**Liberty University**

**CSIS 331**

**Lab 10 Answer Sheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **Ping From Device** | **Ping to Device IP** | **Possible Y/N** | **Why?** |
| PC-A | PC-B | N | Because we donot advertise G 0/1 |
| PC-A | PC-C | N | Address not in table |
| PC-C | PC-B | N | Address not in table |
| PC-C | PC-A | N | Address not in table |
|  |  |  |  |

1. When issuing the debug ip rip command on R2, what information is provided that confirms RIPv2 is running?

It gives us sending and receiving updates. That means v2 is working

1. When issuing the show run command on R3, what information is provided that confirms RIPv2 is running?

Router rip information and passive interface is provided.

1. Use the debug ip rip command on R2 to determine the routes received in the RIP updates from R3 and list them here.
   1. R2#debug ip rip
   2. RIP protocol debugging is on
   3. R2#RIP: received v2 update from 10.2.2.1 on Serial0/0/1
   4. 172.30.0.0/16 via 0.0.0.0 in 1 hops
   5. R2#RIP: received v2 update from 10.1.1.1 on Serial0/0/0
   6. 172.30.0.0/16 via 0.0.0.0 in 1 hops
   7. R2#RIP: sending v2 update to 224.0.0.9 via Serial0/0/0 (10.1.1.2)
   8. RIP: build update entries
   9. 10.2.2.0/30 via 0.0.0.0, metric 1, tag 0
   10. RIP: sending v2 update to 224.0.0.9 via Serial0/0/1 (10.2.2.2)
   11. RIP: build update entries
   12. 10.1.1.0/30 via 0.0.0.0, metric 1, tag 0
2. What is the route in the RIP updates that is received from R3?

172.30.0.0

1. Are the subnet masks included in the routing updates? \_Y\_ Yes / \_\_ No
2. How can you tell from the routing table that the subnetted network shared by R1 and R3 has a pathway for Internet traffic?

There is gateway of last resort and default route is also given

1. How is the pathway for Internet traffic provided in its routing table?

0.0.0.0/0 [1/0] via 209.165.201.2

8. Were the pings successful? Y\_\_ Yes / \_\_ No

9. Were the pings successful?\_Y\_ \_\_ Yes / \_\_ No

Reflection Questions 1: Why would you turn off automatic summarization for RIPv2?

Because once we turn off the automatic summarize, routers will not summarize routes at major class full network boundaries

Reflection Questions 2:How did R1 and R3learn the pathway to the Internet?

Using routing pdates

Copy and Paste R1 show run Output:

R1#show running-config

Building configuration...

Current configuration : 1169 bytes

!

version 15.1

no service timestamps log datetime msec

no service timestamps debug datetime msec

service password-encryption

!

hostname R1

!

!

!

enable secret 5 $1$mERr$9cTjUIEqNGurQiFU.ZeCi1

!

!

!

!

!

!

no ip cef

no ipv6 cef

!

!

!

!

license udi pid CISCO1941/K9 sn FTX1524CYZ0-

!

!

!

!

!

!

!

!

!

no ip domain-lookup

!

!

spanning-tree mode pvst

!

!

!

!

!

!

interface GigabitEthernet0/0

no ip address

duplex auto

speed auto

shutdown

!

interface GigabitEthernet0/1

description 172.30.10.1

ip address 172.30.10.1 255.255.255.0

duplex auto

speed auto

!

interface Serial0/0/0

description 10.1.1.1

ip address 10.1.1.1 255.255.255.252

clock rate 2000000

!

interface Serial0/0/1

no ip address

clock rate 2000000

shutdown

!

interface Vlan1

no ip address

shutdown

!

router rip

version 2

passive-interface GigabitEthernet0/1

network 10.0.0.0

network 172.30.0.0

no auto-summary

!

ip classless

!

ip flow-export version 9

!

!

!

banner motd ^C Unauthorized access is prohibited ^C

!

!

!

!

!

line con 0

password 7 0822455D0A16

logging synchronous

!

line aux 0

!

line vty 0 4

password 7 0822455D0A16

login

line vty 5 15

password 7 0822455D0A16

login

!

!

!

end

Copy and Paste R2 show run Output:

R2#show running-config

Building configuration...

Current configuration : 1207 bytes

!

version 15.1

no service timestamps log datetime msec

no service timestamps debug datetime msec

service password-encryption

!

hostname R2

!

!

!

enable secret 5 $1$mERr$9cTjUIEqNGurQiFU.ZeCi1

!

!

!

!

!

!

no ip cef

no ipv6 cef

!

!

!

!

license udi pid CISCO1941/K9 sn FTX1524A8QH-

!

!

!

!

!

!

!

!

!

no ip domain-lookup

!

!

spanning-tree mode pvst

!

!

!

!

!

!

interface GigabitEthernet0/0

description 209.165.201.1

ip address 209.165.201.1 255.255.255.0

duplex auto

speed auto

!

interface GigabitEthernet0/1

no ip address

duplex auto

speed auto

shutdown

!

interface Serial0/0/0

description 10.1.1.2

ip address 10.1.1.2 255.255.255.252

!

interface Serial0/0/1

description 10.2.2.2

ip address 10.2.2.2 255.255.255.252

clock rate 2000000

!

interface Vlan1

no ip address

shutdown

!

router rip

version 2

network 10.0.0.0

default-information originate

no auto-summary

!

ip classless

ip route 0.0.0.0 0.0.0.0 209.165.201.2

!

ip flow-export version 9

!

!

!

banner motd ^C Unauthorized acced is prohibited$

^C

!

!

!

!

!

line con 0

password 7 0822455D0A16

logging synchronous

login

!

line aux 0

!

line vty 0 4

password 7 0822455D0A16

login

line vty 5 15

password 7 0822455D0A16

login

!

!

!

end

R2# RIP: received v2 update from 10.1.1.1 on Serial0/0/0

172.30.10.0/24 via 0.0.0.0 in 1 hops

R2# RIP: sending v2 update to 224.0.0.9 via Serial0/0/1 (10.2.2.2)

RIP: build update entries

0.0.0.0/0 via 0.0.0.0, metric 1, tag 0

10.1.1.0/30 via 0.0.0.0, metric 1, tag 0

172.30.10.0/24 via 0.0.0.0, metric 2, tag 0

RIP: sending v2 update to 224.0.0.9 via Serial0/0/0 (10.1.1.2)

RIP: build update entries

0.0.0.0/0 via 0.0.0.0, metric 1, tag 0

10.2.2.0/30 via 0.0.0.0, metric 1, tag 0

172.30.30.0/24 via 0.0.0.0, metric 2, tag 0

R2# RIP: received v2 update from 10.2.2.1 on Serial0/0/1

172.30.30.0/24 via 0.0.0.0 in 1 hops

R2#

Copy and Paste R3 show run Output:

R3#show running-config

Building configuration...

Current configuration : 1154 bytes

!

version 15.1

no service timestamps log datetime msec

no service timestamps debug datetime msec

service password-encryption

!

hostname R3

!

!

!

enable secret 5 $1$mERr$9cTjUIEqNGurQiFU.ZeCi1

!

!

!

!

!

!

no ip cef

no ipv6 cef

!

!

!

!

license udi pid CISCO1941/K9 sn FTX1524UE46-

!

!

!

!

!

!

!

!

!

no ip domain-lookup

!

!

spanning-tree mode pvst

!

!

!

!

!

!

interface GigabitEthernet0/0

no ip address

duplex auto

speed auto

shutdown

!

interface GigabitEthernet0/1

description 172.30.30.1

ip address 172.30.30.1 255.255.255.0

duplex auto

speed auto

!

interface Serial0/0/0

no ip address

clock rate 2000000

shutdown

!

interface Serial0/0/1

description 10.2.2.1

ip address 10.2.2.1 255.255.255.252

!

interface Vlan1

no ip address

shutdown

!

router rip

version 2

passive-interface GigabitEthernet0/1

network 10.0.0.0

network 172.30.0.0

no auto-summary

!

ip classless

!

ip flow-export version 9

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