Jahangirnagar University

Department of Computer Science & Engineering

Course Code: CSE-402

Course Title: Computer Networking Laboratory

Submitted by:

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Roll No: 47

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Experiment No: 06

Experiment Name: IP Telephony

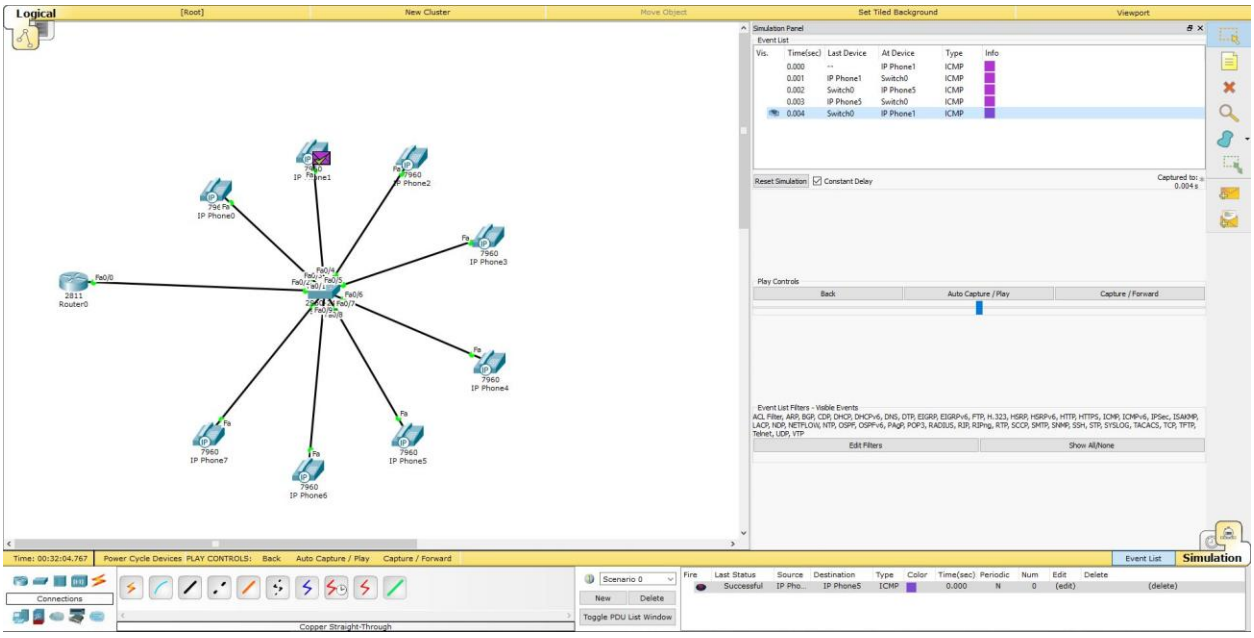
Objective:

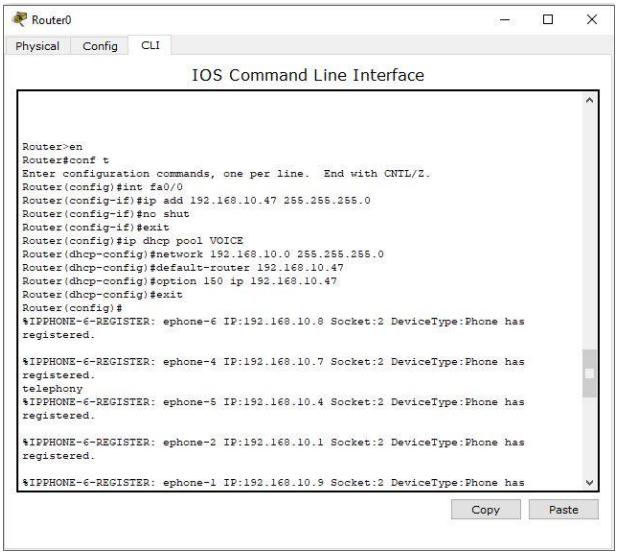
We will simulate an IP telephony network with one switch connected with 8 IP telephone and a router to rout the packet transfer among the telephone via a switch.

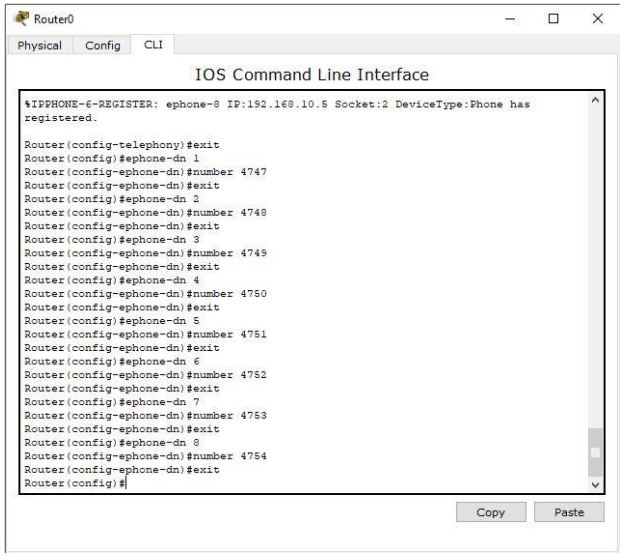
Description:

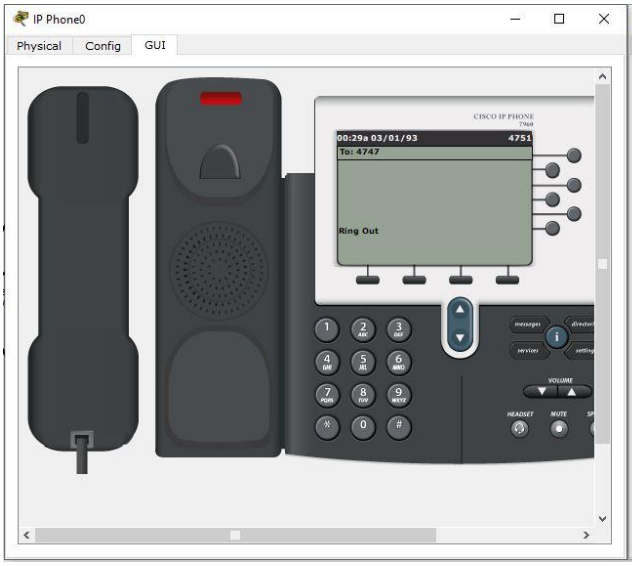
IP telephony (Internet Protocol telephony) is a general term for the technologies that use the Internet Protocol's packet-switched connections to exchange voice, fax, and other forms of information that have traditionally been carried over the dedicated circuit-switched connections of the public switched telephone network (PSTN). Using the Internet, calls travel as packets of data on shared lines, avoiding the tolls of the PSTN. The challenge in IP telephony is to deliver the voice, fax, or video packets in a dependable flow to the user. Much of IP telephony focuses on that challenge.

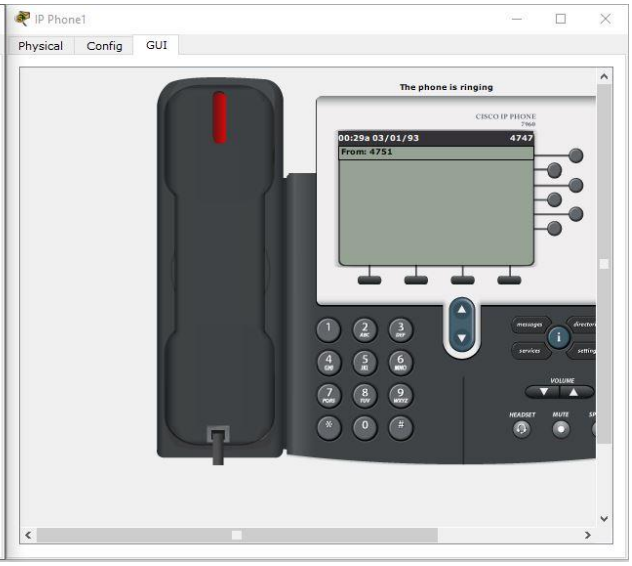
Simulation:

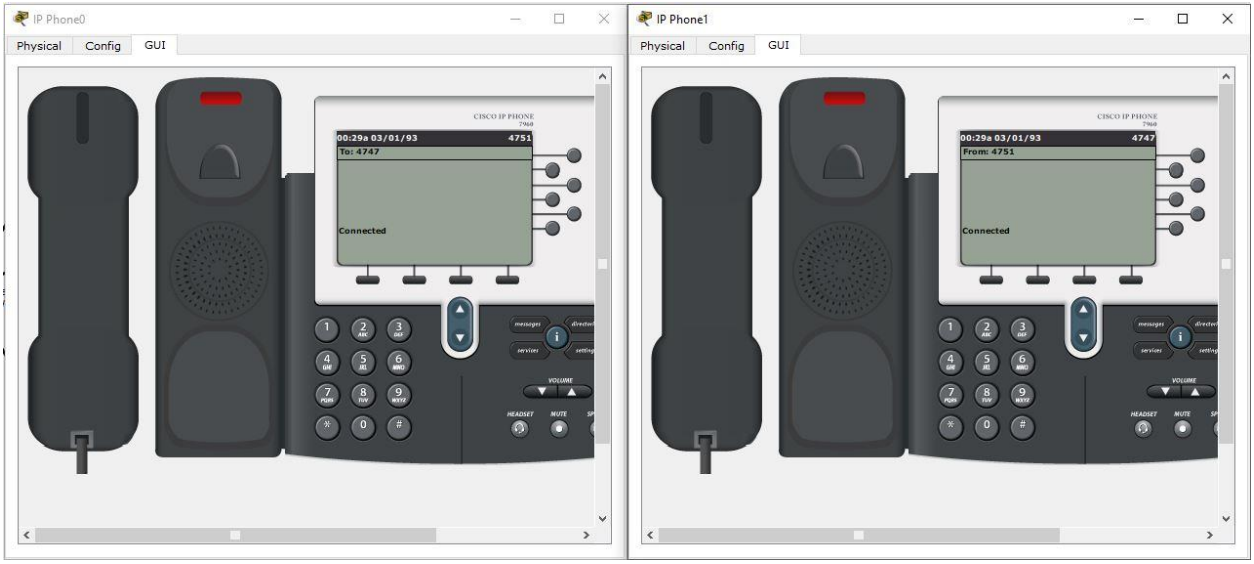


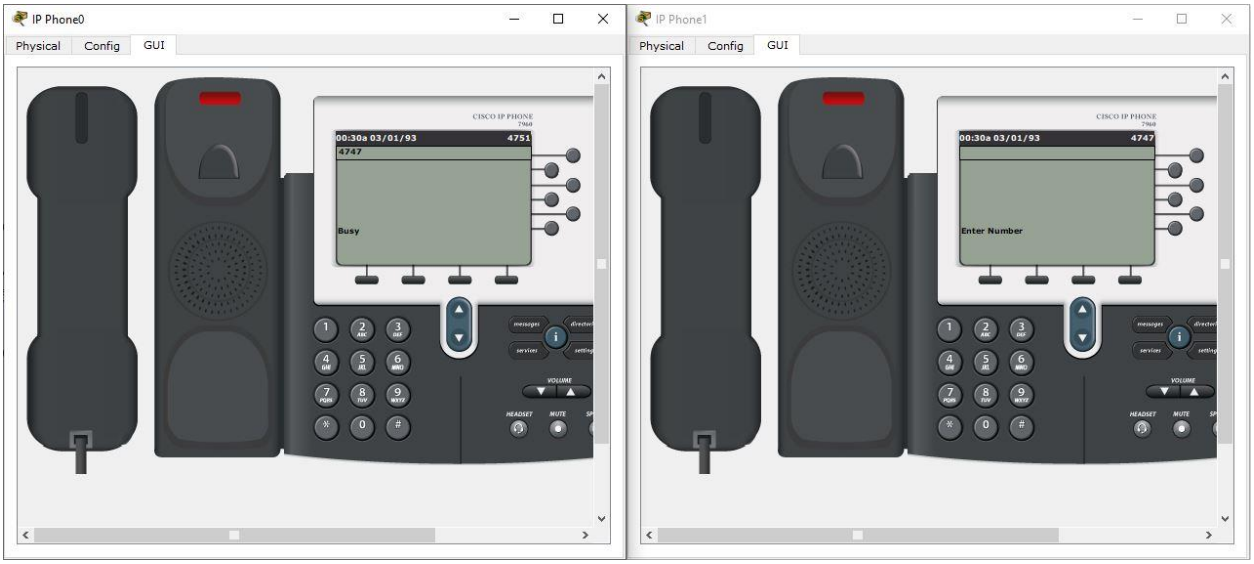

Router0
Physical
Config
CLI
IOS Command Line Interface
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/0
Router(config-if)#ip add 192.168.10.47 255.255.255.0
Router(config-if)#no shut
Router(config-if)#exit
Router(config)#ip dhcp pool VOICE
Router(dhcp-config)#network 192.168.10.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.10.47
Router(dhcp-config)#option 150 ip 192.168.10.47
Router(dhcp-config)#exit
Router(config)#
%IPPHONE-6-REGISTER: ephone-6 IP:192.168.10.8 Socket:2 DeviceType:Phone has registered.
%IPPHONE-6-REGISTER: ephone-4 IP:192.168.10.7 Socket:2 DeviceType:Phone has registered.
telephony
%IPPHONE-6-REGISTER: ephone-5 IP:192.168.10.4 Socket:2 DeviceType:Phone has registered.
%IPPHONE-6-REGISTER: ephone-2 IP:192.168.10.1 Socket:2 DeviceType:Phone has registered.
%IPPHONE-6-REGISTER: ephone-1 IP:192.168.10.9 Socket:2 DeviceType:Phone has
Copy
Paste


Router0
Physical
Config
CLI
IOS Command Line Interface
%IPPHONE-6-REGISTER: ephone-8 IP:192.168.10.5 Socket:2 DeviceType:Phone has registered.
Router(config-telephony)#exit
Router(config)#ephone-dn 1
Router(config-ephone-dn)#number 4747
Router(config-ephone-dn)#exit
Router(config)#ephone-dn 2
Router(config-ephone-dn)#number 4748
Router(config-ephone-dn)#exit
Router(config)#ephone-dn 3
Router(config-ephone-dn)#number 4749
Router(config-ephone-dn)#exit
Router(config)#ephone-dn 4
Router(config-ephone-dn)#number 4750
Router(config-ephone-dn)#exit
Router(config)#ephone-dn 5
Router(config-ephone-dn)#number 4751
Router(config-ephone-dn)#exit
Router(config)#ephone-dn 6
Router(config-ephone-dn)#number 4752
Router(config-ephone-dn)#exit
Router(config)#ephone-dn 7
Router(config-ephone-dn)#number 4753
Router(config-ephone-dn)#exit
Router(config)#ephone-dn 8
Router(config-ephone-dn)#number 4754
Router(config-ephone-dn)#exit
Router(config)#
Copy
Paste


IP Phone0
Physical
Config
GUI
CISCO IP PHONE
7960
00:29a 03/01/93
4751
To: 4747
Ring Out
messages
directories
services
settings
VOLUME
HEADSET
MUTE


IP Phone1
Physical
Config
GUI
The phone is ringing
CISCO IP PHONE
7960
00:29a 03/01/93
4747
From: 4751
messages
directories
services
settings
VOLUME
HEADSET
MUTE





Discussion:

We can clearly observe that providing different ip to the telephones it is possible to transfer packet among them and construct a communication among them. So the experiment is valid.