The use of wireless networks has widely increased beyond simple text and data transmission. With the increasing need for transmission of audio and video data across

planners, designers, and engineers are faced with common strategic and sometimes challenging questions: What are the QoS requirements for VoIP? How will the new VoIP load impact the QoS for currently running network services and applications? Will my existing network support VoIP and satisfy the standardized QoS requirements? If so, how many VoIP calls can the network support

shows the simulated and average time. The simulation log save the entries of the project detail and the time or date at which the above scenario being run.

Figure 3: Simulation Speed of scenario2

Figure 4: Memory Usage of scenario2

Figure 5: Messages of Simulation Sequence

This paper discusses the deployment of VoIP equipment, the number of VoIP calls that can be sustained by an existing network while satisfying Quality of Service (QoS) requirements of all network services and leaving adequate capacity for future growth. In this paper, the simulation approach has been applied on a typical network of a small enterprise. This research work presents a detailed description of simulation models for network topology and elements using OPNET. The simulator parameters were varied in following dimensions:

(1) VoIP traffic and QoS requirements.
(2) VoIP flow and call distribution.
(3) Measurement of background traffic.
(4) To calculate the throughput of the VOIP scenario.
(5) To investigate and calculate the queue delay of VOIP scenario.

The above parameters have been calculated by using OPENET simulator with the help of .Net framework. Before the simulation starts, OPNET has to be configured to obtain graphed results for numerous network components whi

The following Table 1 and Table 2 represent the Throughput Analysis statistics of VOIP protocols i.e. run in OPENET simulator with the help of DOT NET Environment. This table represents the maximum number of calls supported per node and per link basis.

SNO	Devices	Calls
1	Router	315
2	F1SW	23950
3	F2SW	23950
4	F3SW	23955
5		

Figure 8: Point to point Queue delay