Packet Tracer - Configure GRE (Instructor Version)

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

Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
RA	G0/0	192.168.1.1	255.255.255.0	N/A
	S0/0/0	64.103.211.2	255.255.255.252	
	Tunnel 0	10.10.10.1	255.255.255.252	
RB	G0/0	192.168.2.1	255.255.255.0	N/A
	S0/0/0	209.165.122.2	255.255.255.252	
	Tunnel 0	10.10.10.2	255.255.255.252	
PCA	NIC	192.168.1.2	255.255.255.0	192.168.1.1
PCB	NIC	192.168.2.2	255.255.255.0	192.168.2.1

Objectives

Part 1: Verify Router Connectivity

Part 2: Configure GRE Tunnels

Part 3: Verify PC Connectivity

Scenario

You are the network administrator for a company which wants to set up a GRE tunnel to a remote office. Both networks are locally configured. You need configure the tunnel and static routes.

Instructions

Part 1: Verify Router Connectivity

Step 1: Ping RA from RB.

a. Use the **show ip interface brief** command on **RA** to determine the IP address of the S0/0/0 port.

b. From **RB** ping the IP S0/0/0 address of **RA.**

Step 2: Ping PCA from PCB.

Attempt to ping the IP address of **PCA** from **PCB**. We will repeat this test after configuring the GRE tunnel. What were the ping results? Explain.

The pings failed because there is no route to the destination.

Part 2: Configure GRE Tunnels

Step 1: Configure the Tunnel 0 interface of RA.

a. Enter into the configuration mode for **RA** Tunnel 0.

```
RA(config)# interface tunnel 0
```

b. Set the IP address as indicated in the Addressing Table.

```
RA(config-if)# ip address 10.10.10.1 255.255.255.252
```

c. Set the source and destination for the endpoints of Tunnel 0.

```
RA(config-if)# tunnel source s0/0/0
RA(config-if)# tunnel destination 209.165.122.2
```

d. Configure Tunnel 0 to convey IP traffic over GRE.

```
RA(config-if)# tunnel mode gre ip
```

e. The Tunnel 0 interface should already be active. In the event that it is not, treat it like any other interface.

```
RA(config-if)# no shutdown
```

Step 2: Configure the Tunnel 0 interface of RB.

Repeat Steps 1a – e with **RB**. Be sure to change the IP addressing as appropriate.

```
RB(config)# interface tunnel 0
RB(config-if)# ip address 10.10.10.2 255.255.255.252
RB(config-if)# tunnel source s0/0/0
RB(config-if)# tunnel destination 64.103.211.2
RB(config-if)# tunnel mode gre ip
RB(config-if)# no shutdown
```

Step 3: Configure a route for private IP traffic.

Establish a route between the 192.168.X.X networks using the 10.10.10.0/30 network as the destination.

```
RA(config)# ip route 192.168.2.0 255.255.255.0 10.10.10.2
RB(config)# ip route 192.168.1.0 255.255.255.0 10.10.10.1
```

Part 3: Verify Router Connectivity

Step 1: Ping PCA from PCB.

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

Step 2: 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.

Device Configs

Router RA

```
enable
configure terminal
interface Tunnel0
```

```
 ip address 10.10.10.1 255.255.255.252
 tunnel source Serial0/0/0
 tunnel destination 209.165.122.2
 tunnel mode gre ip
ip route 192.168.2.0 255.255.255.0 10.10.10.2
end
```

Router RB

```
enable
configure terminal
interface Tunnel0
 ip address 10.10.10.2 255.255.255.252
 tunnel source Serial0/0/0
 tunnel destination 64.103.211.2
 tunnel mode gre ip
ip route 192.168.1.0 255.255.255.0 10.10.10.1
end
```