

2-4 Activity: GNS3 Sandboxing Part One

Andree Salvo

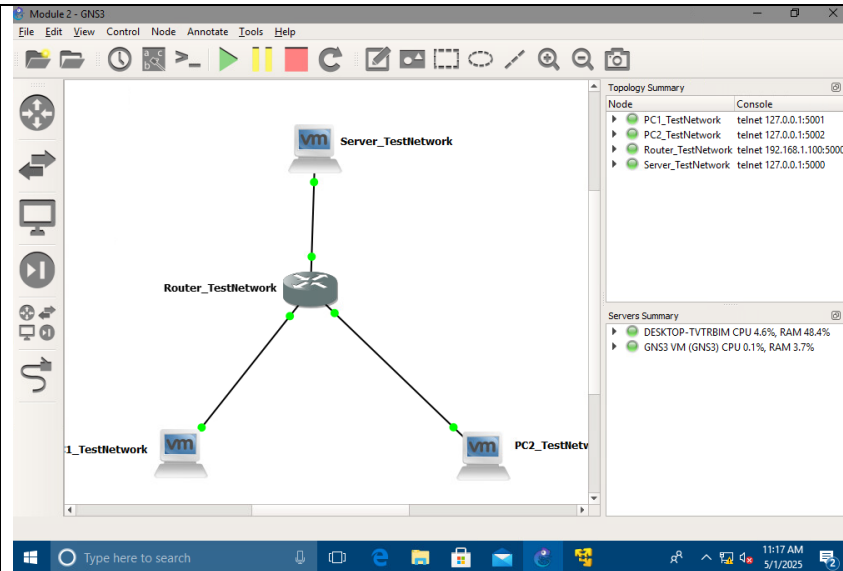
Southern New Hampshire University

Cyb 220

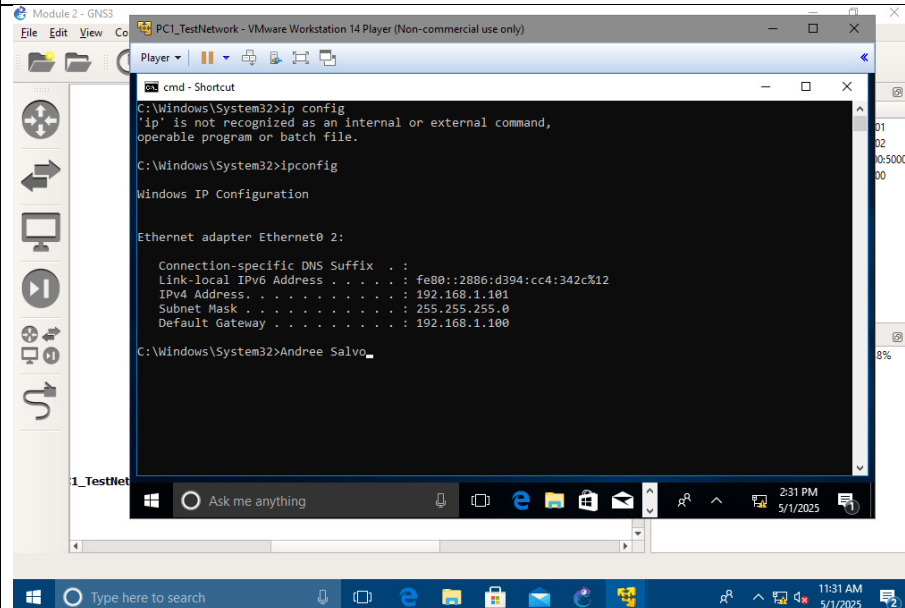
Instructor: Wesley Buchan

Note: If you see my “name” where the command prompt is, it just shows you that it is proof of my work.

1. Create the network and submit a screenshot of the topology, which should include the configuration on described below.

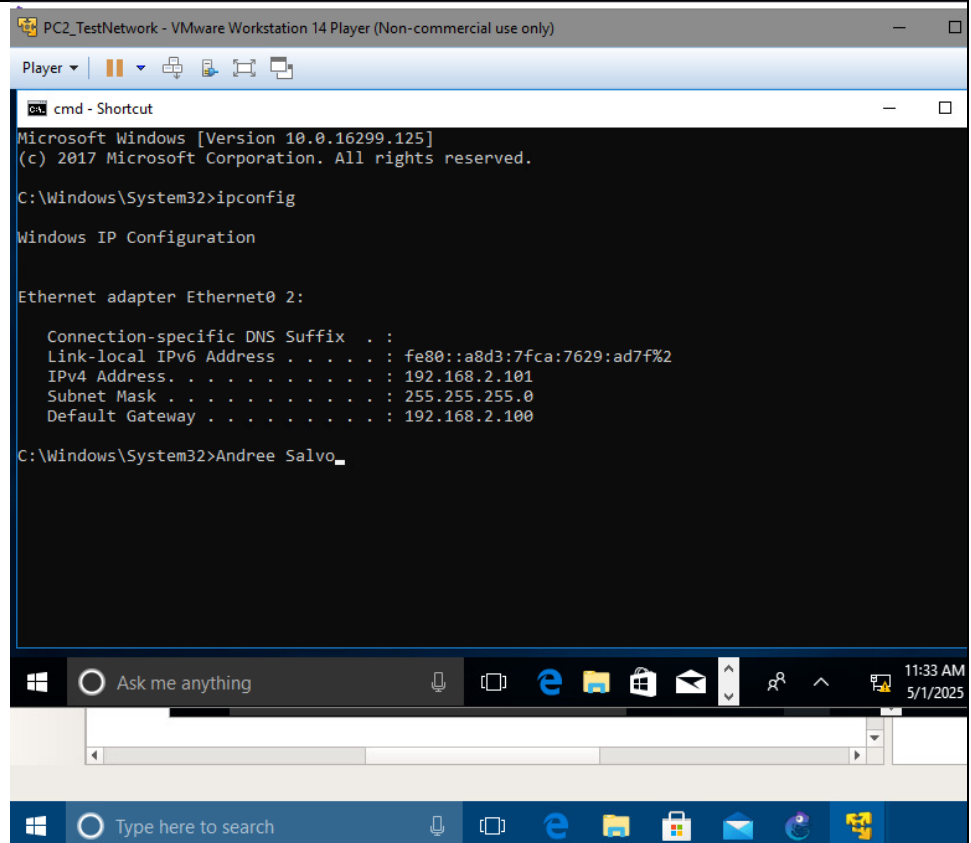


Connect two Windows PCs (labeled PC1_TestNetwork and PC2_TestNetwork) to the router and assign IP addresses as indicated in the table provided.



PC2_TestNetwork

:



```
cmd - Shortcut
Microsoft Windows [Version 10.0.16299.125]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Windows\System32>ipconfig

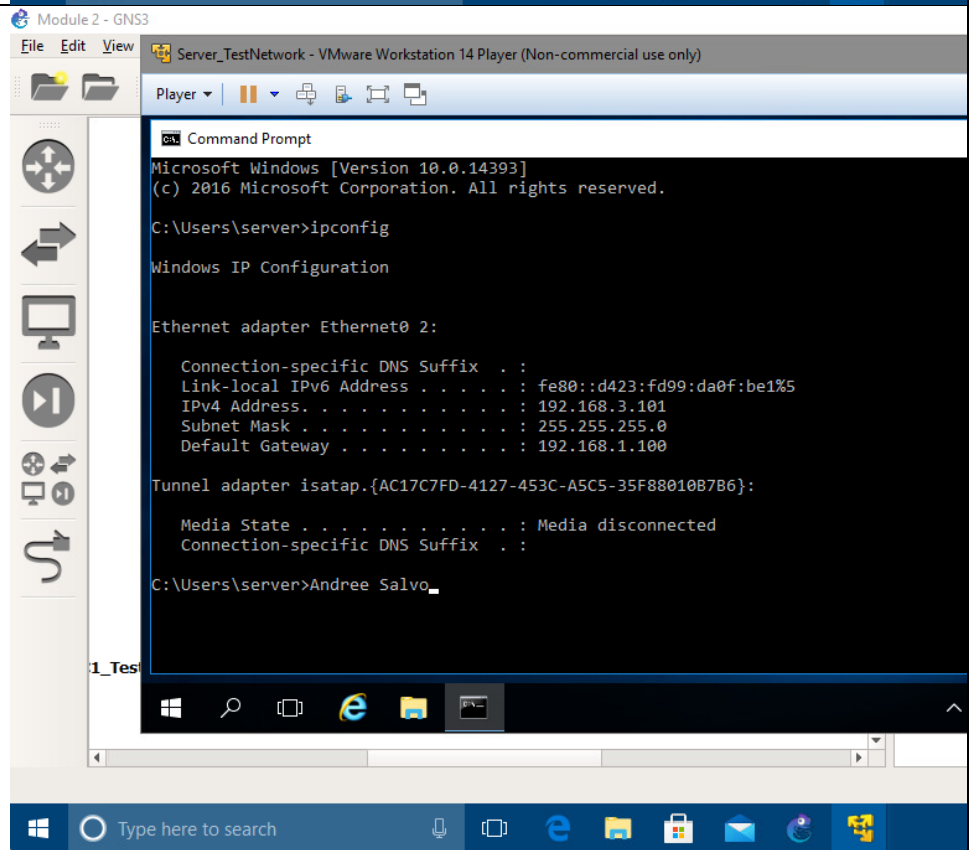
Windows IP Configuration

Ethernet adapter Ethernet0 2:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::a8d3:7fca:7629:ad7f%2
    IPv4 Address. . . . . : 192.168.2.101
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.2.100

C:\Windows\System32>Andree Salvo_
```

Connect the Windows server (labeled Server_TestNetwork) to the router and assign an IP address as indicated in the table provided.



```
Module 2 - GNS3
File Edit View
Server_TestNetwork - VMware Workstation 14 Player (Non-commercial use only)
Player
cmd - Command Prompt
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. All rights reserved.

C:\Users\server>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet0 2:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::d423:fd99:da0f:be1%5
    IPv4 Address. . . . . : 192.168.3.101
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.100

Tunnel adapter isatap.{AC17C7FD-4127-453C-A5C5-35F88010B7B6}:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 

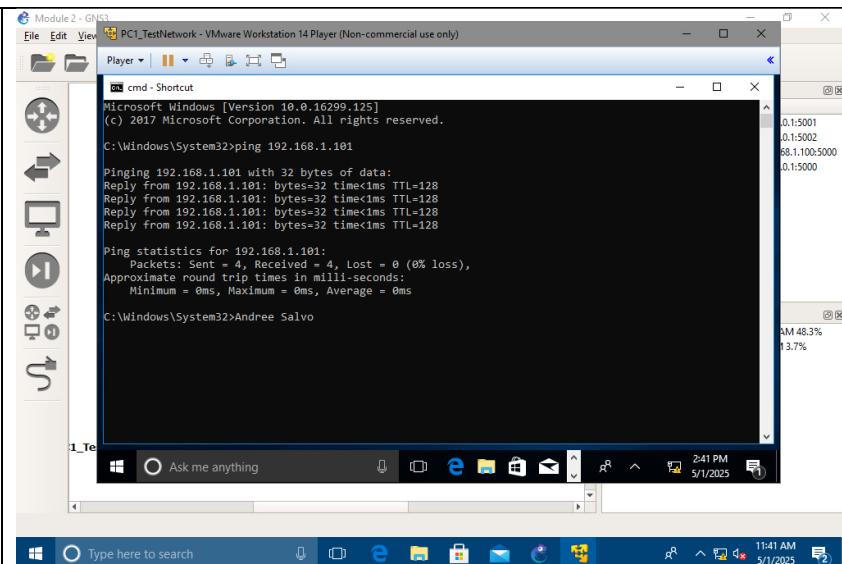
C:\Users\server>Andree Salvo_
```

Configure the Cisco 3745 router (labeled Router_TestNetwork) and assign IP addresses on the interfaces as indicated in the table provided.

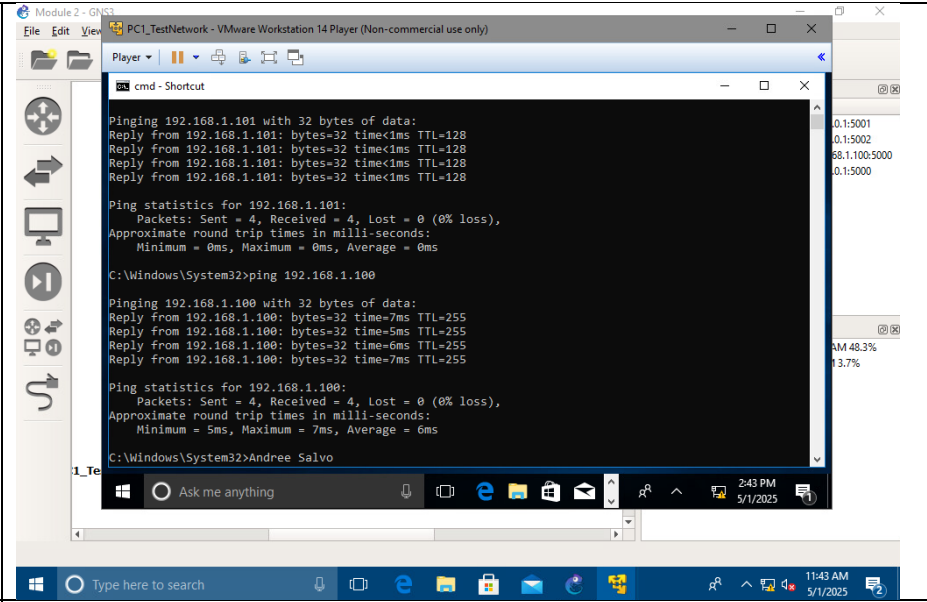
```
Windows10VM-V2v3-new
Router_TestNetwork
Router_TestNetwork#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router_TestNetwork(config)#int fa0/0
Router_TestNetwork(config-if)#ip address 192.168.1.100
Router_TestNetwork(config-if)#ip address 192.168.1.100 255.255.255.0
Router_TestNetwork(config-if)#no shutdown
Router_TestNetwork(config-if)#exit
Router_TestNetwork(config)#
Mar 1 00:06:34.347: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
Mar 1 00:06:35.347: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Router_TestNetwork(config)#int fa0/1
Router_TestNetwork(config-if)#ip address 192.168.2.100 255.255.255.0
Router_TestNetwork(config-if)#no shutdown
Router_TestNetwork(config-if)#exit
Router_TestNetwork(config)#
Mar 1 00:07:28.059: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up
Mar 1 00:07:29.059: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
Router_TestNetwork(config)#int fa1/0
Router_TestNetwork(config-if)#ip address 192.168.3.100 255.255.255.0
Router_TestNetwork(config-if)#no shutdown
Router_TestNetwork(config-if)#exit
Router_TestNetwork(config)#
Mar 1 00:08:13.311: %LINK-3-UPDOWN: Interface FastEthernet1/0, changed state to up
Mar 1 00:08:14.311: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up
Router_TestNetwork(config-if)#exit
Router_TestNetwork(config)#exit
Router_TestNetwork#
Mar 1 00:08:37.239: %SYS-5-CONFIG_I: Configured from console by console
Router_TestNetwork#
Router_TestNetwork#Andree Salvo
```

2. Test connections using best practice methods for communications between PC1_TestNetwork and PC2_TestNetwork. Submit screenshots of ping tests performed at the command line between devices on the network. The screenshots should show the results of using best practice methods to execute the ping command between the following devices:

From PC1_TestNetwork to PC1_TestNetwork



From PC1_TestNetwork
to PC1_TestNetwork
Gateway



```
Module 2 - GNS3
PC1_TestNetwork - VMware Workstation 14 Player (Non-commercial use only)

Player

cmd - Shortcut

Pinging 192.168.1.101 with 32 bytes of data:
Reply from 192.168.1.101: bytes=32 time<1ms TTL=128
Reply from 192.168.1.101: bytes=32 time<1ms TTL=128
Reply from 192.168.1.101: bytes=32 time<1ms TTL=128
Reply from 192.168.1.101: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 7ms, Average = 6ms

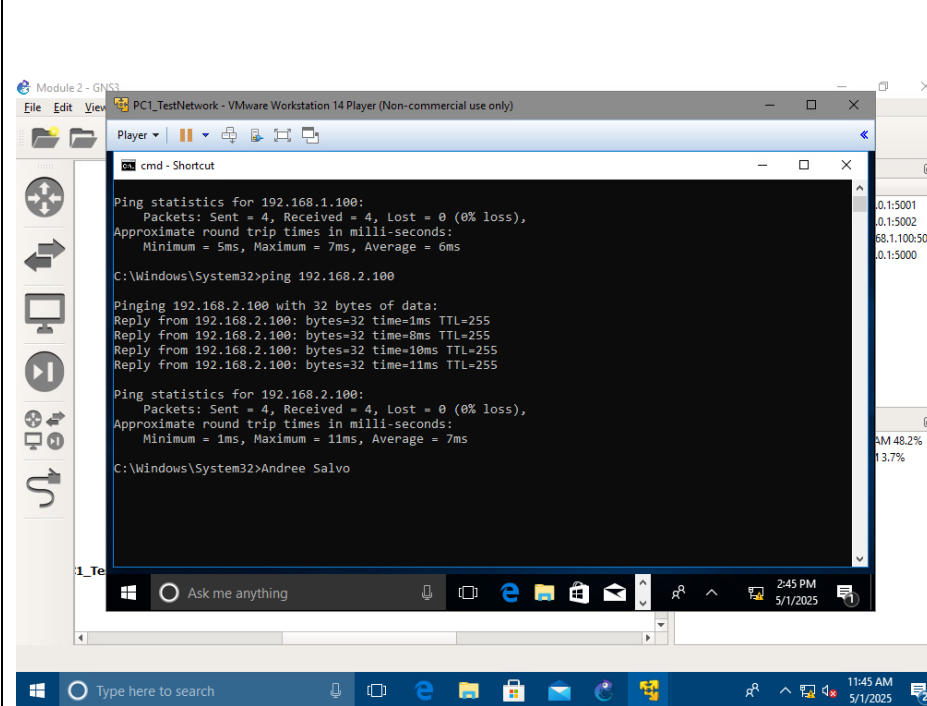
C:\Windows\System32>ping 192.168.1.100

Pinging 192.168.1.100 with 32 bytes of data:
Reply from 192.168.1.100: bytes=32 time=7ms TTL=255
Reply from 192.168.1.100: bytes=32 time=5ms TTL=255
Reply from 192.168.1.100: bytes=32 time=6ms TTL=255
Reply from 192.168.1.100: bytes=32 time=7ms TTL=255

Ping statistics for 192.168.1.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 5ms, Maximum = 7ms, Average = 6ms

C:\Windows\System32>Andree Salvo
```

From PC1_TestNetwork
to PC2_TestNetwork
Gateway



```
Module 2 - GNS3
PC1_TestNetwork - VMware Workstation 14 Player (Non-commercial use only)

Player

cmd - Shortcut

Ping statistics for 192.168.1.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 5ms, Maximum = 7ms, Average = 6ms

C:\Windows\System32>ping 192.168.2.100

Pinging 192.168.2.100 with 32 bytes of data:
Reply from 192.168.2.100: bytes=32 time=1ms TTL=255
Reply from 192.168.2.100: bytes=32 time=8ms TTL=255
Reply from 192.168.2.100: bytes=32 time=10ms TTL=255
Reply from 192.168.2.100: bytes=32 time=11ms TTL=255

Ping statistics for 192.168.2.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 11ms, Average = 7ms

C:\Windows\System32>Andree Salvo
```

- From PC1_TestNetwork to PC2_TestNetwork

```

C:\Windows\System32>ping 192.168.2.101

Pinging 192.168.2.101 with 32 bytes of data:
Reply from 192.168.2.100: bytes=32 time=8ms TTL=255
Reply from 192.168.2.100: bytes=32 time=10ms TTL=255
Reply from 192.168.2.100: bytes=32 time=11ms TTL=255

Ping statistics for 192.168.2.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 11ms, Average = 7ms

C:\Windows\System32>ping 192.168.2.101

Pinging 192.168.2.101 with 32 bytes of data:
Reply from 192.168.2.101: bytes=32 time=21ms TTL=127
Reply from 192.168.2.101: bytes=32 time=17ms TTL=127
Reply from 192.168.2.101: bytes=32 time=18ms TTL=127
Reply from 192.168.2.101: bytes=32 time=19ms TTL=127

Ping statistics for 192.168.2.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 17ms, Maximum = 21ms, Average = 18ms

C:\Windows\System32>Andree Salvo_
  
```

3. Test connections for communications between the computers on the network. Submit screenshots of ping tests performed at the command line between devices on the network. The screenshots should show the results of executing the ping command between the following devices:

From PC2_TestNetwork to PC1_TestNetwork

```

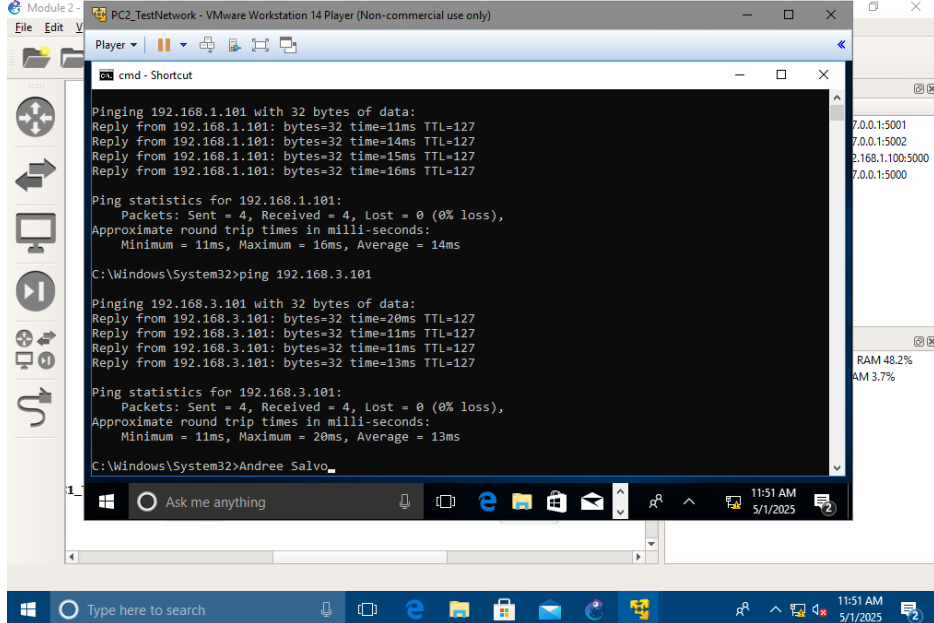
C:\Windows\System32>ping 192.168.1.101

Pinging 192.168.1.101 with 32 bytes of data:
Reply from 192.168.1.101: bytes=32 time=11ms TTL=127
Reply from 192.168.1.101: bytes=32 time=14ms TTL=127
Reply from 192.168.1.101: bytes=32 time=15ms TTL=127
Reply from 192.168.1.101: bytes=32 time=16ms TTL=127

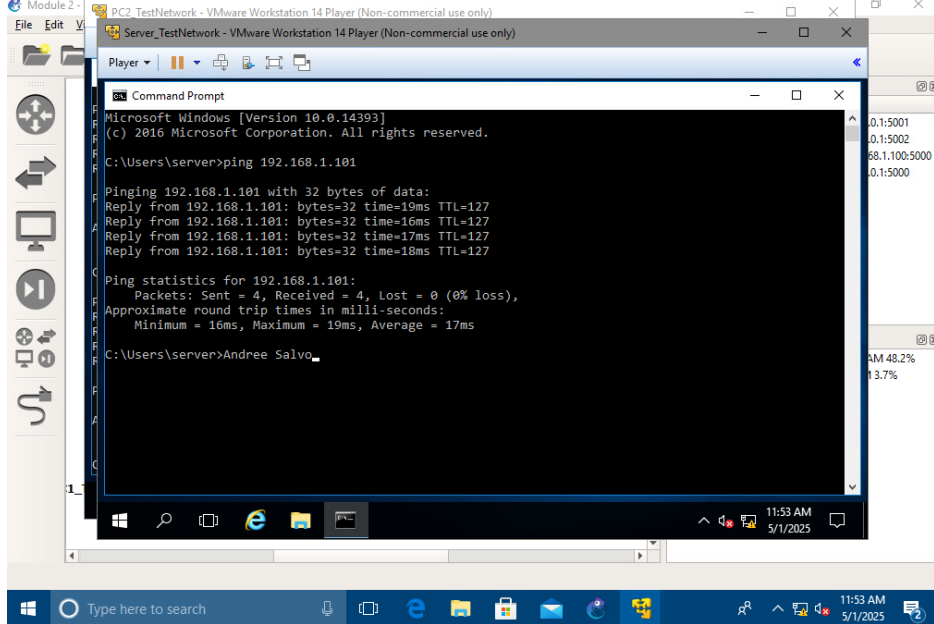
Ping statistics for 192.168.1.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 11ms, Maximum = 16ms, Average = 14ms

C:\Windows\System32>Andree Salvo
  
```

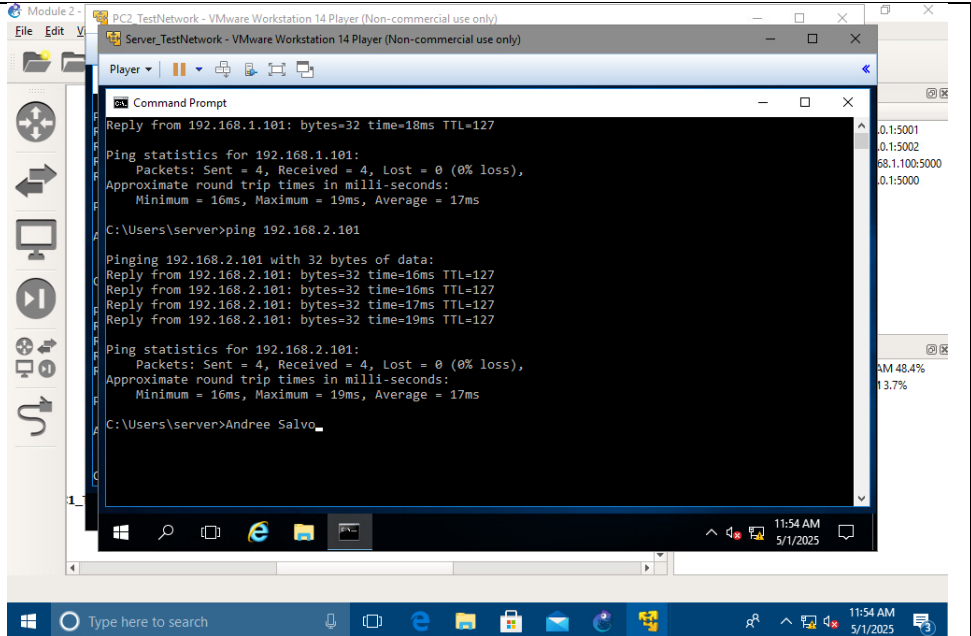
From
PC2_TestNetwork
to
Server_TestNetwork



From
Server_TestNetwork
to
PC1_TestNetwork



From
Server_TestNetwor
k to
PC2_TestNetwork



From
PC1_TestNetwork
to
Server_TestNetwor
k

