

Watch the Data Cloud Summit

(<https://cloudonair.withgoogle.com/events/summit-data-cloud-2022>) on demand and learn about the latest innovations in analytics, AI, BI, and databases.

JUMP TO (#)



Cloud Bigtable

A fully managed, scalable NoSQL database service for large analytical and operational workloads with up to 99.999% availability.

New customers get \$300 in free credits to spend on Cloud Bigtable.

Try Bigtable free (<https://console.cloud.google.com/freetrial>)

Contact sales (<https://cloud.google.com/contact>)

- ✓ Consistent sub-10ms latency—handle millions of requests per second
- ✓ Ideal for use cases such as personalization, ad tech, fintech, digital media, and IoT
- ✓ Seamlessly scale to match your storage needs; no downtime during reconfiguration
- ✓ Designed with a storage engine for machine learning applications leading to better predictions
- ✓ Easily connect to Google Cloud services such as BigQuery ([/bigquery](#)) or the

Apache ecosystem



VIDEO

Bigtable helps you work with data and build a foundation for innovative apps.

01:12

(<https://www.youtube.com/watch?v=6YFaF45R3nI&autoplay=1>)

BENEFITS

Fast and performant

Use Cloud Bigtable as the storage engine that grows with you from your first gigabyte to petabyte-scale for low-latency applications as well as high-throughput data processing and analytics.

Seamless scaling and replication

Start with a single node per cluster, and seamlessly scale to hundreds of nodes dynamically supporting peak demand. Replication also adds high availability and workload isolation for live serving apps.

Simple and integrated

Fully managed service that integrates easily with big data tools like [Hadoop](https://hadoop.apache.org/) (<https://hadoop.apache.org/>), [Dataflow](https://dataflow.apache.org/) ([/dataflow](https://dataflow.apache.org/)), and [Dataproc](https://dataproc.apache.org/) ([/dataproc](https://dataproc.apache.org/)). Plus, support for the open source [HBase API](https://hbase.apache.org/) (<https://hbase.apache.org/>) standard makes it easy for development teams to get started.

KEY FEATURES

Key features

High throughput at low latency

Bigtable is ideal for storing very large amounts of data in a key-value store and supports high read and write throughput at low latency for fast access to large amounts of data.

Throughput scales linearly—you can increase QPS (queries per second) by adding Bigtable nodes. Bigtable is built with proven infrastructure that powers Google products used by billions such as Search and Maps.

Cluster resizing without downtime

Scale seamlessly from thousands to millions of reads/writes per second. Bigtable throughput can be dynamically adjusted by adding or removing cluster nodes without restarting, meaning you can increase the size of a Bigtable cluster for a few hours to handle a large load, then reduce the cluster's size again—all without any downtime.

Flexible, automated replication to optimize any workload

Write data once and automatically replicate where needed with eventual consistency—giving you control for high availability and isolation of read and write workloads. No manual steps needed to ensure consistency, repair data, or synchronize writes and deletes. Benefit from a

high availability SLA of 99.999% for instances with multi-cluster routing across 3 or more regions (99.9% for single-cluster instances).



VIDEO

Driving a real-time personalization engine with Cloud Bigtable

41:18

(<https://www.youtube.com/watch?v=rECHcoGIJNU>)

CUSTOMERS

Learn from customers using Cloud Bigtable



CASE STUDY

How Macy's enhances the customer experience with Google Cloud services



5-min read

See all customers (<https://cloud.google.com/customers>)

WHAT'S NEW

What's new

[Sign up](https://cloud.google.com/newsletter) (<https://cloud.google.com/newsletter>) for Google Cloud newsletters to receive product updates, event information, special offers, and more.

VIDEO

[HBase to Cloud Bigtable migrations](#)

<https://www.youtube.com/watch?v=ShBnpMisJHs>



[Watch video](#)

DOCUMENTATION

Documentation

TUTORIAL

Codelab: Introduction to Cloud Bigtable

Step through a Cloud Bigtable codelab that teaches you how to avoid common schema design mistakes, import data, and then query and use it.

Learn more (<https://codelabs.developers.google.com/codelabs/cloud-bigtable-intro-java/index.html>)

GOOGLE CLOUD BASICS

Creating a Cloud Bigtable instance

Create a Cloud Bigtable instance using command-line tools or the Cloud Console.

Learn more (</bigtable/docs/creating-instance>)

QUICKSTART

Quickstart using the cbt tool

Learn first-hand how to use the cbt command line to connect to a Cloud Bigtable instance, perform basic admin tasks, and read and write data in a table.

Learn more (</bigtable/docs/create-instance-write-data-cbt-cli>)

GOOGLE CLOUD BASICS

Migrating from HBase to Cloud Bigtable with minimal downtime

Use tooling designed to create Cloud Bigtable tables from HBase tables schemas, import snapshots of the HBase tables, and validate the integrity of migrated data.

Learn more (<https://cloud.google.com/bigtable/docs/hbase-replication>)

GOOGLE CLOUD BASICS

Autoscaling

Let Cloud Bigtable automatically add or remove nodes when usage changes, significantly lowering the risk of over-provisioning or under-provisioning your resources.

Learn more (<https://cloud.google.com/bigtable/docs/autoscaling>)

GOOGLE CLOUD BASICS

Customer-managed encryption keys (CMEK)

CMEK provides the ability to create and manage Bigtable instances using Google Cloud Key Management (KMS) encryption keys to protect your data at rest.

(<https://cloud.google.com/bigtable/docs/cmek>)

Learn more (<https://cloud.google.com/bigtable/docs/cmek>)

GOOGLE CLOUD BASICS

Cloud Bigtable for Cassandra users

Understand the similarities and differences between Cloud Bigtable and Apache Cassandra so you can migrate existing applications or build new ones using Bigtable.

Learn more (<https://cloud.google.com/solutions/cloud-bigtable-for-cassandra-users>)

APIS & LIBRARIES

Cloud Bigtable client libraries

Work with Cloud Bigtable using a Google Cloud client library in your preferred programming language.

Learn more (</bigtable/docs/reference/libraries>)

GOOGLE CLOUD BASICS

Optimize schema performance with Key Visualizer

Key Visualizer lets you see key access patterns in heatmap format to optimize your Cloud Bigtable schemas for improved performance.

Learn more (<https://cloud.google.com/bigtable/docs/keyvis-overview>)

Not seeing what you're looking for?

[View all product documentation \(/bigtable/docs\)](/bigtable/docs)

Explore more docs

[Get a quick intro to using this product.](/bigtable/docs/quickstarts)

[\(/bigtable/docs/quickstarts\)](/bigtable/docs/quickstarts)

[Learn to complete specific tasks with this product.](#)

[\(/bigtable/docs/how-to\)](/bigtable/docs/how-to)

[Browse walkthroughs of common uses and scenarios for this product.](#)

[\(/bigtable/docs/tutorials\)](/bigtable/docs/tutorials)

[View APIs, references, and other resources for this product.](#)

Release notes

Read about the latest releases for Cloud Bigtable

[\(/bigtable/docs/release-notes\)](/bigtable/docs/release-notes)

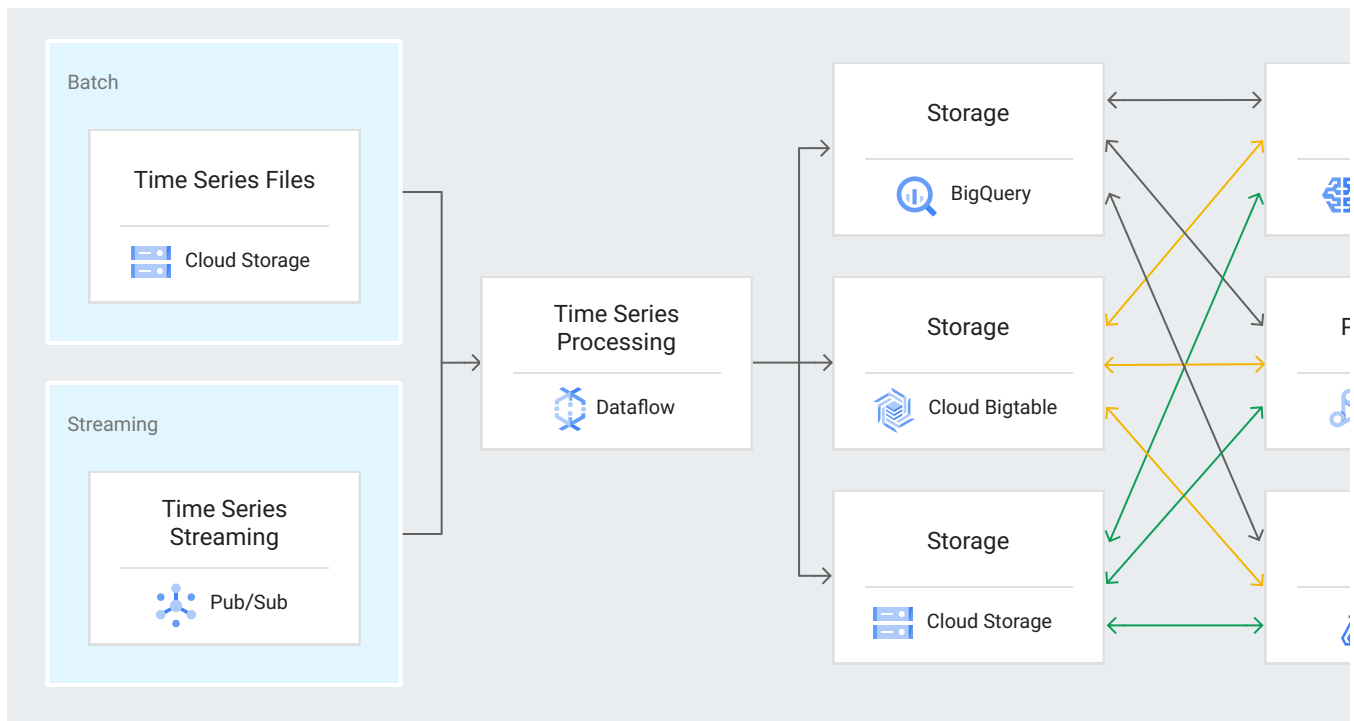
USE CASES

Use cases

USE CASE

Financial analysis

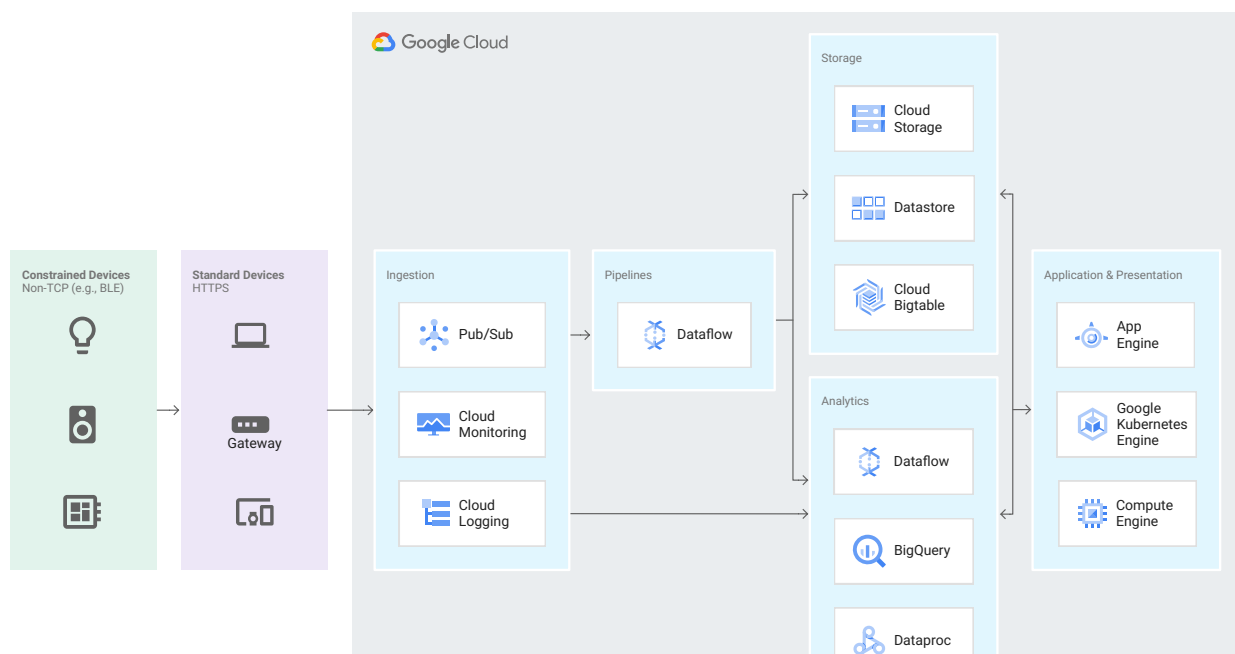
Build models based on historical behavior. Continually update fraud patterns and compare with real-time transactions. Store and consolidate market data, trade activity, and other data, such as social and transactional data.



USE CASE

IoT

Ingest and analyze large volumes of time series data from sensors in real time, matching the high speeds of IoT data to track normal and abnormal behavior. Enable customers to build dashboards and drive analytics on their data in real time.

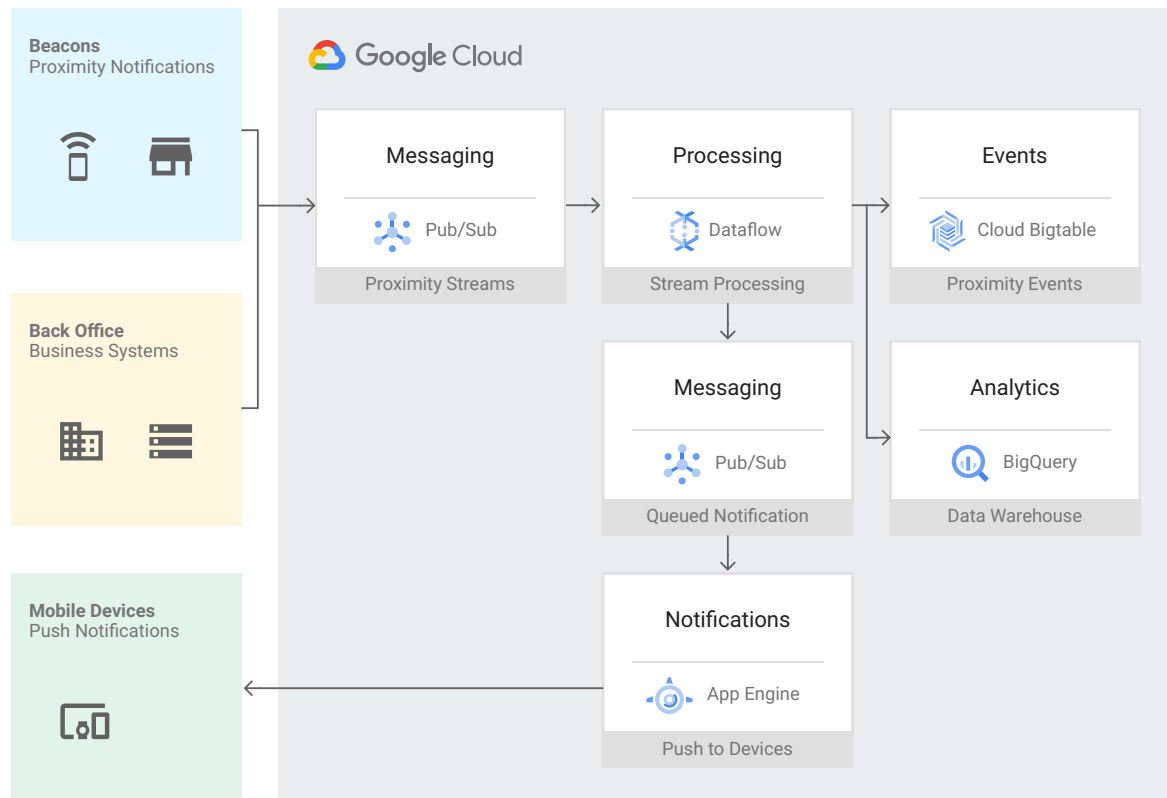




USE CASE

AdTech

Integrate large volumes of unrefined data from many sources, typically to drive consistent customer activity across channels. Collect and compare large volumes of behavior data across customers to find common patterns that can drive recommendations and sales.



iew all technical guides (<https://cloud.google.com/architecture?text=bigtable>)

PRICING

Pricing

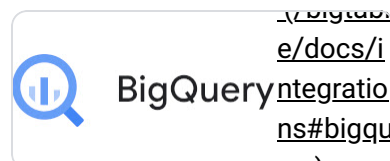
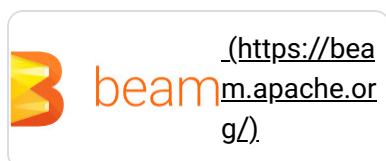
Cloud Bigtable is a fast, fully managed, massively scalable NoSQL database service. For detailed pricing information, please view the [pricing guide](/bigtable/pricing) (/bigtable/pricing).

[view pricing details](/bigtable/pricing) (/bigtable/pricing)

PARTNERS

Integrations

Cloud Bigtable integrates with the Apache® ecosystem and other Google Cloud products to analyze, process, and store data. For more details, refer to [Integrations](/bigtable/docs/integrations) (/bigtable/docs/integrations) documentation.



See all partners (<https://cloud.withgoogle.com/partners/>)

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