

## 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 Storage Incident #18005

We are currently investigating an issue with Google Cloud Storage and App Engine. Google Cloud Build and Cloud Functions services are restored

Incident began at **2018-12-21 08:01** and ended at **2018-12-21 11:43** (all times are **US/Pacific**).

DATE	TIME	DESCRIPTION
✔	Dec 28, 201809:53	ISSUE SUMMARY
		On Friday 21 December 2018, customers deploying App Engine apps, deploying in Cloud Functions, reading from Google Cloud Storage (GCS), or using Cloud Build experienced increased latency and elevated error rates ranging from 1.6% to 18% for a period of 3 hours, 41 minutes.
		We understand that these services are critical to our customers and sincerely apologize for the disruption caused by this incident; this is not the level of quality and reliability that we strive to offer you. We have several engineering efforts now under way to prevent a recurrence of this sort of problem; they are described in detail below.
		DETAILED DESCRIPTION OF IMPACT
		On Friday 21 December 2018, from 08:01 to 11:43 PST, Google Cloud Storage reads, App Engine deployments, Cloud Functions deployments, and Cloud Build experienced a disruption due to increased latency and 5xx errors while reading from Google Cloud Storage. The peak error rate for GCS reads was 1.6% in US multi-region. Writes were not impacted, as the impacted metadata store is not utilized on writes.
		Elevated deployment errors for App Engine Apps in all regions averaged 8% during the incident period. In Cloud Build, a 14% INTERNAL_ERROR rate and 18% TIMEOUT error rate occurred at peak. The aggregated average deployment failure rate of 4.6% for Cloud Functions occurred in us-central1, us-east1, europe-west1, and asia-northeast1.
		ROOT CAUSE
		Impact began when increased load on one of GCS's metadata stores resulted in request queuing, which in turn created an uneven distribution of service load.
		The additional load was created by a partially-deployed new feature. A routine maintenance operation in combination with this new feature resulted in an unexpected increase in the load on the metadata store. This increase in load affected read workloads due to increased request latency to the metadata store.
		In some cases, this latency exceeded the timeout threshold, causing an average of 0.6% of requests to fail in the US multi-region for the duration of the incident.
✔	Dec 21, 201812:10	REMEDIATION AND PREVENTION
		Google engineers were automatically alerted to the increased error rate at 08:22 PST. Since the issue involved multiple backend systems, multiple teams at Google were involved in the investigation and narrowed down the issue to the newly-deployed feature. The latency and error rate began to subside as Google Engineers initiated the rollback of the new feature. The issue was fully mitigated at 11:43 PST when the rollback finished, at which point the impacted GCP services recovered completely.
		In addition to updating the impacting feature to prevent this type of increased load, we will update the rollout workflow to stress feature limits before rollout. To improve time to resolution of issues in the metadata store, we are implementing additional instrumentation to the requests made of the subsystem.
✔	Dec 21, 201811:46	The issue with Google Cloud Storage, App Engine, and Cloud Functions has been resolved for all affected projects as of Friday, 2018-12-21 11:46 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.
⚠	Dec 21, 201810:53	The rollout for the potential fix is continuing its progress. The Google Cloud Storage error rate has improved and is currently 0.1% for US multi-region. Google App Engine App deployments and Google Cloud Function deployments remain affected. We will provide another status update by Friday, 2018-12-21 12:30 US/Pacific with current details.
⚠	Dec 21, 201810:30	We are rolling out a potential fix to mitigate this issue. This currently also impacts Google App Engine App deployments and Google Cloud Function deployments. We will provide another status update by Friday, 2018-12-21 12:00 US/Pacific with current details.
⚠	Dec 21, 201810:30	A proximate root cause has been identified and mitigation work is currently underway by our Engineering Team. We will provide another status update by Friday, 2018-12-21 12:30 US/Pacific with current details.
⚠	Dec 21, 201809:59	We are experiencing an issue with Google Cloud Storage service returning elevated error rates for requests in the US multi-region, starting at Friday, 2018-12-21 08:06 US/Pacific. This currently also impacts Google App Engine. The issue for Google Cloud Build and Google Cloud Functions has been resolved as of Friday, 2018-12-21 09:38 US/Pacific.
		Mitigation work is currently underway by our engineering team and we expect a full resolution in the near future.
		Google Cloud Storage service is reporting a 1% error rate for all requests. Affected Google Cloud Functions customers may seen their deployments time out. Affected customers of Google Cloud Build were observable as "Build failed (internal error)"
		We will provide another status update by Friday, 2018-12-21 11:00 US/Pacific with current details.
⚠	Dec 21, 201809:18	The Google Cloud Storage service issue is correlated to issues in Google App Engine, Google Cloud Build and Google Cloud Functions in US multi-region. We will provide another status update by Friday, 2018-12-21 10:00 US/Pacific with current details.
⚠	Dec 21, 201809:14	The Google Cloud Storage service issue is correlated to issues in Google Cloud Build and Google Cloud Functions in US Region. We will provide another status update by Friday, 2018-12-21 10:00 US/Pacific with current details.
⚠	Dec 21, 201808:51	The Google Cloud Storage service is reporting an error rate increase in US region on requests. We will provide another status update by Friday, 2018-12-21 09:15 US/Pacific with current details.
⚠	Dec 21, 201808:51	We are investigating an issue with Google Cloud Storage.

