

## Lab 12.7.4: Booting into Safe Mode

**Estimated Time:** 25 Minutes

### Objective

Upon completion of this lab, you will be able to boot the PC utilizing the advanced troubleshooting options of Windows 2000.

### Equipment

The following equipment is required for this exercise:

- An operational computer that is running Windows 2000.

### Scenario

You are unable to boot a computer into the normal Windows Desktop environment. Boot into safe mode to attempt to troubleshoot the problem.

### Procedures

Booting the computer into Safe Mode, bypasses the normal startup sequence of Windows. Part of this process involves timing. When the black and white “starting windows bar” is on the screen, press the **F8** key before the system begins loading Windows. Otherwise it is too late.

#### Step 1

Power on the computer.

#### Step 2

When the computer is running through the boot process, a series of different startup screens display. In order to get into Safe Mode in Windows 2000, press **F8** while the black and white “Starting Windows” bar appears at the bottom of the screen. The Starting Windows bar will display after the BIOS has been loaded.

What is the name of the menu that displays?

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What are the options that are available on this menu?

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### Step 3

Next, select the **Safe Mode** option by using the arrow keys up or down and press **Enter**. Windows will load to the Safe Mode environment. Read the window carefully and press **OK**.

### Step 4

Windows loads into Safe Mode desktop environment. However, since Windows only loads basic drivers in Safe Mode the graphics will be in VGA mode.

Does the desktop appear to be in VGA mode? \_\_\_\_\_

How would you check the video settings?

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### Step 5

Next access the Device Manager to check loaded drivers. To access the Device Manager, click on **Start Menu > Settings > Control Panel > System > Hardware > Device Manager**. The Device Manager will open displaying the hardware components.

### Step 6

After the Device Manager is open, check to see if any devices are conflicting. Conflicting devices will have a yellow exclamation point next to them.

Are there any conflicting devices? \_\_\_\_\_

### Step 7

Next, verify that no network drivers have been installed. To verify the network drivers, click on the "+" sign next to "Network Adapters." A list of devices should display. Right-click on a device, select properties and a device properties window will appear.

What does the device properties window display for "Device Status"?

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## Troubleshooting

Booting a PC into Safe Mode is often used by computer technicians when troubleshooting a problem. Safe Mode helps technicians identify and diagnose problems. If the problem is not present in Safe Mode, then it is probably related to settings and/or drivers.

Safe Mode loads only generic drivers during the loading of the OS. It will load basic drivers for the mouse, video display, mass storage, keyboard, and the default services. Also, booting a PC into Safe Mode does not load network devices/connections by default. However, the PC can be booted using the "Safe Mode with Networking" to establish a

network connection.

### **Reflection**

What key is pushed to enter into Safe Mode in Windows 2000?

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What is the main difference between Safe Mode and normal operation?

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Why might Safe Mode be an effective troubleshooting tool?

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