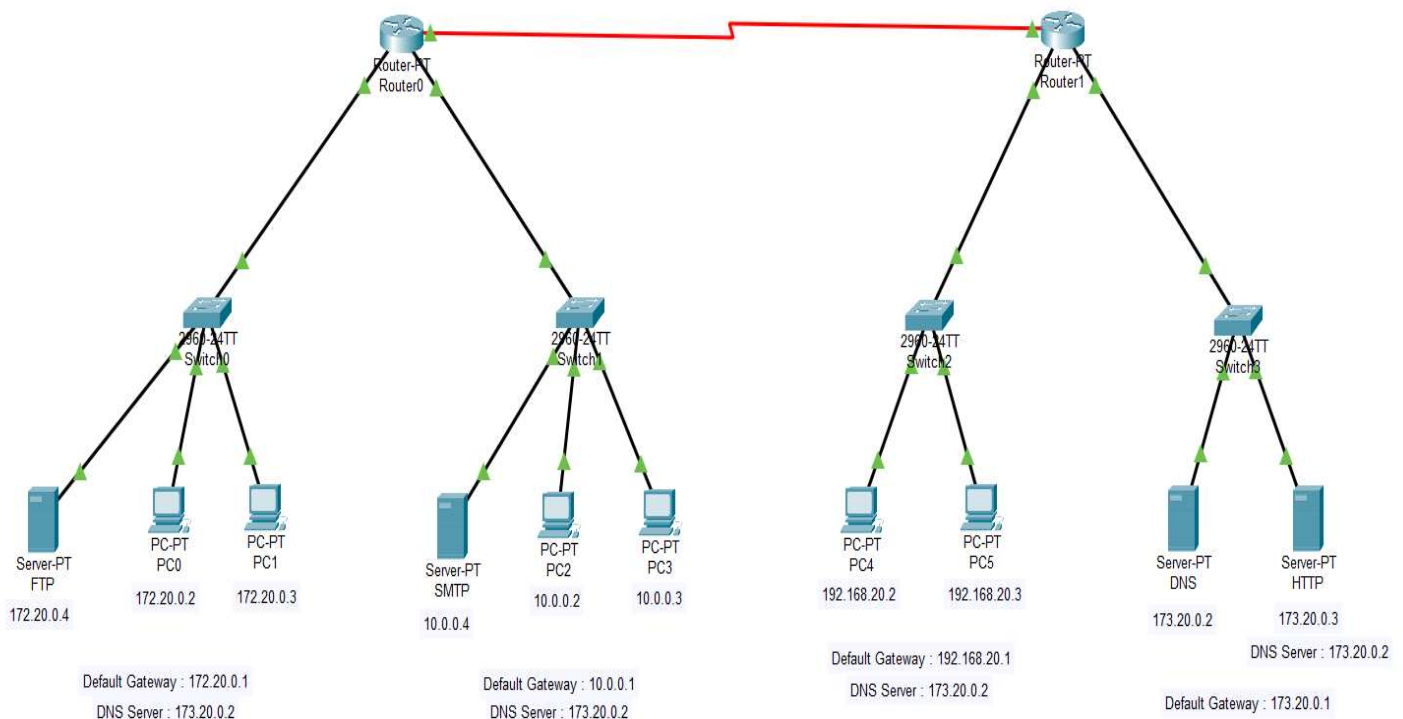


Question :

HTTP, FTP, DNS and SMTP Configuration

Configuration :

First, we have added 6 PCs and 4 Servers (Server-PT) along with 4 switches (2960-24TT) and 2 Routers (Router-PT) in the network.



The IP Addresses for the PCs and Servers under separate switches are set.

The default gateway for the components of each switch is set.

The Switches, Routers, Servers and PCs are all connected using Copper Straight-through (Interface FastEthernet) while the interconnection between routers is done using Serial DCE (Interface Serial).

For Router0 :

IP Address of FastEthernet 0/0 is the default gateway of Switch0 components
i.e., 172.20.0.1

IP Address of FastEthernet 1/0 is the default gateway of Switch1 components
i.e., 10.0.0.1

For Router1 :

IP Address of FastEthernet 0/0 is the default gateway of Switch2 components
i.e., 172.20.0.1

IP Address of FastEthernet 1/0 is the default gateway of Switch3 components
i.e., 173.20.0.1

The one end of interconnection between the routers is set as 11.0.0.1 and the
other end is set as 11.0.0.2.

For Router 0 :

IP Address of Serial 2/0 is 11.0.0.1

In Static Route, 192.168.20.0 255.255.255.0 11.0.0.2

173.20.0.0 255.255.255.0 11.0.0.2

11.0.0.0 255.0.0.0 11.0.0.2

12.0.0.0 255.0.0.0 11.0.0.2 are added.

For Router 1 :

IP Address of Serial 2/0 is 11.0.0.2

In Static Route, 172.20.0.0 255.255.255.0 11.0.0.1

10.0.0.0 255.255.255.0 11.0.0.1

11.0.0.0 255.0.0.0 11.0.0.1

12.0.0.0 255.0.0.0 11.0.0.1 are added.

Configuring HTTP and DNS Servers :

All the services of HTTP Server except HTTP and HTTPS Services are turned OFF.

All the services of DNS Server except DNS Service are turned OFF.

In DNS Server, a record of 'www.abc.com' is added in DNS service. The IP Address of HTTP Server is set as the address of this record. This record is added.

No.	Name	Type	Detail
0	www.abc.com	A Record	173.20.0.3

The IP Address of DNS Server is set as the DNS Server address for all the other Servers and all the PCs.

To check if the HTTP and DNS servers are working or not :

Ping their domain name from any PC.

Execute the command 'ping www.abc.com' in the cmd of any of the PCs and thus we can verify the working of DNS server.

```
C:\>ping www.abc.com

Pinging 173.20.0.3 with 32 bytes of data:

Reply from 173.20.0.3: bytes=32 time<1ms TTL=127
Reply from 173.20.0.3: bytes=32 time<1ms TTL=127
Reply from 173.20.0.3: bytes=32 time<1ms TTL=127
Reply from 173.20.0.3: bytes=32 time<1ms TTL=127

Ping statistics for 173.20.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Ping results from PC4

Browsing the domain from any of the PCs checks the working of HTTP server.



Browse results from PC4

Thus, both the HTTP and DNS servers are working.

Configuring FTP Server :

All the services of FTP Server except FTP service are turned OFF.

In the FTP service of the FTP server, user setup is made. A user of username 'student' and password '123' with permissions RWDNL is added.

To check if the FTP server is working or not :

Ping the ftp server ip address from any of the PCs.

```
C:\>ping 172.20.0.4

Pinging 172.20.0.4 with 32 bytes of data:

Reply from 172.20.0.4: bytes=32 time<1ms TTL=127
Reply from 172.20.0.4: bytes=32 time<1ms TTL=127
Reply from 172.20.0.4: bytes=32 time=1ms TTL=127
Reply from 172.20.0.4: bytes=32 time=1ms TTL=127

Ping statistics for 172.20.0.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

Ping results from PC2.

Thus, the FTP server is working.

Now access ftp server from any PC.

```
C:\>ftp 172.20.0.4
Trying to connect...172.20.0.4
Connected to 172.20.0.4
220- Welcome to PT Ftp server
Username:student
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>?
?
cd
delete
dir
get
help
passive
put
pwd
quit
rename
```

```

ftp>dir

Listing /ftp directory from 172.20.0.4:
0  : asa842-k8.bin                5571584
1  : asa923-k8.bin                30468096
2  : cl841-advipservicesk9-mz.124-15.T1.bin  33591768
3  : cl841-ipbase-mz.123-14.T7.bin  13832032
4  : cl841-ipbasek9-mz.124-12.bin  16599160
5  : cl900-universalk9-mz.SPA.155-3.M4a.bin  33591768
6  : c2600-advipservicesk9-mz.124-15.T1.bin  33591768
7  : c2600-i-mz.122-28.bin        5571584
8  : c2600-ipbasek9-mz.124-8.bin   13169700
9  : c2800nm-advipservicesk9-mz.124-15.T1.bin  50938004
10 : c2800nm-advipservicesk9-mz.151-4.M4.bin  33591768
11 : c2800nm-ipbase-mz.123-14.T7.bin  5571584
12 : c2800nm-ipbasek9-mz.124-8.bin  15522644
13 : c2900-universalk9-mz.SPA.155-3.M4a.bin  33591768
14 : c2950-i6q412-mz.121-22.EA4.bin  3058048
15 : c2950-i6q412-mz.121-22.EA8.bin  3117390
16 : c2960-lanbase-mz.122-25.FX.bin  4414921
17 : c2960-lanbase-mz.122-25.SEE1.bin  4670455
18 : c2960-lanbasek9-mz.150-2.SE4.bin  4670455
19 : c3560-advipservicesk9-mz.122-37.SE1.bin  8662192
20 : c3560-advipservicesk9-mz.122-46.SE.bin  10713279
21 : c800-universalk9-mz.SPA.152-4.M4.bin  33591768
22 : c800-universalk9-mz.SPA.154-3.M6a.bin  83029236
23 : cat3k_caa-universalk9.16.03.02.SPA.bin  505532849
24 : cg1000-universalk9-mz.SPA.154-2.CG  159487552
25 : cg1000-universalk9-mz.SPA.156-3.CG  184530138
26 : ir800-universalk9-bundle.SPA.156-3.M.bin  160968869
27 : ir800-universalk9-mz.SPA.155-3.M  61750062
28 : ir800-universalk9-mz.SPA.156-3.M  63753767
29 : ir800_yocto-1.7.2.tar           2877440
30 : ir800_yocto-1.7.2_python-2.7.3.tar  6912000
31 : pt1000-i-mz.122-28.bin          5571584
32 : pt3000-i6q412-mz.121-22.EA4.bin  3117390
ftp>quit

221- Service closing control connection.

```

Successful Access Trial.

Configuring SMTP Server :

All the services of SMTP Server except EMail service are turned OFF.

In the SMTP service, domain name of 'abc.com' is set, users with username 'pc1' and 'pc2' with passwords '123' and '123' respectively are added.

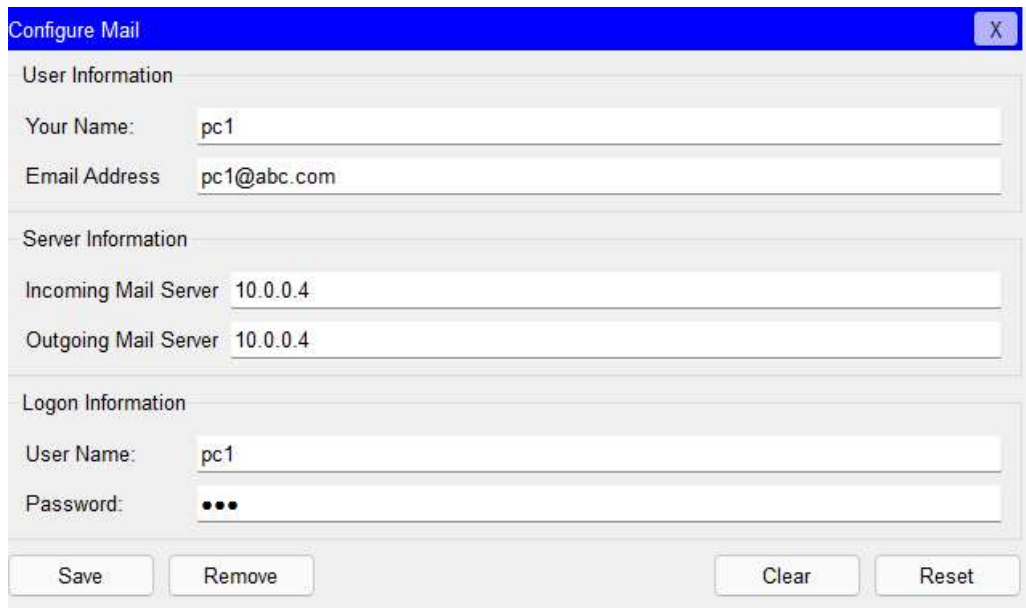
Domain Name:

User Setup

User	Password
pc1	
pc2	

Next step is to configure PC email service.

In PC1, Option 'Email' of Desktop is selected.



Configure Mail [X]

User Information

Your Name:

Email Address:

Server Information

Incoming Mail Server:

Outgoing Mail Server:

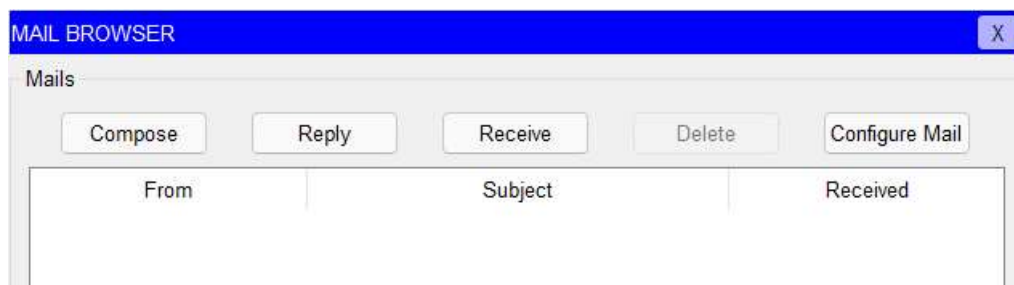
Logon Information

User Name:

Password:

Save Remove Clear Reset

User Name and Email Address, IP address of SMTP Server and Login Info with password '123' is set.



MAIL BROWSER [X]

Mails

Compose Reply Receive Delete Configure Mail

From	Subject	Received
------	---------	----------

Mail Browser appears indicating establishing of mail for PC1 is successful.

Same Procedure is adopted and executed for PC2.

Working of mail services is verified by sending mails between the two PCs.

Mail sent from PC2 to PC1 :

Sending mail to pc1@abc.com , with subject :
Introduction ... Mail Server: 10.0.0.4
Send Success.

Mail received by PC1 :



Mails

Compose Reply Receive Delete Configure Mail

	From	Subject	Received
1	pc2@abc.com	Introduction	Mon Apr 25 2022 02:31:52

PC1 sending reply to PC2 :



Reply Mail

Send To: pc2@abc.com

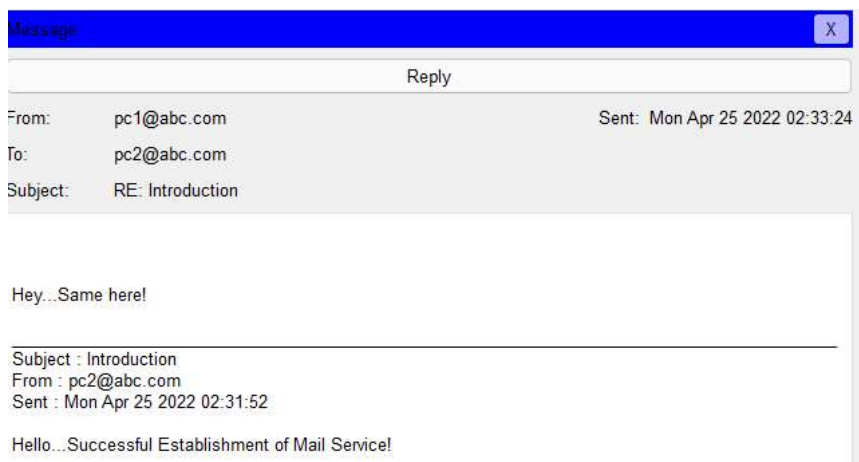
Subject: RE: Introduction

Hey...Same here!

Subject : Introduction
From : pc2@abc.com
Sent : Mon Apr 25 2022 02:31:52

Hello...Successful Establishment of Mail Service!

Reply Mail received by PC2 :



Message

Reply

From: pc1@abc.com Sent: Mon Apr 25 2022 02:33:24

To: pc2@abc.com

Subject: RE: Introduction

Hey...Same here!

Subject : Introduction
From : pc2@abc.com
Sent : Mon Apr 25 2022 02:31:52

Hello...Successful Establishment of Mail Service!

Thus, we have configured the HTTP, FTP, DNS and SMTP Services.

-----Thank you-----