ABSTRACT

Live streaming technology resembles with streaming video, it's just that the data used directly sourced from television, smartphone, and laptop that are real time. Live Streaming requires live encoding and minimum buffering. The next problem faced by this technology is bandwidth limitations. The computer network used to pass various applications will be used as well as streaming media that require high bitrate. This process will cause the network load to increase so that existing services can not run properly (disrupted).

Research is focused on streaming live services in cloud computing using RTMP protocol. Live stream video recording requires fast video encoding and low-delay content transport. RTMP is designed for high performance in audio and video transmission as well as data. Observations include delay values, throughput, frame drop, and jitter. The infrastructure used, namely OpenNebula. While the platform in use is Ubuntu 14.04 and the software used is Nginx RTMP.

In this final project has been implemented live streaming in OpenNebula cloud environment at Faculty of Applied Sciences. From QoS measurement results, it is known that the best performance, that is at a distance of 10m with a delay value of 12.19 ms for 480p video and 23.51 for 720p video, jitter value of 15.63 ms for 480p and 31.30 ms for 720p, frame drop value of 0.3 frames for 480p and 8.8 frames for 720p. This is because the Wi-Fi network is determined by the transmit power of the transmitting antenna, the capture power of the receiver, the barrier material between the transmitter and the receiver and the interference factor.

Keywords : *Cloud Computing, Live Streaming, RTMP, OpenNebula*