ABSTRACT

Current technological developments more rapidly, for example file sharing technology and multimedia applications such as Voice over IP. Technology file sharing and voice over IP is great demand by many people, especially the users of a network such as LAN (Local Area Network). In a network that is under or behind the NAT (Network Address Translator), a user can not perform activities files sharing or do voice over IP from other users via TCP or UDP connection.

To be able to make connections between users or clients (single peer), which is behind NAT, it needs a protocol that can "penetrate" the NAT. So that the user can perform activities without restriction connections.

In this final project, carried out the design of a multimedia application and file sharing with users who are behind NAT or firewall by using the protocol that can "penetrate" the NAT that is TURN (Traversal Using Relay NAT). In the implementation of the applications, using TURNserver.

The end goal of the project is testing conducted on systems that use NAT networking in order to make an application that is VoIP and file sharing on the network, without reducing the security on the network. In reality there is a server called TURNserver.

Keywords: File Sharing, VoIP, NAT, TURN (Traversal Using Relay NAT), and TURNserver.