**Liberty University**

**CSIS 331**

**Lab 8 Answer Sheet**

* + 1. What address did the command return for **b2server**?

128.107.64.254

* + 1. What is different about the **traceroute** command on the router compared to **tracert** on the PC?

When I use traceroute command on router it uses only four hobs while in tracet commant uses five hobs including add of R4 G 0/0 which is not used while using traceroute.

* + 1. What is the significance of **R4** to **Sales**?

R4 is default gateway for device sales.

* + 1. Based on the output of the command, which interface is used to reach the next device in the list output from the **tracert** command?

G 0/0

* + 1. What is the name of the device to which you are connected?

Tier3a

* + 1. Referring to the list of codes at the beginning of the output, what are the different types of routes displayed in the routing table?

Tier3a#show ip route

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP

i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area

\* - candidate default, U - per-user static route, o - ODR

P - periodic downloaded static route

Gateway of last resort is 64.100.100.1 to network 0.0.0.0

64.0.0.0/8 is variably subnetted, 13 subnets, 3 masks

D 64.100.8.0/24 [90/5376] via 64.104.222.2, 00:30:47, GigabitEthernet0/0

C 64.100.100.0/30 is directly connected, Serial0/0/0

C 64.100.100.1/32 is directly connected, Serial0/0/0

L 64.100.100.2/32 is directly connected, Serial0/0/0

C 64.100.150.0/30 is directly connected, Serial0/1/0

C 64.100.150.1/32 is directly connected, Serial0/1/0

L 64.100.150.2/32 is directly connected, Serial0/1/0

S 64.100.200.0/30 is directly connected, Serial0/1/0

C 64.104.222.0/30 is directly connected, GigabitEthernet0/0

L 64.104.222.1/32 is directly connected, GigabitEthernet0/0

D 64.104.222.4/30 [90/28416] via 64.104.222.2, 00:30:47, GigabitEthernet0/0

C 64.104.223.0/30 is directly connected, GigabitEthernet0/1

L 64.104.223.1/32 is directly connected, GigabitEthernet0/1

D 128.107.0.0/16 [90/28416] via 64.104.222.2, 00:30:47, GigabitEthernet0/0

S\* 0.0.0.0/0 [1/0] via 64.100.100.1

* + 1. Based on the **show ip route** command output, which interface is the exit interface for the next IP address listed in your original **tracert** output?

G 0/1

* + 1. What is the hostname of the current device?

ISP-Tier3b

* + 1. What networks are connected directly to this router?

ISP-Tier3b#show ip route

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP

i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area

\* - candidate default, U - per-user static route, o - ODR

P - periodic downloaded static route

Gateway of last resort is 64.104.222.1 to network 0.0.0.0

64.0.0.0/8 is variably subnetted, 8 subnets, 3 masks

D 64.0.0.0/8 is a summary, 00:44:12, Null0

C 64.100.8.0/24 is directly connected, GigabitEthernet0/2

D 64.100.100.0/30 [90/2170112] via 64.104.222.1, 00:41:31, GigabitEthernet0/1

D 64.100.150.0/30 [90/2170112] via 64.104.222.1, 00:44:09, GigabitEthernet0/1

D EX 64.100.200.0/30 [170/6778112] via 64.104.222.1, 00:44:09, GigabitEthernet0/1

C 64.104.222.0/30 is directly connected, GigabitEthernet0/1

C 64.104.222.4/30 is directly connected, FastEthernet0/2

D 64.104.223.0/30 [90/3072] via 64.104.222.1, 00:44:11, GigabitEthernet0/1

128.107.0.0/16 is variably subnetted, 3 subnets, 2 masks

D 128.107.0.0/16 is a summary, 00:44:12, Null0

C 128.107.46.0/24 is directly connected, FastEthernet0/1

* + 1. Which interfaces connect the devices between trace route 2 and trace route 3?

G 0/0 and G 0/1

* + 1. Telnet to the fourth IP address in the **tracert** list and log in. What is the name of the device?

B2-R1

* + 1. Which command(s) did you use?

show cdp neighbors detail

1. Complete the Addressing Table in Yellow

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Trace Route ID | Device | Interface | Address | Subnet Mask |
| - | Sales | NIC | 172.16.0.11 (DHCP) | 255.255.255.0 |
| 1 | R4 | G 0/0 | 172.16.0.1 | 255.255.255.0 |
| Serial0/0/0 | 64.100.150.1 | 255.255.255.252 |
| S0/0/1.1 | 64.100.200.1 | 255.255.255.252 |
| 2 | Tier3a | GigabitEthernet0/0 | 64.104.222.1 | 255.255.255.252 |
| G0/1 | 64.104.223.1 | 255.255.255.252 |
| S0/0/0 | 64.100.100.2 | 255.255.255.252 |
| Serial0/1/0 | 64.100.150.2 | 255.255.255.252 |
| 3 | ISP-Tier3b | GigabitEthernet0/1 | 64.104.222.2 | 255.255.255.252 |
| G0/2 | 64.100.8.1 | 255.255.255.0 |
| F0/1 | 128.107.46.1 | 255.255.255.0 |
| FastEthernet0/2 | 64.104.222.5 | 255.255.255.252 |
| 4 | B2-R1 | G0/0 | 64.104.222.6 | 255.255.255.252 |
| GigabitEthernet0/1 | 128.107.64.1 | 255.255.255.0 |
| 5 | b2server.pt.pka | NIC | 128.107.64.254 | 255.255.255.0 |

Branch2Topology

Use the space below to draw the topology for the new branch location. Use Insert-> Shapes and Insert-> Text Boxes. Right click the shapes to edit, bring forward. When you are complete you should have 4 Networking Devices and 1 Endpoint. There should be lines connecting to each device. Each device should show the host name. Show the full subnets addresses and CIDR.

G 0/0

F 0/2

ISP-Tier3b

G 0/1

G 0/0

S 0/1/0

S 0/0/0

G 0/0

Tier3a

R4

B2-R1

Switch

Branch2

ISP