

Google Cloud Platform

Storage and Databases

G-Cloud 15 – Service Definition

Globally unified, scalable, and highly durable object storage for developers and enterprises.

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Storage

Cloud Storage: Cloud Storage is a RESTful service for storing and accessing your data on Google's infrastructure. The service combines the performance and scalability of Google's cloud with advanced security and sharing capabilities.

Persistent Disk: Persistent Disk is a durable and high performance block storage service for Google Cloud Platform. Persistent Disk provides SSD and HDD storage that can be attached to instances running in either Compute Engine or Google Kubernetes Engine.

Cloud Filestore: Cloud Filestore is a scalable and highly available shared file service fully-managed by Google. Cloud Filestore provides persistent storage ideal for shared workloads. It is best suited for enterprise applications requiring persistent, durable, shared storage which is accessed by NFS or requires a POSIX compliant file System.

Databases

Cloud Bigtable: Cloud Bigtable is a fast, fully-managed, highly-scalable NoSQL database service. It is designed for the collection and retention of data from 1TB to hundreds of PB.

Datastore: Datastore is a fully-managed, schemaless, non-relational datastore. It provides a rich set of query capabilities, supports atomic transactions, and automatically scales up and down in response to load. It can scale to support an application with 1,000 users or 10 million users with no code changes.

Firestore: Firestore is a NoSQL document database for storing, syncing, and querying data for mobile and web apps. Its client libraries provide live synchronisation and offline support, while its security features and integrations with Firebase and Google Cloud Platform accelerate building serverless apps.

Memorystore: Memorystore, which includes Memorystore for Redis and Memorystore for Memcached, provides a fully-managed in-memory data store service that allows customers to deploy distributed caches that provide sub-millisecond data access.

Cloud Spanner: Cloud Spanner is a fully-managed, mission-critical relational database service. It is designed to provide a scalable online transaction

processing (OLTP) database with high availability and strong consistency at global scale.

Cloud SQL: Cloud SQL is a web service that allows you to create, configure, and use relational databases that live in Google's cloud. It is a fully-managed service that maintains, manages, and administers your databases, allowing you to focus on your applications and services.

Cloud Storage

Globally unified, scalable, and highly durable object storage for developers and enterprises.

- Optimise price and performance across storage classes with Object Lifecycle Management
- Secure and durable storage for resilience against errors or outages
- Reduce data storage carbon emissions to zero
- Use Cloud Storage for content delivery, data lakes, and backup
- For file sharing see Drive Enterprise

Features

Object Lifecycle Management

Define conditions that trigger data deletion or transition to a cheaper storage class.

Object Versioning

Continue to store old copies of objects when they are deleted or overwritten.

Retention policies

Define minimum retention periods that objects must be stored for before they're deletable.

Object holds

Place a hold on an object to prevent its deletion.

Customer-managed encryption keys

Encrypt object data with encryption keys stored by the Cloud Key Management Service and managed by you.

Customer-supplied encryption keys

Encrypt object data with encryption keys created and managed by you.

Uniform bucket-level access

Uniformly control access to your Cloud Storage resources by disabling object ACLs.

Requester Pays

Require accessors of your data to include a project ID to bill for network charges, operation charges, and retrieval fees.

Bucket Lock

Bucket Lock allows you to configure a data retention policy for a Cloud Storage bucket that governs how long objects in the bucket must be retained.

Pub/Sub notifications for Cloud Storage

Send notifications to Pub/Sub when objects are created, updated, or deleted.

Cloud Audit Logs with Cloud Storage

Maintain admin activity logs and data access logs for your Cloud Storage resources.

Object- and bucket-level permissions

Cloud Identity and Access Management (IAM) allows you to control who has access to your buckets and objects.

Cloud Databases

Migrate, manage, and modernise data with secure, reliable, and highly available databases.

- Flexible performance and scale
- Broad open-source compatibility
- Do more with your data with analytics and ML/AI integrations

For more information see [here](#)

Type	Common uses	GCP Product
Relational	Compatibility Transactions Complex queries Joins	Cloud SQL Cloud Spanner
NoSQL / Non relational	Time Series Streaming Mobile Web IOT Offline sync Caching Low Latency	Cloud Bigtable Cloud Firestore Firebase realtime database Cloud Memorystore

Cloud SQL

Cloud SQL is a fully managed database service that makes it easy to set up and manage your relational PostgreSQL, MySQL, and SQL Server databases in the cloud.

Ideal for WordPress, backends, game states, CRM tools, MySQL, PostgreSQL, and Microsoft SQL Servers.

Cloud Bigtable

Cloud Bigtable is a NoSQL database service for use cases where low latency reads and high throughput writes, scalability, and reliability are critical.

Ideal for running large analytical workloads and building low-latency applications.

Cloud Spanner

Cloud Spanner is a scalable relational database service built to support transactions, strong consistency, and high availability across regions and continents.

Ideal for teams requiring scale insurance and mission-critical availability.

Cloud Memorystore

Cloud Memorystore is a fully managed in-memory data store service for Redis built on scalable, more secure, and highly available infrastructure.

Ideal for building application caches and sub-millisecond data access using Redis.

Cloud Firestore

Cloud Firestore is a fast, fully managed, serverless, cloud-native NoSQL document database.

Ideal for building client side mobile and web applications, gaming leaderboards, and user presence at global scale.

Firebase Realtime Database

The Firebase Realtime Database is a cloud-hosted NoSQL database that lets you store and sync data between your users in real time.

Ideal for creating onboarding flows, rolling out new features, and building serverless apps.

Contact Information

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