ELECTRONIC PRIVATE AUTOMATIC BRANCH EXCHANGE (EPABX): A SURVEY

Dr.P.B.Pokle[1], Swati Dhandade[2], Ketika Zilpe[3], kundan nardange[4], Nikhil Raut[5]

[1]Asst. professor, PJLCE, [2,3,4,5]Student, PJLCE.

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Abstract: *The ability to transmit and process voice over Internet protocol (VoIP) networks has important implications for technology users especially by the using Asterisk PBX. Many companies nowadays are rushing to bring different VoIP products to market with a wide variety of features. This article will focus on the introduction of VoIP and its implementation by the use of Asterisk PBX. Firstly, the paper presents the project objective with some introductory theory about VOIP. Secondly, the project includes report on the viability of utilizing the Asterisk PBX as a foundation for conducting research performance studies for VoIP. Finally, the project is showing on live experimental studies of SIP voice traffic. The article experimentally studied the performance of voice calls initiated using SIPp simulator for testing SIP protocol performance and found much more stability and accuracy using Asterisk PBX. The purpose is to suggest those VoIP technology attributes that best meet users' needs. Asterisk, the open source PBX of choice is used to show that this is maturing fast and ready for main stream VoIP implementation.*

Keywords: **VoIP, SIP, PBX, GSM, ISDN, TCP, RTP.**

1. INTRODUCTION:

Many organization use Electronic Private Automatic Branch Exchange (EPABX) for telephony communication with internal employees and with the outside word. This system works like a mini telephony exchange. If we have two telephone lines it can be used by eight lines and calling can be done from these eight numbers at the same time by having only two telephone line or number. But EPABX system uses a lot of maintenance work as well as requires extra hardware and wiring for the new user extension. Also EPABX in less secured and is less flexible. To overcome, traditional EPABX is replaced by voice over Internet Protocol (VOIP).

The term VoIP stands for vocalization web Protocol. VoIP originated in middle 90's, once hobbyists began to note the potential of effort voice data packets over the online instead of communication through normal communication systems. The concept is to use the online as a communication network with some extra capabilities. VoIP converts the voice signal from a phone into a digital signal, sends it through the online, and so converts it back at the other finish.

2. LITERATURE SURVEY:

➢ Many long ago, all voice communications traffic was handled over the circuit switched network. There are two significant developments took place during the 1990s which led to innovation in PABX systems. One was the large growth of data networks and second was increased public understanding of packet switching. There are many Companies needed packet switched networks for data, but also explored the possibility of using them for telephone calls.

➢ Then there is the availability of the Internet network as a global delivery system made packet switched communications even more attractive. These factors led to the development of the voice over IP and thus IP PABX. In the case of VoIP, major traffic across the Internet still originates at a non-IP voice terminal connected to the PSTN or a customer premises communications system

➢ Then in 1992, In that it discussed the artificial market having the controlling body. And that commission of market has does not taken any action to make awareness among the people then since they become relief that in the overall decade of beginning of an artifact by brand market I the self-government of India by the Andre du Toit

➢ 'Private PBX networks cost effective communication solutions' in IEEE. Then for the general people the FMC has taken some positive steps to open the system with reference to handling the operation, the players of the market, different FMC's structural charts and major installation taken by the government and dignitary of commission.

   That this paper are arranged to start the significant are taken by the centric government and the FMC to the common people and having the understanding with the higher operation of FMC against artifact by product brand market in the republic of India when become relief.[1]

➢ Then the next process is held in 2007, the Guo Fong Mao, Alex Taleuski, Elizabeth change "Voice over internet protocol on mobile or television devices" in ICIS.

Voice over internet protocol is useful to us we proud to thanks them he do a calling process over a transferring information services that square to measure sanctuary a lot of mobile, and supply the good voice quality as compared to old period so there will be VOIP widely are used on the mobile devices from its infancy. Currently, there square measure variety of VOIP solutions for mobile phones.

So, in the mobile phones measure of time now the VOIP are present. But for the development of the victimization two platform with Java edition are did not to be used. Java is basically having the large compatible with the several different devices.

During this situation with the hard focus it given to cross device section they had been utilized the wide supported J2ME framework. The VOIP implementation details with the consumer victimization J2ME with the square measure illustrated. [3]

➢ Then the Md. Zaidul Alam, saugata Bose,Md. Mhafuzur Rahman,Mohamma Abdullah Almumin "Small office PBX using voice over IP" in ICACT from the 12 February to 14 February 2007.he discussed in this paper the voice over internet protocol used in that the PBX system have been seen.The internet protocol is having the voice exchange with the used of VOIP with one line up a server supported they connected the shoppers to it server with the assistance of soppy phones and so configuring the soft phones with the server.

Here in our implementation we have got connected the shoppers to the server with the assistance of IAX protocols, the primary a part of the paper contains some introductory ideas regarding VOIP, followed by the Asterisk's internal design within the third part of the paper we discuss the code and the protocols employed by the packet shift based mostly PBX networks and at last we tend to brush up regarding the look and implementation aspects. [4]

➢ Finally, paper which propose is given by in February, 2008 by the Ryosuke Yamamoto, fumikazu Iseki, Moo wan kim, "Validation of VOIP system"in ICACT .From this paper we get the example of FMC who supported the IMS. It define that the VOIP system that has performed the develop mentation of the university network supported the different project FMC representation.[5]

➢ But they decided the changes in 2006 march this paper highlights the implementation with the different aspects of a VoIP primarily based Asterisk voice exchange, Developing a completely useful voice exchange needs to line up a server supported Asterisk, connecting purchasers to it server with the assistance of soppy phones and so configuring the softphones with the server. Here in our implementation we\'ve got connected the purchasers to the server with the assistance of IAX protocols. The first a part of the paper contains some introductory ideas concerning VoIP, followed by Asterisk's internal design.

➢ Within the third a part of the paper we have a tendency to discuss concerning the codecs and protocols utilized by the packet shift primarily based PBX networks and eventually we have a tendency to brush up concerning the planning and implementation aspects.

3. CONCLUSION:

Thus from this system we can communicate by using laptop, computer via softphone and also using mobile phone having Wi-Fi facility. This system is mostly beneficial for colleges or organizations. This system has many advantages like it uses our on LAN, lowers operation cost over time, easier to configure and install and simple management. Moreover along with calling other facilities are also available like interactive voice response and ring group. In future scope necessary additional features can be code and included according to the need.

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