ABSTRACT

Website is an internet application service that is visited by a myriad of users. A large number of simultaneous requests from users expecting high load server resources. However, the website does not always meet a high traffic. Sometimes the website meets more demand, but the website also often meets less demand. These unconditional times could reduce the efficiency of a large number of server resources.

This problem can be done by an auto-scaling system that dynamically and automatically adjusts the computing resources. As the auto-scaling increases or decreases computing resources of the servers, it is capable of reducing the hardware costs as well. Openstack presents Senlin as a clustering service to run the auto-scaling feature.

In this final project, an auto-scaling web server with Senlin service on Openstack has been implemented. From the test results, it is known that the use of the auto-scaling system is quite efficient and effective compared to the load-balancer system. This is indicated by the high average throughput value of the auto-scaling system of 26.52 MB/s, the average value of the total request loss of 0,0618%, and the average cpu-usage savings from the total test of 14.31%. Meanwhile, in the response time parameter, the average value of the auto-scaling system is slower than the load-balancer system, with the auto-scaling is 5.13 ms and the load-balancer is 3.79 ms.

Keywords: *auto-scaling, Openstack, Senlin*