DESIGN OF LOAD BALANCING SCHEDULING METHOD OF IPTV (INTERNET PROTOCOL TELEVISION) AND LMS (LEARNING MANAGEMENT SYSTEM)

Name : Fachrurrozi. as
ID : 2209106078
Supervisor : 1. Dr.Ir. Achmad Affandi, DEA
2. Ir. Djoko Suprajitno Raharjo, MT

ABSTRACT

In this Final Research will be designed and made the IPTV server and LMS server based on load balancing method of Linux Virtual Server (LVS) with weighted round robin (wrr), weighted least connection (wlc), least connection (lc), and round robin (rr) scheduling algorithm. Then we do the IPTV server performance testing based load balancing method and the LMS server and the IPTV server load balancing, by accessing IPTV and LMS server with 2000 connection and 20000 connection to know throughput, response time, reply connection client and error connection client. The best value of throughput for IPTV Server is obtained by weighted least connection (wlc) algorithm as big as 435.08 KB/s and 205.53 ms for the best response time, with the value of maximal connection is 1734 connection. And then the best value of throughput for LMS Server is obtained by weighted least connection (wlc) algorithm as big as 598.44 KB/s and 15.12 ms for the best response time, with the value of maximal connection is 2000 connection.

The best network performance throughput for IPTV Server is obtained by weighted least connection (wlc) algorithm as big as 19.3 Mbps. And the best network performance throughput for LMS Server is obtained by round robin algorithm as big as 232.1 kbps. Velocity of response time can be determined by throughput measurement. Response time of IPTV server is uninterrupted experience based on ITU-T G.1030 11/200, because the response time is under 1 ms. The best response time of cluster IPTV is 203.53 ms and the best response time of cluster LMS is 15.12 ms. Response time of LMS server is uninterrupted experience because the response time is under 0.1 second.
Based on Final Research that the throughput measurement can be seen that the greater bandwidth then the throughput value is also greater.

**Keywords**: Internet Protocol Television, least connection, round robin, throughput