

3.4.4 Troubleshoot Power Supply Problems

Your Performance

Your Score: 2 of 2 (100%)

Elapsed Time: 7 minutes 34 seconds

Pass Status: **Pass**

Required Score: 100%

Task Summary

Actions you were required to perform:

- ✓ Remove the bad power supply
- ✓ Install the 20+4 pin power supply with PCIe connectors [Show Details](#)

Explanation

In this lab, your task is to complete the following:

- Test the power supply.
- Choose a power supply that has the following connectors:
 - The motherboard main power connector (20+4 pin)
 - The CPU power connector (4 pin)
 - A PCIe video card (6 pin)
- The customer has expressed interest in a new graphics card that requires its own power connector. Make sure that the power supply you select will support adding this card.
- Install a power supply in the computer making the following connections:
 - Connect the motherboard power connector.
 - Connect the CPU power connector.
 - Connect the power connector for the SATA hard drive and the optical drive.
 - Plug the computer in using the existing power cable that is plugged into the wall.
- Start the computer and boot into Windows. If everything is connected correctly, the computer will work.

Complete this lab as follows:

1. Test the power supply as follows:
 - a. On the computer, click the **power** button to turn on the computer and observe the symptoms.
 - b. In the Computer Startup dialog, click **OK**.
 - c. On the Shelf, expand **PC Tools**.
 - d. Drag the **Power Supply Tester** from the Shelf to the Workspace area.
 - e. Above the computer, select **Motherboard** to switch to the motherboard view of the computer.
 - f. On the motherboard, drag the **20+4 pin power supply connector** to the port on Power Supply Tester.
 - g. On the motherboard, drag the **4-pin CPU power connector** to the 4/6/8 port on Power Supply Tester.
 - h. Under Selected Component, drag an unconnected **15-pin SATA power connector** to the port on the Power Supply Tester.
What do the lights and values on the Power Supply Tester indicate? The power supply is bad.
2. Remove the power supply as follows:
 - a. Above the computer, select **Back** to switch to the back view of the computer.
 - b. Drag the **power cord** from the power supply to the Workspace.
 - c. Above the computer, select **Drive Bays** to switch to the drive bays view of the computer.
 - d. Drag the **power connector** from the SATA drive to the Workspace.
 - e. Drag the **power connector** from the optical drive to the Workspace.
 - f. In the Workspace, disconnect the **connectors** from the Power Supply Tester.
 - g. Above the computer, select **Motherboard** to switch to the motherboard view of the computer.
 - h. Drag the **power supply** to the Workspace area.
3. Install a power supply as follows:
 - a. On the Shelf, expand **Power Supplies**.
 - b. Select a **power supply**.
 - c. Under Selected Component, examine each of the power **connectors** looking for all of the connectors required for this scenario.
 - d. From the Shelf, drag the **Power Supply, ATX, 20+4 pin, PCIe** to the correct area in the computer.
 - e. Under Selected Component, drag the **20+4 pin power supply connector** to the motherboard connector to connect the motherboard main power connector.

- f. Under Selected Component, drag the **4-pin CPU power connector** to the motherboard connector
 4. Connect the SATA hard drive power as follows:
 - a. Above the computer, select **Drive Bays** to switch to the drive bays view of the computer.
 - b. Under Selected Component, drag the **SATA power connector** to the location on the hard drive.
 - c. Under Selected Component, drag the **optical drive power connector** to the location on the hard drive.
 5. Plug the computer into the wall outlet as follows:
 - a. Above the computer, select **Back** to switch to the back view of the computer.
 - b. Under Partial Connections for the wall plate, select the **power cord**.
 - c. Under Selected Component, drag the **AC Power Connector** to the power supply port.
 - d. On the power supply, click the **power supply switch** to turn it to the on position.
 - e. Above the computer, select **Front** to switch to the front view of the computer.
 6. On the computer, click the **power** button to turn on the computer and verify that the computer boots into Windows.
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