CEL 51, DCCN, Monsoon 2020

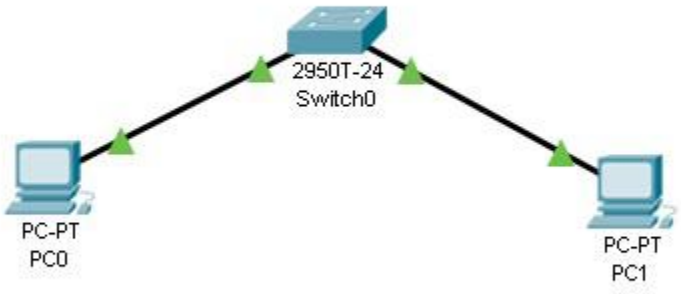
Lab 4: Prototyping a Network

Objective:
Prototype a network using Packet Tracer

Background
A client has requested that you set up a simple network with two PCs connected to a switch. Verify that the hardware, along with the given configurations, meet the requirements of the client.

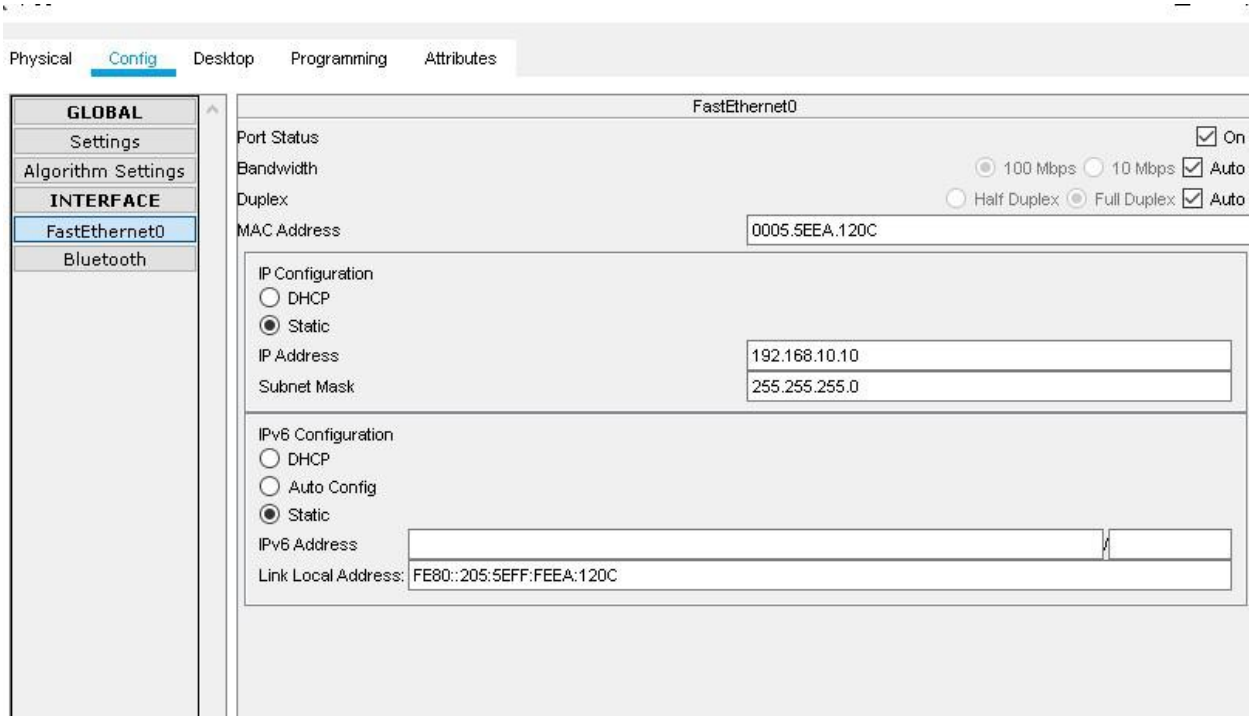
Step 1: Set up the network topology

a) Add two PCs and a Cisco 2950T switch

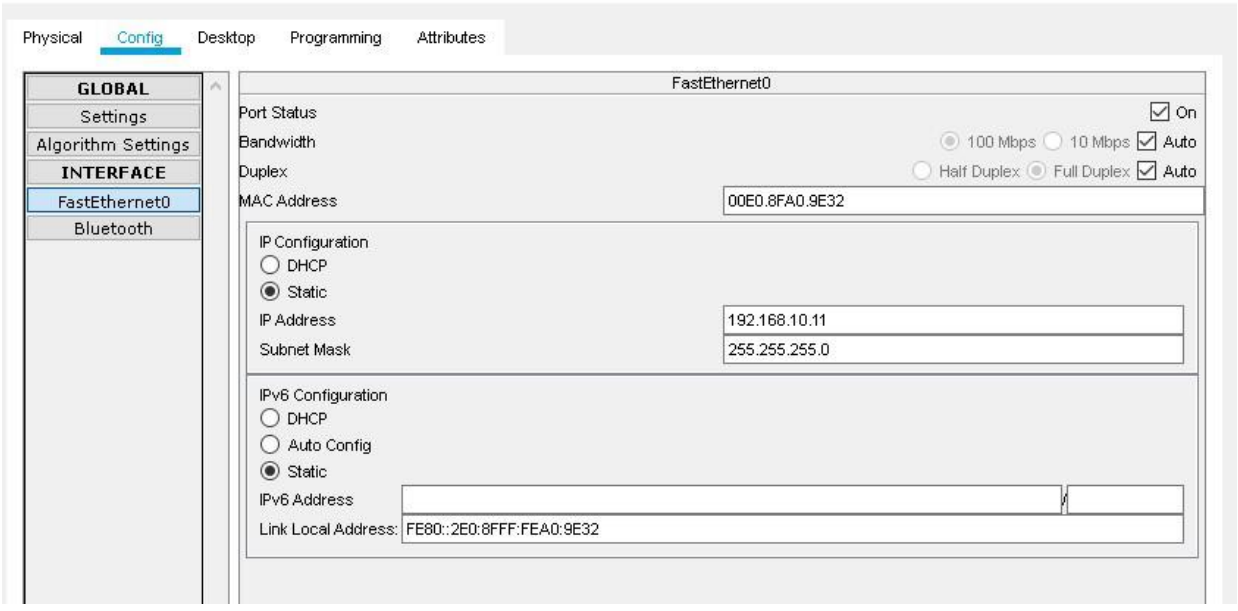


b) Using straight-through cables, connect **PC0** to interface **Fa0/1** on **Switch0** and **PC1** to interface **Fa0/2** on **Switch0**.

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



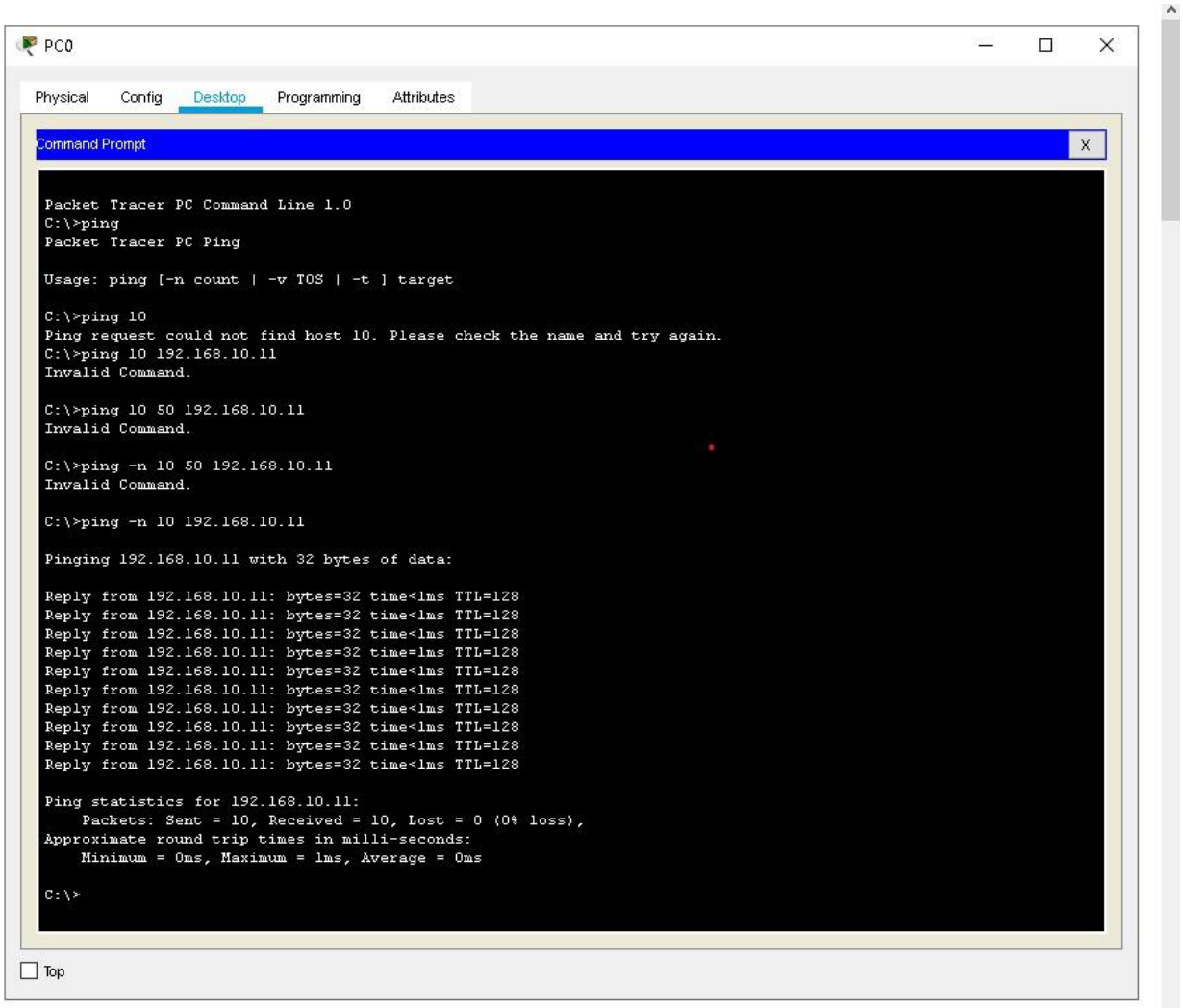
d) Configure PC1 using the **Config** tab in the PC1 configuration window



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..

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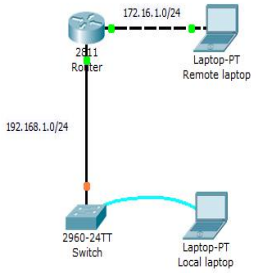
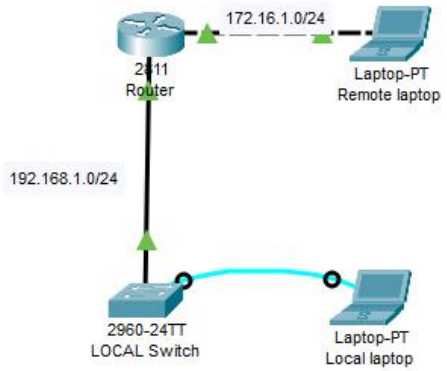
Lab 4.1: Basic configuration - hostname, motd banner, passwd etc

Objective:
This lab will test your ability to configure basic settings such as hostname, motd banner, encrypted passwords, and terminal options on a Packet Tracer 6.2 simulated Cisco Catalyst switch.



1. Use the local laptop connect to the switch console.



2. Configure Switch hostname as LOCAL-SWITCH

```
Unauthorized access is forbidden

LOCAL-SWITCH>enable
Password:
LOCAL-SWITCH#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
LOCAL-SWITCH(config)#hostname LOCAL-SWITCH
LOCAL-SWITCH(config)#
```

Ctrl+F6 to exit CLI focus

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

```
LOCAL-SWITCH(config)#banner motd #
Enter TEXT message.  End with the character '#'.
Unauthorized access is forbidden #

LOCAL-SWITCH(config)#exit
LOCAL-SWITCH#
%SYS-5-CONFIG_I: Configured from console by console
exit









LOCAL-SWITCH con0 is now available







Press RETURN to get started.

















Unauthorized access is forbidden

LOCAL-SWITCH>
```

Ctrl+F6 to exit CLI focus

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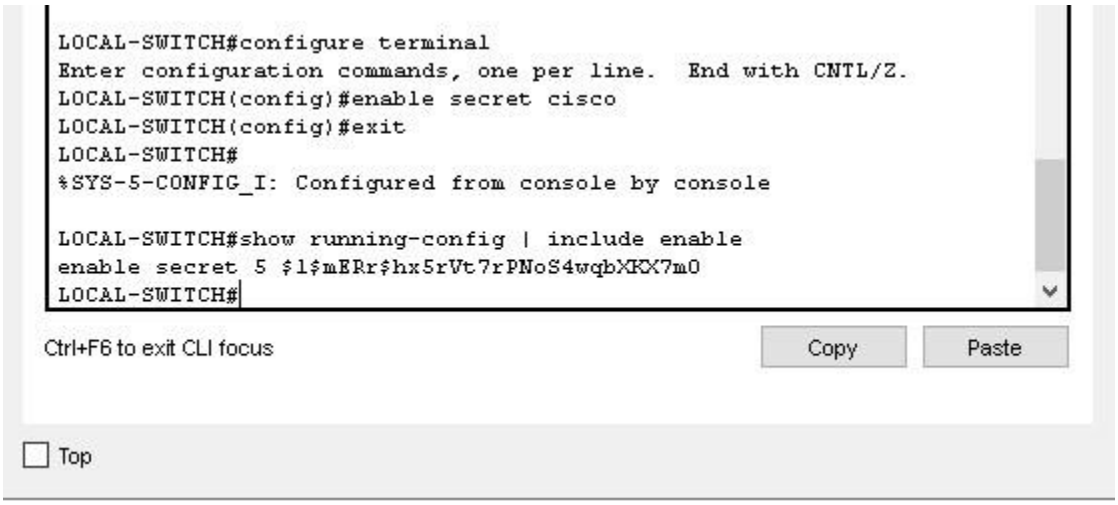
4. Configure the password for privileged mode access as "cisco". The password must be md5 encrypted




```
LOCAL-SWITCH con0 is now available



Press RETURN to get started.



Unauthorized access is forbidden

User Access Verification

Password:

LOCAL-SWITCH>enable
Password:
LOCAL-SWITCH#configure terminal
```

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

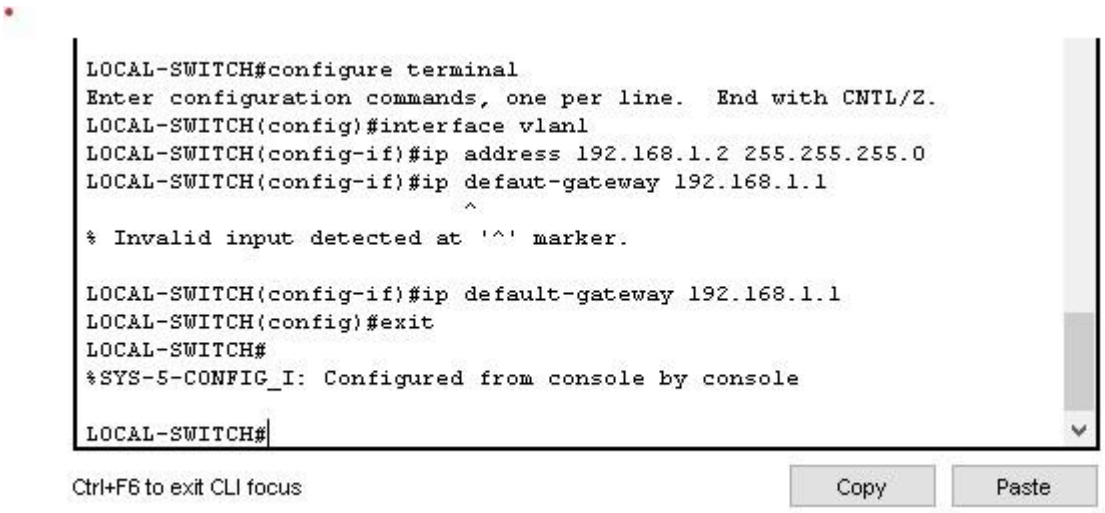
```
LOCAL-SWITCH(config)#line con 0
LOCAL-SWITCH(config-line)#password ciscol
LOCAL-SWITCH(config-line)#logging synchronous
LOCAL-SWITCH(config-line)#login
LOCAL-SWITCH(config-line)#history size 15
LOCAL-SWITCH(config-line)#exec-timeout 6 45
LOCAL-SWITCH(config-line)#end
LOCAL-SWITCH#
%SYS-5-CONFIG_I: Configured from console by console

LOCAL-SWITCH#
```

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

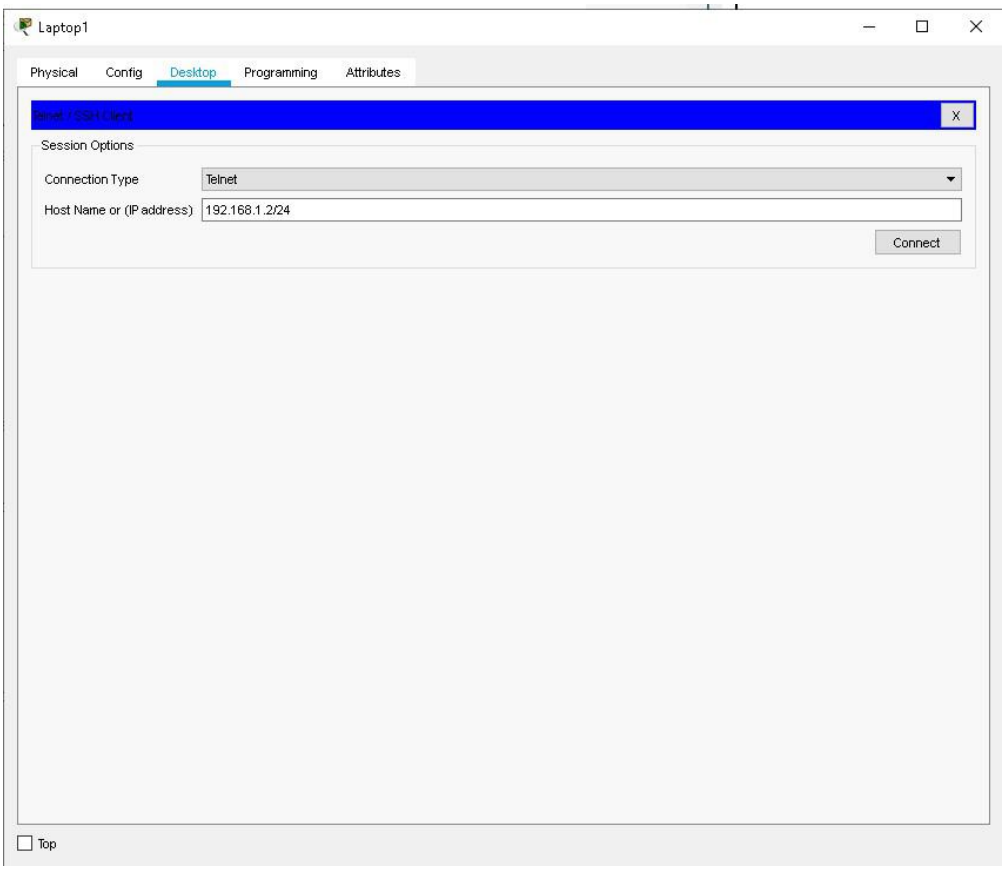
```
LOCAL-SWITCH#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
LOCAL-SWITCH(config)#line vty 0 15
LOCAL-SWITCH(config-line)#password darshak
LOCAL-SWITCH(config-line)#login
LOCAL-SWITCH(config-line)#history size 15
LOCAL-SWITCH(config-line)#exec-timeout 8 20
LOCAL-SWITCH(config-line)#logging synchronous
LOCAL-SWITCH(config-line)#exit
LOCAL-SWITCH(config)#exit
LOCAL-SWITCH#
%SYS-5-CONFIG_I: Configured from console by console

LOCAL-SWITCH#
```

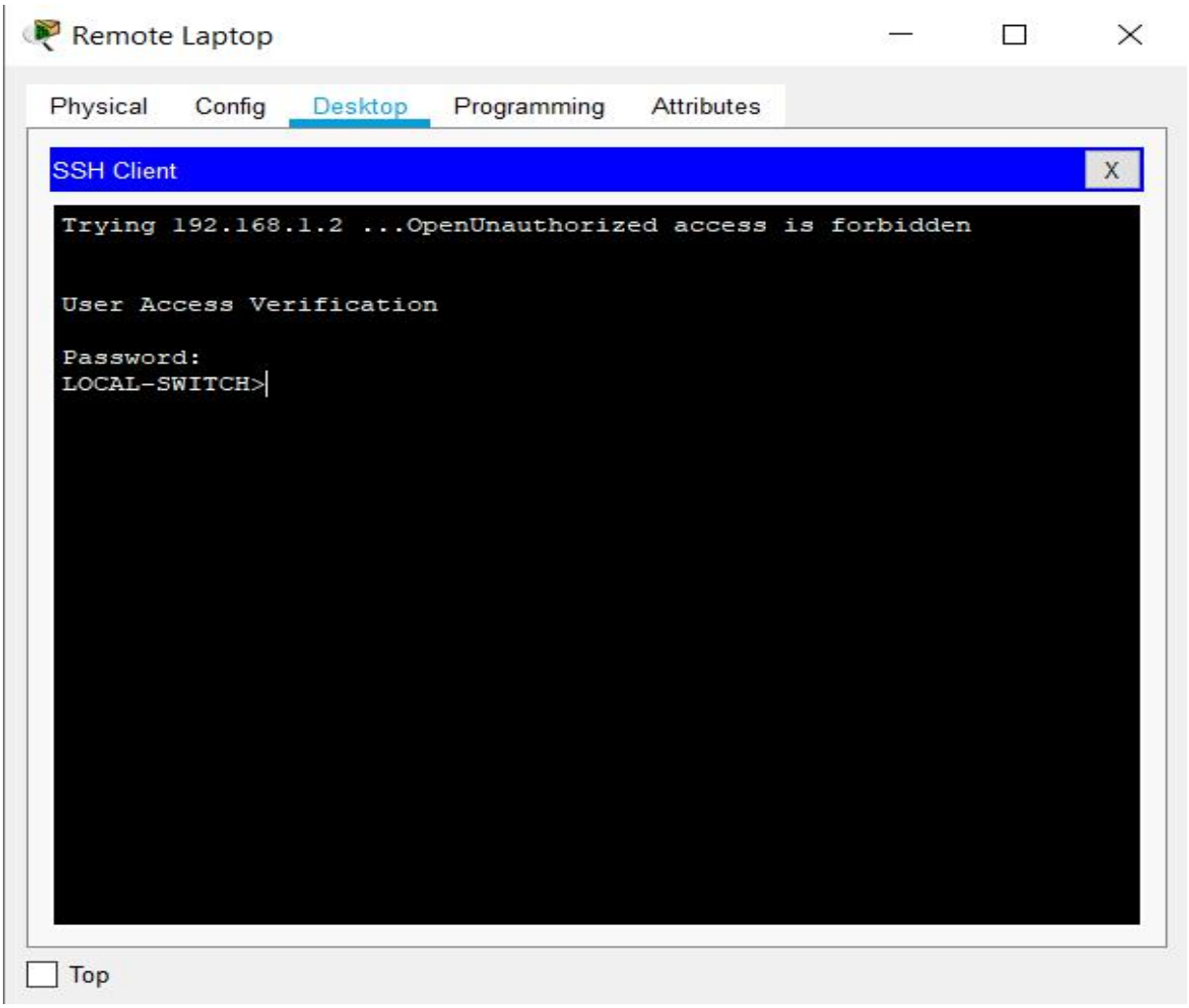
Ctrl+F6 to exit CLI focus Copy Paste

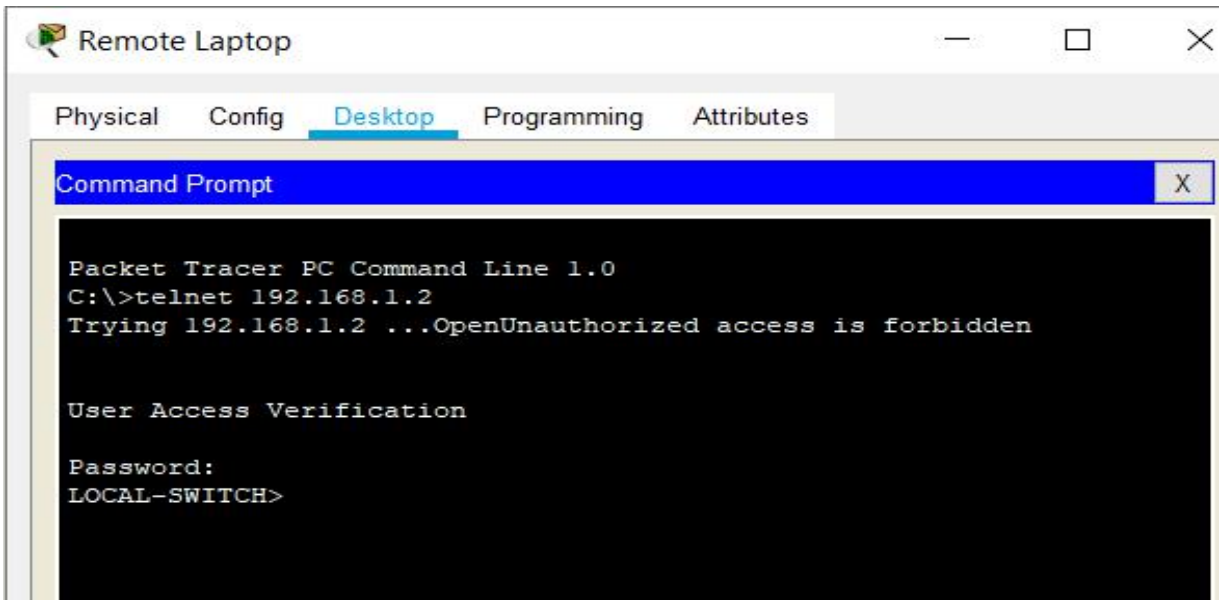
7. Configure the IP address of the switch as 192.168.1.2/24 and it's default gateway IP (192.168.1.1).

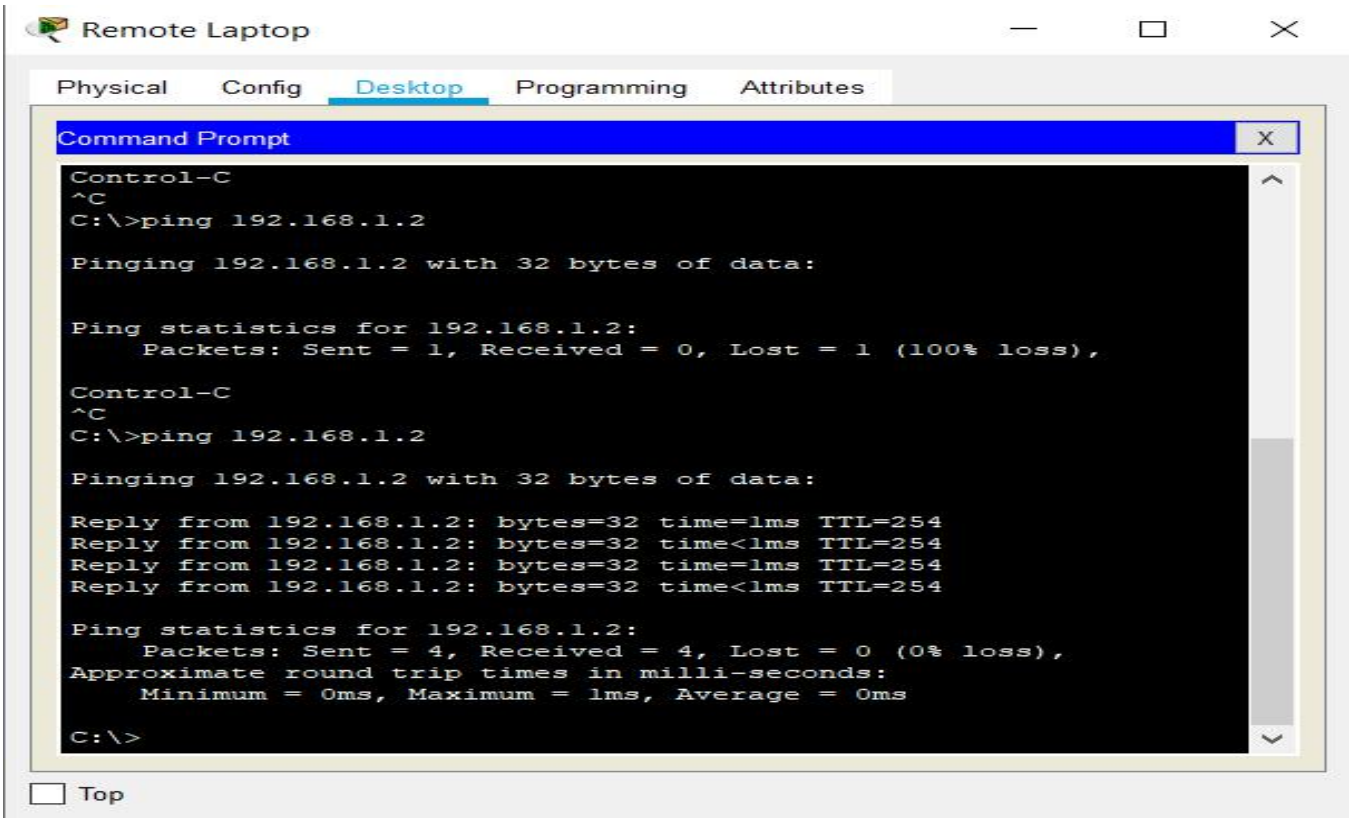


8. Test telnet connectivity from the Remote Laptop using the telnet client.




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>
Top


Remote Laptop
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
Packet Tracer PC Command Line 1.0
C:\>telnet 192.168.1.2
Trying 192.168.1.2 ...OpenUnauthorized access is forbidden
User Access Verification
Password:
LOCAL-SWITCH>


Remote Laptop
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
Control-C
^C
C:\>ping 192.168.1.2
Pinging 192.168.1.2 with 32 bytes of data:
Ping statistics for 192.168.1.2:
Packets: Sent = 1, Received = 0, Lost = 1 (100% loss),
Control-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<1ms 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 = 1ms, Average = 0ms
C:\>
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