

Packet Tracer - Configure Wireless Security

Introduction

In this activity, you will configure the wireless router to:

- Use WPA2 Personal as the security method
- Rely on MAC filtering to increase security
- Support Single Port Forwarding

Instructions

Step 1: Connect to the wireless router

- a. From the **Desktop** tab on **PC0**, click **Web Browser**.
- b. Type in the IP address of the wireless router 192.168.0.1 and press **Enter**. You may get a **Request Timeout** message while the network converges. Press **Enter** again.
- c. When prompted for credentials, enter the default username and password, **admin**.

Step 2: Configure WPA2 security on the wireless router.

- a. Click **Wireless > Wireless Security**. For each of the radios, 2.4 GHz, 5.1 GHz -1, and 5.1 GHz -2, change Security Mode to **WPA2 Personal**. **AES** is currently the strongest encryption protocol available. Leave it selected.
- b. Configure the passphrase for each as **aCompWiFi**. Scroll down the page and click **Save Settings**.

Step 3: Configure Laptop0 as a wireless client.

- a. From the **Desktop** tab on **Laptop0**, click **PC Wireless**. You should see the message **No association with access point**.
- b. Click the **Connect** tab. Allow a few seconds for the SSID broadcasted by **WRS1** to appear. You should see three SSIDs starting with **aCompany** listed under the **Wireless Network Name** column.
- c. Select the SSID named **aCompany**, and then click **Connect**.
- d. In the Security field, choose **WPA2-Personal**. Enter the password for the wireless network, **aCompWiFi**, and then click **Connect**.
- e. **Laptop0** should now be associated to **WRS1**.
- f. Close **PC Wireless** window and click **Command Prompt**.
- g. Type **ipconfig /all** and take note of the IP address and MAC addresses.

Step 4: Configure WRS1 to support MAC filtering.

Note: Packet Tracer will not score the configuration of MAC Filtering

- a. Click **PC0**. If necessary, reopen the **Web Browser** and connect to **WRS1** again.
- b. Navigate to **Wireless > Wireless MAC Filter**.
- c. Select **Enabled** and **Permit PCs listed below to access wireless network**.
- d. Type in the MAC address for **Laptop0** in the **MAC 01:** field. Notice the MAC address must be in the **XX:XX:XX:XX:XX:XX** format.

- e. Scroll down the page and click **Save Settings**.
- f. Because **Laptop0**'s MAC address is the only one specified, **Laptop0** is the only wireless device currently capable of associating to **WRS1**. Test connectivity through the Telco Cloud.
- g. From the **Desktop** tab on Laptop0, click **Command Prompt**.
- h. Test connectivity to **RemotePC** by issuing the **ping 209.165.201.2** command. The first few pings may fail while the network converges. Issue the command again if you did not get successful replies.
- i. From the **Desktop** tab on **RemotePC**, click **Web Browser** and type the address of the internal web page hosted at **Server0**, which is **www.acompany.com**. A **Request Timeout** message should display. A webpage request from **RemotePC** to **Server0** is not successful because **WRS1** does not know which internal device should get it. In order to accomplish that, port forwarding must be configured.

Step 5: Configure WRS1 to forward a single port to Server0.

Note: Packet Tracer will not score the configuration of Port Forwarding.

- a. Click **PC0**. If necessary, reopen the **Web Browser** and connect to **WRS1** again.
- b. Navigate to **Application & Gaming > Single Port Forwarding**.
- c. From the left hand menu, choose **HTTP** from the first combo box. Then change the IP address to match **Server0** IP address, **192.168.0.2**. Also check the **Enabled** check box at the end of that same row.
- d. Scroll down the page and click **Save Settings**.
- e. You should now be able to reach the webpage hosted on **Server0**. Open the **Web Browser** on **RemotePC**. In the address bar, type in **www.acompany.com**. You should now see the web page hosted by **Server0**.