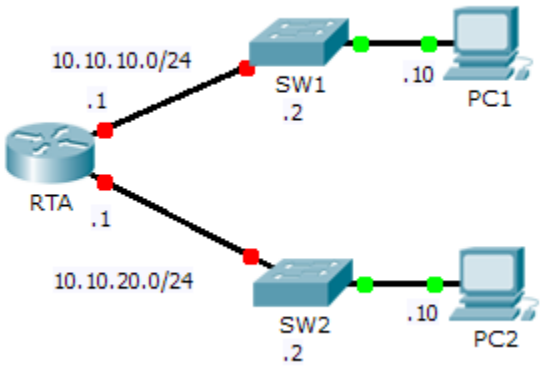
Packet Tracer - Configuring and Verifying a Small Network

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
RTA	G0/0	10.10.10.1	255.255.255.0	N/A
	G0/1	10.10.20.1	255.255.255.0	N/A
SW1	VLAN1	10.10.10.2	255.255.255.0	10.10.10.1
SW2	VLAN1	10.10.20.2	255.255.255.0	10.10.20.1
PC1	NIC	10.10.10.10	255.255.255.0	10.10.10.1
PC2	NIC	10.10.20.10	255.255.255.0	10.10.20.1

Objectives

Part 1: Configure Devices and Verify Connectivity

Part 2: Gather Information with Show Commands

Background

In this activity, you will configure **RTA** with basic settings, including IP addressing. You will also configure SW1 for remote management and configure the PCs. Once you have successfully verified connectivity, you will use **show** commands to gather information about the network.

Note: The user EXEC password is **cisco**. The privileged EXEC password is **class**.

Part 1: Configure Devices and Verify Connectivity

Step 1: Apply basic configurations to RTA.

a. Using the following information and the **Addressing Table**, configure RTA:

- Hostname and banner

- Line passwords set to **cisco**; encrypted password set to **class**
- IP addressing and descriptions on LAN interfaces

b. Save the configuration.

Step 2: Configure addressing on PC1 and PC2.

a. Using the **Addressing Table**, configure IP addressing for PC1 and PC2.

b. Test connectivity between **PC1** and **PC2**. Troubleshoot as necessary.

Step 3: Configure SW1 for remote management.

a. Using the **Addressing Table**, configure the management interface for SW1.

b. Configure the default gateway address.

c. Save the configuration.

Part 2: Gather Information with Show Commands

Step 1: Gather information from show interface command output.

Issue each of the following commands and then answer the related questions:

```
show ip interface brief
show interfaces
show ip interface
```

Which commands display the status of the port?

_____

Which command shows only the IP address (no subnet mask or prefix)? _____

Which command displays the description configured on the interface? _____

Which command displays the IP broadcast address? _____

Which command displays the MAC address of the interface? _____

Step 2: Gather information from show ip route command output.

Issue each of the following commands and then answer the related questions:

```
show ip route
show ip route connected
```

How many networks are known by the router based on the output of the **show ip route** command?

_____

What does the **L** at the beginning of the lines within the routing table represent? _____

What does the /32 prefix listed in the route table indicate? _____

Step 3: Gather information after an interface state is changed.

a. On **RTA**, shut down the Gigabit Ethernet 0/0 interface and issue the **show ip route** command. How many networks are displayed in the routing table now? _____

b. Attempt to ping PC1. Was the ping successful? _____

c. Issue the **show ip interface brief** command. What is the status of the Gigabit Ethernet 0/0 interface?

_____

d. Reactivate the Gigabit Ethernet 0/0 interface. Issue the **show ip route** command. Did the routing table repopulate? _____

What can be inferred about the interface status of routes that appear in the routing table?

_____