Blackboard Ally for UCL Moodle – Server load impact assessment

The Blackboard Ally integration is designed to primarily use Moodle Web Services, store minimal user data in the plugins or Ally service. The Ally Moodle plugins are mostly there as a channel to view data from Ally in Moodle contexts rather than to send content to Ally. Ally as part of the initial indexing will download all Moodle files.

From a load perspective, this does mean that:

1. Load will impact on moodle-app-0[1-4] rather than on the moodle-admin-01 server
2. Timing of Ally making Web Services calls is not fully under UCL control
3. Significant amount of data to be transferred (3.5TB)

The load impact is therefore worth noting and monitoring. However, during the on-boarding Ally gathers, via the Web Services API, a list of the files that need to be downloaded and adds them to a queue. Both the Web Service calls and the file downloads are limited to use a specified number of threads - 1(default) up to 5. - this ensures that the load is contained and does not overwhelm our Moodle servers but if we want to speed up the on-boarding additional threads can be used to achieve this in a controlled manner. While a single thread constantly querying Moodle for these things will generate significantly more load than a single student would, it shouldn’t represent more than the load generated by 20 active users while New Moodle coped with ease with the load of 1000 active users during start of term.

The on-boarding process will occur annually in August, after the annual Moodle upgrade, in the quietest part of the year for Moodle usage. The load on UCL Moodle at the end of May is already less than a third of the load during the start of term in October and will further reduce in July and August.

The day-to-day load after the on boarding is minimal, Ally will be notified of every file uploaded, updated or deleted in Moodle and will proceed to update itself downloading this from our Moodle. File uploads account for a relatively small proportion of actions in Moodle compared to viewing content or interacting with activities, so the minor increase in load day-to-day is negligible.

Overall, the on boarding is the period of highest load impact, but this risk can be monitored and managed effectively by the Learning Applications team and Blackboard Ally’s on boarding team. The day to day impact on load is minimal and not of significant concern.