

Important RFCs

This document contains two tables: Table 1 lists the RFCs mentioned in *Guide to TCP/IP: IPv6 and IPv4, 5th Edition*, and Table 2 lists IPv6-related RFCs for general reference that were not specifically referenced in the book.

If you're interested in a particular RFC, read about it online to verify its current status. RFCs can be found at the following Web sites:

- <http://tools.ietf.org/html>
- www.faqs.org/rfcs
- www.rfc-editor.org
- www.ietf.org

Table 1 RFCs referenced in Guide to TCP/IP, 4th Edition

RFC No.	Focus	Title	Chapter
768	IPv4	User Datagram Protocol	9
777	IPv4	Internet Control Message Protocol	5
791	IPv4	Internet Protocol	3, 4
792	IPv4	Internet Control Message Protocol	5
793	IPv4	Transmission Control Protocol	9
826	IPv4	An Ethernet Address Resolution Protocol	4
882	IPv4	Domain Names—Concepts and Facilities	8
883	IPv4	Domain Names—Implementation and Specification	8
894	IPv4	A Standard for the Transmission of IP Datagrams over Ethernet Networks	4
896	IPv4	Congestion Control in IP/TCP Internetworks	9
903	IPv4	A Reverse Address Resolution Protocol	4
904	IPv4	Exterior Gateway Protocol Formal Specification	4
922	IPv4	Broadcasting Internet Datagrams in the Presence of Subnets	4
950	IPv4	Internet Standard Subnetting Procedure	5
951	IPv4	Bootstrap Protocol (BOOTP)	7
1034	IPv4	Domain Names—Concepts and Facilities	8
1035	IPv4	Domain Names—Implementation and Specification	8
1058	IPv4	Routing Information Protocol	4
1112	IPv4	Host Extensions for IP Multicasting	2
1122	IPv4	Requirements for Internet Hosts—Communication Layers	4, 9
1190	IPv5	Experimental Internet Stream Protocol, Version 2 (ST-II)	1
1191	IPv4	Path MTU Discovery	5
1195	IPv4/IPv6	Use of OSI IS-IS for Routing in TCP/IP and Dual Environments	4
1256	IPv4	ICMP Router Discovery Messages	4, 5
1332	IPv4	The PPP Internet Protocol Control Protocol (IPCP)	4

RFC No.	Focus	Title	Chapter
1349	IPv4	Type of Service in the Internet Protocol Suite	3, 4
1393	IPv4	Traceroute Using an IP Option	5
1517	IPv4	Applicability Statement for the Implementation of Classless Inter-Domain Routing (CIDR)	2
1518	IPv4	An Architecture for IP Address Allocation with CIDR	2
1519	IPv4	Classless Inter-Domain Routing (CIDR): An Address Assignment and Aggregation Strategy	2
1534	IPv4	Interoperation Between DHCP and BOOTP	7
1661	IPv4	The Point-to-Point Protocol (PPP)	1, 4
1662	IPv4	PPP in HDLC-like Framing	4
1700	General	Assigned Numbers	9
1716	IPv4	Towards Requirements for IP Routers	4
1812	IPv4	Requirements for IP Version 4 Routers	4, 5
1819	IPv5	Internet Stream Protocol Version 2 (ST2) Protocol Specification - Version ST2+	1
1877	IPv4	PPP Internet Protocol Control Protocol Extensions for Name Server Addresses	4
1878	IPv4	Variable Length Subnet Table for IPv4	2
1883	IPv6	Internet Protocol, Version 6 (IPv6) Specification	3
1885	IPv6	Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification	5
1886	IPv6	DNS Extensions to support IP version 6	8
1918	IPv4	Address Allocation for Private Internets	2, 4, 11
1930	IPv4	Guidelines for creation, selection, and registration of an Autonomous System (AS)	4
1981	IPv6	Path MTU Discovery for IP version 6	3
2002	IPv4	IP Mobility Support	4
2003	IPv4	IP Encapsulation within IP	4
2004	IPv4	Minimal Encapsulation within IP	4
2005	IPv4	Applicability Statement for IP Mobility Support	4
2006	IPv4	The Definitions of Managed Objects for IP Mobility Support Using SMIv2	4
2018	IPv4	TCP Selective Acknowledgment Options	9
2026	IPv4	The Internet Standards Process—Revision 3	1
2052	IPv4	A DNS RR for specifying the location of services (DNS SRV)	8
2080	IPv6	RIPng for IPv6	4
2131	IPv4	Dynamic Host Configuration Protocol	7
2132	IPv4	DHCP Options and BOOTP Vendor Extensions	7
2136	IPv4	Dynamic Updates in the Domain Name System (DNS UPDATE)	8
2241	IPv4	DHCP Options for Novell Directory Services	7
2317	IPv4	Classless IN-ADDR.ARPA Delegation	8
2328	IPv4	OSPF Version 2	4

RFC No.	Focus	Title	Chapter
2453	IPv4/IPv6	RIP Version 2	4
2460	IPv6	Internet Protocol, Version 6 (IPv6) Specification	2, 3, 9
2463	IPv6	Internet Control Message Protocol (ICMPv6) for the Inter-net Protocol Version 6 (IPv6) Specification	5
2474	IPv4	Definition of Differentiated Service Field (DS Field) in the IPv4 and IPv6 Headers	3, 4
2475	IPv4	An Architecture for Differentiated Services	3, 4
2491	IPv6	IPv6 over Non-Broadcast Multiple Access (NBMA) Networks	10
2492	IPv6	IPv6 over ATM Networks	10
2521	IPv4	ICMP Security Failures Messages	5
2522	General	Photuris: Session-Key Management Protocol	5
2526	IPv6	Reserved IPv6 Subnet Anycast Addresses	2
2529	IPv6	Transmission of IPv6 over IPv4 Domains without Explicit Tunnels	10
2597	IPv4	Assured Forwarding PHB [Per-Hop Behavior] Group	3
2598	IPv4	An Expedited Forwarding PHB	3
2675	IPv4	IPv6 Jumbograms	3, 9
2710	IPv6	Multicast Listener Discovery (MLD) for IPv6	4, 5
2711	IPv4	IPv6 Router Alert Option	3
2732	IPv6	Format for Literal IPv6 Addresses in URLs	2, 8
2740	IPv6	OSPF for IPv6	4
2766	IPv4/IPv6	Network Address Translation - Protocol Translation (NAT-PT)	2, 10, 11
2858	IPv4	Multiprotocol Extensions for BGP-4	4
2874	IPv6	DNS Extensions to Support IPv6 Address Aggregation and Renumbering	8
2893	IPv6	Transition Mechanisms for IPv6 Hosts and Routers	10
2894	IPv6	Router Renumbering for IPv6	5
3056	IPv6	Connection of IPv6 Domains via IPv4 Clouds	3, 10
3068	IPv4/IPv6	An Anycast Prefix for 6to4 Relay Routers	10
3122	IPv6	Extensions to IPv6 Neighbor Discovery for Inverse Discovery Specification	5
3142	IPv6	An IPv6-to-IPv4 Transport Relay Translator	3
3168	IPv4	The Addition of Explicit Congestion Notification (ECN) to IP	3, 4
3173	IPv4/IPv6	IP Payload Compression Protocol (IPComp)	12
3220	IPv4	IP Mobility Support for IPv4	4
3246	IPv4	An Expedited Forwarding PHB (Per-Hop Behavior)	3
3248	IPv4	A Delay Bound alternative revision of RFC 2598	3
3260	IPv4/IPv6	New Terminology and Clarifications for Diffserv	4
3315	IPv6	Dynamic Host Configuration Protocol for IPv6 (DHCPv6)	7, 11
3319	IPv6	Dynamic Host Configuration Protocol (DHCPv6) Options for Session Initiation Protocol (SIP) Servers	7
3376	IPv4	Internet Group Management Protocol, Version 3	3

RFC No.	Focus	Title	Chapter
3390	General	Increasing TCP's Initial Window	9
3484	IPv6	Default Address Selection for Internet Protocol Version 6 (IPv6)	4, 8
3569	IPv4/IPv6	An Overview of Source-Specific Multicast (SSM)	4
3596	IPv6	DNS Extensions to Support IP Version 6	8
3633	IPv6	IPv6 Prefix Options for Dynamic Host Configuration Protocol (DHCP) Version 6	7
3646	IPv6	DNS Configuration options for Dynamic Host Configuration Protocol for IPv6 (DHCPv6)	7
3697	IPv6	IPv6 Flow Label Specification	3
3810	IPv6	Multicast Listener Discovery Version 2 (MLDv2) for IPv6	4, 5
3879	IPv6	Deprecating Site Local Addresses	4, 8
3898	IPv6	Network Information Service (NIS) Configuration Options for Dynamic Host Configuration Protocol for IPv6 (DHCPv6)	7
3901	IPv6	DNS IPv6 Transport Operational Guidelines	8
3927	IPv4	Dynamic Configuration of IPv4 Link-Local Addresses	7
3971	IPv6	SEcure Neighbor Discovery (SEND)	5, 7
3972	IPv6	Cryptographically Generated Addresses (CGA)	7
3986	IPv6	Uniform Resource Identifier (URI): Generic Syntax	2, 8
4064	IPv4	Experimental Message, Extensions, and Error Codes for Mobile IPv4	4
4065	IPv4/IPv6	Instructions for Seamoby and Experimental Mobility Protocol IANA Allocations	5
4075	IPv6	Simple Network Time Protocol (SNTP) Configuration Option for DHCPv6	7
4191	IPv6	Default Router Preferences and More-Specific Routes	6
4193	IPv6	Unique Local IPv6 Unicast Addresses	8
4213	IPv6	Basic Transition Mechanisms for IPv6 Hosts and Routers	10
4214	IPv4/IPv6	Intra-Site Automatic Tunnel Addressing Protocol (ISATAP)	10
4242	IPv6	Information Refresh Time Option for Dynamic Host Configuration Protocol for IPv6 (DHCPv6)	7
4271	IPv4	A Border Gateway Protocol 4 (BGP-4)	4
4280	IPv4/IPv6	Dynamic Host Configuration Protocol (DHCP) Options for Broadcast and Multicast Control Servers	7
4286	IPv4/IPv6	Multicast Router Discovery	5
4291	IPv6	IP Version 6 Addressing Architecture	2, 4, 7, 10
4301	IPv4/IPv6	Security Architecture for the Internet Protocol	12
4339	IPv6	IPv6 Host Configuration of DNS Server Information Approaches	8
4379	IPv4/IPv6	Detecting Multi-Protocol Label Switched (MPLS) Data Plane Failures	4
4380	IPv6	Teredo: Tunneling IPv6 over UDP through Network Address Translations (NATs)	2, 10
4389	IPv4/IPv6	Neighbor Discovery Proxies (ND Proxy)	6
4389	IPv4/IPv6	Neighbor Discovery Proxies (ND Proxy)	6

RFC No.	Focus	Title	Chapter
4443	IPv6	Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification	4, 5
4580	IPv6	Dynamic Host Configuration Protocol for IPv6 (DHCPv6) Relay Agent Subscriber-ID Option	7
4604	IPv4/IPv6	Using Internet Group Management Protocol Version 3 (IGMPv3) and Multicast Listener Discovery Protocol Version 2 (MLDv2) for Source-Specific Multicast	3
4620	IPv6	IPv6 Node Information Queries	5
4632	IPv4	Classless Inter-domain Routing (CIDR): The Internet Address Assignment and Aggregation Plan	2
4649	IPv6	Dynamic Host Configuration Protocol for IPv6 (DHCPv6) Relay Agent Remote-ID Option	7
4704	IPv6	The Dynamic Host Configuration Protocol for IPv6 (DHCPv6) Client Fully Qualified Domain Name (FQDN) Option	7
4727	IPv4/IPv6	Experimental Values in IPv4, IPv6, ICMPv4, ICMPv6, UDP, and TCP Headers	5
4760	IPv4	Multiprotocol Extensions for BGP-4	4
4776	IPv4/IPv6	Dynamic Host Configuration Protocol (DHCPv4 and DHCPv6) Option for Civic Addresses Configuration Information	7
4795	IPv4/IPv6	Link-Local Multicast Name Resolution (LLMNR)	8
4833	IPv4	Timezone Options for DHCP	7
4861	IPv6	Neighbor Discovery for IP version 6 (IPv6)	4, 5, 6, 7, 10
4862	IPv6	IPv6 Stateless Address Autoconfiguration	6, 7, 11
4884	IPv4/IPv6	Extended ICMP to Support Multi-Part Messages	5
4941	IPv6	Privacy Extensions for Stateless Address Autoconfiguration in IPv6	2, 7, 11
4966	IPv4/IPv6	Reasons to Move the Network Address Translator - Protocol Translator (NAT-PT) to Historic Status	2, 10, 11
4994	IPv6	DHCPv6 Relay Agent Echo Request Option	7
5007	IPv6	DHCPv6 Leasequery	7
5095	IPv6	Deprecation of Type 0 Routing Headers in IPv6	3
5192	IPv4	DHCP Options for Protocol for Carrying Authentication for Network Access (PANA) Authentication Agents	7
5214	IPv4/IPv6	Intra-Site Automatic Tunnel Addressing Protocol (ISATAP)	2, 10
5220	IPv4/IPv6	Problem Statement for Default Address Selection in Multi-Prefix Environments: Operational Issues of RFC 3484 Default Rules	4
5223	IPv6	Discovering Location-to-Service Translation (LoST) Servers Using the Dynamic Host Configuration Protocol (DHCP)	7
5227	IPv4	IPv4 Address Conflict Detection	4
5280	General	Internet X.509 Public Key Infrastructure Certificate and Certificate Revocation List (CRL) Profile	3
5308	IPv6	Routing IPv6 with IS-IS	4
5340	IPv6	OSPF for IPv6	4

RFC No.	Focus	Title	Chapter
5375	IPv6	IPv6 Unicast Address Assignment Considerations	11
5417	IPv4	Control And Provisioning of Wireless Access Points (CAPWAP) Access Controller DHCP Option	7
5460	IPv6	DHCPv6 Bulk Leasequery	7
5494	IPv4/IPv6	IANA Allocation Guidelines for the Address Resolution Protocol (ARP)	4
5568	IPv6	Mobile IPv6 Fast Handovers	5
5569	IPv4/IPv6	IPv6 Rapid Deployment on IPv4 Infrastructures (6rd)	2
5678	IPv4/IPv6	Dynamic Host Configuration Protocol (DHCPv4 and DHCPv6) Options for IEEE 802.21 Mobility Services (MoS) Discovery	7
5681	General	TCP Congestion Control	9
5720	IPv4/IPv6	Routing and Addressing in Networks with Global Enterprise Recursion (RANGER)	10
5855	IPv4/IPv6	Nameservers for IPv4 and IPv6 Reverse Zones	8
5884	IPv4/IPv6	Bidirectional Forwarding Detection (BFD) for MPLS Label Switched Paths (LSPs)	4
5908	IPv6	Network Time Protocol (NTP) Server Option for DHCPv6	7
5942	IPv6	IPv6 Subnet Model: The Relationship between Links and Subnet Prefixes	6
5952	IPv6	A Recommendation for IPv6 Address Text Representation	3
5969	IPv4/IPv6	IPv6 Rapid Deployment on IPv4 Infrastructures (6rd) -- Protocol Specification	2
5970	IPv6	DHCPv6 Options for Network Boot	7
5986	IPv4/IPv6	Discovering the Local Location Information Server (LIS)	7
5991	IPv6	Teredo Security Updates	2, 10
6011	IPv6	Session Initiation Protocol (SIP) User Agent Configuration	7
6052	IPv4/IPv6	IPv6 Addressing of IPv4/IPv6 Translators	2, 3
6081	IPv6	Teredo Extensions	2, 10
6093	IPv4	On the Implementation of the TCP Urgent Mechanism	4
6106	IPv6	IPv6 Router Advertisement Options for DNS Configuration	7, 11
6144	IPv4/IPv6	Framework for IPv4/IPv6 Translation	10, 11
6145	IPv4/IPv6	IP/ICMP Translation Algorithm	10, 11
6225	IPv6	Dynamic Host Configuration Protocol Options for Coordinate-Based Location Configuration Information	7
6275	IPv6	Mobility Support in IPv6	5, 6
6286	IPv4	Autonomous-System-Wide Unique BGP Identifier for BGP-4	4
6298	IPv4/IPv6	Computing TCP's Retransmission Timer	4
6334	IPv6	Dynamic Host Configuration Protocol for IPv6 (DHCPv6) Option for Dual-Stack Lite	7
6343	IPv4/IPv6	Advisory Guidelines for 6to4 Deployment	3, 10
6398	IPv4/IPv6	IP Router Alert Considerations and Usage	3
6422	IPv6	Relay-Supplied DHCP Options	7

RFC No.	Focus	Title	Chapter
6434	IPv6	IPv6 Node Requirements	10
6437	IPv6	IPv6 Flow Label Specification	3, 11
6440	IPv6	The EAP Re-authentication Protocol (ERP) Local Domain Name DHCPv6 Option	7
6550	IPv6	RPL: IPv6 Routing Protocol for Low-Power and Lossy Networks (last draft named RFC-ietf-roll-rpl-19)	5
6555	IPv4/IPv6	Happy Eyeballs: Success with Dual-Stack Hosts	8
6608	IPv4/IPv6	Subcodes for BGP Finite State Machine Error	4
6633	IPv4	Deprecation of ICMP Source Quench Messages	4, 5
6724	IPv6	Default Address Selection for Internet Protocol Version 6 (IPv6)	4, 8, 11
6732	IPv4/IPv6	6to4 Provider Managed Tunnels	10
6793	IPv4/IPv6	BGP Support for Four-Octet Autonomous System (AS) Number Space	4
6814	IPv4	Formally Deprecating Some IPv4 Options	5
6864	IPv4	Updated Specification of the IPv4 ID Field	3, 4
6874	IPv6	Representing IPv6 Zone Identifiers in Address Literals and Uniform Resource Identifiers	2
6890	IPv4/IPv6	Special-Purpose IP Address Registries	2
6918	IPv4/IPv6	Formally Deprecating Some ICMPv4 Message Types	5
6980	IPv6	Security Implications of IPv6 Fragmentation with IPv6 Neighbor Discovery	6
7048	IPv6	Neighbor Unreachability Detection Is Too Impatient	6
7112	IPv6	Implications of Oversized IPv6 Header Chains	2
7320	IPv6	URI Design and Ownership	2
7323	IPv4/IPv6	TCP Extensions for High Performance	9
7526	IPv6	Deprecating the Anycast Prefix for 6to4 Relay Routers	3, 10
7527	IPv6	Enhanced Duplicate Address Detection	6
7559	IPv6	Packet-Loss Resiliency for Router Solicitations	5, 6
3493	IPv6	Basic Socket Interface Extensions for IPv6	9

Table 2 IPv6-related RFCs Not Addressed in the Textbook

RFC No.	Title
1809	Using the Flow Label Field in IPv6
1881	IPv6 Address Allocation Management
1887	An Architecture for IPv6 Unicast Address Allocation
1924	A Compact Representation of IPv6 Addresses
2081	RIPng Protocol Applicability Statement
2185	Routing Aspects of IPv6 Transition

RFC No.	Title
2375	IPv6 Multicast Address Assignments
2428	FTP Extensions for IPv6 and NATs
2462	IPv6 Stateless Address Autoconfiguration
2464	Transmission of IPv6 Packets over Ethernet Networks
2465	Management Information Base for IP Version 6: Textual Conventions and General Group
2466	Management Information Base for IP Version 6: ICMPv6 Group
2467	Transmission of IPv6 Packets over FDDI Networks
2470	Transmission of IPv6 Packets over Token Ring Networks
2471	IPv6 Testing Address Allocation
2472	IP Version 6 over PPP
2473	Generic Packet Tunneling in IPv6 Specification
2545	Use of BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing
2590	Transmission of IPv6 Packets over Frame Relay Networks Specification
2928	Initial IPv6 Sub-TLA ID Assignments
3041	Privacy Extensions for Stateless Address Autoconfiguration in IPv6
3053	IPv6 Tunnel Broker
3089	A SOCKS-based IPv6/IPv4 Gateway Mechanism
3111	Service Location Protocol Modifications for IPv6
3146	Transmission of IPv6 Packets over IEEE 1394 Networks
3162	RADIUS and IPv6
3175	Aggregation of RSVP for IPv4 and IPv6 Reservations
3177	IAB/IESG Recommendations on IPv6 Address
3178	IPv6 Multihoming Support at Site Exit Routers
3226	DNSSEC and IPv6 A6 aware server/resolver message size requirements
3266	Support for IPv6 in Session Description Protocol (SDP)
3306	Unicast-Prefix-based IPv6 Multicast Addresses
3307	Allocation Guidelines for IPv6 Multicast Addresses
3314	Recommendations for IPv6 in Third Generation Partnership Project (3GPP) Standards
3316	Internet Protocol Version 6 (IPv6) for Some Second and Third Generation Cellular Hosts
3363	Representing Internet Protocol Version 6 (IPv6) Addresses in the Domain Name System (DNS)
3364	Tradeoffs in Domain Name System (DNS) Support for Internet Protocol Version 6 (IPv6)
3531	A Flexible Method for Managing the Assignment of Bits of an IPv6 Address Block
3542	Advanced Sockets Application Program Interface (API) for IPv6
3582	Goals for IPv6 Site-Multihoming Architectures
3587	IPv6 Global Unicast Address Format
3595	Textual Conventions for IPv6 Flow Label
3736	Stateless Dynamic Host Configuration Protocol (DHCP) Service for IPv6
3750	Unmanaged Networks IPv6 Transition Scenarios
3756	IPv6 Neighbor Discovery (ND) Trust Models and Threats
3769	Requirements for IPv6 Prefix Delegation

RFC No.	Title
3775	Mobility Support in IPv6
3776	Using IPsec to Protect Mobile IPv6 Signaling Between Mobile Nodes and Home Agents
3831	Transmission of IPv6 Packets over Fibre Channel
3849	IPv6 Address Prefix Reserved for Documentation
3904	Evaluation of IPv6 Transition Mechanisms for Unmanaged Networks
3919	Remote Network Monitoring (RMON) Protocol Identifiers for IPv6 and Multi Protocol Label Switching (MPLS)
3956	Embedding the Rendezvous Point (RP) Address in an IPv6 Multicast Address
3974	SMTP Operational Experience in Mixed IPv4/v6 Environments
4007	IPv6 Scoped Address Architecture
4029	Scenarios and Analysis for Introducing IPv6 into ISP Networks
4038	Application Aspects of IPv6 Transition
4057	IPv6 Enterprise Network Scenarios
4068	Fast Handovers for Mobile IPv6
4074	Common Misbehavior Against DNS Queries for IPv6 Addresses
4076	Renumbering Requirements for Stateless Dynamic Host Configuration Protocol for IPv6 (DHCPv6)
4135	Goals of Detecting Network Attachment in IPv6
4140	Hierarchical Mobile IPv6 Mobility Management (HMIPv6)
4147	Proposed Changes to the Format of the IANA IPv6 Registry
4177	Architectural Approaches to Multi-homing for IPv6
4192	Procedures for Renumbering an IPv6 Network without a Flag Day
4215	Analysis on IPv6 Transition in Third Generation Partnership Project (3GPP) Networks
4219	Things Multihoming in IPv6 (MULTI6) Developers Should Think About
4241	A Model of IPv6/IPv4 Dual Stack Internet Access Service
4260	Mobile IPv6 Fast Handovers for 802.11 Networks
4283	Mobile Node Identifier Option for Mobile IPv6 (MIPv6)
4285	Authentication Protocol for Mobile IPv6
4295	Mobile IPv6 Management Information Base
4311	IPv6 Host-to-Router Load Sharing
4330	Simple Network Time Protocol (SNTP) Version 4 for IPv4, IPv6, and OSI
4338	Transmission of IPv6, IPv4, and Address Resolution Protocol (ARP) Packets over Fibre Channel
4472	Operational Considerations and Issues with IPv6 DNS
4942	IPv6 Transition/Coexistence Security Considerations