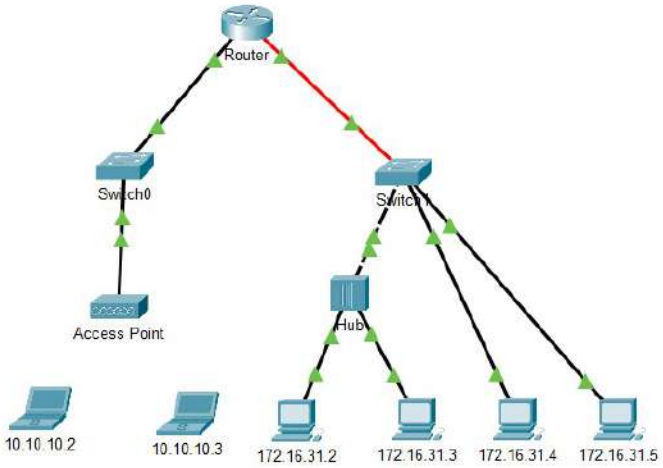
Cisco Packet Tracer - C:\Users\Nur\Downloads\9.1.3-packet-tracer---identify-mac-and-ip-addresses.pka

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1371, y: 425 Root 00:02:30




PT Activity: 01:17:14

## Packet Tracer - Identify MAC and IP Addresses

### Objectives

Part 1: Gather PDU Information for Local Network Communication

Part 2: Gather PDU Information for Remote Network Communication

### Background

This activity is optimized for viewing PDUs. The devices are already configured. You will gather PDU information in simulation mode and answer a series of questions about the data you collect.

### Instructions

### Part 1: Gather PDU Information for Local Network Communication

**Note**: Review the Reflection Questions in Part 3 before proceeding with Part 1. It will give you an idea of the type of information you will need to gather.Gather PDU information as a packet travels from 172.16.31.5 to 172.16.31.2.

a. Click **172.16.31.5** and open the **Command Prompt**.

b. Enter the **ping 172.16.31.2** command.

c. Switch to simulation mode and repeat the **ping 172.16.31.2** command. A PDU appears next to **172.16.31.5**.

d. Click the PDU and note the following information from the **OSI Model** and **Outbound PDU**

Time Elapsed: 01:17:14

Top Dock Check Results Back 1/1 Next

Time: 00:00:04 Realtime Simulation

4331 4321 1941 2901 2911 819IOX 819HGW 829 1240 PT-Router PT-Empty 1841 2620XM 2621XM

(Select a Device to Drag and Drop to the Workspace)

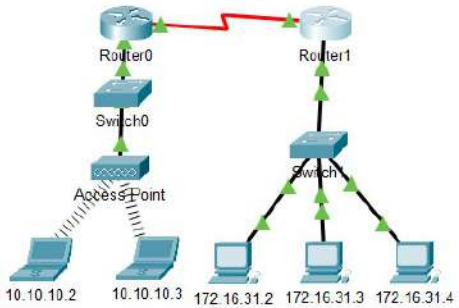
Scenario 0 New Delete Toggle PDU List Window

| Fire | Last Status | Source | Destination | Type | Color | Time(sec) | Periodic | Num | Edit | Delete |
|---|---|---|---|---|---|---|---|---|---|---|

Cisco Packet Tracer - C:\Users\Nur\Downloads\9.2.9-packet-tracer---examine-the-arp-table.pka

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1625, y: 675




PT Activity: 00:27:33

## Packet Tracer - Examine the ARP Table

### Addressing Table

| Device | Interface | MAC Address |
|---|---|---|
| Router0 | Gg0/0 | 0001.6458.2501 |
| | S0/0/0 | N/A |
| Router1 | G0/0 | 00E0.F7B1.8901 |
| | S0/0/0 | N/A |
| 10.10.10.2 | Wireless | 0060.2F84.4AB6 |
| 10.10.10.3 | Wireless | 0060.4706.572B |
| 172.16.31.2 | F0 | 000C.85CC.1DA7 |
| 172.16.31.3 | F0 | 0060.7036.2849 |
| 172.16.31.4 | G0 | 0002.1640.8D75 |

### Objectives

Part 1: Examine an ARP Request

Time Elapsed: 00:27:33

Top Dock Check Results Back 1/1 Next

Router1

Physical Config CLI Attributes

IOS Command Line Interface

```
Router>show
% Incomplete command.
Router>
Router>
Router>
Router>show mac-a
Router>show mac-
Router>show mac-
              ^
% Invalid input detected at '^' marker.

Router>enable
Router#show
% Incomplete command.
Router#show mac
Router#show mac-address-table
          Mac Address Table
-------------------------------------------

Vlan    Mac Address       Type        Ports
----    -----------       --------    -----

Router#
Router#show arp
Protocol  Address          Age (min)  Hardware Addr   Type   Interface
Internet  172.16.31.1            -   00E0.F7B1.8901  ARPA
GigabitEthernet0/0
Internet  172.16.31.2            0   000C.85CC.1DA7  ARPA
GigabitEthernet0/0
Router#
```

Ctrl+F6 to exit CLI focus

Copy Paste

Top

Time: 00:19:14

Realtime Simulation

4331 4321 1941 2901 2911 819IOX 819HGW 829 1240 PT-Router PT-Empty 1841 2620XM 2621XM

2621XM

Scenario 0

New Delete

Toggle PDU List Window

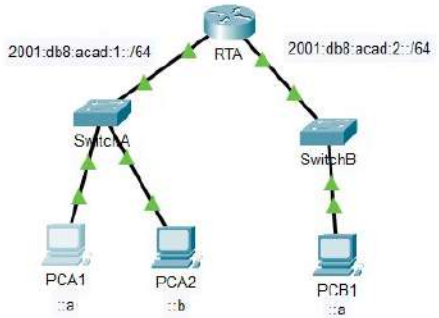
Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Cisco Packet Tracer - C:\Users\Nur\Downloads\9.3.4-packet-tracer---ipv6-neighbor-discovery.pka

File Edit Options View Tools Extensions Window Help

Logical Physical x: 827, y: 18

Root 12:33:00




PCA1

Desktop Programming

Command Prompt

```
Pinging 2001:db8:acad:2::a with 32 bytes of data:

Reply from 2001:DB8:ACAD:2::A: bytes=32 time=24ms TTL=127

Ping statistics for 2001:DB8:ACAD:2::A:
    Packets: Sent = 1, Received = 1, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 24ms, Maximum = 24ms, Average = 24ms

C:\>ping -n 1 2001:db8:acad:2::a

Pinging 2001:db8:acad:2::a with 32 bytes of data:

Reply from 2001:DB8:ACAD:2::A: bytes=32 time=8ms TTL=127

Ping statistics for 2001:DB8:ACAD:2::A:
    Packets: Sent = 1, Received = 1, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 8ms, Maximum = 8ms, Average = 8ms

C:\>ping -n 1 2001:db8:acad:1::B

Pinging 2001:db8:acad:1::B with 32 bytes of data:

Reply from 2001:DB8:ACAD:1::B: bytes=32 time=11ms TTL=128

Ping statistics for 2001:DB8:ACAD:1::B:
    Packets: Sent = 1, Received = 1, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 11ms, Maximum = 11ms, Average = 11ms

C:\>
```

Top

PCA1 repeat the **ping** to PCA2. (Hint: you should be able to press the up arrow to bring the previous command back.)

q. Click the **Capture Forward** button 5 times to complete the ping process.

Why weren't there any NDP events?

## Part 2: IPv6 Neighbor Discovery Remote Network

In Part 2 of this activity, you will perform steps that are similar to those in Part 1, except in this case,

Time Elapsed: 00:59:50

Top Dock Check Results Back 1/1 Next

RTA

CLI

IOS Command Line Interface

```
RTA>enable
RTA#clear ipv6 n
RTA#clear ipv6 nei
RTA#clear ipv6 neighbors
RTA#show  ipv6 neighbors
RTA#
RTA#show  ipv6 neighbors
IPv6 Address                              Age Link-layer Addr State Interface
2001:DB8:ACAD:1::A                          3 0001.427E.E8ED  REACH Gig0/0/0
2001:DB8:ACAD:2::A                          3 0060.2F68.9E91  REACH Gig0/0/1
FE80::201:42FF:FE7E:E8ED                    3 0001.427E.E8ED  REACH Gig0/0/0
FE80::260:2FFF:FE68:9E91                    3 0060.2F68.9E91  REACH Gig0/0/1
RTA#show  ipv6 neighbors
IPv6 Address                              Age Link-layer Addr State Interface
2001:DB8:ACAD:1::A                          6 0001.427E.E8ED  REACH Gig0/0/0
2001:DB8:ACAD:2::A                          6 0060.2F68.9E91  REACH Gig0/0/1
FE80::201:42FF:FE7E:E8ED                    6 0001.427E.E8ED  REACH Gig0/0/0
FE80::260:2FFF:FE68:9E91                    6 0060.2F68.9E91  REACH Gig0/0/1
RTA#show  ipv6 neighbors
IPv6 Address                              Age Link-layer Addr State Interface
2001:DB8:ACAD:1::A                          6 0001.427E.E8ED  REACH Gig0/0/0
2001:DB8:ACAD:2::A                          6 0060.2F68.9E91  REACH Gig0/0/1
FE80::201:42FF:FE7E:E8ED                    6 0001.427E.E8ED  REACH Gig0/0/0
FE80::260:2FFF:FE68:9E91                    6 0060.2F68.9E91  REACH Gig0/0/1
RTA#ping ?
  WORD  Ping destination address or hostname
  ip    IP echo
  ipv6  IPv6 echo
  <cr>
RTA#
```

Ctrl+F6 to exit CLI focus Copy Paste

Top

Time: 00:22:20

4331 4321 1941 2901 2911 819IOX 819HGW 829 1240 PT-Router PT-Empty 1841 2620XM 2621XM

2811 IOS15

Scenario 0 New Delete Toggle PDU List Window

Cisco Packet Tracer - C:\Users\Nur\Downloads\10.1.4-packet-tracer---configure-initial-router-settings.pka

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1795, y: 656 Root 01:28:30

PCA R1

PCA

Physical Config Desktop Programming Attributes

Terminal X

```
% Invalid input detected at '^' marker.

R1(config)#do write mem
Building configuration...
[OK]
R1(config)#copy?
% Unrecognized command
R1(config)#exit
R1#
%SYS-5-CONFIG_I: Configured from console by console

R1#copy r
R1#copy running-config st
R1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R1#write mem
Building configuration...
[OK]
R1#show flash

System flash directory:
File  Length   Name/status
  3   33591768 c1900-universalk9-mz.SPA.151-4.M4.bin
  2   28282    sigdef-category.xml
  1   227537   sigdef-default.xml
[33847587 bytes used, 221896413 available, 255744000 total]
249856K bytes of processor board System flash (Read/Write)


R1#
```

Top

PT Activity: 00:24:59

## Packet Tracer - Configure Initial Router Settings

### Objectives

Part 1: Verify the Default Router Configuration

Part 2: Configure and Verify the Initial Router Configuration

Part 3: Save the Running Configuration File

### Background

In this activity, you will perform basic router configuration tasks. You will secure access to the CLI and console port using encrypted and plain-text passwords. You will also configure messages for users who are logging into the router. These banners warn unauthorized users that access is prohibited. Finally, you will verify and save your running configuration.

### Instructions

### Part 1: Verify the Default Router Configuration

**Step 1: Establish a console connection to R1.**

a. Choose a **Console** cable from the available connections.

b. Click **PCA** and select **RS 232**.

c. Click **R1** and select **Console**.

Time Elapsed: 00:24:59 Completion: 100%

Top Dock Check Results Back 1/1 Next

Time: 00:25:21 Realtime Simulation

Console

Scenario 0 New Delete Toggle PDU List Window

Fire | Last Status | Source | Destination | Type | Color | Time(sec) | Periodic | Num | Edit | Delete

Cisco Packet Tracer - C:\Users\Nur\Downloads\10.3.4-packet-tracer---connect-a-router-to-a-lan.pka

File Edit Options View Tools Extensions Window Help

Activity Results

Time Elapsed: 00:35:46

Congratulations Nur Zhetessov! You completed the activity.

Overall Feedback | Assessment Items | Connectivity Tests

Expand/Collapse All | Show Incorrect Items

| Assessment Items | Status | Points | Component(s) |
|---|---|---|---|
| Network | | | |
| R1 | | | |
| Ports | | | |
| GigabitEthernet0/0 | | | |
| Description | Correct | 3 | Device Interface C... |
| IP Address | Correct | 3 | Device Interface C... |
| Port Status | Correct | 3 | Device Interface C... |
| Subnet Mask | Correct | 3 | Device Interface C... |
| GigabitEthernet0/1 | | | |
| Description | Correct | 3 | Device Interface C... |
| IP Address | Correct | 3 | Device Interface C... |
| Port Status | Correct | 3 | Device Interface C... |
| Subnet Mask | Correct | 3 | Device Interface C... |
| Startup Config | Correct | 3 | Configuration Man... |
| R2 | | | |
| Ports | | | |
| GigabitEthernet0/0 | | | |
| Description | Correct | 3 | Device Interface C... |
| IP Address | Correct | 3 | Device Interface C... |
| Port Status | Correct | 3 | Device Interface C... |
| Subnet Mask | Correct | 3 | Device Interface C... |
| GigabitEthernet0/1 | | | |
| Description | Correct | 3 | Device Interface C... |
| IP Address | Correct | 3 | Device Interface C... |
| Port Status | Correct | 3 | Device Interface C... |
| Subnet Mask | Correct | 3 | Device Interface C... |
| Startup Config | Correct | 3 | Configuration Man... |

Score : 54/54
Item Count : 18/18

| Component | Items/Total | Score |
|---|---|---|
| Configuration Management | 2/2 | 6/6 |
| Device Interface Configuration | 16/16 | 48/48 |

R2

Physical Config CLI Attributes

IOS Command Line Interface

```
!
interface GigabitEthernet0/1
 description LAN connection to S4
 ip address 10.1.2.1 255.255.255.0
 duplex auto
 speed auto
!
interface Serial0/0/0
 ip address 209.165.200.226 255.255.255.252
!
interface Serial0/0/1
 no ip address
 clock rate 2000000
 shutdown
!
interface Vlan1
 no ip address
 shutdown
!
router eigrp 1
 network 10.0.0.0
 network 209.165.200.0
!
router ospf 10
 log-adjacency-changes
 network 10.1.1.0 0.0.0.255 area 0
 network 10.1.2.0 0.0.0.255 area 0
 network 209.165.200.224 0.0.0.3 area 0
!
```

Ctrl+F6 to exit CLI focus | Copy

Top

R1

Physical Config CLI Attributes

IOS Command Line Interface

```
R1#ping 192.168.10.10

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.10.10, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 0/0/1 ms

R1#ping 192.168.10.10

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.10.10, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/1 ms

R1#interface gigabitEthernet 0/1
                ^
% Invalid input detected at '^' marker.

R1#interface gigabitEthernet
                ^
% Invalid input detected at '^' marker.

R1#interface gigabitEthernet
                ^
% Invalid input detected at '^' marker.

R1#inter
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#interface gigabitEthernet 0/1
```

Ctrl+F6 to exit CLI focus | Copy | Paste

Top

Close

Cisco Packet Tracer - C:\Users\Nur\Downloads\10.3.5-packet-tracer---troubleshoot-default-gateway-issues.pka

File Edit Options View Tools Extensions Window Help

Activity Results

Time Elapsed: 00:31:44

Congratulations Nur Zhetessov! You completed the activity.

Overall Feedback | Assessment Items | Connectivity Tests

Congratulations! You successfully completed the **Packet Tracer - Troubleshooting Default Gateway Issues** activity. However, your final score may change based on your answers to the questions in the Instructions. Consult your instructor.

S1

Physical Config CLI Attributes

IOS Command Line Interface

```
Enter configuration commands, one per line.  End with CNTL/Z.
S1(config)#interface vlan 1
S1(config-if)#ip defa
S1(config-if)#ip ?
  address         Set the IP address of an interface
  helper-address  Specify a destination address for UDP broadcasts
S1(config-if)#ip defaulte-
S1(config-if)#ip default?
% Unrecognized command
S1(config-if)#ip default-gateway ?
% Unrecognized command
S1(config-if)#ip default-gateway 192.168.10.1
S1(config)#copy ?
% Unrecognized command
S1(config)#copy exit
          ^
% Invalid input detected at '^' marker.

S1(config)#copy?
% Unrecognized command
S1(config)#ecit
          ^
% Invalid input detected at '^' marker.

S1(config)#exit
S1#
%SYS-5-CONFIG_I: Configured from console by console

S1#oipy ?
% Unrecognized command
```

Ctrl+F6 to exit CLI focus | Copy | Paste

Top

S2

Physical Config CLI Attributes

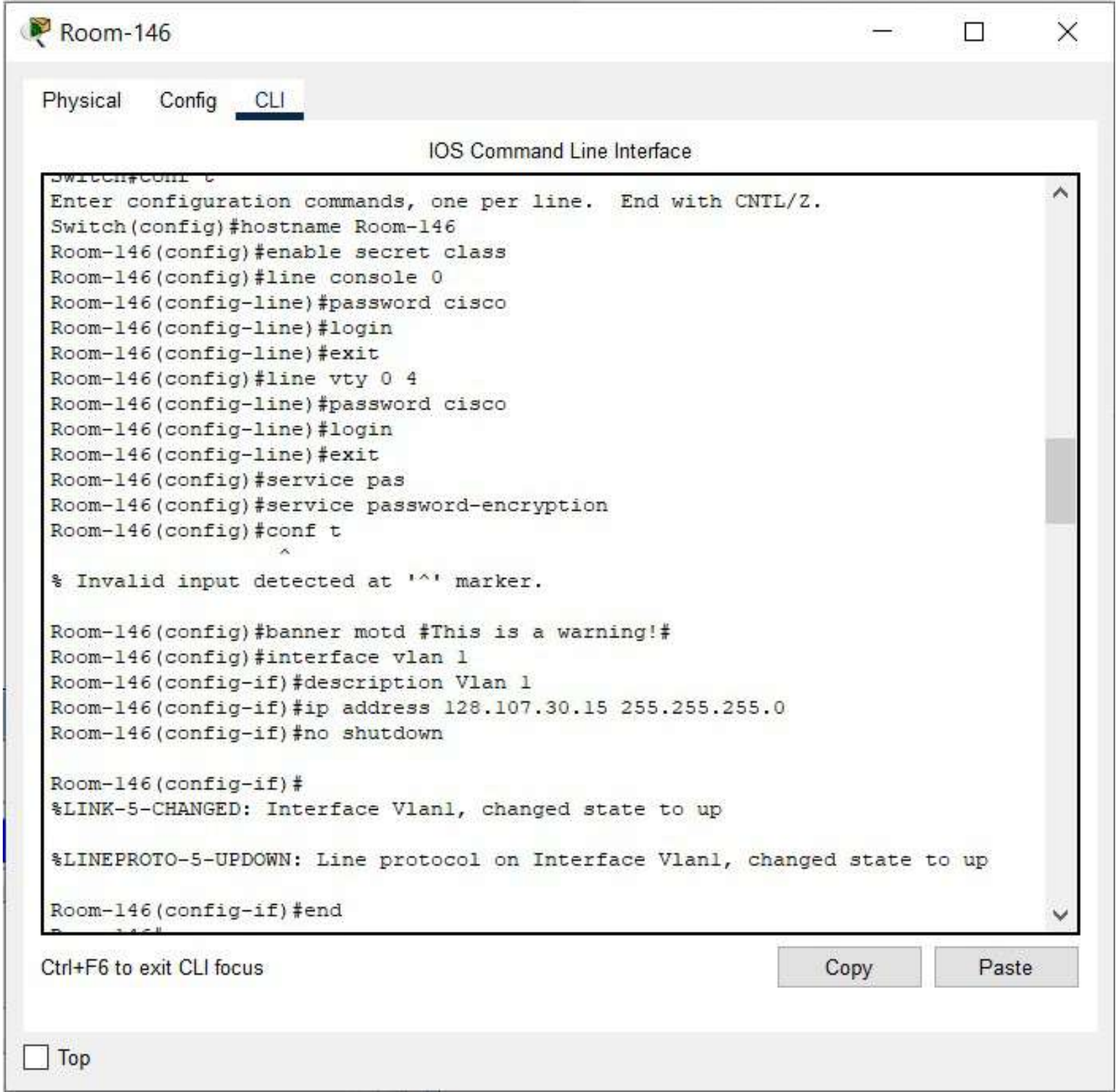
IOS Command Line Interface

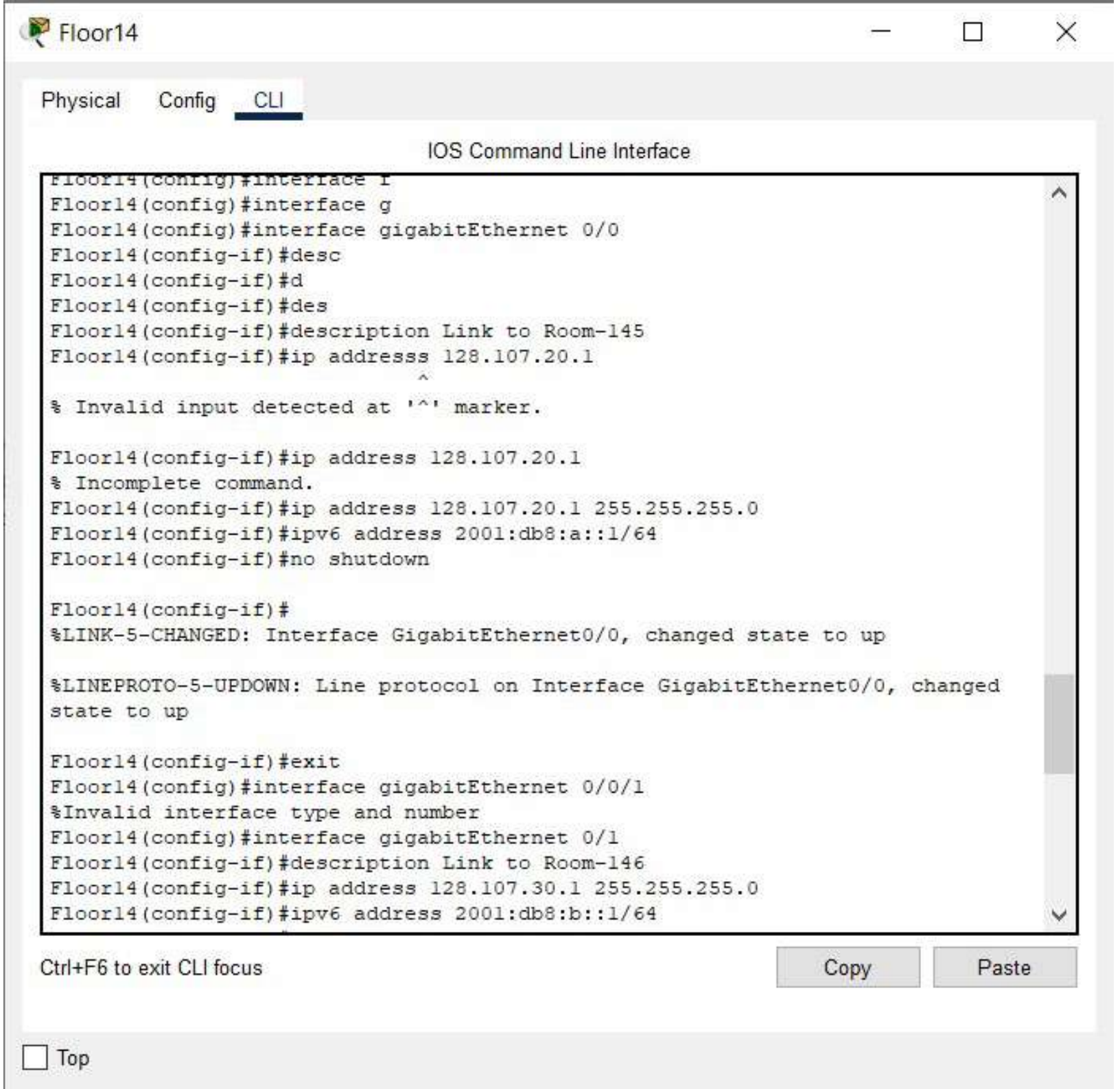
```
  BGP Policy Mapping is disabled

S2#
S2#
S2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
S2(config)#write memory
          ^
% Invalid input detected at '^' marker.

S2(config)#do write memory
Building configuration...
[OK]
S2(config)#show running
          ^
% Invalid input detected at '^' marker.

S2(config)#exit
S2#
%SYS-5-CONFIG_I: Configured from console by console
show ip interface
Vlan1 is up, line protocol is up
  Internet address is 192.168.11.2/24
  Broadcast address is 255.255.255.255
  Address determined by setup command
  MTU is 1500 bytes
  Helper address is not set
  Directed broadcast forwarding is disabled
  Outgoing access list is not set
  Inbound  access list is not set
```

Ctrl+F6 to exit CLI focus | Copy | Paste

Top

Close


Room-146
Physical
Config
CLI
IOS Command Line Interface
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname Room-146
Room-146(config)#enable secret class
Room-146(config)#line console 0
Room-146(config-line)#password cisco
Room-146(config-line)#login
Room-146(config-line)#exit
Room-146(config)#line vty 0 4
Room-146(config-line)#password cisco
Room-146(config-line)#login
Room-146(config-line)#exit
Room-146(config)#service pas
Room-146(config)#service password-encryption
Room-146(config)#conf t
^
% Invalid input detected at '^' marker.
Room-146(config)#banner motd #This is a warning!#
Room-146(config)#interface vlan 1
Room-146(config-if)#description Vlan 1
Room-146(config-if)#ip address 128.107.30.15 255.255.255.0
Room-146(config-if)#no shutdown
Room-146(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
Room-146(config-if)#end
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


Floor14
Physical
Config
CLI
IOS Command Line Interface
Floor14(config)#interface f
Floor14(config)#interface g
Floor14(config)#interface gigabitEthernet 0/0
Floor14(config-if)#desc
Floor14(config-if)#d
Floor14(config-if)#des
Floor14(config-if)#description Link to Room-145
Floor14(config-if)#ip addresss 128.107.20.1
^
% Invalid input detected at '^' marker.
Floor14(config-if)#ip address 128.107.20.1
% Incomplete command.
Floor14(config-if)#ip address 128.107.20.1 255.255.255.0
Floor14(config-if)#ipv6 address 2001:db8:a::1/64
Floor14(config-if)#no shutdown
Floor14(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
Floor14(config-if)#exit
Floor14(config)#interface gigabitEthernet 0/0/1
%Invalid interface type and number
Floor14(config)#interface gigabitEthernet 0/1
Floor14(config-if)#description Link to Room-146
Floor14(config-if)#ip address 128.107.30.1 255.255.255.0
Floor14(config-if)#ipv6 address 2001:db8:b::1/64
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

Cisco Packet Tracer - C:\Users\Nur\Downloads\10.4.3-packet-tracer---basic-device-configuration.pka

File Edit Options View Tools Extensions Window Help

Activity Results

Time Elapsed: 01:28:15

Congratulations Nur Zhetessov! You completed the activity.

Overall Feedback | Assessment Items | Connectivity Tests

Congratulations! You successfully completed the **Packet Tracer - Skills Integration Challenge** activity.

Close

Router0

Physical Config CLI Attributes

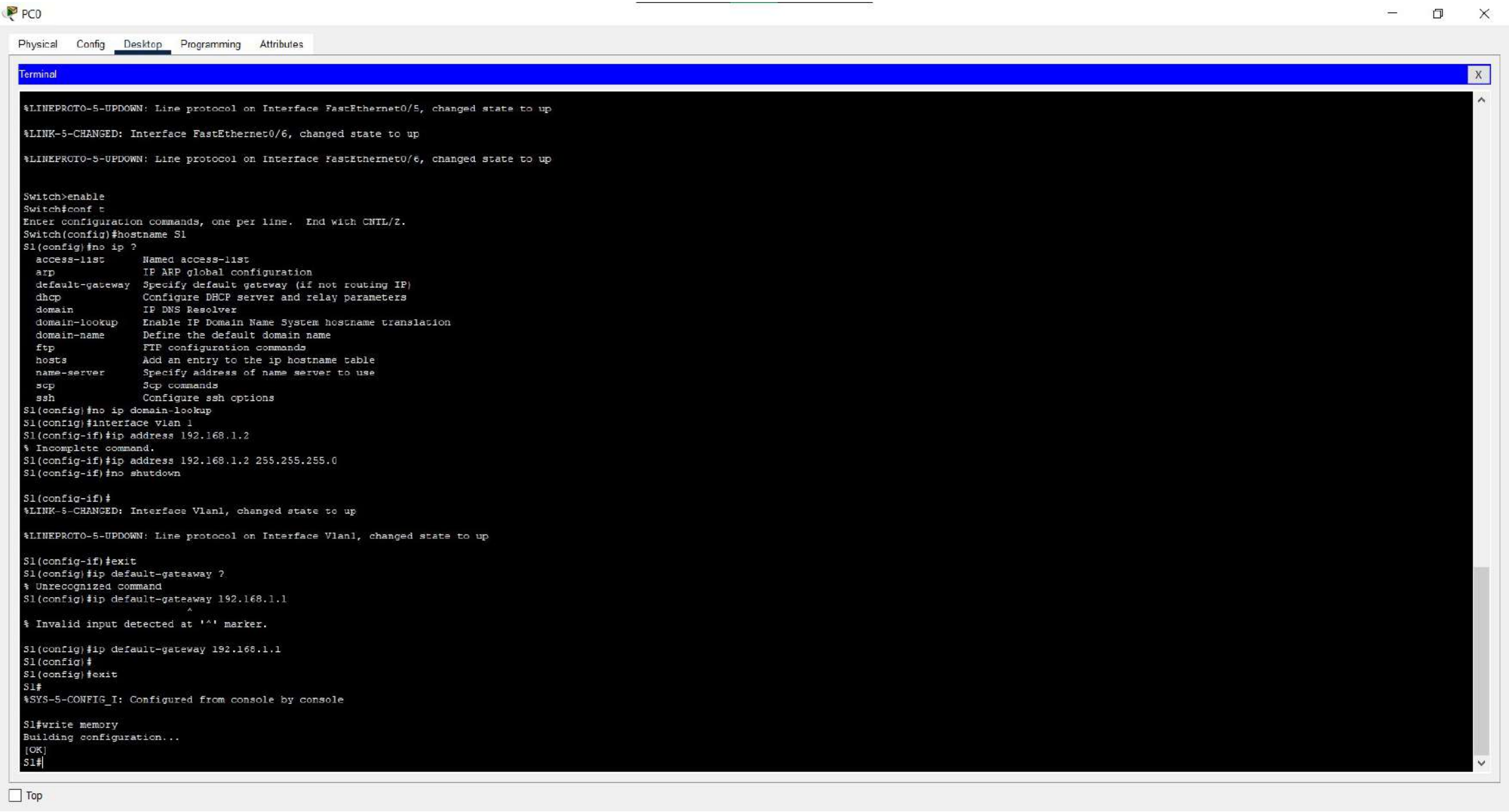
IOS Command Line Interface

```
Router(config)#no ip domain-lookup
Router(config)#enable secret class
Router(config)#line console 0
Router(config-line)#password cisco
Router(config-line)#login
Router(config-line)#line vty 0 4
Router(config-line)#password cisco
Router(config-line)#login
Router(config-line)#transport input telnet
Router(config-line)#exit
Router(config)#service pas
Router(config)#service password-encryption
Router(config)#banner motd #This is a Banner!#
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#write memory
Building configuration...
[OK]
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface g
Router(config)#interface gigabitEthernet 0/0
%Invalid interface type and number
Router(config)#desc
Router(config)#interface gigabitEthernet ?
  <0-9>  GigabitEthernet interface number
Router(config)#interface gigabitEthernet 0
                                         ^
% Invalid input detected at '^' marker.

Router(config)#interface gigabitEthernet 0/0
%Invalid interface type and number
Router(config)#interface gigabitEthernet 0-0
                                       ^
% Invalid input detected at '^' marker.

Router(config)#interface gigabitEthernet0/0
%Invalid interface type and number
Router(config)#interface gigabitEthernet 0/0/0
Router(config-if)#desc
Router(config-if)#description LAN to Switch
Router(config-if)#description LAN to PC1
Router(config-if)#ip address 192.168.0.1 255.255.255.0
Router(config-if)#ipv6 address 2001:db8:acad::1
% Incomplete command.
Router(config-if)#ipv6 address 2001:db8:acad::1/64
Router(config-if)#ipv6 address fe80::1
% Incomplete command.
Router(config-if)#ipv6 address fe80::1 ?
  link-local  Use link-local address
```

Ctrl+F6 to exit CLI focus

Copy Paste

Top


PC0
Physical
Config
Desktop
Programming
Attributes
Terminal
X
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/6, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/6, changed state to up
Switch>enable
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname S1
S1(config)#no ip ?
access-list Named access-list
arp IP ARP global configuration
default-gateway Specify default gateway (if not routing IP)
dhcp Configure DHCP server and relay parameters
domain IP DNS Resolver
domain-lookup Enable IP Domain Name System hostname translation
domain-name Define the default domain name
ftp FTP configuration commands
hosts Add an entry to the ip hostname table
name-server Specify address of name server to use
scp Scp commands
ssh Configure ssh options
S1(config)#no ip domain-lookup
S1(config)#interface vlan 1
S1(config-if)#ip address 192.168.1.2
% Incomplete command.
S1(config-if)#ip address 192.168.1.2 255.255.255.0
S1(config-if)#no shutdown
S1(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
S1(config-if)#exit
S1(config)#ip default-gateaway ?
% Unrecognized command
S1(config)#ip default-gateaway 192.168.1.1
^
% Invalid input detected at '^' marker.
S1(config)#ip default-gateway 192.168.1.1
S1(config)#
S1(config)#exit
S1#
%SYS-5-CONFIG_I: Configured from console by console
S1#write memory
Building configuration...
[OK]
S1#
Top