BIOS and UEFI

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

1. Identify PC firmware platforms.

Exam Objective: 3.4 -Given a scenario, install and configure motherboards, central processing units (CPUs), and add-on cards.

Description: In this episode, we will discuss two major firmware platforms known as Basic Input/Output System (BIOS) and Unified Extensible Firmware Interface (UEFI) as well as compare their respective features.

- What is **firmware**?
- Basic Input/Output System (**BIOS**)
    - Legacy system built in the days of 16-bit systems
    - Maximum limit of 4 primary partitions
    - 2 TB volume size max
    - Uses a Master Boot Record or MBR to boot the system
- Unified Extensible Firmware Interface (**UEFI**) settings
    - More than 4 partitions (128)
    - Volume sizes larger than 2 TB (9 zettabytes)

    - Faster boot times
    - Uses a GUID Partition Table or GPT to locate and boot the OS
    - Implements Secure boot
- **Boot options**
    - Default boot devices
    - Boot order
- **Monitoring**
    - Voltages
    - Timings
    - Fans
    - Temperature
- **Security**
    - Boot password
    - Chassis Intrusion Detection
    - Trusted Platform Module (TPM)
    - Secure Boot