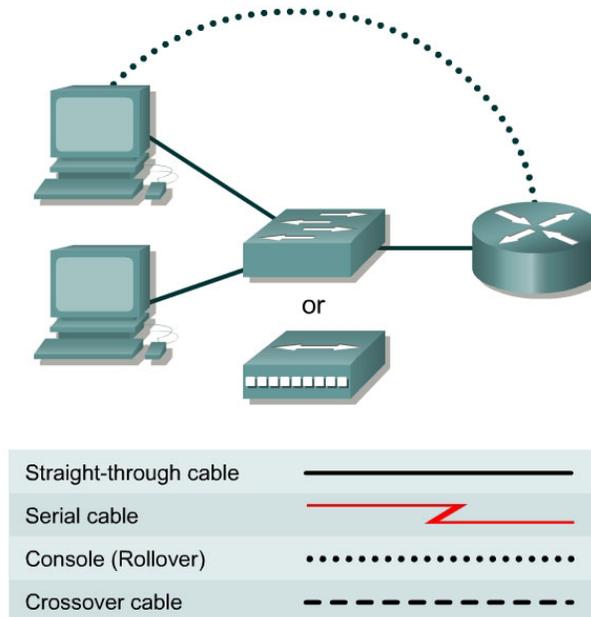


Lab 1.2.6 Connecting Router LAN Interfaces



Objective

- Identify the Ethernet or Fast Ethernet interfaces on the router.
- Identify and locate the proper cables to connect the router and PC to a hub or switch.
- Use the cables to connect the router and PC to the hub or switch.

Background/Preparation

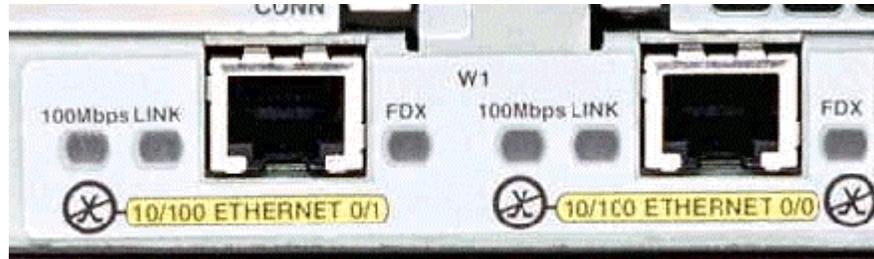
This lab focuses on the ability to connect the physical cabling between Ethernet LAN devices such as hubs and switches and the appropriate Ethernet interface on a router. The computer(s) and router should be preconfigured with the correct IP network settings. Start this lab with the computer(s), router and hub or switch all turned off and unplugged. The following resources will be required:

- At least one workstation with an Ethernet 10/100 NIC installed
- One Ethernet switch or hub
- One router with an RJ-45 Ethernet or Fast Ethernet interface, or an AUI interface
- 10BASE-T AUI, DB-15 to RJ-45 transceiver, for a 2500 series router with an AUI Ethernet interface

- Several straight-through Ethernet cables to choose from for connecting the workstation and router to the hub or switch

Step 1 Identify the Ethernet or FastEthernet interfaces on the router

- Examine the router.
- What is the model number of the router? _____
- Locate one or more RJ-45 connectors on the router labeled 10/100 Ethernet on the 2500 series or 10/100 Fast Ethernet on the 2600 series. This identifier may vary depending on the type of router used. A 2500 series router will have an AUI DB-15 Ethernet port labeled AUI 0. These will require a 10BaseT transceiver to connect to the RJ-45 cable.



- Identify the Ethernet ports shown that could be used for connecting the routers. Record the information below. Record the AUI port numbers if the router is a Cisco 2500 series router.

Router	Port	Port

Step 2 Identify the proper cables and connect router

- The connection between the router and the hub will be accomplished using a Category 5 straight-through patch cable. Locate a patch cable that is long enough to reach from the router to the hub. Be sure to examine the cable ends carefully and select only straight-through cables.
- Use a cable to connect the Ethernet interface that uses the 0 (zero) designation on the router to a port on the hub or switch. Also, use the 10BaseT AUI transceiver for the 2500 series.

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

- The computer(s) will also connect to the hub using a straight through patch cable. Run Category 5 patch cables from each PC to where the switch or hub is located. Connect one end of these cables to the RJ-45 connector on the computer NIC and connect the other end to a port on the hub or switch. Be sure to examine the cable ends carefully and select only straight through cables.

Step 4 Locate or build a rollover cable

- Plug in and turn on the routers, computers, and hub or switch.
- To verify the router connections, insure that the link light on the router interface and the hub/switch interface are both lit.
- To verify the computer connections, insure that the link light on the NIC and the hub interface are both lit.