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Moodle system performance analysis of Wayamba University

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Abstract

Moodle is an online management system which was built for online learning. Moodle has already become a term of its own synonymous with a software package designed to help educators create quality online education. Most of the higher educational courses are conducted based on Moodle system. Due to different factors Moodle system performance degrade which makes a difficult task to academics to conduct the Moodle based courses. Research was done mostly with the Moodle resources of Wayamba University to check the response time of the pages for the users requests such as login page, video resource page, forum pages and discussion pages. System starts response and system finishes response was used as the performance matrices for Moodle resources. Several factors such as computer parameters (Speed of the CPU, Number of cores, Capacity of the disk, Main memory available capacity), network parameters (Network structure, Types of switches, routers), Moodle services (login , view image ,view video files) were considered to evaluate the Moodle system performances.   Apache   JMeter was used as the testing tool. JMeter was used to simulate a heavy load on a server to test its strength or to analyze overall performance under different load types. Thread groups, config elements, timers, samplers and listeners were used extensively to check the performance. Testing data were collected during 20 working days.

According to the analysis, number of users, size of the resources, and speed of the CUP with response time showcase a significant negative linear relationship.

Keywords: Performance analysis, Learn Management System, network design