Experiment 7: Exercise on Installing of a switch and connecting systems to a network switch.

Switches

A switch is a network device. The main elements of a network are called Data Terminating Equipment. This term applies to computers, printers, faxes and any other pieces of equipment that serves the users of the network. The network that links these devices together is composed of cables and network equipment. A switch is the most commonly used network device. It makes connections between all the DTEs on the network, each of which is connected to the switch by a stretch of cable.

How to Install a Network Switch

Network switches for home and small office use are typically stand-alone units, while switches for larger networks are usually rack-mounted. Either way, they typically use either Cat5 or Cat6 ethernet cables. Switches allow multiple computers to connect to a single Internet connection, but rather than simply passing the signal through, like a network hub, a switch can manage that network traffic. Switches differ in the way they handle network traffic, but all of them are installed in a very similar way.

Step 1

Provide power to the switch, if required. For a stand-alone switch, this simply means plugging in the power supply. For rack-mounted switches, this means using a slot that has power supplied to it.

Step 2

Connect the incoming network cable to the switch. Although any slot can be used on most network switches, it is a good idea to use the first slot so anyone can quickly identify the incoming cable. For home and small office applications, the incoming cable will be the one coming from your modem.

Step 3

Connect a Cat5 or Cat6 cable to another slot in the network switch. Connect the other end to a computer you want connected to the network.

Step 4

A Home/Office Switch

Repeat this process until all the computers are connected or all slots are filled.

How to Connect an Ethernet Switch

Home or Small Office Switch

A switch is a device that allows multiple computers to connect to one Internet connection. Unlike a network hub, which serves a similar purpose, a switch has the ability to manage the traffic that passes through it. A switch can be a stand-alone device, suitable for home or small office use, or rack-mounted for larger network applications. Switches also vary widely in traffic management capability. It's important to clearly define your requirements before you purchase a switch so you can buy the one best suited to your needs.

Step 1

Connect your modem to your Internet input line. Whether it is DSL, cable or satellite, your modem is the device that brings the signal into your network.

Step 2

Connect one end of an Ethernet cable to your modem. This will most likely be a Cat 5 or Cat 6 Ethernet cable. Connect the other end to your switch. Although not required, it's a good idea to connect this end to Slot 1 on your switch so you can quickly differentiate between incoming and outgoing cables.

Step 3

Connect one end of another Ethernet cable to a different slot on your switch. Connect the other end of this cable to the Ethernet slot on a computer you wish to connect to the Internet.

Step 4

Switch with one modem and two computers connected.

Repeat Step 3 for all computers you wish to connect.