Storage Device Cables

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

1. Identify common storage devices cables and connections

Exam Objective: 3.1 - Explain basic cable types and their connectors, features, and purposes.

Description: In this episode, we will discuss storage device cables and connections. We will discuss IDE, SATA, eSATA, FireWire, and SCSI.

- Integrated Drive Electronics (**IDE**)
  - Older legacy technology
  - 18” cables (and non-standardized 24” cables)
  - Primary and secondary drives
  - 2 devices per cable, maximum of 4 devices
  - 40 and 80 pin varieties
  - Retro named Parallel ATA or PATA
- Serial Advanced Technology Attachment (**SATA**)
  - Successor to IDE/PATA
  - Minimum of 12” (smaller can cause timing/noise interference issues)
  - Single device per cable

    - 4-8 SATA port on motherboards commonly
    - 7 pin data cable connectors
    - 15 pin power connectors
- External SATA (**eSATA**)
    - Allows for the connection of SATA enclosures to an external port
    - 2-meter max cable length
    - Shielded cable
    - Largely replaced by faster technologies such as USB and Thunderbolt.
- **FireWire**
    - IEEE 1394
    - 12V power
    - 60+ devices
    - 400 (FireWire 400) and 800 (FireWire800) Mbps
- Small Computer System Interface (**SCSI**)
    - Older technology used in enterprises
    - Costly
    - Legacy devices used parallel cables
        - Required jumpers to configure SCSI_IDs
    - Newer devices use serial cables
    - Uses a specialized adapter called a host bus adapter (HBA)