Lab - Investigate BIOS or UEFI Settings

# Introduction

In this lab, you will boot the computer, explore the firmware setup utility program, and change the boot order sequence.

# Recommended Equipment

* Computer with or without operating system
* Motherboard manual

# Instructions

## Enter BIOS or UEFI.

### Power on the computer.

* + - 1. Plug the power supply cable into an AC wall outlet.
      2. If there is a power switch on the power supply, set the switch to “1” or “on”.
      3. Turn on the computer with the power button on the front panel.

**Note**: If the computer beeps more than once, or if the power does not come on, notify your instructor.

### Enter the firmware setup program.

During POST, press the firmware setup key or key combination. The firmware setup utility program screen will appear.

#### Questions:

What is the key or combination of keys used to enter the firmware setup utility program?

F2

Who manufactures the BIOS or UEFI system for your computer?

Dell

What is the BIOS or UEFI version?

A17

## Explore the Settings.

### List the main menu options.

#### Question:

List the main menu options and describe what is monitored in each menu?

General – Information and boot sequence

System Configuration – Hardware configuration

Video - Brightness

Security - Passwords

Secure Boot – Enable/Disable secure boot

Performance – CPU Configuration

Power Management – Power Behavior

POST Behavior – Settings for certain parts of the device

Virualization support – Settings for virtualization

Wireless – Enable/Disable wireless devices

Maintenance – Service and asset tags

System Logs - Logs

### Find the security settings.

Navigate through each screen to find the security settings.

#### Question:

What security settings and features are available?

Admin password

System password

Internal HDD-0 password

Strong password

Password configuration

Password bypass

Password change

Non-admin setup changes

TPM Security

Computrace®

CPU XD Support

OROM Keyboard access

Admin setup lockout

### Find the CPU settings.

Navigate through each screen to find the CPU settings.

#### Questions:

What is the CPU speed?

2.9Ghz

What other information is listed for the CPU

Core count

Processor ID

Current clock speed

Minimum clock speed

maximum clock speed

processor L2 cache

processor L3 cahce

HT Capable

64-Bit technology

### Find the RAM settings.

Navigate through each screen to find the RAM settings.

#### Questions:

What is the RAM speed?

1500MHz

What other information is listed for the RAM?

Memory installed

memory available

memory speed

memory channel mode

memmory technology

DIMM A Size

DIMM B Size

### Find the hard drive settings.

Navigate through each screen to find the hard drive settings.

#### Questions:

What information is listed for the hard drive?

Primary Hard Drive

Modular Bay Device

System eSATA Device

Dock eSata Device

LOM MAC Address

### Find the boot order sequence.

Navigate through each screen to find the boot order sequence.

#### Questions:

What is the first boot device in the boot order sequence?

Internal HDD

Diskette drive

USB Storage Device

CD/DVD/CD-RW Drive

Onboard NIC

How many additional devices can be assigned in the boot order sequence?

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### Set the device boot order settings.

* + - 1. Ensure that the first boot order device is the optical drive.
      2. Ensure that the second boot order device is the hard disk drive.

#### Questions:

Why would you change the first boot device to the optical drive?

In case you were installing an operating system and the file was in the diskette drive

What happens when the computer boots and the optical drive does not contain bootable media?

It moves onto the next item in the list

### Find the power management setup or ACPI screen.

Navigate through each screen to find the power management setup screen, or ACPI screen.

#### Question:

What power management settings are available?

AC Behavior

Auto on time

USB Wake Support

Wireless Radio Control

Wake on LAN/WLAN

Block Sleep

Primary battery charge configuration

Battery Slice Charge Configuration

Module Bay Battery Charge configuration

Intel® Smart connect technology

### Find the PnP settings.

Navigate through each screen to find the PnP settings.

#### Question:

What PnP settings are available?

N/A

### Find the splash screen settings.

Navigate through each screen to find the splash screen settings.

#### Question:

What splash screen settings are available?

N/A

### Save and exit the setup utility program.

Save the new BIOS/UEFI settings and exit the setup utility program. The computer should restart automatically.

**Note**: An error message stating that an OS cannot be found (or a similar error) will appear on the screen after the computer boots. An operating system must now be installed to prevent this error. It is safe to turn off the computer at this time.

This lab is complete. Please have the instructor verify your work.

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