

INCIDENT REPORT

INFORMATION TECHNOLOGY SERVICES



Incident Report - January 09, 2017

Incident #2017-179

OnQ Sync issue

Summary

On January 9, 2017, ITS became aware that a number of users were not successfully enrolled in their classes. Investigation into the issue uncovered an inconsistency in how enrolment data was provided. Consultation with the ITS Middleware team determined this was a known issue. A work-around was implemented in Qerberus and invalid data was removed on Jan 11. A "full re-sync" against onQ ran on Jan 12.

The "full re-sync" triggered a bug in Qerberus causing duplicate enrolments to be stored. On January 16, ITS discovered that when a user with duplicate enrolments was unenrolled, the duplication only removed them from the section within OnQ and not from the course itself. ITS then authored additional code within Qerberus to allow for a "full drop" feature which would ensure users that had been unenrolled from courses were actually removed within OnQ. The "full drop" ran on Jan 17. This fixed the existing bug.

However, the "full drop" triggered another bug in Qerberus whereby if users were enrolled in a course through multiple enrolments and one of those enrolments was marked as unenrolled, they would be removed from the course even though they should not be. (Note – multiple enrolments are different from duplicate enrolments). This manifested most frequently when users switched sections within a course. This was discovered, diagnosed, and fixed on Jan 18. A normal sync was initiated which re-enrolled affected users into their courses.

Normal Add/Drop activity occurring during this incident was frequently detected as having been caused because of this issue. Therefore, investigation and resolution were made significantly more difficult.

Impact

- Between Jan 9 and Jan 12, 2017, some students were not able to access courses they were enrolled in.



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- Between Jan 12 and Jan 17, 2017, some students were able to access courses they were no longer enrolled in.
- Between Jan 17 and Jan 18, 2017, some students were not able to access courses they were enrolled in.

Root Cause

The root cause of the issue were inconsistencies in how the enrolment data was stored which required new code.

Resolution

ITS made alterations to the code to resolve the inconsistencies in how the data was stored.

Communications (Internal)

The Education and Collaboration Technologies team (formerly Web Services and Teaching & Learning) communicated throughout the incident. Messages were sent to support staff periodically as the situation developed. Staff from Middleware and PeopleSoft were involved to facilitate debugging.

ITSP Communication (External)

A notification was posted on Jan 9, 2017, with updates on Jan 11 and Jan 12. In addition, various professors and administration staff were contacted to apprise them of the situation.

Lessons Learned

- A number of new situations were identified that were previously unknown and thus untested.
- It was suggested that the enrolment data should be standardized so it cannot affect other systems in a similar fashion.
- A repeat of this incident is not anticipated as this was predominantly fixed via updates to the codebase.



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- Testing in the preview environment did not identify the inconsistencies, possibly because the preview environment differs from production, and possibly because the enrolment data tested against did not contain any of the inconsistent data.

Action Items

No new action items were identified by this incident.

