ABSTRACT

According to Web Technology Surveys, the increase in internet users accessing websites continues to increase every year, especially Apache and Nginx web servers. This can cause the performance of a web server to be heavy and if it exceeds capacity, server downtime can occur. Hence the need for reverse proxy caching. Reverse proxy caching can balance the load on multiple back-end servers and provide caching for sluggish back-end servers especially on Apache web servers. This research is reverse proxy caching nginx and varnish. Web server performance testing is done by sending 3 kinds of tests, namely by sending 200 load connections, 2,000 connections and 20,000 connections with 200 Conccurency as measured by Apache Benchmark Tools. Based on the reverse proxy caching test Nginx provides benchmarking results better than the reverse proxy caching Varnish with a request per second parameter of 1207 req/seconds (39.6% Better than Varnish), timetake for test of 16.65 seconds (28.3% Better) than Varnish), time per request of 166.4 milliseconds (28.4% Better than Varnish), and transfer rate of 13.15 MB/sec (38.4% Better than Varnish). Based on these results, it can be seen that the Apache web server configured with reverse proxy caching Nginx shows better performance than the reverse proxy caching Varnish.

Keywords: Nginx, Varnish, Apache, Apache Benchmark, Reverse Proxy.