	<i>Anycast-RP Using Protocol Independent Multicast (PIM)</i>
RFC 4649	<i>Dynamic Host Configuration Protocol for IPv6 (DHCPv6) Relay Agent Remote-ID Option</i>
RFC 4659	<i>BGP-MPLS IP Virtual Private Network (VPN) Extension for IPv6 VPN</i>
RFC 4724	<i>Graceful Restart Mechanism for BGP</i>
RFC 4798	<i>Connecting IPv6 Islands over IPv4 MPLS Using IPv6 Provider Edge Routers (6PE)</i>
RFC 4861	<i>Neighbor Discovery for IP version 6 (IPv6)</i>
RFC 4862	<i>IPv6 Stateless Address Autoconfiguration</i>
RFC 4884	<i>Extended ICMP to Support Multi-Part Messages</i>
RFC 4885	<i>Network Mobility Support Terminology</i>
RFC 4887	<i>Network Mobility Home Network Models</i>
RFC 5059	<i>Bootstrap Router (BSR) Mechanism for Protocol Independent Multicast (PIM)</i>
RFC 5072	<i>IPv6 over PPP</i>

RFCs	Title
RFC 5095	<i>Deprecation of Type 0 Routing Headers in IPv6</i>
RFC 5120	<i>M-ISIS: Multi Topology (MT) Routing in Intermediate System to Intermediate Systems (IS-ISs)</i>
RFC 5187	<i>OSPFv3 Graceful Restart</i>
RFC 5308	<i>Routing IPv6 with IS-IS</i>
RFC 5340	<i>OSPF for IPv6</i>
RFC 5460	<i>DHCPv6 Bulk Leasequery</i>
RFC 5838	<i>Support of Address Families in OSPFv3</i>
RFC 5881	<i>Bidirectional Forwarding Detection (BFD) for IPv4 and IPv6 (Single Hop)</i>
RFC 5905	<i>Network Time Protocol Version 4: Protocol and Algorithms Specification</i>
RFC 5969	<i>IPv6 Rapid Deployment on IPv4 Infrastructures (6RD) — Protocol Specification</i>

MIBs

MIBs	MIBs Link
<ul style="list-style-type: none"> • CISCO-CONFIG-COPY-MIB • CISCO-CONFIG-MAN-MIB • CISCO-DATA-COLLECTION-MIB • CISCO-FLASH-MIB • CISCO-IETF-IP-FORWARDING-MIB (not available as of Cisco IOS Release 12.2(33)SRC) • CISCO-IETF-IP-MIB (not available as of Cisco IOS Release 12.2(33)SRC) • CISCO-IP-FORWARD-MIB • CISCO-IP-MIB • CISCO-RTTMON-IPv6-MIB • CISCO-SNMP-TARGET-EXT-MIB • ENTITY-MIB • NOTIFICATION-LOG-MIB • SNMP-TARGET-MIB • TUNNEL-MIB 	<p>To locate and download MIBs for selected platforms, Cisco software releases, and feature sets, use Cisco MIB Locator found at the following URL:</p> <p>http://www.cisco.com/go/mibs</p>

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