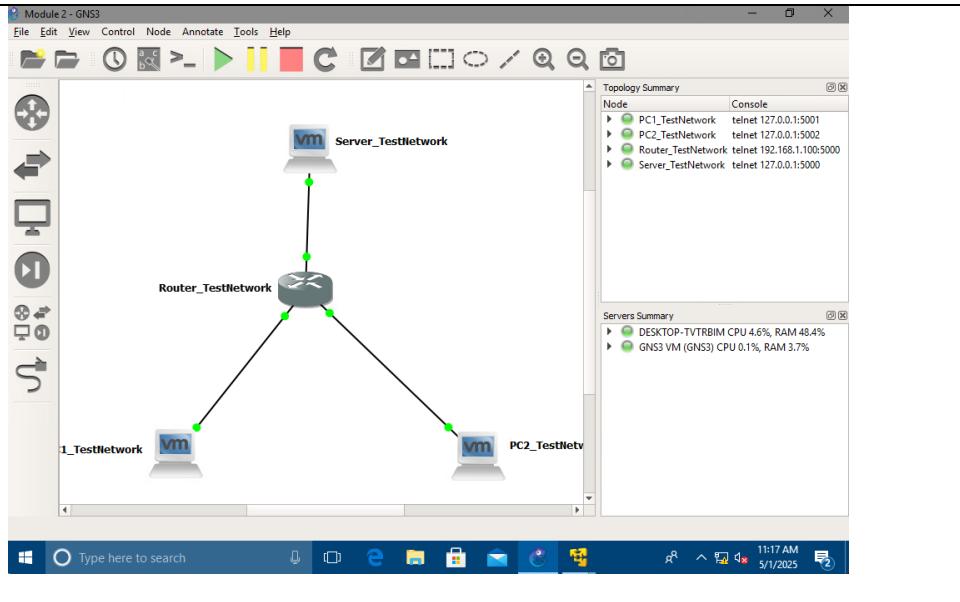


2-4 Activity: GNS3 Sandboxing Part One

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Cyb 220
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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 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.

The screenshot shows a Windows Command Prompt window titled "cmd - Shortcut" running on a PC labeled "PC1_TestNetwork". The user has run the commands "ipconfig" and "ipconfig /all" to check the network configuration. The output shows the correct IP assignments for the two PCs. The Windows taskbar at the bottom indicates the date and time as 5/1/2025 at 11:31 AM.

```
C:\Windows\System32>ipconfig
'ip' is not recognized as an internal or external command,
operable program or batch file.

C:\Windows\System32>ipconfig
Windows IP Configuration

Ethernet adapter Ethernet0 2:

    Connection-specific DNS Suffix . :
    Link-local IPv6 Address . . . . . : fe80::2886:d394:cc4:342c%12
    IPv4 Address . . . . . : 192.168.1.101
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.100

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

PC2_TestNetwork

:

```
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.

```
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 . :

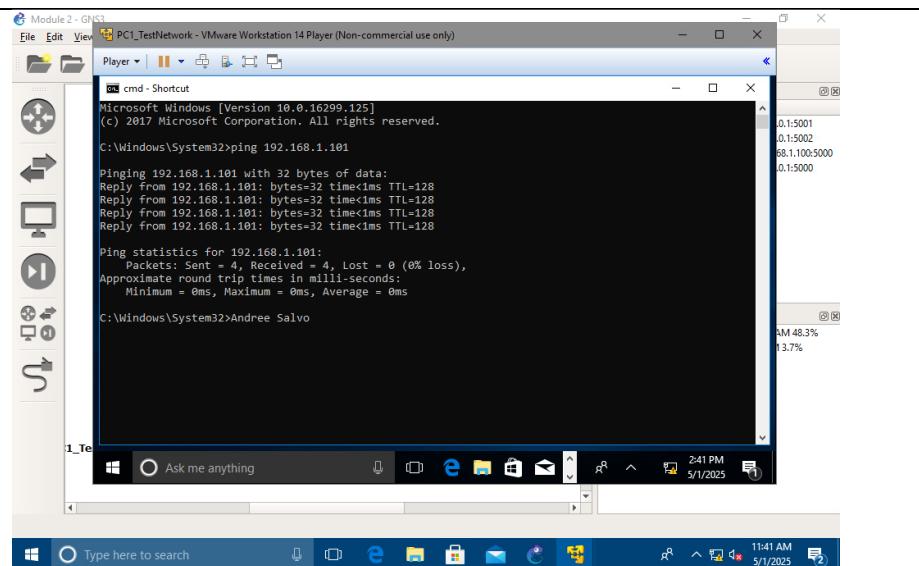
C:\Users\server>Andree Salvo
```

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

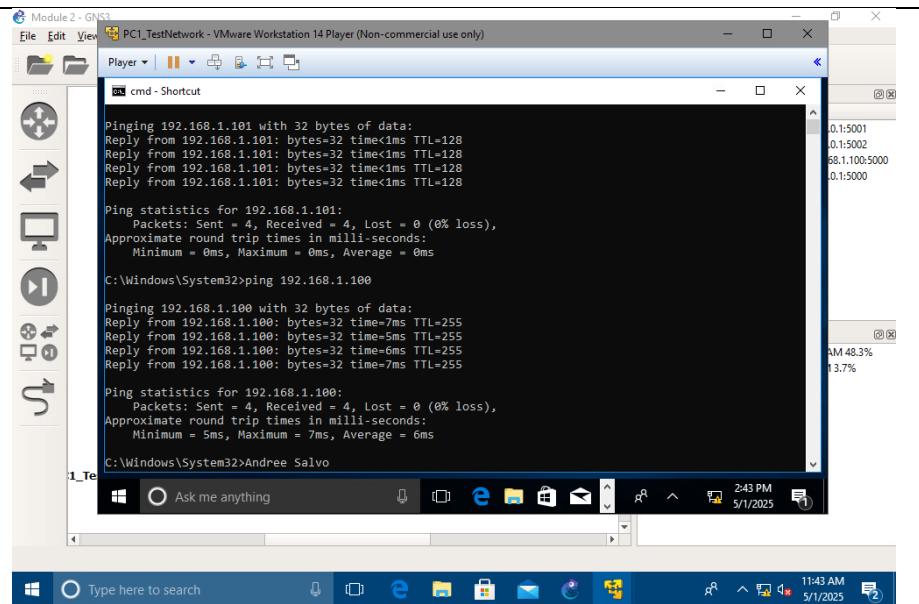
```
Windows10VM-V2v3-new
Router_TestNetwork>conf t
router configuration commands, one per line. End with CNTL/Z.
outer_TestNetwork(config)#int fa0/0
outer_TestNetwork(config-if)#ip address 192.168.1.100
outer_TestNetwork(config-if)#ip address 192.168.1.100 255.255.255.0
outer_TestNetwork(config-if)#no shutdown
outer_TestNetwork(config-if)#exit
outer_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
outer_TestNetwork(config)#int fa0/1
outer_TestNetwork(config-if)#ip address 192.168.2.100 255.255.255.0
outer_TestNetwork(config-if)#no shutdown
outer_TestNetwork(config-if)#exit
outer_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
outer_TestNetwork(config)#int fa1/0
outer_TestNetwork(config-if)#ip address 192.168.3.100 255.255.255.0
outer_TestNetwork(config-if)#no shutdown
outer_TestNetwork(config-if)#exit
outer_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
outer_TestNetwork(config-if)#exit
outer_TestNetwork#
Mar 1 00:08:37.239: %SYS-5-CONFIG_I: Configured from console by console
outer_TestNetwork#
outer_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:

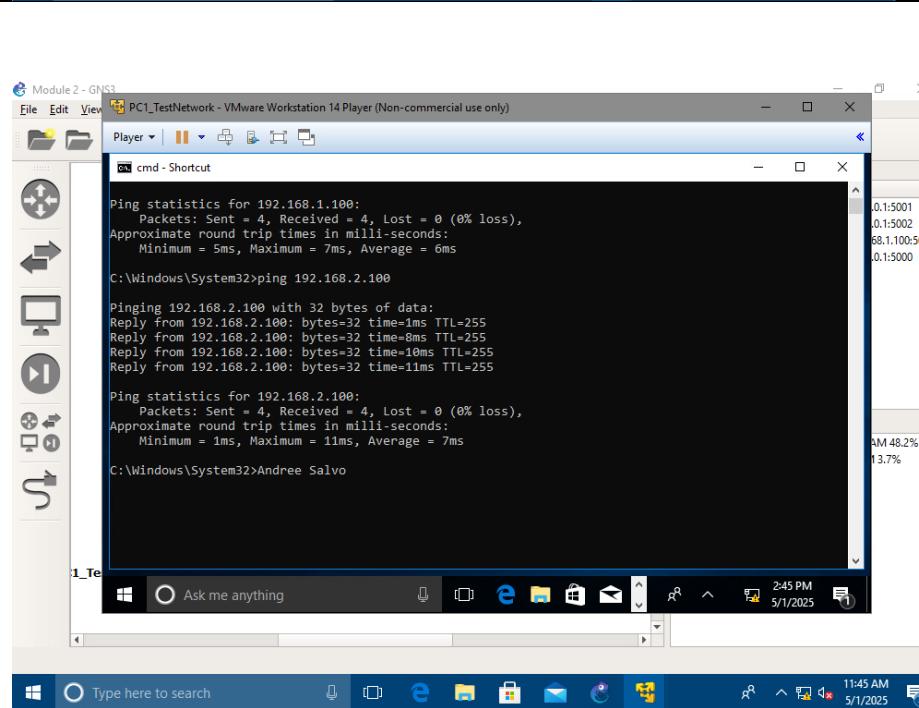
From
PC1_TestNetwork to
PC1_TestNetwork



From PC1_TestNetwork
to PC1_TestNetwork
Gateway



From PC1_TestNetwork
to PC2_TestNetwork
Gateway



- From PC1_TestNetwork to PC2_TestNetwork

```

Module 2 - GNS3
File Edit View PC1_TestNetwork - VMware Workstation 14 Player (Non-commercial use only)
Player cmd - Shortcut
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

```

Module 2 - GNS3
File Edit View PC2_TestNetwork - VMware Workstation 14 Player (Non-commercial use only)
Player cmd - Shortcut
Microsoft Windows [Version 10.0.16299.125]
(c) 2017 Microsoft Corporation. All rights reserved.

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_TestNetwor
k

Module 2 - PC2_TestNetwork - VMware Workstation 14 Player (Non-commercial use only)

cmd - Shortcut

```
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>ping 192.168.3.101  
  
Pinging 192.168.3.101 with 32 bytes of data:  
Reply from 192.168.3.101: bytes=32 time=20ms TTL=127  
Reply from 192.168.3.101: bytes=32 time=11ms TTL=127  
Reply from 192.168.3.101: bytes=32 time=11ms TTL=127  
Reply from 192.168.3.101: bytes=32 time=13ms TTL=127  
  
Ping statistics for 192.168.3.101:  
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  
Approximate round trip times in milli-seconds:  
Minimum = 11ms, Maximum = 20ms, Average = 13ms  
  
C:\Windows\System32>Andree Salvo_
```

RAM 48.2%
AM 3.7%

11:51 AM 5/1/2025

From
Server_TestNetwor
k to
PC1_TestNetwork

Module 2 - PC2_TestNetwork - VMware Workstation 14 Player (Non-commercial use only)

Server_TestNetwork - VMware Workstation 14 Player (Non-commercial use only)

cmd - Shortcut

```
Microsoft Windows [Version 10.0.14393]  
(c) 2016 Microsoft Corporation. All rights reserved.  
  
C:\Users\server>ping 192.168.1.101  
  
Pinging 192.168.1.101 with 32 bytes of data:  
Reply from 192.168.1.101: bytes=32 time=19ms TTL=127  
Reply from 192.168.1.101: bytes=32 time=16ms TTL=127  
Reply from 192.168.1.101: bytes=32 time=17ms TTL=127  
Reply from 192.168.1.101: bytes=32 time=18ms 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 = 16ms, Maximum = 19ms, Average = 17ms  
  
C:\Users\server>Andree Salvo_
```

RAM 48.2%
AM 13.7%

11:53 AM 5/1/2025

From
Server_TestNetwork
to
PC2_TestNetwork

Module 2 - PC2_TestNetwork - VMware Workstation 14 Player (Non-commercial use only)

File Edit View Player ▾ Command Prompt

```
Reply from 192.168.1.101: bytes=32 time=18ms 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 = 16ms, Maximum = 19ms, Average = 17ms
C:\Users\server>ping 192.168.2.101

Pinging 192.168.2.101 with 32 bytes of data:
Reply from 192.168.2.101: bytes=32 time=16ms TTL=127
Reply from 192.168.2.101: bytes=32 time=16ms TTL=127
Reply from 192.168.2.101: bytes=32 time=17ms 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 = 16ms, Maximum = 19ms, Average = 17ms
C:\Users\server>Andree Salvo
```

11:54 AM 5/1/2025

From
PC1_TestNetwork
to
Server_TestNetwork

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

File Edit View Player ▾ cmd - Shortcut

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

C:\Windows\System32>ping 192.168.3.101

Pinging 192.168.3.101 with 32 bytes of data:
Reply from 192.168.3.101: bytes=32 time=15ms TTL=127
Reply from 192.168.3.101: bytes=32 time=17ms TTL=127
Reply from 192.168.3.101: bytes=32 time=18ms TTL=127
Reply from 192.168.3.101: bytes=32 time=20ms TTL=127

Ping statistics for 192.168.3.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 15ms, Maximum = 20ms, Average = 17ms
C:\Windows\System32>Andree Salvo
```

2:55 PM 5/1/2025