

Packet Tracer – Creating a Cyber World

Addressing Table

Device	IP Address	Subnet Mask	Site
FTP/Web Server	10.44.1.254	255.255.255.0	Metropolis Bank HQ
Email/DNS Server	10.44.1.253	255.255.255.0	Metropolis Bank HQ
NTP/AAA Server	10.44.1.252	255.255.255.0	Metropolis Bank HQ
File Backup Server	10.44.2.254	255.255.255.0	Gotham Healthcare Branch

Objectives

Part 1: Configure the FTP Server

Part 2: Configure the Web Server

Part 3: Configure the Email Server

Part 4: Configure the DNS Server

Part 5: Configure the NTP Server

Part 6: Configure the AAA Server

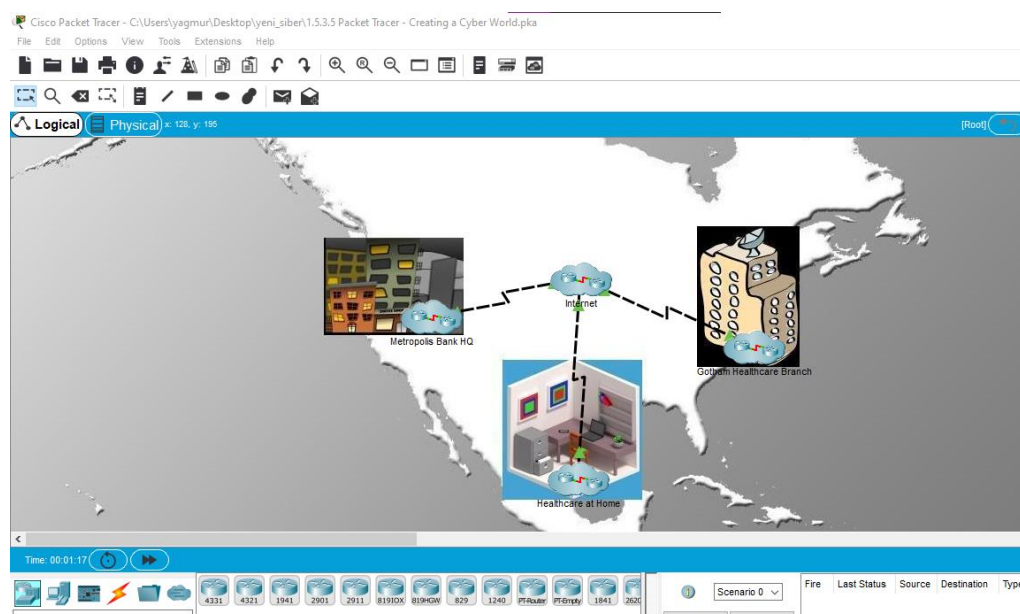
Background / Scenario

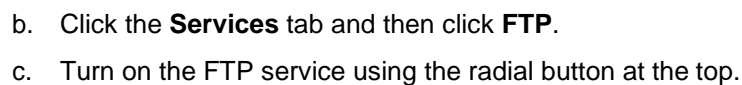
In this activity, you will configure basic server components. The IP addressing configuration is already complete. You will use the Services tab on multiple servers to deploy FTP, Web, Email, DNS, NTP, and AAA services.

Part 1: Configure the FTP Server

Step 1: Activate the FTP Service.

- Click the **Metropolis Bank HQ** and then click the **FTP/Web** server.





Step 2: Allow users' access to the FTP server.

- Create user account names of **bob**, **mary**, and **mike**, each with the password of **cisco123**.
- Each user account should have full permissions (RWDNL) on the FTP/Web server.

The screenshot shows the Cisco configuration interface for the FTP service. The 'Services' tab is selected, and the 'FTP' service is highlighted in the left sidebar. The main configuration area shows the FTP service is turned 'On'. Under 'User Setup', three users are listed: bob, mary, and mike, all with the password 'cisco123' and 'RWDNL' permissions. A 'File' list shows three files: BankData.txt, asa842-k8.bin, and c1841-advipservicesk9-mz.124-15.T1.bin.

FTP/Web

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP**
- IoT
- VM Management
- Radius EAP

FTP

Service ☒ On ☐ Off

User Setup

Username Password

☒ Write ☒ Read ☒ Delete ☒ Rename ☒ List

	Username	Password	Permission
2	bob	cisco123	RWDNL
3	mary	cisco123	RWDNL
4	mike	cisco123	RWDNL

Add Save Remove

File

1	BankData.txt
2	asa842-k8.bin
3	c1841-advipservicesk9-mz.124-15.T1.bin

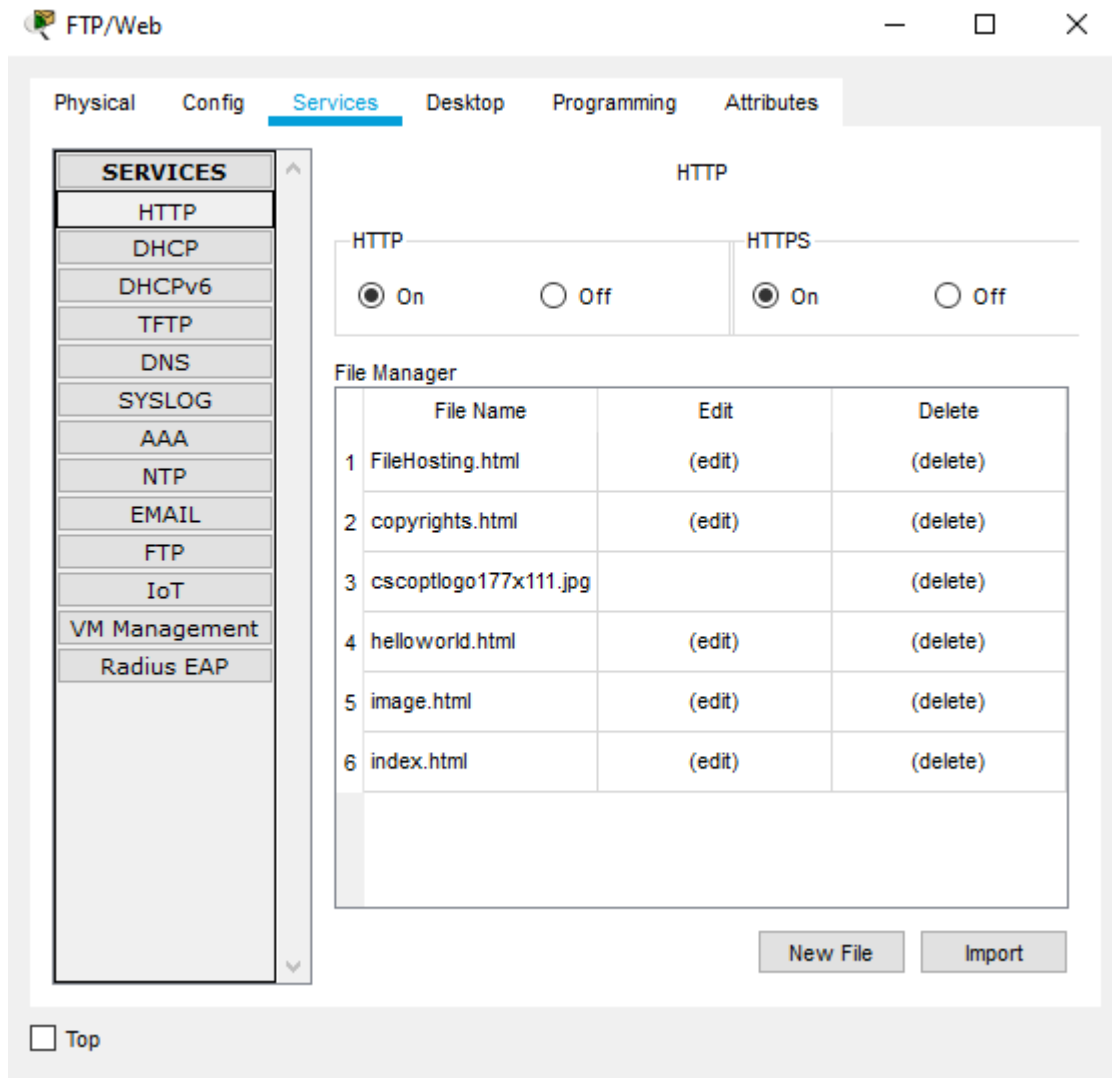
Remove

☐ Top

Part 2: Configure the Web Server

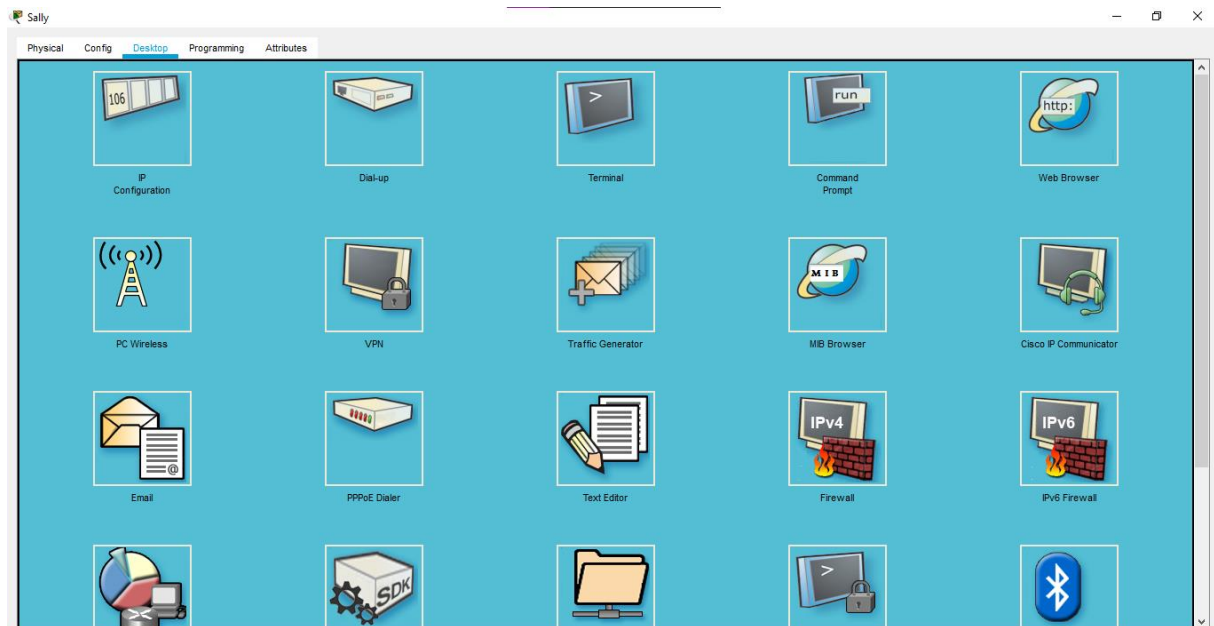
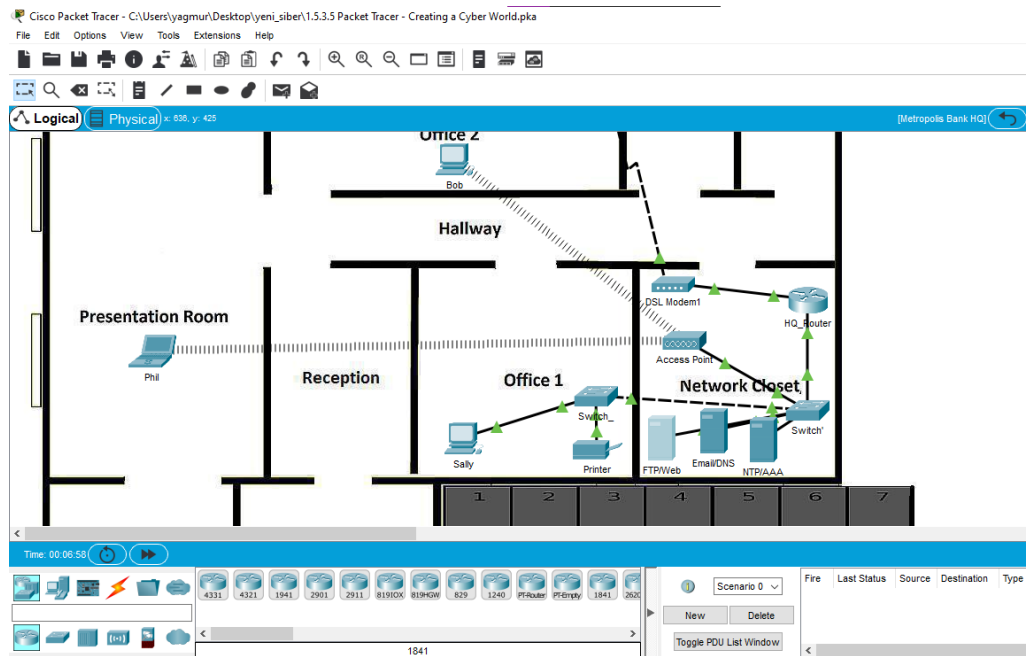
Step 1: Activate the HTTP Service.

- Within the **Metropolis Bank HQ**, click the **FTP/Web** server.
- Click the **Services** tab and then click **HTTP**.
- Turn on both the HTTP and HTTPS services using the radial buttons at the top.

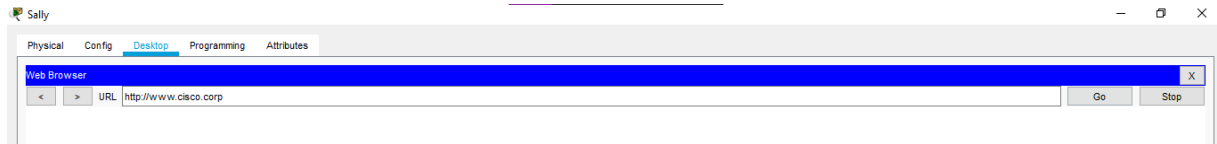


Step 2: Verify the HTTP Service.

- a. Click the PC named Sally, and click the **Desktop** tab.



- b. Click the **Web Browser**. Browse to the website **www.cisco.corp**.



- c. Within the Web Browser, browse to the IP **10.44.1.254**.



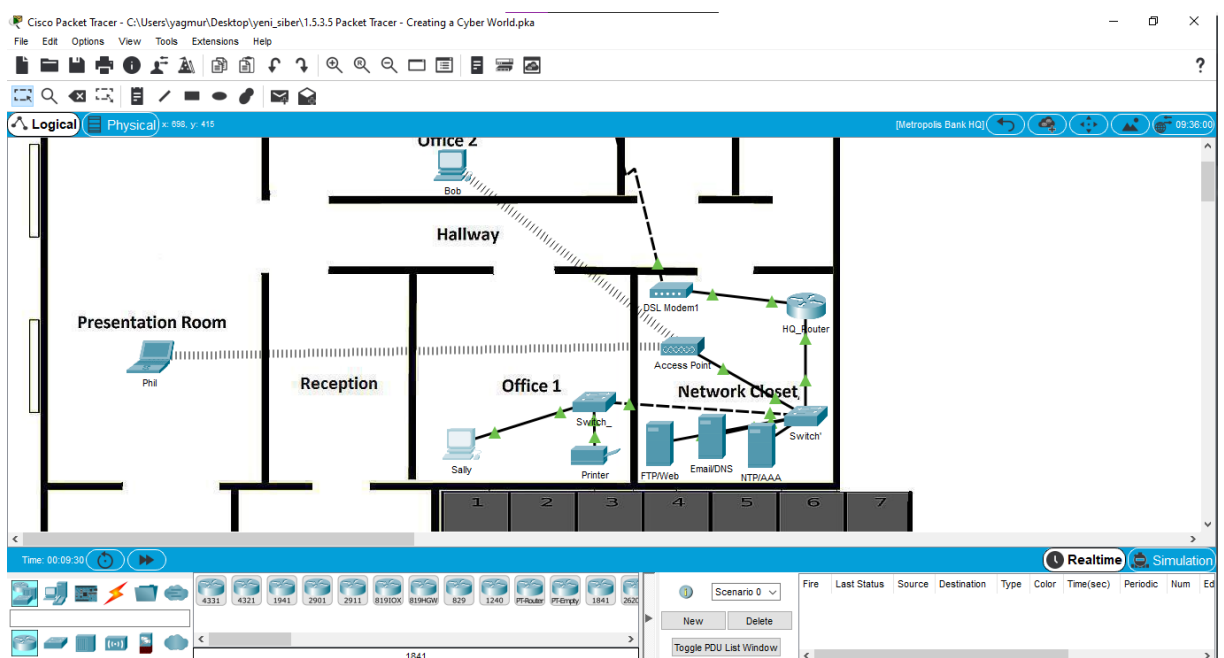
Why would a user be able to browse to an IP address but not a FQDN?

The web browser does not know IP address without DNS to translate the domain name to the IP address.

Part 3: Configure the DNS Server

Step 1: Activate the DNS Service.

- a. Within the **Metropolis Bank HQ**, click the **Email/DNS** server.



- b. Click the **Services** tab and then click **DNS**.

Email/DNS

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS**
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DNS

DNS Service ☐ On ☒ Off

Resource Records

Name Type **A Record** ▾

Address

Add Save Remove

No.	Name	Type	Detail
-----	------	------	--------

DNS Cache

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- c. Turn on the DNS service using the radial button at the top.

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS**

DNS

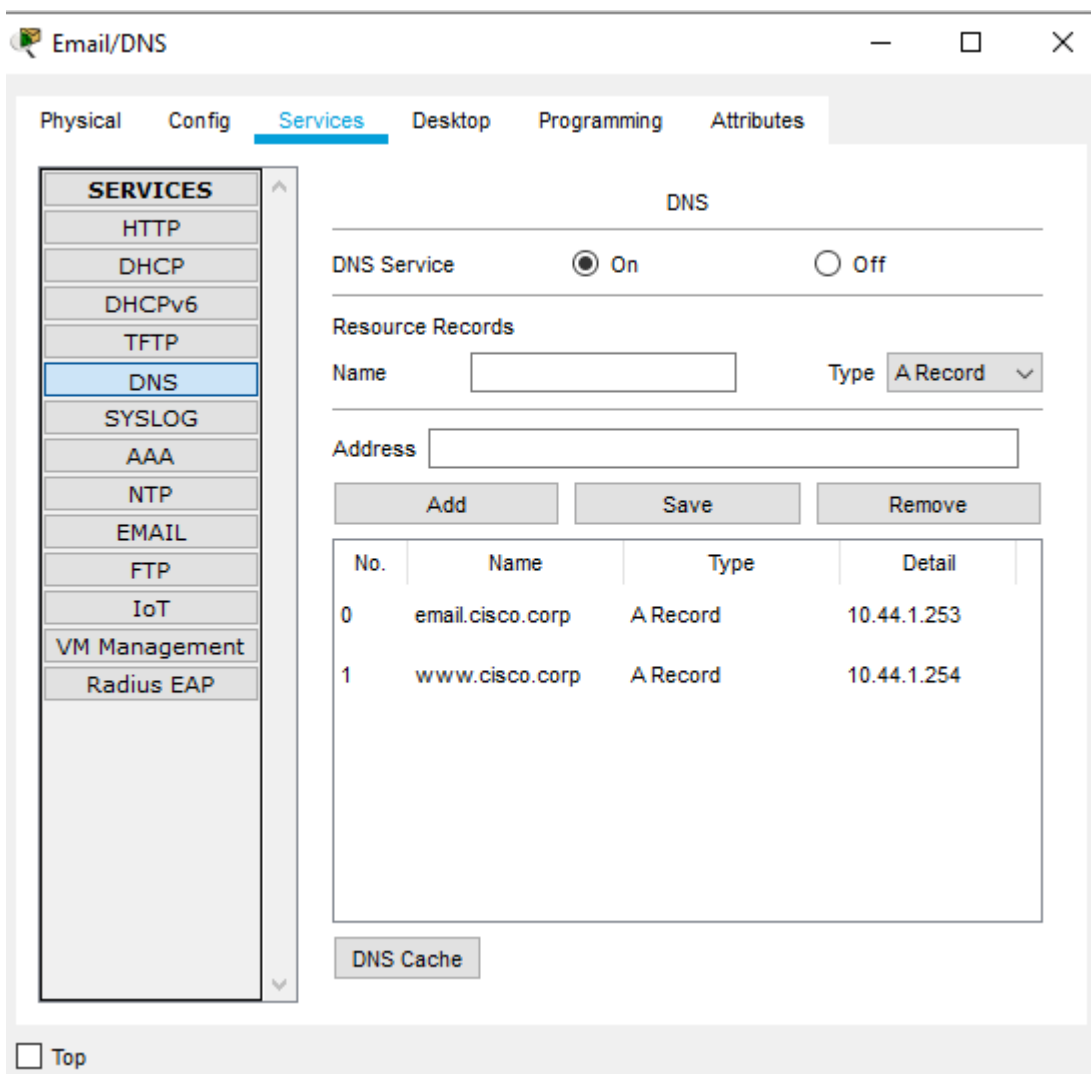
DNS Service ☒ On ☐ Off

Resource Records

Name Type **A Record** ▾

Step 2: Create the DNS A records.

- Create the **A** record **email.cisco.corp** with IP address **10.44.1.253**. Click **Add** to save the record.
- Create the **A** record **www.cisco.corp** with IP address **10.44.1.254**. Click **Add** to save the record.



Step 3: Verify the DNS Service.

- Click the PC named Sally, and click the **Desktop** tab.
- Click the **Web Browser**. Browse to the website **www.cisco.corp**.



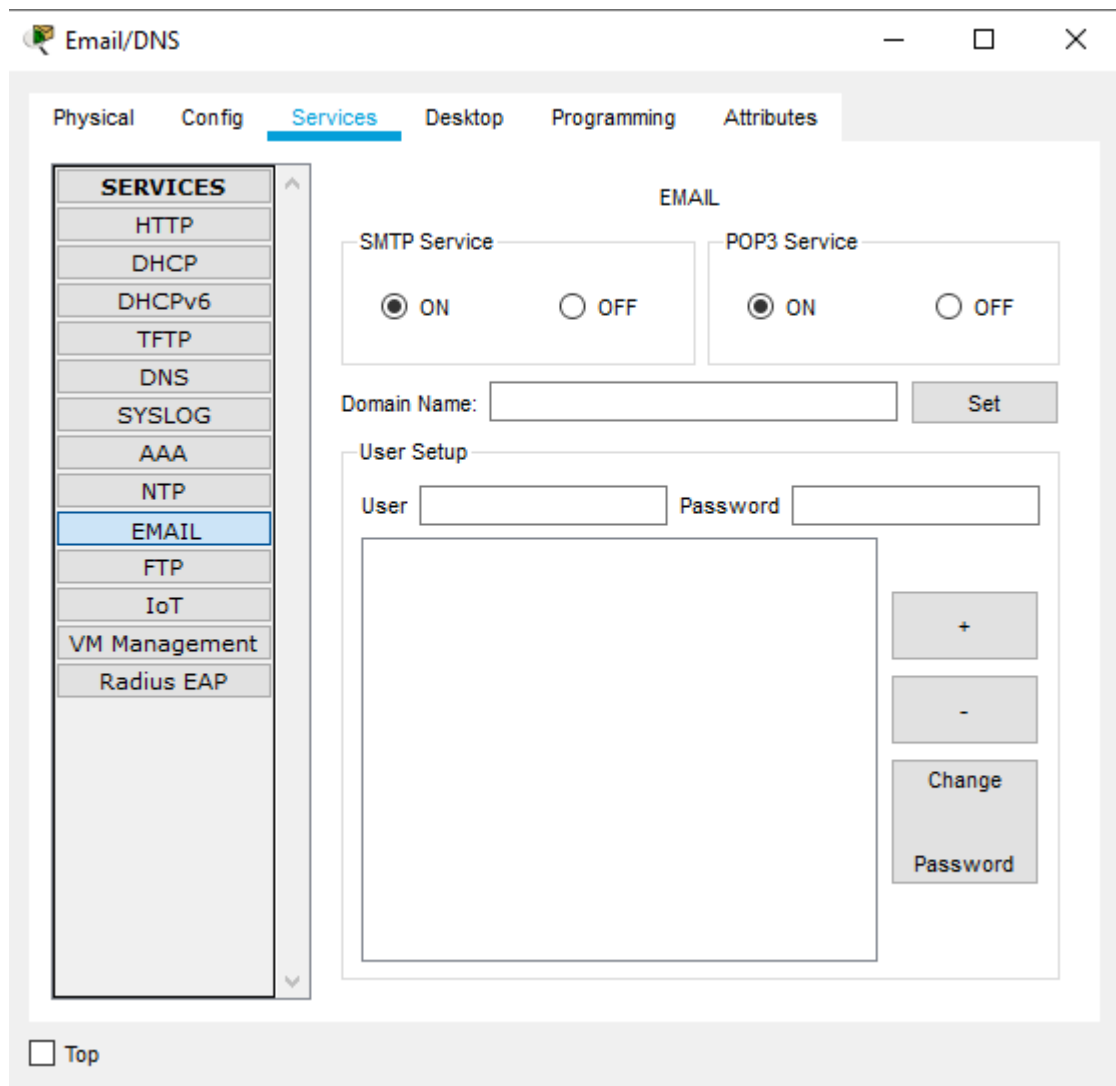
c. Why is the user able to browse to an FQDN?

The DNS server translated the domain name to the associated IP address so the web browser can understand it.

Part 4: Configure the Email Server

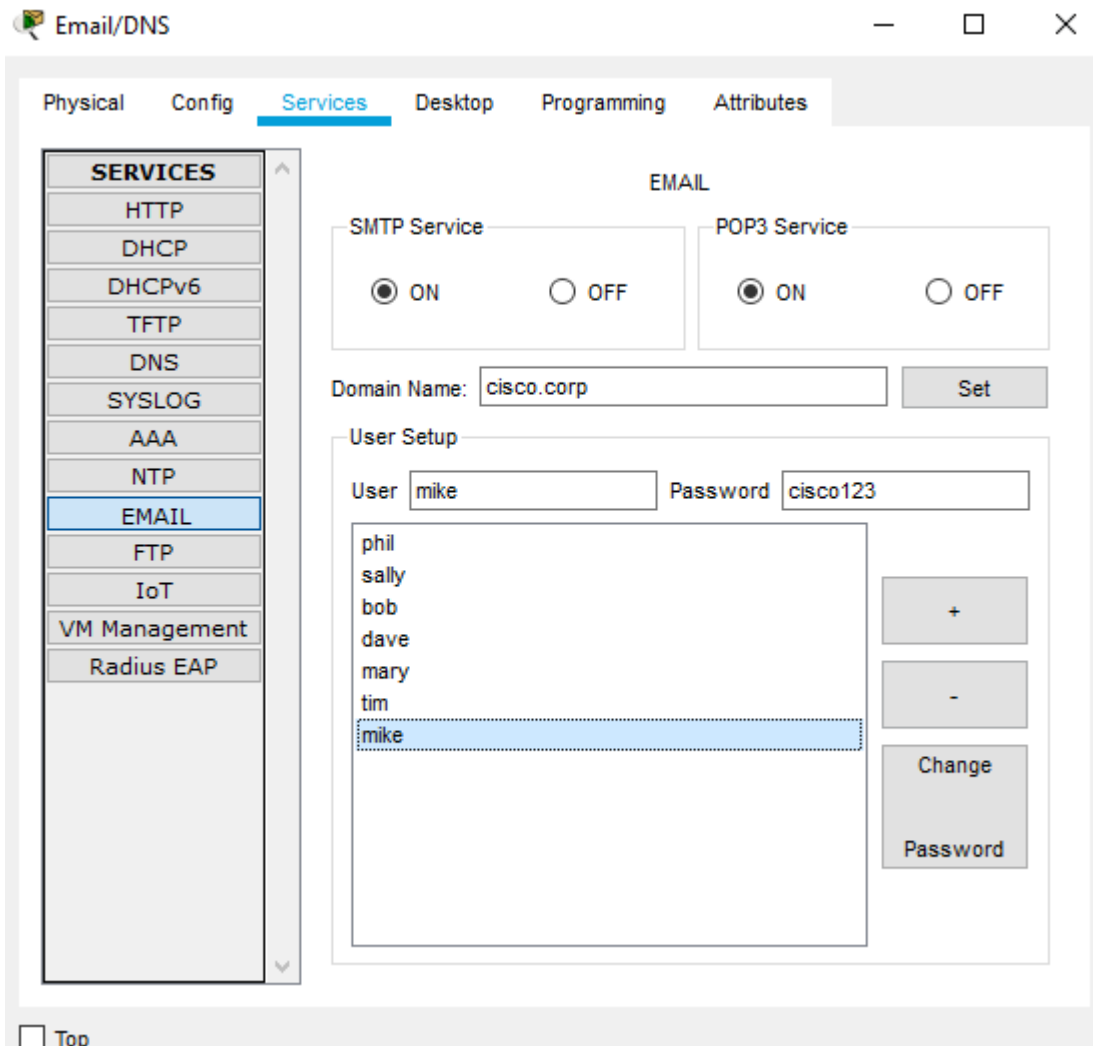
Step 1: Activate the Email Services.

- Within the **Metropolis Bank HQ**, click the **Email/DNS** server.
- Click the **Services** tab and then click on **EMAIL**.
- Turn on both the SMTP and POP3 services using the radial buttons at the top.



Step 2: Create Email accounts for users.

- Create the domain name of **cisco.corp**.
- Create user account names of **phil**, **sally**, **bob**, **dave**, **mary**, **tim** and **mike**, each with the password of **cisco123**.



Step 3: Configure user Email clients.

- Click the PC named **Sally**, and click the **Desktop** tab.
- Click **Email** and enter the following information:
Name: **Sally**
Email Address: **sally@cisco.corp**
Incoming & Outgoing Email Server(s): **email.cisco.corp**
Username: **sally**
Password: **cisco123**

Packet Tracer – Creating a Cyber World

The screenshot shows the 'Configure Mail' window for a PC named Sally. The window has tabs for Physical, Config, Desktop, Programming, and Attributes, with 'Desktop' selected. The 'Configure Mail' section is active, showing fields for User Information, Server Information, and Logon Information. The 'Your Name' field is set to 'Sally', 'Email Address' is 'sally@cisco.corp', 'Incoming Mail Server' is 'sally@cisco.corp', and 'Outgoing Mail Server' is 'sally@cisco.corp'. The 'Logon Information' section shows 'User Name' as 'sally' and 'Password' as a masked field. There are 'Save', 'Clear', and 'Reset' buttons at the bottom.

- c. Repeat Step 3b on the PC named **Bob** but replace the name **sally** with **bob** as needed.

The top screenshot shows the main Cisco Packet Tracer interface. The title bar indicates the file path: 'Cisco Packet Tracer - C:\Users\yagmur\Desktop\yeni_siber\1.5.3.5 Packet Tracer - Creating a Cyber World.pka'. The menu bar includes File, Edit, Options, View, Tools, Extensions, and Help. The toolbar contains various icons for network configuration. The main workspace shows a logical network diagram of 'Metropolis Bank HQ' with rooms like Office 2, Hallway, Presentation Room, Reception, Office 1, and Network Closet. Devices include PCs (Phil, Bob, Sally), a printer, a switch, a router, and various servers. The bottom status bar shows the time as 00:20:00 and a list of network devices.

The bottom screenshot shows the 'Configure Mail' window for a PC named Bob. The window has tabs for Physical, Config, Desktop, Programming, and Attributes, with 'Desktop' selected. The 'Configure Mail' section is active, showing fields for User Information, Server Information, and Logon Information. The 'Your Name' field is set to 'Bob', 'Email Address' is 'bob@cisco.corp', 'Incoming Mail Server' is 'bob@cisco.corp', and 'Outgoing Mail Server' is 'bob@cisco.corp'. The 'Logon Information' section shows 'User Name' as 'bob' and 'Password' as a masked field. There are 'Save', 'Clear', and 'Reset' buttons at the bottom.

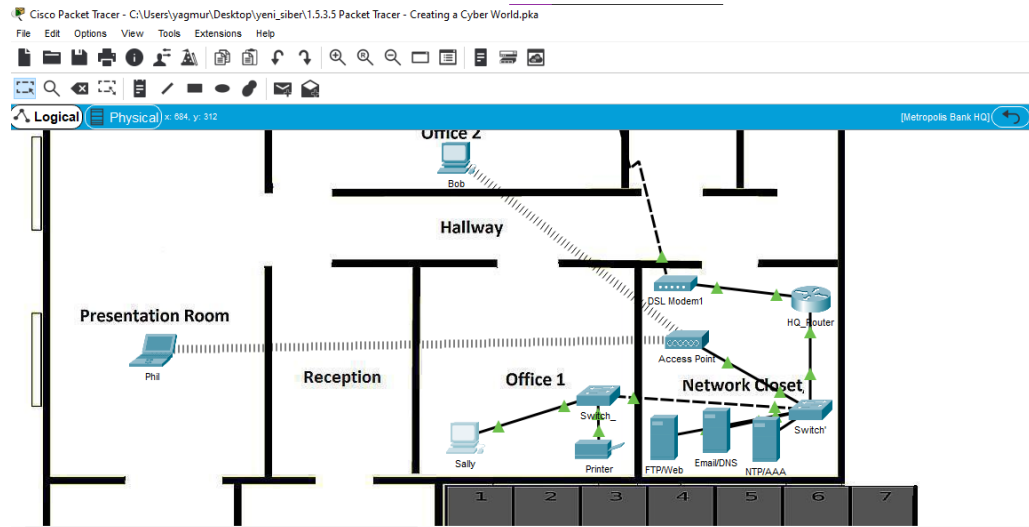
Why does the Email service require both SMTP and POP3 to be activated?

SMTP is the protocol responsible for sending emails between servers, and POP is a protocol used by local email clients to retrieve emails from a server.

Part 5: Configure the NTP Server

Step 1: Activate the NTP Service.

- a. Within the **Metropolis Bank HQ**, click the **NTP/AAA** server.



- b. Click the **Services** tab and then click **NTP**.
- c. Turn on the NTP service using the radial button at the top.

NTP/AAA

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP**
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

NTP

Service ☒ On ☐ Off

Authentication

☐ Enable ☒ Disable

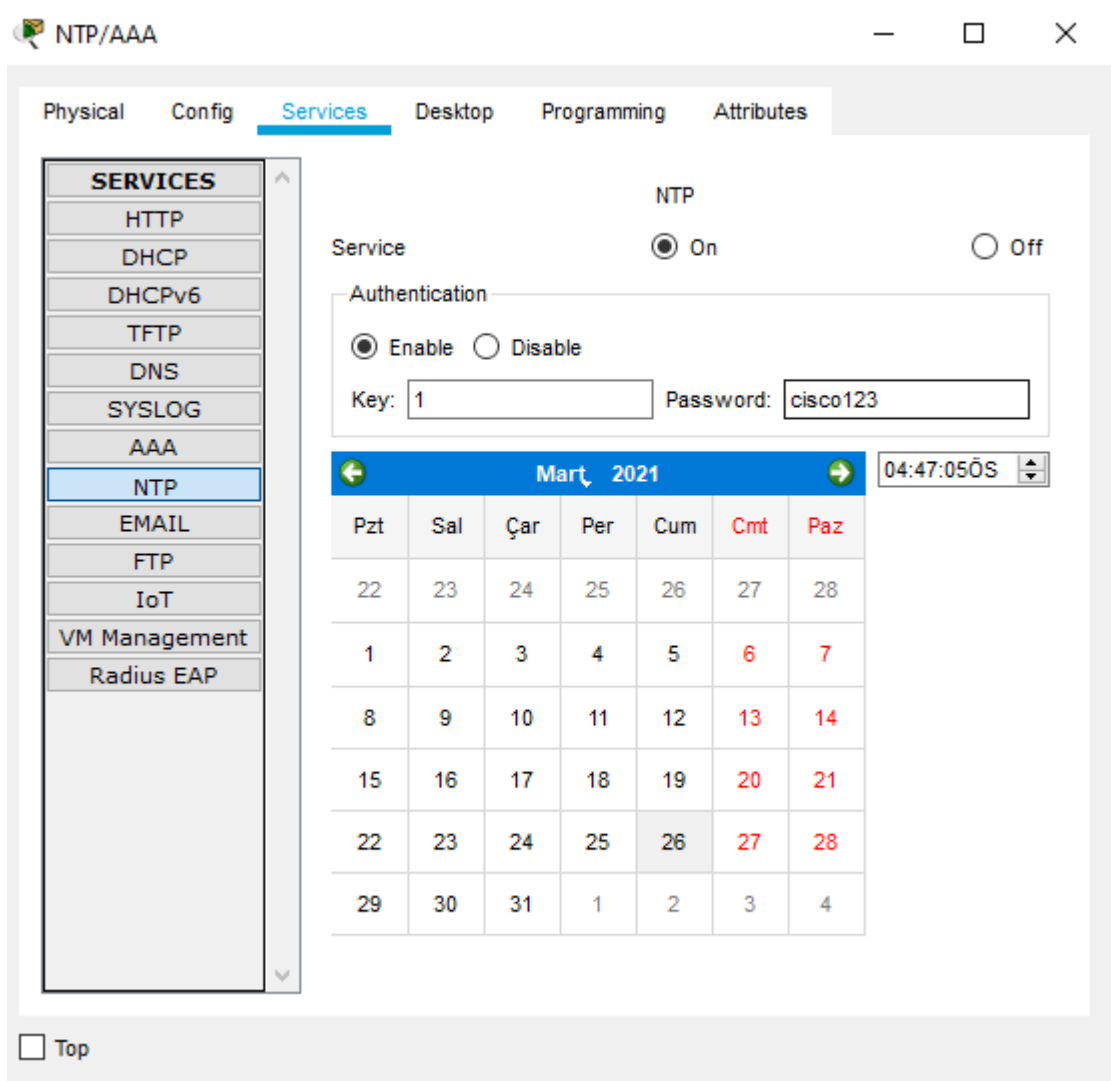
Key: Password:

← Mar 2021 → 04:46:32 OS

Pzt	Sal	Çar	Per	Cum	Cmt	Paz
22	23	24	25	26	27	28
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4

Step 2: Secure the NTP Service.

- Enable the NTP authentication feature using the radial button.
- Configure **Key 1** with a password of **cisco123**.



NTP/AAA

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP**
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

NTP

Service ☒ On ☐ Off

Authentication

☒ Enable ☐ Disable

Key: 1 Password: cisco123

← Mar 2021 → 04:47:05 OS

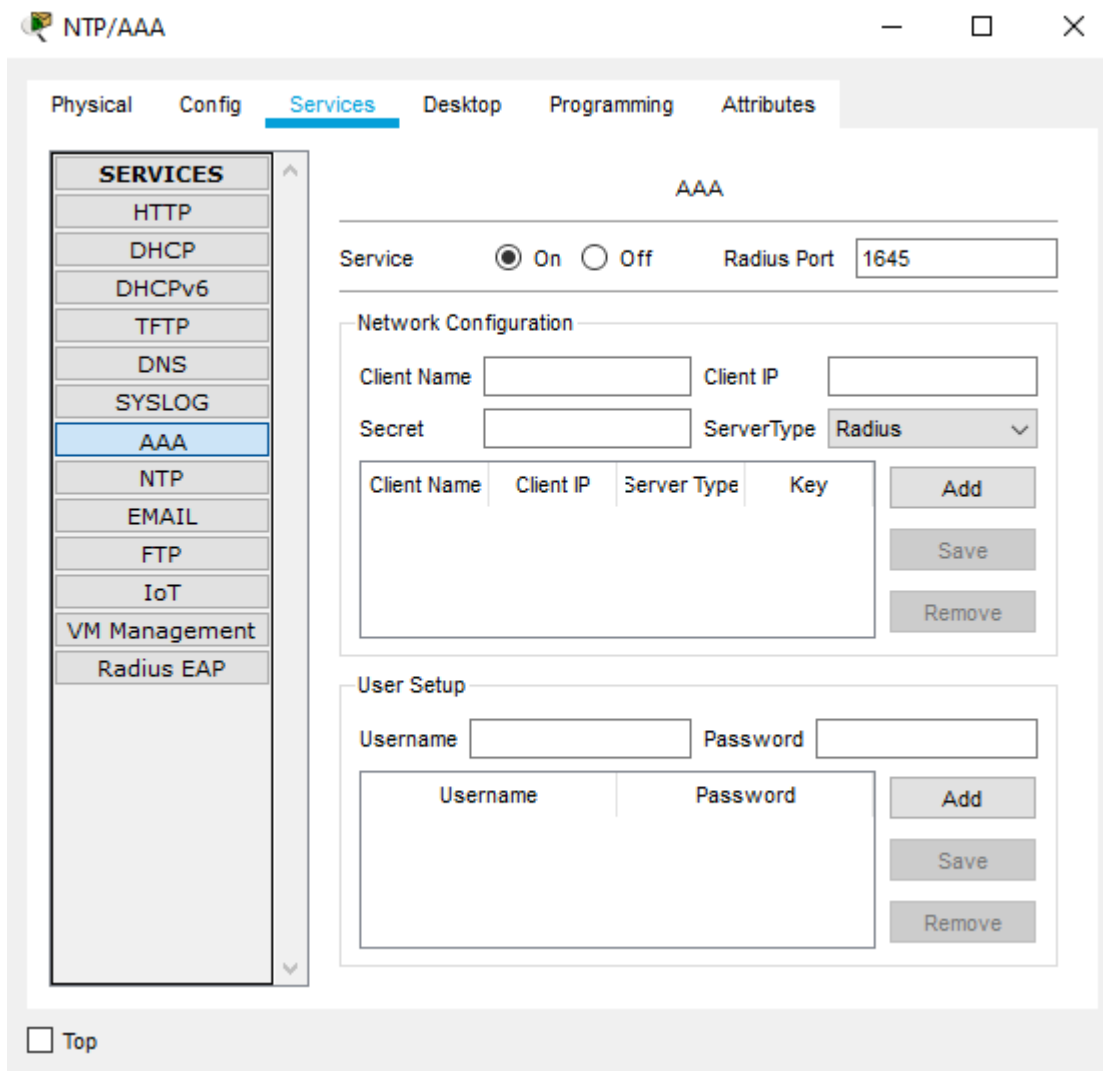
Pzt	Sal	Çar	Per	Cum	Cmt	Paz
22	23	24	25	26	27	28
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4

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Part 6: Configure the AAA Server

Step 1: Activate the AAA Service.

- Within the **Metropolis Bank HQ**, click the **NTP/AAA** server.
- Click the **Services** tab and then click **AAA**.
- Turn on the AAA service using the radial button at the top.



NTP/AAA

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA**
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

AAA

Service ☒ On ☐ Off Radius Port

Network Configuration

Client Name Client IP

Secret ServerType **Radius** ▼

Client Name	Client IP	Server Type	Key
<div> <input type="button" value="Add"/> <input type="button" value="Save"/> <input type="button" value="Remove"/> </div>			

User Setup

Username Password

Username	Password
<div> <input type="button" value="Add"/> <input type="button" value="Save"/> <input type="button" value="Remove"/> </div>	

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Step 2: Configure the AAA Network Configuration.

- Configure the Client Name **HQ_Router** with the Client IP **10.44.1.1** with a secret of **cisco123**. Click **Add** to save the client information.
- Configure the AAA user account of **admin** with a password of **cisco123**. Click **Add** to save the user information.

NTP/AAA

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
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- SYSLOG
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- NTP
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- Radius EAP

AAA

Service ☒ On ☐ Off Radius Port

Network Configuration

Client Name Client IP

Secret ServerType **Radius** ▼

	Client Name	Client IP	Server Type	Key	
1	HQ_Router	10.44.1.1	Radius	cisco123	<input type="button" value="Add"/> <input type="button" value="Save"/> <input type="button" value="Remove"/>

User Setup

Username Password

	Username	Password	
1	admin	cisco123	<input type="button" value="Add"/> <input type="button" value="Save"/> <input type="button" value="Remove"/>

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