

Lab #1 – Layer 2 Forwarding

Purpose

To learn how to configure a switch and learn how Layer 2 forwarding works.

Procedure

1. Configure your group's switch
 - a. Create a VLAN by port – use the appropriate VLAN number assigned to your group (see the table below)
 - b. Assign the VLAN an IP address and subnet mask
 - i. Use .1 for the IP address
 - ii. Subnet mask – 255.255.255.0
 - c. Assign specific switch ports to the VLAN. Assign the ports to the VLAN that have been assigned to your group; if no ports are specified, assign all ports on the switch to the VLAN.
 - d. Enable telnet on the switch
2. You will have to manually configure the NIC on the 2 client machines (it is the main adapter and not the 2nd one)
 - a. IP address of first client – 192.168.xxx.10
 - b. IP address of second client – 192.168.xxx.11
 - c. Subnet mask for both clients – 255.255.255.0
 - d. Default gateway for both clients – the IP address of your switch
3. Make configuration changes persistent after a reboot of the switch (use the default names for the configuration files)
4. Print the layer 2 forwarding table in your switch
5. Explain how a packet would be sent from the one client (.10) to the other client (.11) using layer 2 forwarding (refer to your switch's forwarding table in your explanation)

Turn in

1. All successful commands used to complete the above steps
2. A screenshot showing the use of telnet for administration of your switch
3. A screenshot showing the layer 2 forwarding table in your switch
4. The answer to #5