The influence of broadband networks growth and data transport channels cost reduction results in replacing Public Switched Telephone Network by Voice over Internet Protocol (VoIP) services. Performance improvement and cost decrease of network computing devices that can handle and store large amounts of data leads to their widespread use and growth of traffic generated by them. Due to growth of voice traffic in IP-networks and the abundance of offers from IP-telephony providers, the problem of VoIP system optimization to meet the requirements for quality, cost, and security of communication becomes an actual issue.