Google Cloud Platform

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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 App Engine Incident #17007

The Memcache service has recovered from a disruption between 12:30 US/Pacific and 15:30 US/Pacific.

Incident began at **2017-11-06 12:33** and ended at **2017-11-06 14:23** (all times are **US/Pacific**).

DATE	TIME	DESCRIPTION
✅ Nov 07, 2017	10:59	ISSUE SUMMARY
		On Monday 6 November 2017, the App Engine Memcache service experienced unavailability for applications in all regions for 1 hour and 50 minutes.
		We sincerely apologize for the impact of this incident on your application or service. We recognize the severity of this incident and will be undertaking a detailed review to fully understand the ways in which we must change our systems to prevent a recurrence.
		DETAILED DESCRIPTION OF IMPACT
		On Monday 6 November 2017 from 12:33 to 14:23 PST, the App Engine Memcache service experienced unavailability for applications in all regions.
		Some customers experienced elevated Datastore latency and errors while Memcache was unavailable. At this time, we believe that all the Datastore issues were caused by surges of Datastore activity due to Memcache being unavailable. When Memcache failed, if an application sent a surge of Datastore operations to specific entities or key ranges, then Datastore may have experienced contention or hotspotting, as described in https://cloud.google.com/datastore/docs/best-practices#designing_for_scale. Datastore experienced elevated load on its servers when the outage ended due to a surge in traffic. Some applications in the US experienced elevated latency on gets between 14:23 and 14:31, and elevated latency on puts between 14:23 and 15:04.
		Customers running Managed VMs experienced failures of all HTTP requests and App Engine API calls during this incident. Customers using App Engine Flexible Environment, which is the successor to Managed VMs, were not impacted.
		ROOT CAUSE
		The App Engine Memcache service requires a globally consistent view of the current serving datacenter for each application in order to guarantee strong consistency when traffic fails over to alternate datacenters. The configuration which maps applications to datacenters is stored in a global database.
		The incident occurred when the specific database entity that holds the configuration became unavailable for both reads and writes following a configuration update. App Engine Memcache is designed in such a way that the configuration is considered invalid if it cannot be refreshed within 20 seconds. When the configuration could not be fetched by clients, Memcache became unavailable.
		REMEDIATION AND PREVENTION
		Google received an automated alert at 12:34. Following normal practices, our engineers immediately looked for recent changes that may have triggered the incident. At 12:59, we attempted to revert the latest change to the configuration file. This configuration rollback required an update to the configuration in the global database, which also failed. At 14:21, engineers were able to update the configuration by sending an update request with a sufficiently long deadline. This caused all replicas of the database to synchronize and allowed clients to read the mapping configuration.
		As a temporary mitigation, we have reduced the number of readers of the global configuration, which avoids the contention during write and led to the unavailability during the incident. Engineering projects are already under way to regionalize this configuration and thereby limit the blast radius of similar failure patterns in the future.
✅ Nov 06, 2017	15:55	The issue with Memcache availability has been resolved for all affected projects as of 15:30 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. We will provide a more detailed analysis of this incident once we have completed our internal investigation.
		This is the final update for this incident.
✅ Nov 06, 2017	15:26	The Memcache service is still recovering from the outage. The rate of errors continues to decrease and we expect a full resolution of this incident in the near future.
		We will provide an update by 16:00 US/Pacific with current details.
✅ Nov 06, 2017	15:08	The issue with Memcache and MVM availability should be resolved for the majority of projects and we expect a full resolution in the near future.
		We will provide an update by 15:30 US/Pacific with current details.
✅ Nov 06, 2017	14:44	We are experiencing an issue with Memcache availability beginning at November 6, 2017 at 12:30 pm US/Pacific. At this time we are gradually ramping up traffic to Memcache and we see that the rate of errors is decreasing. Other services affected by the outage, such as MVM instances, should be normalizing in the near future.
		We will provide an update by 15:15 US/Pacific with current details.
✅ Nov 06, 2017	14:31	We are experiencing an issue with Memcache availability beginning at November 6, 2017 at 12:30 pm US/Pacific. Our Engineering Team believes they have identified the root cause of the errors and is working to mitigate.
		We will provide an update by 15:00 US/Pacific with current details.
❌ Nov 06, 2017	13:57	We are experiencing an issue with Memcache availability beginning at November 6, 2017 at 12:30 pm US/Pacific. Current data indicates that all projects using Memcache are affected by this issue. For everyone who is affected, we apologize for any inconvenience you may be experiencing.
		We will provide an update by 14:30 US/Pacific with current details.
❌ Nov 06, 2017	13:31	We are experiencing an issue with Memcache availability beginning at November 6, 2017 at 12:30 pm US/Pacific. Current data indicate(s) that all projects using Memcache are affected by this issue. For everyone who is affected, we apologize for any inconvenience you may be experiencing.
		We will provide an update by 14:00 US/Pacific with current details.
❌ Nov 06, 2017	13:11	We are investigating an issue with Google App Engine and Memcache. We will provide more information by 13:30 US/Pacific.

All times are US/Pacific

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