Ports and Protocols

At the end of this episode, I will be able to:

1. Identify TCP and UDP protocols and ports.

Exam Objective: 2.1 - Compare and contrast Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) ports, protocols, and their purposes.

Description: In this episode, we discuss common protocols used in network communications. We will compare and contrast Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) and a connection-oriented service vs. a connectionless service.

- What is a **protocol and port**?
- What is are the standardized port ranges?
  - 0- 1023 = **Well known ports** (most of the focus)
  - 1024-49151 = **Register port ranges** (a few in this range)
  - 49152 - 65535 = **Dynamic port ranges**
- What is a connection-oriented service vs. a connectionless service?
  - Reliable delivery vs. best effort delivery
- Protocols List
  - **Email Protocols**

        - SMTP = Port 25
        - IMAP = Port 143
        - POPv3 = Port 110
    - **Web Protocols**
        - HTTP = Port 80 (Demo)
        - HTTPS = Port 143 (Demo)
    - **File Protocols**
        - FTP = Port 20,21
        - TFTP = Port 69 (Demo)
    - **Remote Connection Protocols**
        - Telnet = 23
        - SSH = 22 (Demo)
        - RDP = 3389
            - **Network Services**
            - DNS = Port 53 (Demo)
            - NETBIOS = Port 137/139
            - DHCP Port 68 and 67
            - SNMP = 161/162
            - LDAP = 389
            - SMB = 445

- Additional Reference Materials
    - Not applicable if blank