



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Experiment Name: IP Telephony

Experiment No: 6

Date of perform: Dec 12, 2023

Date of submission: May 13, 2024

Submitted to:

Md. Imdadul Islam

Professor of CSE, Jahangirnagar University

Mohammad Ashraful Islam

Assistant Professor of CSE, Jahangirnagar University

Submitted by:

Name: Sudipta Singha

Exam Roll: 202220

Class Roll: 408

Jahangirnagar University, Savar, Dhaka

1 Objective

Objective of this experiment is to implement a small network of IP telephony. Each telephone will be verified with its content of IP address and corresponding telephone number. Finally, the network will be tested by dialing to each other IP phone.

2 Network Diagram

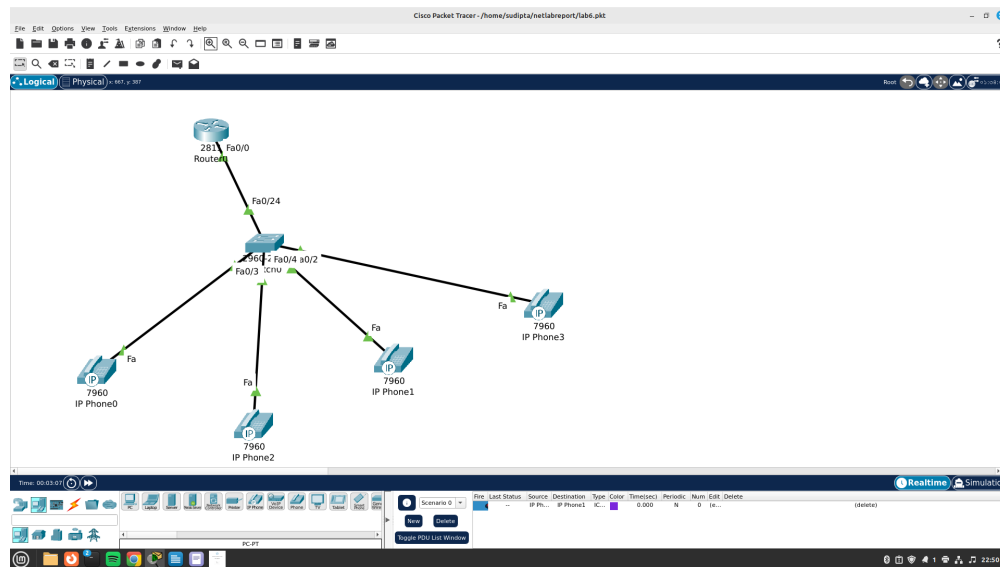


Figure 1: The network of IP Telephony

3 Procedure

The project is implemented using Cisco Packet Tracer. The command of the router is written below

3.1 Router configuration using cli

```
Router>en
Router#conf t
Router(config)#int fa0/0
Router(config-if)#ip add 192.168.10.1 255.255.255.0
Router(config-if)#no shut
Router(config-if)#exit
Router(config)#ip dhcp pool VOICE
Router(dhcp-config)#network 192.168.10.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.10.1
Router(dhcp-config)#option 150 ip 192.168.10.1
Router(dhcp-config)#exit
Router(config)#telephony-service
Router(config-telephony)#max-dn 5
Router(config-telephony)#max-ephone 20
Router(config-telephony)#ip source-address 192.168.10.1 port 2000
Router(config-telephony)#auto assign 1 to 5
Router(config-telephony)#exit
```

```

Router(config)#ephone-dn 1
Router(config-ephone-dn)#number 54001
Router(config-ephone-dn)#exit
Router(config)#ephone-dn 2
Router(config-ephone-dn)#number 54002
Router(config-ephone-dn)#
Router(config)#ephone-dn 3
Router(config-ephone-dn)#number 54003
Router(config-ephone-dn)#exit
Router(config)#ephone-dn 4
Router(config)#number 54004
Router(config-ephone-dn)#exit
Router(config)#

```

3.2 Switch configuration using cli

```

Switch>en
Switch#conf t
Switch(config)#int range fa0/1-23
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport VOICE vlan 1
Switch(config-if-range)#exit
Switch(config)#int fa0/24
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit
Switch(config)#do wr

```

4 Result

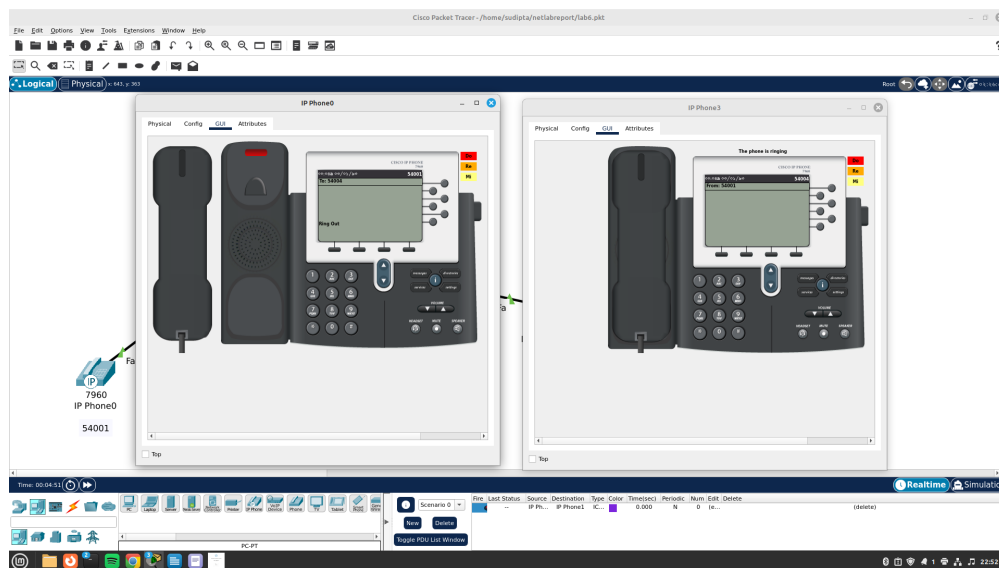


Figure 2: The ip phone is reading dial

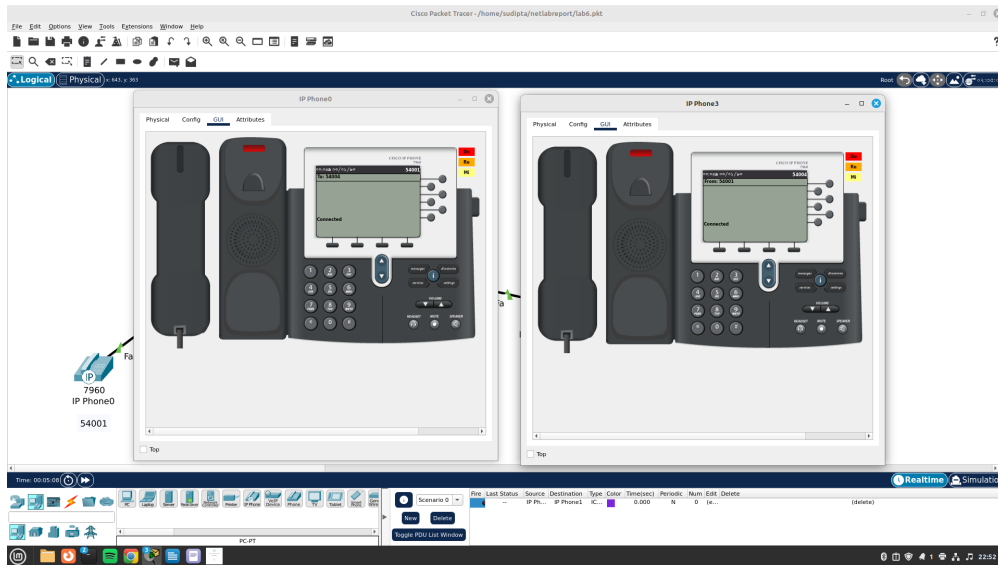


Figure 3: The receiver accept the call