Packet Tracer - Connect to a Wireless Router and Configure Basic Settings

Objectives

- Configure a PC to join a wireless network.
- Test the wireless connection.

Introduction

In this activity, you will configure a wireless router to accept **CompanyLaptop** as a wireless client and route its IP packets.

Step 1: Prepare the Network.

a. Select **Connections**, represented by a lightning bolt, from the bottom-left side of Packet Tracer.

b. Click **Copper Straight-Through**, represented by a solid black line.

c. When the cursor changes to connection mode, click **PC0** and choose **FastEthernet0.** Click **WRS1** and choose **Ethernet 1** to connect the other end of the cable.

Notice that WRS1 has 2 network segments: **internal** and **internet**. Ports **Ethernet 1-4** and **Wireless** are considered part of the **internal** segment while the **Internet** port is part of the **Internet**. **WRS1** will act as a switch to the devices connected to its internal segment and as a router between the two segments. **PC0** is now connected to the internal segment (**Ethernet 1**). When **Packet Tracer** displays green dots on both sides of the connection between **PC0** and **WRS1**, continue to the next step.

Note: If no green dots are shown, make sure to enable **Show Link Lights** under **Options > Preferences**. You may also click **Fast Forward Time** just above the **Connections** selection box in the yellow bar.

Step 2: Configure PC0 to use DHCP.

To reach the **WRS1** management page, **PC0** must communicate on the network. A wireless router usually includes a DHCP server, and the DHCP server is usually enabled by default on the internal segment of the router. For **PC0** to acquire an IP address from the **WRS1**, **PC0** will receive the IP information from the DHCP server on **WRS1**.

a. Click **PC0**, and select the **Desktop** tab.

b. Click **IP Configuration** and select **DHCP**.

What is the IP address of the computer?

What is the subnet mask of the computer?

What is the default gateway of the computer?

Close the **IP Configuration** window.

Note: Values can vary within the network range due to normal DHCP operation.

Step 3: Connect to the Wireless Router.

a. In the **Desktop** tab on **PC0**, choose **Web Browser**.

b. Enter **192.168.0.1** in the URL field to open the web configuration page of the wireless router.

c. Use **admin** for both the username and password.

d. Under the Network Setup heading on the **Basic Setup** page, notice the IP address range for the DHCP server. Is the IP address for **PC0** within this range? Is it expected? Explain your answer.

Step 4: Configure the Internet Port of WSR1

In this step, **WRS1** is configured to route the packets from the wireless clients to other networks. You will configure the **Internet** port on **WRS1** to connect to other networks.

a. Under the **Internet Setup** at the top of the **Basic Setup** page, change the Internet IP address method from **Automatic Configuration – DHCP** to **Static IP**.

b. Type the IP address to be assigned to the Internet interface as follows:

Internet IP Address: 209.165.200.225

Subnet Mask: 255.255.255.252

Default Gateway: 209.165.200.226

Leave the rest unchanged.

c. Scroll down the page and click **Save Settings**.

d. Click **Continue** and move on to the next step.

Step 5: Configure the WSR1 SSID

a. Navigate to **Wireless > Basic Wireless Settings**.

b. Change **Network Name (SSID)** to **aCompany**. Notice that SSIDs are case-sensitive.

c. Scroll to the bottom of the window and click **Save Settings**.

d. **Laptop0** now shows a wireless connection to **WRS1**.

e. Click **Continue** and move on to the next step.

Step 6: Change the WRS1 Access Password

a. Navigate to **Administration > Management** and change the current Router password to **cisco**.

b. Scroll to the bottom of the window and click **Save Settings**.

c. Use the username **admin** and the new password **cisco** when prompted to log in to the wireless router.

d. Click **Continue** and move on to the next step.

Step 7: Change the DHCP address range in WRS1

In this step, you will change the internal network address from 192.168.0.0/24 to 192.168.50.0/24. When the internal network address changes, the IP addresses on the devices in the internal network must be renewed to receive new IP addresses before the lease is timed out.

a. Navigate to **Setup > Basic Setup**.

b. Scroll down the page to **Network Setup**.

c. The IP address assigned to **Router IP** is 192.168.0.1. Change it to 192.168.50.1.

d. Scroll to the bottom of the window and click **Save Settings**.

e. Note that the DHCP range of addresses has been automatically updated to reflect the interface IP address change. The Web Browser will display a **Request Timeout** after a short time. Why?

f. Close the **PC0** web browser.

g. In **PC0 Desktop** tab, click the **Command Prompt**.

h. Type **ipconfig /renew** to force **PC0** re-acquire its IP information via DHCP.

What is the new IP address information for **PC0**?

i. Check your score, you should have 100%.