Voice over IP

Asterisk without Risk

Voice over Internet Protocol (VoIP) is a technology that allows you to make telephone calls using a broadband Internet connection instead of a regular (or analog) phone line. Phone service via VoIP is free or costs less than equivalent service from traditional sources but similar to alternative Public Switched Telephone Network (PSTN) service providers. Some cost savings are due to using a single network to carry voice and data, especially where users have existing underutilized network capacity they can use for VoIP at no additional cost. VoIP to VoIP phone calls on any provider are typically free, whilst VoIP to PSTN calls generally costs the VoIP user.

Problem

Client requested to develop application for remote administration of Asterisk PBX.

Our solution

Our team started working on creation of VoIP turnkey system.
At the end of the project the graphic user interface (GUI) for PBX was designed and management remote API was created. For quick install of VoIP software, the RPM distributive was created.

Project features

• *VoIP turnkey system integration with Cisco VoIP phones, using SIP and SCCP protocols.*

• *Analog phone integration with Asterisk PBX*
Ability to redirect calls made from analog phones to Asterisk PBX

• *Voice Mail Message Notification – Telephone.*
When a message is left in a voice mailbox, a call should be placed to notify that individual of the message and allow the individual to enter the voice mailbox to retrieve the message.

• *Creation of context sensitive keys on the LCD screen of the Cisco 79XX series phones*
These phones present titles within the LCD screen that are associated with physical buttons on the phone. The titles vary by phone state, displaying the function associated with the button nearest the title.

• *Obtain a Trunk Line*
The system allows the phone user to obtain a CO trunk line for an outbound call by doing no more than pressing a key / button.

• *Integrating the 7914 Expansion Module*
The CTX 5000 is able to employ up to 2 7914 expansion modules.

Our experience

Experience we obtained during the development process:
• During the project implementation we have studied in detail how to configure Asterisk PBX
• We have developed AGI scripts for Asterisk PBX.
• Our team created the dial plan for Asterisk PBX.
• Also we created servers network

Technologies used during the project development:
• C++
• QT Library

Summary

At the end of the project we gained invaluable experience in integration of Voice-over-Internet Protocol system.