## **ABSTRACT**

Technological developments cause the number of requests to cloud servers to increase, this has the potential to result in cloud servers being overloaded. This overload problem will be very detrimental because it can reduce the performance of the web server and cause the server to not be able to serve the increasing demand. Load balancing is used as a preventive solution to prevent excessive workload on the server. This study aims to implement load balancing with IP-based backend on Microsoft Azure Cloud. Testing is done by sending 200, 500, and 1000 requests. Testing using HTTPERF software to test the web server. Throughput testing results get an average result of 500 Kbps, this result is in the category of quite good. CPU time user test results 43.2% and 56.7% system, showing the time of execution evenly each incoming request. Request rate get the results show that the time required is relatively short/his request, it can be seen from the results of testing the request rate is in the number 0.9 ms-1.0 ms.