

# Institute of Computer Technology

B. Tech Computer Science and Engineering

Sub: Computer Networks

Course Code:-2CSE502

Sem-V(CS)

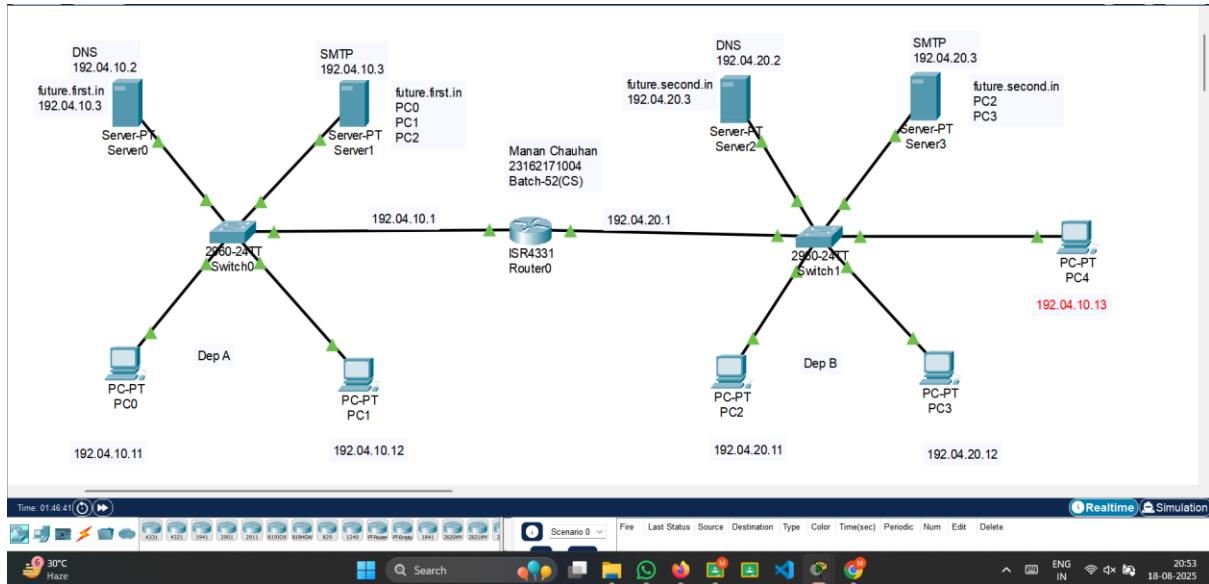
Class:-A

Practical:2

Aim: To demonstrate configuration of Mail Server (SMTP)

Scenario:

Mr. Tim is planning to set up the network for his company's branch office which contains 2 departments - Department A and Department B. The configuration should be done such that all the devices in those departments should be able to reach each other. For security reasons, Mr. Tim doesn't want to use any external company service for mail. So, he asked his Network Engineer to set up the server in the company premises only to use the mail services. Therefore, help the network Engineer to do the same. Note the important point while designing and implementing the network. The branch office is connected to the main office. Therefore you need to show the network of the main office as well. The mail domain of the main office is future.first.in and the mail domain of the branch office is future.second.in. All the users in the main office and branch office should be able to send and receive the mail. Design the network so that at least 2 users are there in branch office and at least 2 users in the main office.



## Configuration:-

### 1. PC

#### a. PC0-Dep A

**IP Configuration**

Setting	Value
Interface	FastEthernet0
IP Configuration	<input checked="" type="radio"/> Static <input type="radio"/> DHCP
IPv4 Address	192.4.10.11
Subnet Mask	255.255.255.0
Default Gateway	192.4.10.1
DNS Server	192.4.10.2
IPv6 Configuration	<input checked="" type="radio"/> Static <input type="radio"/> Automatic
IPv6 Address	FE80::201:C7FF:FE6:AAE8
Link Local Address	
Default Gateway	
DNS Server	
802.1X	<input type="checkbox"/> Use 802.1X Security
Authentication	MD5
Username	
Password	

**Configure Mail**

User Information	
Your Name:	Manan
Email Address:	PC0@future.first.in
Server Information	
Incoming Mail Server:	future.first.in
Outgoing Mail Server:	future.first.in
Logon Information	
User Name:	PC0
Password:	*

## b. PC1-Dep A

The image displays two windows from a software application titled "PC1".

**Top Window: IP Configuration**

- Interface:** FastEthernet0
- IP Configuration:**
  - DHCP:** Unselected
  - Static:** Selected
  - IPv4 Address:** 192.4.10.12
  - Subnet Mask:** 255.255.255.0
  - Default Gateway:** 192.4.10.1
  - DNS Server:** 192.4.10.2
- IPv6 Configuration:**
  - Automatic:** Unselected
  - Static:** Selected
  - IPv6 Address:** FE80::2E0:F7FF:FE65:670A
  - Link Local Address:** FE80::2E0:F7FF:FE65:670A
  - Default Gateway:** Unselected
  - DNS Server:** Unselected
- 802.1X:** Unselected
- Authentication:** MD5
- Username:** Unselected
- Password:** Unselected

**Bottom Window: Configure Mail**

- User Information:**
  - Your Name:** Man
  - Email Address:** PC1@future.first.in
- Server Information:**
  - Incoming Mail Server:** future.first.in
  - Outgoing Mail Server:** future.first.in
- Logon Information:**
  - User Name:** PC1
  - Password:** •
- Buttons:** Save, Remove, Clear, Reset

### c. PC2-Dep-B

**Configure Mail**

User Information

Your Name: Hello

Email Address: PC2@future.second.in

Server Information

Incoming Mail Server: future.second.in

Outgoing Mail Server: future.second.in

Logon Information

User Name: PC2

Password: •

Save Remove Clear Reset

**IP Configuration**

Interface: FastEthernet0

IP Configuration

DHCP  Static

IPv4 Address: 192.4.20.11

Subnet Mask: 255.255.255.0

Default Gateway: 192.4.20.1

DNS Server: 192.4.20.2

IPv6 Configuration

Automatic  Static

IPv6 Address: FE80::290:21FF:FE07:2821

Link Local Address: FE80::290:21FF:FE07:2821

Default Gateway:

DNS Server:

802.1X

Use 802.1X Security

Authentication: MD5

Username:

Password:

## d. PC3-Dep B

The image displays two windows from the PC3 software interface.

**Top Window: IP Configuration**

- Interface: FastEthernet0
- IP Configuration:
  - IPv4 Address: 192.4.20.12
  - Subnet Mask: 255.255.255.0
  - Default Gateway: 192.4.20.1
  - DNS Server: 192.4.20.2
- IPv6 Configuration:
  - IPv6 Address: FE80::260:47FF:FE0C:788A
  - Link Local Address: FE80::260:47FF:FE0C:788A
  - Default Gateway:
  - DNS Server:
- 802.1X:
  - Use 802.1X Security:
  - Authentication: MD5
  - Username:
  - Password:

**Bottom Window: Configure Mail**

- User Information:
  - Your Name: Hi
  - Email Address: PC3@future.second.in
- Server Information:
  - Incoming Mail Server: future.second.in
  - Outgoing Mail Server: future.second.in
- Logon Information:
  - User Name: PC3
  - Password: ●
- Action Buttons: Save, Remove, Clear, Reset

### e. PC4-Dep A

The image displays two windows from the PC4 software interface.

**Mail Configuration Window:**

- User Information:**
  - Your Name: Mana
  - Email Address: PC4@future.first.in
- Server Information:**
  - Incoming Mail Server: future.first.in
  - Outgoing Mail Server: future.first.in
- Logon Information:**
  - User Name: PC4
  - Password: •

**Buttons:** Save, Remove, Clear, Reset.

**IP Configuration Window:**

- Interface:** FastEthernet0
- IP Configuration:**
  - DHCP       Static
  - IPv4 Address: 192.4.20.13
  - Subnet Mask: 255.255.255.0
  - Default Gateway: 192.4.20.1
  - DNS Server: 192.4.20.2
- IPv6 Configuration:**
  - Automatic       Static
  - IPv6 Address: FE80::201:64FF:FE5E:9447
  - Link Local Address: FE80::201:64FF:FE5E:9447
  - Default Gateway:
  - DNS Server:
- 802.1X:**
  - Use 802.1X Security
  - Authentication: MD5
  - Username:
  - Password:

## 2. DNS

### a. Department A

The image shows two windows from a server configuration interface:

**Top Window (IP Configuration):**

- IP Configuration:** Static selected.
- IPv4 Address:** 192.4.10.2
- Subnet Mask:** 255.255.255.0
- Default Gateway:** 192.4.10.1
- DNS Server:** 192.4.10.2

**Bottom Window (Services):**

- Services Tab:** Selected.
- SERVICES List:** HTTP, DHCP, DHCPv6, TFTP, **DNS**, SYSLOG, AAA, NTP, EMAIL, FTP, IoT, VM Management, Radius EAP.
- DNS Section:**
  - DNS Service:** On (radio button selected).
  - Resource Records:**
    - Name:** future.first.in
    - Type:** A Record
    - Address:** 192.4.10.3
  - Address Table:**

No.	Name	Type	Detail
0	future.first.in	A Record	192.4.10.3
1	future.second.in	A Record	192.4.20.3

## b. Department B

The image shows two windows from a server management interface for a system named "Server2".

**Top Window (IP Configuration):**

- IP Configuration:** Set to **Static**.
  - IPv4 Address:** 192.4.20.2
  - Subnet Mask:** 255.255.255.0
  - Default Gateway:** 192.4.20.1
  - DNS Server:** 192.4.20.2
- IPv6 Configuration:** Set to **Static**.
  - IPv6 Address:** FE80::205:5EFF:FE3B:4BBD
  - Link Local Address:** FE80::205:5EFF:FE3B:4BBD
  - Default Gateway:** (empty)
  - DNS Server:** (empty)
- 802.1X:**
  - Use 802.1X Security**
  - Authentication:** MD5
  - Username:** (empty)
  - Password:** (empty)

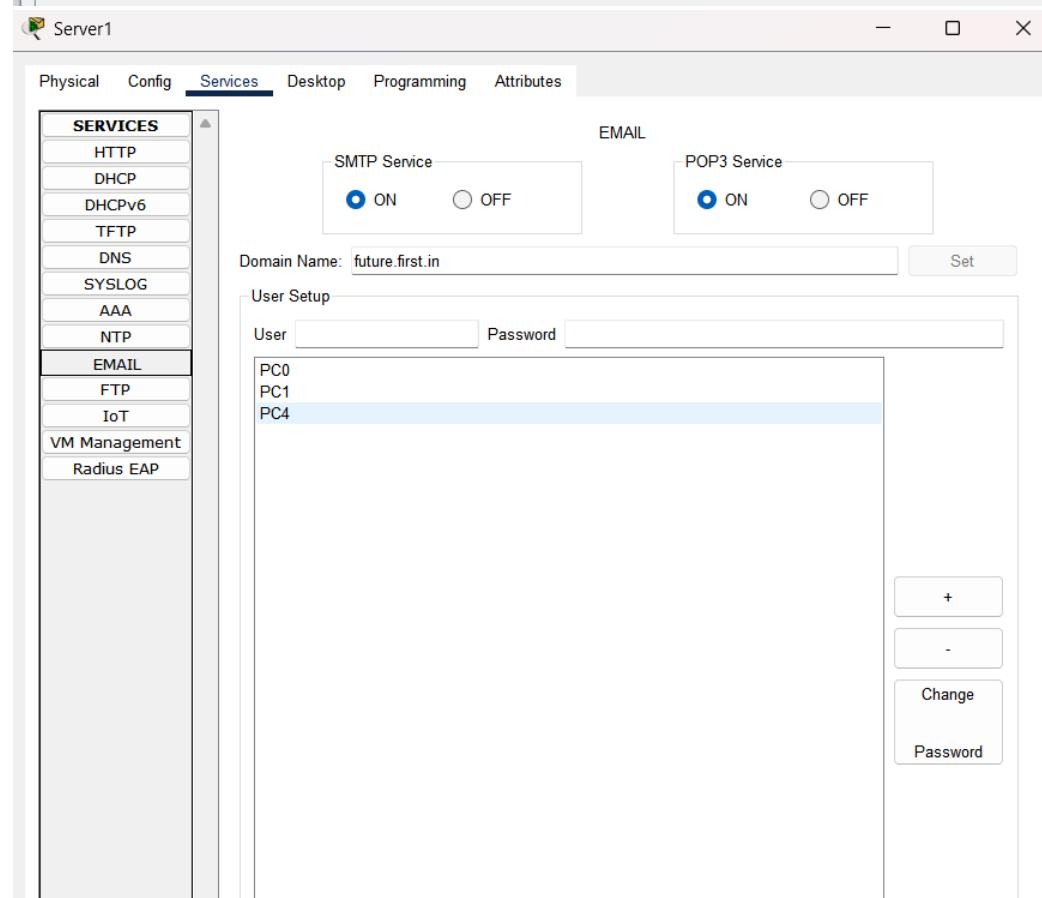
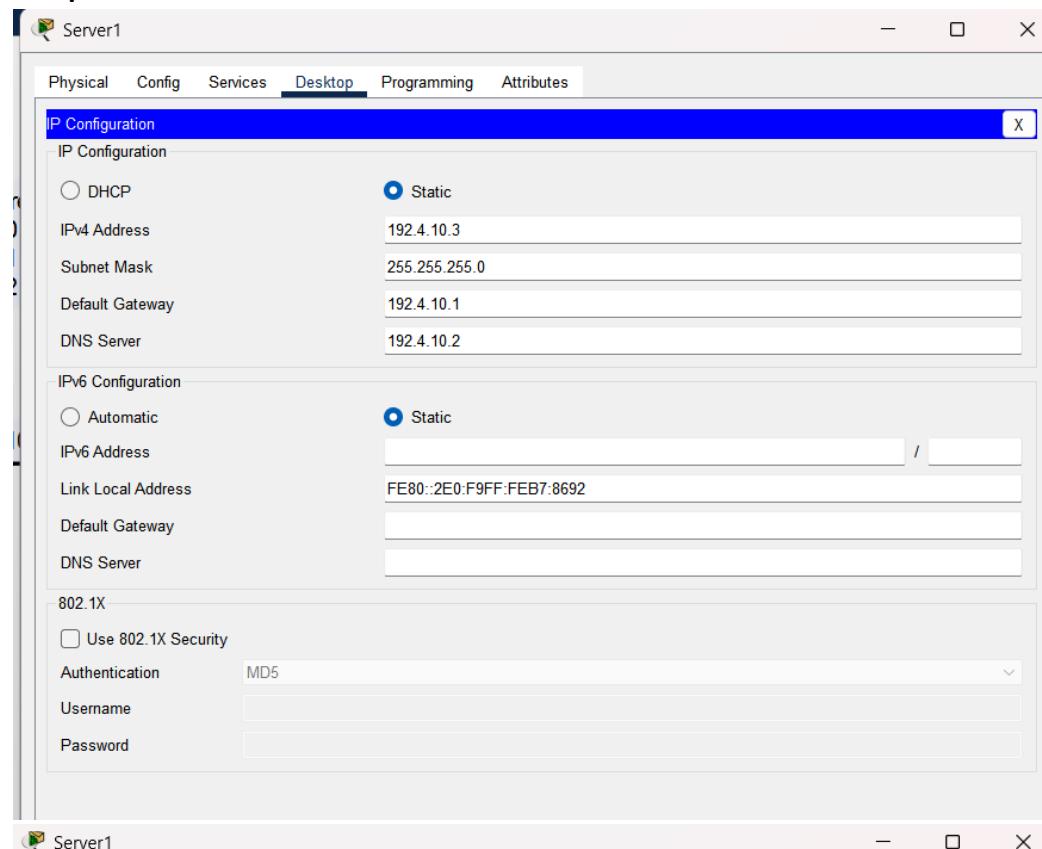
**Bottom Window (Services):**

- Services List:** A sidebar on the left lists various services: HTTP, DHCP, DHCPv6, TFTP, DNS, SYSLOG, AAA, NTP, EMAIL, FTP, IoT, VM Management, and Radius EAP. The **DNS** service is currently selected.
- DNS Configuration:**
  - DNS Service:** Set to **On**.
  - Resource Records:** A table showing two entries:

No.	Name	Type	Detail
0	future.first.in	A Record	192.4.10.3
1	future.second.in	A Record	192.4.20.3
  - Buttons:** Add, Save, Remove.

### 3. SMTP

#### a. Department A



## b. Department B

The screenshot shows two windows of the Server3 management interface.

**Top Window (Services Tab):**

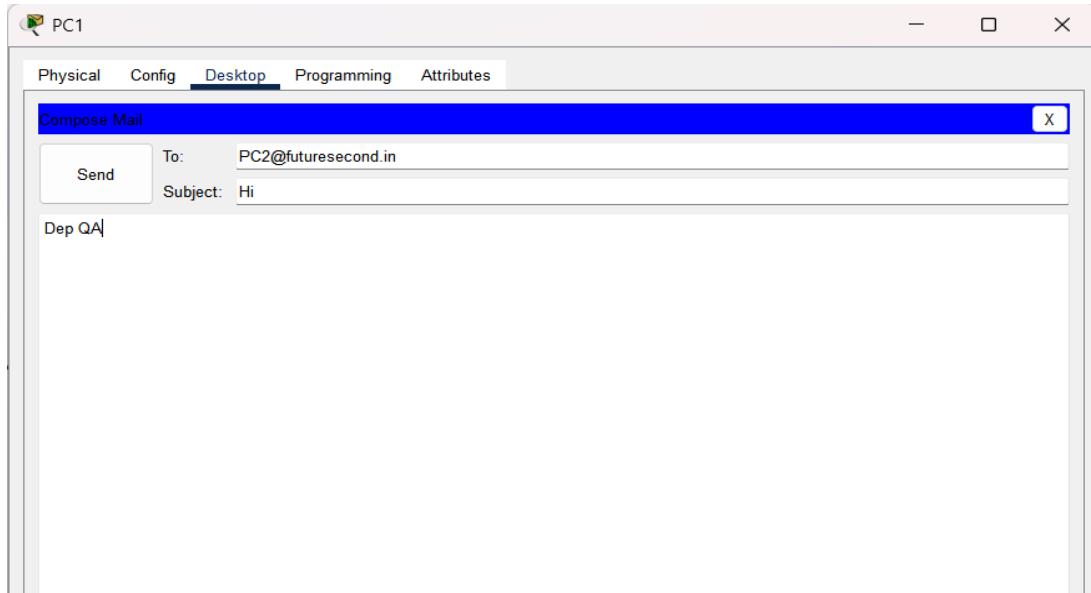
- Left Sidebar:** SERVICES (HTTP, DHCP, DHCPv6, TFTP, DNS, SYSLOG, AAA, NTP), EMAIL (selected), FTP, IoT, VM Management, Radius EAP.
- Right Panel:** SMTP Service (ON), POP3 Service (ON). Domain Name: future.second.in. User Setup: User PC2, Password PC3. Buttons: +, -, Change, Password.

**Bottom Window (Desktop Tab):**

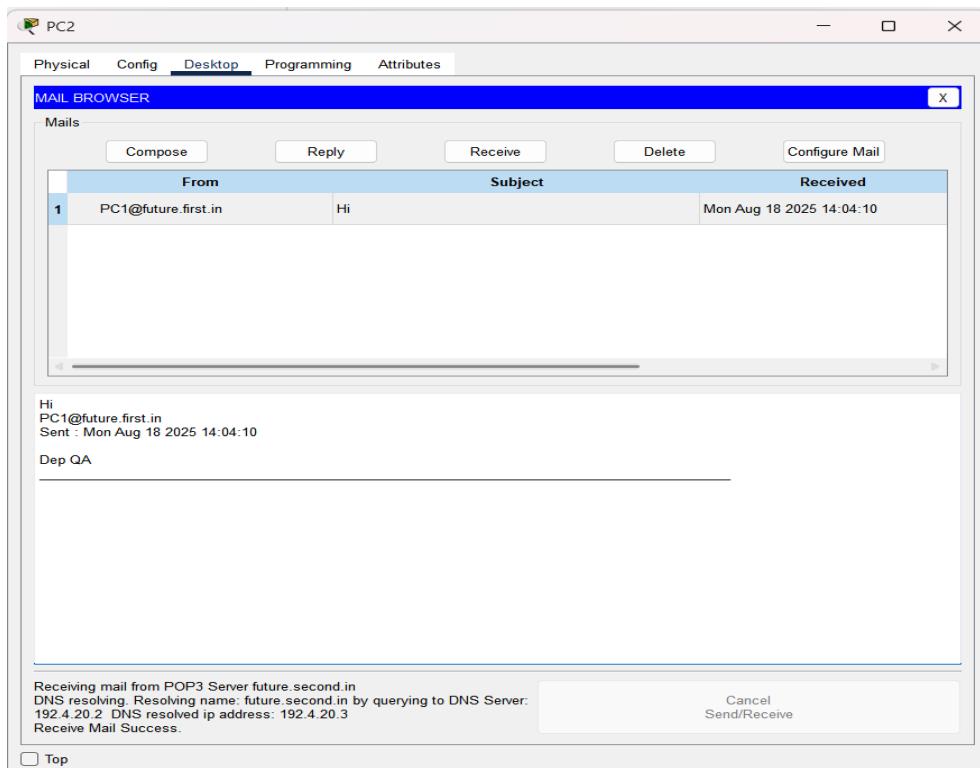
- IP Configuration:** IP Configuration tab selected. Options: DHCP (radio button), Static (radio button, selected). Fields: IPv4 Address (192.4.20.3), Subnet Mask (255.255.255.0), Default Gateway (192.4.20.1), DNS Server (192.4.20.2). IPv6 Configuration tab: Automatic (radio button), Static (radio button, selected). Fields: IPv6 Address, Link Local Address (FE80::2E0:8FFF:FE32:7CCD), Default Gateway, DNS Server.
- 802.1X:** Use 802.1X Security (checkbox), Authentication (MD5), Username, Password.

Output:-PC1->PC2

PC1->Sender Side PC



PC2-> Receivers Side PC



Conclusion:- I learned to configure an SMTP server and enable secure email communication within the organization.