ACTIVITY 5

WORKSHOP WEEK 5 – DEFAULT STATIC ROUTE CONFIGURATION

INTRODUCTION

In this week's workshop, the goal was to configure default static routes on multiple routers using Cisco Packet Tracer. A default static route is essential for directing traffic to a default destination when no specific route to the target network is found in the routing table. This setup is particularly useful for managing traffic to larger networks like the Internet, where a complete routing table is impractical. Through this activity, I gained hands-on experience in setting up these routes and verifying their functionality within a simulated network environment.

NETWORK CONFIGURATION

Network Topology:

The network consisted of five routers connected via various interfaces

Router0 was connected to Router1 using FastEthernet0/0.

Router1 was further connected to Router2 using FastEthernet0/1.

Router2 was linked to Router3 and Router4 through Serial1/0 and Serial1/1 interfaces.

IP Addressing:

Each router was assigned IP addresses based on the provided network layout

Router0, Router1, Router2, Router3, and Router4 were all assigned specific IP addresses to enable proper communication.

Configuration Tasks:

IP Address Assignment:

I started by configuring the IP addresses on all routers. Using the CLI interface, I entered the necessary commands to set IP addresses for each router's interfaces. This step was crucial for establishing connectivity between the routers.

Default Route Configuration:

Router0 and Router1: I configured default routes on Router0 and Router1 to ensure they could route traffic to the 192.168.3.0/24 and 192.168.4.0/24 networks. This was done by using the ip route command to specify the next-hop addresses or exit interfaces.

Router2: I set up a default route on Router2 to handle traffic to the 192.168.1.0/24 network.

Router3 and Router4: I configured default routes on these routers to enable them to route traffic to the 192.168.1.0/24 and 192.168.2.0/24 networks.

During this process, I made sure that all interfaces were in the UP state to ensure proper routing functionality.

Network Testing:

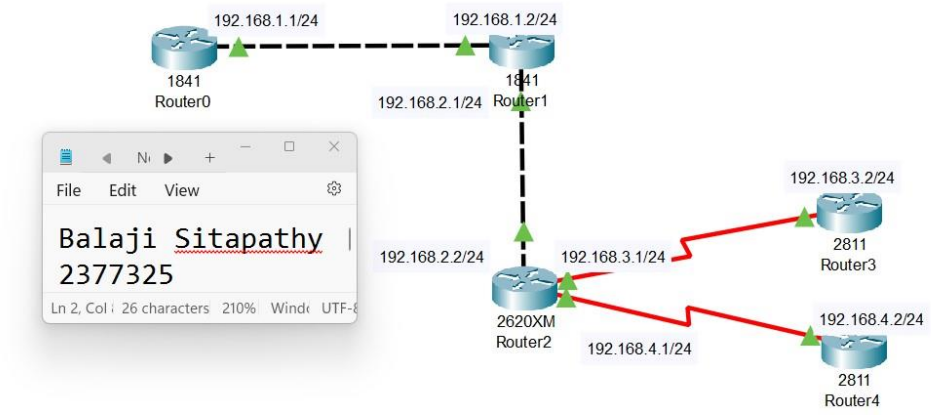
To verify that the network configuration was correct, I conducted a ping test from Router0 to Router4. This test was crucial in confirming that traffic could successfully traverse the network based on the configured static routes.

I encountered some delays initially, likely due to Packet Tracer's simulation latency, but re-running the ping command typically resolved these issues.

RESULTS

Network Configuration:

I captured screenshots showing the completed network configuration. These screenshots illustrate that all routers were correctly set up with IP addresses and default routes.



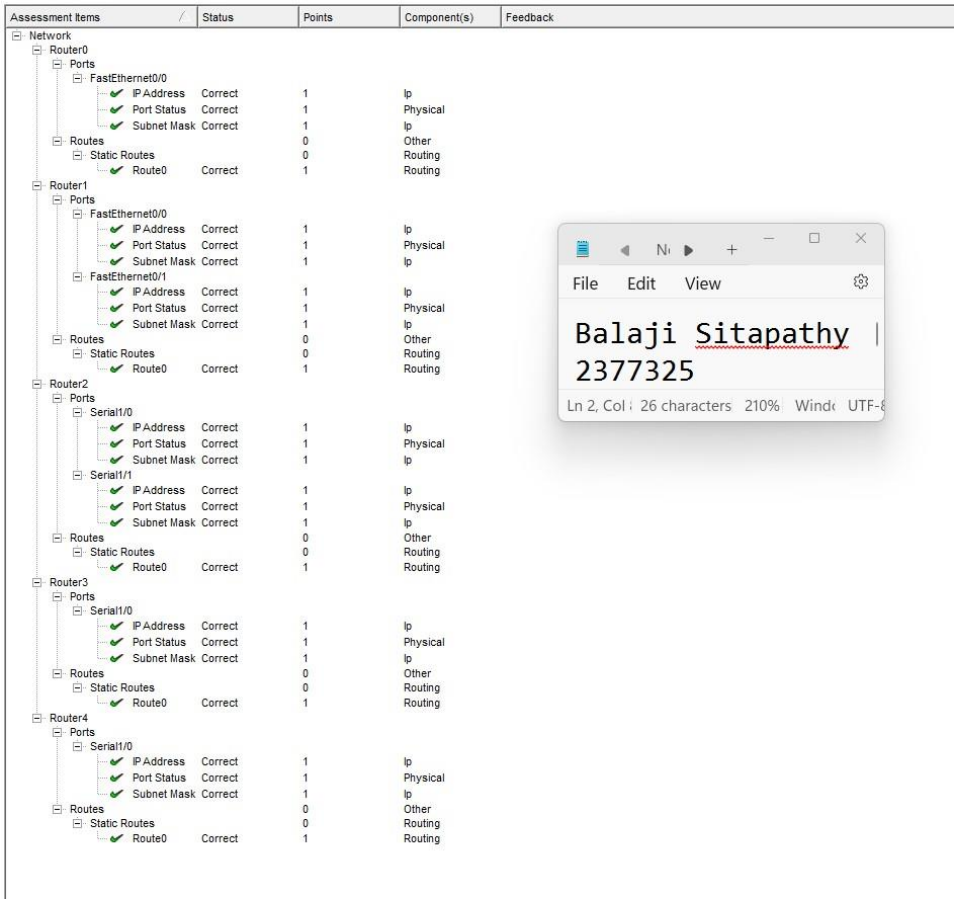
Ping Test:

I successfully pinged Router4 from Router0, with a 100% success rate. The ping test results confirmed that the default routes were working as intended and that network connectivity was properly established.

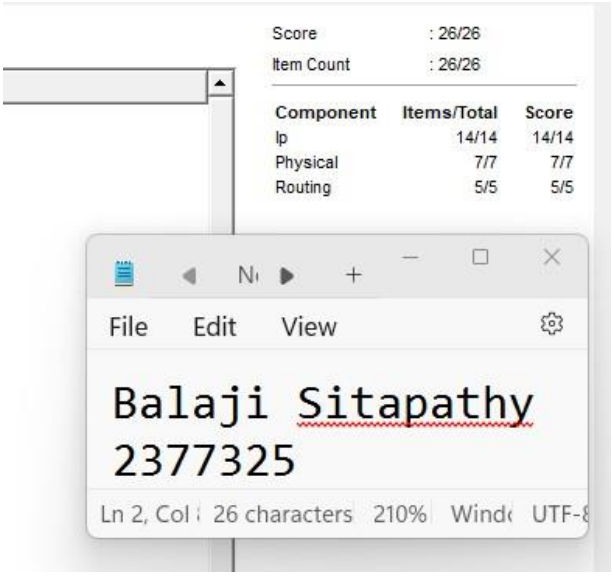
```
Router>ping 192.168.4.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.4.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/16/48 ms

Router>Balaji Sitapathy 2377325
```

Assessment Items:

I took screenshots of the assessment results, showing that all configuration tasks were completed successfully. These included the status of assessment items and overall test results, with my name and student number clearly visible.



Assessment Items	Status	Points	Component(s)	Feedback
Network				
Router0				
Ports				
FastEthernet0/0				
IP Address	Correct	1	Ip	
Port Status	Correct	1	Physical	
Subnet Mask	Correct	1	Ip	
Routes		0	Other	
Static Routes		0	Routing	
Route0	Correct	1	Routing	
Router1				
Ports				
FastEthernet0/0				
IP Address	Correct	1	Ip	
Port Status	Correct	1	Physical	
Subnet Mask	Correct	1	Ip	
FastEthernet0/1				
IP Address	Correct	1	Ip	
Port Status	Correct	1	Physical	
Subnet Mask	Correct	1	Ip	
Routes		0	Other	
Static Routes		0	Routing	
Route0	Correct	1	Routing	
Router2				
Ports				
Serial1/0				
IP Address	Correct	1	Ip	
Port Status	Correct	1	Physical	
Subnet Mask	Correct	1	Ip	
Serial1/1				
IP Address	Correct	1	Ip	
Port Status	Correct	1	Physical	
Subnet Mask	Correct	1	Ip	
Routes		0	Other	
Static Routes		0	Routing	
Route0	Correct	1	Routing	
Router3				
Ports				
Serial1/0				
IP Address	Correct	1	Ip	
Port Status	Correct	1	Physical	
Subnet Mask	Correct	1	Ip	
Routes		0	Other	
Static Routes		0	Routing	
Route0	Correct	1	Routing	
Router4				
Ports				
Serial1/0				
IP Address	Correct	1	Ip	
Port Status	Correct	1	Physical	
Subnet Mask	Correct	1	Ip	
Routes		0	Other	
Static Routes		0	Routing	
Route0	Correct	1	Routing	



CONCLUSION

The activity provided valuable learning experience in configuring default static routes and managing network traffic. By setting up default routes on multiple routers, I ensured that the network could effectively handle traffic even when specific routes were not available. This exercise enhanced my understanding of routing principles and network configuration