

Google Cloud Status Dashboard

This page provides status information on the services that are part of Google Cloud Platform. Check back here to view the current status of the services listed below. If you are experiencing an issue not listed here, please [contact Support](#). Learn more about what's posted on the dashboard in [this FAQ](#). For additional information on these services, please visit [cloud.google.com](#).

Google Cloud Pub/Sub Incident #17001

Issues with Cloud Pub/Sub

Incident began at **2017-03-21 21:22** and ended at **2017-03-21 22:02** (all times are **US/Pacific**).

	DATE	TIME	DESCRIPTION
✔	Mar 29, 2017	22:19	<p>ISSUE SUMMARY On Tuesday 21 March 2017, new connections to Cloud Pub/Sub experienced high latency leading to timeouts and elevated error rates for a duration of 95 minutes. Connections established before the start of this issue were not affected. If your service or application was affected, we apologize – this is not the level of quality and reliability we strive to offer you, and we are taking immediate steps to improve the platform's performance and availability.</p> <p>DETAILED DESCRIPTION OF IMPACT On Tuesday 21 March 2017 from 21:08 to 22:43 US/Pacific, Cloud Pub/Sub publish, pull and ack methods experienced elevated latency, leading to timeouts. The average error rate for the issue duration was 0.66%. The highest error rate occurred at 21:43, when the Pub/Sub publish error rate peaked at 4.1%, the ack error rate reached 5.7% and the pull error rate was 0.02%.</p> <p>ROOT CAUSE The issue was caused by the rollout of a storage system used by the Pub/Sub service. As part of this rollout, some servers were taken out of service, and as planned, their load was redirected to remaining servers. However, an unexpected imbalance in key distribution led some of the remaining servers to become overloaded. The Pub/Sub service was then unable to retrieve the status required to route new connections for the affected methods. Additionally, some Pub/Sub servers didn't recover promptly after the storage system had been stabilized and required individual restarts to fully recover.</p> <p>REMEDIATION AND PREVENTION Google engineers were alerted by automated monitoring seven minutes after initial impact. At 21:24, they had correlated the issue with the storage system rollout and stopped it from proceeding further. At 21:41, engineers restarted some of the storage servers, which improved systemic availability. Observed latencies for Pub/Sub were still elevated, so at 21:54, engineers commenced restarting other Pub/Sub servers, restoring service to 90% of users. At 22:29 a final batch was restarted, restoring the Pub/Sub service to all.</p> <p>To prevent a recurrence of the issue, Google engineers are creating safeguards to limit the number of keys managed by each server. They are also improving the availability of Pub/Sub servers to respond to requests even when in an unhealthy state. Finally they are deploying enhancements to the Pub/Sub service to operate when the storage system is unavailable.</p>
✔	Mar 21, 2017	22:40	The issue with Pub/Sub high latency has been resolved for all affected projects as of 22:02 US/Pacific. We will conduct an internal investigation of this issue and make appropriate improvements to our systems to help prevent or minimize future recurrence.
✖	Mar 21, 2017	21:47	We are investigating an issue with Pub/Sub. We will provide more information by 22:40 US/Pacific.

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