Packet Tracer - Troubleshoot a Wireless Connection

# Objectives

Identify and correct any misconfiguration of a wireless device.

# Background / Scenario

A small business owner learns that a wireless user is unable to access the network. All the PCs are configured with static IP addressing. Identify and resolve the issue.

# Instructions

## Verify connectivity.

Access the **Desktop > Web Browser** of each wireless PC and type **www.cisco.pka** into the URL. Identify any PCs that are not connecting to the web server.

**Note**: All the devices require time to complete the boot process. Please allow up to one minute before receiving a web response.

### Question:

Which wireless PCs are unable to connect to the web server?

PC1

## Examine the IP configuration of the PCs.

* + 1. On the PC that is unable to connect, access the Command Prompt from the Desktop tab.
    2. Enter the **ipconfig /all** command at the prompt.

### Question:

What IP addressing information is available?

## *Text Description automatically generated with medium confidence*

## Examine the Wireless Settings on the Wireless Client.

* + 1. On the Desktop tab of any PC that is unable to connect, click PC Wireless to access the wireless configurations.
    2. Click **Connect** tab and record the associated SSID. Click **Refresh** as needed to display the list of SSID.

### Question:

What is the associated SSID?

Academy

## Examine the Wireless Settings on the Wireless Router.

* + 1. Access the Wireless Router from the web browser of a wired PC. Use the username **admin** and password **admin** to access the wireless router.

### Question:

What IP address did you use? (**Hint**: default gateway)

192.168.1.1

* + 1. On the Basic Setup page, examine the DHCP Server Setting configuration.

### Question:

Is DHCP enabled?

yes

* + 1. Click the **Wireless** tab.
    2. Examine the setup information under the Wireless tab.

### Question:

What is the SSID? Does it match the SSID configured on the client?

Academy, yes

* + 1. Click the **Wireless Security** submenu.
    2. Examine the security settings.

### Question:

What is the wireless security mode? What is the passphrase?

WPA2 Personal, Cisco123

## Make any necessary configuration changes on the Wireless Clients

* + 1. On the Desktop tab of any PC that is unable to connect. Click **PC Wireless** to correct the wireless configurations.
    2. Click **Connect** tab. Select the Academy wireless network and click **Connect**.
    3. Enter the passphrase (Pre-shared Key) recorded from the wireless router. Click **Connect**.
    4. Using the Web Browser within the Desktop tab connect to **www.cisco.pka** to verify that the configuration changes resolved the problem.

# Answer Key

## Verify connectivity.

Which wireless PCs are unable to connect to the web server?

PC1

## Examine the IP configuration of the PCs.

What IP addressing information is available?

PC> ipconfig /all

Wireless0 Connection:(default port)

Connection-specific DNS Suffix..:

Physical Address................: 0001.64D1.7A60

Link-local IPv6 Address.........: FE80::201:64FF:FED1:7A60

Autoconfiguration IP Address......................: 169.254.122.96

Subnet Mask.....................: 255.255.0.0

Default Gateway.................: 0.0.0.0

DNS Servers.....................: 0.0.0.0

DHCP Servers....................: 0.0.0.0

DHCPv6 Client DUID..............: 00-01-00-01-90-52-8B-26-00-01-64-D1-7A-60

## Examine the Wireless Settings on the Wireless Client.

What is the associated SSID?

Academy

## Examine the Wireless Settings on the Wireless Router.

What IP address did you use? (**Hint**: default gateway)

192.168.1.1

Is DHCP enabled?

Yes.

What is the SSID? Does it match the SSID configured on the client?

The SSID is configured as Academy. The SSID has been configured on the PC.

What is the wireless security mode? What is the passphrase?

The configured security mode is WPA2 Personal and the passphrase is Cisco123.

## Make any necessary configuration changes on the Wireless Clients

End of document