EMERGING TRENDS: VOIP

Ashwini R. Chavan (Jagtap)
Lecturer, Jayawant Institute of Management Studies,Pune
ashwini.chavan.jagtap@gmail.com

Aditya H. Katkar
Lecturer, Jayawant Institute of Management Studies,Pune
adityakatkar@gmail.com

ABSTRACT

Communication is the basis, the very cornerstone to Human existence. From last decade there is enormous change in communication ways. We are becoming more and more habitual of electronic communication. This paper explains that Voice over IP (VoIP) is one of the most important emerging trends in digital communication or networking because it integrates communication services into the IP network infrastructure, the Internet, especially e-mail and instant messaging, and standard classical services like telephony. VoIP is a very large, complex, and rapidly evolving field. Voice over Internet Protocol (VoIP) is a technology that allows you to make voice calls using a broadband Internet connection instead of a regular (or analog) phone line. In this paper I try to stress on some of the VoIP characters' like confidentiality, integrity and availability of the data and information, which streams through the network. The relevant social & legal security issues like eavesdropping, denial of service, bandwidth, and need of speed, and quality of service implications for security are explored. The solution for these threats is also explored in the same. The hype, deservedly so, is reaching a crescendo as excess bandwidth, improved software and better hardware drive this technology forward.

Keywords: VoIP (Voice over Internet Protocol), Security, QoS (Quality of Services), PSTN (Public switched telephone network), DoS (Denial of Services)

INTRODUCTION

Voice has been the key service of the mobile industry. It was voice for which the first analog and digital cellular networks and handsets were developed and built. Though we have seen quite an evolution towards more and more complex mobile services, voice is still there as the most important service category. Voice has traditionally built on circuit-switched technologies. As we are now moving towards packet switched networks, in which all kinds of streams and information are easily combined into packets, we have to reconsider the justification for circuit switched services. It is very expensive to have a separate circuit-switched network to implement voice services, as the integration of all information on a packet-switched network is much more cost-effective and scalable. In addition to the lower investment expenses we see major advantages also in further development of voice services towards e.g. video calls and instant messaging. In the fixed Internet we have already seen quite a number of voice-oriented services, in which voice is essentially coded into streams of packets. These technologies and services are often referred to as voice over IP.

WHAT IS VOIP?

Voice over Internet Protocol (VoIP) is a rapidly emerging technology for voice communication that uses the ubiquity of IP-based networks to deploy VoIP-enabled devices in enterprise and home environments. Technologies - such as Voice over Internet Protocols or cyber telephony - are with no single doubt the next generation of communications providers. End users can easily benefit from end-to-end connectivity to every data-networking device available, benefiting from both good voice quality and reasonable rates. A voice-over-Internet protocol (VoIP) application meets the challenges of combining legacy voice networks and packet networks by allowing both voice and signaling information to be transported over the packet network. It specifies both a technology and a service. The technology is Internet protocols (IP) and the service is voice-data transmission. The migration of voice telecommunications services to the Internet has become a primary focus for the telecommunications industry. VoIP is an IP telephony term for a set of facilities used to manage the delivery of voice information over the Internet. VoIP involves sending voice information in digital form in discrete packets rather than by using the traditional circuit-committed protocols of the public switched telephone network (PSTN). A major advantage of VoIP and