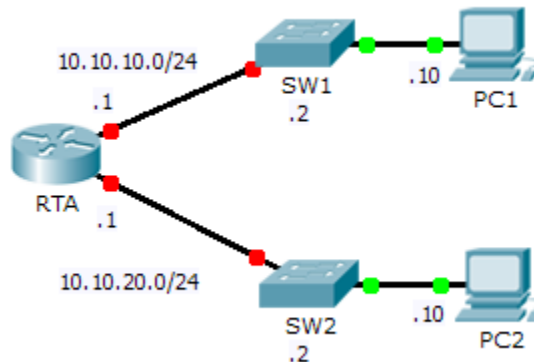


# Packet Tracer - Configuring and Verifying a Small Network

## 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?

### Suggested Scoring Rubric

Activity Section	Question Location	Possible Points	Earned Points
Part 2: Gather Information with Show Commands	Step 1	15	
	Step 2	10	
	Step 3	15	
<b>Part 2 Total</b>		<b>40</b>	
<b>Packet Tracer Score</b>		<b>60</b>	
<b>Total Score</b>		<b>100</b>	