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?  
  
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* + 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 **XX:XX:XX:XX:XX:XX** 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?

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* + 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.