

ABSTRACT

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DESIGN OF HTTP(S) NETWORK LOAD BALANCER USING AUTOSCALING METHOD WITH VIRTUAL MACHINE ON GCP PLATFORM

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Network balancer with HTTP(S) Load Balancer method using Virtual Machine on Google Cloud Platform (GCP) platform is a system design that aims to improve the performance and availability of web applications through the application of efficient load balancing technology. This network balancer uses the HTTP(S) Load Balancer method which is one of the flagship services of GCP, which is able to distribute traffic evenly to various backend virtual machines, thereby reducing the load on a single server and increasing system scalability. In this research, a network balancer will be designed and implemented using Virtual Machine as the application backend. The setup process involves steps such as creating a health check firewall rule to ensure the availability of the backend instance, configuring Cloud NAT to allow outbound traffic from the instance, and creating a custom web server image as a template for the Virtual Machine. The results of this research are expected to benefit the development of web applications that are more responsive and efficient, and provide a better user experience. In addition, the implementation of HTTP(S) Load Balancer with Virtual Machine on GCP also has the potential to optimize the use of cloud resources and reduce operational costs.

Reference (2016 - 2023)