


Lab 5.2.7 Establishing a Console Connection to a Router or Switch – Instructor Version



Straight-through cable	—————
Serial cable	—————  —————
Rollover (console)
Crossover cable	- - - - -

Objective

- Create a console connection from a PC to a router and switch using the proper cable
- Configure HyperTerminal on the PC
- Observe the router and switch user interface

Background / Preparation

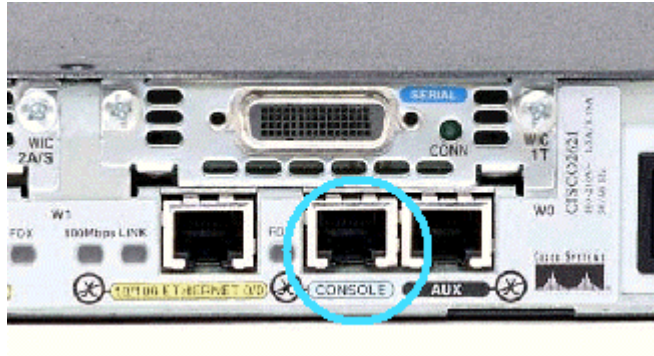
This lab will focus on the ability to connect a PC to a router or a switch in order to establish a console session and observe the user interface. A console session allows the user to check or change the configuration of the switch or router and is the simplest method of connecting to one of these devices.

This lab should be performed twice, once with a router and once with a switch to see the differences between the user interfaces. Start this lab with the equipment turned off and with cabling disconnected. Work in teams of two with one for the router and one for the switch. The following resources will be required:

- Workstation with a serial interface and HyperTerminal installed
- Ethernet 10BASE-T or Fast Ethernet switch
- Cisco Router
- Rollover or console cable for connecting the workstation to the router or switch

Step 1 Identify the Router/Switch console connectors

- a. Examine the router or switch and locate the RJ-45 connector labeled "Console".



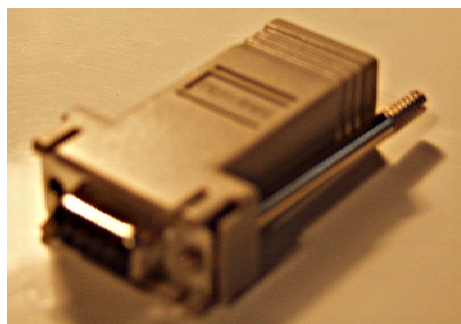
Step 2 Identify the computer serial interface, which is COM 1 or 2

- a. It should be a 9 or 25-pin male connector labeled serial or COM1. It may or may not be identified.



Step 3 Locate the RJ-45 to DB-9 adapter

One side of the adapter connects to the PC's serial interface and the other to the RJ-45 rollover cable connector. If the serial interface on the PC or dumb terminal is a DB-25, an RJ-45 to DB-25 adapter will be needed. Both of these adapters typically come with a Cisco router or switch.

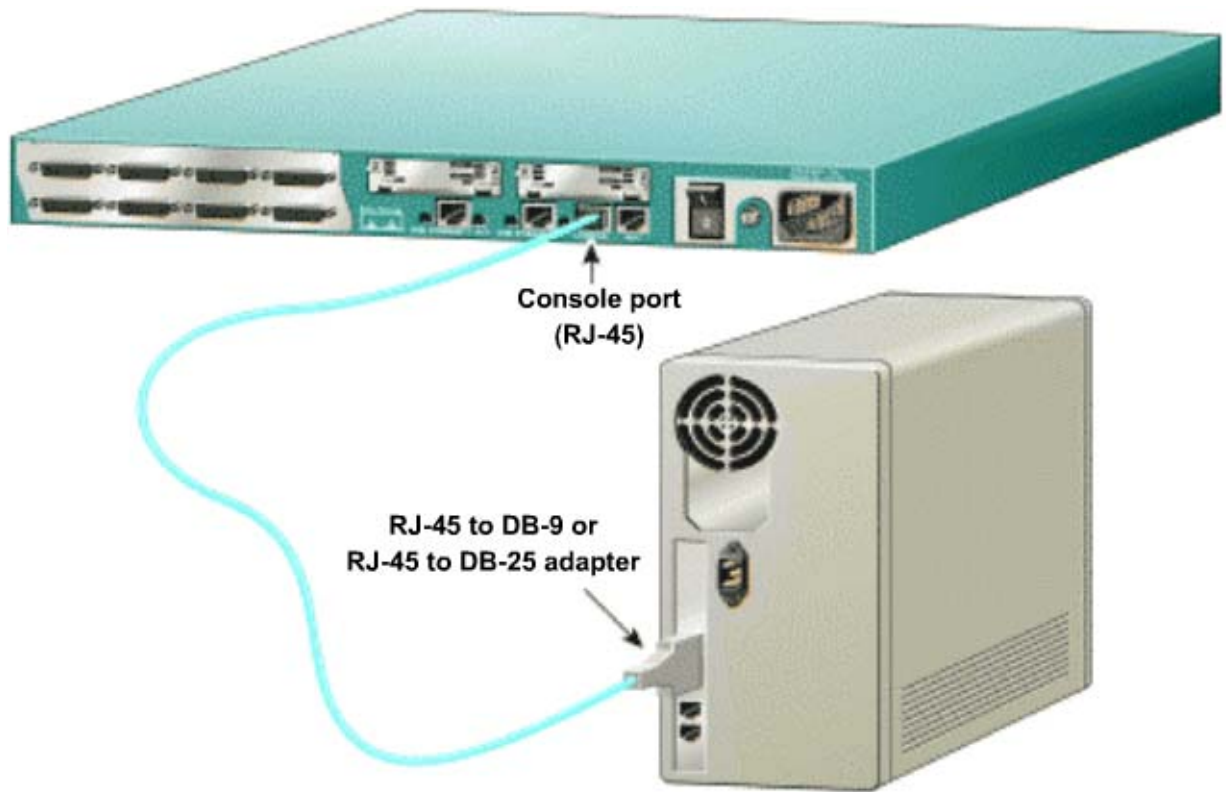


Step 4 Locate or build a rollover cable

Use a rollover cable. If necessary, make one of adequate length to connect the router or switch to a workstation.

Step 5 Connect the cabling components

Connect the rollover cable to the router or switch console port RJ-45 connector. Next, connect the other end of the rollover cable to the RJ-45 to DB-9 or DB-25 adapter. Finally, attach the adapter to a PC serial port, either DB-9 or DB-25, depending on the computer.



Step 6 Start the PC HyperTerminal program

- a. Turn on the computer
- b. From the Windows taskbar, locate the **HyperTerminal** program:

Start > Programs > Accessories > Communications > Hyper Terminal

Note: In Windows 95/98/Me, the student may have to install HyperTerminal in the Windows Components Tab of "Add/Remove Programs".

Step 7 Name the HyperTerminal Session

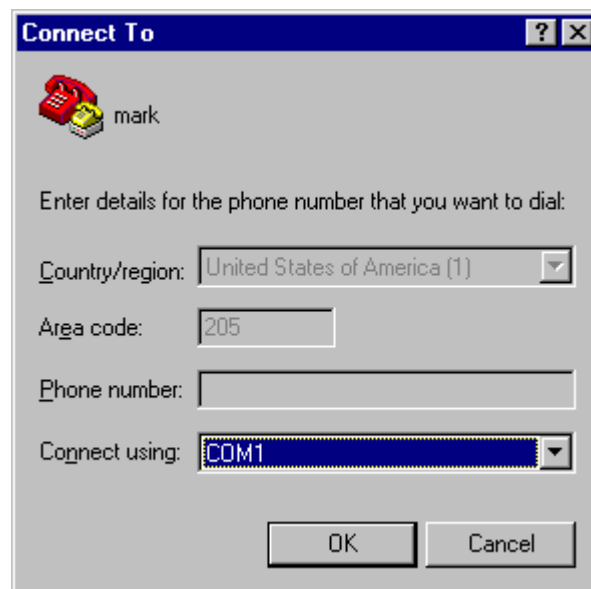
At the "Connection Description" popup enter a name in the connection Name field and select **OK**.



Step 8 Specify the computer connecting interface

At the “Connect To” popup, use the drop down arrow in the Connect using: field to select **COM1** and select **OK**.

Note: Depending on which serial port was used on the PC, it may be necessary to set this to **COM2**.



Step 9 Specify the interface connection properties

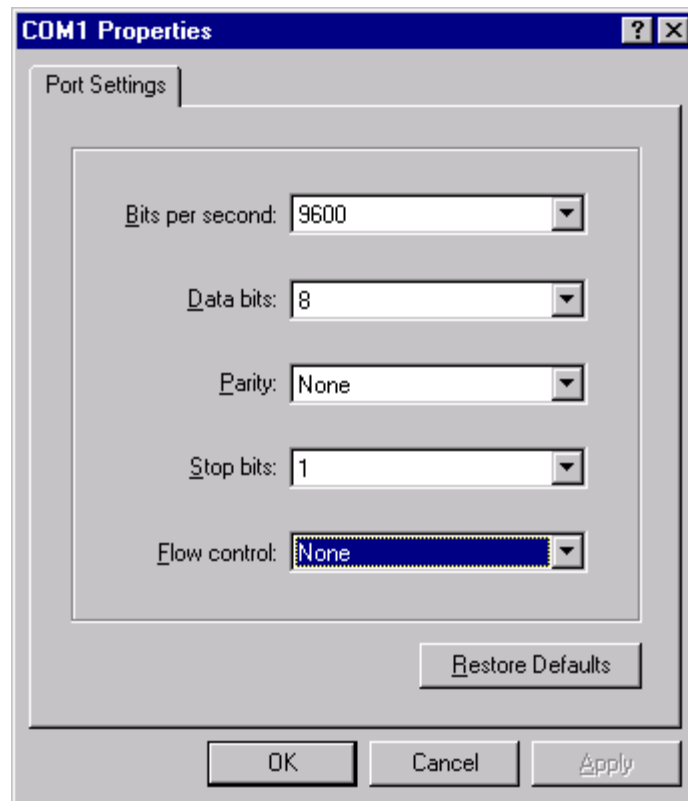
- a. At the “COM1 Properties” popup use the drop down arrows to select the following:

Bits per second = **9600**

Data bits = **8**

Parity = **None**
Stop bits = **1**
Flow control = **None**

- b. Then select **OK**.



- c. When the HyperTerminal session window comes up, turn on the router or switch. If the router or switch is already on, press the **Enter** key. There should be a response from the router or switch. If there is, then the connection has been successfully completed.

Step 10 Observe the router or switch user interface

- a. Observe the user interface.
b. If this is a router, what is the prompt?

Answers will vary depending on the configuration of the Router. Example prompt: Router>

- c. If this is a switch, what is the prompt?

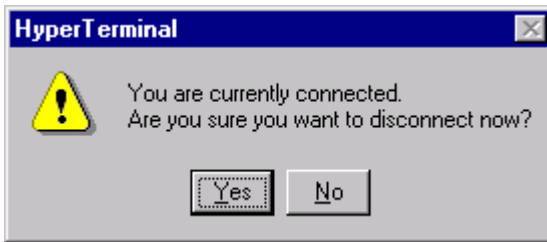
Answers will vary depending on the configuration of the switch. Example prompt: Switch>

Step 11 Close the Session

- a. To end the console session from a HyperTerminal session, select the following:

File > Exit

- b. When the HyperTerminal disconnect warning popup appears, select **Yes**.



- c. The computer will then ask if the session is to be saved. Select **No**.

Step 12 Shut down the router or switch and store the cables