Google Apps Incident Report
Google Mail - August 19-25, 2010

Prepared for Google Apps Customers

The following is the incident report for the Google Mail duplicate message issues experienced by some Google Apps customers from August 19 to August 25, 2010. We understand that this service issue has affected our valued customers and their users, and we apologize for the impact.

Issue Summary

Beginning on August 19, an update to the Gmail message routing system caused duplicate delivery of a small fraction of multirecipient messages. This was only visible to external recipients, since Gmail itself suppresses duplicates.

Actions and Root Cause Analysis

At 11:41 AM PDT | 18:41 UTC August 24, the Google Engineering team received reports that some outbound messages to multiple recipients were duplicated. This incident was not directly visible to Gmail users, and did not cause any performance problems, delays, or message failures. Analysis from the Google Engineering team traced this problem to new code introduced at 3:00 PM PDT | 22:00 UTC August 19. The Google Engineering team repaired the problem at 6:04 PM PDT August 25 | 01:04 UTC August 26, but because of the nature of the problem, a very small number of duplicates may have occurred after the problem was repaired and the root cause was resolved.

Corrective and Preventative Measures

The Engineering team conducted an internal review and analysis, and is performing the following actions to help address the underlying causes of the problem and help prevent recurrence:

- Improve monitoring to detect changes to mail flow after new code is introduced.
- Test code to verify that messages are not duplicated.

We appreciate your patience and again apologize for the impact to your organization. We thank you for your business and continued support during this time.

Sincerely,

The Google Apps Team