Packet Tracer - Configure Access Control

Objectives

Part 1: Configure and Use AAA Authentication Credentials

Part 2: Configure and Use Email Services

Part 3: Configure and Use FTP Services

Background / Scenario

Authentication and authorization are distinct security processes in the world of identity and access management (IAM). Authentication uses passwords and other identification methods to confirm that users are who they say they are. By contrast, authorization assigns user permissions to the resources that the user is allowed access. In this Packet Tracer (PT) activity, you will configure authentication and authorization for network services including wireless network access, email, and FTP services.

Note: This activity opens in **Physical** mode. However, if you can also complete it in **Logical** mode.

Note: Most tasks in this activity are graded. Click **Check Results** at any time to view your correct and incorrect **Assessment Items**.

Instructions

Part 1: Configure and Use AAA Authentication Credentials

Step 1: Configure user accounts on the AAA server.

a. Navigate to **Headquarters** and then click the **Wiring Closet**, which is the tall, black server chassis in the bottom left corner.

b. On the right side **Rack**, click **AAA-RADIUS** server > **Services** tab, and then **AAA** under **SERVICES**.

c. Turn on the AAA service.

d. Under **User Setup**, add the following **usernames** / **passwords**.

- **user1** / **PASSuser1!**
- **user2** / **PASSuser2!**

Step 2: Configure wireless authentication on HQ-Laptop-1.

a. Navigate back to **HQ** and click **HQ-Laptop-1**. It is located two rooms to the right from the **Wiring Closet**.

b. Click **Config** tab, and then under **INTERFACE**, click **Wireless0**.

c. In the **SSID** box, type **HQ-INT**.

d. In the **Authentication** area, click **WPA2**.

e. In the **User ID** box, enter **user1**; and enter **PASSuser1!** in the **Password** box.

f. In **IP Configuration** section, click **DHCP**. What a few moments for the DHCP offer to be accepted. Verify **HQ-Laptop-1** received IP addressing and is assigned an address in the 192.168.50.0/24 network.

Note: It may be necessary to toggle between **Static** and **DHCP** to force Packet Tracer to converge on your settings. Also, click **Check Results** to make sure you correctly configured the AAA server and the wireless settings on the laptop. Clicking **Check Results** may also force Packet Tracer to converge. If

everything is configured correctly, proceed to the configuration of **HQ-Laptop-2**, and then return to **HQ-Laptop-1** and check it's IP configuration. This issue is typically resolved.

Step 3: Configure wireless authentication on HQ-Laptop-2.

a. Click **HQ-Laptop-2**, which is located in the top right corner of **HQ**.

b. Repeat the previous steps to configure the wireless settings for **HQ-Laptop-2**, using the **user2** credentials.

c. Verify **HQ-Laptop-2** received IP addressing and is assigned an address in the 192.168.50.0/24 network.

Part 2: Configure and Use Email Services

Step 1: Activate email services and configure email user accounts.

a. Navigate to the **Wiring Closet**.

b. On the right side **Rack**, click **Mail** server > **Services** tab, and then **EMAIL** under **SERVICES**.

c. Turn on both the **SMTP** and **POP3** services.

d. Set the domain to **mail.cyberhq.com**.

e. Under **User Setup**, enter the following **usernames** / **passwords**. Click the plus sign (**+**) to add each pair.

- **HQuser1** / **Cisco123**!
- **HQuser2** / **Cisco123~**
- **BRuser1** / **Cisco123-**
- **BRuser2** / **Cisco123+**

Step 2: Configure email clients.

a. Navigate back to **HQ** and click the **PC 1-1**, which is in the bottom corner.

b. Click **Desktop** tab > **Email**. The **Configure Mail** settings open.

c. Enter the following information:

- Your Name: **Suk-Yi**
- Email Address: **HQuser1@mail.cyberhq.com**
- Incoming & Outgoing Email Server(s): **mail.cyberhq.com**
- User Name: **HQuser1**
- Password: **Cisco123!**

Click **Save**.

d. Use the information in the table to configure email settings for **2-3**, **HQ-Laptop-1**, and **Net-Admin**. PC **2-3** is in the office below the conference room. The **Net-Admin** PC is in the **Wiring Closet**.

PC / Laptop	Your Name	Email address	User Name	Password
2-3	Ajulo	BRuser1@mail.cyberhq.com	BRuser1	Cisco123-
HQ-Laptop-1	Malia	BRuser2@mail.cyberhq.com	BRuser2	Cisco123+
Net-Admin	Cisco	HQuser2@mail.cyberhq.com	HQuser2	Cisco123~

Step 3: Send an email as Suk-Yi.

a. On PC **1-1**, click **Compose**.

b. Compose an email Ajulo at **BRuser1@mail.cyberhq.com**. Enter a subject and email message of your choice. Click **Send** when finished.

Note: Packet Tracer may take several seconds to converge before you see a **Send Success** message at the bottom of the window.

Note: Packet Tracer does not grade this step. Verify you correctly completed this step by receiving the email sent by Suk-Yi on Ajulo's PC **2-3**.

c. Navigate to Ajulo's PC **2-3**. If necessary, click **Desktop** tab > **Email**.

d. Click **Receive** and read the email from Suk-Yi.

Part 3: Configure and Use FTP Services

Step 1: Activate the FTP Service.

a. Navigate to the **Wiring Closet**.

b. On the right side **Rack**, click **FTP** server > **Services** tab, and then **FTP** under **SERVICES**.

c. Turn on the **FTP** service.

Step 2: Create the FTP user accounts.

a. Under **User Setup** enter the follow usernames, passwords, and privileges. Click **Add** to add each user.

Note: Be sure username **malia** does not include **Delete** as one of the user privileges.

Username	Password	User Privilege
sukyi	cisco123	RWDNL (Write, Read, Delete, Rename, List)
ajulo	cisco321	RWDNL (Write, Read, Delete, Rename, List)
malia	cisco123	RWNL (Write, Read, Rename, List)

b. Verify each user is correctly created and close the server.

Step 3: Transfer files between Net-Admin and the FTP server.

a. Click **Net-Admin** PC, and then click **Desktop** > **Command Prompt**.

b. Enter the command **ftp 192.168.75.2** to log in to the FTP server, and then authenticate with username **sukyi** and password **cisco123**.

c. Enter the **dir** command to list the files on the FTP server.

d. Use the **get** command to download **aMessage.txt**.

e. Quit the FTP session.

f. Close the **Command Prompt**, click **Text Editor**, and then **File** > **Open**. Open the downloaded file **aMessage.txt**.

What is the message in the file?

g. Click **File > New**. Type a text message your choice.

h. Click **File** > **Save** and save the new file as **aMessage_new.txt**. Close the **Text Editor**.

i. Click **Command Prompt** and then log back in to the FTP server as user **sukyi**.

j. Use the **put** command to upload **aMessage_new.txt**.

k. Quit the FTP session.

Step 4: Verify FTP user privileges are working as configured.

a. Navigate back to **HQ** and click **HQ-Laptop-1**, **Desktop** tab > **Command Prompt**.

b. Login to the FTP server at 192.168.75.2 with username **malia** and password **cisco123**.

c. Use the **delete** command to attempt to remove the newly uploaded file **aMessage_new.txt**.

Were you able to delete file from the FTP server? Explain.

d. Use the **rename** command to attempt to change the name of **aMessage_new.txt** to **aMessage_rename.txt**.

```
ftp> rename aMessage_new.txt aMessage_rename.txt
```

Were you able to rename file from the FTP server?

e. Quit the FTP session and close the **HQ-Laptop-1** window.

Answer Key

Part 1: Configure and Use AAA Authentication Credentials

Step 1: Configure user accounts on the AAA server.

Step 2: Configure wireless authentication on HQ-Laptop-1.

Step 3: Configure wireless authentication on HQ-Laptop-2.

Part 2: Configure and Use Email Services

Step 1: Activate email services and configure email user accounts.

Step 2: Configure email clients.

Step 3: Send an email as Suk-Yi.

Part 3: Configure and Use FTP Services

Step 1: Activate the FTP Service.

Step 2: Create the FTP user accounts.

Step 3: Transfer files between Net-Admin and the FTP server.

What is the message in the file?

The text file will have the following text:
Greetings. You have successfully accessed the FTP server.

Step 4: Verify FTP user privileges are working as configured.

Were you able to delete file from the FTP server? Explain.

Malia cannot delete the file because the user does not have permission to delete the file.

Were you able to rename file from the FTP server?

Malia can rename the file because the user has permission to rename the file.