

List of TCP and UDP port numbers

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This is a **list of TCP and UDP port numbers** used by protocols for operation of network applications. The Transmission Control Protocol (TCP) and the User Datagram Protocol (UDP) only need one port for duplex, bidirectional traffic. They usually use port numbers that match the services of the corresponding TCP or UDP implementation, if they exist.

The Internet Assigned Numbers Authority (IANA) is responsible for maintaining the official assignments of port numbers for specific uses.^[1] However, many unofficial uses of both well-known and registered port numbers occur in practice. Similarly, many of the official assignments refer to protocols that were never or are no longer in common use. This article lists port numbers and their associated protocols that have experienced significant uptake.

Table legend

Legend of TCP and UDP protocol table cells for port numbers

Cell	Description
Yes	Described protocol <i>is</i> assigned by IANA for this port, and <i>is</i> : standardized, specified, or widely used for such.
Unofficial	Described protocol <i>is not</i> assigned by IANA for this port, but <i>is</i> : standardized, specified, or widely used for such.
Assigned	Described protocol <i>is</i> assigned by IANA for this port, ^[2] but <i>is not</i> : standardized, specified, or widely used for such.
No	Described protocol <i>is not</i> : assigned by IANA for this port, standardized, specified, or widely used for such.
Reserved	Port is reserved by IANA, ^[2] generally to prevent collision having its previous use removed. ^{[3][4]} The port number may be available for assignment upon request to IANA. ^[3]

Well-known ports

The port numbers in the range from 0 to 1023 (0 to $2^{10} - 1$) are the *well-known ports* or *system ports*.^[3] They are used by system processes that provide widely used types of network services. On Unix-like operating systems, a process must execute with superuser privileges to be able to bind a network socket to an IP address using one of the well-known ports.^[5]

Well-known ports

Port	TCP	UDP	SCTP	DCCP	Description
0	Reserved				In programming APIs (not in communication between hosts), requests a system-allocated (dynamic) port ^[6]
1	Yes	Assigned			TCP Port Service Multiplexer (TCPMUX). Historic. Both TCP and UDP have been assigned to TCPMUX by IANA, ^[2] but by design only TCP is specified. ^[7]
2	Assigned				compressnet (Management Utility) ^[3]
3	Assigned				compressnet (Compression Process) ^[3]
5	Assigned				Remote Job Entry ^[8] was historically using socket 5 in its old socket form, while MIB PIM has identified it as TCP/5 ^[9] and IANA has assigned both TCP and UDP 5 to it.
7	Yes				Echo Protocol ^{[10][11]}
9	Yes		Yes ^[12]	Assigned	Discard Protocol ^[13]
	No	Unofficial			Wake-on-LAN ^[14]
11	Yes				Active Users (systat service) ^{[15][16]}
13	Yes				Daytime Protocol ^[17]
15	Unofficial	No			Previously netstat service ^{[2][15]}
17	Yes				Quote of the Day (QOTD) ^[18]
18	Yes				Message Send Protocol ^{[19][20]}
19	Yes				Character Generator Protocol (CHARGEN) ^[21]
20	Yes	Assigned	Yes ^[12]		File Transfer Protocol (FTP) data transfer ^[11]
21	Yes	Assigned	Yes ^[12]		File Transfer Protocol (FTP) control (command) ^{[11][12][22][23]}
22	Yes	Assigned	Yes ^[12]		Secure Shell (SSH), ^[11] secure logins, file transfers (scp, sftp) and port forwarding
23	Yes	Assigned			Telnet protocol—unencrypted text communications ^{[11][24]}
25	Yes	Assigned			Simple Mail Transfer Protocol (SMTP), ^{[11][25]} used for email routing between mail servers
27	Assigned				nsw-fe (NSW User System FE) ^[3]
28	Unofficial				Palo Alto Networks' Panorama High Availability (HA) sync encrypted port. ^[26]
29	Assigned				msg-icp (MSG ICP) ^[3]
31	Assigned				msg-auth (MSG Authentication) ^[3]
33	Assigned				dsp (Display Support Protocol) ^[3]
37	Yes				Time Protocol ^[27]
38	Assigned				rap (Route Access Protocol) ^[3]
38	Assigned				rlp (Resource Location Protocol) ^[3]

41	Assigned				graphics (Graphics) ^[3]
42	Assigned	Yes			Host Name Server Protocol ^[28]
43	Yes	Assigned			WHOIS protocol ^{[29][30][31]}
44	Assigned				mpm-flags (MPM FLAGS Protocol) ^[3]
45	Assigned				mpm (Message Processing Module [recv]) ^[3]
46	Assigned				mpm-snd (MPM [default send]) ^[3]
47	Reserved	Reserved			
48	Assigned				auditd (Digital Audit Daemon) ^[3]
49	Yes				TACACS Login Host protocol. ^[32] TACACS+, still in draft which is an improved but distinct version of TACACS, only uses TCP 49. ^[33]
50	Assigned				re-mail-ck (Remote Mail Checking Protocol) ^[3]
51	Reserved	Reserved			Historically used for <u>Interface Message Processor</u> logical address management, ^[34] entry has been removed by IANA on 2013-05-25
52	Assigned				Xerox Network Systems (XNS) Time Protocol. Despite this port being assigned by IANA, the service is meant to work on SPP (ancestor of IPX/SPX), instead of TCP/IP. ^[35]
53	Yes	Yes			Domain Name System (DNS) ^{[36][11]}
54	Assigned				Xerox Network Systems (XNS) Clearinghouse (Name Server). Despite this port being assigned by IANA, the service is meant to work on SPP (ancestor of IPX/SPX), instead of TCP/IP. ^[35]
55	Assigned				isi-gl (ISI Graphics Language) ^[3]
56	Assigned				Xerox Network Systems (XNS) Authentication Protocol. Despite this port being assigned by IANA, the service is meant to work on SPP (ancestor of IPX/SPX), instead of TCP/IP. ^[35]
58	Assigned				Xerox Network Systems (XNS) Mail. Despite this port being assigned by IANA, the service is meant to work on SPP (ancestor of IPX/SPX), instead of TCP/IP. ^[35]
61	Reserved	Reserved			Historically assigned to the NIFTP-Based Mail protocol, ^[37] but was never documented in the related IEN. ^[38] The port number entry was removed from IANA's registry on 2017-05-18. ^[2]
62	Assigned				acas (ACA Services) ^[3]
63	Assigned				whoispp (whois++) ^[3]
64	Assigned				covia (Communications Integrator (CI)) ^[3]
65	Assigned				tacacs-ds (TACACS-Database Service) ^[3]
66	Assigned				sql-net (Oracle SQL*NET) ^[3]
67	Assigned	Yes			Bootstrap Protocol (BOOTP) server; ^[11] also used by <u>Dynamic Host Configuration Protocol</u> (DHCP)

68	Assigned	Yes			Bootstrap Protocol (BOOTP) client; ^[11] also used by Dynamic Host Configuration Protocol (DHCP)
69	Assigned	Yes			Trivial File Transfer Protocol (TFTP) ^{[11][39][40][41]}
70	Yes	Assigned			Gopher protocol ^[42]
71–74	Yes	Yes			NETRJS protocol ^{[43][44][45]}
76	Assigned				deos (Distributed External Object Store) ^[3]
78	Assigned				vettcp (vettcp) ^[3]
79	Yes	Assigned			Finger protocol ^{[11][46][47]}
80	Yes	Yes	Yes ^[12]		Hypertext Transfer Protocol (HTTP) ^{[48][49]} uses TCP in versions 1.x and 2. HTTP/3 uses QUIC, ^[50] a transport protocol on top of UDP.
81	Unofficial				TorPark onion routing
82	Assigned				xfer (XFER Utility) ^[3]
82		Unofficial			TorPark control
83	Assigned				mit-ml-dev (MIT ML Device) ^[3]
84	Assigned				ctf (Common Trace Facility) ^[3]
85	Assigned				mit-ml-dev (MIT ML Device) ^[3]
86	Assigned				mfcobol (Micro Focus Cobol) ^[3]
88	Yes	Yes			Kerberos ^{[11][51][52]} authentication system
89	Assigned				su-mit-tg (SU/MIT Telnet Gateway) ^[3]
90	Assigned				dnsix (DNSIX Security Attribute Token Map) ^[3]
90	Unofficial	Unofficial			PointCast (dotcom) ^[2]
91	Assigned				mit-dov (MIT Dover Spooler) ^[3]
92	Assigned				npp (Network Printing Protocol) ^[3]
93	Assigned				dcp (Device Control Protocol) ^[3]
94	Assigned				objcall (Tivoli Object Dispatcher) ^[3]
95	Yes	Assigned			SUPDUP, terminal-independent remote login ^[53]
96	Assigned				dixie (DIXIE Protocol Specification) ^[3]
97	Assigned				swift-rvf (Swift Remote Virtual File Protocol) ^[3]
98	Assigned				tacnews (TAC News) ^[3]
99	Assigned				metagram (Metagram Relay) ^[3]
101	Yes	Assigned			NIC host name ^[54]
102	Yes	Assigned			ISO Transport Service Access Point (TSAP) Class 0 protocol; ^{[55][56]}
104	Yes	Yes			Digital Imaging and Communications in Medicine (DICOM; also port 11112)
105	Yes	Yes			CCSO Nameserver ^[57]

106	Unofficial	No			<u>macOS Server</u> , (macOS) password server ^[11]
107	Yes	Yes			<u>Remote User Telnet Service</u> (RTelnet) ^[58]
108	Yes	Yes			<u>IBM Systems Network Architecture</u> (SNA) gateway access server
109	Yes	Assigned			<u>Post Office Protocol</u> , version 2 (POP2) ^[59]
110	Yes	Assigned			<u>Post Office Protocol</u> , version 3 (POP3) ^{[11][60][61]}
111	Yes	Yes			<u>Open Network Computing Remote Procedure Call</u> (ONC RPC, sometimes referred to as Sun RPC)
113	Yes	No			<u>Ident</u> , authentication service/identification protocol, ^{[11][62]} used by <u>IRC</u> servers to identify users
	Yes	Assigned			<u>Authentication Service</u> (auth), the predecessor to <i>identification protocol</i> . Used to determine a user's identity of a particular TCP connection. ^[63]
115	Yes	Assigned			<u>Simple File Transfer Protocol</u> ^[64]
117	Yes	Yes			<u>UUCP Mapping Project</u> (path service)
118	Yes	Yes			<u>Structured Query Language</u> (SQL) Services
119	Yes	Assigned			<u>Network News Transfer Protocol</u> (NNTP), ^[11] retrieval of newsgroup messages ^{[65][66]}
123	Assigned	Yes			<u>Network Time Protocol</u> (NTP), used for time synchronization ^[11]
126	Yes	Yes			Formerly <u>Unisys Unitary Login</u> , renamed by Unisys to NXEdit. Used by Unisys Programmer's Workbench for Clearpath MCP, an IDE for <u>Unisys MCP software development</u>
135	Yes	Yes			<u>DCE endpoint</u> resolution
	Yes	Yes			<u>Microsoft EPMAP</u> (End Point Mapper), also known as <u>DCE/RPC Locator service</u> , ^[67] used to remotely manage services including <u>DHCP server</u> , <u>DNS server</u> and <u>WINS</u> . Also used by <u>DCOM</u>
137	Yes	Yes			<u>NetBIOS Name Service</u> , used for name registration and <u>resolution</u> ^{[68][69]}
138	Assigned	Yes			<u>NetBIOS Datagram Service</u> ^{[11][68][69]}
139	Yes	Assigned			<u>NetBIOS Session Service</u> ^{[68][69]}
143	Yes	Assigned			<u>Internet Message Access Protocol</u> (IMAP), ^[11] management of <u>electronic mail</u> messages on a server ^[70]
151	Assigned				<u>HEMS</u>
152	Yes	Yes			<u>Background File Transfer Program</u> (BFTP) ^[71]
153	Yes	Yes			<u>Simple Gateway Monitoring Protocol</u> (SGMP), a protocol for remote inspection and alteration of gateway management information ^[72]
156	Yes	Yes			<u>Structured Query Language</u> (SQL) Service
158	Yes	Yes			<u>Distributed Mail System Protocol</u> (DMSP, sometimes referred to as Pcmal) ^[73]

161	Assigned	Yes			<u>Simple Network Management Protocol (SNMP)</u> ^{[74][11]}
162	Yes	Yes			<u>Simple Network Management Protocol Trap (SNMPTRAP)</u> ^{[74][75]}
165	Assigned				<u>Xerox</u>
169	Assigned				<u>SEND</u>
170	Yes	Yes			Network <u>PostScript</u> print server
177	Yes	Yes			<u>X Display Manager Control Protocol (XDMCP)</u> , used for remote logins to an <u>X Display Manager</u> server ^[76]
179	Yes	Assigned	Yes ^[12]		<u>Border Gateway Protocol (BGP)</u> , ^[77] used to exchange routing and reachability information among autonomous systems (AS) on the <u>Internet</u>
180	Assigned				<u>ris</u>
194	Yes	Yes			<u>Internet Relay Chat (IRC)</u> ^[78]
199	Yes	Yes			<u>SNMP Unix Multiplexer (SMUX)</u> ^[79]
201	Yes	Yes			<u>AppleTalk</u> Routing Maintenance
209	Yes	Assigned			<u>Quick Mail Transfer Protocol</u> ^[80]
210	Yes	Yes			<u>ANSI Z39.50</u>
213	Yes	Yes			<u>Internetwork Packet Exchange (IPX)</u>
218	Yes	Yes			Message posting protocol (MPP)
220	Yes	Yes			<u>Internet Message Access Protocol (IMAP)</u> , version 3
225–241	Reserved	Reserved			
249–255	Reserved	Reserved			
259	Yes	Yes			Efficient Short Remote Operations (ESRO)
262	Yes	Yes			Arcisdms
264	Yes	Yes			<u>Border Gateway Multicast Protocol (BGMP)</u>
280	Yes	Yes			http-mgmt
300	Unofficial				<u>ThinLinc</u> Web Access
308	Yes				Novastor Online Backup
311	Yes	Assigned			<u>macOS Server Admin</u> ^[11] (officially <u>AppleShare</u> IP Web administration ^[2])
312	Unofficial	No			<u>macOS Xsan</u> administration ^[11]
318	Yes	Yes			PKIX <u>Time Stamp Protocol (TSP)</u>
319		Yes			<u>Precision Time Protocol (PTP)</u> event messages
320		Yes			<u>Precision Time Protocol (PTP)</u> general messages
350	Yes	Yes			<u>Mapping of Airline Traffic over Internet Protocol (MATIP)</u> type A
351	Yes	Yes			MATIP type B
356	Yes	Yes			cloanto-net-1 (used by Cloanto Amiga Explorer and VMs)

366	Yes	Yes			On-Demand Mail Relay (ODMR)
369	Yes	Yes			Rpc2portmap
370	Yes	Yes			codauth2, Coda authentication server
		Yes			securecast1, outgoing packets to <u>NAI's SecureCast servers</u> ^[81] As of 2000
371	Yes	Yes			ClearCase albd
376	Yes	Yes			<u>Amiga Envoy Network Inquiry Protocol</u>
383	Yes	Yes			HP data alarm manager
384	Yes	Yes			A Remote Network Server System
387	Yes	Yes			AURP (<u>AppleTalk Update-based Routing Protocol</u>) ^[82]
388	Yes	Assigned			Unidata LDM near real-time data distribution protocol ^{[83][84]}
389	Yes	Assigned			<u>Lightweight Directory Access Protocol (LDAP)</u> ^[11]
399	Yes	Yes			<u>Digital Equipment Corporation DECnet+ (Phase V) over TCP/IP (RFC1859)</u>
401	Yes	Yes			<u>Uninterruptible power supply (UPS)</u>
427	Yes	Yes			<u>Service Location Protocol (SLP)</u> ^[11]
433	Yes	Yes			NNTP, part of <u>Network News Transfer Protocol</u>
434	Yes	Yes			<u>Mobile IP Agent (RFC 5944)</u>
443	Yes	Yes	Yes ^[12]		<u>Hypertext Transfer Protocol Secure (HTTPS)</u> ^{[48][49]} uses TCP in versions 1.x and 2. <u>HTTP/3</u> uses QUIC, ^[50] a transport protocol on top of UDP.
444	Yes	Yes			<u>Simple Network Paging Protocol (SNPP)</u> , RFC 1568
445	Yes	Yes			Microsoft-DS (Directory Services) <u>Active Directory</u> , ^[85] Windows shares
	Yes	Assigned			Microsoft-DS (Directory Services) <u>SMB</u> ^[11] file sharing
464	Yes	Yes			<u>Kerberos</u> Change/Set password
465 ^[note 1]	Yes	No			SMTP over implicit SSL (<i>obsolete</i>) ^[86]
	Yes	No			URL Rendezvous Directory for Cisco SSM (<i>primary usage assignment</i>) ^[87]
	Yes	No			Authenticated <u>SMTP</u> ^[11] over <u>TLS/SSL (SMTPS)</u> (<i>alternative usage assignment</i>) ^[88]
475	Yes	Yes			tcpnethasprv, <u>Aladdin Knowledge Systems</u> Hasp services
476–490	Unofficial	Unofficial			<u>Centro Software ERP</u> (https://www.centrosoftware.com/) ports
491	Unofficial				<u>GO-Global</u> remote access and application publishing software
497	Yes	Yes			<u>Retrospect</u>
500	Assigned	Yes			<u>Internet Security Association and Key Management</u>

					<u>Protocol (ISAKMP) / Internet Key Exchange (IKE)</u> ^[11]
502	Yes	Yes			<u>Modbus</u> Protocol
504	Yes	Yes			Citadel, multiservice protocol for dedicated clients for the Citadel groupware system
510	Yes	Yes			FirstClass Protocol (FCP), used by <u>FirstClass</u> client/server groupware system
512	Yes				<u>Rexec</u> , Remote Process Execution
		Yes			comsat, together with <u>biff</u>
513	Yes				<u>rlogin</u>
		Yes			<u>Who</u> ^[89]
514	Unofficial				Remote Shell, used to execute non-interactive commands on a remote system (Remote Shell, rsh, remsh)
	No	Yes			<u>Syslog</u> , ^[11] used for system logging
515	Yes	Assigned			<u>Line Printer Daemon (LPD)</u> , ^[11] print service
517		Yes			<u>Talk</u>
518		Yes			NTalk
520	Yes				efs, extended file name server
		Yes			<u>Routing Information Protocol (RIP)</u>
521		Yes			<u>Routing Information Protocol Next Generation (RIPng)</u>
524	Yes	Yes			<u>NetWare Core Protocol (NCP)</u> is used for a variety things such as access to primary NetWare server resources, Time Synchronization, etc.
525		Yes			Timed, <u>Timeserver</u>
530	Yes	Yes			<u>Remote procedure call (RPC)</u>
532	Yes	Assigned			netnews ^[11]
533		Yes			netwall, for emergency broadcasts
540	Yes				Unix-to-Unix Copy Protocol (<u>UUCP</u>)
542	Yes	Yes			<u>commerce</u> (Commerce Applications)
543	Yes				klogin, <u>Kerberos</u> login
544	Yes				kshell, Kerberos Remote shell
546	Yes	Yes			<u>DHCPv6</u> client
547	Yes	Yes			DHCPv6 server
548	Yes	Assigned			<u>Apple Filing Protocol (AFP)</u> over <u>TCP</u> ^[11]
550	Yes	Yes			new-rwho, new-who ^[89]
554	Yes	Yes			<u>Real Time Streaming Protocol (RTSP)</u> ^[11]
556	Yes				Remotefs, <u>RFS</u> , rfs_server
560		Yes			rmonitor, Remote Monitor
561		Yes			monitor

563	Yes	Yes			<u>NNTP over TLS/SSL (NNTPS)</u>
564	Unofficial				<u>9P (Plan 9)</u>
585	No	No			Previously assigned for use of Internet Message Access Protocol over <u>TLS/SSL (IMAPS)</u> , now deregistered in favour of port 993. ^[90]
587	Yes	Assigned			<u>email message submission</u> ^{[11][91]} (<u>SMTP</u>)
591	Yes				<u>FileMaker 6.0 (and later) Web Sharing (HTTP Alternate, also see port 80)</u>
593	Yes	Yes			<u>HTTP RPC Ep Map, Remote procedure call over Hypertext Transfer Protocol</u> , often used by <u>Distributed Component Object Model services</u> and <u>Microsoft Exchange Server</u>
601	Yes				Reliable <u>Syslog Service</u> — used for system logging
604	Yes				<u>TUNNEL profile</u> , ^[92] a protocol for <u>BEEP peers</u> to form an <u>application layer tunnel</u>
623		Yes			<u>ASF Remote Management and Control Protocol (ASF-RMCP)</u> & <u>IPMI Remote Management Protocol</u>
625	Unofficial	No			<u>Open Directory Proxy (ODProxy)</u> ^[11]
631	Yes	Yes			<u>Internet Printing Protocol (IPP)</u> ^[11]
	Unofficial	Unofficial			<u>Common Unix Printing System (CUPS) administration console (extension to IPP)</u>
635	Yes	Yes			<u>RLZ DBase</u>
636	Yes	Assigned			<u>Lightweight Directory Access Protocol over TLS/SSL (LDAPS)</u> ^[11]
639	Yes	Yes			<u>Multicast Source Discovery Protocol, MSDP</u>
641	Yes	Yes			<u>SupportSoft Nexus Remote Command (control/listening)</u> , a proxy gateway connecting remote control traffic
643	Yes	Yes			<u>SANity</u>
646	Yes	Yes			<u>Label Distribution Protocol (LDP)</u> , a routing protocol used in <u>MPLS networks</u>
647	Yes				<u>DHCP Failover protocol</u> ^[93]
648	Yes				<u>Registry Registrar Protocol (RRP)</u> ^[94]
651	Yes	Yes			<u>IEEE-MMS</u>
653	Yes	Yes			<u>SupportSoft Nexus Remote Command (data)</u> , a proxy gateway connecting remote control traffic
654	Yes				<u>Media Management System (MMS) Media Management Protocol (MMP)</u> ^[95]
655	Yes	Yes			<u>Tinc VPN daemon</u>
657	Yes	Yes			<u>IBM RMC (Remote monitoring and Control) protocol</u> , used by <u>System p5 AIX Integrated Virtualization Manager (IVM)</u> ^[96] and <u>Hardware Management Console to connect managed logical partitions (LPAR)</u> to enable dynamic partition reconfiguration

660	Yes	Assigned			<u>macOS Server</u> administration, ^[2] version 10.4 and earlier ^[11]
666	Yes	Yes			<u>Doom</u> , the first online <u>first-person shooter</u>
	Unofficial				<u>airserv-ng</u> (http://www.aircrack-ng.org/doku.php?id=airserv-ng), <u>aircrack-ng</u> 's server for remote-controlling wireless devices
674	Yes				<u>Application Configuration Access Protocol</u> (ACAP)
688	Yes	Yes			REALM-RUSD (ApplianceWare Server Appliance Management Protocol)
690	Yes	Yes			Velneo Application Transfer Protocol (VATP)
691	Yes				<u>MS Exchange</u> Routing
694	Yes	Yes			<u>Linux-HA</u> high-availability heartbeat
695	Yes				<u>IEEE Media Management System over SSL</u> (IEEE-MMS-SSL) ^[97]
698		Yes			<u>Optimized Link State Routing</u> (OLSR)
700	Yes				<u>Extensible Provisioning Protocol</u> (EPP), a protocol for communication between <u>domain name registries</u> and <u>registrars</u> (RFC 5734)
701	Yes				<u>Link Management Protocol</u> (LMP), ^[98] a protocol that runs between a pair of <u>nodes</u> and is used to manage <u>traffic engineering</u> (TE) <u>links</u>
702	Yes				<u>IRIS</u> ^{[99][100]} (Internet Registry Information Service) over <u>BEEP</u> (Blocks Extensible Exchange Protocol) ^[101] (RFC 3983)
706	Yes				<u>Secure Internet Live Conferencing</u> (SILC)
711	Yes				<u>Cisco Tag Distribution Protocol</u> ^{[102][103][104]} —being replaced by the MPLS <u>Label Distribution Protocol</u> ^[105]
712	Yes				<u>Topology Broadcast based on Reverse-Path Forwarding routing protocol</u> (TBRPF; RFC 3684)
749	Yes	Yes			Kerberos administration ^[11]
750		Yes			kerberos-iv, <u>Kerberos</u> version IV
751	Unofficial	Unofficial			kerberos_master, Kerberos authentication
752		Unofficial			passwd_server, Kerberos password (kpasswd) server
753	Yes	Yes			<u>Reverse Routing Header</u> (RRH) ^[106]
		Unofficial			userreg_server, Kerberos userreg server
754	Yes	Yes			tell send
	Unofficial				krb5_prop, Kerberos v5 slave propagation
760	Unofficial	Unofficial			krbupdate [kreg], Kerberos registration
782	Unofficial				<u>Conserver</u> serial-console management server
783	Unofficial				<u>SpamAssassin</u> spamd daemon
800	Yes	Yes			mdbs-daemon
802	Yes	Yes			<u>MODBUS/TCP Security</u> ^[107]

808	Unofficial				Microsoft Net.TCP Port Sharing Service
829	Yes	Assigned			Certificate Management Protocol ^[108]
830	Yes	Yes			NETCONF over <u>SSH</u>
831	Yes	Yes			NETCONF over <u>BEEP</u>
832	Yes	Yes			NETCONF for <u>SOAP</u> over <u>HTTPS</u>
833	Yes	Yes			NETCONF for SOAP over BEEP
843	Unofficial				Adobe Flash ^[109]
847	Yes				DHCP Failover protocol
848	Yes	Yes			Group Domain Of Interpretation (GDOI) protocol
853	Yes				DNS over <u>TLS</u> (RFC 7858)
		Yes			DNS over QUIC or DNS over DTLS ^[110]
860	Yes				iSCSI (RFC 3720)
861	Yes	Yes			OWAMP control (RFC 4656)
862	Yes	Yes			TWAMP control (RFC 5357)
873	Yes				<u>rsync</u> file synchronization protocol
888	Unofficial				cddbp, <u>CD DataBase</u> (CDDb) protocol (CDDbP)
	Unofficial				IBM Endpoint Manager Remote Control
897	Unofficial	Unofficial			<u>Brocade SMI-S</u> RPC
898	Unofficial	Unofficial			Brocade SMI-S RPC SSL
902	Unofficial	Unofficial			<u>VMware ESXi</u> ^{[111][112]}
903	Unofficial				VMware ESXi ^{[111][112]}
953	Yes	Reserved			<u>BIND</u> remote name daemon control (RNDC) ^{[113][114]}
981	Unofficial				Remote HTTPS management for firewall devices running embedded <u>Check Point VPN-1</u> software ^[115]
987		Unofficial			Sony PlayStation Wake On Lan
	Unofficial				Microsoft Remote Web Workplace, a feature of <u>Windows Small Business Server</u> ^[116]
988	Unofficial				<u>Lustre</u> (file system) ^[117] Protocol (data).
989	Yes	Yes			<u>FTPS</u> Protocol (data), <u>FTP</u> over <u>TLS/SSL</u>
990	Yes	Yes			FTPS Protocol (control), FTP over TLS/SSL
991	Yes	Yes			<u>Netnews</u> Administration System (NAS) ^[118]
992	Yes	Yes			<u>Telnet</u> protocol over TLS/SSL
993	Yes	Assigned			<u>Internet Message Access Protocol</u> over <u>TLS/SSL</u> (IMAPS) ^[11]
994	Reserved	Reserved			Previously assigned to <u>Internet Relay Chat</u> over <u>TLS/SSL</u> (IRCS), but was not used in common practice.
995	Yes	Yes			<u>Post Office Protocol 3</u> over <u>TLS/SSL</u> (POP3S) ^[11]

1010	Unofficial				ThinLinc web-based administration interface ^[119]
1011–1020	Reserved	Reserved			
1023	Reserved	Reserved			^[2]
	Unofficial	Unofficial			z/OS Network File System (NFS) (potentially ports 991–1023) ^{[78][79][120]}

Registered ports

The range of port numbers from 1024 to 49151 (2^{10} to $2^{14} + 2^{15} - 1$) are the registered ports. They are assigned by [IANA](#) for specific service upon application by a requesting entity.^[2] On most systems, registered ports can be used without superuser privileges.

Registered ports

Port	TCP	UDP	SCTP	DCCP	Description
1024	Reserved	Reserved			Reserved
1025	Yes	Yes			<u>Teradata database management system</u> (Teradata) server
1027	Reserved				Reserved
		Yes			Native IPv6 behind IPv4-to-IPv4 NAT Customer Premises Equipment (6a44) ^[121]
1028	Reserved ^[2]				
1029	Unofficial				Microsoft <u>DCOM</u> services
1058	Yes	Yes			nim, IBM <u>AIX Network Installation Manager</u> (NIM)
1059	Yes	Yes			nimreg, IBM AIX Network Installation Manager (NIM)
1080	Yes	Yes			<u>SOCKS</u> proxy
1085	Yes	Yes			<u>WebObjects</u> ^[11]
1098	Yes	Yes			rmiactivation, <u>Java remote method invocation</u> (RMI) activation
1099	Yes	Assigned			rmiregistry, Java remote method invocation (RMI) registry
1109	Reserved	Reserved			Reserved
1113	Assigned [note 2][122]	Yes ^[123]			<u>Licklider Transmission Protocol</u> (LTP) delay tolerant networking protocol
1119	Yes	Yes			<u>Battle.net chat/game protocol</u> , used by <u>Blizzard's</u> games ^[124]
1167	Yes	Yes	Yes		Cisco <u>IP SLA</u> (Service Assurance Agent)
1194	Yes	Yes			<u>OpenVPN</u>
1198	Yes	Yes			The <u>cajo project</u> Free dynamic transparent distributed computing in Java
1212	Unofficial	Unofficial			Equalsocial <u>Fediverse</u> protocol
1214	Yes	Yes			<u>Kazaa</u>
1220	Yes	Assigned			<u>QuickTime Streaming Server</u> administration ^[11]
1234	Yes	Yes			<u>Infoseek</u> search agent
		Unofficial			<u>VLC media player</u> default port for UDP/RTP stream
1241	Unofficial	Unofficial			<u>Nessus Security Scanner</u>
1270	Yes	Yes			Microsoft System Center Operations Manager (SCOM) (formerly Microsoft Operations Manager (MOM)) agent
1293	Yes	Yes			Internet Protocol Security (IPSec)
1311	Yes	Yes			Windows RxMon . exe
	Unofficial				Dell <u>OpenManage</u> HTTPS ^[125]
1314	Unofficial				<u>Festival Speech Synthesis System</u> server ^[126]
1319	Yes	Yes			AMX ICSP (Protocol for communications with AMX control systems devices)
<u>1337</u>	Yes	Yes			<u>Men&Mice DNS</u> ^[127]

	Unofficial				<u>Strapi</u> ^[128]
	Unofficial				<u>Sails.js</u> default port ^[129]
1341	Yes	Yes			Qubes (Manufacturing Execution System)
1344	Yes	Yes			<u>Internet Content Adaptation Protocol</u>
1352	Yes	Yes			IBM <u>Lotus Notes/Domino</u> (RPC) protocol
1360	Yes	Yes			<u>Mimer SQL</u>
1414	Yes	Yes			IBM <u>WebSphere MQ</u> (formerly known as <u>MQSeries</u>)
1417	Yes	Yes			<u>Timbuktu</u> Service 1 Port
1418	Yes	Yes			Timbuktu Service 2 Port
1419	Yes	Yes			Timbuktu Service 3 Port
1420	Yes	Yes			Timbuktu Service 4 Port
1431	Yes				<u>Reverse Gossip Transport Protocol</u> (RGTP), used to access a General-purpose Reverse-Ordered Gossip Gathering System (GROGGS) bulletin board, such as that implemented on the <u>Cambridge University's Phoenix system</u>
1433	Yes	Yes			Microsoft SQL Server <u>database management system</u> (MSSQL) server
1434	Yes	Yes			Microsoft SQL Server <u>database management system</u> (MSSQL) monitor
1476	Yes	Yes			WiFi Pineapple Hak5.
1481	Yes	Yes			AIRS data interchange.
1492	Unofficial				<i><u>Sid Meier's CivNet</u></i> , a multiplayer remake of the original <i><u>Sid Meier's Civilization</u></i> game
1494	Unofficial	Unofficial			Citrix <u>Independent Computing Architecture</u> (ICA) ^[130]
1500	Unofficial				IBM <u>Tivoli Storage Manager</u> server ^[131]
1501	Unofficial				IBM <u>Tivoli Storage Manager</u> client scheduler ^[131]
1503	Unofficial	Unofficial			<u>Windows Live Messenger</u> (Whiteboard and Application Sharing) ^[132]
1512	Yes	Yes			Microsoft's <u>Windows Internet Name Service</u> (WINS)
1513	Unofficial	Unofficial			<u>Garena</u> game client
1521	Yes	Yes			<u>nCUBE</u> License Manager
	Unofficial				Oracle database default listener, in future releases ^[133] official port 2483 (TCP/IP) and 2484 (TCP/IP with SSL)
1524	Yes	Yes			ingreslock, <u>ingres</u>
1527	Yes	Yes			<u>Oracle Net Services</u> , formerly known as SQL*Net ^[134]
	Unofficial				<u>Apache Derby Network Server</u> ^[135]
1533	Yes	Yes			IBM <u>Sametime</u> Virtual Places Chat
1534	No	Unofficial			Eclipse Target Communication Framework ^[136]
1540	Unofficial	Unofficial			<u>1C:Enterprise</u> server agent (ragent) ^{[137][138]}

1541	Unofficial	Unofficial			1C:Enterprise master cluster manager (rmngr) ^[137]
1542	Unofficial	Unofficial			1C:Enterprise configuration repository server ^[137]
1545	Unofficial	Unofficial			1C:Enterprise cluster administration server (RAS) ^[137]
1547	Yes	Yes			<u>Laplink</u>
1550	Unofficial	Unofficial			1C:Enterprise debug server ^[137]
	Unofficial				<u>Gadu-Gadu</u> (direct client-to-client)
1560–1590	Unofficial	Unofficial			1C:Enterprise cluster working processes ^[137]
1581	Yes	Yes			<u>MIL STD 2045-47001 VMF</u>
	Unofficial				<u>IBM Tivoli Storage Manager</u> web client ^[131]
1582–1583	Unofficial				IBM Tivoli Storage Manager server web interface ^[131]
1583	Unofficial				<u>Pervasive PSQ</u> ^[139]
1589	Yes	Yes			Cisco VLAN Query Protocol (<u>VQP</u>)
1604	Unofficial	Unofficial			<u>DarkComet</u> remote administration tool (RAT)
1626	Unofficial				<u>iSketch</u> ^[140]
1627	Unofficial				<u>iSketch</u> ^[140]
1628	Yes	Yes			<u>LonTalk</u> normal
1629	Yes	Yes			LonTalk urgent
1645	No	Unofficial			Early deployment of <u>RADIUS</u> before RFC standardization was done using UDP port number 1645. Enabled for compatibility reasons by default on Cisco and Juniper Networks RADIUS servers. ^[141] Official port is 1812. TCP port 1645 MUST NOT be used. ^[142]
1646	No	Unofficial			Old radacct port, RADIUS accounting protocol. Enabled for compatibility reasons by default on Cisco and Juniper Networks RADIUS servers. ^[141] Official port is 1813. TCP port 1646 MUST NOT be used. ^[142]
1666	Unofficial				<u>Perforce</u> ^[143]
1677	Yes	Yes			<u>Novell GroupWise</u> clients in client/server access mode
1688	Unofficial				Microsoft Key Management Service (<u>KMS</u>) for Windows Activation ^[144]
1701	Yes	Yes			<u>Layer 2 Forwarding Protocol</u> (L2F)
	Assigned	Yes			<u>Layer 2 Tunneling Protocol</u> (L2TP) ^[11]
1707	Yes	Yes			<u>Windward Studios</u> games (vdmplay)
		Unofficial			L2TP/IPsec, for establish an initial connection ^[145]
1714–1764	Unofficial	Unofficial			<u>KDE Connect</u> ^[146]
1716		Unofficial			<u>America's Army</u> , a massively multiplayer online game (MMO) ^[147]
1719	Yes	Yes			<u>H.323</u> registration and alternate communication

1720	Yes	Yes			<u>H.323</u> call signaling
1723	Yes	Assigned			<u>Point-to-Point Tunneling Protocol (PPTP)</u> ^[11]
1755	Yes	Yes			<u>Microsoft Media Services (MMS, ms-streaming)</u>
1761	Unofficial	Unofficial			<u>Novell ZENworks</u> ^{[148][149]}
1776	Yes				<u>Emergency management information system</u>
1783	Reserved				"Decommissioned [<i>sic</i>] Port 04/14/00, ms" ^[2]
1801	Yes	Yes			<u>Microsoft Message Queuing</u>
1812	Yes	Yes			<u>RADIUS</u> authentication protocol, radius
1813	Yes	Yes			<u>RADIUS</u> accounting protocol, radius-acct
1863	Yes	Yes			<u>Microsoft Notification Protocol (MSNP)</u> , used by the <u>Microsoft Messenger service</u> and a number of instant messaging <u>Messenger clients</u>
1880	Unofficial				<u>Node-RED</u> ^[150]
1883	Yes	Yes			<u>MQTT</u> (formerly MQ Telemetry Transport)
1900	Assigned	Yes			<u>Simple Service Discovery Protocol (SSDP)</u> , ^[11] discovery of <u>UPnP</u> devices
1935	Yes	Yes			<u>Macromedia Flash Communications Server MX</u> , the precursor to <u>Adobe Flash Media Server</u> before <u>Macromedia's</u> acquisition by <u>Adobe</u> on December 3, 2005
	Unofficial	Unofficial			<u>Real Time Messaging Protocol (RTMP)</u> , primarily used in <u>Adobe Flash</u> ^[151]
1965	Unofficial	No			<u>Gemini</u> , a lightweight, collaboratively designed protocol, striving to fill the gap between <u>Gopher</u> and <u>HTTP</u> ^[152]
1967		Unofficial			<u>Cisco IOS IP Service Level Agreements (IP SLAs) Control Protocol</u>
1972	Yes	Yes			<u>InterSystems Caché</u> , and <u>InterSystems IRIS</u> versions 2020.3 and later
1984	Yes	Yes			<u>Big Brother</u>
1985	Assigned	Yes			<u>Cisco Hot Standby Router Protocol (HSRP)</u> ^[153]
1998	Yes	Yes			<u>Cisco X.25 over TCP (XOT) service</u>
2000	Yes	Yes			<u>Cisco Skinny Client Control Protocol (SCCP)</u>
2010	Unofficial				<u>Artemis: Spaceship Bridge Simulator</u> ^[154]
2033	Unofficial	Unofficial			<u>Civilization IV</u> multiplayer ^[155]
2049	Yes	Yes	Yes		<u>Network File System (NFS)</u> ^[11]
2056	Unofficial	Unofficial			<u>Civilization IV</u> multiplayer ^[155]
2080	Yes	Yes			<u>Autodesk NLM (FLEXlm)</u>
2082	Unofficial				<u>cPanel</u> default ^[156]
2083	Yes	Yes			Secure <u>RADIUS</u> Service (radsec)
	Unofficial				<u>cPanel</u> default <u>SSL</u> ^[156]
2086	Yes	Yes			<u>GNUnet</u>

	Unofficial				<u>WebHost Manager</u> default ^[156]
2087	Unofficial				<u>WebHost Manager</u> default <u>SSL</u> ^[156]
2095	Yes				<u>cPanel</u> default web mail ^[156]
2096	Unofficial				<u>cPanel</u> default <u>SSL</u> web mail ^[156]
2100	Unofficial				<u>Warzone 2100</u> multiplayer
2101	Unofficial				<u>Networked Transport of RTCM via Internet Protocol (NTRIP)</u>
2102	Yes	Yes			<u>Zephyr Notification Service</u> server
2103	Yes	Yes			<u>Zephyr Notification Service</u> serv - hm connection
2104	Yes	Yes			<u>Zephyr Notification Service</u> hostmanager
2123	Yes	Yes			<u>GTP</u> control messages (GTP-C)
2142	Yes	Yes			<u>TDMoIP</u> (TDM over IP)
2152	Yes	Yes			<u>GTP</u> user data messages (GTP-U)
2159	Yes	Yes			<u>GDB</u> remote debug port
2181	Yes	Yes			<u>EForward</u> -document transport system
	Unofficial				<u>Apache ZooKeeper</u> default client port
2195	Unofficial				<u>Apple Push Notification Service</u> , binary, gateway. ^{[11][157]} Deprecated March 2021. ^[158]
2196	Unofficial				<u>Apple Push Notification Service</u> , binary, feedback. ^{[11][157]} Deprecated March 2021. ^[158]
2197	Unofficial				<u>Apple Push Notification Service</u> , <u>HTTP/2</u> , <u>JSON</u> -based API.
2210	Yes	Yes			<u>NOAAPORT</u> Broadcast Network
2211	Yes	Yes			<u>EMWIN</u>
2221	Unofficial				<u>ESET</u> anti-virus updates ^[159]
2222	Yes	Yes			<u>EtherNet/IP</u> implicit messaging for IO data
	Unofficial				<u>DirectAdmin</u> Access ^[160]
2222–2226	Yes				<u>ESET</u> Remote administrator ^[159]
2240	Yes	Yes			General Dynamics Remote Encryptor Configuration Information Protocol (RECIPe)
2261	Yes	Yes			<u>CoMotion</u> master
2262	Yes	Yes			<u>CoMotion</u> backup
2302		Unofficial			<u>ArmA</u> multiplayer ^[161]
		Unofficial			<u>Halo: Combat Evolved</u> multiplayer host ^[162]
2303		Unofficial			<u>ArmA</u> multiplayer (<i>default port for game +1</i>) ^[161]
		Unofficial			<u>Halo: Combat Evolved</u> multiplayer listener ^[162]
2305		Unofficial			<u>ArmA</u> multiplayer (<i>default port for game +3</i>) ^[161]
2351	Unofficial				<u>AIM</u> game LAN network port

2368	Unofficial				<u>Ghost (blogging platform)</u> ^[163]
2369	Unofficial				Default for <u>BMC Control-M/Server Configuration Agent</u>
2370	Unofficial				Default for BMC Control-M/Server, to allow the Control-M/Enterprise Manager to connect to the Control-M/Server
2372	Unofficial				Default for <u>K9 Web Protection</u> /parental controls, content filtering agent
2375	Yes	Reserved			<u>Docker</u> REST API (plain)
2376	Yes	Reserved			Docker REST API (SSL)
2377	Yes	Reserved			Docker Swarm cluster management communications ^[164]
2379	Yes	Reserved			CoreOS <u>etcd</u> client communication
	Unofficial				<u>KGS Go Server</u> ^[165]
2380	Yes	Reserved			CoreOS etcd server communication
2389	Assigned				OpenView Session Mgr
2399	Yes	Yes			<u>FileMaker</u> Data Access Layer (ODBC/JDBC)
2401	Yes	Yes			<u>CVS</u> version control system password-based server
2404	Yes	Yes			IEC 60870-5-104, used to send electric power telecontrol messages between two systems via directly connected data circuits
2424	Unofficial				<u>OrientDB</u> database listening for binary client connections ^[166]
2427	Yes	Yes			<u>Media Gateway Control Protocol</u> (MGCP) media gateway
2447	Yes	Yes			ovwdb— <u>OpenView Network Node Manager</u> (NNM) daemon
2456	Unofficial	Unofficial			<u>Valheim</u>
2459	Yes	Yes			<u>XRPL</u>
2480	Unofficial				<u>OrientDB</u> database listening for HTTP client connections ^[166]
2483	Yes	Yes			<u>Oracle database</u> listening for insecure client connections to the listener, replaces port 1521
2484	Yes	Yes			Oracle database listening for <u>SSL</u> client connections to the listener
2500	Unofficial	Unofficial			NetFS communication ^[167]
2501		Unofficial			NetFS probe
2535	Yes	Yes			<u>Multicast Address Dynamic Client Allocation Protocol</u> (MADCAP). ^[168] All standard messages are UDP datagrams. ^[169]
2541	Yes	Yes			<u>LonTalk/IP</u>
2546–2548	Yes	Yes			<u>EVault</u> data protection services
2593	Unofficial	Unofficial			<u>Ultima Online</u> servers
2598	Unofficial				Citrix <u>Independent Computing Architecture</u> (ICA) with Session Reliability; port 1494 without session reliability ^[130]
2599	Unofficial	Unofficial			<u>Ultima Online</u> servers

2628	Yes	Yes			<u>DICT</u> ^[170]
2638	Yes	Yes			<u>SQL Anywhere</u> database server ^{[171][172]}
2710	Unofficial	Unofficial			<u>XBT Tracker</u> . ^[173] <u>UDP tracker extension</u> is considered experimental. ^[174]
2727	Yes	Yes			<u>Media Gateway Control Protocol</u> (MGCP) media gateway controller (call agent)
2775	Yes	Yes			<u>Short Message Peer-to-Peer</u> (SMPP)
2809	Yes	Yes			corbaloc:iiop URL, per the <u>CORBA</u> 3.0.3 specification
2811	Yes	Yes			gsi ftp, per the <u>GridFTP</u> specification
2827	Unofficial				<u>I2P BOB Bridge</u> ^[175]
2944	Yes	Yes			<u>Megaco</u> text H.248
2945	Yes	Yes			Megaco binary (ASN.1) H.248
2947	Yes	Yes			gpsd, GPS daemon
2948– 2949	Yes	Yes			<u>WAP</u> push <u>Multimedia Messaging Service</u> (MMS)
2967	Yes	Yes			<u>Symantec System Center</u> agent (SSC-AGENT)
3000	Unofficial				<u>Ruby on Rails</u> development default ^[176]
	Unofficial				<u>Meteor</u> development default ^[177]
	Unofficial	Unofficial			<u>Resilio Sync</u> , ^[178] spun from BitTorrent Sync.
	Unofficial				Create React App, script to create single-page <u>React</u> applications ^[179]
	Unofficial				Gogs (self-hosted GIT service) ^[180]
	Unofficial				<u>Grafana</u> ^[181]
3001	Yes	No			Honeywell Prowatch ^[182]
3004	Unofficial				<u>iSync</u> ^[11]
3010	Yes	Yes			KWS Connector
3020	Yes	Yes			Common Internet File System (CIFS). See also port 445 for <u>Server Message Block</u> (SMB), a dialect of CIFS.
3050	Yes	Yes			gds-db (<u>Interbase</u> / <u>Firebird</u> databases)
3052	Yes	Yes			<u>APC PowerChute</u> Network
3074	Yes	Yes			Xbox LIVE and <u>Games for Windows – Live</u>
3101	Unofficial				<u>BlackBerry Enterprise Server</u> communication protocol ^[183]
3128	Unofficial	No			<u>Squid</u> caching web proxy ^[184]
3225	Yes	Yes			<u>Fibre Channel over IP</u> (FCIP)
3233	Yes	Yes			<u>WhiskerControl</u> research control protocol
3260	Yes	Yes			<u>iSCSI</u>
3268	Yes	Yes			msft-gc, Microsoft Global Catalog (LDAP service which contains data from <u>Active Directory</u> forests)

3269	Yes	Yes			msft-gc-ssl, Microsoft Global Catalog over <u>SSL</u> (similar to port 3268, <u>LDAP</u> over <u>SSL</u>)
3283	Yes	Yes			<i>Net Assistant</i> , ^[11] a predecessor to <i>Apple Remote Desktop</i>
	Unofficial	Unofficial			<i>Apple Remote Desktop</i> 2.0 or later ^[11]
3290		Unofficial			<u>Virtual Air Traffic Simulation</u> (VATSIM) network voice communication
3305	Yes	Yes			<u>Odette File Transfer Protocol</u> (OFTP)
3306	Yes	Assigned			<u>MySQL</u> database system ^[11]
3323	Unofficial	Unofficial			<u>DECE</u> GEODI Server
3332		Unofficial			Thundercloud DataPath Overlay Control
3333	Unofficial				<u>Eggdrop</u> , an IRC bot default port ^[185]
	Unofficial				<u>Network Caller ID</u> server
	Unofficial				<u>CruiseControl.rb</u> ^[186]
	Unofficial				<u>OpenOCD</u> (gdbserver) ^[187]
3344	Unofficial	Unofficial			Repetier-Server
3351	Unofficial				<u>Pervasive PSQL</u> ^[139]
3386	Yes	Yes			<u>GTP'</u> <u>3GPP</u> <u>GSM/UMTS</u> <u>CDR</u> logging protocol
3389	Yes	Yes			<u>Microsoft Terminal Server</u> (RDP) officially registered as <u>Windows Based Terminal</u> (WBT) ^[188]
3396	Yes	Yes			<u>Novell NDPS</u> Printer Agent
3412	Yes	Yes			xmlBlaster
3423	Yes				Xware xTrm Communication Protocol
3424	Yes				Xware xTrm Communication Protocol over SSL
3435	Yes	Yes			Pacom Security User Port
3455	Yes	Yes			<u>Resource Reservation Protocol</u> (RSVP)
3478	Yes	Yes			<u>STUN</u> , a protocol for NAT traversal ^[189]
	Yes	Yes			<u>TURN</u> , a protocol for NAT traversal ^[190] (extension to STUN)
	Yes	Yes			STUN Behavior Discovery. ^[191] See also port 5349.
3479	Unofficial	Unofficial			<u>PlayStation Network</u> ^[192]
3480	Unofficial	Unofficial			<u>PlayStation Network</u> ^[192]
3483		Yes			<u>Slim Devices</u> discovery protocol
	Yes				<u>Slim Devices</u> SlimProto protocol
3493	Yes	Yes			<u>Network UPS Tools</u> (NUT)
3503	Yes	Yes			MPLS LSP-echo Port
3516	Yes	Yes			Smartcard Port
3527		Yes			<u>Microsoft Message Queuing</u>
3535	Unofficial				<u>SMTP</u> alternate ^[193]

3544		Yes			<u>Teredo tunneling</u>
3551	Yes	Yes			<u>Apcupsd Information Port</u> ^[194]
3601	Yes				<u>SAP Message Server Port</u> ^[195]
3632	Yes	Assigned			<u>Distcc</u> , distributed compiler ^[11]
3645	Yes	Yes			<u>Cyc</u>
3659	Yes	Yes			Apple <u>SASL</u> , used by <u>macOS Server Password Server</u> ^[11]
		Unofficial			<u>Battlefield 4</u>
3667	Yes	Yes			<u>Information Exchange</u>
3671	Yes	Yes			<u>KNXnet/IP(EIBnet/IP)</u>
3689	Yes	Assigned			<u>Digital Audio Access Protocol (DAAP)</u> , used by <u>Apple's iTunes</u> and <u>AirPlay</u> ^[11]
3690	Yes	Yes			<u>Subversion (SVN)</u> ^[11] version control system
3702	Yes	Yes			<u>Web Services Dynamic Discovery (WS-Discovery)</u> , used by various components of <u>Windows Vista</u> and later
3724	Yes	Yes			Some <u>Blizzard</u> games ^[124]
	Unofficial				<u>Club Penguin</u> Disney online game for kids
3725	Yes	Yes			<u>Netia NA-ER Port</u>
3749	Yes	Yes			<u>CimTrak</u> (https://www.cimcor.com/cimtrak/) registered port
3768	Yes	Yes			<u>RBLcheckd</u> server daemon
3784		Yes			<u>Bidirectional Forwarding Detection (BFD)</u> for IPv4 and IPv6 (Single Hop) (RFC 5881)
3785		Unofficial			<u>VoIP</u> program used by <u>Ventrilo</u>
3799		Yes			<u>RADIUS</u> change of authorization
3804	Yes	Yes			Harman Professional <u>HiQnet</u> protocol
3825	Unofficial				<u>RedSeal Networks</u> client/server connection
3826	Yes	Yes			<u>WarMUX</u> game server
	Unofficial				<u>RedSeal Networks</u> client/server connection
3835	Unofficial				<u>RedSeal Networks</u> client/server connection
3830	Yes	Yes			<u>System Management Agent</u> , developed and used by Cerner to monitor and manage solutions
3856	Unofficial	Unofficial			<u>ERP Server Application</u> used by F10 Software
3880	Yes	Yes			<u>IGRS</u>
3868	Yes		Yes		<u>Diameter</u> base protocol (RFC 3588)
3872	Yes				<u>Oracle Enterprise Manager Remote Agent</u>
3900	Yes				<u>udt_os</u> , <u>IBM UniData UDT OS</u> ^[196]
3960		Unofficial			<u>Warframe</u> online interaction
3962		Unofficial			<u>Warframe</u> online interaction
3978	Unofficial	Unofficial			<u>OpenTTD</u> game (masterserver and content service)

3978	Unofficial				Palo Alto Networks' Panorama management of firewalls and log collectors & pre-PAN-OS 8.0 Panorama-to-managed devices software updates. ^[197]
3979	Unofficial	Unofficial			<i>OpenTTD</i> game
3999	Yes	Yes			Norman distributed scanning service
4000	Unofficial	Unofficial			<i>Diablo II</i> game
4001	Unofficial				<i>Microsoft Ants</i> game
	Unofficial				CoreOS <i>etcd</i> client communication
4018	Yes	Yes			Protocol information and warnings
4035	Unofficial				IBM Rational Developer for System z Remote System Explorer Daemon
4045	Unofficial	Unofficial			<i>Solaris</i> <i>lockd</i> NFS lock daemon/manager
4050	Unofficial				Mud Master Chat protocol (MMCP) - Peer-to-peer communications between <i>MUD</i> clients. ^[198]
4069		Yes			<i>Minger</i> Email Address Verification Protocol ^[199]
4070	Unofficial	Unofficial			<i>Amazon Echo Dot (Amazon Alexa)</i> streaming connection with <i>Spotify</i> ^[200]
4089	Yes	Yes			OpenCORE Remote Control Service
4090	Yes	Yes			<i>Kerio</i>
4093	Yes	Yes			PxPlus Client server interface <i>ProvideX</i>
4096	Yes	Yes			<i>Ascom Timeplex</i> Bridge Relay Element (BRE)
4105	Yes	Yes			Shofar (ShofarNexus)
4111	Yes	Assigned			<i>Xgrid</i> ^[11]
4116	Yes	Yes			Smartcard-TLS
4125	Unofficial				<i>Microsoft Remote Web Workplace</i> administration
4172	Yes	Yes			<i>Teradici PCoIP</i>
4190	Yes				<i>ManageSieve</i> ^[201]
4195	Yes	Yes	Yes	Yes	<i>AWS</i> protocol for cloud remoting solution
4197	Yes	Yes			Harman International's HControl protocol for control and monitoring of Audio, Video, Lighting and Control equipment
4198	Unofficial	Unofficial			<i>Couch Potato</i> Android app ^[202]
4200	Unofficial				<i>Angular</i> app
4201	Unofficial				<i>TinyMUD</i> and various derivatives
4222	Unofficial				NATS server default port ^[203]
4226	Unofficial	Unofficial			<i>Aleph One</i> , a computer game
4242	Unofficial				<i>Orthanc</i> – <i>DICOM</i> server ^[204]
	Unofficial				<i>Quassel</i> distributed IRC client
4243	Unofficial				<i>Docker</i> implementations, redistributions, and setups default ^[205]

	Unofficial				CrashPlan
4244	Unofficial	Unofficial			Viber ^[206]
4303	Yes	Yes			Simple Railroad Command Protocol (SRCP)
4307	Yes				TrueConf Client - TrueConf Server media data exchange ^[207]
4321	Yes				Referral Whois (RWhois) Protocol ^[208]
4444	Unofficial	Unofficial			Oracle WebCenter Content: Content Server—Intradoc Socket port. (formerly known as Oracle Universal Content Management).
	Unofficial				Metasploit 's default listener port ^[209]
	Unofficial	Unofficial			Xvfb X server virtual frame buffer service
	Unofficial				OpenOCD (Telnet) ^[187]
4444–4445	Unofficial				I2P HTTP/S proxy
4486	Yes	Yes			Integrated Client Message Service (ICMS)
4488	Yes	Assigned			Apple Wide Area Connectivity Service, used by Back to My Mac ^[11]
4500	Assigned	Yes			IPSec NAT Traversal ^[11] (RFC 3947, RFC 4306)
4502–4534	Yes				Microsoft Silverlight connectable ports under non-elevated trust
4505–4506	Unofficial				Salt master
4534		Unofficial			Armagetron Advanced server default
4560	Unofficial				default Log4j socketappender port
4567	Unofficial				Sinatra default server port in development mode (HTTP)
4569		Yes			Inter-Asterisk eXchange (IAX2)
4604	Yes				Identity Registration Protocol
4605	Yes				Direct End to End Secure Chat Protocol
4610–4640	Unofficial				QualiSystems TestShell Suite Services
4662	Yes	Yes			OrbitNet Message Service
	Unofficial				Default for older versions of eMule ^[210]
4664	Unofficial				Google Desktop Search
4672		Unofficial			Default for older versions of eMule ^[210]
4711	Unofficial				eMule optional web interface ^[210]
4713	Unofficial				PulseAudio sound server
4723	Unofficial				Appium open source automation tool
4724	Unofficial				Default bootstrap port to use on device to talk to Appium
4728	Yes				Computer Associates Desktop and Server Management (DMP)/Port Multiplexer ^[211]

4730	Yes	Yes			<u>Gearman's job server</u>
4739	Yes	Yes			<u>IP Flow Information Export</u>
4747	Unofficial				<u>Apprentice</u>
4753	Yes	Yes			SIMON (service and discovery)
4757	Unofficial	Unofficial			Select Studios (https://www.select-studios.com) Official Servers
4789		Yes			Virtual eXtensible Local Area Network (VXLAN)
4791		Yes			<u>IP Rutable RocE (RoCEv2)</u>
4840	Yes	Yes			OPC UA Connection Protocol (TCP) and OPC UA Multicast Datagram Protocol (UDP) for <u>OPC Unified Architecture</u> from <u>OPC Foundation</u>
4843	Yes	Yes			OPC UA TCP Protocol over TLS/SSL for <u>OPC Unified Architecture</u> from <u>OPC Foundation</u>
4847	Yes	Yes			Web Fresh Communication, Quadriion Software & Odorless Entertainment
4848	Unofficial				Java, Glassfish Application Server administration default
4894	Yes	Yes			<u>LysKOM</u> Protocol A
4944	No	Unofficial			<u>DrayTek DSL Status Monitoring</u> ^[212]
4949	Yes				Munin Resource Monitoring Tool
4950	Yes	Yes			Cylon Controls UC32 Communications Port
5000	Unofficial				<u>UPnP</u> —Windows network device interoperability
	Unofficial	Unofficial			<u>VTun</u> , <u>VPN</u> Software
	Unofficial				<u>ASP.NET Core</u> — Development Webserver
		Unofficial			<u>FlightGear</u> multiplayer ^[213]
	Unofficial				<u>Synology Inc.</u> Management Console, File Station, Audio Station
	Unofficial				<u>Flask</u> Development Webserver
	Unofficial				<u>Heroku</u> console access
	Unofficial				<u>Docker Registry</u> ^[214]
	Unofficial				<u>AT&T U-verse</u> public, educational, and government access (PEG) streaming over <u>HTTP</u> ^[215]
	Unofficial				<u>High-Speed SECS Message Services</u>
	Unofficial				<u>3CX Phone System</u> Management Console/Web Client (HTTP)
	Unofficial				RidgeRun GStreamer Daemon (GSTD) ^[216]
	Unofficial				<u>Apple's AirPlay</u> Receiver ^[217]
5000–5500	No	Unofficial			<u>League of Legends</u> , a <u>multiplayer online battle arena</u> video game ^[218]
5001	Unofficial				<u>Slingbox</u> and Slingplayer
	Unofficial	Unofficial			<u>Iperf</u> (Tool for measuring TCP and UDP bandwidth performance)

5002	Unofficial				<u>Synology Inc. Secured Management Console, File Station, Audio Station</u>
	Unofficial				<u>3CX Phone System Management Console/Web Client (HTTPS)</u>
	Unofficial				ASSAARX access control system ^[219]
5003	Yes	Assigned			<u>FileMaker</u> – name binding and transport ^[11]
5004	Yes	Yes		Yes	<u>Real-time Transport Protocol media data (RTP) (RFC 3551, RFC 4571)</u>
5005	Yes	Yes		Yes	<u>Real-time Transport Protocol control protocol (RTCP) (RFC 3551, RFC 4571)</u>
5007	Unofficial				Palo Alto Networks - User-ID agent
5010	Yes	Yes			Registered to: <u>TelePath (the IBM FlowMark workflow-management system messaging platform)</u> ^[220] The TCP port is now used for: IBM <u>WebSphere MQ Workflow</u>
5011	Yes	Yes			<u>TelePath (the IBM FlowMark workflow-management system messaging platform)</u> ^[220]
5022	Unofficial				MSSQL Server Replication and Database mirroring endpoints ^[221]
5025	Yes	Yes			<u>scpi-raw Standard Commands for Programmable Instruments</u>
5029		Unofficial			Sonic Robo Blast 2 and Sonic Robo Blast 2 Kart servers
5031	Unofficial	Unofficial			AVM CAPI-over-TCP (<u>ISDN over Ethernet tunneling</u>)
5037	Unofficial				Android ADB server
5044	Yes				Standard port in Filebeats/Logstash implementation of Lumberjack protocol.
5048	Yes				Texai Message Service
5050	Unofficial				<u>Yahoo! Messenger</u>
5051	Yes				ita-agent <u>Symantec Intruder Alert</u> ^[222]
5060	Yes	Yes			<u>Session Initiation Protocol (SIP)</u> ^[11]
5061	Yes ^[223]				<u>Session Initiation Protocol (SIP) over TLS</u>
5062	Yes	Yes			Localisation access
5064	Yes	Yes			<u>EPICS Channel Access server</u> ^[224]
5065	Assigned	Yes			EPICS Channel Access repeater beacon ^[224]
5070	Unofficial	No			<u>Binary Floor Control Protocol (BFCP)</u> ^[225]
5080	Unofficial	Unofficial			List of telephone switches#NEC[NEC Phone System] NEC SV8100 and SV9100 MLC Phones Default iSIP Port
5084	Yes	Yes			<u>EPCglobal Low Level Reader Protocol (LLRP)</u>
5085	Yes	Yes			<u>EPCglobal Low Level Reader Protocol (LLRP) over TLS</u>
5090	Unofficial	Unofficial			3CX Phone System 3CX Tunnel Protocol, 3CX App API, 3CX Session Border Controller

5093		Yes			<u>SafeNet, Inc Sentinel LM, Sentinel RMS, License Manager, client-to-server</u>
5099	Yes	Yes			<u>SafeNet, Inc Sentinel LM, Sentinel RMS, License Manager, server-to-server</u>
5104	Unofficial				<u>IBM Tivoli Framework NetCOOL/Impact</u> ^[226] <u>HTTP Service</u>
5121	Unofficial				<u>Neverwinter Nights</u>
5124	Unofficial	Unofficial			<u>TorgaNET (Micronational Darknet)</u>
5125	Unofficial	Unofficial			<u>TorgaNET (Micronational Intelligence Darknet)</u>
5150	Yes	Yes			<u>ATMP Ascend Tunnel Management Protocol</u> ^[227]
5151	Yes				<u>ESRI SDE Instance</u>
		Yes			<u>ESRI SDE Remote Start</u>
5154	Yes	Yes			<u>BZFlag</u>
5172	Yes				<u>PC over IP Endpoint Management</u> ^[228]
5173	Unofficial				<u>Vite (https://vitejs.dev/)</u>
5190	Yes	Yes			<u>AOL Instant Messenger protocol</u> . ^[11] The chat app is defunct as of 15 December 2017. ^[229]
5198		Unofficial			<u>EchoLink VoIP Amateur Radio Software (Voice)</u>
5199		Unofficial			<u>EchoLink VoIP Amateur Radio Software (Voice)</u>
5200	Unofficial				<u>EchoLink VoIP Amateur Radio Software (Information)</u>
5201	Unofficial	Unofficial			<u>Iperf3 (Tool for measuring TCP and UDP bandwidth performance)</u>
5222	Yes	Reserved			<u>Extensible Messaging and Presence Protocol (XMPP) client connection</u> ^{[11][230][231]}
5223	Unofficial				<u>Apple Push Notification Service</u> ^{[11][157]}
	Unofficial				<u>Extensible Messaging and Presence Protocol (XMPP) client connection over SSL</u>
5228	Yes				<u>HP Virtual Room Service</u>
	Unofficial				<u>Google Play, Android Cloud to Device Messaging Service, Google Cloud Messaging</u>
5235-5236	Unofficial				<u>Firebase Cloud Messaging</u> ^[232]
5242	Unofficial	Unofficial			<u>Viber</u> ^[206]
5243	Unofficial	Unofficial			<u>Viber</u> ^[206]
5246		Yes			<u>Control And Provisioning of Wireless Access Points (CAPWAP) CAPWAP control</u> ^[233]
5247		Yes			<u>Control And Provisioning of Wireless Access Points (CAPWAP) CAPWAP data</u> ^[233]
5269	Yes				<u>Extensible Messaging and Presence Protocol (XMPP) server-to-server connection</u> ^{[11][230][231]}
5280	Yes				<u>Extensible Messaging and Presence Protocol (XMPP)</u> ^[234]
5281	Unofficial				<u>Extensible Messaging and Presence Protocol (XMPP)</u> ^[235]

5298	Yes	Yes			Extensible Messaging and Presence Protocol (XMPP) ^[236]
5310	Assigned	Yes			<u>Outlaws</u> , a 1997 first-person shooter video game ^[237]
5318	Yes	Reserved			Certificate Management over CMS ^[238]
5349	Yes	Yes			STUN over TLS/DTLS, a protocol for NAT traversal ^[189]
	Yes	Yes			TURN over TLS/DTLS, a protocol for NAT traversal ^[190]
	Yes	Reserved			STUN Behavior Discovery over TLS. ^[191] See also port 3478.
5351	Reserved	Yes			NAT Port Mapping Protocol and Port Control Protocol—client-requested configuration for connections through network address translators and firewalls
5353	Assigned	Yes			Multicast DNS (mDNS) ^[11]
5355	Yes	Yes			Link-Local Multicast Name Resolution (LLMNR), allows hosts to perform name resolution for hosts on the same local link (only provided by <u>Windows Vista</u> and <u>Server 2008</u>)
5357	Unofficial	Unofficial			Web Services for Devices (WSDAPI) (only provided by <u>Windows Vista</u> , <u>Windows 7</u> and <u>Server 2008</u>)
5358	Unofficial	Unofficial			WSDAPI Applications to Use a Secure Channel (only provided by <u>Windows Vista</u> , <u>Windows 7</u> and <u>Server 2008</u>)
5394		Unofficial			Kega Fusion, a Sega multi-console emulator ^{[239][240]}
5402	Yes	Yes			Multicast File Transfer Protocol (MFTP) ^[241]
5405	Yes	Yes			<u>NetSupport Manager</u>
5412	Yes	Yes			IBM Rational Synergy (<u>Telelogic Synergy</u>) (Continuous CM) Message Router
5413	Yes	Yes			<u>Wonderware SuiteLink</u> service
5417	Yes	Yes			SNS Agent
5421	Yes	Yes			<u>NetSupport Manager</u>
5432	Yes	Assigned			<u>PostgreSQL</u> ^[11] database system
5433	Unofficial				Bouwsoft file/webserver ^[242]
5445		Unofficial			Cisco Unified Video Advantage
5450	Unofficial	Unofficial			<u>OSIsoft PI Server Client Access</u> ^[243]
5457	Unofficial				<u>OSIsoft PI Asset Framework Client Access</u> ^[244]
5458	Unofficial				<u>OSIsoft PI Notifications Client Access</u> ^[245]
5480	Unofficial				<u>VMware VAMI</u> (Virtual Appliance Management Infrastructure)—used for initial setup of various administration settings on Virtual Appliances designed using the VAMI architecture.
5481	Unofficial				<u>Schneider Electric's ClearSCADA</u> (SCADA implementation for Windows) — used for client-to-server communication. ^[246]
5495	Unofficial				<u>IBM Cognos TM1 Admin server</u>
5498	Unofficial				<u>Hotline</u> tracker server connection

5499		Unofficial			Hotline tracker server discovery
5500	Unofficial				Hotline control connection
	Unofficial				VNC Remote Frame Buffer <u>RFB protocol</u> —for incoming listening viewer
5501	Unofficial				Hotline file transfer connection
5517	Unofficial				<u>Setiqueue Proxy</u> server client for <u>SETI@Home</u> project
5550	Unofficial				<u>Hewlett-Packard Data Protector</u>
5554	Unofficial	Unofficial			<u>Fastboot</u> default wireless port
5555	Unofficial	Unofficial			Oracle WebCenter Content: Inbound Refinery—Intradoc <u>Socket port</u> . (formerly known as Oracle <u>Universal Content Management</u>). Port though often changed during installation
	Unofficial				<u>Freeciv</u> versions up to 2.0, <u>Hewlett-Packard Data Protector</u> , <u>McAfee EndPoint Encryption Database Server</u> , <u>SAP</u> , Default for Microsoft Dynamics CRM 4.0, <u>Softether VPN</u> default port
5556	Yes	Yes			<u>Freeciv</u> , Oracle WebLogic Server Node Manager ^[247]
5568	Yes	Yes			Session Data Transport (SDT), a part of <u>Architecture for Control Networks (ACN)</u> ^[248]
5601	Unofficial				<u>Kibana</u> ^[249]
5631	Yes				pcANYWHEREdata, <u>Symantec pcAnywhere</u> (version 7.52 and later ^[250]) ^[251] data
5632		Yes			pcANYWHEREstat, Symantec pcAnywhere (version 7.52 and later) status
5656	Unofficial				<u>IBM Lotus Sametime</u> p2p file transfer
5666	Unofficial				<u>NRPE (Nagios)</u>
5667	Unofficial				<u>NSCA (Nagios)</u>
5670	Yes				<u>FILEMQ ZeroMQ File Message Queuing Protocol</u>
		Yes			<u>ZRE-DISC ZeroMQ Realtime Exchange Protocol (Discovery)</u>
5671	Yes	Assigned			<u>Advanced Message Queuing Protocol (AMQP)</u> ^[252] over <u>TLS</u>
5672	Yes	Assigned	Yes		<u>Advanced Message Queuing Protocol (AMQP)</u> ^[252]
5678	Unofficial	No			<u>n8n</u> ^[253]
5683	Yes	Yes			<u>Constrained Application Protocol (CoAP)</u>
5684	Yes	Yes			<u>Constrained Application Protocol Secure (CoAPs)</u>
5693	Unofficial				<u>Nagios Cross Platform Agent (NCPA)</u> ^[254]
5701	Unofficial				<u>Hazelcast</u> default communication port ^[255]
5718	Unofficial				Microsoft DPM Data Channel (with the agent coordinator)
5719	Unofficial				Microsoft DPM Data Channel (with the protection agent)
5722	Yes	Yes			Microsoft RPC, DFSR (SYSVOL) Replication Service
5723	Unofficial				<u>System Center Operations Manager</u> ^[256]

5724	Unofficial				Operations Manager Console
5741	Yes	Yes			IDA Discover Port 1
5742	Yes	Yes			IDA Discover Port 2
5800	Unofficial				<u>VNC Remote Frame Buffer RFB protocol over HTTP</u>
	Unofficial				<u>ProjectWise Server</u> ^[257]
5900	Yes	Yes			<u>Remote Frame Buffer protocol (RFB)</u>
	Unofficial				<u>Virtual Network Computing (VNC) Remote Frame Buffer RFB protocol</u> ^{[11][258]}
5905	Unofficial				Windows service "C:\Program Files\Intel\Intel(R) Online Connect Access\IntelTechnologyAccessService.exe" that listens on 127.0.0.1
5931	Yes	Yes			<u>AMMYY admin Remote Control</u>
5938	Unofficial	Unofficial			<u>TeamViewer remote desktop protocol</u> ^[259]
5984	Yes	Yes			<u>CouchDB database server</u>
5985	Yes				<u>Windows PowerShell Default psSession Port</u> ^[260] <u>Windows Remote Management Service (WinRM-HTTP)</u> ^[261]
5986	Yes				<u>Windows PowerShell Default psSession Port</u> ^[260] <u>Windows Remote Management Service (WinRM-HTTPS)</u> ^[261]
5988–5989	Yes				<u>CIM-XML (DMTF Protocol)</u> ^[262]
6000–6063	Yes	Yes			<u>X11</u> —used between an X client and server over the network
6005	Unofficial				Default for <u>BMC Software Control-M/Server</u> —Socket used for communication between Control-M processes—though often changed during installation
	Unofficial				Default for <u>Camfrog chat & cam client</u>
6009	Unofficial				<u>JD Edwards EnterpriseOne ERP system JDENet messaging client listener</u>
6050	Unofficial				<u>Arcserve backup</u>
6051	Unofficial				<u>Arcserve backup</u>
6086	Yes				<u>Peer Distributed Transfer Protocol (PDTP)</u> , FTP like file server in a P2P network
6100	Unofficial				<u>Vizrt System</u>
	Unofficial				<u>Ventrilo authentication for version 3</u>
6101	Unofficial				<u>Backup Exec Agent Browser</u>
6110	Yes	Yes			<u>softcm</u> , <u>HP Softbench CM</u>
6111	Yes	Yes			<u>spc</u> , <u>HP Softbench Sub-Process Control</u>
6112	Yes	Yes			<u>dtspcd</u> , execute commands and launch applications remotely
	Unofficial	Unofficial			<u>Blizzard's Battle.net gaming service and some games</u> , ^[124] <u>ArenaNet gaming service</u> , <u>Relic gaming service</u>
	Unofficial				<u>Club Penguin Disney online game for kids</u>

6113	Unofficial				Club Penguin Disney online game for kids, Used by some Blizzard games ^[124]
6136	Unofficial				ObjectDB database server ^[263]
6159	Yes				ARINC 840 EFB Application Control Interface
6160	Unofficial				Veeam Installer Service
6161	Unofficial				Veeam vPower NFS Service
6162	Unofficial				Veeam Data Mover
6163	Unofficial				Veeam Hyper-V Integration Service
6164	Unofficial				Veeam WAN Accelerator
6165	Unofficial				Veeam WAN Accelerator Data Transfer
6167	Unofficial				Veeam Log Shipping Service
6170	Unofficial				Veeam Mount Server
6200	Unofficial				Oracle WebCenter Content Portable: Content Server (With Native UI) and Inbound Refinery
6201	Assigned				Thermo-Calc Software AB: Management of service nodes in a processing grid for thermodynamic calculations
	Unofficial				Oracle WebCenter Content Portable: Admin
6225	Unofficial				Oracle WebCenter Content Portable: Content Server Web UI
6227	Unofficial				Oracle WebCenter Content Portable: JavaDB
6240	Unofficial				Oracle WebCenter Content Portable: Capture
6244	Unofficial	Unofficial			Oracle WebCenter Content Portable: Content Server—Intradoc Socket port
6255	Unofficial	Unofficial			Oracle WebCenter Content Portable: Inbound Refinery—Intradoc Socket port
6257		Unofficial			WinMX (see also 6699)
6260	Unofficial	Unofficial			planet M.U.L.E.
6262	Unofficial				Sybase Advantage Database Server
6343		Yes			SFlow, sFlow traffic monitoring
6346	Yes				gnutella-svc , gnutella (FrostWire , Limewire , Shareaza , etc.)
6347	Yes				gnutella-rtr , Gnutella alternate
6350	Yes				App Discovery and Access Protocol
6379	Yes				Redis key-value data store
6389	Unofficial				EMC CLARiiON
6432	Yes				PgBouncer —A connection pooler for PostgreSQL
6436	Unofficial				Leap Motion Websocket Server TLS
6437	Unofficial				Leap Motion Websocket Server
6443	Yes				Kubernetes API server ^[264]
6444	Yes				Sun Grid Engine Qmaster Service
6445	Yes				Sun Grid Engine Execution Service

6454		Unofficial			<u>Art-Net</u> protocol
6463–6472	Unofficial				<u>Discord RPC</u> ^[265]
6464	Yes				Port assignment for medical device communication in accordance to <u>IEEE 11073-20701</u>
6513	Yes				<u>NETCONF</u> over <u>TLS</u>
6514	Yes				Syslog over <u>TLS</u> ^[266]
6515	Yes				<u>Eclipse RPC Protocol (REC)</u>
6516	Unofficial				<u>Windows Admin Center</u>
6543	Unofficial				<u>Pylons project</u> # <u>Pyramid</u> Default Pylons Pyramid web service port
6556	Unofficial				<u>Check MK Agent</u>
6566	Yes				<u>SANE</u> (Scanner Access Now Easy)—SANE network scanner daemon ^[267]
6560–6561	Unofficial				<u>Speech-Dispatcher</u> daemon
6571	Unofficial				<u>Windows Live FolderShare</u> client
6600	Yes				Microsoft <u>Hyper-V</u> Live
	Unofficial				<u>Music Player Daemon (MPD)</u>
6601	Yes				Microsoft Forefront Threat Management Gateway
6602	Yes				Microsoft Windows WSS Communication
6619	Yes				odette-ftps, <u>Odette File Transfer Protocol (OFTP)</u> over <u>TLS/SSL</u>
6622	Yes				Multicast FTP
6653	Yes	Assigned			<u>OpenFlow</u>
6660–6664	Unofficial				<u>Internet Relay Chat (IRC)</u>
6665–6669	Yes				Internet Relay Chat (IRC)
6679	Yes				Osorno Automation Protocol (OSAUT)
	Unofficial				Internet Relay Chat (IRC) <u>SSL</u> (Secure Internet Relay Chat)—often used
6690	Unofficial				Synology Cloud station
6697	Yes				IRC <u>SSL</u> (Secure Internet Relay Chat)—often used
6699	Unofficial				<u>WinMX</u> (see also 6257)
6715	Unofficial				AberMUD and derivatives default port
6771		Unofficial			BitTorrent <u>Local Peer Discovery</u>
6783–6785	Unofficial				<u>Splashtop Remote</u> server broadcast
6801	Yes				ACNET Control System Protocol
6881–	Unofficial	Unofficial			<u>BitTorrent</u> beginning of range of ports used most often

6887					
6888	Yes				MUSE
	Unofficial	Unofficial			BitTorrent continuation of range of ports used most often
6889–6890	Unofficial	Unofficial			BitTorrent continuation of range of ports used most often
6891–6900	Unofficial	Unofficial			BitTorrent continuation of range of ports used most often
6891–6900	Unofficial	Unofficial			<u>Windows Live Messenger</u> (File transfer)
6901	Unofficial	Unofficial			Windows Live Messenger (Voice)
	Unofficial	Unofficial			BitTorrent continuation of range of ports used most often
6902–6968	Unofficial	Unofficial			BitTorrent continuation of range of ports used most often
6924	Yes				split-ping, ping with RX/TX latency/loss split
6969	Yes				acmsoda
	Unofficial				<u>BitTorrent tracker</u>
6970–6999	Unofficial	Unofficial			BitTorrent end of range of ports used most often
		Unofficial			<u>QuickTime Streaming Server</u> ^[11]
6980		Unofficial			<u>Voicemeeter</u> VBAN network audio protocol ^[268]
7000	Unofficial				Default for <u>Vuze's</u> built-in <u>HTTPS</u> Bittorrent tracker
	Unofficial				<u>Avira</u> Server Management Console
7001	Unofficial				Avira Server Management Console
	Unofficial				Default for <u>BEA WebLogic Server's</u> <u>HTTP</u> server, though often changed during installation
7002	Unofficial				Default for <u>BEA WebLogic Server's</u> <u>HTTPS</u> server, though often changed during installation
7005	Unofficial				Default for <u>BMC Software Control-M/Server</u> and <u>Control-M/Agent</u> for <u>Agent-to-Server</u> , though often changed during installation
7006	Unofficial				Default for <u>BMC Software Control-M/Server</u> and <u>Control-M/Agent</u> for <u>Server-to-Agent</u> , though often changed during installation
7010	Unofficial				Default for <u>Cisco AON AMC</u> (<u>AON Management Console</u>) ^[269]
7022	Unofficial				Database mirroring endpoints ^[221]
7023		Yes			Bryan Wilcutt T2-NMCS Protocol for SatCom Modems
7025	Unofficial				Zimbra <u>LMTP</u> [mailbox]—local mail delivery
7047	Unofficial				<u>Zimbra</u> conversion server
7070	Unofficial	Unofficial			<u>Real Time Streaming Protocol</u> (RTSP), used by <u>QuickTime Streaming Server</u> . TCP is used by default, UDP is used as an alternate. ^[11]
7077	Yes				Development-Network Authentication-Protocol
7133	Unofficial				<u>Enemy Territory: Quake Wars</u>

7144	Unofficial				Peercast
7145	Unofficial				Peercast
7171	Unofficial				<u>Tibia</u>
7262	Yes				CNAP (Calypso Network Access Protocol)
7272	Yes				WatchMe - WatchMe Monitoring
7306	Unofficial				Zimbra mysql [mailbox]
7307	Unofficial				Zimbra mysql [logger]
7312		Unofficial			<u>Sibelius License Server</u>
7396	Unofficial				Web control interface for <u>Folding@home v7.3.6</u> and later ^[270]
7400	Yes				RTPS (Real Time Publish Subscribe) <u>DDS</u> Discovery
7401	Yes				RTPS (Real Time Publish Subscribe) <u>DDS</u> User-Traffic
7402	Yes				RTPS (Real Time Publish Subscribe) <u>DDS</u> Meta-Traffic
7471	Unofficial				Stateless Transport Tunneling (STT)
7473	Yes				<u>Rise: The Vieneo Province</u>
7474	Yes				Neo4J Server webadmin ^[271]
7478	Yes				Default port used by <u>Open iT Server</u> . ^[272]
7542	Yes				<u>Saratoga file transfer protocol</u> ^{[273][274]}
7547	Yes				CPE WAN Management Protocol (CWMP) <u>Technical Report 069</u>
7575		Unofficial			<u>Populous: The Beginning server</u>
7624	Yes				<u>Instrument Neutral Distributed Interface</u>
7631	Yes				ERLPhase
7634	Unofficial				hddtemp—Utility to monitor hard drive temperature
7652–7654	Unofficial				<u>I2P</u> anonymizing overlay network
7655		Unofficial			I2P SAM Bridge Socket API
7656–7660	Unofficial				I2P anonymizing overlay network
7670	Unofficial				<u>BrettspielWelt</u> BSW Boardgame Portal
7680	Unofficial				Delivery Optimization for <u>Windows 10</u> ^[275]
7687	Yes				<u>Bolt</u> database connection
7707–7708		Unofficial			<u>Killing Floor</u>
7717		Unofficial			<u>Killing Floor</u>
7777	Unofficial				iChat server file transfer proxy ^[11]
	Unofficial				Oracle Cluster File System 2
	Unofficial				Windows backdoor program tini.exe default
	Unofficial				<i>Just Cause 2: Multiplayer Mod Server</i>

7777–7788	Unofficial				<u>Terraria</u> default server
		Unofficial			<u>San Andreas Multiplayer</u> (SA-MP) default port server
		Unofficial			<u>SCP: Secret Laboratory</u> Multiplayer Server
	Unofficial	Unofficial			<u>Unreal Tournament</u> series default server
	Unofficial				Default used by Smartlaunch Internet Cafe Administration ^[276] software
7831	Unofficial				Default used by Smartlaunch Internet Cafe Administration ^[276] software
7880	Unofficial	Unofficial			PowerSchool Gradebook Server
7890	Unofficial				Default that will be used by the iControl Internet Cafe Suite Administration software
7915	Unofficial				Default for YSFlight server ^[277]
7935	Unofficial				Fixed port used for Adobe Flash Debug Player to communicate with a debugger (Flash IDE, Flex Builder or fdb). ^[278]
7946	Unofficial	Unofficial			Docker Swarm communication among nodes ^[164]
7979		Unofficial			Used by SilverBluff Studios for communication between servers and clients.
7990	Unofficial				Atlassian <u>Bitbucket</u> (default port)
	Unofficial				Commonly used for Internet radio streams such as <u>SHOUTcast</u> , <u>Icecast</u> and <u>iTunes Radio</u> ^[11]
8000	Unofficial				<u>DynamoDB Local</u> ^[279]
	Unofficial				<u>Django</u> Development Webserver ^[280]
8005	Unofficial				<u>Python 3 http.server</u> ^[281]
	Unofficial				<u>Tomcat</u> remote shutdown ^[11]
	Unofficial				<u>PLATO</u> ASCII protocol (RFC 600)
	Unofficial				Windows SCCM HTTP listener service ^[282]
8006	Unofficial				<u>Quest AppAssure 5 API</u> ^[283]
	Unofficial	No			<u>Proxmox Virtual Environment</u> admin web interface ^[284]
8007	Unofficial				<u>Quest AppAssure 5 Engine</u> ^[283]
8007	Yes				<u>Proxmox Backup Server</u> admin web interface
	Unofficial	Unofficial			Alternative port for <u>HTTP</u> . See also ports 80 and 8080.
8008	Unofficial				<u>IBM HTTP Server</u> administration default
	Unofficial				<u>iCal</u> , a calendar application by <u>Apple</u> ^[11]
8009	Unofficial	No			<u>Matrix</u> homeserver federation over <u>HTTP</u> ^[285]
	Unofficial				<u>Apache JServ Protocol</u> (ajp13)
8010	Unofficial	No			<u>Buildbot</u> web status page
8042	Unofficial				<u>Orthanc</u> – REST API over <u>HTTP</u> ^[204]
8069	Unofficial				<u>OpenERP 5.0 XML-RPC</u> protocol ^[286]
8070	Unofficial				<u>OpenERP 5.0 NET-RPC</u> protocol ^[286]

8074	Yes				<u>Gadu-Gadu</u>
8075	Unofficial				<i>Killing Floor</i> web administration interface
8080	Yes				Alternative port for <u>HTTP</u> . See also ports 80 and 8008.
	Unofficial				<u>Apache Tomcat</u> ^[287]
	Unofficial				<u>Atlassian JIRA</u> applications ^[288]
8081	Yes	Yes			Sun Proxy Admin Service ^[289]
8088	Unofficial				<u>Asterisk</u> management access via HTTP
8089	Unofficial	No			<u>Splunk</u> daemon management ^[290]
	Unofficial				<u>Fritz!Box</u> automatic <u>TR-069</u> configuration ^[291]
8090	Unofficial				<u>Atlassian Confluence</u> ^[292]
	Unofficial				Coral Content Distribution Network (legacy; 80 and 8080 now supported) ^[293]
	Unofficial				Matrix identity server
8091	Unofficial				<u>CouchBase</u> web administration ^[294]
8092	Unofficial				<u>CouchBase API</u> ^[294]
8096	Unofficial				<u>Emby</u> and <u>Jellyfin</u> HTTP port ^[295]
8111	Unofficial				<u>JOSM</u> Remote Control
8112	Unofficial				PAC Pacifica Coin
8116		Unofficial			<u>Check Point</u> Cluster Control Protocol
8118	Yes				<u>Privoxy</u> —advertisement-filtering Web proxy
8123	Unofficial				<u>Polipo</u> Web proxy
	Unofficial				<u>Home Assistant</u> Home automation
	Unofficial				BURST P2P ^[296]
8124	Unofficial				Standard BURST Mining Pool Software Port
8125	Unofficial				BURST Web Interface
8139	Unofficial				<u>Puppet (software)</u> Client agent
8140	Yes				<u>Puppet (software)</u> Master server
8172	Unofficial				<u>Microsoft</u> Remote Administration for IIS Manager ^[297]
8184	Unofficial				<u>NCSA Brown Dog</u> Data Access Proxy
8194–8195	Yes				<u>Bloomberg Terminal</u> ^[298]
8200	Unofficial				<u>GoToMyPC</u>
	Unofficial				MiniDLNA media server Web Interface
8222	Unofficial				<u>VMware VI</u> Web Access via HTTP ^[299]
8236	Unofficial				jRCS listener for <u>Rocket Software</u> jBASE Remote Connectivity Server ^[300]
8243	Yes				<u>HTTPS</u> listener for <u>Apache Synapse</u> ^[301]

8245	Unofficial				Dynamic DNS for at least No-IP and DynDNS ^[302]
8280	Yes				HTTP listener for Apache Synapse ^[301]
8281	Unofficial				HTTP Listener for Gatecraft Plugin
8291	Unofficial				Winbox —Default on a MikroTik RouterOS for a Windows application used to administer MikroTik RouterOS ^[303]
8303		Unofficial			Teeworlds Server
8332	Unofficial				Bitcoin JSON-RPC server ^[304]
8333	Unofficial				Bitcoin
	Unofficial				VMware VI Web Access via HTTPS ^[299]
8334	Unofficial				Filestash server (default) ^[305]
8337	Unofficial				VisualSVN Distributed File System Service (VDFS) ^[306]
8384	Unofficial				Syncthing web GUI
8388	Unofficial				Shadowsocks proxy server
8400	Yes				Commvault Communications Service (https://documentation.commvault.com/commvault/v11/article?p=8572.htm) (GxCVD, found in all client computers)
8401	Yes				Commvault Server Event Manager (GxEvMgrS, available in CommServe)
8403	Yes				Commvault Firewall (GxFWD, tunnel port for HTTP/HTTPS)
8443	Unofficial				SW Soft Plesk Control Panel
	Unofficial				Apache Tomcat SSL
	Unofficial				Promise WebPAM SSL
	Unofficial				iCal over SSL ^[11]
	Unofficial				MineOs WebUi
8444	Unofficial				Bitmessage
8448	Unofficial	No			Matrix homeserver federation over HTTPS ^[285]
8484	Unofficial				MapleStory Login Server
8500	Unofficial				Adobe ColdFusion built-in web server ^[307]
8530	Unofficial				Windows Server Update Services over HTTP , when using the default role installation settings in Windows Server 2012 and later versions. ^{[308][309]}
8531	Unofficial				Windows Server Update Services over HTTPS , when using the default role installation settings in Windows Server 2012 and later versions. ^{[308][309]}
8555	Unofficial				Symantec DLP OCR Engine ^[310]
8580	Unofficial				Freegate , an Internet anonymizer and proxy tool ^[311]
8629	Unofficial				Tibero database
8642	Unofficial				Lotus Notes Traveler auto synchronization for Windows Mobile and Nokia devices ^[312]

8691	Unofficial				<u>Ultra Fractal</u> , a <u>fractal generation and rendering software application</u> – distributed calculations over networked computers ^{[313][314]}
8765	Unofficial	No			Default port of a local GUN relay peer that the Internet Archive ^[315] and others use as a decentralized mirror for censorship resistance. ^[316]
8767		Unofficial			Voice channel of TeamSpeak 2, ^[317] a proprietary <u>Voice over IP</u> protocol targeted at <u>gamers</u>
8834	Unofficial				<u>Nessus</u> , a <u>vulnerability scanner</u> – remote <u>XML-RPC</u> web server ^[318]
8840	Unofficial				<u>Opera Unite</u> , an extensible <u>framework</u> for web applications ^{[319][320]}
8880	Yes				Alternate port of CDDB (Compact Disc Database) protocol, used to look up <u>audio CD (compact disc)</u> information over the <u>Internet</u> . ^[321] See also port 888.
	Unofficial				<u>IBM WebSphere Application Server SOAP</u> connector ^[322]
8883	Yes				Secure <u>MQTT</u> (<u>MQTT over TLS</u>) ^{[323][324]}
8887	Unofficial				<u>HyperVM</u> over <u>HTTP</u>
8888	Unofficial				<u>HyperVM</u> over <u>HTTPS</u>
	Unofficial	No			<u>Freenet</u> web UI (localhost only)
	Unofficial				Default for <u>IPython</u> ^[325] / <u>Jupyter</u> ^[326] notebook dashboards
	Unofficial				<u>MAMP</u> ^[327]
8889	Unofficial				<u>MAMP</u> ^[327]
8920	Unofficial				<u>Jellyfin</u> <u>HTTPS</u> port ^[295]
8983	Unofficial				<u>Apache Solr</u> ^[328]
8997	Unofficial				Alternate port for <u>I2P Monotone Proxy</u> ^[175]
8998	Unofficial				<u>I2P Monotone Proxy</u> ^[175]
8999	Unofficial				Alternate port for <u>I2P Monotone Proxy</u> ^[175]
9000	Unofficial				<u>SonarQube</u> Web Server ^[329]
	Unofficial				<u>ClickHouse</u> default port
	Unofficial				<u>DBGp</u>
	Unofficial				<u>SqueezeCenter</u> web server & streaming
		Unofficial			<u>UDPCast</u>
	Unofficial				<u>Play Framework</u> web server ^[330]
	Unofficial				<u>Hadoop</u> <u>NameNode</u> default port
	Unofficial				<u>PHP-FPM</u> default port
	Unofficial				<u>QBittorrent</u> 's embedded torrent tracker default port ^[331]
9001	Yes				<u>ETL Service Manager</u> ^[332]
	Unofficial				<u>Microsoft SharePoint</u> authoring environment

9002	Unofficial				cisco-xremote router configuration
	Unofficial				<u>Tor</u> network default
	Unofficial				<u>DBGp</u> Proxy
	Unofficial				<u>HSQLDB</u> default port
	Unofficial				Newforma Server comms
9006	Reserved ^[2]				
9030	Unofficial				<u>Tomcat</u> in standalone mode ^[11]
	Unofficial				<u>Tor</u> often used
9042	Unofficial				<u>Apache Cassandra</u> native protocol clients
9043	Unofficial				<u>WebSphere Application Server</u> Administration Console secure
9050–9051	Unofficial				<u>Tor</u> (SOCKS-5 proxy client)
9060	Unofficial				<u>WebSphere Application Server</u> Administration Console
	Yes				glrpc, <u>Groove Collaboration software</u> GLRPC
9080	Unofficial				<u>WebSphere Application Server HTTP</u> Transport (port 1) default
	Unofficial				Remote Potato by FatAttitude, Windows Media Center addon
	Unofficial				ServerWMC, Windows Media Center addon
9081	Unofficial				<u>Zerto</u> ZVM to ZVM communication
	Unofficial				<u>Prometheus</u> metrics server
9090	Unofficial				<u>Openfire</u> Administration Console
	Unofficial				<u>SqueezeCenter</u> control (CLI)
	Unofficial				<u>Cherokee</u> Admin Panel
9091	Unofficial				<u>Openfire</u> Administration Console (SSL Secured)
	Unofficial				<u>Transmission</u> (BitTorrent client) Web Interface
	Unofficial				<u>H2</u> (DBMS) Database Server
9092	Unofficial				<u>Apache Kafka</u> A Distributed Streaming Platform ^[333]
9100	Yes	Assigned			<u>PDL Data Stream</u> , used for printing to certain network printers ^[11]
9101	Yes				<u>Bacula</u> Director
9102	Yes				<u>Bacula</u> File Daemon
9103	Yes				<u>Bacula</u> Storage Daemon
9119	Yes				<u>MXit</u> Instant Messenger
9150	Unofficial				<u>Tor</u> Browser
9191	Unofficial				Sierra Wireless Airlink
9199	Unofficial				Avtex LLC—qStats
9200	Unofficial				Elasticsearch ^[334] —default Elasticsearch port

9217	Unofficial			iPass Platform Service
9293	Unofficial			Sony PlayStation RemotePlay ^[335]
9295	Unofficial	Unofficial		Sony PlayStation Remote Play Session creation communication port
9296		Unofficial		Sony PlayStation Remote Play
9897		Unofficial		Sony PlayStation Remote Play Video stream
9300	Unofficial			<u>IBM Cognos BI</u>
9303		Unofficial		<u>D-Link Shareport</u> Share storage and MFP printers
9306	Yes			<u>Sphinx</u> Native API
9309	Unofficial	Unofficial		Sony PlayStation Vita Host Collaboration WiFi Data Transfer ^[336]
9312	Yes			<u>Sphinx</u> SphinxQL
9332	Unofficial			<u>Litecoin</u> <u>JSON-RPC</u> server
9333	Unofficial			<u>Litecoin</u>
9339	Unofficial			Used by all Supercell games such as Brawl Stars and Clash of Clans, mobile freemium strategy video games
9389	Yes			adws, <u>Microsoft AD DS</u> Web Services, <u>Powershell</u> uses this port
9392	Unofficial	No		OpenVAS Greenbone Security Assistant web interface
9418	Yes			git, <u>Git</u> pack transfer service
9419	Unofficial			<u>MooseFS</u> distributed file system – master control port ^[337]
9420	Unofficial			<u>MooseFS</u> distributed file system – master command port ^[337]
9421	Unofficial			<u>MooseFS</u> distributed file system – master client port ^[337]
9422	Unofficial			<u>MooseFS</u> distributed file system – Chunkservers ^[337]
9425	Unofficial			<u>MooseFS</u> distributed file system – CGI server ^[337]
9443	Unofficial			VMware Websense Triton console (HTTPS port used for accessing and administrating a vCenter Server via the Web Management Interface)
	Unofficial			<u>NCSA Brown Dog</u> Data Tilling Service
9535	Yes			mngsuite, <u>LANDesk</u> Management Suite Remote Control
9536	Yes			laes-bf, <u>IP Fabrics</u> Surveillance buffering function
9600	No	Unofficial		Factory Interface Network Service (FINS), a network protocol used by <u>Omron programmable logic controllers</u>
9669	Unofficial	No		VGG Image Search Engine <u>VISE</u> (https://www.robots.ox.ac.uk/~vgg/software/vise/)
9675	Unofficial	Unofficial		<u>Spiceworks</u> Desktop, IT Helpdesk Software
9676	Unofficial	Unofficial		<u>Spiceworks</u> Desktop, IT Helpdesk Software
9695	Yes			<u>Content centric networking</u> (CCN, CCNx)
9735	Unofficial			<u>Bitcoin</u> <u>Lightning Network</u> ^[338]

9785	Unofficial	Unofficial			<u>Viber</u> ^[206]
9800	Yes				<u>WebDAV</u> Source
	Unofficial				<u>WebCT</u> e-learning portal
9875	Unofficial				<u>Club Penguin</u> Disney online game for kids
9898	Unofficial				<u>Tripwire</u> —File Integrity Monitoring Software ^[339]
9899		Yes			<u>SCTP</u> tunneling (port number used in SCTP packets encapsulated in UDP, RFC 6951)
9901	Unofficial				Banana for Apache Solr
9981	Unofficial				<u>Tvheadend</u> HTTP server (web interface) ^[340]
9982	Unofficial				<u>Tvheadend</u> HTSP server (Streaming protocol) ^[340]
9987	Unofficial	No			<u>TeamSpeak</u> 3 server default (voice) port (for the conflicting service see the IANA list) ^[341]
9993		Unofficial			<u>ZeroTier</u> Default port for ZeroTier
9997	Unofficial				<u>Splunk</u> port for communication between the forwarders and indexers
9999	Unofficial				<u>Urchin</u> Web Analytics
9999	Unofficial				<u>Dash</u> (cryptocurrency) ^[342]
10000	Yes				Network Data Management Protocol (NDMP) Control stream for network backup and restore.
	Unofficial				<u>BackupExec</u>
	Unofficial				<u>Webmin</u> , Web-based Unix/Linux system administration tool (default port)
10000–20000	No	Unofficial			Used on VoIP networks for receiving and transmitting voice telephony traffic which includes <u>Google Voice</u> via the <u>OBiTalk</u> ATA devices as well as on the <u>MagicJack</u> and <u>Vonage</u> ATA network devices. ^[343]
10001		Unofficial			<u>Ubiquiti UniFi</u> access points broadcast to 255.255.255.255:10001 (UDP) to locate the controller(s)
10009	Unofficial	Unofficial			<u>Crossfire</u> , a multiplayer online First Person Shooter
10011	Unofficial	No			<u>TeamSpeak</u> 3 ServerQuery ^[341]
10022	Unofficial	No			<u>TeamSpeak</u> 3 ServerQuery over SSH
10024	Unofficial				<u>Zimbra smtp</u> [mta]—to amavis from postfix
10025	Unofficial				<u>Zimbra smtp</u> [mta]—back to postfix from amavis
10042	Unofficial				<u>Mathoid</u> server ^[344]
10050	Yes				<u>Zabbix</u> agent
10051	Yes				<u>Zabbix</u> trapper
10110	Yes				NMEA 0183 Navigational Data. Transport of NMEA 0183 sentences over TCP or UDP
10172	Unofficial				Intuit <u>Quickbooks</u> client
10200	Unofficial				<u>FRISK Software International's fpcscand</u> virus scanning daemon for Unix platforms ^[345]

	Unofficial				FRISK Software International's <i>f-protd</i> virus scanning daemon for Unix platforms ^[346]
10201–10204	Unofficial				FRISK Software International's <i>f-protd</i> virus scanning daemon for Unix platforms ^[346]
10212	Yes				GE Intelligent Platforms Proficy HMI/SCADA – CIMPLICITY WebView ^[347]
10308	Unofficial				<u>Digital Combat Simulator</u> Dedicated Server ^[348]
10468		Unofficial			Flyer - discovery protocol
10480	Unofficial				<u>SWAT 4</u> Dedicated Server
10505		Unofficial			BlueStacks (android simulator) broadcast ^[349]
10514	Unofficial	Unofficial			TLS-enabled Rsyslog (default by convention)
10578	Unofficial	No			Skyrim Together multiplayer server for <u>The Elder Scrolls V: Skyrim</u> mod.
10800	Unofficial				Touhou fight games (<u>Immaterial and Missing Power</u> , <u>Scarlet Weather Rhapsody</u> , <u>Hisoutensoku</u> , <u>Hopeless Masquerade</u> and <u>Urban Legend in Limbo</u>)
10823		Unofficial			<u>Farming Simulator 2011</u>
10891	Unofficial				Jungle Disk (this port is opened by the Jungle Disk Monitor service on the localhost)
10933	Yes	No			Octopus Deploy Tentacle deployment agent ^[350]
11001	Yes				metasys (Johnson Controls Metasys java AC control environment)
11100	No	Unofficial			<u>Risk of Rain</u> multiplayer server
11111	Unofficial				RiCcl, Remote Configuration Interface (Redhat Linux)
11112	Yes				<u>ACR/NEMA Digital Imaging and Communications in Medicine (DICOM)</u>
11211	Unofficial	Unofficial			<u>memcached</u> ^[11]
11214	Unofficial	Unofficial			memcached incoming SSL proxy
11215	Unofficial	Unofficial			memcached internal outgoing SSL proxy
11235	Yes				XCOMPUTE numerical systems messaging (Xplicit Computing) ^[351]
11311	Unofficial	Unofficial			<u>Robot Operating System</u> master
11371	Yes				<u>OpenPGP</u> HTTP <u>key server</u>
11753	Unofficial				<u>OpenRCT2</u> multiplayer ^[352]
12000	Unofficial	Unofficial			<u>CubeForm</u> , Multiplayer SandBox Game
12012		Unofficial			<u>Audition Online Dance Battle</u> , Korea Server—Status/Version Check
12013	Unofficial	Unofficial			Audition Online Dance Battle, Korea Server
12035		Unofficial			<u>Second Life</u> , used for server UDP in-bound ^[353]
12043	Unofficial				<u>Second Life</u> , used for LSL HTTPS in-bound ^[354]
12046	Unofficial				<u>Second Life</u> , used for LSL HTTP in-bound ^[354]

12201	Unofficial	Unofficial			Graylog Extended Log Format (GELF) ^[355]
12222		Yes			Light Weight Access Point Protocol (LWAPP) LWAPP data (RFC 5412)
12223		Yes			Light Weight Access Point Protocol (LWAPP) LWAPP control (RFC 5412)
12307		Unofficial			Makerbot UDP Broadcast (client to printer) (JSON-RPC) ^[356]
12308		Unofficial			Makerbot UDP Broadcast (printer to client) (JSON-RPC) ^[356]
12345	Unofficial	Unofficial			<u>Cube World</u> ^[357]
	Unofficial				<u>Little Fighter 2</u>
	Unofficial				NetBus remote administration tool (often Trojan horse).
12443	Unofficial				IBM HMC web browser management access over HTTPS instead of default port 443 ^[358]
12489	Unofficial				NSClient/NSClient++/NC_Net (Nagios)
12975	Unofficial				LogMeIn Hamachi (VPN tunnel software; also port 32976) —used to connect to Mediation Server (bibi.hamachi.cc); will attempt to use SSL (TCP port 443) if both 12975 & 32976 fail to connect
13000–13050		Unofficial			<u>Second Life</u> , used for server UDP in-bound ^[359]
13008	Unofficial	Unofficial			<u>Crossfire</u> , a multiplayer online First Person Shooter
13075	Yes				Default ^[360] for BMC Software Control-M/Enterprise Manager Corba communication, though often changed during installation
13400	Yes				ISO 13400 Road vehicles — Diagnostic communication over Internet Protocol(DoIP)
13720	Yes				Symantec NetBackup—bprd (formerly VERITAS)
13721	Yes				Symantec NetBackup—bpdbsm (formerly VERITAS)
13724	Yes				Symantec Network Utility—vnetd (formerly VERITAS)
13782	Yes				Symantec NetBackup—bpcd (formerly VERITAS)
13783	Yes				Symantec VOPIED protocol (formerly VERITAS)
13785	Yes				Symantec NetBackup Database—nbdb (formerly VERITAS)
13786	Yes				Symantec nomdb (formerly VERITAS)
14550		Unofficial			MAVLink Ground Station Port
14567		Unofficial			Battlefield 1942 and mods
14652	Unofficial				Repgen DoxBox reporting tool
14800	Unofficial				Age of Wonders III p2p port ^[361]
15000	Unofficial				psyBNC
	Unofficial				Wesnoth
	Unofficial				Kaspersky Network Agent ^[362]

		Unofficial			Teltonika networks remote management system (RMS)
15009	Unofficial	Unofficial			Teltonika networks remote management system (RMS)
15010	Unofficial	Unofficial			Teltonika networks remote management system (RMS)
15441	Unofficial				<u>ZeroNet</u> fileserver
15567		Unofficial			<u>Battlefield Vietnam</u> and mods
15345	Yes				<u>XPilot</u> Contact
15672	Unofficial	No			<u>RabbitMQ</u> management plugin ^[363]
16000	Unofficial				Oracle WebCenter Content: Imaging (formerly known as Oracle Universal Content Management). Port though often changed during installation
	Unofficial				<u>shroudBNC</u>
16080	Unofficial				<u>macOS Server Web</u> (HTTP) service with performance cache ^[364]
16200	Unofficial				Oracle WebCenter Content: Content Server (formerly known as Oracle Universal Content Management). Port though often changed during installation
16225	Unofficial				Oracle WebCenter Content: Content Server Web UI. Port though often changed during installation
16250	Unofficial				Oracle WebCenter Content: Inbound Refinery (formerly known as Oracle Universal Content Management). Port though often changed during installation
16261	Unofficial	Unofficial			<u>Project Zomboid</u> multiplayer. Additional sequential ports used for each player connecting to server.
16300	Unofficial				Oracle WebCenter Content: Records Management (formerly known as Oracle Universal Records Management). Port though often changed during installation
16384		Unofficial			CISCO Default RTP MIN
16384–16403		Unofficial			Real-time Transport Protocol (RTP), RTP Control Protocol (RTCP), used by Apple's <u>iChat</u> for audio and video ^[11]
16384–16387		Unofficial			Real-time Transport Protocol (RTP), RTP Control Protocol (RTCP), used by Apple's <u>FaceTime</u> and <u>Game Center</u> ^[11]
16393–16402		Unofficial			Real-time Transport Protocol (RTP), RTP Control Protocol (RTCP), used by Apple's <u>FaceTime</u> and <u>Game Center</u> ^[11]
16403–16472		Unofficial			Real-time Transport Protocol (RTP), RTP Control Protocol (RTCP), used by Apple's <u>Game Center</u> ^[11]
16400	Unofficial				Oracle WebCenter Content: Capture (formerly known as Oracle Document Capture). Port though often changed during installation
16567		Unofficial			<u>Battlefield 2</u> and mods
16666	Unofficial	Unofficial			SITC Port for mobile web traffic
16677	Unofficial	Unofficial			SITC Port for mobile web traffic
17000		Unofficial			M17 - Digital RF voice and data protocol with Internet (UDP) gateways (reflectors). ^[365]
17011	Unofficial				<u>Worms</u> multiplayer

17224	Yes				Train Realtime Data Protocol (TRDP) Process Data, network protocol used in train communication. ^{[2][366]}
17225	Yes				Train Realtime Data Protocol (TRDP) Message Data, network protocol used in train communication. ^{[2][367]}
17333	Unofficial				CS Server (CSMS), default binary protocol port
17472	Yes				Tanium Communication Port
17474		Unofficial			DMXControl 3 Network Discovery
17475	Unofficial	Unofficial			DMXControl 3 Network Broker
17500	Yes				Dropbox LanSync Protocol (db-lsp); used to synchronize file catalogs between Dropbox clients on a local network.
17777	Unofficial	Unofficial			SITC Port for mobile web traffic
18080	Unofficial	No			<u>Monero</u> P2P network communications
18081	Unofficial	No			Monero incoming RPC calls
18091	Unofficial	Unofficial			<u>memcached</u> Internal REST HTTPS for SSL
18092	Unofficial	Unofficial			memcached Internal CAPI HTTPS for SSL
18104	Yes				RAD PDF Service
18200	Unofficial	Unofficial			Audition Online Dance Battle, AsiaSoft Thailand Server status/version check
18201	Unofficial	Unofficial			Audition Online Dance Battle, AsiaSoft Thailand Server
18206	Unofficial	Unofficial			Audition Online Dance Battle, AsiaSoft Thailand Server FAM database
18300	Unofficial	Unofficial			Audition Online Dance Battle, AsiaSoft SEA Server status/version check
18301	Unofficial	Unofficial			Audition Online Dance Battle, AsiaSoft SEA Server
18306	Unofficial	Unofficial			Audition Online Dance Battle, AsiaSoft SEA Server FAM database
18333	Unofficial				<u>Bitcoin</u> testnet
18400	Unofficial	Unofficial			Audition Online Dance Battle, KAIZEN Brazil Server status/version check
18401	Unofficial	Unofficial			Audition Online Dance Battle, KAIZEN Brazil Server
18505	Unofficial	Unofficial			Audition Online Dance Battle R4p3 Server, Nexon Server status/version check
18506	Unofficial	Unofficial			Audition Online Dance Battle, Nexon Server
18605	Unofficial	Unofficial			<u>X-BEAT</u> status/version check
18606	Unofficial	Unofficial			<u>X-BEAT</u>
18676	Unofficial	Unofficial			YouView
19000	Unofficial	Unofficial			Audition Online Dance Battle, G10/alaplaya Server status/version check
		Unofficial			<u>JACK</u> sound server
19001	Unofficial	Unofficial			Audition Online Dance Battle, G10/alaplaya Server
19132		Unofficial			<u>Minecraft: Bedrock Edition</u> multiplayer server ^[368]

19133		Unofficial			<i>Minecraft: Bedrock Edition</i> IPv6 multiplayer server ^[368]
19150	Unofficial	Unofficial			Gkrellm Server
19226	Unofficial				<u>Panda Software</u> AdminSecure Communication Agent
19294	Unofficial				<u>Google Talk</u> Voice and Video connections ^[369]
19295		Unofficial			Google Talk Voice and Video connections ^[369]
19302		Unofficial			Google Talk Voice and Video connections ^[369]
19531	Unofficial	No			<u>systemd-journal-gatewayd</u> ^[370]
19532	Unofficial	No			<u>systemd-journal-remote</u> ^[371]
19788	No	Yes			Mesh Link Establishment protocol for IEEE 802.15.4 radio mesh networks ^[372]
19812	Yes	No			4D database SQL Communication ^[373]
19813	Yes				4D database Client Server Communication ^[373]
19814	Yes				4D database DB4D Communication ^[373]
19999	Yes				Distributed Network Protocol—Secure (DNP—Secure), a secure version of the protocol used in <u>SCADA</u> systems between communicating <u>RTU</u> 's and <u>IED</u> 's
20000	Yes				Distributed Network Protocol (DNP), a protocol used in <u>SCADA</u> systems between communicating <u>RTU</u> 's and <u>IED</u> 's
	Yes				<u>OpenWebNet</u> , communications protocol used in <u>Bticino</u> products
	Unofficial				Usermin, Web-based Unix/Linux user administration tool (default port)
	Unofficial				Used on VoIP networks for receiving and transmitting voice telephony traffic which includes <u>Google Voice</u> via the <u>OBiTalk</u> ATA devices as well as on the <u>MagicJack</u> and <u>Vonage</u> ATA network devices. ^[343]
20560	Unofficial	Unofficial			<i>Killing Floor</i>
20582		Unofficial			HW Development IoT comms
20583		Unofficial			HW Development IoT comms
20595		Unofficial			<i>0 A.D. Empires Ascendant</i>
20808		Unofficial			Ableton Link
21025	Unofficial				Starbound Server (default), <u>Starbound</u> (http://playstarbound.com/)
21064	Unofficial				Default Ingres DBMS server
22000	Unofficial				<u>Syncthing</u> (default)
22136	Unofficial				<u>FLIR Systems</u> (http://www.flir.com/) Camera Resource Protocol
22222	Unofficial				Davis Instruments, WeatherLink IP (http://davisnet.com/weather/products/weather_product.asp?pnun=06555)
23073	Unofficial				<u>Soldat</u> Dedicated Server
23399	Unofficial				<u>Skype</u> default protocol
23513	Unofficial				<i>Duke Nukem 3D</i> source ports

24441	Unofficial	Unofficial			Pyzor spam detection network
24444	Unofficial				<u>NetBeans</u> integrated development environment
24465	Yes				Tonido Directory Server for Tonido (http://www.tonido.com/) which is a Personal Web App and P2P platform
24554	Yes				<u>BINKP</u> , <u>Fidonet</u> mail transfers over <u>TCP/IP</u>
24800	Unofficial				<u>Synergy</u> : keyboard/mouse sharing software
24842	Unofficial				<u>StepMania: Online</u> : <u>Dance Dance Revolution</u> Simulator
25565	Unofficial				<u>Minecraft</u> (Java Edition) multiplayer server ^{[374][375]}
		Unofficial			<u>Minecraft</u> (Java Edition) multiplayer server query ^[376]
25575		Unofficial			<u>Minecraft</u> (Java Edition) multiplayer server RCON ^[377]
25600-25700	Unofficial	Unofficial			SamsidParty Operational Ports
25734-25735	Unofficial	Unofficial			SOLIDWORKS SolidNetworkLicense Manager ^[378]
25826		Unofficial			<u>collectd</u> default port ^[379]
26000	Yes	Yes			<u>id Software's Quake</u> server
	Unofficial				<u>EVE Online</u>
		Unofficial			<u>Xonotic</u> , an open-source arena shooter
26822		Unofficial			<u>MSI MysticLight</u>
26900-26901	Unofficial				<u>EVE Online</u>
26909-26911	Unofficial				<u>Action Tanks Online</u>
27000	Unofficial				<u>PowerBuilder SySAM</u> license server
27000-27006		Unofficial			<u>id Software's QuakeWorld</u> master server
27000-27009	Yes	Yes			<u>FlexNet Publisher's</u> License server (from the range of default ports)
27000-27015	No	Unofficial			<u>Steam</u> (game client traffic) ^[380]
27015	No	Unofficial			<u>GoldSrc</u> and <u>Source engine</u> dedicated server port ^[380]
27015-27018		Unofficial			<u>Unturned</u> , a survival game
27015-27030	No	Unofficial			<u>Steam</u> (matchmaking and HLTV) ^[380]
	Unofficial	Unofficial			<u>Steam</u> (downloads) ^[380]
27016	Unofficial				<u>Magicka</u> and <u>Space Engineers</u> server port
27017	Unofficial	No			<u>MongoDB</u> daemon process (mongod) and routing service (mongos) ^[381]
27031-27035	No	Unofficial			<u>Steam</u> (In-Home Streaming) ^[380]
27036	Unofficial	Unofficial			<u>Steam</u> (In-Home Streaming) ^[380]

27374	Unofficial				<u>Sub7</u> default.
27500–27900		Unofficial			id Software's <i>QuakeWorld</i>
27888		Unofficial			<u>Kaillera</u> server
27901–27910		Unofficial			id Software's <i>Quake II</i> master server
27950		Unofficial			<u>OpenArena</u> outgoing
27960–27969		Unofficial			Activision's <i>Enemy Territory</i> and id Software's <i>Quake III Arena</i> , <i>Quake III</i> and <i>Quake Live</i> and some ioquake3 derived games, such as <i>Urban Terror</i> (<i>OpenArena</i> incoming)
28000	Yes	Yes			Siemens Digital Industries Software license server ^[2]
28001	Unofficial				<i>Starsiege: Tribes</i>
28015		Unofficial			<i>Rust</i> (video game) ^[382]
28016		Unofficial			<i>Rust</i> (video game) RCON ^[383]
28260	Unofficial				Palo Alto Networks' Panorama HA-1 backup unencrypted sync port. ^[26]
28443	Unofficial				Palo Alto Networks' Panorama-to-managed devices software updates, PAN-OS 8.0 and later. ^[197]
28769	Unofficial				Palo Alto Networks' Panorama HA unencrypted sync port. ^[26]
28770	Unofficial				Palo Alto Networks' Panorama HA-1 backup sync port. ^[26]
28770–28771		Unofficial			<i>AssaultCube Reloaded</i> , a video game based upon a modification of <i>AssaultCube</i>
28785–28786		Unofficial			<i>Cube 2: Sauerbraten</i> ^[384]
28852	Unofficial	Unofficial			<i>Killing Floor</i>
28910	Unofficial	Unofficial			Nintendo Wi-Fi Connection ^[385]
28960	Unofficial	Unofficial			<i>Call of Duty</i> ; <i>Call of Duty: United Offensive</i> ; <i>Call of Duty 2</i> ; <i>Call of Duty 4: Modern Warfare</i> <i>Call of Duty: World at War</i> (PC platform) ^[386]
29000	Unofficial				<i>Perfect World</i> , an adventure and fantasy MMORPG
29070	Unofficial	Unofficial			<i>Jedi Knight: Jedi Academy</i> by <u>Ravensoft</u>
29900–29901	Unofficial	Unofficial			Nintendo Wi-Fi Connection ^[385]
29920	Unofficial	Unofficial			Nintendo Wi-Fi Connection ^[385]
30000		Unofficial			<u>XLink Kai P2P</u>
		Unofficial			<u>Minetest</u> server default port ^[387]
		Unofficial			Foundry Virtual Tabletop server default port ^[388]
30033	Unofficial	No			<u>TeamSpeak 3</u> File Transfer ^[341]
30120	Unofficial				<i>Fivem</i> (Default Port) GTA V multiplayer ^{[389][375]}
30564	Unofficial				<u>Multiplicity</u> : keyboard/mouse/clipboard sharing software

31337	Unofficial				<u>Back Orifice</u> and <u>Back Orifice 2000</u> remote administration tools ^{[390][391]}
	Unofficial	Unofficial			<u>ncat</u> , a <u>netcat</u> alternative ^[392]
31416	Unofficial				<u>BOINC RPC</u> ^[393]
31438	Unofficial				<u>Rocket U2</u> ^[394]
31457	Yes				<u>TetriNET</u>
32137	Unofficial	Unofficial			<u>Immunit Protect</u> (UDP in version 2.0, ^[395] TCP since version 3.0 ^[396])
32400	Yes				<u>Plex Media Server</u> ^[397]
32764	Unofficial				A backdoor found on certain Linksys, Netgear and other wireless DSL modems/combo routers ^[398]
32887	Unofficial				<u>Ace of Spades</u> , a multiplayer FPS video game
32976	Unofficial				<u>LogMeIn Hamachi</u> , a VPN application; also TCP port 12975 and <u>SSL</u> (TCP 443). ^[399]
33434	Yes	Yes			<u>tracert</u>
33848		Unofficial			<u>Jenkins</u> , a continuous integration (CI) tool ^{[400][401]}
34000		Unofficial			<i>Infestation: Survivor Stories</i> (formerly known as <i>The War Z</i>), a multiplayer zombie video game
34197	No	Unofficial			<i>Factorio</i> , a multiplayer survival and factory-building game ^[402]
35357	Yes				<u>OpenStack Identity</u> (Keystone) administration ^[403]
36330	Unofficial				<u>Folding@home</u> Control Port
37008		Unofficial			<u>TZSP</u> intrusion detection
40000	Yes	Yes			<u>SafetyNET p</u> – a real-time Industrial Ethernet protocol
41121	Yes	Yes			<u>Tentacle Server</u> ^[404] - <u>Pandora FMS</u>
41794	Yes	Yes			<u>Crestron Control Port</u> ^[405] - <u>Crestron Electronics</u>
41795	Yes	Yes			<u>Crestron Terminal Port</u> ^[406] - <u>Crestron Electronics</u>
41796	Yes	No			<u>Crestron Secure Control Port</u> ^[407] - <u>Crestron Electronics</u>
41797	Yes	No			<u>Crestron Secure Terminal Port</u> ^[408] - <u>Crestron Electronics</u>
42081-42090	Yes	Yes			<u>Zippin</u> - <u>Zippin Stores</u> (https://getzippin.com)
42590-42595	Yes	Yes			<u>Glue</u> - <u>MakePro X</u> (https://makepro-x.com)
42806					<u>Discord</u> ^[409]
42999	Yes				<u>Curiosity</u> (https://curiosity.ai/) ^[410]
43110	Unofficial				<u>ZeroNet</u> web UI default port ^[411]
43594–43595	Unofficial				<u>RuneScape</u> ^[412]
44405	Unofficial				<u>Mu Online</u> Connect Server

44818	Yes	Yes			<u>EtherNet/IP</u> explicit messaging
47808–47823	Yes	Yes			BACnet Building Automation and Control Networks (47808 ₁₀ = BAC0 ₁₆ to 47823 ₁₀ = BACF ₁₆)
48556	Yes	Yes			<u>drive.web</u> AC/DC Drive Automation and Control Networks [413]
49151	Reserved	Reserved			Reserved ^[2]

Dynamic, private or ephemeral ports

The range 49152–65535 ($2^{15} + 2^{14}$ to $2^{16} - 1$) contains dynamic or private ports that cannot be registered with IANA.^[414] This range is used for private or customized services, for temporary purposes, and for automatic allocation of ephemeral ports.

Dynamic, private or ephemeral ports

Port	TCP	UDP	SCTP	DCCP	Description
49152–65535	Unofficial	No			<u>Certificate Management over CMS</u> ^[415]
49160	Unofficial				Palo Alto Networks' Panorama. ^[197]
51820	No	Unofficial			<u>WireGuard</u> protocol ^[416]
60000–61000	No	Unofficial			Range from which Mosh – a remote-terminal application similar to <u>SSH</u> – typically assigns ports for ongoing sessions between Mosh servers and Mosh clients. ^[417]
64738	Unofficial	Unofficial			<u>Mumble</u> ^[418]

Note

1. TCP port 465 was originally assigned to allow the use of SMTP over SSL (SMTPS), but practical concerns meant that it was left unused and according to the registration rules at that time was subsequently revoked and eventually re-assigned for use by Cisco's URD protocol. Subsequently, port 587 was assigned as the SMTP submission port, but was initially in plaintext, with encryption eventually provided years later by the STARTTLS extension. At the same time, the subsequent adoption of the usage of 465 as an SSL-enabled SMTP submission port, even though that the original registration did not envision that usage and despite the fact that it was registered to another service has endured. Subsequently, RFC 8314, in a special exemption to the normal assignment process as defined by RFC 6335, has acknowledged the *de-facto* situation and has designated SMTP over TLS as an 'alternate usage assignment'.
2. Deployment typically occurs only directly over UDP, but other underlying protocol layers which meet the requirements described in the specification are possible.

See also

- Port (computer networking)
- Internet protocol suite
- List of IP numbers
- Lists of network protocols

- Comparison of file transfer protocols

[419]

References and notes

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 - The computer used to connect to Remote Web Workplace must allow connections through TCP ports 80, 443, 987, and 3389.
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To run our code, type the following command in the terminal:

```
sails lift
```

Your app will be running on localhost : 1337. Let's test it. ...

..."

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Further reading

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External links

- "Service Name and Transport Protocol Port Number Registry" (<https://www.iana.org/assignments/service-names-port-numbers/>). *IANA.org*. Internet Assigned Numbers Authority.

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