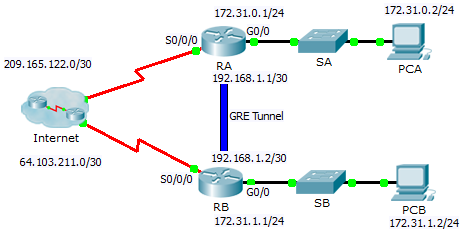
Packet Tracer – Troubleshooting GRE(Instructor Version)

**Instructor Note**: Red font color or gray highlights indicate text that appears in the instructor copy only.

1. Topology



1. Addressing Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Device | Interface | IP Address | Subnet Mask | Default Gateway |
| RA | G0/0 | 172.31.0.1 | 255.255.255.0 | N/A |
| S0/0/0 | 209.165.122.2 | 255.255.255.252 | N/A |
| Tunnel 0 | 192.168.1.1 | 255.255.255.252 | N/A |
| RB | G0/0 | 172.31.1.1 | 255.255.255.0 | N/A |
| S0/0/0 | 64.103.211.2 | 255.255.255.252 | N/A |
| Tunnel 0 | 192.168.1.2 | 255.255.255.252 | N/A |
| PC-A | NIC | 172.31.0.2 | 255.255.255.0 | 172.31.0.1 |
| PC-C | NIC | 172.31.1.2 | 255.255.255.0 | 172.31.1.1 |

1. Objectives

* Find and Correct All Network Errors
* Verify Connectivity

1. Scenario

A junior network administrator was hired to set up a GRE tunnel between two sites and was unable to complete the task. You have been asked to correct configuration errors in the company network.

1. Find and Correct All Network Errors.

|  |  |  |
| --- | --- | --- |
| Device | Error | Correction |
| RA | G0/0 IP interface and subnet mask is not correct. Tunnel address must be removed to prevent overlap error. | interface Tunnel 0  no ip address  interface g0/0  ip address 172.31.0.1 255.255.255.0 |
| RA | T0 IP address is not correct. | interface Tunnel 0  ip address 192.168.1.1 255.255.255.252 |
| RA | Static route is not correct. | no ip route 172.31.1.0 255.255.255.0 64.103.211.2  ip route 172.31.1.0 255.255.255.0 192.168.1.2 |
| RB | Tunnel destination address is not correct. | tunnel destination 209.165.122.2 |
| RB | Tunnel source port is not correct. | tunnel source Serial0/0/0 |

1. Verify Connectivity
   1. Ping PCA from PCB.

Attempt to ping the IP address of **PCA** from **PCB**. The ping should be successful.

* 1. Trace the path from PCA to PCB.

Attempt to trace the path from **PCA** to **PCB**. Note the lack of public IP addresses in the output.

1. Device Configs
2. Router RA

no service timestamps log datetime msec

no service timestamps debug datetime msec

no service password-encryption

hostname RA

interface Tunnel0

ip address 192.168.1.1 255.255.255.252

tunnel source Serial0/0/0

tunnel destination 64.103.211.2

tunnel mode gre ip

interface GigabitEthernet0/0

ip address 172.31.0.1 255.255.255.0

duplex auto

speed auto

interface GigabitEthernet0/1

no ip address

duplex auto

speed auto

shutdown

interface GigabitEthernet0/2

no ip address

duplex auto

speed auto

shutdown

interface Serial0/0/0

ip address 209.165.122.2 255.255.255.252

interface Serial0/0/1

no ip address

shutdown

interface Vlan1

no ip address

shutdown

ip classless

ip route 0.0.0.0 0.0.0.0 Serial0/0/0

ip route 172.31.1.0 255.255.255.0 192.168.1.2

line con 0

line aux 0

line vty 0 4

login

end

1. Router RB

no service timestamps log datetime msec

no service timestamps debug datetime msec

no service password-encryption

hostname RB

interface Tunnel0

ip address 192.168.1.2 255.255.255.252

tunnel source Serial0/0/0

tunnel destination 209.165.122.2

tunnel mode gre ip

interface GigabitEthernet0/0

ip address 172.31.1.1 255.255.255.0

duplex auto

speed auto

interface GigabitEthernet0/1

no ip address

duplex auto

speed auto

shutdown

interface GigabitEthernet0/2

no ip address

duplex auto

speed auto

shutdown

interface Serial0/0/0

ip address 64.103.211.2 255.255.255.252

interface Serial0/0/1

no ip address

shutdown

interface Vlan1

no ip address

shutdown

ip classless

ip route 0.0.0.0 0.0.0.0 Serial0/0/0

ip route 172.31.0.0 255.255.255.0 192.168.1.1

line con 0

line aux 0

line vty 0 4

login

end