Lab Report

Course Code: CSE 314

Course Name: Computer Networks Lab

Experiment No: 02

Experiment name : Configuring multiple static router connection

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Section: 60_B

Title: Configuring multiple static router connection

Equipment:

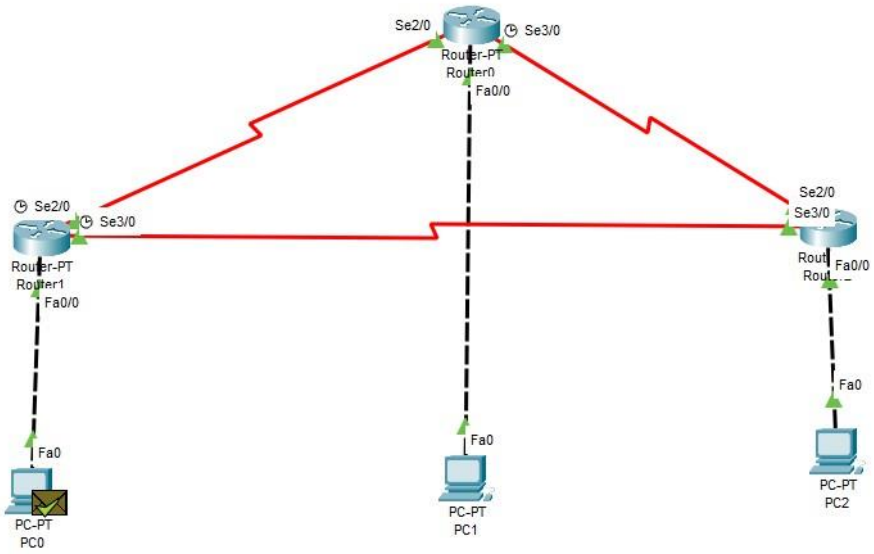
End device – 3 pc

Connecting device – 3 (3 router)

Connection type – copper cross (router to pc),

serial DCE (router to router)

Topology:



Configuration:

PC –

PC	IP	Subnet Mask	Gateway
0	200.200.200.130	255.255.255.128	200.200.200.129
1	201.201.201.194	255.255.255.192	201.201.201.193
2	150.150.148.2	255.255.252.0	150.150.148.1

Right –

Router	Port	IP	Subnet
1	S2/0	10.0.0.1	255.192.0.0
	S3/0	12.0.0.1	255.240.0.0
0	S2/0	10.0.0.2	255.192.0.0
	S3/0	11.0.0.1	255.224.0.0
2	S2/0	12.0.0.2	255.240.0.0
	S3/0	11.0.0.2	255.224.0.0

Command Line Interface (router):

IP Adding:

Router -01:

```
Router>en
Router#config t
Router(config)#int f0/0
Router(config-if)#ip add 200.200.200.129 255.255.255.128
Router(config-if)#no shut
Router(config-if)#
Router(config-if)#exit

Router(config)#int s2/0
Router(config-if)#ip add 10.0.0.1 255.192.0.0
```

```
Router(config-if)#no shut
Router(config-if)#clock rate 64000
Router(config-if)#exit

Router(config)#int s3/0
Router(config-if)#ip add 12.0.0.1 255.240.0.0
Router(config-if)#no shut
Router(config-if)#clock rate 64000
Router(config-if)#exit
Router(config)#exit

Router#
Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
```

Router-02:

```
Router>en
Router#config t
Router(config)#int s2/0
Router(config-if)#ip add 10.0.0.2 255.192.0.0
Router(config-if)#no shut
Router(config-if)#
Router(config-if)#exit
Router(config)#int f0/0
Router(config-if)#ip add 201.201.201.193 255.255.255.192
Router(config-if)#no shut
Router(config-if)#exit

Router(config)#int s3/0
Router(config-if)#ip add 11.0.0.1 255.224.0.0
Router(config-if)#no shut
Router(config-if)#clock rate 64000
Router(config-if)#exit
Router(config)#exit
Router#
```

```
Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
Router#
```

Router-03:

```
Router>en
Router#config t
Router(config)#int f0/0
Router(config-if)#ip add 150.150.148.1 255.255.252.0
Router(config-if)#no shut
Router(config-if)#
Router(config-if)#exit

Router(config)#int s2/0
Router(config-if)#ip add 11.0.0.2 255.224.0.0
Router(config-if)#no shut
Router(config-if)#
Router(config-if)#exit

Router(config)#int
Router(config)#int s3/0
Router(config-if)#ip add 12.0.0.2 255.240.0.0
Router(config-if)#no shut

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

Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
```

Routing

Router -01:

```
Router>en
Router#config t
Router(config)#ip route 200.200.200.128 255.255.255.128 10.0.0.2
Router(config)#ip route 150.150.148.0 255.255.252.0 12.0.0.2
Router(config)#exit
Router#

Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
```

Router-02:

```
Router>en
Router#config t
Router(config)#ip route 200.200.200.128 255.255.255.128 10.0.0.1
Router(config)#ip route 150.150.148.0 255.255.252.0 11.0.0.2
Router(config)#exit
Router#


Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
```

Router-03:

```
Router>en
Router#config t
Router(config)#ip route 200.200.200.128 255.255.255.128 12.0.0.1
Router(config)#ip route 201.201.201.192 255.255.255.192 11.0.0.1
Router(config)#exit
```

Router#

Router#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Router#

Result:

Pc0 to Pc2:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 150.150.148.2

Pinging 150.150.148.2 with 32 bytes of data:

Reply from 150.150.148.2: bytes=32 time=16ms TTL=126
Reply from 150.150.148.2: bytes=32 time=1ms TTL=126
Reply from 150.150.148.2: bytes=32 time=15ms TTL=126
Reply from 150.150.148.2: bytes=32 time=15ms TTL=126

Ping statistics for 150.150.148.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 16ms, Average = 11ms

C:\>
```

PC2 to PC1:

```
C:\>ping 201.201.201.194

Pinging 201.201.201.194 with 32 bytes of data:

Reply from 201.201.201.194: bytes=32 time=14ms TTL=126
Reply from 201.201.201.194: bytes=32 time=13ms TTL=126
Reply from 201.201.201.194: bytes=32 time=15ms TTL=126
Reply from 201.201.201.194: bytes=32 time=3ms TTL=126

Ping statistics for 201.201.201.194:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 3ms, Maximum = 15ms, Average = 11ms

C:\>
```

Comment:

1. In this Lab we learned how to configure a router to pc
2. We also learned how to configure between two routers
3. We also learned how to configure static routing path

This experiment will help us understanding how static routing works and how to optimize it