Google Cloud Issue Summary

Classroom - 2021-01-21

All dates/times relative to US/Pacific

On 2021-01-21 - from 16:10 until 19:24, Google Classroom experienced an increase in overall error rates for a duration of 3 hours and 14 minutes. At peak, 35% of all requests to the Google Classroom service returned errors, this included the submission of assignments, viewing classes, grading, and other Classroom specific actions. We understand that this issue has impacted our valued customers and users, and we apologize to those who were affected.

ROOT CAUSE

Google Classroom is in the process of multi-stage migration of their internal production environment. As a result of this migration, there have been a number of internal production configuration changes which allows Google Classroom to continually serve requests successfully during the migration process.
As such, Google Classroom is running two production environments with request traffic shared across each, and both production environments are to be configured in a way which ensures that the same binaries are running across each environment.

During the process of configuring this binary parity, a release was pushed to the legacy environment, into both its canary and production serving tasks simultaneously. This release included a bad change which would cause a crash in the user authorization code.
When this release was rolled out, the Google Classroom engineering team were alerted to a rise in the error rate.

Once the release was identified as the probable cause, Google Engineering attempted an automated roll-back. However - due to an issue with how these errors were manifesting themselves, mechanisms that safeguard against bad releases incorrectly identified the automated rollback as a bad release.
This required the rollback to be deployed manually which was completed at 19:19.

REMEDIATION AND PREVENTION

Google Engineering were automatically alerted to the increase in error rates at 16:15, and after some investigation into the errors, the team attempted to automatically roll-back to a known-working binary.
This roll-back failed due to an issue with the roll-back safety mechanism, and the decision was made to manually deploy the roll-back.
This roll-back was completed at 19:19.

In order to avoid this issue reoccurring, and to reduce the impact of similar events, we are taking the following actions:
- Finish the migration of all Classroom traffic to the new production environment.
- Splitting of Binary Parity to configure both it's canary and production serving tasks separately.
- Identify why this release was not caught by our pre-production error detection service.

Google is committed to quickly and continually improving our technology and operations to prevent service disruptions. We appreciate your patience and apologize again for any impact to your organization. We thank you for your business.

Sincerely,

The Google Workspace Team