

# Google Cloud Associate Cloud Engineer Quick Summary

A fast 3-5 minute refresh of the services and decisions that appear most often in ACE-style scenarios.

<b>Best for</b> rapid memory refresh	<b>Focus</b> service purpose, IAM, deployment path, cost basics	<b>Use with</b> cheat sheet for fuller context
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## 1. Hierarchy and IAM

<b>Project</b>	Primary boundary for APIs, billing linkage, quotas, and most resources.
<b>Predefined role</b>	Default safe choice before using basic roles or creating a custom role.
<b>Service account key</b>	Avoid long-lived keys when possible; prefer attached identity or workload-based auth.

## 2. Core services

<b>Compute Engine</b>	VMs and infrastructure control.
<b>GKE</b>	Managed Kubernetes clusters.
<b>Cloud Run</b>	Serverless containers for stateless apps.
<b>Cloud Storage</b>	Object storage for files, backups, logs, and static content.

## 3. Networking

<b>VPC</b>	Global network container with regional subnets.
<b>Firewall rule</b>	Allow/deny traffic by direction, target, protocol, and port.
<b>Load balancer</b>	Front door for scale, health checks, and availability.

## 4. Operations

<b>Monitoring</b>	Metrics, dashboards, alerting.
<b>Logging</b>	Central log search and export.
<b>Common exam traps</b>	Wrong region, missing API, IAM denial, quota hit, missing firewall, or wrong storage service.