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Subject	DCCN

Experiment : 4

AIM: Prototype a network using Packet Tracer

Theory:

CEL 51, DCCN, Monsoon 2020

Lab 4: Prototyping a Network

Step 1: Set up the network topology

a) Add two PCs and a Cisco 2950T switch

b) Using straight-through cables, connect PC0 to interface Fa0/1 on Switch0 and PC1 to interface Fa0/2 on Switch0.

c) Configure PC0 using the Config tab in the PC0 configuration window:

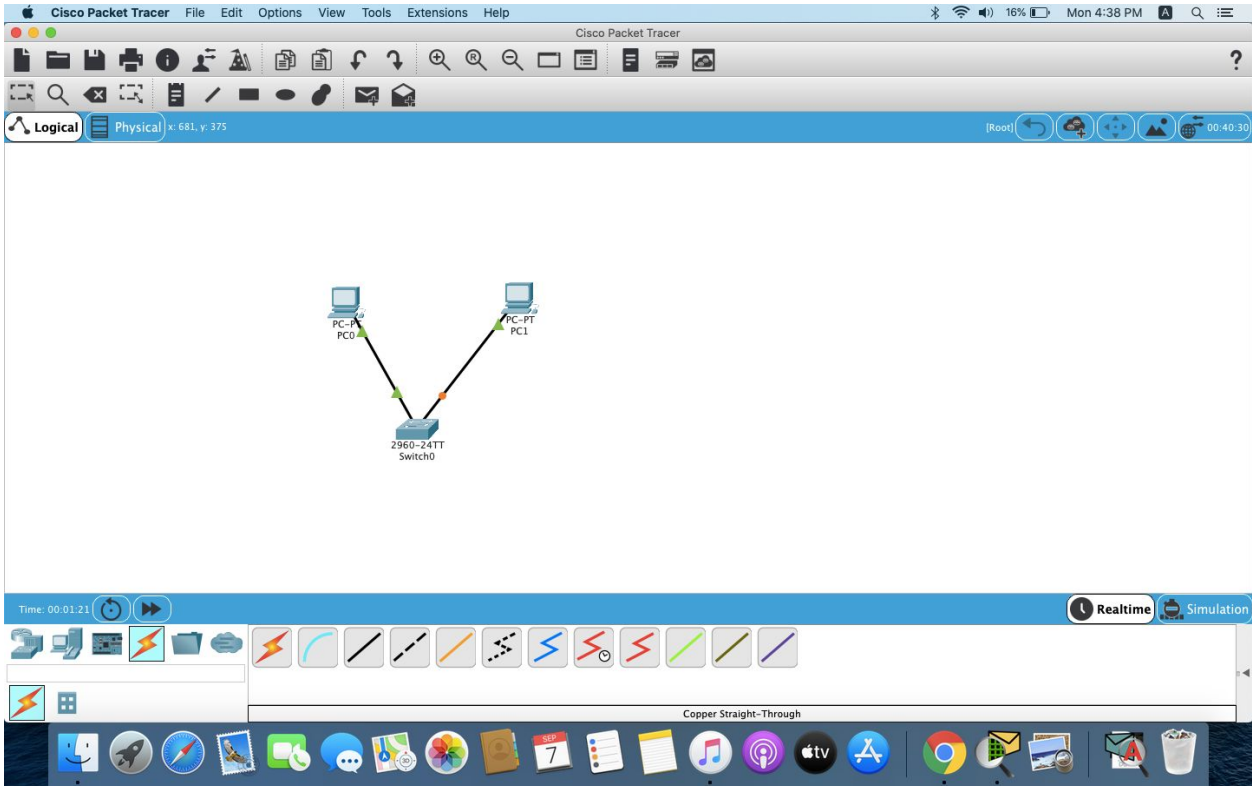
a. IP address: 192.168.10.10

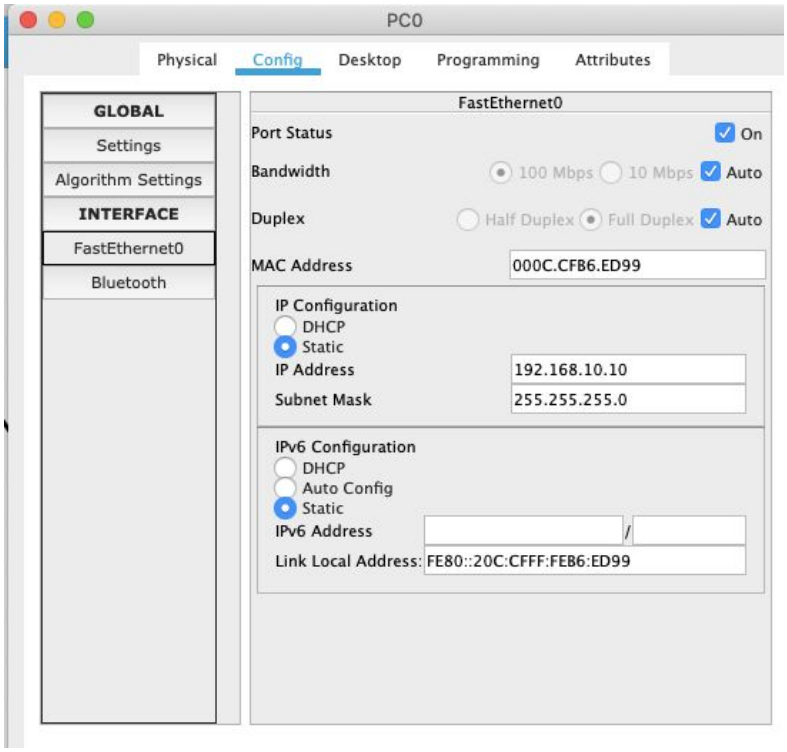
b. Subnet Mask 255.255.255.0

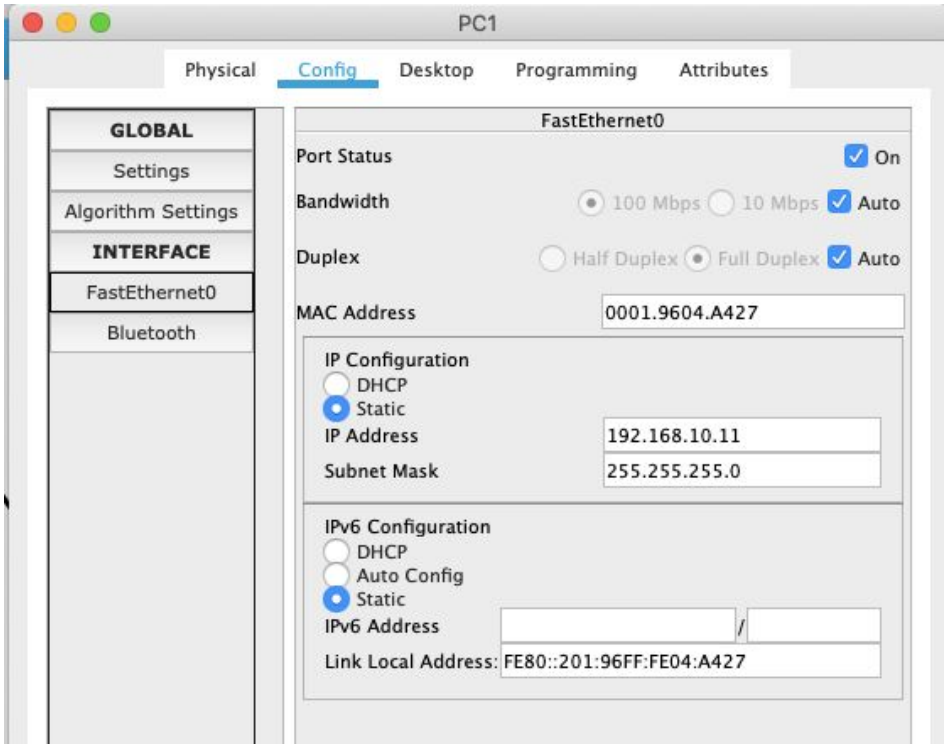
d) Configure PC1 using the Config tab in the PC1 configuration window

a. IP address: 192.168.10.11

b. Subnet Mask 255.255.255.0


Cisco Packet Tracer File Edit Options View Tools Extensions Help
Cisco Packet Tracer
Logical
Physical
PC-PT PC0
PC-PT PC1
2960-24TT Switch0
Realtime
Simulation
Copper Straight-Through


PC0
Physical
Config
Desktop
Programming
Attributes
GLOBAL
Settings
Algorithm Settings
INTERFACE
FastEthernet0
Bluetooth
FastEthernet0
Port Status
On
Bandwidth
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
000C.CFB6.ED99
IP Configuration
DHCP
Static
IP Address
192.168.10.10
Subnet Mask
255.255.255.0
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address:
FE80::20C:CFFF:FEB6:ED99



Step 2: Test connectivity from PC0 to PC1

a) Use the ping command to test connectivity.

a. Click PC0.

b. Choose the Desktop tab.

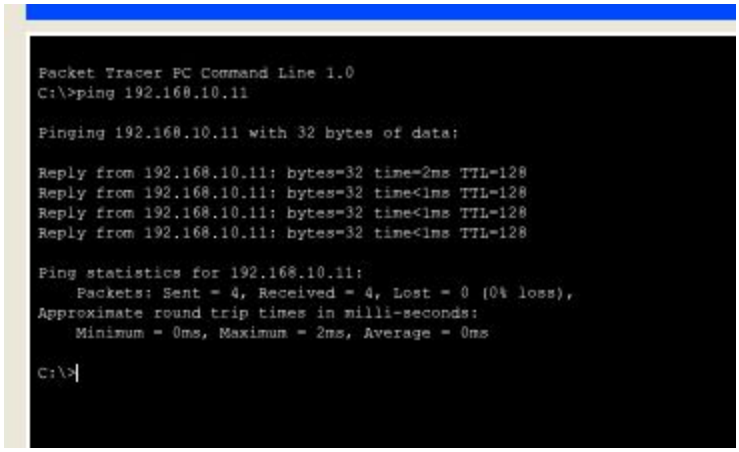
c. Choose Command Prompt.

d. Type: ping 192.168.10.11 and press enter.

b) A successful ping indicates the network was configured correctly and the prototype validates the hardware and software configurations. A successful ping should resemble the below output:

c) Close the configuration window.

d) Click the Check Results button at the bottom of the instruction window to check your work..



Activity Results

Congratulations Guest! You completed the activity.

Congratulations on completing this activity!

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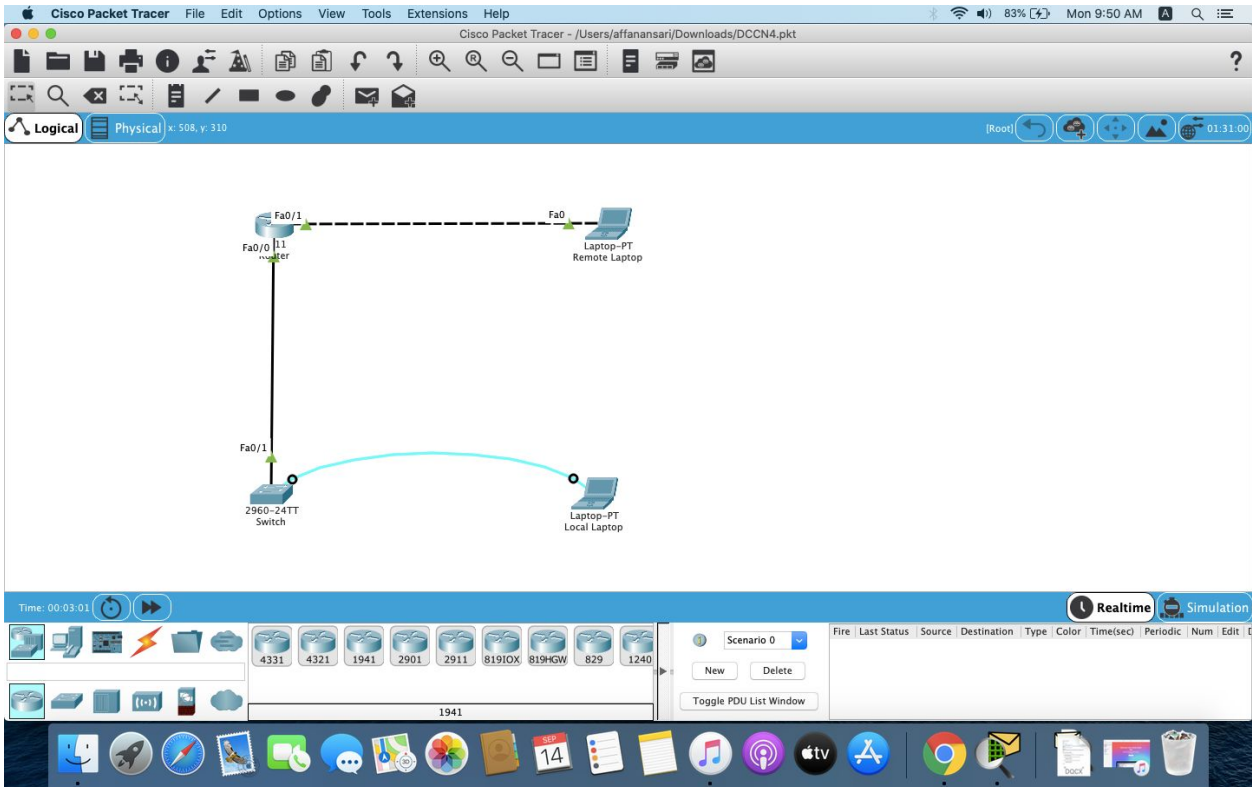
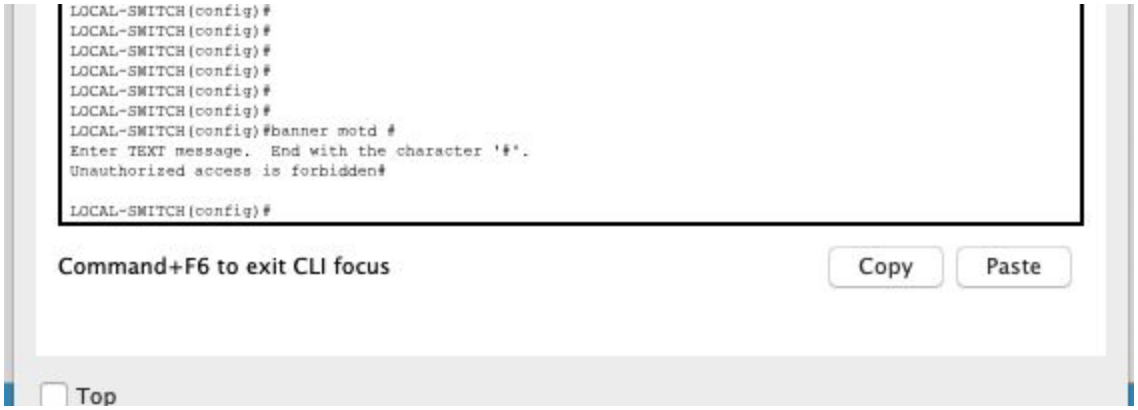
Lab 4.1: Basic configuration - hostname, motd banner, passwd etc



1. Use the local laptop connect to the switch console.
2. Configure Switch hostname as LOCAL-SWITCH

3. Configure the message of the day as "Unauthorized access is forbidden"



4. Configure the password for privileged mode access as "cisco". The password must be md5 encrypted

5. Configure password encryption on the switch using the global configuration command

```
LOCAL-SWITCH#enable
LOCAL-SWITCH#confi
LOCAL-SWITCH#configure term
LOCAL-SWITCH#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
LOCAL-SWITCH(config)#service password-encryption
LOCAL-SWITCH(config)#
LOCAL-SWITCH(config)#
LOCAL-SWITCH(config)#
LOCAL-SWITCH(config)#
```

Command+F6 to exit CLI focus Copy Paste

6. Configure CONSOLE access with the following settings : -
   - Login enabled -
   - Password : whatever you like -
   - History size : 15 commands -
   - Timeout : 6'45" -
   - Synchronous logging

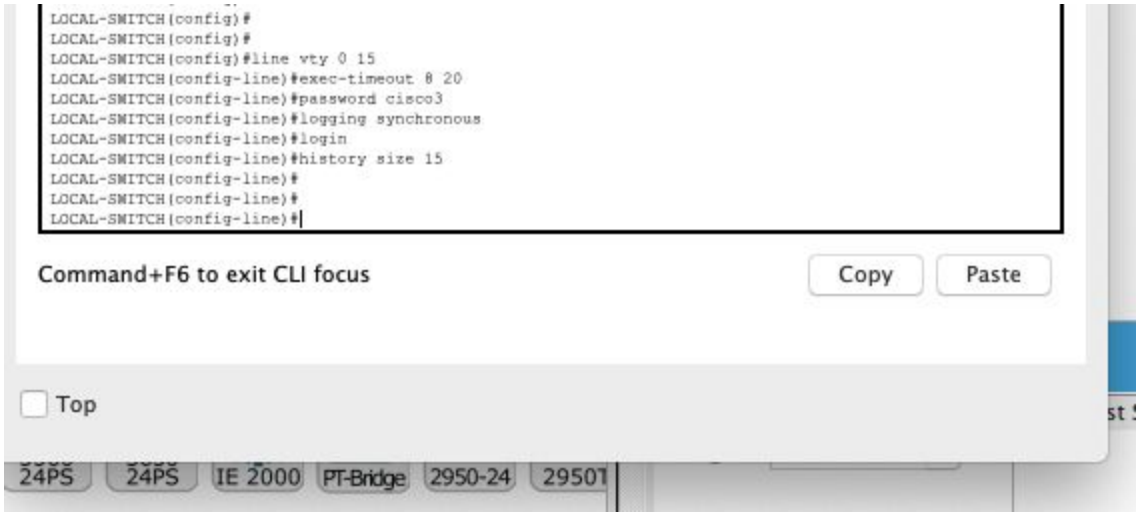
```
LOCAL-SWITCH(config)#
LOCAL-SWITCH(config)#line con 0
LOCAL-SWITCH(config-line)#password cisco2
LOCAL-SWITCH(config-line)#logging synchronous
LOCAL-SWITCH(config-line)#login
LOCAL-SWITCH(config-line)#history size 15
LOCAL-SWITCH(config-line)#exec-timeout 6 45
LOCAL-SWITCH(config-line)#
```

Command+F6 to exit CLI focus Copy Paste

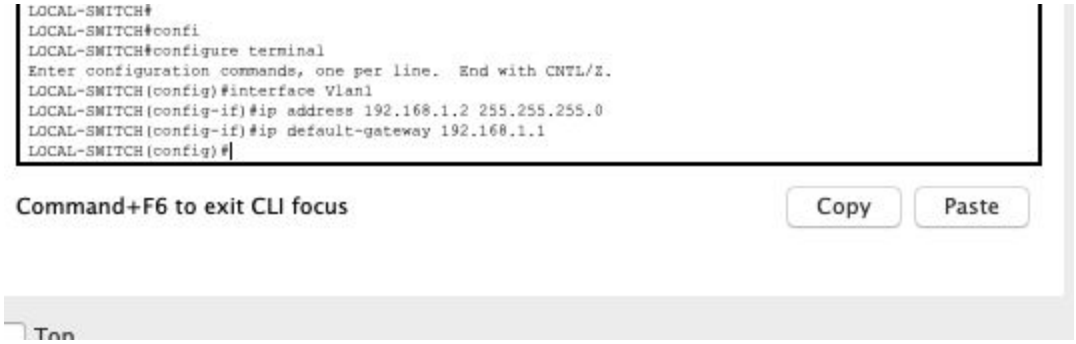
Top

24PS 24PS IE 2000 PT-Bridge 2950-24 2950T

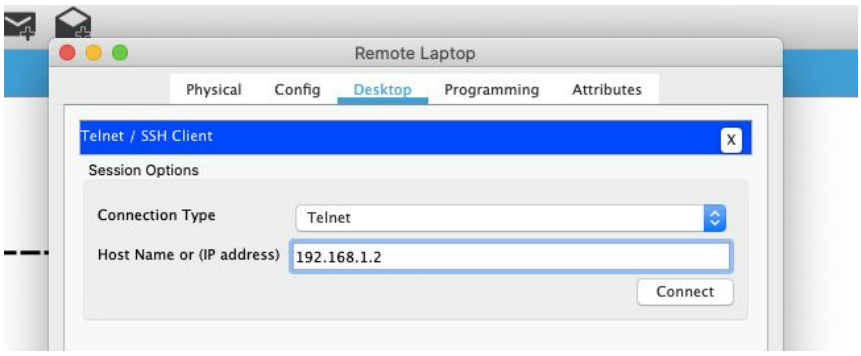
6. Configure TELNET access with the following settings : -
   - Login enabled -
   - Password : whatever you like -
   - History size : 15 commands -
   - Timeout : 8'20" -
   - Synchronous logging

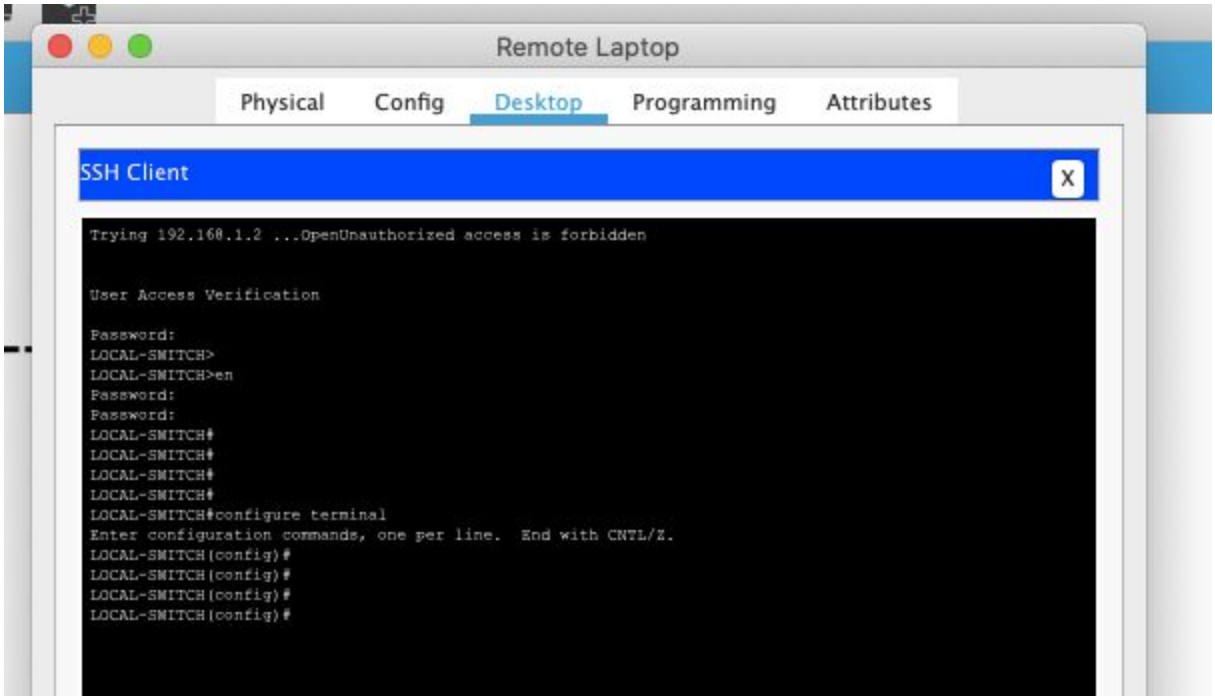


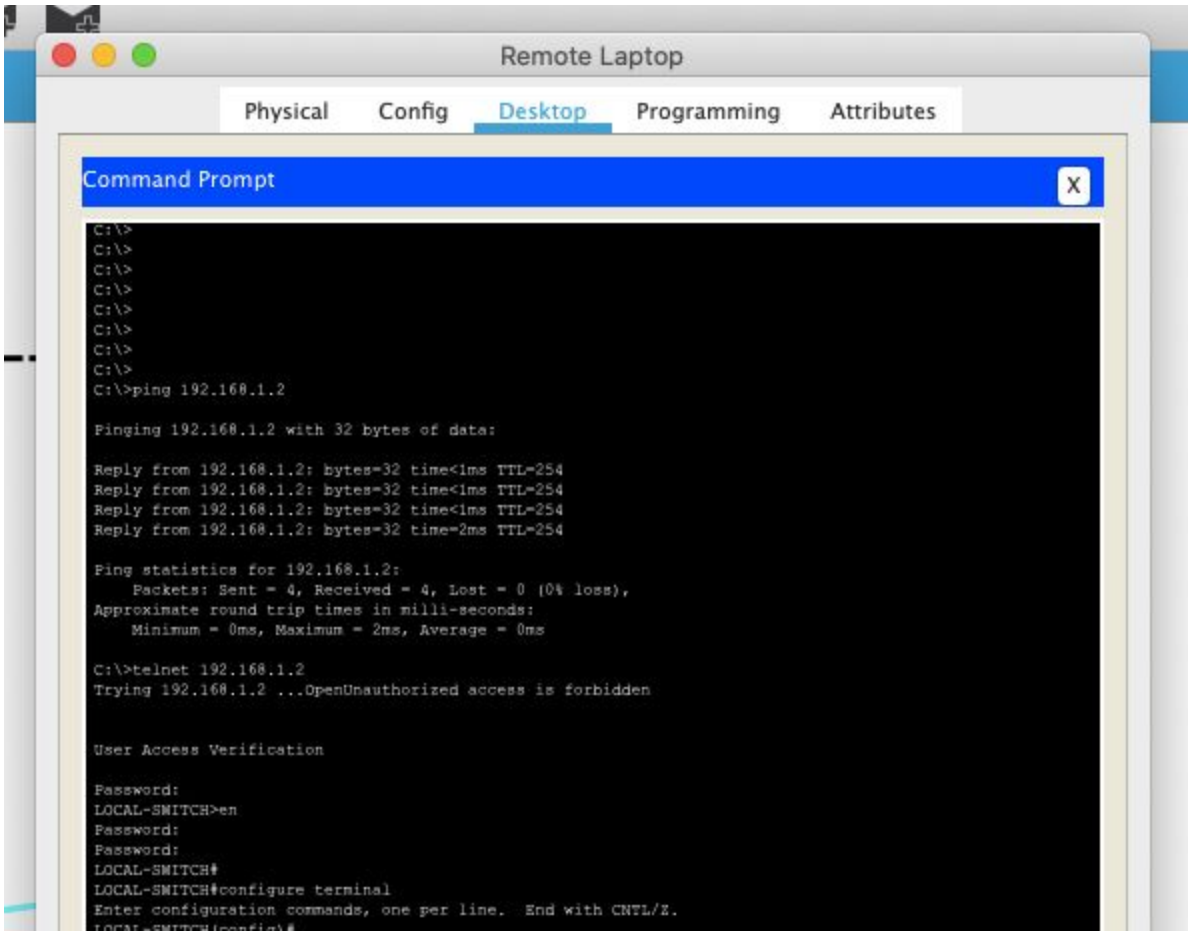
7. Configure the IP address of the switch as 192.168.1.2/24 and it's default gateway IP (192.168.1.1).



8. Test telnet connectivity from the Remote Laptop using the telnet client.




Remote Laptop
Physical
Config
Desktop
Programming
Attributes
SSH Client
X
Trying 192.168.1.2 ...OpenUnauthorized access is forbidden
User Access Verification
Password:
LOCAL-SWITCH>
LOCAL-SWITCH>en
Password:
Password:
LOCAL-SWITCH#
LOCAL-SWITCH#
LOCAL-SWITCH#
LOCAL-SWITCH#
LOCAL-SWITCH#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
LOCAL-SWITCH(config)#
LOCAL-SWITCH(config)#
LOCAL-SWITCH(config)#
LOCAL-SWITCH(config)#


Remote Laptop
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>ping 192.168.1.2
Pinging 192.168.1.2 with 32 bytes of data:
Reply from 192.168.1.2: bytes=32 time<1ms TTL=254
Reply from 192.168.1.2: bytes=32 time<1ms TTL=254
Reply from 192.168.1.2: bytes=32 time<1ms TTL=254
Reply from 192.168.1.2: bytes=32 time=2ms TTL=254
Ping statistics for 192.168.1.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 2ms, Average = 0ms
C:\>telnet 192.168.1.2
Trying 192.168.1.2 ...OpenUnauthorized access is forbidden
User Access Verification
Password:
LOCAL-SWITCH>en
Password:
Password:
LOCAL-SWITCH#
LOCAL-SWITCH#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.