

ABSTRACT

Learning Management System (LMS) is an application used to manage learning activities, including the administration, assessment, information resources, and media for communication. Along with technological developments of world wide web can be integrated into the LMS application service such as web conferencing, streaming server, social networks, online storage, and digital repository through OAuth protocol without the need to transmit data user login credential.

Development of processor technology in information processing in parallel and quickly utilized by the application of virtualization to run multiple operating systems simultaneously and share resources automatically. The use of virtualization technology can save the need for physical servers and power consumption. With the combination of virtualization and grid computing so was born the concept of cloud computing where all the computational work done on the network. Facilitate the development of cloud computing becomes more widespread application of the scale vertically. Besides the ease of application development, minimize downtime, backup, disaster recovery and cloud computing now makes the trend more and more popular.

In this study designed an infrastructure for the LMS by using virtualization and cloud computing. To improve performance and QoS in the LMS is used to run the application load balancer to process requests from users. Load balancer using a TCP / HTTP Load Balancer with a round-robin scheduler algorithms.

Keywords: Learning Management System, Virtualization, Cloud Computing, Load Balancer, OAuth.