Liberty University

CSIS331

Lab 3 Answer Sheet

**Submit this completed document with your completed and saved packet tracer in the link provided in Blackboard.**

**Part 1: Questions.**

**Step 1:**

a. Which command displays the statistics for all interfaces configured on a router?

show interfaces

b. Which command displays the information about the Serial 0/0/0 interface only?

show interface serial 0/0/0

c. 1) What is the IP address configured on R1?

209.165.200.225/30

c. 2) What is the bandwidth on the Serial 0/0/0 interface?

BW 1544 Kbit

d. 1) What is the IP address on R1?

There is no IP address configured on the GigabitEthernet 0/0 interface

d. 2) What is the MAC address of the GigabitEthernet 0/0 interface?

000d.bd6c.7d01

d. 3) What is the bandwidth on the GigabitEthernet 0/0 interface?

BW 1000000 Kbit

**Step 2. Questions.**

a. Which command displays a brief summary of the current interfaces, statuses, and IP addresses assigned to them?

show ip interface brief

b. 1) How many serial interfaces are there on R1 and R2?

Each router has 2 interfaces

b. 2) How many Ethernet interfaces are there on R1 and R2?

R1 has 6 Ethernet interfaces and R2 has 2 Ethernet interfaces

b. 3) Are all the Ethernet interfaces on R1 the same? If no, explain the difference(s).

No all the Ethernet interfaces on R1 are not same. There are 2 GigabitEthernet interfaces and 4 Fast Ethernet interfaces. GigabitEthernet interfaces support speed up to 1,000,000,000 bits and Fast Ethernetsupportspeed up to 100,00,000

**Step 3: Display the routing table on R1.**

a. What command displays the content of the routing table?

show ip route

b. 1) How many connected routes are there (uses the C code)?

1

b. 2) Which route is listed?

209.165.200.224/30

b. 3) How does a router handle a packet destined for a network that is not listed in the routing table?

A router only sends packets to network listed in routing table. Packet will be dropped if a network is not listed in table

**Part 2 Step 3**

a. What command did you use?

copy running startup

**Part 3 Step 1**

a. 1) How many interfaces on R1 and R2 are configured with IP addresses and in the “up” and “up” state?

3 interfaces on each router are configured with IP address and in “up” state

a. 2) What part of the interface configuration is NOT displayed in the command output?

The subnet mask is not displayed in command output

a. 3) What commands can you use to verify this part of the configuration?

show run

show interfaces

Show ip protocols

b. 1) How many connected routes (uses the C code) do you see on each router?

There are 3 connected routes that uses the C code

b. 2) How many EIGRP routes (uses the D code) do you see on each router?

There are 2 EIGRP routes that uses the D code

b. 3) If the router knows all the routes in the network, then the number of connected routes and dynamically learned routes (EIGRP) should equal the total number of LANs and WANs. How many LANs and WANs are in the topology?

5

b. 4) Does this number match the number of C and D routes shown in the routing table?

Yes

Ping Table:

|  |  |  |
| --- | --- | --- |
| **Ping From Device IP** | **Ping to Device IP** | **Results** |
| PC1 | PC4 | Pinging 10.1.1.10 with 32 bytes of data:  Reply from 10.1.1.10: bytes=32 time=2ms TTL=126  Reply from 10.1.1.10: bytes=32 time=16ms TTL=126  Reply from 10.1.1.10: bytes=32 time=21ms TTL=126  Reply from 10.1.1.10: bytes=32 time=1ms TTL=126  Ping statistics for 10.1.1.10:  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  Approximate round trip times in milli-seconds:  Minimum = 1ms, Maximum = 21ms, Average = 10ms |
| R2 | PC2 | R2#ping 192.168.11.10  Type escape sequence to abort.  Sending 5, 100-byte ICMP Echos to 192.168.11.10, timeout is 2 seconds:  !!!!!  Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms |