Packet Tracer - Configure Wireless Security

Objectives

- Configure WPA2 on a wireless router.
- Configure MAC Filtering on a wireless router.
- Configure Single Port Forwarding on a wireless router.

Introduction

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

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

Step 1: Connect to the wireless router

a. Connect to the wireless router configuration web page at 192.168.0.1 from **PC0**.

b. Use **admin** for both the user name and password.

Step 2: Configure WPA2 security on the wireless router.

a. Click **Wireless > Wireless Security**. Change Security Mode to **WPA2 Personal**. **AES** is currently the strongest encryption protocol available. Leave it selected.

b. Configure the passphrase as **aCompWiFi**. Scroll to the bottom of the window and click **Save Settings**.

Step 3: Configure Laptop0 as a wireless client.

a. Connect **Laptop0** to the **WRS1** wireless network using the security settings you configured on the wireless router.

b. Close the **PC Wireless** window and click **Command Prompt**.

c. Type **ipconfig /all** and take note of the IP address and MAC addresses.

Step 4: Configure WRS1 to support MAC filtering.

a. On **PC0**, go to the wireless router's configuration page.

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

f. Reconnect **Laptop0** to the **WRS1** network.

Step 5: Test the MAC filtering of WRS1

a. Add a second laptop to the topology. By default, this is Laptop1.

b. Press the **power** button on **Laptop1** to turn it off.

c. Drag the **Ethernet** port to the **Modules** list to remove it.

d. Drag the **WPC300N** module to the empty slot on **Laptop1** and press the **power** button to boot **Laptop1**.

e. Connect **Laptop1** to the **WRS1** network.

Why are you unable to associate with the access point?

Step 6: Test connectivity through the Telco Cloud.

a. Open a **Command Prompt** on **Laptop0**.

b. Test connectivity to **Remote PC** by issuing the **ping 200.100.50.10** command. The first few pings may fail while the network converges. Issue the command again if you did not get successful replies.

c. Open **Remote PC** and then browse to the address of the internal web page hosted at **Server0**, which is **www.acompany.com**. A **Request Timeout** message should display. A webpage requests from **Remote PC** 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 7: Configure WRS1 to forward a single port to Server0.

a. On **PC0**, reconnect to the wireless router's configuration page.

b. Navigate to **Application & Gaming > Single Port Forwarding**.

c. On the left-hand menu, choose **HTTP** from the first drop-down box. Change the **To IP Address** to match **Server0**'s IP address, **192.168.0.20**. Also, check the **Enabled** check box at the end of the row.

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

e. You should now be able to reach the webpage hosted on **Server0**. Browse to **www.acompany.com** on **Remote PC**. You should now see the web page hosted by **Server0**.

Check your score. You should now have 100%.