



VIT[®]

Vellore Institute of Technology

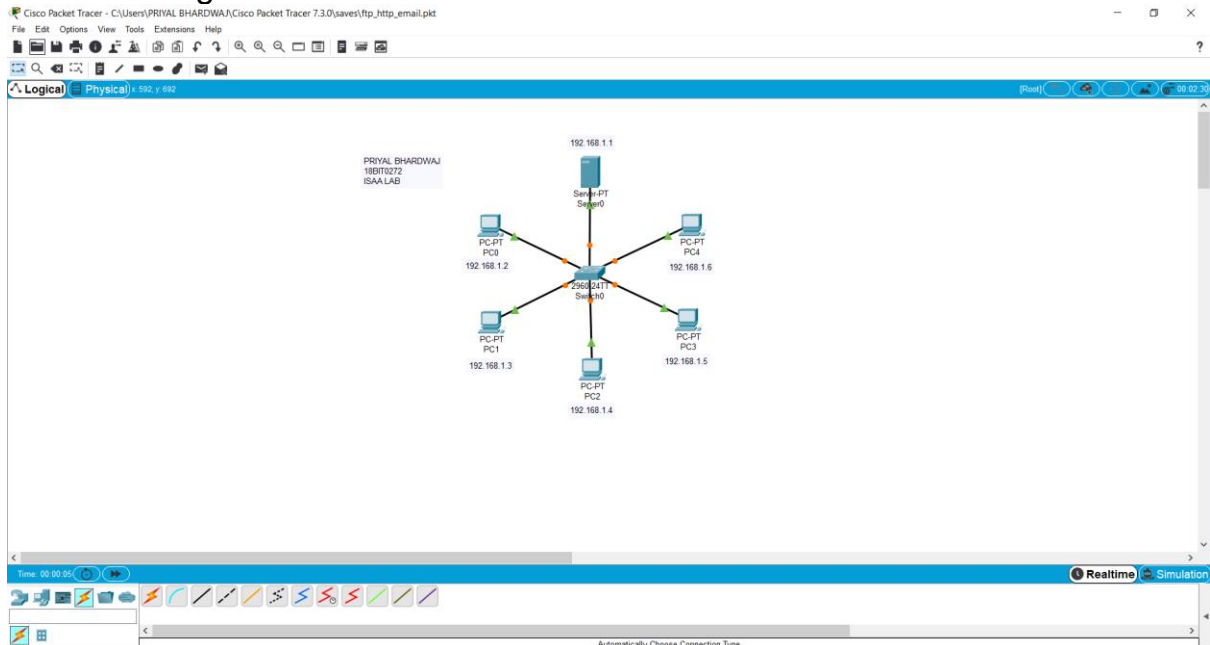
(Deemed to be University under section 3 of UGC Act, 1956)

School of Information Technology and Engineering
Lab Assessment-II, AUGUST 2020
B.Tech., Fall-2020-2021

NAME	PRIYAL BHARDWAJ
REG. NO.	18BIT0272
COURSE CODE	CSE3501
COURSE NAME	INFORMATION SECURITY ANALYSIS & AUDIT
SLOT	L19+L20
FACULTY	Prof. THANDEESWARAN R.

Using Cisco Packet Tracer simulation tool, complete the following tasks:
Draw a network of 5 PCs, Server and connecting device(s) like Switch to configure various servers (FTP, HTTP, EMAIL SERVER and DHCP).

Network Diagram:



PCs IP Configuration:

PC0

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 192.168.1.2

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::290:CFF:FED0:4B0

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

☐ Top

Server IP Configuration:

The screenshot shows the 'IP Configuration' window for 'Server0'. The 'Desktop' tab is selected. Under 'IP Configuration', 'Static' is selected. The fields are: IP Address (192.168.1.1), Subnet Mask (255.255.255.0), Default Gateway (0.0.0.0), and DNS Server (0.0.0.0). Under 'IPv6 Configuration', 'Static' is selected. The fields are: IPv6 Address (empty), Link Local Address (FE80::2E0:F9FF:FE61:9B04), IPv6 Gateway (empty), and IPv6 DNS Server (empty). Under '802.1X', 'Use 802.1X Security' is unchecked and 'Authentication' is set to 'MD5'. A 'Top' button is at the bottom left.

IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

IPv6 Configuration		
<input type="radio"/> DHCP	<input type="radio"/> Auto Config	<input checked="" type="radio"/> Static
IPv6 Address		
Link Local Address	FE80::2E0:F9FF:FE61:9B04	
IPv6 Gateway		
IPv6 DNS Server		

802.1X	
<input type="checkbox"/> Use 802.1X Security	
Authentication	MD5

☐ Top

Creating 2 users in FTP Server:

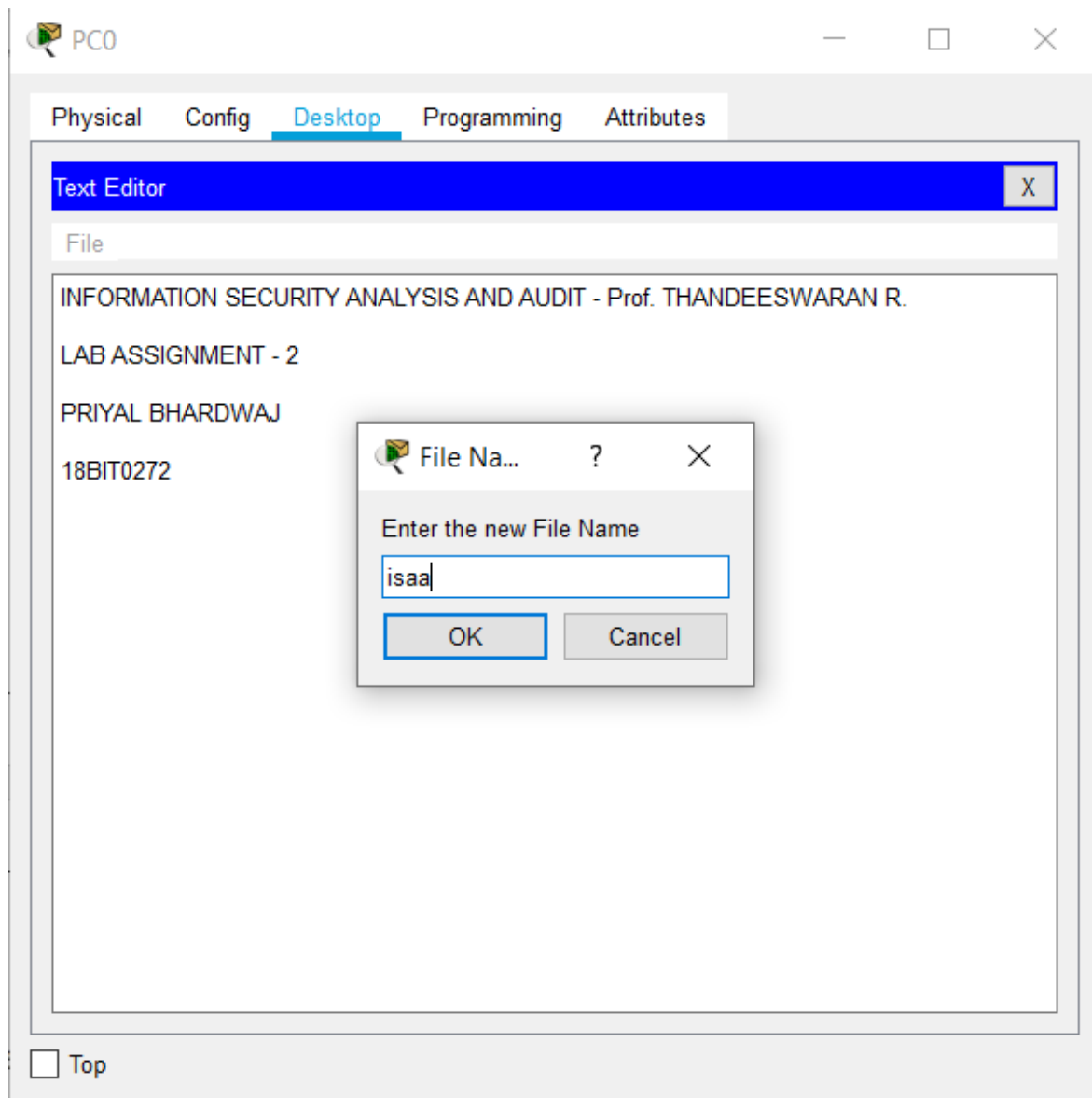
The screenshot shows the 'Services' window for 'Server0'. The 'Services' tab is selected. In the 'SERVICES' list on the left, 'FTP' is highlighted. On the right, the 'FTP' service is configured. The 'Service' is set to 'On'. Under 'User Setup', there are fields for 'Username' and 'Password'. Below these are checkboxes for 'Write', 'Read', 'Delete', 'Rename', and 'List'. A table lists three users: 'cisco' (password 'cisco', permission 'RWDNL'), 'user1' (password '123', permission 'RWDNL'), and 'user2' (password '456', permission 'RWDNL'). There are 'Add', 'Save', and 'Remove' buttons. Below the table is a 'File' list with three items: 'asa842-k8.bin', 'asa923-k8.bin', and 'c1841-advipservicesk9-mz.124-15.T1.bin'. There is a 'Remove' button at the bottom right. A 'Top' button is at the bottom left.

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

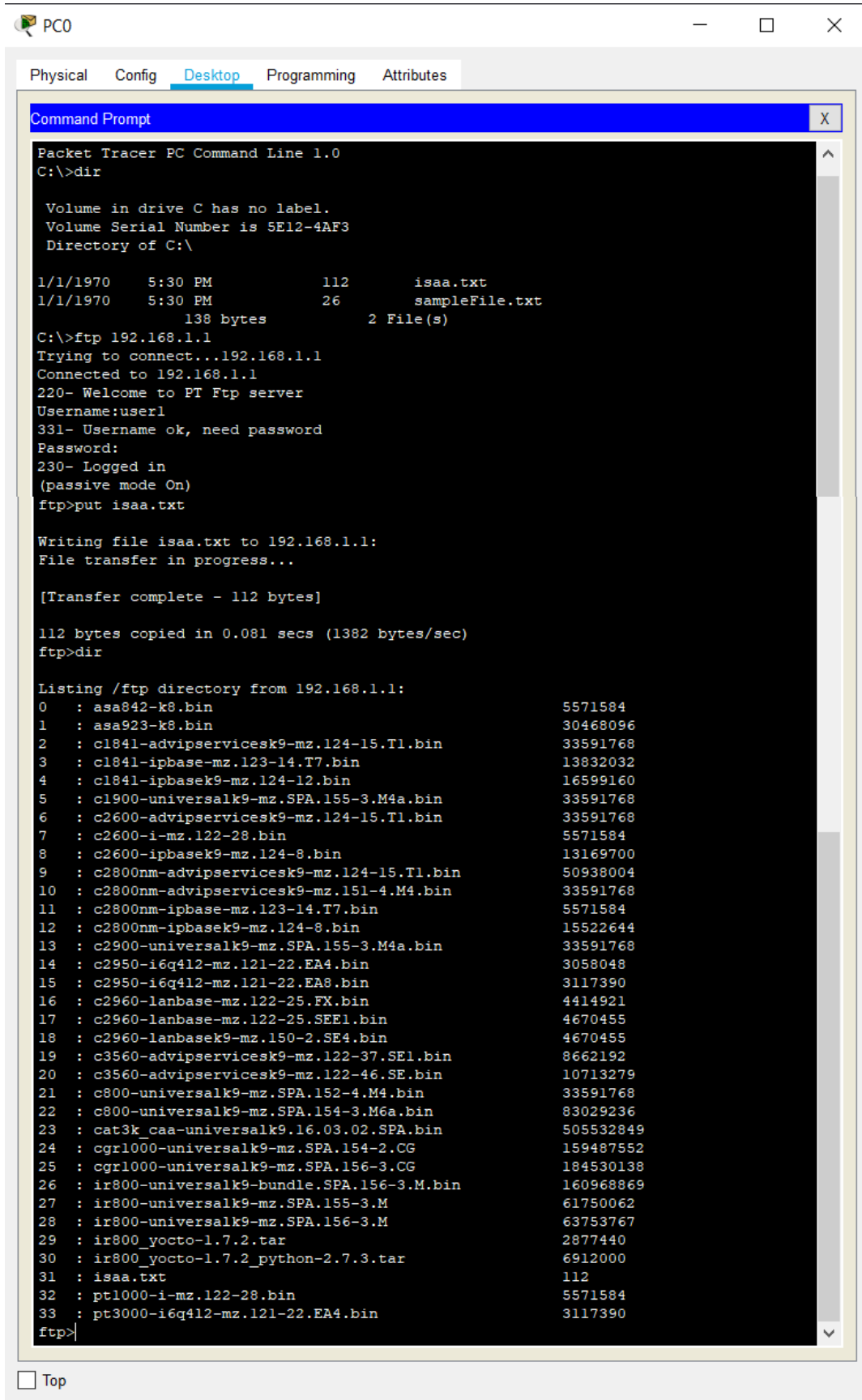
FTP				
Service	<input checked="" type="radio"/> On <input type="radio"/> Off			
User Setup				
Username	Password			
<input type="text"/>	<input type="text"/>			
<input type="checkbox"/> Write	<input type="checkbox"/> Read	<input type="checkbox"/> Delete	<input type="checkbox"/> Rename	<input type="checkbox"/> List
1	cisco	cisco	RWDNL	Add Save Remove
2	user1	123	RWDNL	
3	user2	456	RWDNL	
File				Remove
1	asa842-k8.bin			
2	asa923-k8.bin			
3	c1841-advipservicesk9-mz.124-15.T1.bin			

☐ Top

FTP Server: Creating new text file in PC0 by the name "isaa.txt"



Uploading "isaa.txt" to Server0 from PC0 using "put" command:



```
PC0
Physical Config Desktop Programming Attributes

Command Prompt
Packet Tracer PC Command Line 1.0
C:\>dir

Volume in drive C has no label.
Volume Serial Number is 5E12-4AF3
Directory of C:\

1/1/1970   5:30 PM           112      isaa.txt
1/1/1970   5:30 PM           26      sampleFile.txt
               138 bytes           2 File(s)

C:\>ftp 192.168.1.1
Trying to connect...192.168.1.1
Connected to 192.168.1.1
220- Welcome to PT Ftp server
Username:user1
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>put isaa.txt

Writing file isaa.txt to 192.168.1.1:
File transfer in progress...

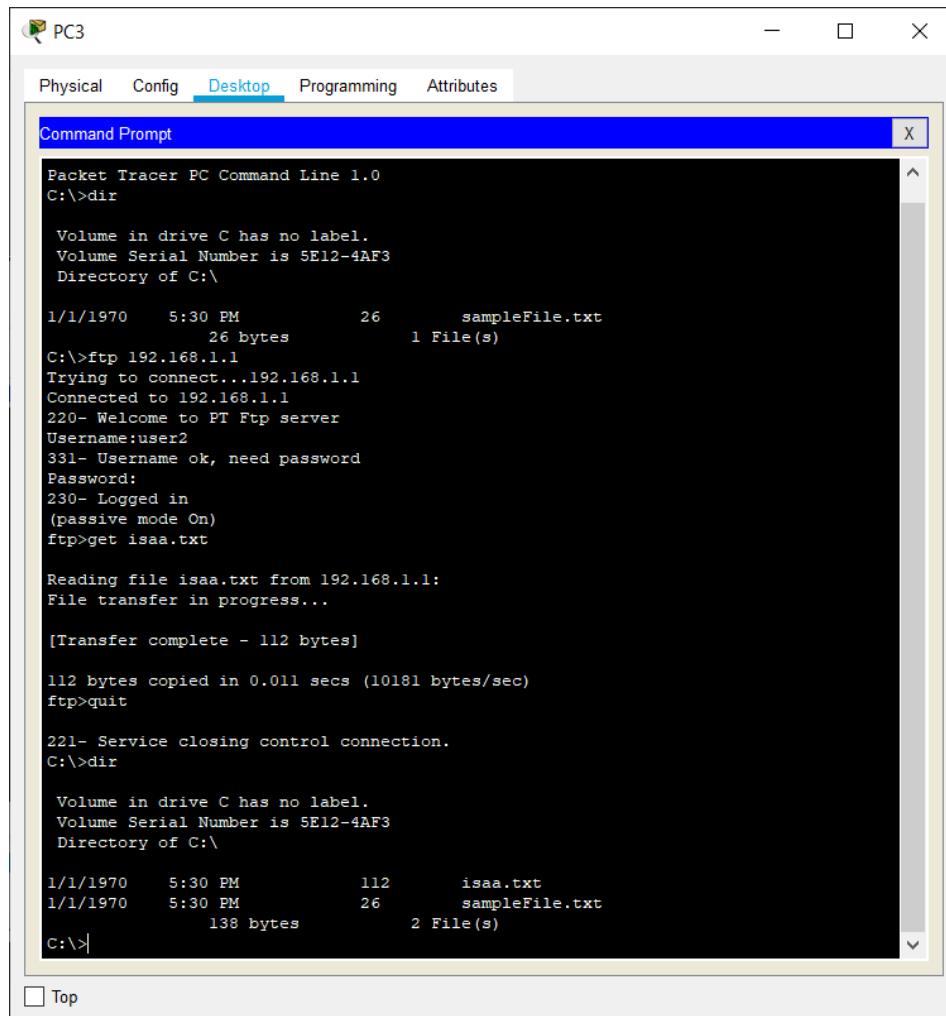
[Transfer complete - 112 bytes]

112 bytes copied in 0.081 secs (1382 bytes/sec)
ftp>dir

Listing /ftp directory from 192.168.1.1:
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  : cgr1000-universalk9-mz.SPA.154-2.CG  159487552
25  : cgr1000-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  : isaa.txt                           112
32  : pt1000-i-mz.122-28.bin              5571584
33  : pt3000-i6q412-mz.121-22.EA4.bin      3117390
ftp>
```

☐ Top

Downloading "isaa.txt" from Server0 in PC3 using "get" command:



The screenshot shows a Packet Tracer PC Command Line window for PC3. The user has navigated to the Desktop tab and opened a Command Prompt. The prompt shows the following sequence of commands and outputs:

```
Packet Tracer PC Command Line 1.0
C:\>dir

Volume in drive C has no label.
Volume Serial Number is 5E12-4AF3
Directory of C:\

1/1/1970    5:30 PM           26      sampleFile.txt
                26 bytes           1 File(s)
C:\>ftp 192.168.1.1
Trying to connect...192.168.1.1
Connected to 192.168.1.1
220- Welcome to FT Ftp server
Username:user2
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>get isaa.txt

Reading file isaa.txt from 192.168.1.1:
File transfer in progress...

[Transfer complete - 112 bytes]

112 bytes copied in 0.011 secs (10181 bytes/sec)
ftp>quit

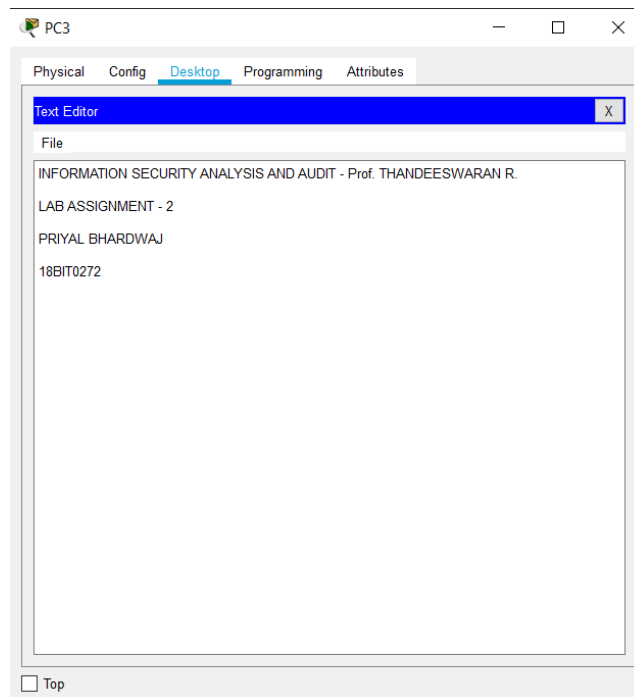
221- Service closing control connection.
C:\>dir

Volume in drive C has no label.
Volume Serial Number is 5E12-4AF3
Directory of C:\

1/1/1970    5:30 PM           112      isaa.txt
1/1/1970    5:30 PM           26      sampleFile.txt
                138 bytes           2 File(s)
```

At the bottom of the window, there is a "Top" button.

Contents of "isaa.txt" can be viewed from PC3 now:

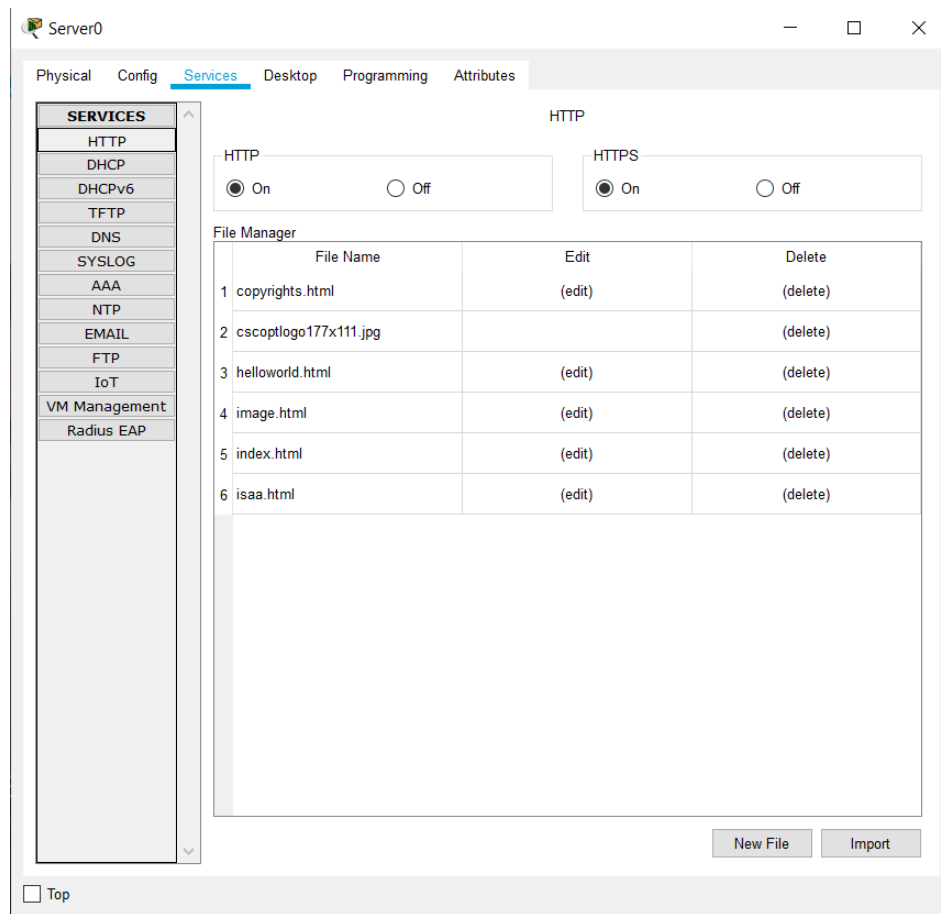


The screenshot shows the same Packet Tracer PC Command Line window for PC3, but now the Text Editor is open. The text editor displays the contents of the downloaded file "isaa.txt". The text is as follows:

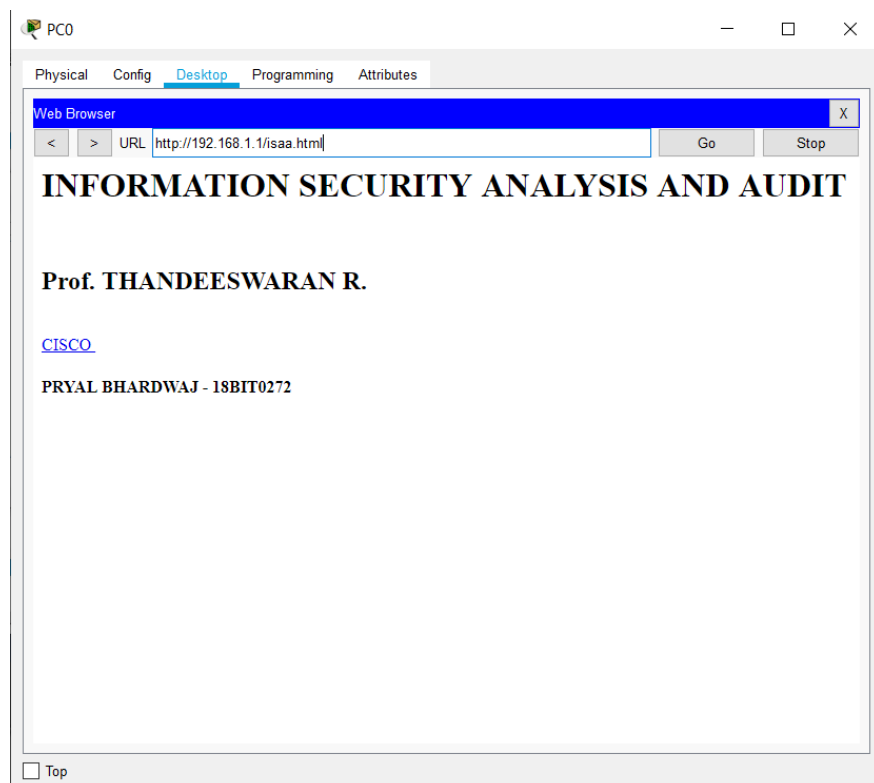
```
INFORMATION SECURITY ANALYSIS AND AUDIT - Prof. THANDEESWARAN R.
LAB ASSIGNMENT - 2
PRIYAL BHARDWAJ
18BIT0272
```

At the bottom of the window, there is a "Top" button.

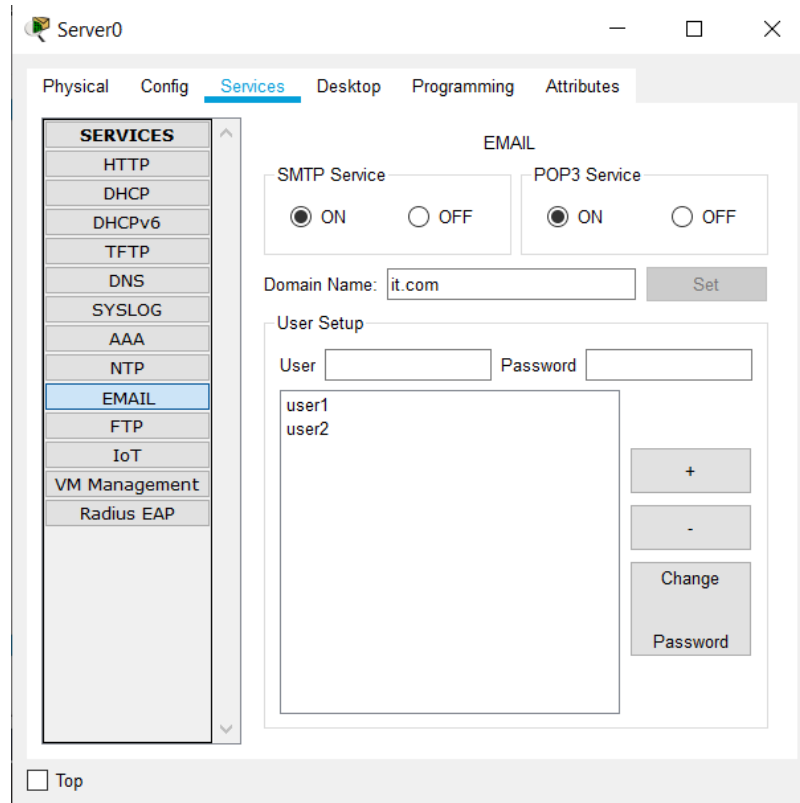
HTTP Server: Creating new html file “isaa.html” in Server0



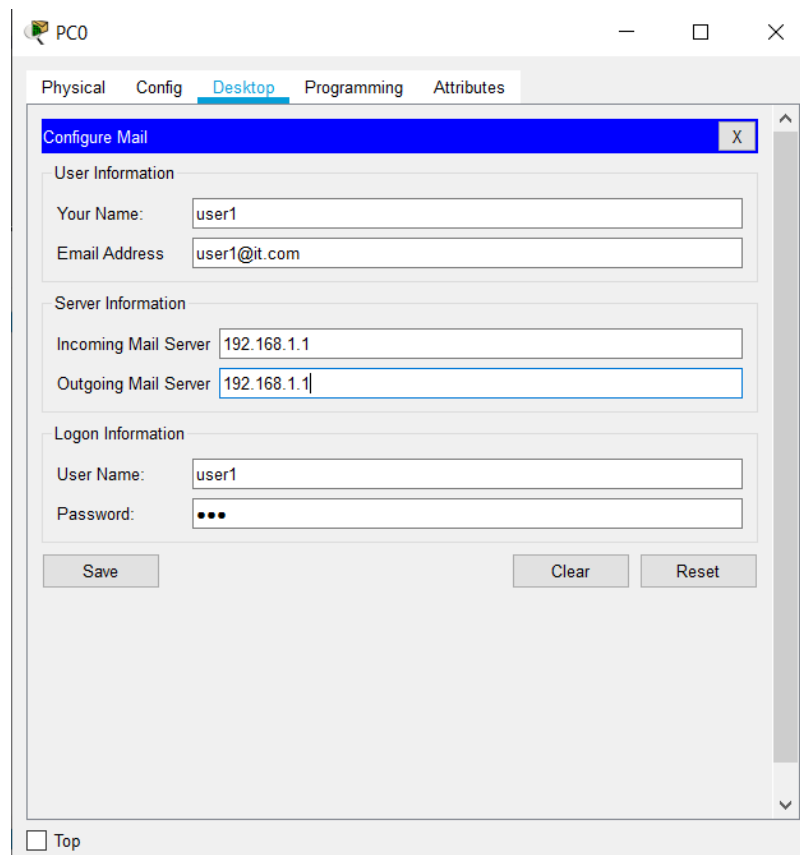
Viewing “isaa.html” from PC0 by giving Server URL - <http://192.168.1.1/isaa.html>



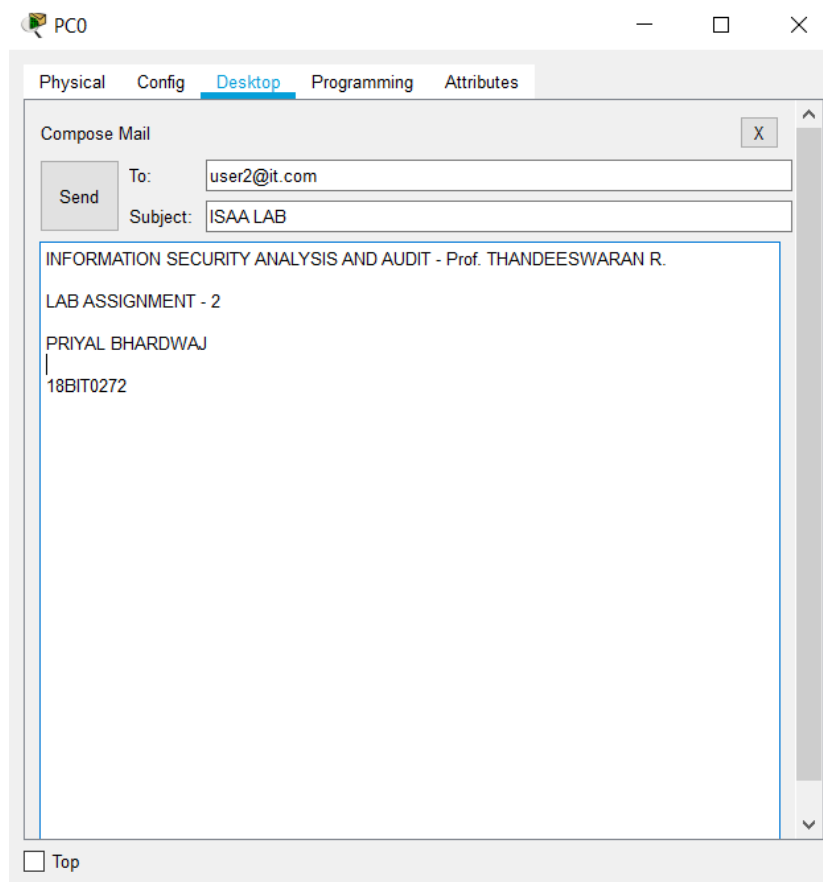
EMAIL Server: Setting domain as "it.com" and creating 2 users



Configure mail for user1 in PC0:



Sending email to user2:



PC0

Physical Config **Desktop** Programming Attributes

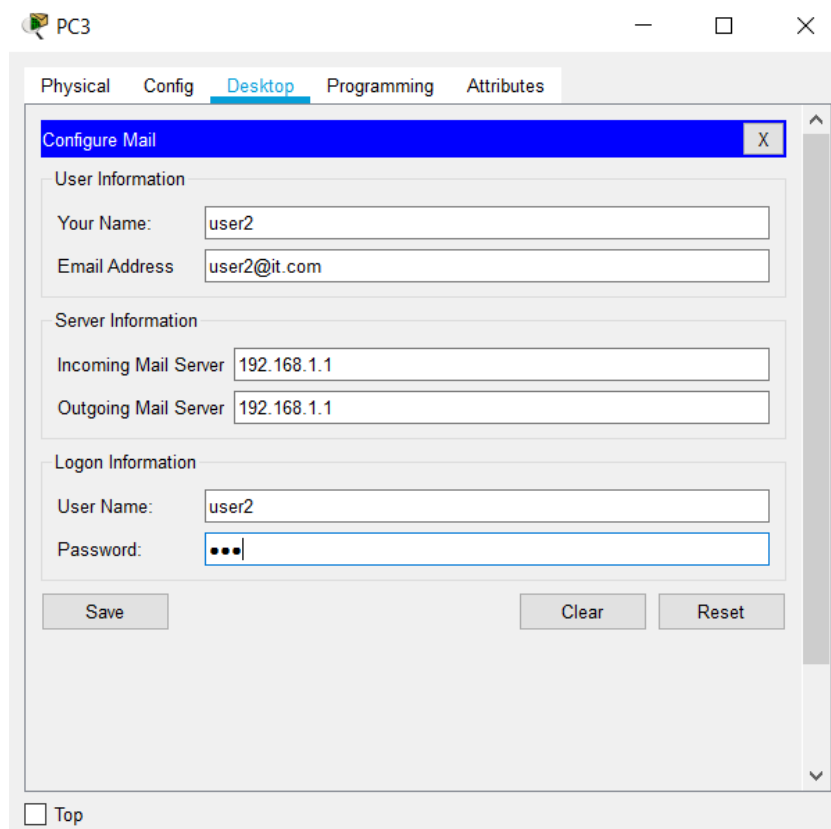
Compose Mail

Send To: user2@it.com Subject: ISAA LAB

INFORMATION SECURITY ANALYSIS AND AUDIT - Prof. THANDEESWARAN R.
LAB ASSIGNMENT - 2
PRIYAL BHARDWAJ
18BIT0272

☐ Top

Configure mail for user2 in PC3:



PC3

Physical Config **Desktop** Programming Attributes

Configure Mail

User Information

Your Name: user2

Email Address: user2@it.com

Server Information

Incoming Mail Server: 192.168.1.1

Outgoing Mail Server: 192.168.1.1

Logon Information

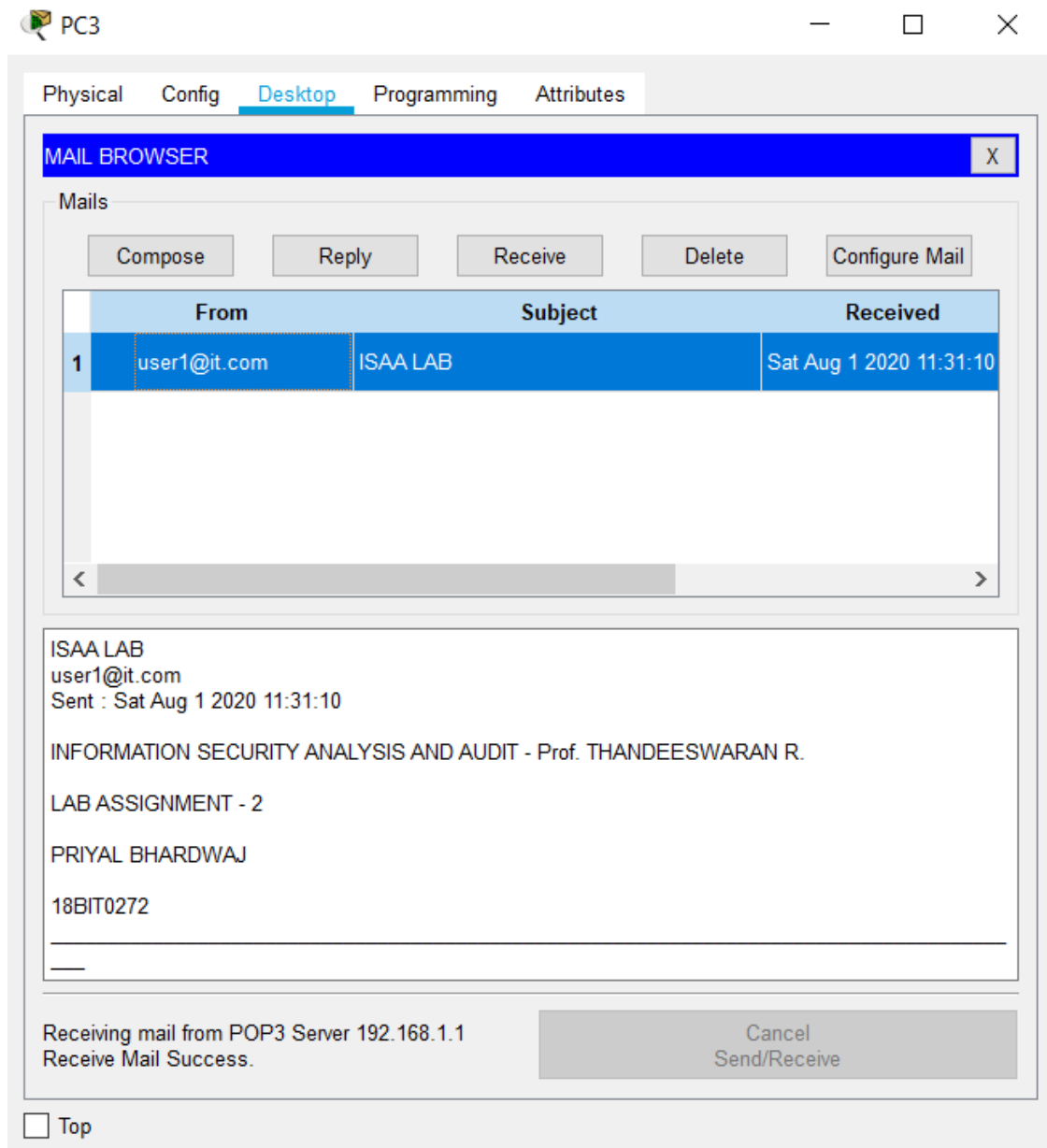
User Name: user2

Password: ...

Save Clear Reset

☐ Top

Viewing received mail from user1 in PC3:



Sending reply to user1 from user2 in PC3 and viewing the reply in PC0:

PC0

Physical Config **Desktop** Programming Attributes

MAIL BROWSER X

Mails

Compose Reply Receive Delete Configure Mail

	From	Subject	Received
1	user2@it.com	RE: ISAA LAB	Sat Aug 1 2020 11:39:08

RE: ISAA LAB
user2@it.com
Sent : Sat Aug 1 2020 11:39:08

Q. Using Cisco Packet Tracer simulation tool, draw a network of 5 PCs, Server and connectong device(s) like Switch to configure various servers (FTP, HTTP, EMAIL SERVER and DHCP).

DEADLINE: 04-08-2020

Subject : ISAA LAB
From : user1@it.com
Sent : Sat Aug 1 2020 11:31:10

INFORMATION SECURITY ANALYSIS AND AUDIT - Prof. THANDEESWARAN R.

LAB ASSIGNMENT - 2

PRIYAL BHARDWAJ

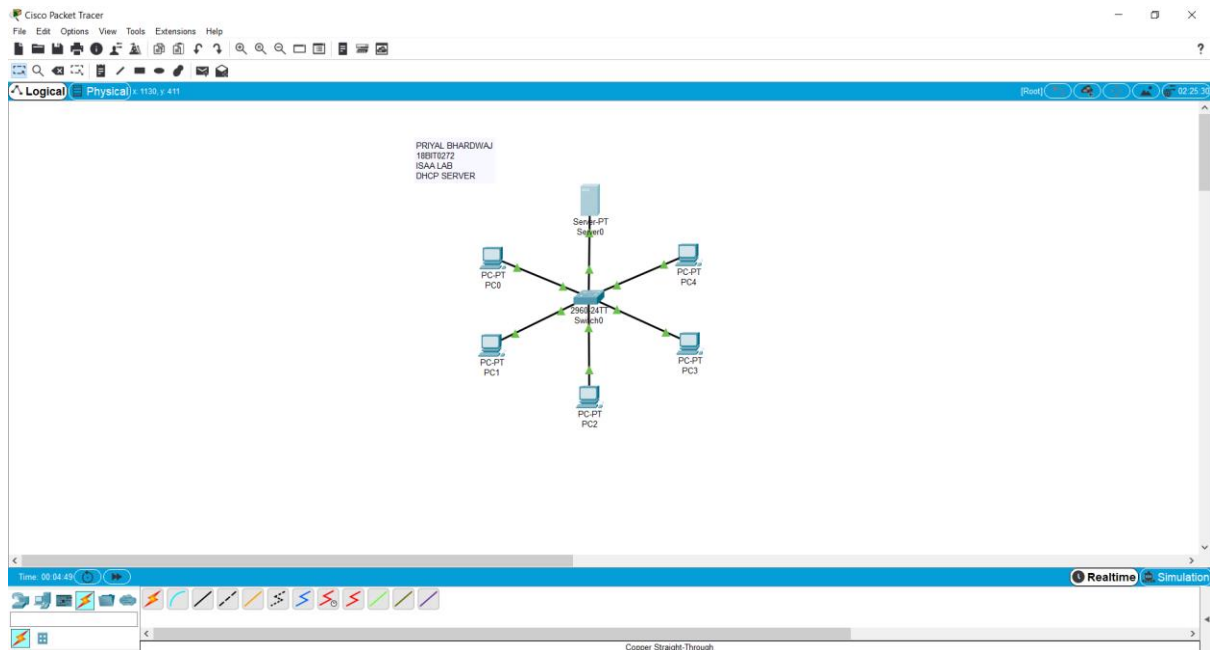
[18BIT0272](#)

Receiving mail from POP3 Server 192.168.1.1
Receive Mail Success.

Cancel
Send/Receive

☐ Top

DHCP Server Configuration:



Setting IP Address and Subnet Mask in Server: 192.168.10.1

The screenshot shows the configuration window for "Server0" in Cisco Packet Tracer. The "Desktop" tab is selected. Under "IP Configuration", the "Static" radio button is selected. The IP Address is set to "192.168.10.1", the Subnet Mask is "255.255.255.0", the Default Gateway is "0.0.0.0", and the DNS Server is "0.0.0.0". Under "IPv6 Configuration", the "Static" radio button is selected. The IPv6 Address is empty, the Link Local Address is "FE80::2D0:58FF:FE3B:5816", the IPv6 Gateway is empty, and the IPv6 DNS Server is empty. Under "802.1X", the "Use 802.1X Security" checkbox is unchecked, and the Authentication is set to "MD5".

Configuration Section	Option	Value
IP Configuration	<input checked="" type="radio"/> Static	
	<input type="radio"/> DHCP	
	IP Address	192.168.10.1
	Subnet Mask	255.255.255.0
	Default Gateway	0.0.0.0
	DNS Server	0.0.0.0
IPv6 Configuration	<input checked="" type="radio"/> Static	
	<input type="radio"/> DHCP	
	<input type="radio"/> Auto Config	
	IPv6 Address	
	Link Local Address	FE80::2D0:58FF:FE3B:5816
	IPv6 Gateway	
	IPv6 DNS Server	
802.1X	<input type="checkbox"/> Use 802.1X Security	
	Authentication	MD5

Turning DHCP Service ON:

The screenshot shows the 'Server0' configuration window with the 'Services' tab selected. On the left, a list of services includes HTTP, DHCP (highlighted), DHCPv6, TFTP, DNS, SYSLOG, AAA, NTP, EMAIL, FTP, IoT, VM Management, and Radius EAP. The main area is titled 'DHCP' and shows the 'FastEthernet0' interface with the 'Service' set to 'On'. Below this, fields for 'Pool Name' (serverPool), 'Default Gateway' (0.0.0.0), 'DNS Server' (0.0.0.0), 'Start IP Address' (192.168.10.0), 'Subnet Mask' (255.255.255.0), 'Maximum Number of Users' (255), 'TFTP Server' (0.0.0.0), and 'WLC Address' (0.0.0.0) are visible. At the bottom, there are 'Add', 'Save', and 'Remove' buttons, followed by a table listing the configured DHCP pool.

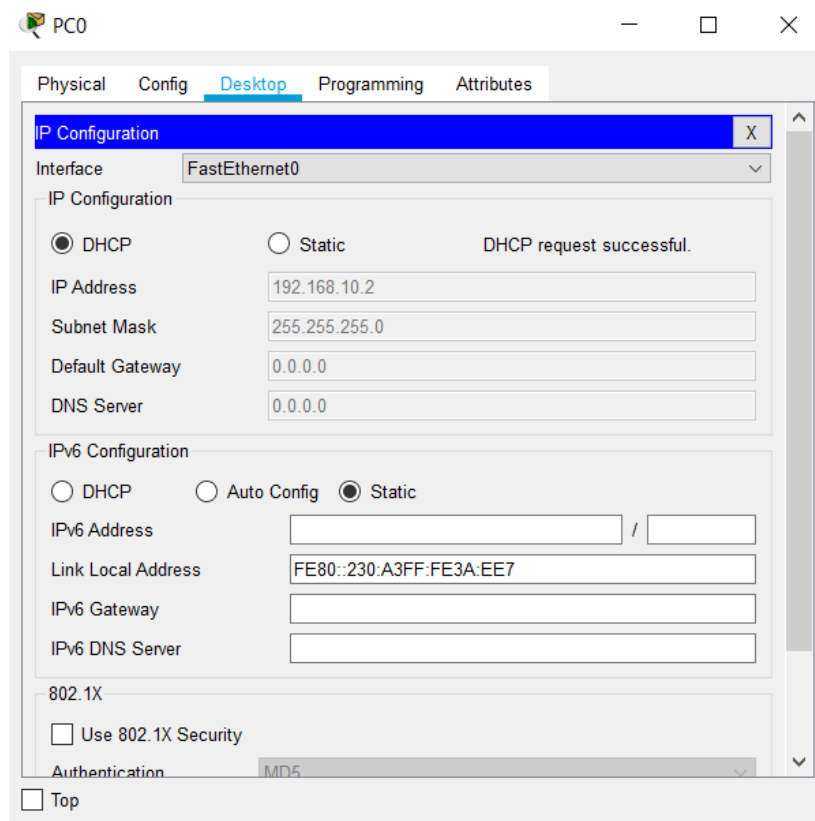
Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	0.0.0.0	0.0.0.0	192.168.10.0	255.255.255.0	255	0.0.0.0	0.0.0.0

Setting all PCs "Gateway/DNS" setting to DHCP:

- Requesting IP Address:

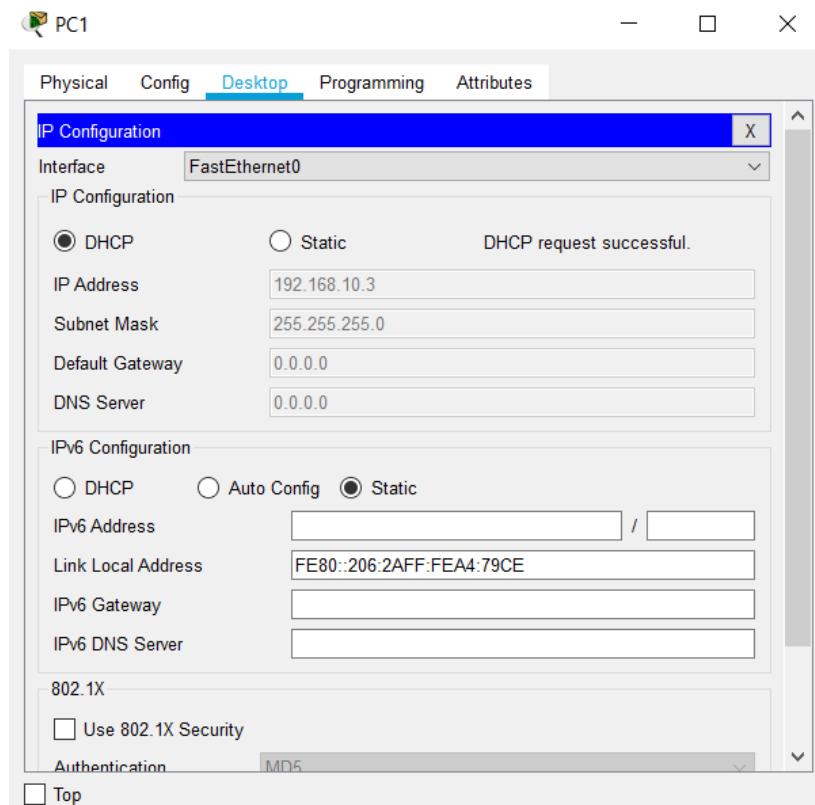
The screenshot shows the 'PC0' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. Under 'IP Configuration', the 'DHCP' radio button is selected, and the 'Requesting IP Address' checkbox is checked. Below this, fields for 'IP Address', 'Subnet Mask', 'Default Gateway', and 'DNS Server' are present. The 'IPv6 Configuration' section shows 'Static' selected, with fields for 'IPv6 Address', 'Link Local Address' (FE80::230:A3FF:FE3A:EE7), 'IPv6 Gateway', and 'IPv6 DNS Server'. At the bottom, there is a '802.1X' section with a 'Use 802.1X Security' checkbox and an 'Authentication' dropdown set to 'MD5'.

- DHCP request successful – PC0: 192.168.10.2



Similarly, all PCs have been dynamically assigned an IP Address by the DHCP server.

PC1: 192.168.10.3



PC2: 192.168.10.4

PC2

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static DHCP request successful.

IP Address 192.168.10.4

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::2D0:FFFF:FE30:DD67

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Top

PC3: 192.168.10.5

PC3

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static DHCP request successful.

IP Address 192.168.10.5

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::201:97FF:FE10:61CC

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Top

PC4: 192.168.10.6

PC4

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static DHCP request successful.

IP Address 192.168.10.6

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::240:BFF:FE25:74D9

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

☐ Top
