Networking

Common Ports

Port Numbers

- A **port number** is a way to identify a specific process to which an internet or other network message is to be forwarded when it arrives at a server

- A port can be any number between 1 and 65,535

- The first 1023 ports are what is known as the well-known ports

- These port numbers are assigned their values in accordance with RFC 3232

- The remaining ports, ports 1,024 - 65,535, are known as registered ports and a lot are reserved for different protocols

Net+ Well-Known Ports

Protocol	Port Number	TCP/UDP	Description
File Transfer Protocol (FTP)	20/21	TCP	Transfers files between two systems
Secure Shell (SSH)	22	TCP	Remote log-in securely to another machine over unsecure networks, typically for CLI
Secure File Transfer Protocol (SFTP)	22	TCP	Transfers files between machines securely
Telnet	23	TCP	Text communication between two machines in plaintext
Simple Mail Transfer Protocol (SMTP)	25	TCP	Send and receive email messages
Domain Name System (DNS)	53	Both	Naming system for IP Addresses
Dynamic Host Configuration Protocol (DHCP)	67/68	UDP	Network naming protocol for networks that automatically assign IP Addresses
Trivial File Transfer Protocol (TFTP)	69	UDP	Transfers files from one system to another with lockstep method
Hypertext Transfer Protocol (HTTP)	80	TCP	Web traffic without encryption

Net+ Well-Known Ports

Protocol	Port Number	TCP/UDP	Description
Post Office Protocol v3 (POP3)	110	TCP	A client can retrieve emails from an email server
Network Time Protocol (NTP)	123	UDP	Clock synchronization between two machines
Internet Message Access Protocol (IMAP)	143	TCP	A client can retrieve emails from an email server
Simple Network Management Protocol (SNMP)	161/162	Both	Hosts the information about machines on a network
Lightweight Directory Access Protocol (LDAP)	389	TCP	Contains directory information for a network
Hypertext Transfer Protocol Secure (HTTPS) [Secure Sockets Layer (SSL)]	443	TCP	Web traffic with SSL encryption
HTTPS [Transport Layer Security (TLS)]	443	Both	Web traffic with TLS encryption
Server Message Block (SMB)	445	TCP	Microsoft created to provide access to devices on a network (printers, files, etc…)

Net+ Well-Known Ports

Protocol	Port Number	TCP/UDP	Description
Syslog	514	UDP	Logging messages on a system
SMTP TLS	587	TCP	Receives emails securely with SMTP
Lightweight Directory Access Protocol (over SSL) (LDAPS)	636	TCP	Contains directory information for a network securely with SSL encryption
IMAP over SSL	993	TCP	Uses IMAP to retrieve emails securely using SSL encryption
POP3 over SSL	995	Both	Uses POP3 to retrieve emails securely using SSL encryption
Structured Query Language (SQL) Server	1433	Both	Database server
SQLnet	1521	Both	Oracle SQL databases
MySQL	3306	TCP	MySQL database port to edit a MySQL database
Remote Desktop Protocol (RDP)	3389	TCP	Access a machine's desktop remotely
Session Initiation Protocol (SIP)	5060/5061	Both	Real-time sessions that include voice, video, text messaging, etc…