

Computer Networks 1

Lab 1

Network Devices

Student Name:.....

Student No.:.....

I. Objectives:

- Get to know basic network devices
- Understand functions of network devices
- Able to connect different network devices together to form a simple network

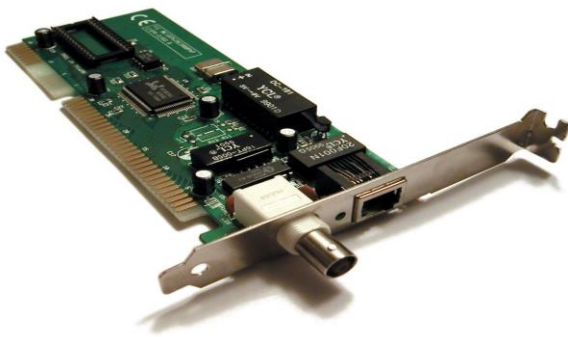
II. Content

1. Get to know network devices:

- ✓ Network Interface Card (NIC)
- ✓ Cables
- ✓ Hub
- ✓ Switches
- ✓ Routers
- ✓ Access Points
- ✓ Modems

2. Understanding functions of network devices

a. Network Interface Card (NIC)



NIC functions: Card mạng hoạt động giúp máy tính kết nối với mạng dữ liệu

Code of NIC processors: B8-08-CF-BF-77-E1

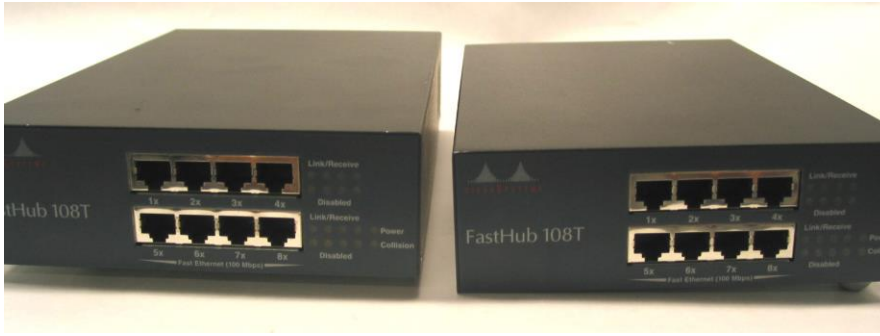
Check NIC of a computer, what is its MAC address? B8-08-CF-BF-77-E1

Cable to connect NIC to a network:

Type: _____

Standard: _____

b. Hubs



Roles of hub in a network: Điểm kết nối trung tâm cho các thiết bị mạng

Main characteristics: Khi thông tin vào từ một cổng và sẽ được đưa ra đến tất cả cổng khác

Weaknesses of hub: Rủi ro về bảo mật dữ liệu

Hub ports:

c. Switches



Roles of switches in a network: Điểm kết nối trung tâm cho các máy tính

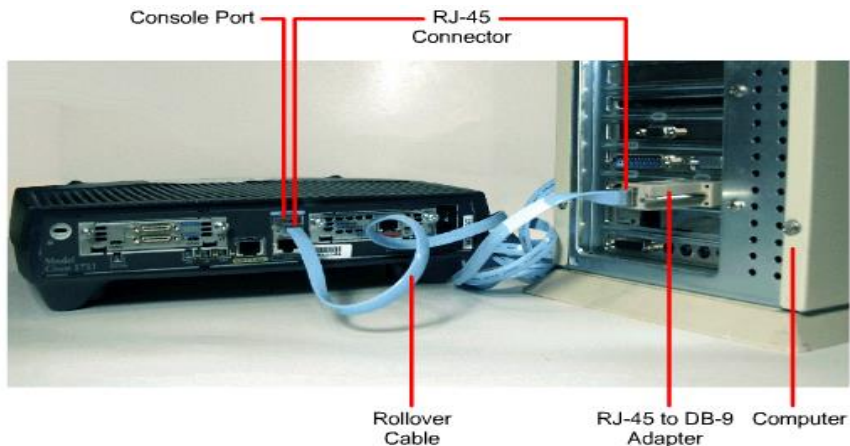
Main characteristics of switches:

Differences between hubs and switches: Hub sử dụng cách truyền quảng bá còn Switch sẽ truyền trực tiếp

Weaknesses of switches:

Switch ports:

d. Routers



Roles of routers in a network: Kết nối các mạng với nhau

Main characteristics of routers: Thường bao gồm 1 hoặc nhiều cổng LAN và có thể bao gồm ăng-ten phát tín hiệu wifi

Differences between routers and switches:

Router ports:

d. Access Points



Roles of access points:

Main characteristics of access points:

Access point's interfaces:

Compare access point and other networking devices mentioned above:

e. Modem



Differentiate:

- Dial-up modem
- ADSL Modem
- Cable Modem

For each type of modem describe its roles and characteristics:

3. Connecting network devices:

Identify the type of network cable can be used for below network connections:

- a) Computer and hub cable is used to connect a host to a hub
- b) Computer and switch cable is used to connect a host to a switch
- c) Computer and router cable is used to connect a host to a router
- d) Computer hub and hub cable is used to connect a hub to a hub
- e) Hub and switch cable is used to connect a hub to a switch
- f) Hub and router cable is used to connect a hub to a router
- g) Switch and switch cable is used to connect a switch to a switch
- h) Switch and router cable is used to connect a switch to a router
- k) Router and router cable is used to connect a router to a router