Packet Tracer – Configure Wireless Security

1. Objectives

* Create a home network with a secure wireless router

1. Introduction

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

* Modify the default password.
* Modify the default SSID and do not broadcast
* Use WPA2 Personal as security method.
* Rely on MAC filtering to increase security.
* Disable remote management.
  + 1. Load the .pkt file
       1. Load the 5.1.2.6 Packet Tracer – Configure Wireless Security.pkt file.
       2. Press the **power** button on Laptop1 to turn it off.
       3. Drag the **Ethernet** port to the **Modules** list to remove it.
       4. Drag the **WPC300N** module to the empty slot on **Laptop1** and press the **power** button to boot **Laptop1**.
    2. Modify the default password.
       1. Click on the wireless router and select the **GUI** for configuration.
       2. Click **Administration > Management**
       3. Modify the router password to a stronger one. Change the password to **aC0mpAny3.** Note that the new password has 8 characters with upper and lower case digits and some of the vowels have been changed to numbers. Select **Save Settings** at the bottom of that screen.
    3. Modify the default SSID name and disable the broadcast feature.
       1. Click **Wireless** and modify the SSID name to **aCompany.**
       2. Select **SSID Broadcast** and click **Disabled**. Click **Save Settings** at the bottom of that screen.

Check the topology. Has Laptop0 lost connectivity with the wireless router? If so, why?  
  
Yes, Because the password and SSID name has changed.

* + 1. Configure WPA2 security on the wireless router.
       1. Return to the wireless router GUI tab. Click **Wireless > Wireless Security**. Change Security Mode to **WPA2 Personal**. **AES** is currently the strongest encryption protocol available. Leave it selected.
       2. Configure the passphrase as **aCompWiFi**. Scroll to the bottom of the window and click **Save Settings**.
    2. Configure Laptop0 as a wireless client.
       1. Configure **Laptop0** to connect to the wireless network using the security settings you configured on the wireless router.
          1. Select **Laptop0 > Desktop > PC Wireless**.
          2. Select **Profiles > New** and add any name for the profile.
          3. Select **Advanced Setup** in the lower right hand corner.
          4. Select **Wireless Network Name** and enter the new SSID name: **aCompany**
          5. Accept the default network settings by selecting **Next**
          6. Modify the Security using the dropdown box to **WPA2-Personal** and select **Next**
          7. Enter the pre-shared key: aCompWiFi and select **Next.**
          8. Save the profile.
          9. Select **Connect to Network**.
          10. If the Laptop does not connect successfully, return to the profile and edit. Check your typing of the SSID name and the pre-shared key.
       2. Close the **PC Wireless** window and click **Command Prompt**.
       3. Type **ipconfig /all** and take note of the IP address and MAC addresses.
    3. Configure WRS1 to support MAC filtering.
       1. Return to the wireless router’s configuration page.
       2. Navigate to **Wireless > Wireless MAC Filter**.
       3. Select **Enabled** and **Permit PCs listed below to access wireless network**.
       4. Type in the MAC address **for Laptop0** in the **MAC 01:** field. Notice the MAC address must be in the **00:30:F2:41:DD:69** format.
       5. Scroll to the bottom of the window and click **Save Settings**.
       6. Reconnect **Laptop0** to the **WRS1** network.
    4. Test the MAC filtering of WRS1
       1. Add a second laptop to the topology.
       2. Press the **power** button on the new laptop to turn it off and replace the Ethernet card with a wireless one.
       3. Configure the new laptop with the security settings required to connect to the wireless router.

Why are you unable to associate with the access point?

Security Mode is Personal

* + 1. Disable remote management on the wireless router.
       1. Check the current status of remote management on the wireless router. Select Administration > Remote Access. If it is disabled, enable it.
       2. Select the **Hacker PC** and select the **Desktop > Web Browser**. Enter the address **192.31.7.100** and tap **Go**. You should be presented with the request for a userID and a password. Enter the valid information and you should be able to access the wireless router GUI. Exit the Desktop.
       3. Return to the wireless router’s configuration page.
       4. Navigate back to **Administration > Management** and scroll down to **Remote Management**. Select **Disabled** and click **Save Settings** at the bottom of that screen.
       5. Return to **the Hacker PC** and select the **Desktop > Web Browser**. Enter the address **192.31.7.100**. You should no longer be able to connect via the Web browser.