

Google Cloud

Next '24

Navigating Google Cloud:

A comprehensive guide for website
deployment

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Cloud Developer Advocate

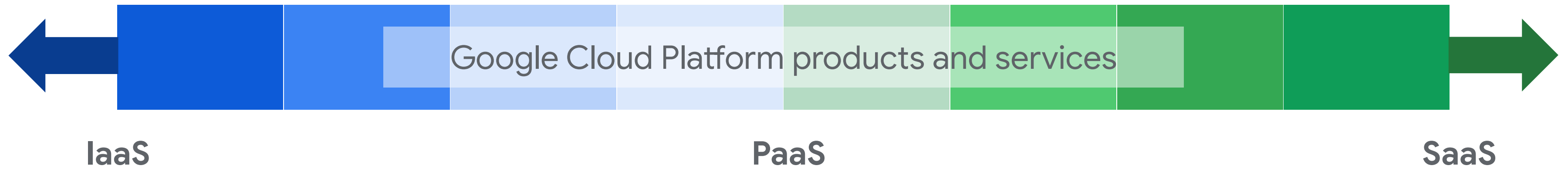
Co-Host of the [Kubernetes Podcast](#)

Google Cloud



Cloud Functions

Choices of runtimes



Servers
VM instances

Clusters
Cluster management

Serverless, autoscaling



VMware
Engine



Compute
Engine



Kubernetes
Engine



App Engine



Cloud Run



Cloud
Functions

Cloud Run

Cloud Run

Deploy and scale applications fast and securely in a fully managed environment

01

Simple and Automated

02

No infra management

03

Developer Velocity

04

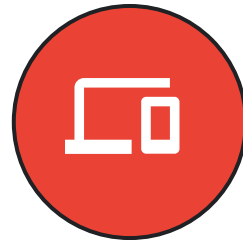
Knative Based (OSS)

Available in all 37 Google Cloud regions



- Cloud Run is available
- Future Google Cloud region

When to use Cloud Run services



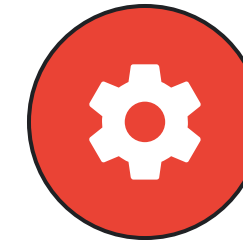
Websites and web applications

- Server-side rendered pages
- Web applications
- Streaming with WebSockets
- Internal web applications



APIs and microservices

- REST or GraphQL API
- Private HTTP or gRPC microservices



Streaming data processing

- Process queue messages
- Event driven architecture

Cloud Run

Jobs Preview

Run containers to completion. Cron for the cloud
Now available in all Google Cloud regions.

When to use Cloud Run jobs

- Script or tool
- Scheduled scripts
- Batch data processing



Google Cl

Google Cloud stereen-serverless Search

Cloud Run ← Create job PREVIEW

A Cloud Run job executes containers to completion. Job name and region cannot be changed later.

Container image URL SELECT

[TEST WITH A SAMPLE CONTAINER](#)
[How to build a container?](#)

Job name *

Region * ▼
[How to pick a region?](#)

Number of tasks *

The number of times to run the container. All tasks must succeed in order for a job to succeed.

Container, Variables & Secrets, Connections, Security ▼

Execute job immediately

CREATE CANCEL

Proprie

Seven new features in Cloud Run

01

Datadog integration

02

Health checks

03

CPU Boost

04

Software Delivery Shield

05

Security Recommendations

06

Cloud Deploy

07

Integrations

Cloud Run #1

Datadog support

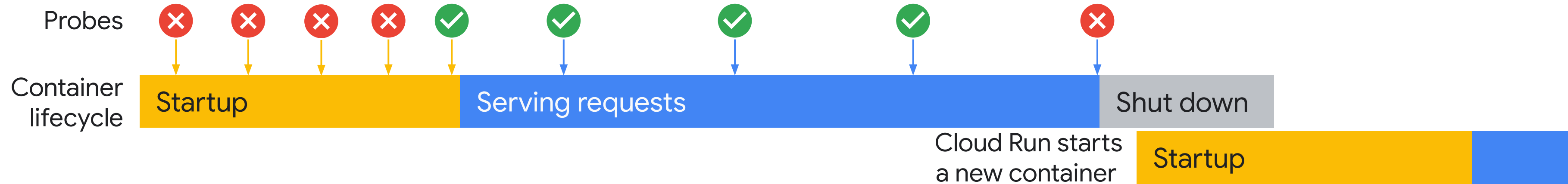


DATADOG

New official Datadog instrumentation support for Google Cloud Run

Collect logs, metrics and traces in real-time via in-container Agent.

Health checks Preview



↓ Startup probe

Determines if a container is ready to receive traffic.

Cloud Run default: *TCP probe on \$PORT*

Custom probes with health checks ^{NEW}

Use a TCP or HTTP probe

Examples:

- Wait for the complete startup of your app.
- Wait for an initial download.

↓ Liveness probe ^{NEW}

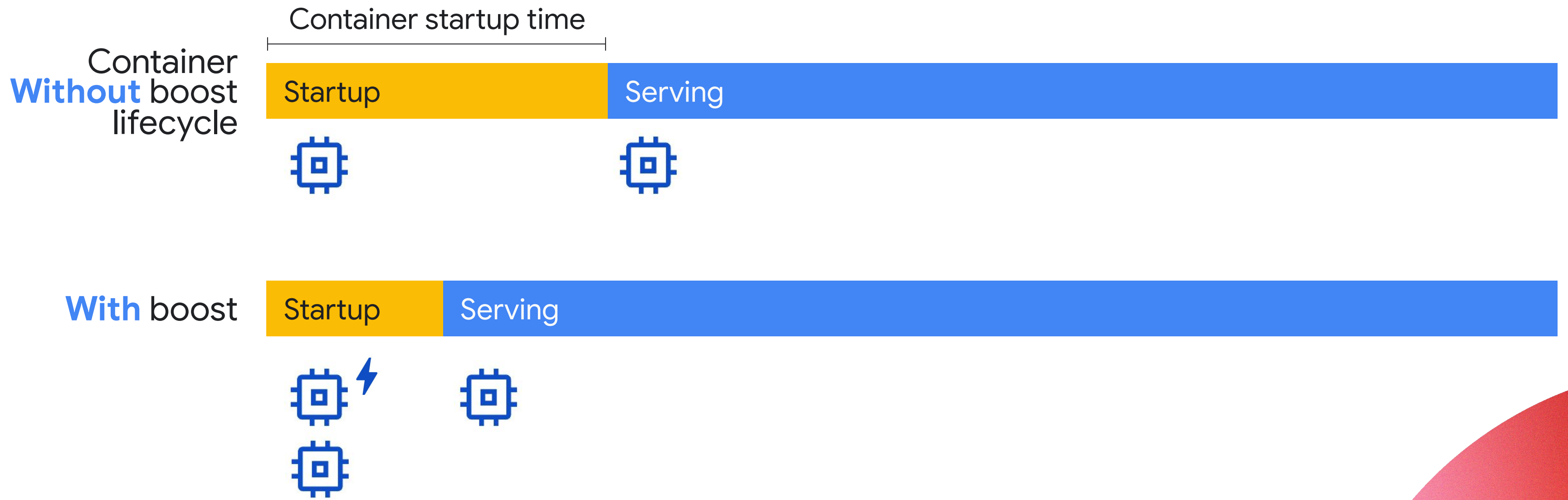
Determines if a container can still serve requests.

Use HTTP or gRPC

Examples:

- Recover from corrupted local state.
- Force restart after N minutes.

Improve scaling speed with Startup CPU Boost Preview



Google Kubernetes Engine (GKE)

- Turn-key solution to Kubernetes
- Start a cluster with **one-click**.
- View your clusters and workloads in a **single panel**.
- Industry-leading **automation**
- Scales to an industry-leading 15k worker nodes
- Deep Google Platform **integration**

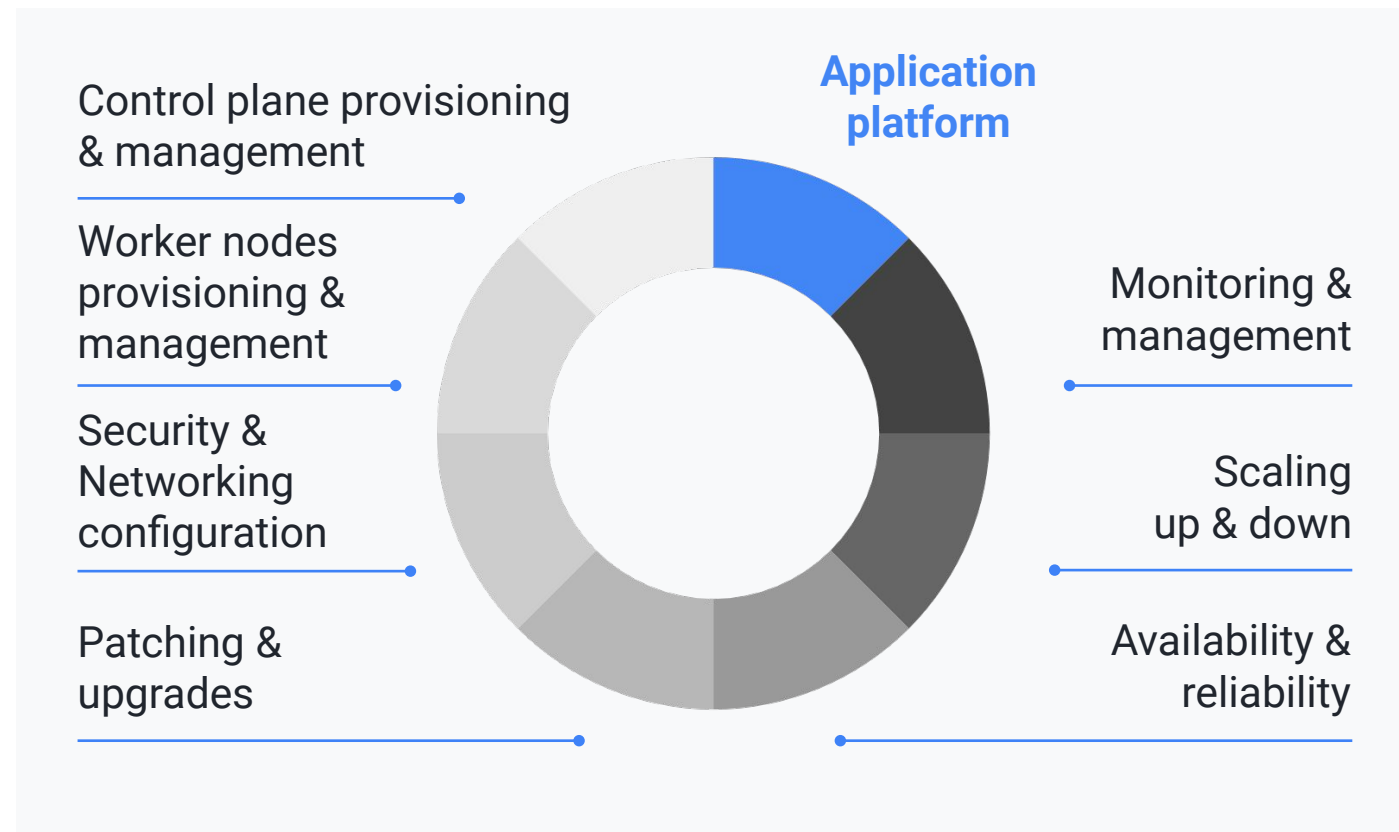
The screenshot displays the Google Cloud Platform interface for creating a Kubernetes cluster. The top navigation bar shows 'Google Cloud Platform' and 'K8S Garage'. The left sidebar contains a navigation menu with 'Kubernetes Engine' selected, and sub-options for 'Kubernetes clusters', 'Workloads', 'Discovery & load balancing', 'Configuration', and 'Storage'. The main content area is titled 'Create a Kubernetes cluster' and includes a description: 'A Kubernetes cluster is a managed group of uniform Kubernetes. [Learn more](#)'. The form fields are: 'Name' (cluster-1), 'Description (Optional)' (empty), 'Location' (Zonal selected), 'Zone' (us-central1-a), 'Cluster Version' (1.8.7-gke.1 (default)), and 'Machine type' (1 vCPU, 3.75 GB memc). A 'Cloud Launcher' banner is visible at the bottom of the sidebar.



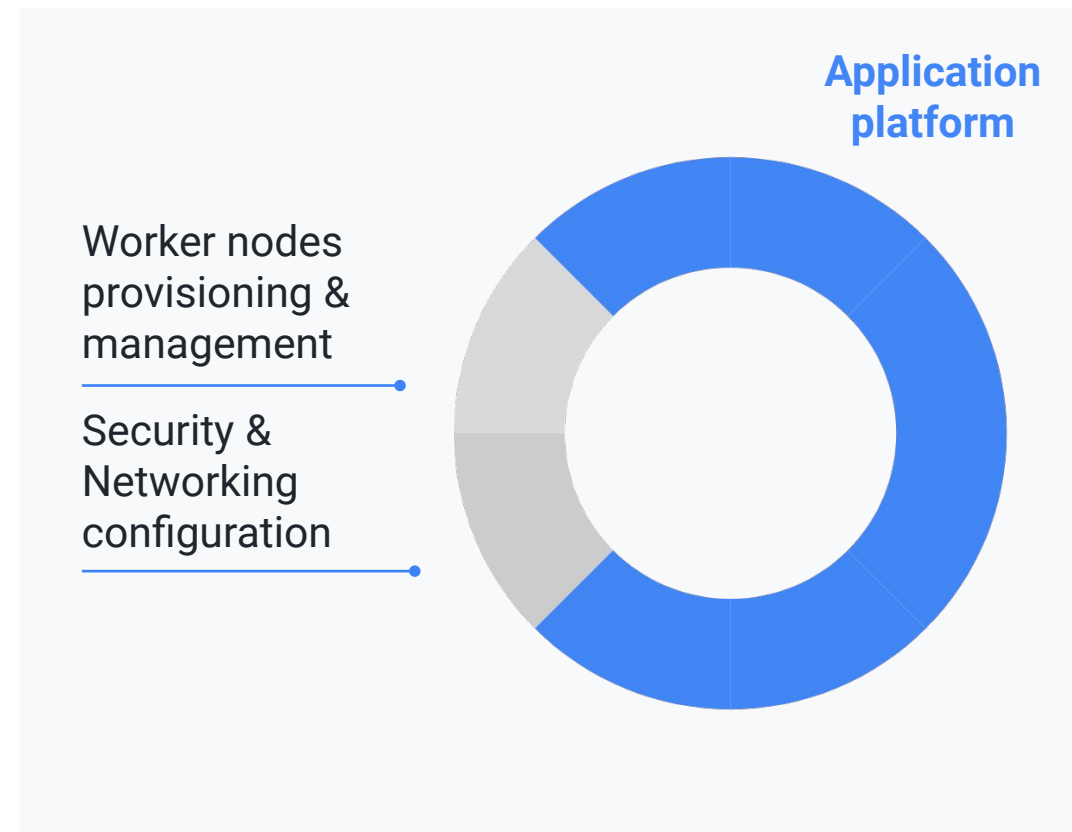
GKE Autopilot

A new mode of operation for GKE

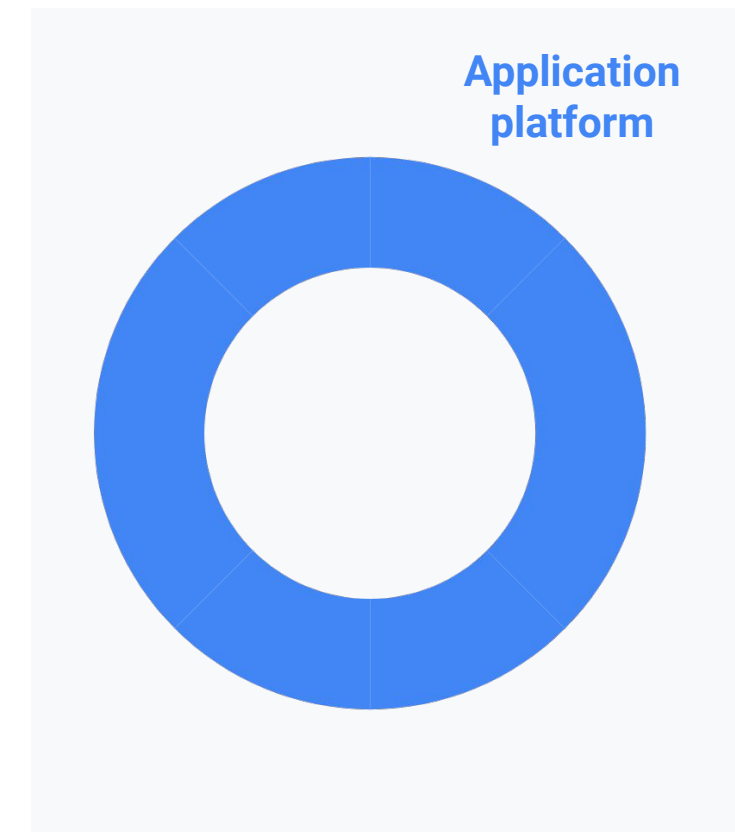
GKE Standard simplifies Kubernetes, GKE Autopilot simplifies GKE Standard



Self-managed Kubernetes



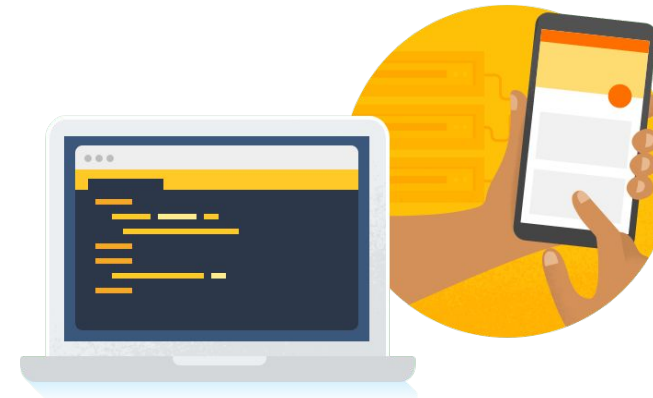
GKE Standard



GKE Autopilot

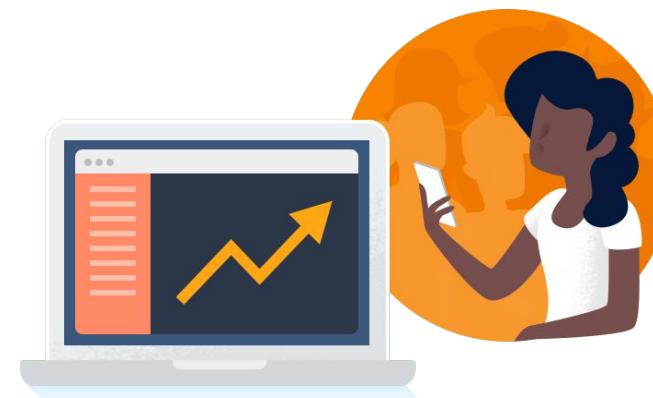
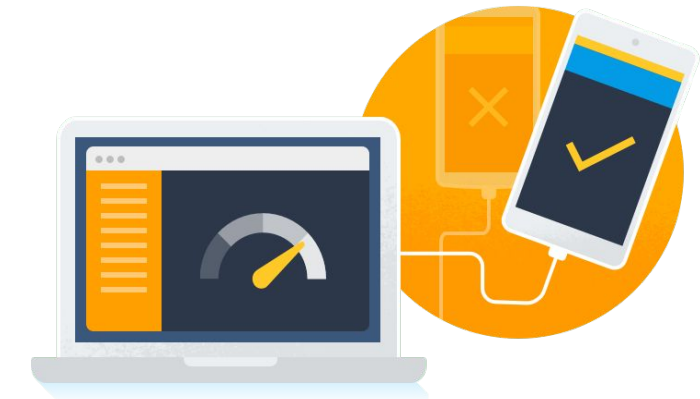
What is Firebase ?

Firestore is a **platform of tools and cloud services** that helps solve **three** core problems in your app lifecycle



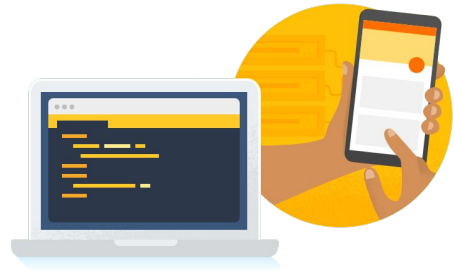
1. Develop apps faster with fully-managed backend services

2. Run apps with confidence through testing and monitoring



3. Engage users effectively with better insights and rollout control

Build applications



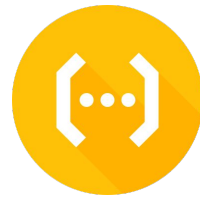
Build better apps



Auth



Cloud Storage



Cloud Functions



Hosting



Cloud Firestore

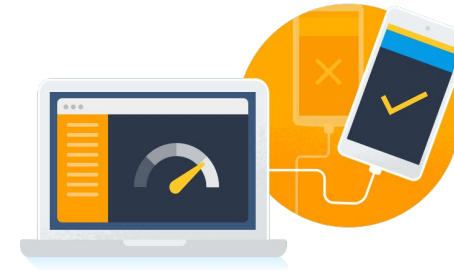


Realtime Database

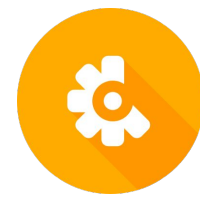


ML Kit

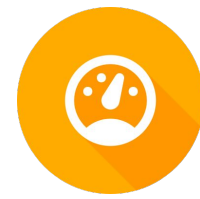
Operate applications



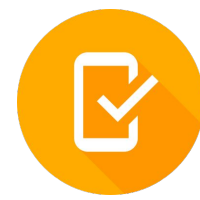
Improve app quality



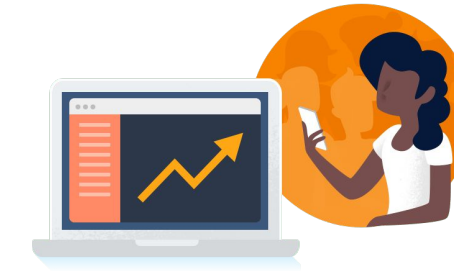
Crashlytics



Performance Monitoring



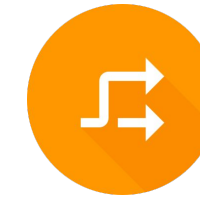
Test Lab



Drive engagement



Analytics



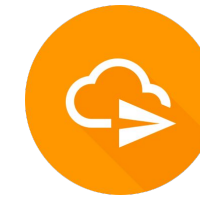
Remote Config



Predictions



A/B Testing



Cloud Messaging



Dynamic Links



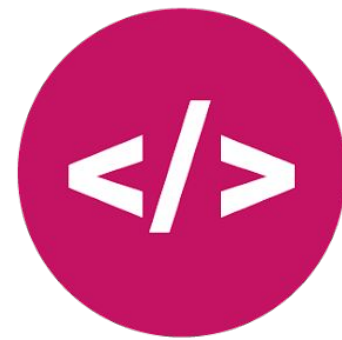
In-App Messaging



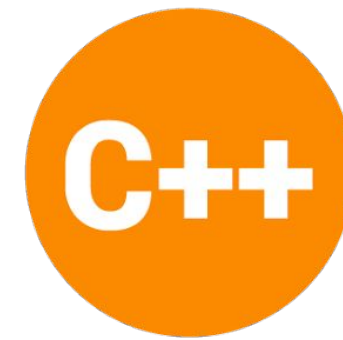
iOS



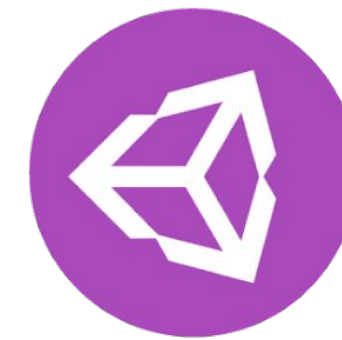
Android



Web



C++



Unity



Flutter
(universal)

Proprietary

Ready to build what's next?

Tap into **special offers** designed to help you **implement what you learned** at Google Cloud Next.

Scan the code to receive personalized guidance from one of our experts.



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Thank you