

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

Part 1: Enter BIOS or UEFI.

Step 1: Power on the computer.

- a. Plug the power supply cable into an AC wall outlet.
- b. If there is a power switch on the power supply, set the switch to “1” or “on”.
- c. 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.

Step 2: 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?

Insyde

is the BIOS or UEFI version?

UEFI

Part 2: Explore the Settings.

Step 1: List the main menu options.

Question:

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

Information, Main, Advance, Security, Boot, Exit

Step 2: Find the security settings.

Navigate through each screen to find the security settings.

Question:

What security settings and features are available?

Set Supervisor Password, Set User Password, Password on Boot, Secure Boot Mode, Current TPM (TCM) State, Change TPM (TCM) State

Step 3: Find the CPU settings.

Navigate through each screen to find the CPU settings.

Questions:

What is the CPU speed?

1.8 GHz

What other information is listed for the CPU?

CPU Type and CPU speed

Step 4: Find the RAM settings.

Navigate through each screen to find the RAM settings.

Questions:

What is the RAM speed?

3200MHz

What other information is listed for the RAM

The capacity, manufacturer, memory timings, voltage.

Step 5: Find the hard drive settings.

Navigate through each screen to find the hard drive settings.

Questions:

What information is listed for the hard drive?

Model name and serial number

Step 6: 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?

Windows boot media

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

None because there is only one storage device in the laptop

Step 7: Set the device boot order settings.

- a. Ensure that the first boot order device is the optical drive.

Lab - Investigate BIOS or UEFI Settings

- b. 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?

If you are installing an operating system on an older device

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

Black screen with a text saying "Reboot and select proper boot device"

Step 8: 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?

FACP - C2 Latency Value, FACP - C3 Latency Value, FACP - RTC S4 Wakeup, APIC - IO APIC Mode, HPET - HPET Support, _OSC Support, SPCR Table Support

Step 9: Find the PnP settings.

Navigate through each screen to find the PnP settings.

Question:

What PnP settings are available?

Plug & Play OS, PCI Latency Timer (32/64/128/256), Allocate IRQ to PCI VGA, Reserved IRQs (None/3/4/5/7/9/10/11), Reserved DMA Channels (None/0/1/3/5/6/7), IRQ/DMA Assignment (Automatic/Manual), Wake on PnP Device

Step 10: Find the splash screen settings.

Navigate through each screen to find the splash screen settings.

Question:

What splash screen settings are available?

Splash screen settings does not seem to exist on this bios (InsydeH20 rev 5.0)

Step 11: 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.

Lab - Investigate BIOS or UEFI Settings

Opening BIOS Proof:

