

Incident Report - November 16th, 2015

Incident #2015-112

Moodle Questionnaire

Summary

Monday November 16th, 2015 between 4-5:30 pm, Moodle was under heavy load. The database CPU was pinned. Application servers were systematically restarted to reduce load. On Tuesday November 17th, 2015 between 11:30-12:30 pm, similar behavior recurred. It was determined that a Geography course was running a questionnaire. One (1) query was being shown as running 250 k times, and reading 20 k rows each time, causing full table scans and slowness on the database to return the results.

Impact to User

Moodle 2015-16 and the dashboard became sluggish and unresponsive. During these two (2) periods of time Moodle may have been displaying a service outage page, or a database connection error.

Root Cause

Poorly written database tables caused the database to process and read a large number of rows, and with multiple users requesting the same information, the system was overloaded.

Resolution

Database indexes were added to the questionnaire tables (mdl1_questionnaire table), and some missing indexes from other tables were added. Load testing was completed by Middleware, satisfying the requirement for the questionnaire module to perform as expected under loads equivalent and greater to what was present during the Geography questionnaire.

Communications (Internal)

From the time the issue was present until resolution the team monitored the application (traffic and load) using Lync messages, and sit down sessions. Additional resources worked to recreate the issue in the preview environment allowing the team to prove the fixes resolved the issue.

Action Items

Creation of database indexes.