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 |
| RA | S0/0/0 | 64.103.211.2 | 255.255.255.252 | N/A |
| RA | Tunnel 0 | 10.10.10.1 | 255.255.255.252 | N/A |
| RB | G0/0 | 192.168.2.1 | 255.255.255.0 | N/A |
| RB | S0/0/0 | 209.165.122.2 | 255.255.255.252 | N/A |
| RB | Tunnel 0 | 10.10.10.2 | 255.255.255.252 | N/A |
| 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

## Verify Router Connectivity

### Ping RA from RB.

* + - 1. Use the **show ip interface brief** command on **RA** to determine the IP address of the S0/0/0 port.
      2. From **RB** ping the IP S0/0/0 address of **RA.**

### 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.

Type your answers here.

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

## Configure GRE Tunnels

### Configure the Tunnel 0 interface of RA.

* + - 1. Enter into the configuration mode for **RA** Tunnel 0.

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

* + - 1. Set the IP address as indicated in the Addressing Table.

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

* + - 1. 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**

* + - 1. Configure Tunnel 0 to convey IP traffic over GRE.

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

* + - 1. 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**

### 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**

### 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**

## Verify Router Connectivity

### Ping PCA from PCB.

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

### 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.

End of document

# 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