

PC Hardware
Chapter 11 Lab:
Serial Port Conflict Resolution

Objective

Serial port conflicts commonly occur when an internal modem is installed in a PC. You can approach troubleshooting these conflicts in several ways, depending on the environment. This lab exercise shows you how to properly troubleshoot a serial port conflict in the Windows 9x environment. After completing this lab exercise, you will be able to:

- Define a serial port conflict.
- Describe the symptoms of a serial port conflict.
- Use the Device Manager to discover which device is conflicting with the serial port.
- Resolve serial port conflicts.

Additional Devices

- One jumper-configurable internal modem, including documentation for the internal modem's jumper settings (a phone line is not necessary)
- At least one COM port must be configured and functioning properly

Lab Setup & Safety Tips

- Each lab workstation should have an internal modem installed and functioning properly.
- Each lab workstation's modem should be configured to use COM2.
- Each lab workstation should be configured to use COM1.
- Always unplug the power cord and properly ground yourself before touching any component inside a computer.

Activity

Creating and observing the conflict

1. Power off the lab workstation.
2. Unplug the power cord.
3. Remove the case from the lab workstation.
4. Locate the modem.
5. Using the documentation provided, change the modem jumper settings from COM2 to COM1.
6. Replace the case and plug in the power cord.
7. Power on your lab workstation and allow it to boot into Windows 9x. Note that depending on the type of system, you might receive an error message during the POST. Observe any error messages and continue booting the system by following the instructions on the screen.
8. Click the **Start** button, point to Settings, then click **Control Panel**.

9. Double-click the System icon.
10. Click the Device **Manager** tab.
11. Look for yellow exclamation points located on top of COM1 and the modem icon. If you see the yellow exclamation points, you have successfully created a resource conflict between the two devices.

Resolving the conflict

You can resolve this conflict in several ways. The needs of the user will determine the best method. For example, you already know that you can easily resolve this conflict simply by changing the modem jumper settings back to the original settings. Another solution would be to disable or reassign the COM port's resources.

Reassigning or disabling the COM port's resources

1. Reboot your lab workstation.
2. Enter the BIOS Setup program.
3. Locate the serial configuration section.
4. Change your serial port configuration from COM2 to Disabled.
5. Save the changes and reboot the lab workstation.

Note the default port assignments in Table 9—1 and remember that not all serial ports are configurable through the BIOS. If the COM port configuration is not available through the BIOS Setup program of your lab workstation, ask your instructor for the I/O card configuration.

Table 9-1 Default port assignments on many computers

Port	IRQ	I/O Address (in Hex)	Type
COM1	IRQ 4	03F8 — 3FF	Serial
COM2	IRQ 3	02F8 — 2FF	Serial
COM3	IRQ 4	03E8 — 3EF	Serial
COM4	IRQ 3	02E8 — 2EF	Serial
LPT1	IRQ 7	0378 — 37F	Parallel
LPT2	IRQ 5	0278 — 27F	Parallel

Lab Notes

Note that in some of the more severe cases, a PC completely freezes when a serial port conflict occurs.

View device resources – You can use the Device Manager to view resource settings by double-clicking the device icon.

Are there yellow exclamation points in the Device Manager? – When the Device Manager displays a yellow exclamation point over a device, it means that the device is conflicting with another device.

Review Questions

Circle True or False.

1. The Device Manager can be found by opening the Control Panel and then double-clicking the Network icon. True / False
2. All serial ports can be configured using the BIOS Setup program. True / False
3. Serial ports can conflict only with modems. True / False
4. To what IRQ does COM4 default?
5. Describe how to view the IRQ of a device using the Device Manager.

6. You are the desktop PC support technician for the Good Job Corporation. Janet, one of your customers, suspects that she has a resource conflict between her newly installed modem and one of the serial ports on her laptop. Describe how you would use the Device Manager to confirm or eliminate her suspicions.
