

# Google Cloud Platform

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# Why Google Cloud



## WHY GOOGLE CLOUD

### Choosing Google Cloud

Reasons why people choose us

### Trust and security

Keep your data secure and compliant

### Open cloud

Scale with open, flexible technology

### Global infrastructure

Build on the same infrastructure Google uses





Periodo de Prueba de 90 días o 300 \$ -

<https://cloud.google.com/free/>

# Google Data Centers

*Los centros de datos de Google son la base de toda la plataforma de Google Cloud. Ofrecen poder computación, almacenamiento, memoria, GPUs para nuestras aplicaciones. Además, alberga el corazón de aplicaciones como Gmail, Youtube, Search...*

- Rapidez
- Baja latencia
- Eficiencia de operaciones
- Eficiencia Energética
- Uso de Energías Renovables
- Cercanía al usuario
- Seguridad de la Información



# Cloud Locations



REGIONES



ZONAS



UBICACIONES DE PERÍMETRO DE RED



PAÍSES Y TERRITORIOS

DISPONIBLE EN

**PRÓXIMAMENTE** Seguiremos ampliando la disponibilidad de Google Cloud a las regiones de Varsovia (Polonia), Doha (Qatar), Toronto (Canadá), Melbourne (Australia), Delhi (India), París (Francia), Milán (Italia), Santiago (Chile) y Madrid (España).

# Google Datacenters - Cloud Regions

[GCPing](#)



Google Cloud  
Platform

Regions

\*Exception: region has 4 zones.

Google Cloud

# Google Datacenters - Cloud Regions

## Google Cloud Platform

### Europe

6

Regions

18

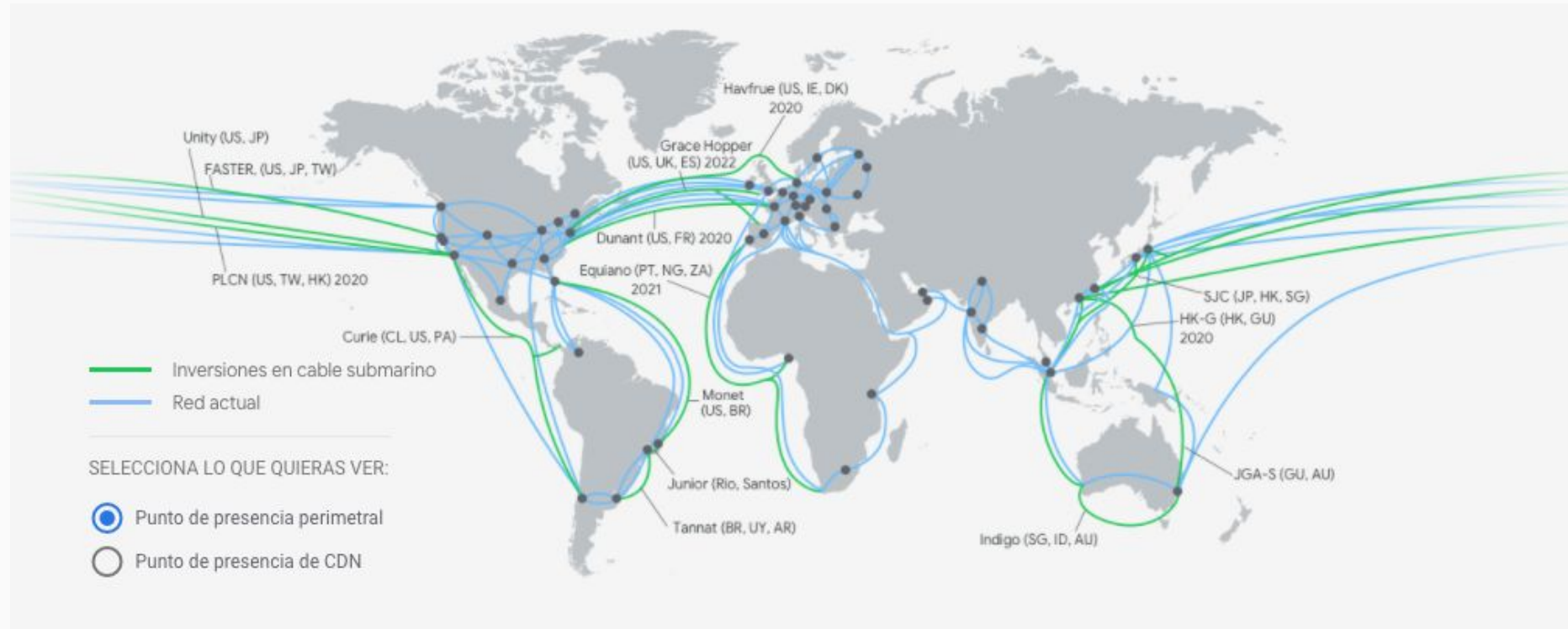
Zones

56

PoPs



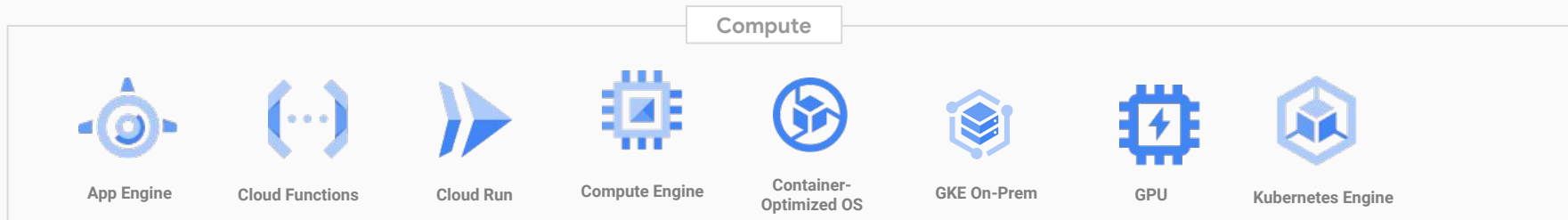
# Google Datacenters - Network





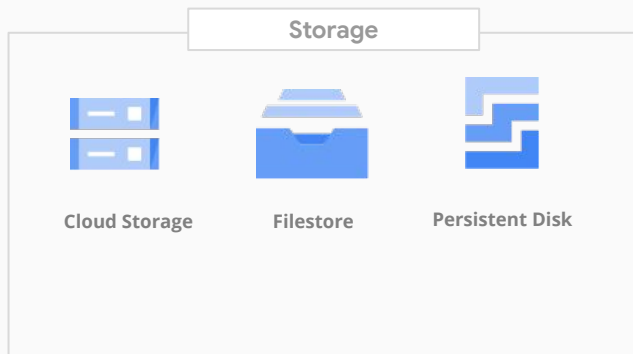
# Compute

- ✓ Cost-effective, scalable virtual machines running on Google infrastructure
- ✓ Choose between predefined and custom virtual machines
- ✓ Everything you need for your computing infrastructure

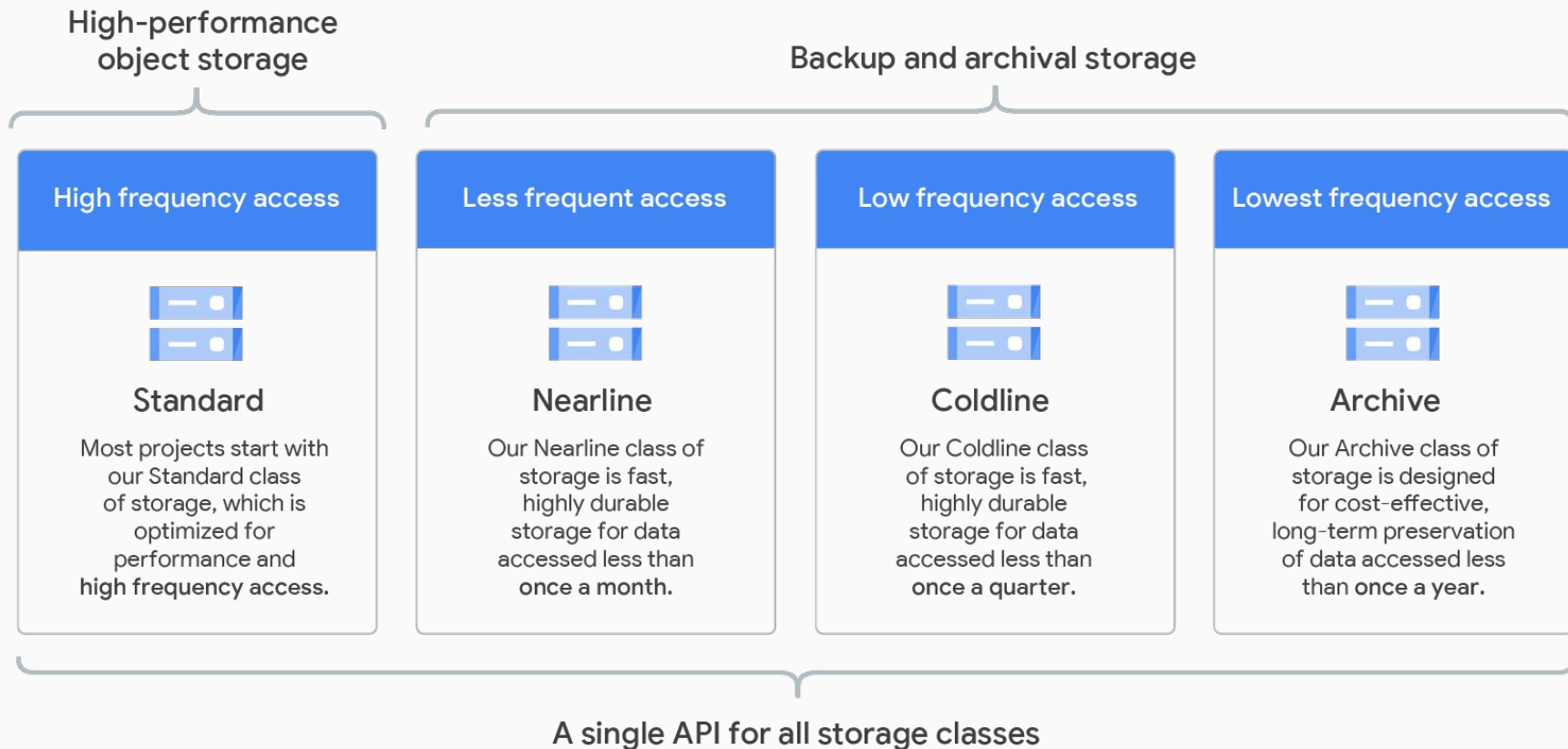


# Storage

- ✓ Advanced features like geo-redundancy, edge caching, and WORM compliance built in
- ✓ Easy control over disaster recovery, performance, location, and price
- ✓ Integrate with analytics and ML solutions to get more from your data storage



# Google Cloud Storage (GCS)



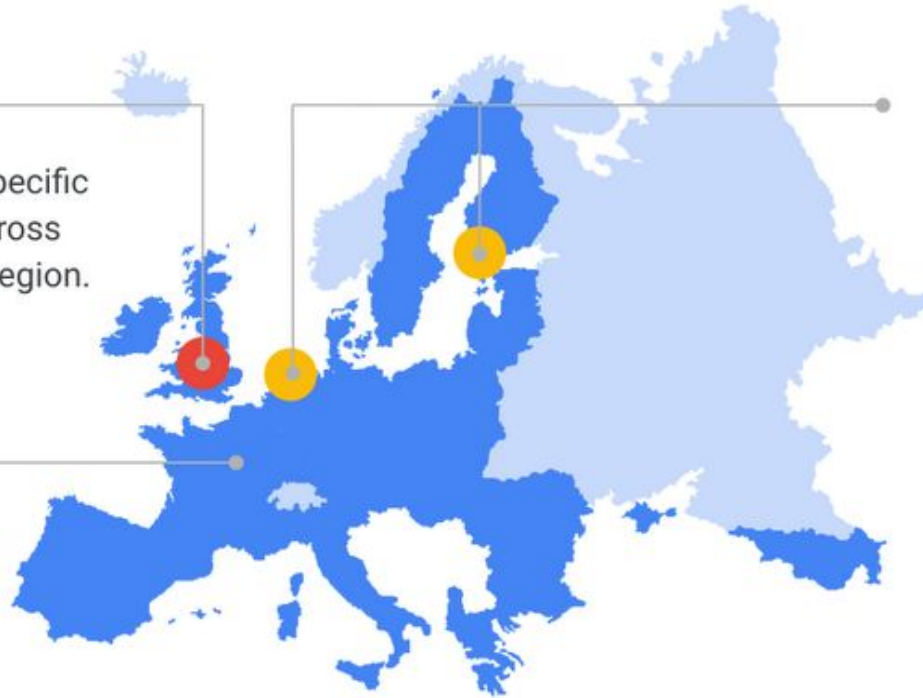
# Google Cloud Storage (GCS)

## Regional

Your data is stored in a specific region with replication across availability zones in that region.

## Multi-regional

Your data is distributed redundantly across US, EU or Asia.



## Dual-regional

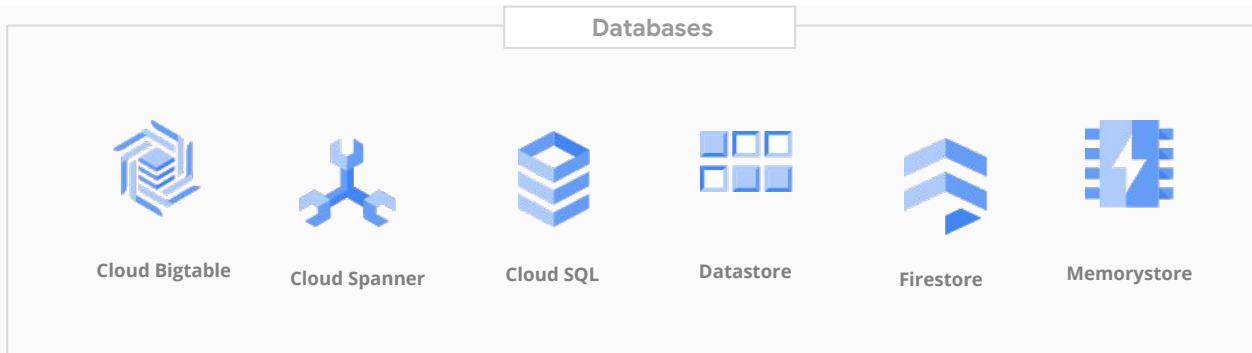
Your data is replicated across a specific pair of regions.

# Databases

✓ Flexible performance  
and scale

✓ Broad open-source  
compatibility

✓ Do more with your data  
with analytics and ML/AI  
integrations



# Databases

DATABASE TYPE	COMMON USES	GCP PRODUCT
Relational	Compatibility	<a href="#">Cloud SQL</a>
	Transactions	<a href="#">Cloud Spanner</a>
	Complex queries	
	Joins	
NoSQL / Nonrelational	Time series	<a href="#">Cloud Bigtable</a>
	Streaming	<a href="#">Cloud Firestore</a>
	Mobile	<a href="#">Firebase Realtime Database</a>
	Web	<a href="#">Cloud Memorystore</a>
	IoT	
	Offline sync	
	Caching	
	Low latency	

# Databases

	Relational		NoSQL / Nonrelational			
	Cloud Spanner	Cloud SQL	Cloud Bigtable	Cloud Firestore	Firebase Realtime Database	Cloud Memorystore
Massive scalability	✓		✓	✓		
Data distribution	global	zonal	global	global	zonal	zonal
OSS compatibility		✓	✓			✓
Replica consistency	strong	strong	eventual	strong	n/a	eventual
Multi-primary	✓		✓	✓		
Transactions (strong consistency)	✓	✓		✓		
Joins and complex queries	✓	✓				
Ultra low latency (microsecond or single-digit ms)		✓	✓			✓
Serverless				✓	✓	
Realtime sync to clients				✓	✓	
In-memory						✓

# Networking

✓ Protect users, resources, and environment with defense-in-depth network security

✓ Ensure reliability with industry-leading SLAs and reduced lag

✓ Innovate on Google Cloud using protocols like QUIC, BBR, and GRPC

## Networking



Cloud Armor



Cloud CDN



Cloud DNS



Cloud External IP  
Addresses



Cloud Firewall  
Rules



Cloud Interconnect



Cloud Load  
Balancing



Cloud NAT



Cloud Network



Cloud Routes



Cloud Router



Cloud VPN



Partner  
Interconnect



Premium Network  
Tier



Standard Network  
Tier



Traffic Director



Virtual Private  
Cloud

<https://cloud.google.com/products/networking>



# Serverless Computing



Cloud Functions



App Engine



Cloud Run

# Developer Tools

✓ Quickly write, deploy, and debug cloud-native applications

✓ Build software and standardize CI/CD across all languages

✓ Create pipelines, automate deployments, and get fast feedback

## Developer Tools



Cloud Build



Cloud Code



Cloud Code for  
IntelliJ



Cloud Scheduler



Cloud SDK



Cloud Source  
Repositories



Cloud Tasks



Cloud Test Lab



Cloud Tools for  
Eclipse



Container  
Registry



Gradle App Engine  
Plugin



IDE plugins



Maven App Engine  
Plugin



Tools  
for PowerShell



Tools for  
Visual Studio

<https://cloud.google.com/products/tools>

# Data Analytics - Big Data

## Big data products

Efficiently capture, process, and analyze data with Google Cloud data analytics products.

## Fully managed serverless approach

Seamlessly unlock business insights with Google Cloud Platform's fully managed, proven, end-to-end data analytics products. Remove operational complexities of data analytics with a serverless approach and make important business decisions quickly and efficiently.



<https://cloud.google.com/products/big-data>

# Big Data

## Data Analytics



BigQuery



Cloud Composer



Cloud Data  
Fusion



Data Catalog



Dataflow



Datalab



Dataprep



Dataproc



Genomics



Pub/Sub

# AI and Machine Learning

- ✓ **AI Hub**, our hosted repository of plug-and-play AI components, encourages experimentation and collaboration within your organization.
- ✓ **AI building blocks** make it easy for developers to add sight, language, conversation, and structured data to their applications.
- ✓ **AI Platform**, our code-based data science development environment, lets ML developers and data scientists quickly take projects from ideation to deployment.

# AI and Machine Learning

## AI and Machine Learning



AI Platform



AI Hub



Advanced Solutions  
Lab



AutoML



AutoML Natural  
Language



AutoML Tables



AutoML  
Translation



AutoML Video  
Intelligence



AutoML Vision



Cloud Inference  
API



Cloud  
Jobs API



Cloud Natural  
Language API



Cloud TPU



Cloud Translation  
API



Cloud Vision API



Data Labeling



Dialog Flow  
Enterprise Edition



Recommendations  
AI



Speech-to-Text



Text-to-Speech



Video Intelligence  
API



## Google Codelabs

Google Developers Codelabs provide a guided, tutorial, hands-on coding experience. Most codelabs will step you through the process of building a small application, or adding a new feature to an existing application. They cover a wide range of topics such as Android Wear, Google Compute Engine, Project Tango, and Google APIs on iOS.

[Codelab tools on GitHub](#)

[A-Z](#) [Recent](#)

Choose an event ▾

Cloud ▾

### Access files in Cloud Storage with the Spring Resource abstraction

13 minutes Updated December 4, 2020

Learn to access files in Cloud Storage with the Spring Resource abstraction.



Start

### Add advanced features to Actions for Google Assistant

Updated October 12, 2020

Learn to develop Actions with advanced features for Assistant, including rich visual responses, custom reprompts and exits, and persistent user storage across...



Start

### AI Platform (Unified): Building a fraud detection model with AutoML

32 minutes Updated November 20, 2020

In this lab, you will use AI Platform (Unified) to train and serve a model with tabular data. This unified offering is the newest AI product offering on Google...



Start

### AI Platform (Unified): Training and serving a custom model

39 minutes Updated November 23, 2020

In this lab, you will use AI Platform (Unified) to train and serve a TensorFlow model using code in a custom container. This unified offering is the newest AI...



Start

### Analyze Clinical Data using BigQuery and AI Platform Notebooks

Updated October 7, 2020

In this codelab, we demonstrate a solution to access and analyze clinical data in GCP using BigQuery and AI Platform Notebooks.



Start

### Analyze production performance with Cloud Profiler

Updated October 22, 2020

In this codelab, you'll learn about Cloud Profiler, a tool for continuous collection and analysis of the performance data from production environments with low...



Start

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