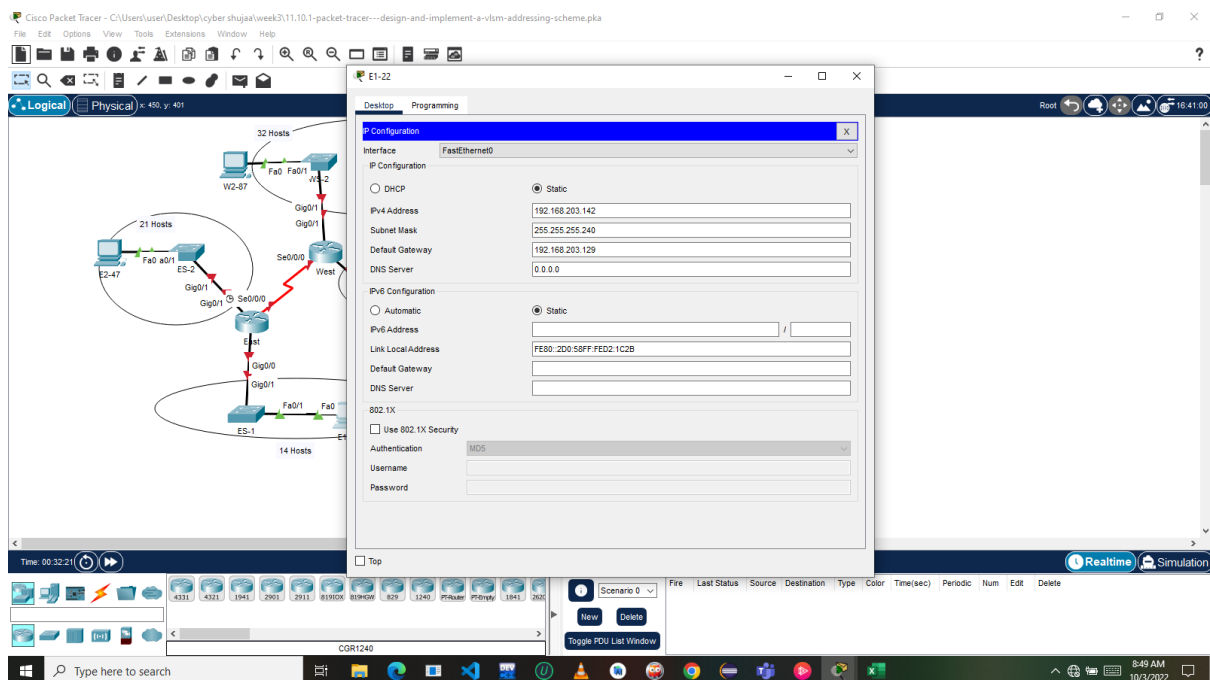
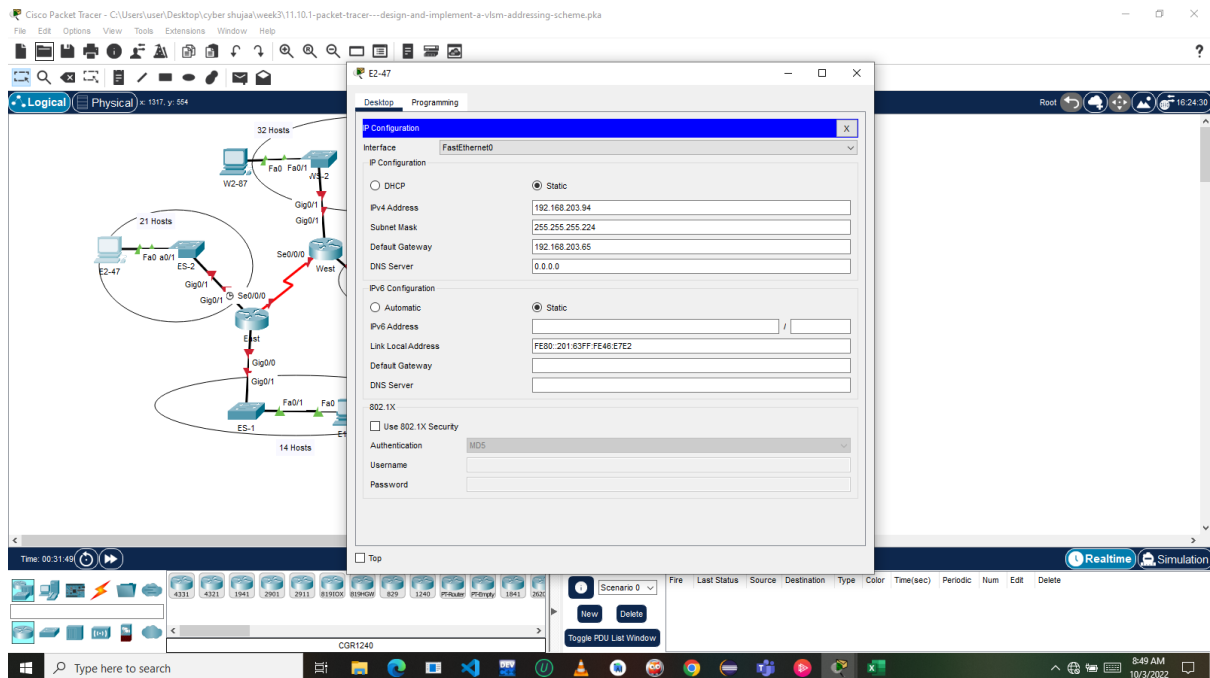


Packet Tracer - Design and Implement a VLSM Addressing Scheme

Configuring the PCs with Ip address, subnet mask and the default gateway



Cisco Packet Tracer - C:\Users\user\Desktop\cyber shujaal\week3\11.10.1-packet-tracer---design-and-implement-a-vlm-addressing-scheme.pka

File Edit Options View Tools Extensions Window Help

Logical Physical x: 430, y: 233

Time: 00:33:02

W1-201

Desktop Programming

IP Configuration

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.203.126

Subnet Mask 255.255.255.224

Default Gateway 192.168.203.97

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address

Link Local Address FE80::204:9AFF:FE01:9656

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication

MD5

Username

Password

Scenario 0

New Delete

Toggle PDU List Window

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

6:50 AM 10/3/2022

Cisco Packet Tracer - C:\Users\user\Desktop\cyber shujaal\week3\11.10.1-packet-tracer---design-and-implement-a-vlm-addressing-scheme.pka

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1161, y: 554

Time: 00:33:42

W2-87

Desktop Programming

IP Configuration

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.203.62

Subnet Mask 255.255.255.192

Default Gateway 192.168.203.1

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address

Link Local Address FE80::260:70FF:FE47:AAC1

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication

MD5

Username

Password

Scenario 0

New Delete

Toggle PDU List Window

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

6:51 AM 10/3/2022

Configuring the two routers

The screenshot displays the Cisco Packet Tracer interface. On the left, the 'East' router's CLI is open, showing the configuration process. On the right, a network diagram illustrates the topology with three subnets: 192.168.203.0/24 (32 hosts), 192.168.203.128/25 (21 hosts), and 192.168.203.146/25 (14 hosts). The routers are connected via their Serial0/0/0 interfaces.

```
East(config)#no ip domain lookup
East(config)#enable secret class
East(config)#line console 0
East(config-line)#password cisco
East(config-line)#login
East(config-line)#line vty 0 4
East(config-line)#password cisco
East(config-line)#login
East(config-line)#service password-encryption
East(config)#banner motd $ Authorized Users Only! $
East(config)#interface g0/0/0
%Invalid interface type and number
East(config)#interface g0/0/0
%Invalid interface type and number
East(config)#interface g0/0/0
%Invalid interface type and number
East(config-if)#ip address 192.168.203.129 255.255.255.224
East(config-if)#no shutdown
East(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
East(config-if)#exit
East(config)#interface g0/0/0
East(config-if)#ip address 192.168.203.129 255.255.255.224
East(config-if)#no shutdown
East(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
East(config-if)#exit
East(config)#exit
East#
%SYS-5-CONFIG_I: Configured from console by console
East#copy ru
East#copy running-config st
East#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
East#
```

The screenshot displays the Cisco Packet Tracer interface. On the left, a network diagram shows the topology with three subnets: 192.168.203.0/24 (32 hosts), 192.168.203.128/25 (21 hosts), and 192.168.203.146/25 (14 hosts). The routers are connected via their Serial0/0/0 interfaces. On the right, the 'West' router's CLI is open, showing the configuration process.

```
West(config)#no ip domain lookup
West(config)#enable secret class
West(config)#line console 0
West(config-line)#password cisco
West(config-line)#login
West(config-line)#line vty 0 4
West(config-line)#password cisco
West(config-line)#login
West(config-line)#service password-encryption
West(config)#banner motd $ Authorized Users Only! $
West(config)#interface g0/0/1
West(config-if)#ip address 192.168.203.1 255.255.255.192
West(config-if)#no shutdown
West(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
West(config-if)#exit
West(config)#interface g0/0/0
West(config-if)#ip address 192.168.203.97 255.255.255.224
West(config-if)#no shutdown
West(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
West(config-if)#exit
West(config)#interface Se0/0/0
West(config-if)#ip address 192.168.203.146 255.255.255.252
West(config-if)#no shutdown
West(config-if)#
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to down
West(config-if)#exit
West#
%SYS-5-CONFIG_I: Configured from console by console
West#
West#copy r
West#copy running-config sta
West#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
West#
```

Configuring the 4 switches

The network diagram shows four switches (ES-1, ES-2, ES-3, ES-4) connected in a mesh topology. ES-1 is connected to ES-2, ES-3, and ES-4. ES-2 is connected to ES-3 and ES-4. ES-3 is connected to ES-4. Each switch has a specific set of hosts connected to it: ES-1 has 14 hosts, ES-2 has 21 hosts, ES-3 has 32 hosts, and ES-4 has 19 hosts. The network is configured with a VLSM addressing scheme.

The CLI window for ES-2 shows the following configuration commands:

```
ES-2>enable
ES-2#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
ES-2(config)#no ip domain-lookup
ES-2(config)#interface vlan 1
ES-2(config-if)#ip address 192.168.203.66 255.255.255.224
ES-2(config-if)#no shutdown
ES-2(config-if)#
ES-2(config-if)#
%LINK-S-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-S-UPDOWN: Line protocol on Interface Vlan1, changed state to up
ES-2(config-if)#exit
ES-2(config)#
```

ES-2 con0 is now available.

Press RETURN to get started.

The network diagram shows the same four switches (ES-1, ES-2, ES-3, ES-4) connected in a mesh topology. Each switch has a specific set of hosts connected to it: ES-1 has 14 hosts, ES-2 has 21 hosts, ES-3 has 32 hosts, and ES-4 has 19 hosts. The network is configured with a VLSM addressing scheme.

The CLI window for ES-1 shows the following configuration commands:

```
ES-1>enable
ES-1#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
ES-1(config)#no ip domain-lookup
ES-1(config)#interface vlan 1
ES-1(config-if)#ip address 192.168.203.130 255.255.255.240
ES-1(config-if)#no shutdown
ES-1(config-if)#
ES-1(config-if)#
%LINK-S-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-S-UPDOWN: Line protocol on Interface Vlan1, changed state to up
ES-1(config-if)#exit
ES-1(config)#ip default-gateway 192.168.203.129
ES-1(config)#exit
ES-1#
%SYS-S-CONFIG_I: Configured from console by console
ES-1#
```

ES-1 con0 is now available.

Press RETURN to get started.

Cisco Packet Tracer - C:\Users\user\Desktop\cyber shuja\week3\11.10.1-packet-tracer---design-and-implement-a-vl...

File Edit Options View Tools Extensions Window Help

Logical Physical x: 237, y: 543

Time: 00:40:13

Realtime Simulation

WS-2

IOS Command Line Interface

```
Press RETURN to get started!

%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

WS-2>enable
WS-2#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
WS-2(config)#no ip domain-lookup
WS-2(config)#interface Vlan1
WS-2(config-if)#ip address 192.168.203.2 255.255.255.192
WS-2(config-if)#no shutdown

WS-2(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

WS-2(config-if)#exit
WS-2(config)#default-gateway 192.168.203.1 255.255.255.192
% Invalid input detected at '' marker.

WS-2(config)#exit
WS-2#
%SYS-5-CONFIG_I: Configured from console by console

WS-2#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
WS-2(config)#default-gateway 192.168.203.1
% Invalid input detected at '' marker.

WS-2(config)#ip default-gateway 192.168.203.1
WS-2(config)#exit
WS-2#
%SYS-5-CONFIG_I: Configured from console by console
```

Copy Paste

Top

Cisco Packet Tracer - C:\Users\user\Desktop\cyber shuja\week3\11.10.1-packet-tracer---design-and-implement-a-vl...

File Edit Options View Tools Extensions Window Help

Logical Physical x: 237, y: 543

Time: 00:40:51

Realtime Simulation

WS-1

IOS Command Line Interface

```
Cisco IOS Software, C3960 Software (C3960-LANBASEK9-M), Version 15.0(2)SE4, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2013 by Cisco Systems, Inc.
Compiled Wed 26-Jun-13 02:49 by mnguyen

Press RETURN to get started!

%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

WS-1>enable
WS-1#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
WS-1(config)#no ip domain-lookup
WS-1(config)#interface Vlan1
WS-1(config-if)#ip address 192.168.203.98
% Incomplete command
WS-1(config-if)#ip address 192.168.203.98 255.255.255.224
WS-1(config-if)#no shutdown

WS-1(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

WS-1(config-if)#exit
WS-1(config)#default-gateway 192.168.203.97 255.255.255.224
% Invalid input detected at '' marker.

WS-1(config)#ip default-gateway 192.168.203.97 255.255.255.224
% Invalid input detected at '' marker.

WS-1(config)#ip default-gateway 192.168.203.97
WS-1(config)#exit
WS-1#
%SYS-5-CONFIG_I: Configured from console by console
```

Copy Paste

Top

[illegible]

The screenshot displays the Cisco Packet Tracer interface. In the foreground, a Command Prompt window is open, showing the execution of a ping command from a PC to the IP address 192.168.203.126. The output indicates that the ping was successful, with a round trip time of approximately 10ms and no packet loss.

In the background, the configuration window for a router (W1-201) is visible. The configuration is set for the FastEthernet0 interface with the following parameters:

- Interface: FastEthernet0
- IP Configuration: Static
- Pv4 Address: 192.168.203.126
- Subnet Mask: 255.255.255.224
- Default Gateway: 192.168.203.97
- DNS Server: 0.0.0.0
- Pv6 Configuration: Static
- Pv6 Address: [Empty]
- Link Local Address: FE80:204:9AFF:FED1:9656
- Default Gateway: [Empty]
- DNS Server: [Empty]
- 802.1X: [Empty]
- Use 802.1X Security: [Empty]
- Authentication: MD5
- Username: [Empty]
- Password: [Empty]

The bottom of the interface shows a Realtime simulation clock at 10:29 AM and a list of devices in the network.