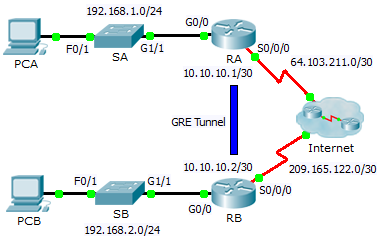
Packet Tracer – Configuring GRE

1. Topology



1. 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 | N/A |
| 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 |
| S0/0/0 | 209.165.122.2 | 255.255.255.252 | N/A |
| Tunnel 0 | 10.10.10.2 | 255.255.255.252 | N/A |
| PC-A | NIC | 192.168.1.2 | 255.255.255.0 | 192.168.1.1 |
| PC-C | NIC | 192.168.2.2 | 255.255.255.0 | 192.168.2.1 |

1. Objectives

Part 1: Verify Router Connectivity

Part 2: Configure GRE Tunnels

Part 3: Verify PC Connectivity

1. 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, and need only the tunnel configured.

1. Verify Router Connectivity
   1. 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.**
   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? Why?

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1. Configure GRE Tunnels
   1. 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**

* 1. Configure the Tunnel 0 interface of RB.

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

* 1. 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**

1. Verify Router 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.