



नाम Name \_\_\_\_\_

अनुक्रमांक Roll No. \_\_\_\_\_

पाठ्यक्रम Course \_\_\_\_\_

प्राप्त अंक Marks Awarded

दिनांक Date \_\_\_\_\_

अनुदेशक का अधाक्षर Instructor Initial

### 1. Purpose

To study the SIP (Session Initiation Protocol) Server based Video Communication System.

### 2. Introduction

SIP is an Internet protocol that provides simple application layer signaling for setting up, maintaining and terminating multimedia sessions such as voice calls, videoconferences and even instant messaging sessions. SIP is designed on the Internet model, it is inherently distributed and supports the development of telephony applications on Internet systems.

### 3. Functioning

This communication is IP based one with packet switching. One server called ' SIP server ' is to be installed on any PC on the network. The installation setup file is freely downloadable from internet. The end user device is a video phone.

### 4. SIP Server

**AsteriskWin32-Setup.exe** installation setup file (17 MB size) is free downloadable from the site [www.asteriskwin32.com](http://www.asteriskwin32.com),

### 5. SIP Server Installation

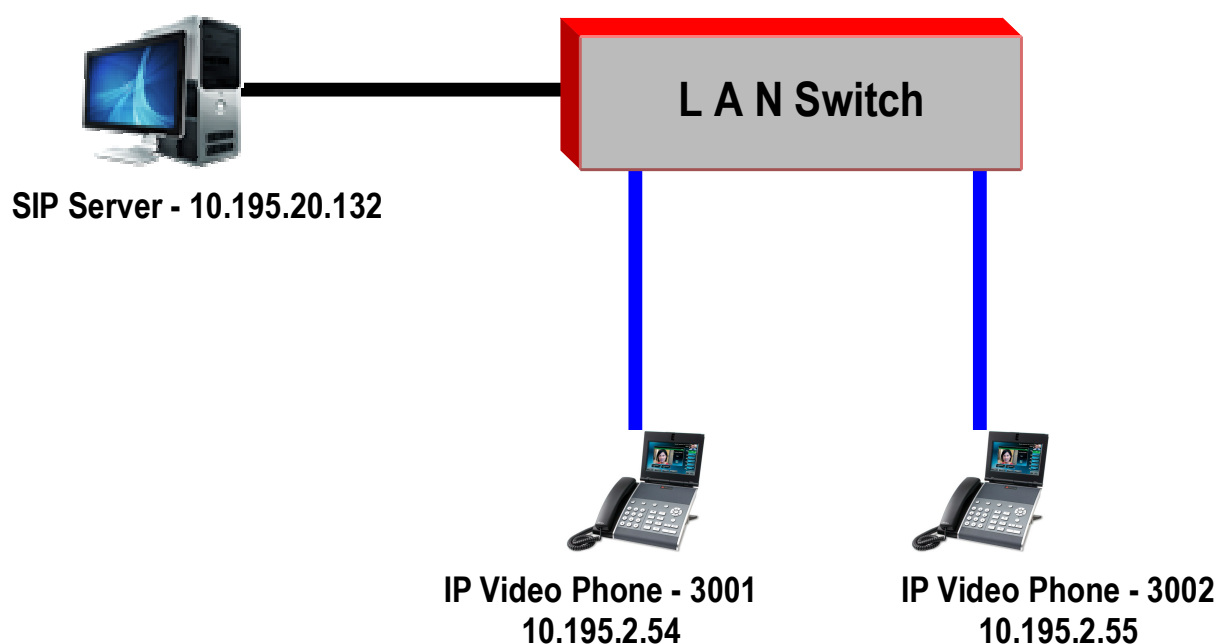
- Select the PC on which SIP server is to be installed
- Install the SIP server by double clicking the file **AsteriskWin32-Setup.exe**.
- Follow the instructions in the installation process
- After installation, **AsteriskWin32PBX** folder appears in start menu / programs
- In AsteriskWin32PBX folder, PBX Manager & Console is the SIP server execution file
- Double click the **PBX Manager & Console**
- The **PBX Manager** dialog box appears
- Go to **Tools** and click on **PBX start**
- Asterisk SIP server starts
- Go to **Admin** and click on **PBX Manager**
- **PBX manager** box appears
- Click on **DialPlan** to see the **dial plan**
- The default dial plan is from 3000 – 3003

### 6. Extensions Setup (Polycom VVX 1500 IP Video Phone)

- One IP Address is to be assigned to this video phone as follows
- Connect the IP video phone to the LAN
- This phone is touch screen controlled
- Go to **Menu > Settings > Advanced**
- Type the password **456** and press Enter
- Go to **Administration Settings > Network Configuration > Phone IP Address**
- Type the valid IP Address of the LAN (10.195.2.55)

- Now this phone can be configured in any browser with its IP address
- Enter the IP address of the phone in a browser
- Enter the user id - **Polycom**
- Enter the password - **456**
- Configuration window appears
- Click on Lines tab
- Scroll down to Identification
- Enter the Display Name - **IRISET**
- Enter the Address - **3001**
- Enter the Authentication User ID - **3001**
- Enter the Label - **3001** (this is displayed on the phone)
- Enter the **SIP server Address** - **10.195.20.132**
- Click on Submit button
- The phone restarts to effect the changes
- Similar configuration is to be done on second phone with a different extension.

## 7. SIP Server based video communication block diagram



## 8. Video calling

- From 3001 video phone make a call to 3002
- Answer from 3002 video phone
- Observe the audio and video in the phones

## 9. Activity

- Configure a video phone with No. 3003 and test ?

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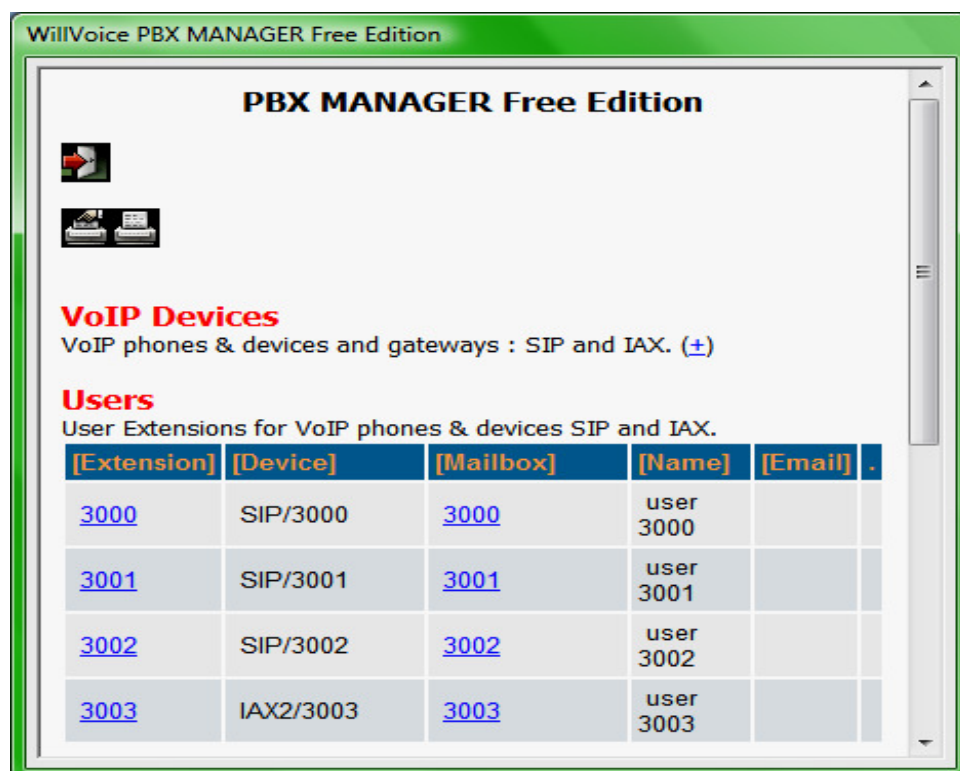
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## 10. Screen Captures

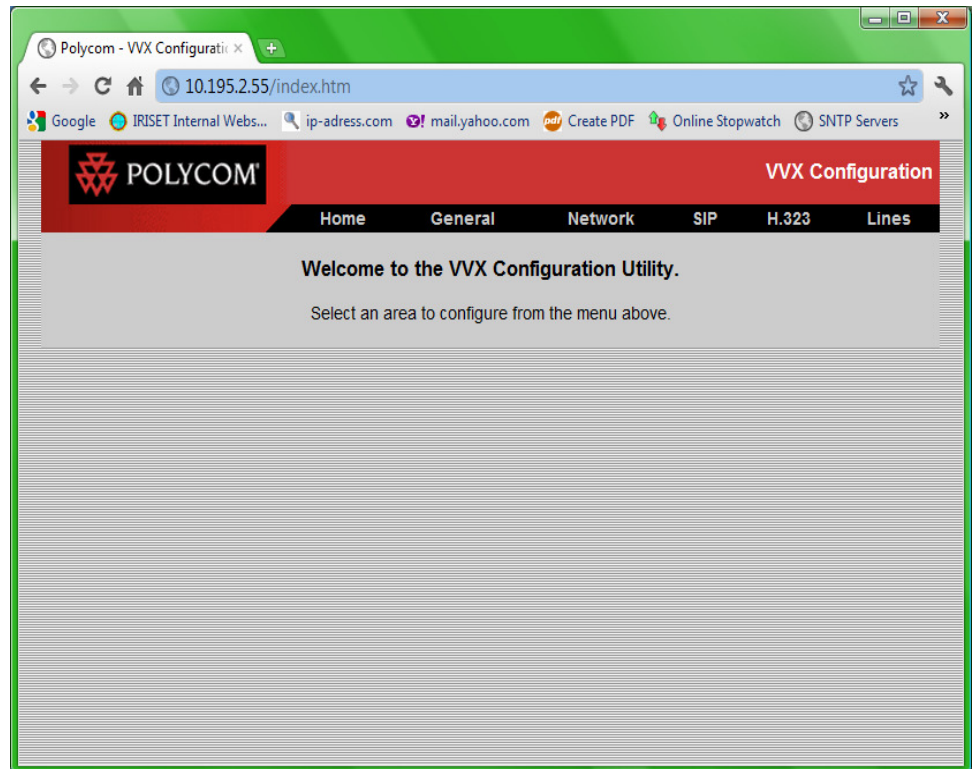
- PBX Manager window



- PBX Manager Dial Plan window



- Polycom IP video phone browser window



- Polycom IP video phone lines window

| Identification          |   |
|-------------------------|---|
| Display Name            | ITE2  |
| Address                 | 3002  |
| Authentication User ID  | 3002  |
| Authentication Password |   |
| Label                   | 3002  |
| Type                    | <input type="radio"/> Private <input checked="" type="radio"/> Shared |
| Third Party Name        |   |
| Number Of Line Keys     |   |
| Calls Per Line          |   |
| Server 1                |   |
| Address                 | 10.195.20.132   |

Signature of the Trainee