



Google Cloud Compute Services

Introduction to Compute Engine
Creating and Managing Virtual Machine Instances
Introduction to Kubernetes Engine
Introduction to App Engine
Introduction to Cloud Functions

Introduction to Compute Engine

Compute Engine is an Infrastructure as a Service (IaaS) offering that allows users to create and manage virtual machines (VMs) in the cloud. Compute Engine provides scalable and flexible computing resources, enabling users to run their applications and workloads efficiently.



**Google
Compute
Engine**



Virtual Machine Instances

A virtual machine is the virtualization or emulation of a computer system. Virtual machines are based on computer architectures and provide the

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Create an instance ← EQUIVALENT CODE HELP ASSISTANT

To create a VM instance, select one of the options:

- New VM instance** Create a single VM instance from scratch
- New VM instance from template** Create a single VM instance from an existing template
- New VM instance from machine image** Create a single VM instance from an existing machine image
- Marketplace** Deploy a ready-to-go solution onto a VM instance

Name * instance-2 Labels [+ ADD LABELS](#)

Region * us-central1 (Iowa) Zone * us-central1-a

Region is permanent Zone is permanent

Pricing summary

Monthly estimate **\$25.46** That's about \$0.03 hourly Pay for what you use: no upfront costs and per second billing

Item	Monthly estimate
2 vCPU + 4 GB memory	\$24.46
10 GB balanced persistent disk	\$1.00
Total	\$25.46

[Compute Engine pricing](#) ▲ LESS

Machine configuration

✓ General purpose Compute optimized Memory optimized GPUs

Machine types for common workloads, optimized for cost and flexibility

Series E2

CPU platform selection based on availability

Machine type

Choose a machine type with preset amounts of vCPUs and memory that suit most workloads. Or, you can create a custom machine for your workload's particular needs. [Learn](#)

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Preemptible Instances

Create an instance

To create a VM instance, select one of the options:

New VM instance

Create a single VM instance from scratch

New VM instance from template

Create a single VM instance from an existing template

New VM instance from machine image

Create a single VM instance from an existing machine image

Marketplace

Deploy a ready-to-go solution onto a VM instance

Metadata

You can set custom metadata for an instance or project outside of the server-defined metadata. This is useful for passing in arbitrary values to your project or instance that can be queried by your code on the instance. [Learn more](#)

+ ADD ITEM

Availability policies

VM provisioning model

Standard

Ideal for most workloads

Spot

Ideal for fault-tolerant workloads

On VM termination

Stop

Choose what happens to your VM when it's preempted or reaches its time limit

On host maintenance

Terminate VM instance

When Compute Engine performs periodic infrastructure maintenance it can migrate your VM instances to other hardware without downtime

Automatic restart

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Persistent Disks



Create a disk

Single zone

Regional

Create a failover replica in the same region for high availability. Storage and data replication is provided between both zones. [Learn more](#)

Region *

us-central1 (Iowa)

Zone *

us-central1-a

Source

Create a blank disk, apply a bootable disk image, or restore a snapshot of another disk in this project.

Disk source type *

Blank disk

Disk settings

Disk type *

Balanced persistent disk

[COMPARE DISK TYPES](#)

Size *

100

GB

CREATE

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Images and Snapshots



Create an image

Name *

image-1



Name is permanent

Source *

Disk



Source disk *



Location



Multi-regional

Regional

Select location



Family



Description

CREATE

CANCEL

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INFO PANEL

LEARN

ecated images



Actions





Create a snapshot

Snapshots are backups of persistent disks. They're commonly used to recover, transfer, or make data accessible to other resources in your project. [Learn more](#)

Name *

snapshot-2

Name is permanent

Description

Source disk *



Type

Snapshot

Best for long-term backup and disaster recovery

Archive snapshot

Best for cost-efficient data retention

Location

There may be a network transfer fee if you choose to store this snapshot in a location different

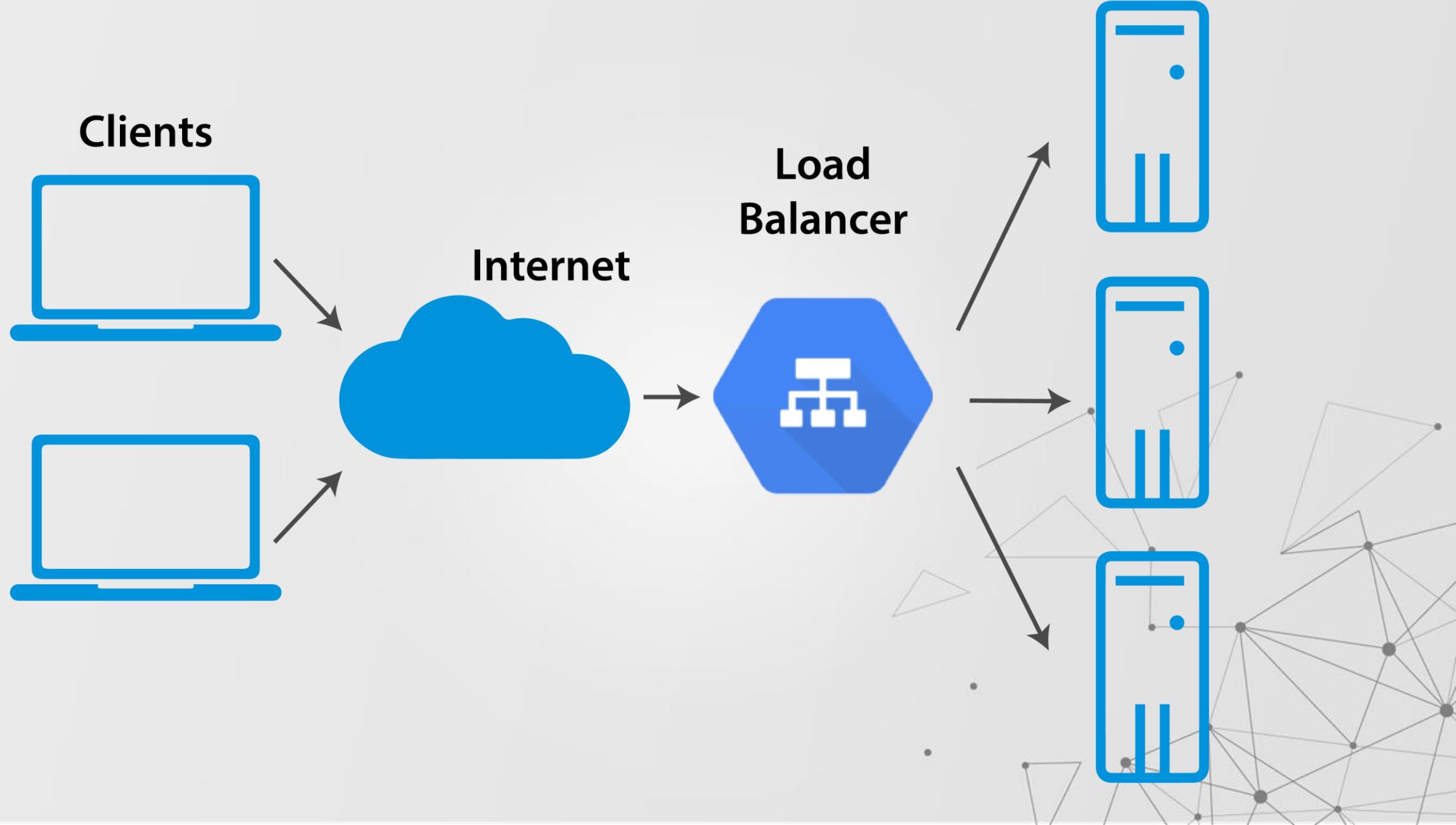
CREATE

CANCEL

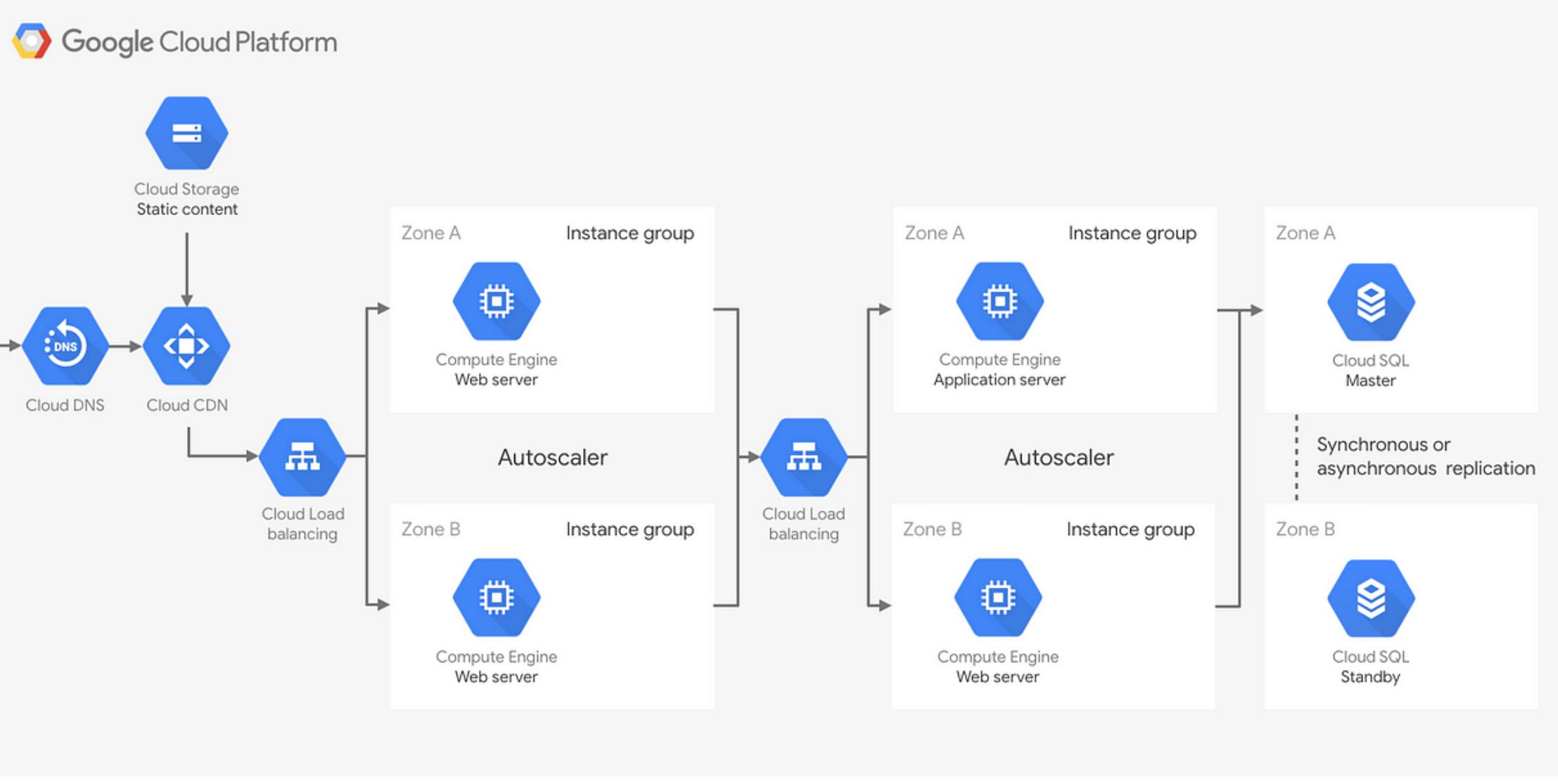
EQUIVALENT COMMAND LINE



Load Balancing



Autoscaling



In Conclusion

Flexibility, Scalability and Reliability

Provision and Manage VMs

Access to Google's Global network infrastructure

