

Answers: 8.1.2.11 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.

- Select **Connections**, represented by a lightning bolt, from the bottom-left side of Packet Tracer.
- Click **Copper Straight-Through**, represented by a solid black line.
- 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**.

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

- In the **Desktop** tab on **PC0**, choose **Web Browser**.
- Enter **192.168.0.1** in the URL field to open the web configuration page of the wireless router.
- 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, **WSR1** is configured to route the packets from the wireless clients to other networks. You will configure the **Internet** port on **WSR1** 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 **WSR1**.
- 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%.