



Usman Institute of Technology
Department of Computer Science Fall 2022

Name: Muhammad Waleed

Roll no: 20B-115-SE

Course: DCCN (CS-222)

Course Instructor: Engr. Fauzan Saeed

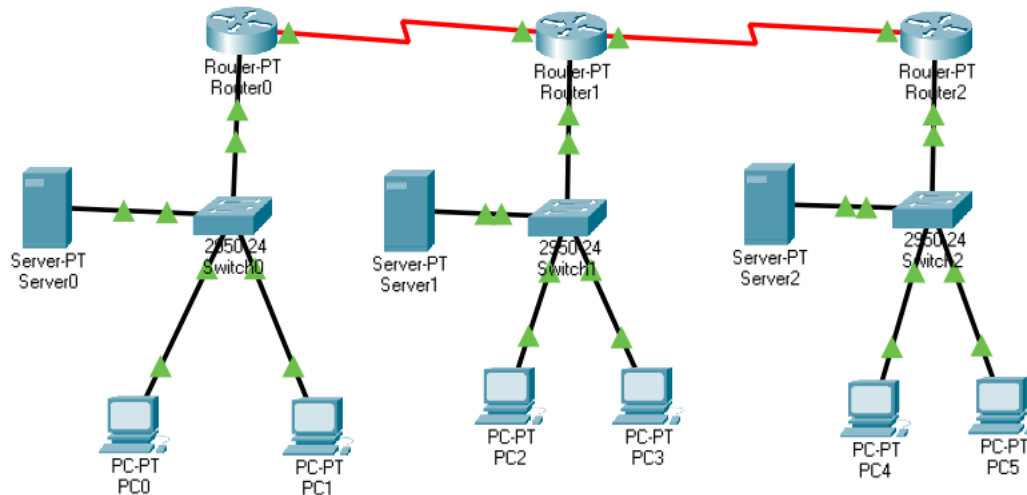
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Muhammad Waleed
20bb-115-se
SE-B
DCCN
Engr. Fauzan Saeed

Lab Task:

Implement following topology using packet tracer and configure static routes

Arrangement:



Router Config:

Router0:

```
Router>en
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int s0/3
%Invalid interface type and number
Router(config)#int s2/0
Router(config-if)#ip add 10.0.0.1 255.0.0.0
Router(config-if)#no shut

%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Router(config-if)#
Router(config-if)#exit

Router(config-if)#clock rate 64000

Router(config)#int fa0/1
%Invalid interface type and number
Router(config)#int fa0/0
Router(config-if)#ip address 12.0.0.1 255.0.0.0
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
```

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Engr. Fauzan Saeed

Router1:

```
Router>en
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int s2/0
Router(config-if)#ip add 10.0.0.2 225.0.0.0
Bad mask 0xE1000000 for address 10.0.0.2
Router(config-if)#ip add 10.0.0.2 255.0.0.0
Router(config-if)#no shut
```

```
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
```

```
Router(config-if)#exit
```

```
Router>en
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int s2/0
Router(config-if)#ip add 10.0.0.2 225.0.0.0
Bad mask 0xE1000000 for address 10.0.0.2
Router(config-if)#ip add 10.0.0.2 255.0.0.0
Router(config-if)#no shut
```

```
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
```

```
Router(config-if)#exit
```

```
Router(config)#int s3/0
Router(config-if)#clock rate 64000
```

```
Router(config)#int fa0/0
Router(config-if)#ip address 13.0.0.1 255.0.0.0
Router(config-if)#no shut
```

```
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
```

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20bb-115-se
SE-B
DCCN
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Router2:

```
Router>en
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int s2/0
Router(config-if)#ip add 11.0.0.2 255.0.0.0
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config)#int fa0/0
Router(config-if)#ip address 14.0.0.0 255.0.0.0
Bad mask /8 for address 14.0.0.0
Router(config-if)#ip address 14.0.0.1 255.0.0.0
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
```

Connectivity:

Router0:

Device Name: Router0
Device Model: Router-PT
Hostname: Router

Port	Link	IP Address	IPv6 Address	MAC Address
FastEthernet0/0	Up	12.0.0.1/8	<not set>	0004.9A52.5E26
FastEthernet1/0	Down	<not set>	<not set>	0001.4346.62C2
Serial2/0	Up	10.0.0.1/8	<not set>	<not set>
Serial3/0	Down	<not set>	<not set>	<not set>
FastEthernet4/0	Down	<not set>	<not set>	0060.70A6.A7D2
FastEthernet5/0	Down	<not set>	<not set>	0001.9621.7B2C

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router0

Router1:

Device Name: Router1
Device Model: Router-PT
Hostname: Router

Port	Link	IP Address	IPv6 Address	MAC Address
FastEthernet0/0	Up	13.0.0.1/8	<not set>	0060.700B.5E91
FastEthernet1/0	Down	<not set>	<not set>	0003.E4A6.52A1
Serial2/0	Up	10.0.0.2/8	<not set>	<not set>
Serial3/0	Up	11.0.0.1/8	<not set>	<not set>
FastEthernet4/0	Down	<not set>	<not set>	0001.97B4.EE6A
FastEthernet5/0	Down	<not set>	<not set>	0001.C720.698D













Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router1

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Router2:

Device Name: Router2				
Device Model: Router-PT				
Hostname: Router				
Port	Link	IP Address	IPv6 Address	MAC Address
FastEthernet0/0	Up	14.0.0.1/8	<not set>	0060.3E36.81C6
FastEthernet1/0	Down	<not set>	<not set>	0060.3E94.0468
Serial2/0	Up	11.0.0.2/8	<not set>	<not set>
Serial3/0	Down	<not set>	<not set>	<not set>
FastEthernet4/0	Down	<not set>	<not set>	0040.0B8B.B1B8
FastEthernet5/0	Down	<not set>	<not set>	0060.70B3.A9A3
Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router2				

PDU:

Fire	Last Status	Source	Destination	Type	Color
	Successful	Router0	Router2	ICMP	
	Successful	Router2	Router0	ICMP	
	Successful	Router0	Router1	ICMP	
	Successful	Router1	Router2	ICMP	
	Successful	Router1	Router0	ICMP	
	Successful	Router2	Router1	ICMP	

Switch Configuration:

Switch0:

```
Switch>en
```

```
Switch#config t
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
Switch(config)#int vlan 1
```

```
Switch(config-if)#ip address 12.0.0.2 255.0.0.0
```

```
Switch(config-if)#no shut
```

```
Switch(config-if)#
```

```
%LINK-5-CHANGED: Interface Vlan1, changed state to up
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
```

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DCCN
Engr. Fauzan Saeed

Device Name: Switch0
Device Model: 2950-24
Hostname: Switch

Port	Link	VLAN	IP Address	MAC Address
FastEthernet0/1	Up	1	--	00D0.BACA.E101
FastEthernet0/2	Up	1	--	00D0.BACA.E102
FastEthernet0/3	Up	1	--	00D0.BACA.E103
FastEthernet0/4	Up	1	--	00D0.BACA.E104
FastEthernet0/5	Down	1	--	00D0.BACA.E105
FastEthernet0/6	Down	1	--	00D0.BACA.E106
FastEthernet0/7	Down	1	--	00D0.BACA.E107
FastEthernet0/8	Down	1	--	00D0.BACA.E108
FastEthernet0/9	Down	1	--	00D0.BACA.E109
FastEthernet0/10	Down	1	--	00D0.BACA.E10A
FastEthernet0/11	Down	1	--	00D0.BACA.E10B
FastEthernet0/12	Down	1	--	00D0.BACA.E10C
FastEthernet0/13	Down	1	--	00D0.BACA.E10D
FastEthernet0/14	Down	1	--	00D0.BACA.E10E
FastEthernet0/15	Down	1	--	00D0.BACA.E10F
FastEthernet0/16	Down	1	--	00D0.BACA.E110
FastEthernet0/17	Down	1	--	00D0.BACA.E111
FastEthernet0/18	Down	1	--	00D0.BACA.E112
FastEthernet0/19	Down	1	--	00D0.BACA.E113
FastEthernet0/20	Down	1	--	00D0.BACA.E114
FastEthernet0/21	Down	1	--	00D0.BACA.E115
FastEthernet0/22	Down	1	--	00D0.BACA.E116
FastEthernet0/23	Down	1	--	00D0.BACA.E117
FastEthernet0/24	Down	1	--	00D0.BACA.E118
Vlan1	Up	1	12.0.0.2/8	0007.EC2C.7A12

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Switch0

Server Config:

Using DHCP service to automatically assign IP to associated PCs.

Device Name: Server0
Device Model: Server-PT

Port	Link	IP Address	IPv6 Address	MAC Address
FastEthernet0	Up	12.0.0.3/8	<not set>	0090.0CD5.5C33

Gateway: <not set>
DNS Server: <not set>
Line Number: <not set>

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Server0

PCs:

Device Name: PC0
Device Model: PC-PT

Port	Link	IP Address
FastEthernet0	Up	12.0.0.4/8
Bluetooth	Down	<not set>

Device Name: PC1
Device Model: PC-PT

Port	Link	IP Address
FastEthernet0	Up	12.0.0.5/8
Bluetooth	Down	<not set>

Muhammad Waleed
20bb-115-se
SE-B
DCCN
Engr. Fauzan Saeed

Switch1:

```
Switch>en
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int vlan 1
Switch(config-if)#ip address 13.0.0.1 255.0.0.0
Switch(config-if)#no shut

Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
%IP-4-DUPADDR: Duplicate address 13.0.0.1 on Vlan1, sourced by 0060.700B.5E91
```

```
Switch(config-if)#
Switch(config-if)#ip address 13.0.0.2 255.0.0.0
Switch(config-if)#no shut
```

Device Name: Switch1
Device Model: 2950-24
Hostname: Switch

Port	Link	VLAN	IP Address	MAC Address
FastEthernet0/1	Up	1	--	00E0.8F4C.1401
FastEthernet0/2	Up	1	--	00E0.8F4C.1402
FastEthernet0/3	Up	1	--	00E0.8F4C.1403
FastEthernet0/4	Up	1	--	00E0.8F4C.1404
FastEthernet0/5	Down	1	--	00E0.8F4C.1405
FastEthernet0/6	Down	1	--	00E0.8F4C.1406
FastEthernet0/7	Down	1	--	00E0.8F4C.1407
FastEthernet0/8	Down	1	--	00E0.8F4C.1408
FastEthernet0/9	Down	1	--	00E0.8F4C.1409
FastEthernet0/10	Down	1	--	00E0.8F4C.140A
FastEthernet0/11	Down	1	--	00E0.8F4C.140B
FastEthernet0/12	Down	1	--	00E0.8F4C.140C
FastEthernet0/13	Down	1	--	00E0.8F4C.140D
FastEthernet0/14	Down	1	--	00E0.8F4C.140E
FastEthernet0/15	Down	1	--	00E0.8F4C.140F
FastEthernet0/16	Down	1	--	00E0.8F4C.1410
FastEthernet0/17	Down	1	--	00E0.8F4C.1411
FastEthernet0/18	Down	1	--	00E0.8F4C.1412
FastEthernet0/19	Down	1	--	00E0.8F4C.1413
FastEthernet0/20	Down	1	--	00E0.8F4C.1414
FastEthernet0/21	Down	1	--	00E0.8F4C.1415
FastEthernet0/22	Down	1	--	00E0.8F4C.1416
FastEthernet0/23	Down	1	--	00E0.8F4C.1417
FastEthernet0/24	Down	1	--	00E0.8F4C.1418
Vlan1	Up	1	13.0.0.2/8	00D0.978A.47A1

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Switch1

Server:

Using DHCP for auto assign IP,

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Device Name: Server1
Device Model: Server-PT

Port	Link	IP Address
FastEthernet0	Up	13.0.0.3/8

PCs:

Device Name: PC2
Device Model: PC-PT

Port	Link	IP Address
FastEthernet0	Up	13.0.0.4/8
Bluetooth	Down	<not set>

Device Name: PC3
Device Model: PC-PT

Port	Link	IP Address
FastEthernet0	Up	13.0.0.5/8

Switch2:

```
Switch(config)#int vlan 1
Switch(config-if)#ip address 14.0.0.2 255.0.0.0
Switch(config-if)#no shut
```

```
Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
```


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Device Name: Switch2
Device Model: 2950-24
Hostname: Switch

Port	Link	VLAN	IP Address	MAC Address
FastEthernet0/1	Up	1	--	0002.4A24.E101
FastEthernet0/2	Up	1	--	0002.4A24.E102
FastEthernet0/3	Up	1	--	0002.4A24.E103
FastEthernet0/4	Up	1	--	0002.4A24.E104
FastEthernet0/5	Down	1	--	0002.4A24.E105
FastEthernet0/6	Down	1	--	0002.4A24.E106
FastEthernet0/7	Down	1	--	0002.4A24.E107
FastEthernet0/8	Down	1	--	0002.4A24.E108
FastEthernet0/9	Down	1	--	0002.4A24.E109
FastEthernet0/10	Down	1	--	0002.4A24.E10A
FastEthernet0/11	Down	1	--	0002.4A24.E10B
FastEthernet0/12	Down	1	--	0002.4A24.E10C
FastEthernet0/13	Down	1	--	0002.4A24.E10D
FastEthernet0/14	Down	1	--	0002.4A24.E10E
FastEthernet0/15	Down	1	--	0002.4A24.E10F
FastEthernet0/16	Down	1	--	0002.4A24.E110
FastEthernet0/17	Down	1	--	0002.4A24.E111
FastEthernet0/18	Down	1	--	0002.4A24.E112
FastEthernet0/19	Down	1	--	0002.4A24.E113
FastEthernet0/20	Down	1	--	0002.4A24.E114
FastEthernet0/21	Down	1	--	0002.4A24.E115
FastEthernet0/22	Down	1	--	0002.4A24.E116
FastEthernet0/23	Down	1	--	0002.4A24.E117
FastEthernet0/24	Down	1	--	0002.4A24.E118
Vlan1	Up	1	14.0.0.2/8	000D.BD9B.2D91

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Switch2

Server:

Using DHCP to auto assign IP

Device Name: Server2
Device Model: Server-PT

Port	Link	IP Address
FastEthernet0	Up	14.0.0.3/8

PCs:

Device Name: PC4
Device Model: PC-PT






Port	Link	IP Address
FastEthernet0	Up	14.0.0.4/8
Bluetooth	Down	<not set>

Device Name: PC5
Device Model: PC-PT

Port	Link	IP Address
FastEthernet0	Up	14.0.0.5/8

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Connectivity Test:

Fire	Last Status	Source	Destination	Type	Color
	Successful	PC0	PC1	ICMP	
	Successful	PC2	PC3	ICMP	
	Successful	PC4	PC5	ICMP	