

INSTITUTE OF COMPUTER TECHNOLOGY
B. TECH COMPUTER SCIENCE AND ENGINEERING

Subject: Computer Networks[CN]

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SEM : 5

Class : A

Batch : 52 (CS)

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.

Note:

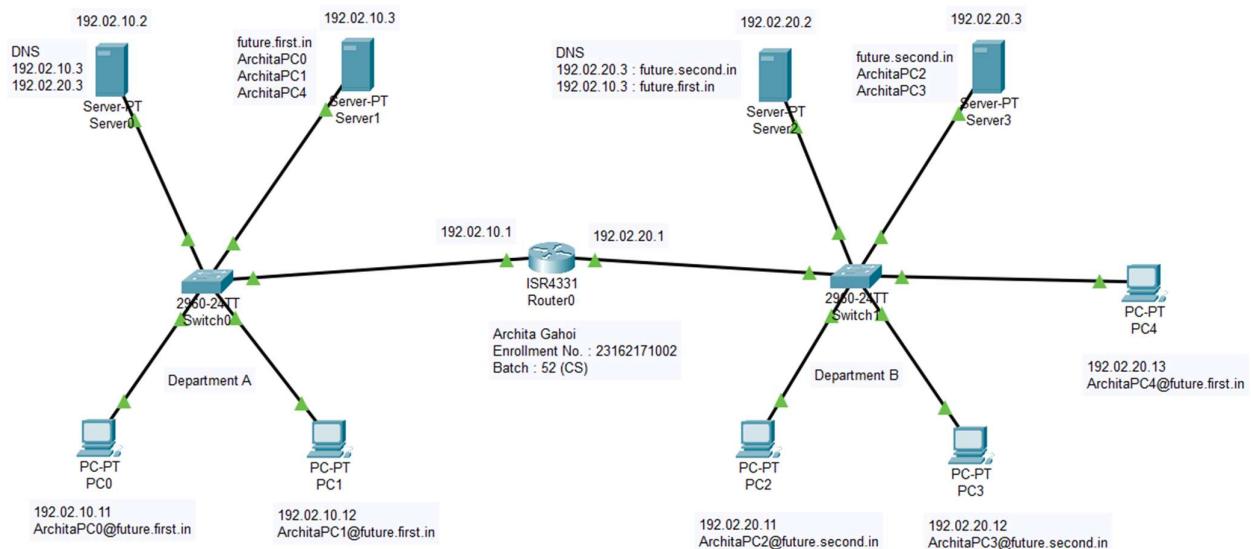
Make sure last two digits of your enrollment numbers appears in network IP address that must be visible in snapshot of the cisco packet tracer. i.e. 192. XX .10.1 (XX indicates last two digits of your enrollment no.)

Configuration:

1. IP CONFIG
2. ALL DNS CONFIG
3. ALL SMTP SERVER CONFIG

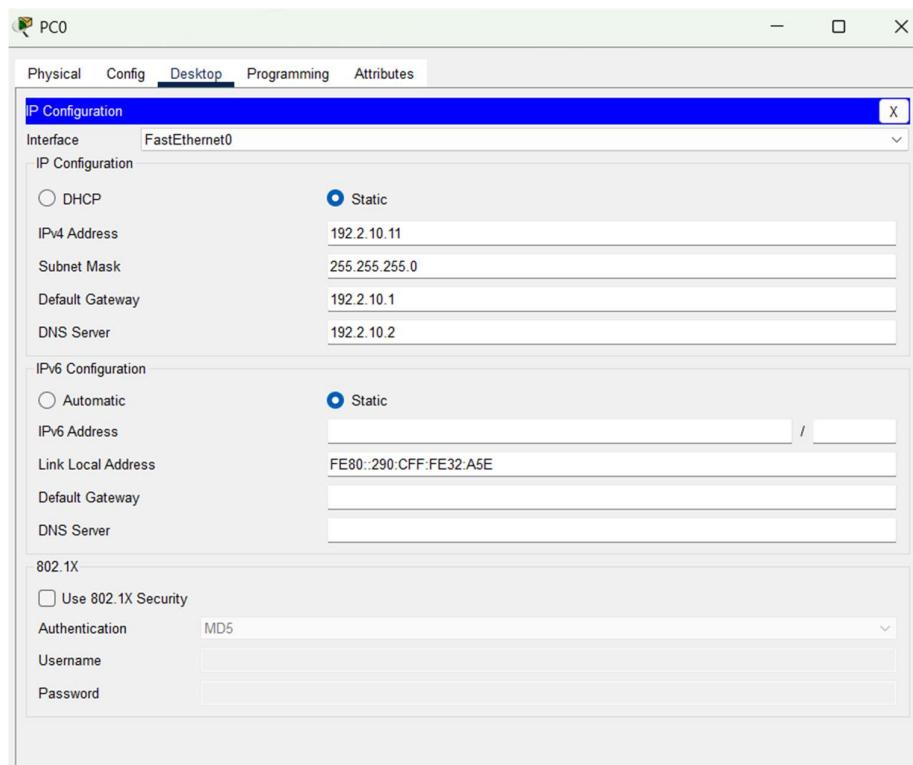
Output:

⇒ Main Circuit



1] IP CONFIG

○ PC0



PC0

Physical Config Desktop Programming Attributes

Configure Mail

User Information

Your Name: ArchitaPC0

Email Address: ArchitaPC0@future.first.in

Server Information

Incoming Mail Server: mail.future.first.in

Outgoing Mail Server: mail.future.first.in

Logon Information

User Name: ArchitaPC0

Password: *****

2] DNS Config

- Server 0 – DNS

Server0

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		
<input type="text"/>	A Record		
<input type="text"/>	<input type="button" value="Add"/> <input type="button" value="Save"/> <input type="button" value="Remove"/>		
No.	Name	Type	Detail
0	future.first.in	A Record	192.2.10.3
1	future.second.in	A Record	192.2.20.3
2	mail.future.first.in	A Record	192.2.10.3
3	mail.future.second.in	A Record	192.2.20.3

- Server 2 – DNS

The screenshot shows the 'Services' tab selected in a software interface for 'Server2'. On the left, a sidebar 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. The main panel is titled 'DNS' and contains settings for the 'DNS Service' (status: On) and a table of 'Resource Records'. The table has columns: No., Name, Type, and Detail. It lists four entries:

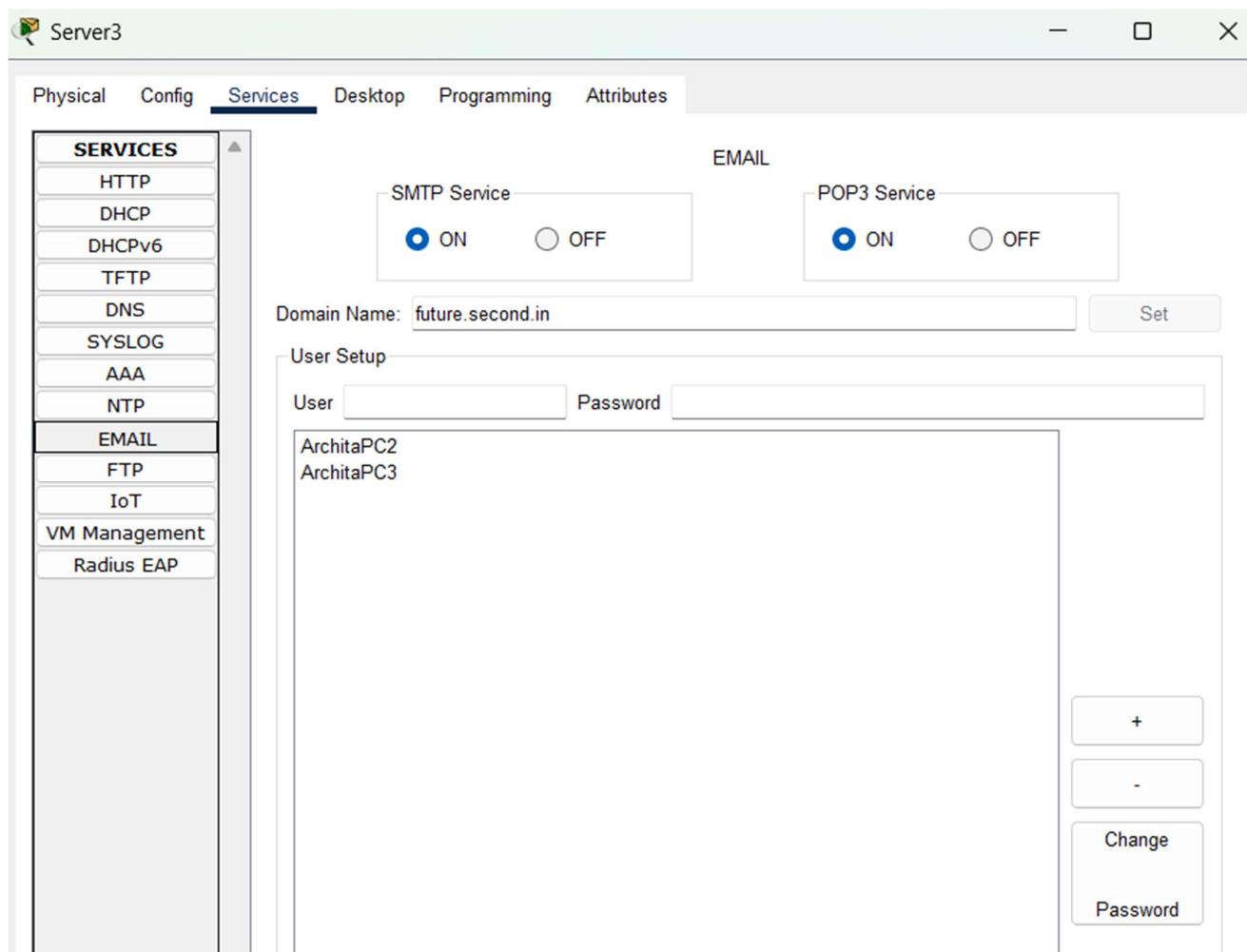
No.	Name	Type	Detail
0	future.first.in	A Record	192.2.10.3
1	future.second.in	A Record	192.2.20.3
2	mail.future.first.in	A Record	192.2.10.3
3	mail.future.second.in	A Record	192.2.20.3

3] SMTP Config

- Server 1 – SMTP

The screenshot shows the 'Services' tab selected in a software interface for 'Server1'. On the left, a sidebar lists various services: HTTP, DHCP, DHCPv6, TFTP, DNS, SYSLOG, AAA, NTP, EMAIL, FTP, IoT, VM Management, and Radius EAP. The 'EMAIL' service is currently selected. The main panel is titled 'EMAIL' and contains settings for the 'SMTP Service' (status: ON) and 'POP3 Service' (status: ON). It also includes fields for 'Domain Name' (set to 'future.first.in') and 'User Setup' (listing users: ArchitaPC0, ArchitaPC1, ArchitaPC4). On the right side, there are buttons for managing user lists: '+', '−', 'Change', and 'Password'.

○ Server 3 – SMTP



⇒ Mail Transfer from PC0 TO PC2

The screenshot shows a desktop environment with a window titled "MAIL BROWSER". The window has tabs at the top: Physical, Config, Desktop (which is selected), Programming, and Attributes. Below the tabs is a toolbar with buttons for Compose, Reply, Receive, Delete, and Configure Mail. The main area displays a list of received emails:

	From	Subject	Received
1	ArchitaPC0@future.first.in	sending mail to PC2 from PC0 - Department A	Mon Aug 18 2025 19:15:01
2	ArchitaPC0@future.first.in	hello	Mon Aug 18 2025 19:14:37
3	ArchitaPC0@future.first.in	hello	Mon Aug 18 2025 19:24:56

Below the table, there is a preview of the first email:

sending mail to PC2 from PC0 - Department A
ArchitaPC0@future.first.in
Sent : Mon Aug 18 2025 19:15:01

At the bottom left, a message box displays:

Receiving mail from POP3 Server mail.future.second.in
DNS resolving. Resolving name: mail.future.second.in by querying to DNS Server:
192.2.20.2 DNS resolved ip address: 192.2.20.3
Receive Mail Success.

At the bottom right of the message box are buttons for Cancel and Send/Receive.

At the very bottom left is a "Top" button.

Conclusion:

The configuration of the Mail Server (SMTP) was successfully demonstrated, enabling the sending and management of emails over a network. This experiment helped understand the working of SMTP protocol and its role in reliable email communication.