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This topic matters as it relates to what I'm studying in this module which is networking.

## **Reading**

### **For Lecture & Lab**

1. What is a port? Describe it with an analogy that would help a family member understand.
   1. A network port is like a mailbox with a number, and it's used by your computer to send and receive different types of data over the internet.
2. What does a port scanner send to a port to check the current status?
   1. Sends network packets to a port to check its current status.
3. When a port scanner sends a request to connect, what are the three possible responses? Describe them.
   1. The three responses are: open port, closed port, blocked or filtered. An open port means that there is a service actively listening on that port and ready to establish a connection. A closed port indicates that there is no service actively listening on that port. A filtered or blocked port typically suggests that a firewall or network security device is actively blocking or dropping incoming connection attempts to that port.
4. What is the difference between TCP and UDP?
   1. TCP is connection-oriented, meaning it establishes a connection before data is exchanged while UDP is connectionless and does not establish a connection before sending data.
5. List and describe the ports used for the following:
   * Telnet
     1. Port 23: Telnet is a protocol that allows remote terminal access and control of a device or server over a network.
   * SSH
     1. Port 22: SSH is a secure alternative to Telnet. It provides encrypted communication for secure remote access and administration of devices, servers, and systems.
   * DNS
     1. Port 53: DNS is a critical service that translates domain names as www.google.com into IP addresses.
   * SMTP
     1. Port 25: SMTP is used for sending email messages between mail servers.
   * HTTP
     1. Port 80: HTTP It's used for transmitting web pages and other resources from web servers to web browsers. It's unencrypted.
   * HTTPS
     1. Port 443: HTTPS is a secure version of HTTP that encrypts data between web servers and clients, ensuring the confidentiality and integrity of web communication.
   * RDP
     1. Port 3389: RDP is a protocol developed by Microsoft for remote desktop access and control of Windows-based computers.
   * Ping
     1. Ping does not have a port number, instead, it uses ICMP. Ping is a network utility used to test the reachability of a host on an IP network.