ABSTRACT

The existence of IP network is already very globalized. Today the services offered on any IP network is growing rapidly. One of the best services on the IP network is a VoIP (Voice over IP). VoIP is a technology capable of passing voice traffic, video, and data in the form of packets over IP networks. Of course, in addition to providing a variety of services, providers should also consider the availability of services. The server is the source of service availability, server therefore play a pivotal role in realizing the availability of a service. Disorder or problem on a server could happen. So that could disrupt the availability of a service. VoIP service (Voice over IP) is a realtime service, it would require a redundant server to resolve problems or issues that occur on the server.

In this final project the author has implemented a redundant VoIP server. Where the master server is the primary server at the time of testing and backup server is a server redundant (backup) that will take over the performance of the master server, when the master server down.

From the measurement results obtained that the backup server can handle a maximum of 150 calls per second to call / s, while the master server can handle up to 200 call / s. In terms of QoS seen some QoS parameters such as delay, jitter, throughput, and packet loss from the master server and backup server is not much different, and obtained downtime in the event of failover approximately 4.61 seconds, so the VoIP service continuity can be maintained. This system meets the quality standard VoIP service making it feasible to implement.

Keyword : Redundant, VoIP, Server, Master, Backup