Common ports and protocols cheat sheet

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Port numbers are defaults. Services can run on other ports, so always confirm with the device or application.

Well-known ports

Port	Protocol	Service
20/21	TCP	FTP data / control
22	TCP	SSH, SFTP, SCP
23	TCP	Telnet (insecure: avoid)
25	TCP	SMTP (server to server)
53	TCP/UDP	DNS
67/68	UDP	DHCP server / client
69	UDP	TFTP
80	TCP	HTTP
88	TCP/UDP	Kerberos
110	TCP	POP3
123	UDP	NTP (time)
135	TCP	Microsoft RPC
137–139	TCP/UDP	NetBIOS
143	TCP	IMAP
161/162	UDP	SNMP / SNMP traps
179	TCP	BGP
389	TCP/UDP	LDAP
443	TCP (UDP for QUIC)	HTTPS
445	TCP	SMB file sharing
465	TCP	SMTP over TLS
500/4500	UDP	IPsec IKE / NAT-T
514	UDP	Syslog
587	TCP	SMTP submission (email clients)
636	TCP	LDAPS
993	TCP	IMAPS
995	TCP	POP3S
1194	UDP	OpenVPN (default)
1433	TCP	Microsoft SQL Server
1812/1813	UDP	RADIUS auth / accounting
3306	TCP	MySQL / MariaDB
3389	TCP/UDP	Remote Desktop (RDP)
5060/5061	TCP/UDP	SIP / SIP over TLS (VoIP)
5432	TCP	PostgreSQL
5900	TCP	VNC
8080/8443	TCP	Alternative HTTP / HTTPS
51820	UDP	WireGuard (default)

Port ranges

Range	Name
0–1023	Well-known (system) ports
1024–49151	Registered ports
49152–65535	Dynamic / private (client side)

Use the secure version

Avoid	Use instead
Telnet 23	SSH 22
FTP 21	SFTP 22 or FTPS
HTTP 80	HTTPS 443
LDAP 389	LDAPS 636 / StartTLS
SNMP v1/v2c	SNMPv3
POP3 110 / IMAP 143	POP3S 995 / IMAPS 993

TCP vs UDP in one line

TCP sets up a connection and resends lost data (web, email, file transfer). **UDP** just sends, with no setup or resends, so it is faster for DNS, voice, video and gaming.

Never expose to the internet

RDP 3389, SMB 445, database ports (1433, 3306, 5432), Telnet 23 and device admin pages. Put them behind a VPN and allow only the addresses that need them.

Check ports yourself

Command	What it does
`ss -tulpn (Linux)`	Listening ports on this machine
`netstat -ano (Windows)`	Connections and process IDs
`Test-NetConnection host -Port 443`	Can I reach a remote port? (PowerShell)
`nmap -sV 192.168.1.10`	Scan your own devices only, with permission

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