PORTS

PORT #	FULL NAME	DESCRIPTION
0-1023	System Ports	
1024-49151	User Ports	
49152-65535	Dynamic and/or Private Ports	
TCP 20	FTP (File Transfer Protocol) - Data Channel	Unsecure
TCP 21	FTP - Control Channel	Unsecure
TCP 21	FTPS	Using TLS (TCP 21 in explicit mode and 990 in implicit mode)
TCP 22	SSH	Secure AF (unless you mishandle keys/passwords)
TCP 23	Telnet	Unsecure
TCP 25	SMTP (Simple Mail Transfer Protocol), sending email	Unsecured, unencrypted. Use Port 587 instead
UDP/TCP 53	DNS	Unsecure, succumbs to DDoS
UDP/TCP 53	DNSSEC	Provides integrity not confidentiality via digital signatures
TCP 80	HTTP	Unsecure, unencrypted
UDP/TCP 110	POP3 (Post Office Protocol Version 3)	First port for sending email. Unsecure, unencrypted, use 995 instead
TCP 143	IMAP (Internet Message Access Protocol)	Send email and more features than POP3 but still unencrypted and unsecured. Use Port 993 instead
UDP/TCP 161	SNMP (Simple Network Management Protocol)	Used for network management, unsecured. SNMPv3 is secure but not by much
TCP 443	HTTPS (Hypertext Transfer Protocol Secure)	Secure and encrypts data between the user's browser and website via TLS
TCP 445	SMB (Server Message Block)	Microsoft's networking port. Should not be open to the public. Allows sharing files and printers over the network. Blocking will prevent file and printer sharing
UDP/TCP 515	LPD (Line Printer Daemon)	Printing port, unsecured
TCP 548	AFP (Apple Filing Protocol)	AppleShare, Personal File Sharing, File services via a networked connection, unsecured - no UN or PWs
TCP 636	LDAPS (Secure Lightweight Directory Access Protocol)	TLS-protected version of LDAP (Lightweight Directory Access Protocol, previously Port 389)
TCP 777	multiling-http	Trojans use this port
TCP 989	FTPS (Implicit) - Data Channel	
TCP 990	FTPS (Implicit) - Control Channel	
TCP 1433	SQL	Microsoft's SQL server, needs to be secured
UDP/TCP 1443	Integrated Engineering Software	
TCP 3389	RDP (Remote Desktop Protocol)	Microsoft's RDP, officially listed as Windows-Based Terminal (WBT)
TCP 5000	UPnP (Universal Plug-in-Play)	Permits networked devices (Computers, printers, Wi-Fi access points) to discover each other's presence and establish a connection
UDP 5004	SRTP (Secure Real-Time Protocol)	Provides audio and video streams via network. A secure alternative to RTP
TCP 5223	Apple's Push Notification Service	Officially listed as "HP Virtual Machine Group Management"

LINUX COMMANDS

COMMAND	FULL NAME	DESCRIPTION
chmod	Change mode	Allows users to change the permissions of files and directories. Syntax: chmod <Operations> <File/Directory Name>
u	user	Grant permission to a user
g	group	grant permission to a group
o	others	grant permissions to others (not in u or g)
r	read	grants read permissions
w	write	grant write permission
x	execute	grant execute permission
+' or '-' operator		indicates adding or removing permissions. example: chmod +r sample.txt --> adds read permissions to the sample.txt file
chown	Change file ownership	
chgrp	Change group ownership	
chroot	Changes root	
ls	List	Lists a directory's content
ln	link	creates a ink to a file
ps	Process Status	report a snapshot of the current processes
date	Prints or sets the system date and time	
pwd	Print Working Directory	Shows the current working directory's path
cd	Change directory	Change the shell working directory
time	time	Report time consumed by pipeline's execution
times	times	display process times
cp	Copy	Copies a file or directory
mv	Move	Moves files or directories from one directory to another
rm	remove	Removes (deletes) files, directories, device nodes and symbolic links
dd	Data duplicator	Copies and converts a file
if	Input file	Specifies the source of data to be copied
of	Output file	Specifies the destination where the output file will be recorded to
cat	Concatenate (to merge things together)	Display file contents on the terminal
ExifTool	Exchangeable Image File Format	Reads metadata for multimedia files
touch	change file timestamps	
locate	Finds files by name	Find a file in the database
uname	Prints system information	Get basic information about the OS
mkdir	Make directory	
rmdir	Remove directory	
sudo	Superuser	Execute commands with administrative privileges
su	Switch user	allows to run commands with a substitute user and group ID
groups	prints groups	Prints the groups of which the user is a member
cksum	Checksums and count the bytes in a file	checksum and count the bytes in a file

CHMOD LINUX COMMANDS

NUMERIC REPRESENTATION	PERMISSION	LETTER REPRESENTATION
0	No permission	- - -
1	Execute	- - x
2	Write	-w-
3	Execute + Write	-wx
4	Read	r--
5	Read + Execute	r-x
6	Read + Write	rw-
7	Read + Write + Execute	rwx

IEEE 802 STANDARDS

STANDARD	FULL NAME	DESCRIPTION
IEEE 802		Collection of networking standards that cover physical and data link layer specifications for technologies such as Ethernet and wireless
802.1X	WPA-2, Standard for NAC	Port-based NAC for wired/wireless networks, RADIUS validates the user
802.1D	Spanning Tree Protocol (STP)	Ethernet MAC bridges standard which includes bridging, Spanning Tree Protocol and others. Loop protection mechanism
802.1Q	Dot1Q	Supports VLAN on IEEE 802.3 Ethernet network
802.11	-	Collection of Wireless LAN & Mesh Wi-Fi
802.11b	Wi-Fi 1	11 Mbit/s, 2.4 GHz
802.11a	Wi-Fi 2	54 Mbit/s, 5 GHz
802.11g	Wi-Fi 3	54 Mbit/s, 2.4 GHz
802.11n	Wi-Fi 4	600 Mbit/s, 2.4 GHz and 5 GHz
802.11ac	Wi-Fi 5	6.9 Gbit/s, 5 GHz
802.11ax	Wi-Fi 6 and Wi-Fi 6E	9.6 Gbit/s, 2.4 GHz, 5 GHz, 6 GHz
802.11be	Wi-Fi 7	Extremely High Throughput (EHT), 40+ Gbit/s, 2.4 GHz, 5 GHz, 6 GHz (adopted 2024)
802.11bn	Wi-Fi 8	Ultra High Reliability (UHR), 100,000 Mbit/s (adopted 2028)
802.15.1	WPAN/Bluetooth	
802.3	Wired Ethernet	Collection of standards defining physical layer and data link layer's MAC of wired Ethernet