

ABSTRACT

Video-conferencing as one of communication application will be trend in the future. Now, communication multi party still use conventional multicast. While conventional IP multicast schemes are scalable for very large multicast group, they have scalability issues with a very large number of distinct multicast group. Multicast, the ability to efficiently send data to a group of destinations, is becoming increasingly important for application such as IP telephone and video-conferencing.

Explicit Multi-Unicast (Xcast), a new multicast scheme with complementary scaling properties support a very large number of small multicast session. Xcast achieves this by explicitly encoding the list of destinations in the data packets, instead of using a multicast group address.

Xcast at this final project implemented in the intern IPv6 networks, we known as Xcast6. It use two main scenarios, scenario for IPv6 unicast and Xcast. Throughput, delay, jitter, packet loss and CPU Utilization are parameters use for observes this scenarios. This scenarios also have three option codec for the observation, H.261, H.263 and BVC.

This experiment give throughput on unicast more bigger 34096,54 bps than Xcast. Delay Xcast give more time 10,28814 ms than delay on unicast. Xcast CPU Utility on client 0,10 % bigger and on router xcast 1,77 % bigger than CPU Utility on unicast. This come from header processing on server/client and router xcast more bigger than Xcast.

Keywords : Xcast (Explicit Multi-Unicast), Multicast, IPv6, Video-conferencing