



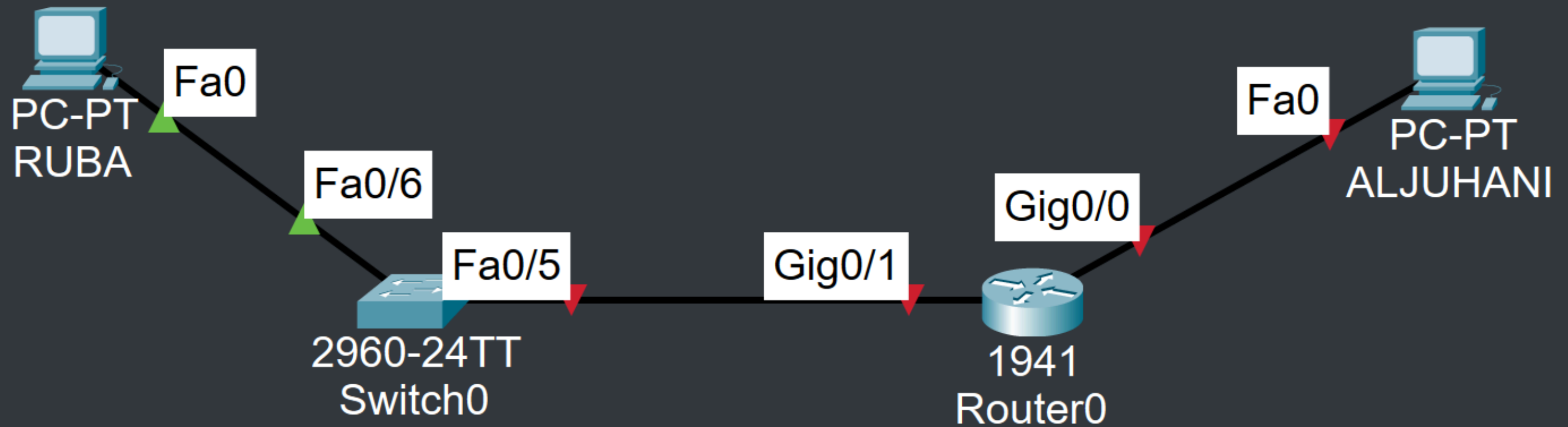
COMPUTER NETWORKS

Lab 4-2: Lab – Designing and Implementing a Subnetted IPv4 Addressing Scheme



Solved by :
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TOPOLOGY



Step 1: Configure the PC interfaces

RUBA

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.0.34

Subnet Mask 255.255.255.224

Default Gateway 192.168.0.33

DNS Server 0.0.0.0

IPv6 Configuration

PC1

ALJUHANI

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.0.2

Subnet Mask 255.255.255.224

Default Gateway 192.168.0.1

DNS Server 0.0.0.0

PC2

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Router>EN
Router#CONF T
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname Ruba_Aljuhani
Ruba_Aljuhani(config)#interface g0/0
Ruba_Aljuhani(config-if)# ip address
% Incomplete command.
Ruba_Aljuhani(config-if)# ip address 192.168.0.33 255.255.255.224
Ruba_Aljuhani(config-if)#no shutdown

Ruba_Aljuhani(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

Ruba_Aljuhani(config-if)#interface loopback1

Ruba_Aljuhani(config-if)#
%LINK-3-UPDOWN: Interface Loopback1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback1, changed state to up

Ruba_Aljuhani(config-if)#end
Ruba_Aljuhani#
%SYS-5-CONFIG_I: Configured from console by console
```

```
Ruba_Aljuhani(config-if)#end
Ruba_Aljuhani#
%SYS-5-CONFIG_I: Configured from console by console
```

```
Ruba_Aljuhani#write
Building configuration...
[OK]
```

```
Ruba_Aljuhani#show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
GigabitEthernet0/0	192.168.0.33	YES	manual	up	up
GigabitEthernet0/1	unassigned	YES	unset	administratively down	down
Loopback1	unassigned	YES	unset	up	up
Vlan1	unassigned	YES	unset	administratively down	down

Step 2: Configure the router

step 3: Test and Troubleshoot the Network

```
RUBA
Physical Config Desktop Programming Attributes
Command Prompt

Cisco Packet Tracer PC Command Line 1.0
C:\>Ping 192.168.0.33

Pinging 192.168.0.33 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.0.33:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 192.168.0.2

Pinging 192.168.0.2 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.0.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

pc1

```
ALJUHANI
Physical Config Desktop Programming Attributes
Command Prompt

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 192.168.0.34

Pinging 192.168.0.34 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.0.34:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

pc2