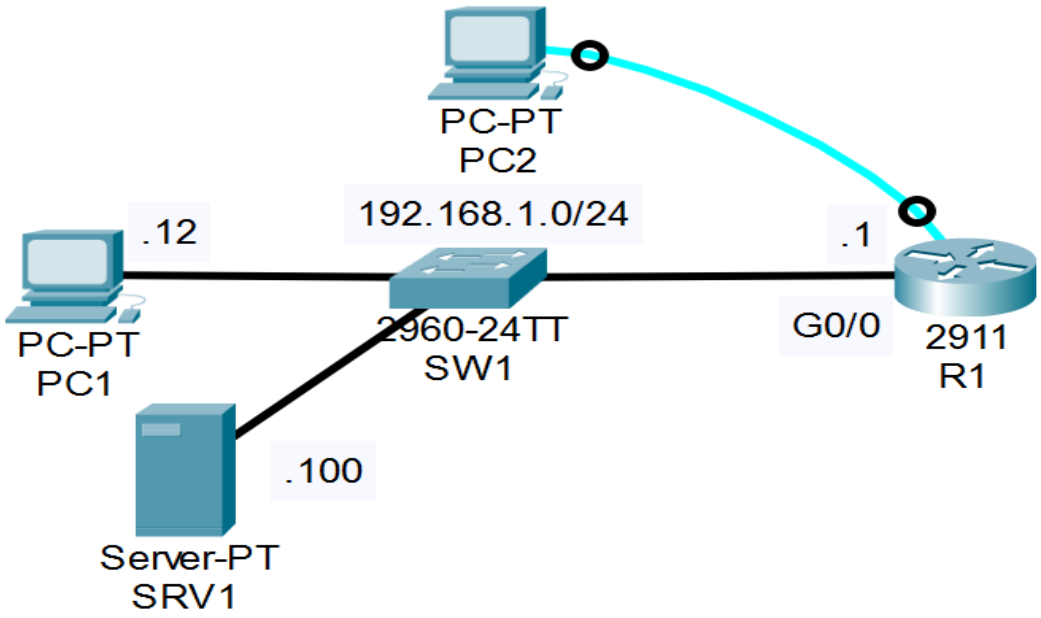
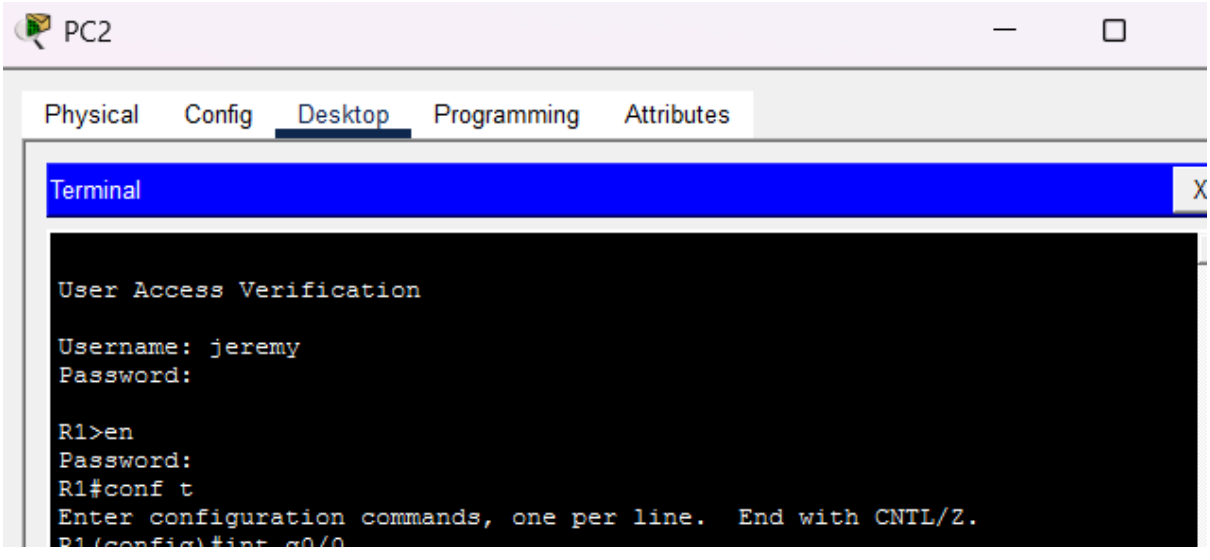
Network Topology:



Instructions and actions:

1. Connect to R1's console port using PC2. Configure username – jeremy, password – ccna.
   Configured the user verification on R1 CLI using the commands:
   R1(config)#username jeremy privilege 0 password ccna
   #line console 0
   #login local
   #exit
   The above commands enable user verification before the user exec mode.
   To enable double verification while going to privileged exec mode:
   R1(config)#enable password ccna
   #exit
   Now, PC2 Terminal:



2. Use the shutdown and no shutdown commands for the g0/0 interface of R1 and monitor the syslog messages:

```
R1(config)#int g0/0
R1(config-if)#shutdown

R1(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to
administratively down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0,
changed state to down

R1(config-if)#no shutdown

R1(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0,
changed state to up

R1(config-if)#exit
```

   Level of Severity = 5

   This is a notice/notification

3. Enable timestamps for logging messages:

```
R1(config)#service timestamps log datetime msec
R1(config)#int g0/0
R1(config-if)#shutdown

R1(config-if)#
*Feb 28, 21:24:17.2424: %LINK-5-CHANGED: Interface GigabitEthernet0/0,
changed state to administratively down
*Feb 28, 21:24:17.2424: %LINEPROTO-5-UPDOWN: Line protocol on Interface
GigabitEthernet0/0, changed state to down
R1(config-if)#no shutdown

R1(config-if)#
*Feb 28, 21:24:25.2424: %LINK-5-CHANGED: Interface GigabitEthernet0/0,
changed state to up
*Feb 28, 21:24:25.2424: %LINEPROTO-5-UPDOWN: Line protocol on Interface
GigabitEthernet0/0, changed state to up
```

4. Use a Telnet connection from PC1 to R1's g0/0 interface:

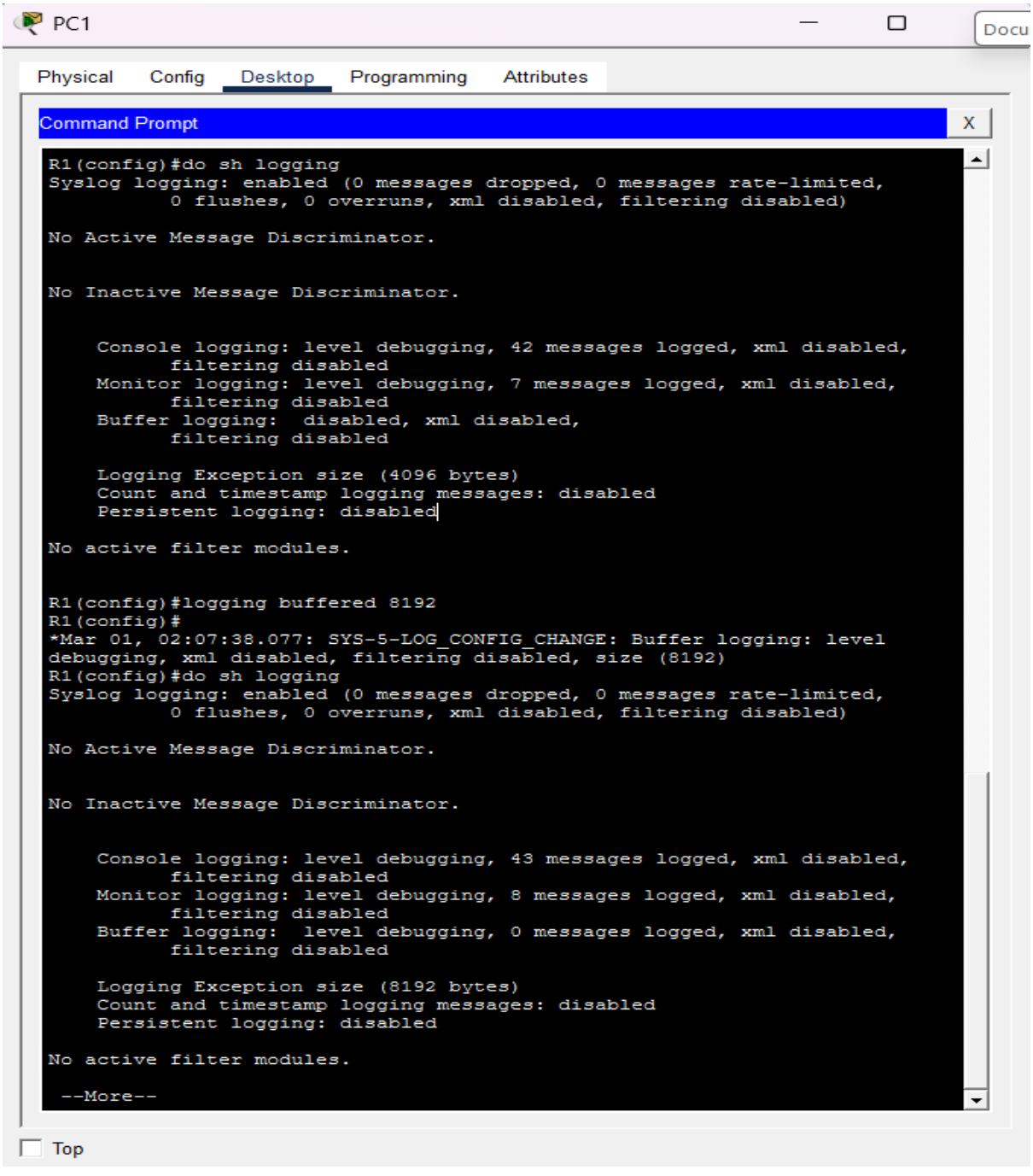
   I will use the Command Prompt of PC1 – The syslog messages don't appear by default on VTY lines; therefore, we will use the command:

   #do terminal monitor

   PC1 Command Prompt:

```
C:\>telnet 192.168.1.1
Trying 192.168.1.1 ...Open


User Access Verification

Username: jeremy
Password:
R1>en
Password:
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#do terminal monitor
R1(config)#int g0/1
R1(config-if)#no shutdown

R1(config-if)#
*Mar 01, 02:01:31.011: %LINK-3-UPDOWN: Interface GigabitEthernet0/1,
changed state to down
R1(config-if)#shutdown

R1(config-if)#
*Mar 01, 02:01:37.011: %LINK-5-CHANGED: Interface GigabitEthernet0/1,
changed state to administratively down
```

5. Enable logging to the buffer, and configure the buffer size of 8192 bytes



6. Enable logging to the syslog server SRV1 with a level of ‘debugging’

   The default level in Cisco Packet Tracer is debugging, and it doesn’t allow for configuring higher levels.

   Trying this command on the external server SRV1 from PC1:

```
R1(config)#logging host 192.168.1.100
R1(config)#logging trap ?
  debugging  Debugging messages                (severity=7)
  <cr>
R1(config)#logging trap debugging
```

   Observation:

   Changes made using the command prompt of PC1 can be observed under the services option of SRV1.

   PC1:

```
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#int g0/1
R1(config-if)#no shutdown

R1(config-if)#shutdown

R1(config-if)#
```

   SRV1: