Lab0 Writeup

- 1. LAN Cabling:
 - a. PC To Router: Cross Connect
 - b. PC To PC: Cross Connect
 - c. Router To Router: Cross Connect
 - d. Router To Switch: Cross Over
 - e. Switch To Switch: Cross Connect
 - f. Hub To Switch: Cross Over
 - g. PC To Hub: Cross Over
 - h. PC To Switch: Cross Over
- 2. Done.
- 3. To get from User-EXEC-mode to Privileged-EXEC-mode use the 'enable' command and to get back use 'disable'. To get from Privileged-EXEC-mode to config mode use 'config terminal' or 'conf t' for short and to get back use 'exit / ctrl + z'
- 4. 'Enable Password' to set a password for privileged access and enable secret to also set password for privileged access. Enable secret takes precedence over enable password.



5.

- a. Setup loopback(commserver):
 - i. Interface loopback 0
 - ii. Ip address 172.21.0.1 255.255.255.0
 - iii. Ip host R1 line(2033) 172.21.0.1
 - iv. Line 33 40
 - v. Transport input all

```
**COMS-PUTY*

**Unrecognized command
Router(config-it) **Anostname commserver
commserver(config-it) host ?

**WORD Name of host
view Specify VRF

**Commserver(config) **Ip host ?

**WORD Name of host
view Specify vlew
vrf Speci
```

- b. Router config (commserver):
 - i. Ip host R1 line(2033) 172.21.0.1
- c. Switch config (commserver):
 - i. Ip host S1 172.21.1.1 255.255.255.0
- d. Telnet:
 - i. Line vty 04
 - ii. Password LAB
 - iii. Login
 - iv. Transport input telnet
 - v. exit
- e. SSH:
 - i. Line vty 04
 - ii. Login local
 - iii. Transport input ssh telnet
 - iv. Username jose password LAB
 - v. Ip domain name lab
 - vi. Crypto key generate rsa
- 6. Went through the packets sent on WireShark with the protocol TELNET and was able to see the password that was sent! It was really cool.
- 7. Done.
- 8.
- a. Setup (Commserver):
 - i. Line vty 04
 - ii. Password LAB

- iii. Login
- iv. Transport input telnet
- v. Interface fastEthernet 0/0
- vi. Ip address 192.168.2.1 255.255.255.0
- vii. No sh
- viii. Exit
- b. 5 telnet sessions could be opened with Putty. This is because we enabled telnet on lines
 0.4
- c. 16 sessions could be configured
- 9. Ping:

```
C:\Users\itplab\ping -t 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:
Reply from 192.168.2.1: bytes=32 time=2ms TTL=255
Reply from 192.168.2.1: bytes=32 time=1ms TTL=255
Reply from 192.1
```

10.

```
G:\Users\Nick\Downloads\ntupath google.com

MTU path scan to google.com (216.58.217.46), ttl=64, limit=48

# 16 processing - best MSS 1472 (estimated MTU 1500) [pPPPPpPpPppppppp]

# 01 nearest minimum MTU on local interface

# 11 MSS IN RANGE 1 (== 147! ==> 1472

# 2 MSS EXCEEDED 1473 (== 1491! ==> 16384

G:\Users\Nick\Downloads\ping -f -1 1472 google.com

Pinging google.com [216.58.217.46: ] with 1472 bytes of data:
Reply from 216.58.217.46: ] bytes=64 (sent 1472) time=9ns TTL=54
Reply from 216.58.217.46: ] bytes=64 (sent 1472) time=5ns TTL=54
Reply from 216.58.217.46: ] bytes=64 (sent 1472) time=5ns TTL=54
Reply from 216.58.217.46: ] bytes=64 (sent 1472) time=4ns TTL=54
Reply from 216.58.217.46: ] bytes=64 (sent 1472) time=4ns TTL=54
Reply from 216.58.217.46: ] bytes=64 (sent 1472) time=4ns TTL=54
Reply from 216.58.217.46: ] bytes=64 (sent 1472) time=4ns TTL=54
Reply from 216.58.217.46: ] bytes=64 (sent 1472) time=4ns TTL=54
Reply from 216.58.217.46: ] bytes=64 (sent 1472) time=4ns TTL=54
Reply from 216.58.217.46: ] bytes=64 (sent 1473) bytes of data:
Packets: Sent = 4. Received = 4. Lost = 8 (8x loss),
Rinimum = 3ns. Maximum = 5ns. Average = 4ns

G:\Users\Nick\Downloads\ping -f -1 1473 google.com

Pinging google.com [216.58.217.46] with 1473 bytes of data:
Packet needs to be fragmented but DF set.
Packets: Sent = 4. Received = 8. Lost = 4 (100x loss),
G:\Users\Nick\Downloads>
```

d. A runt packet is a packet that is smaller than 64 bytes which is the minimum for Ethernet and a giant packet is a packet that is too big to transfer. To troubleshoot these packets you can look at the packet size to see if the packet is either one of these two types.

- 11. When the 'no ip proxy-arp' command is enabled then the ARP request to a computer in another subnet will get dropped and not forwarded by the router.
- 12. Just know how to copy and backup IOS
 - a. Show IOS: show flash
 - b. Copy IOS: copy flash
- 13. Enable password can be recovered, but the enable secret is encrypted so it can't be recovered.
- 15. Done.

Very Useful Commands:

Enable password --- Sets up a password

sh ip interface brief --- Show Port Status

Sh sessions ---- shows sessions, then you can just type the number to reconnect to that session

Ctrl + shift + 6 +x --- Close connection

conf t --- Enter configure mode

hostname commserver – turns the hostname to router

interface loopback 0 --- Create interface

ip address 172.21.1.1 255.255.255.0 – sets ip address

ip host R1 2033 172.21.1.1 --- Sets ip host

line 33 40 --- Sets lines

transport input all

clear line: clear line 33

ctrl + shift + 6 + 6 - kill a process