

Google Cloud

# Next '24

# Navigating Google Cloud:

A comprehensive guide for website  
deployment



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

Google Cloud

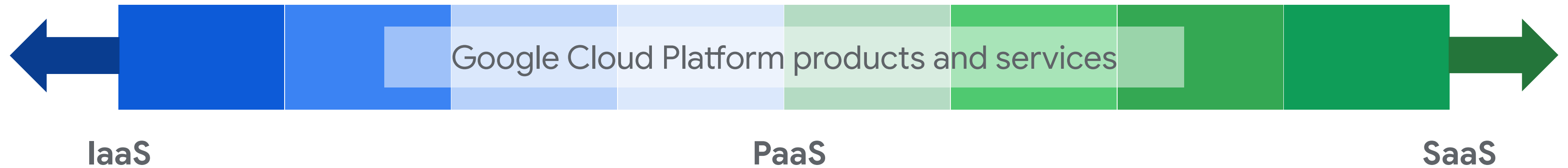




# Cloud Functions



# 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)**



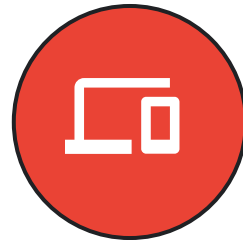
# Available in all 37 Google Cloud regions



- Cloud Run is available
- Future Google Cloud region



# When to use Cloud Run services



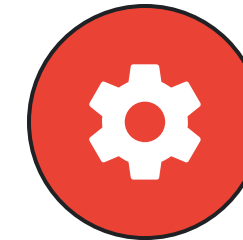
## Websites and web applications

- 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 stere-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



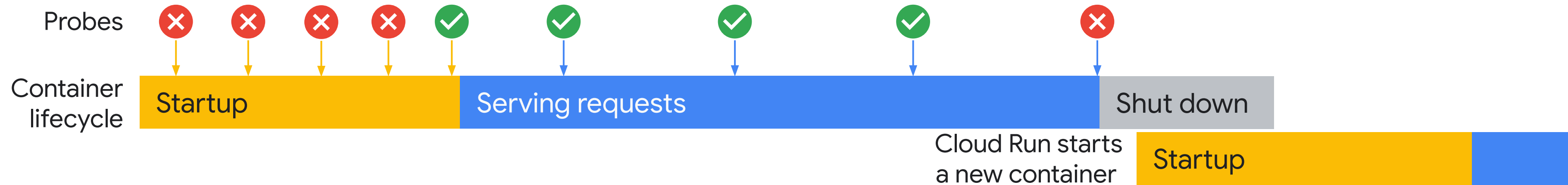
# DATADOG

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 <sup>NEW</sup>

Use a TCP or HTTP probe

Examples:

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

## ↓ Liveness probe <sup>NEW</sup>

Determines if a container can still serve requests.

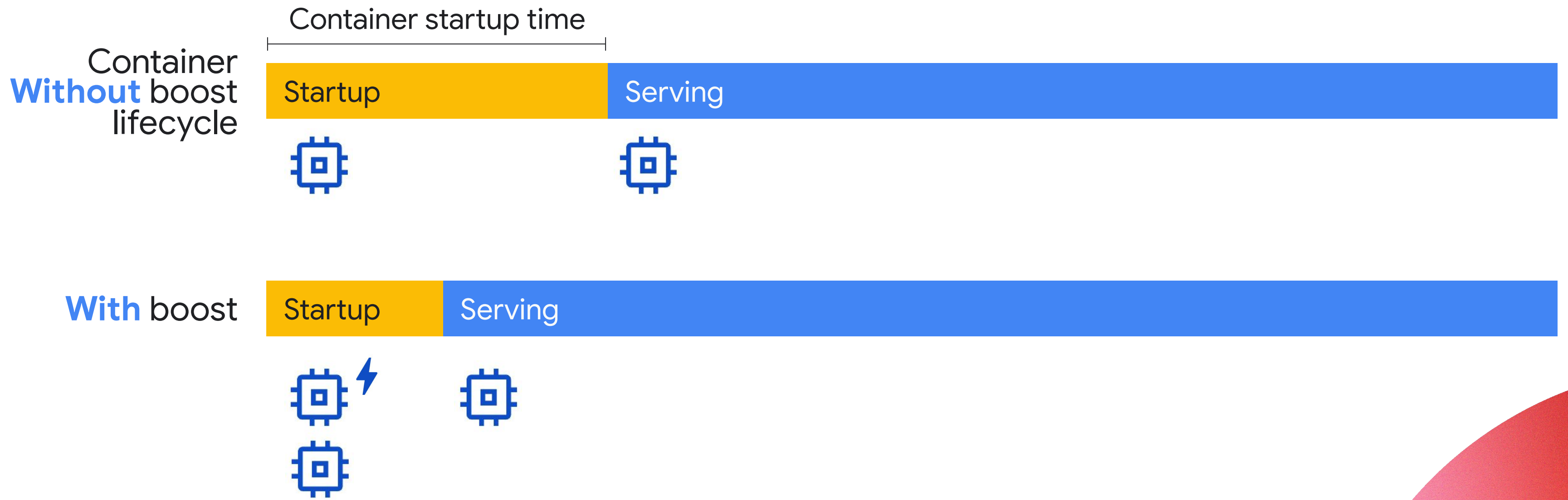
Use HTTP or gRPC

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.



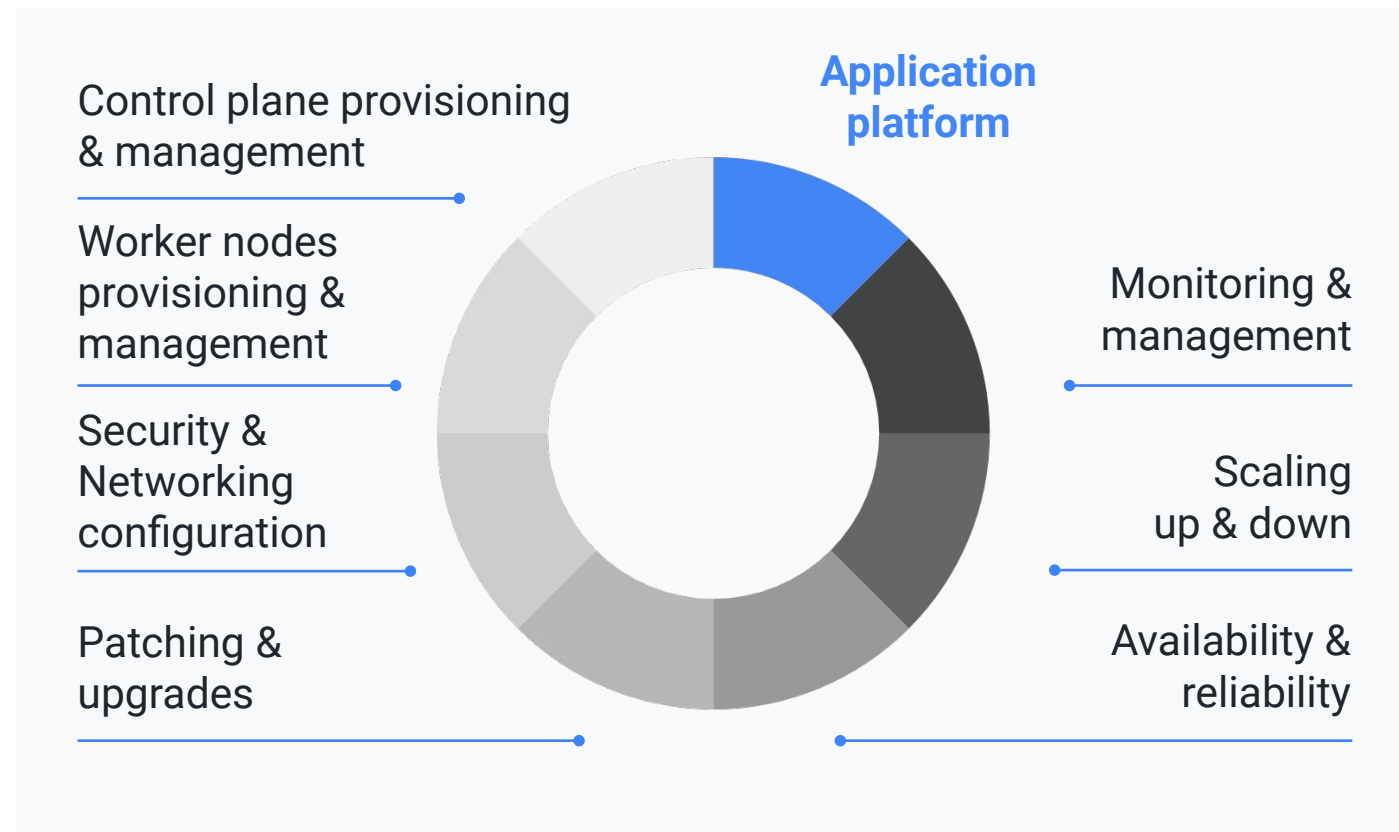


# GKE Autopilot

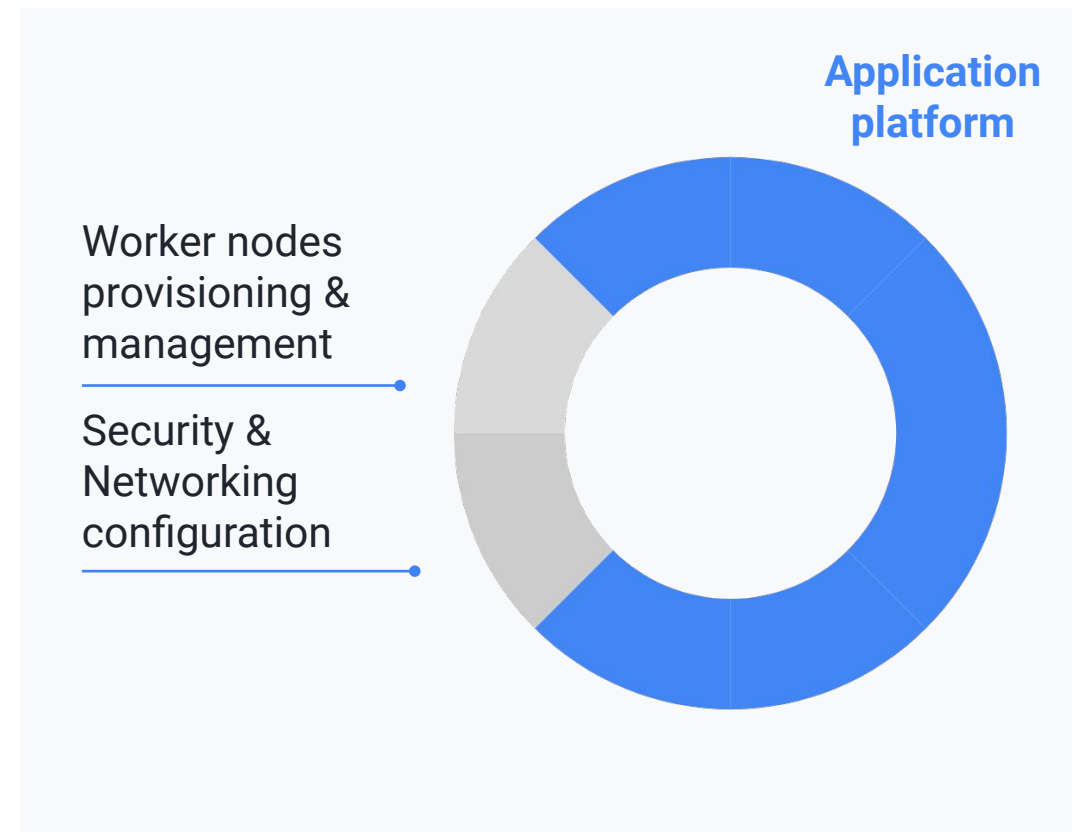
**A new mode of operation for GKE**



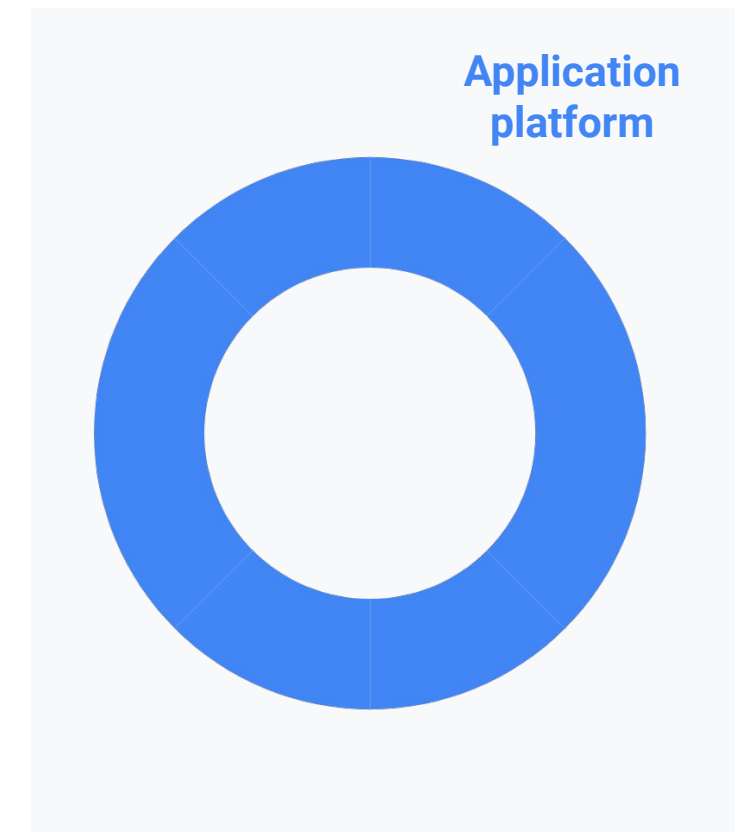
# GKE Standard simplifies Kubernetes, GKE Autopilot simplifies GKE Standard



Self-managed Kubernetes



GKE Standard

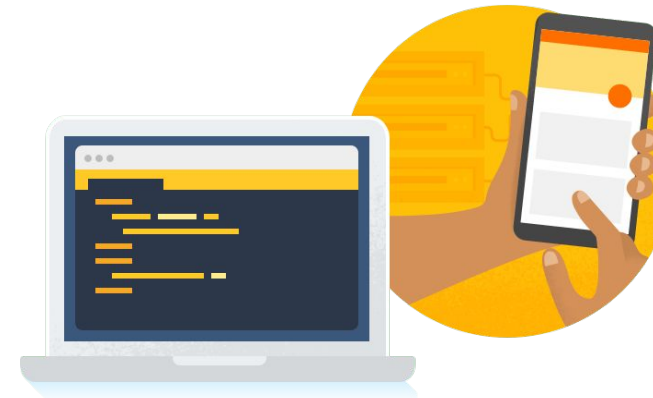


GKE Autopilot



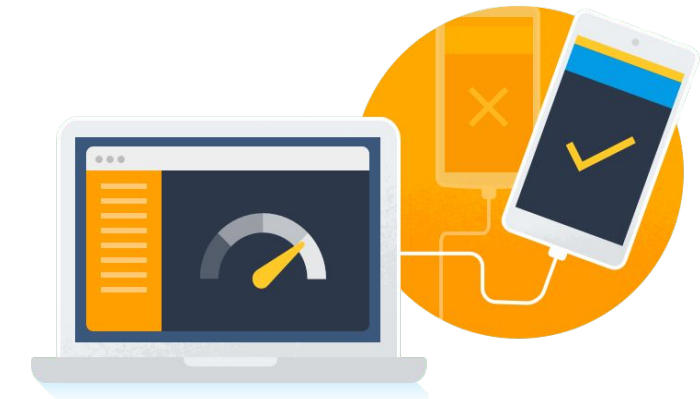
# What is Firebase ?

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

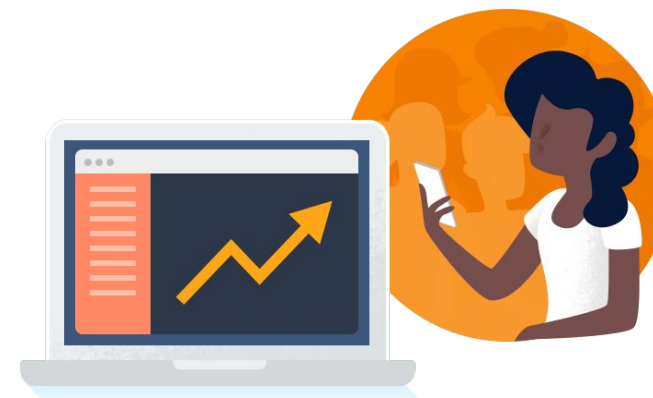


**1. Develop apps faster** with fully-managed backend services

**2. Run apps with confidence** through testing and monitoring

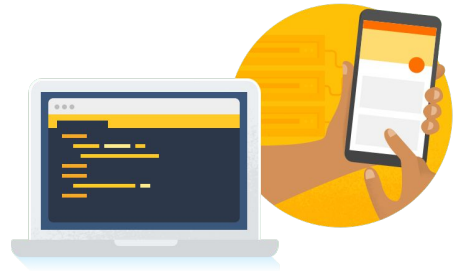


**3. Engage users effectively** with better insights and rollout control





# Build applications



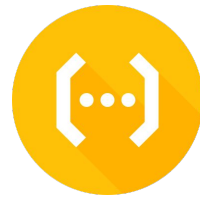
## Build better apps



Auth



Cloud Storage



Cloud Functions



Hosting



Cloud Firestore

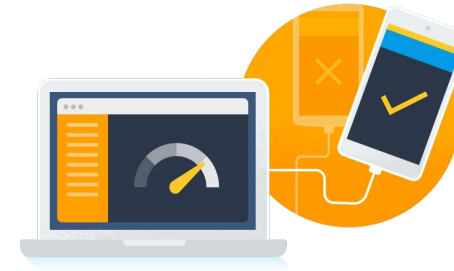


Realtime Database

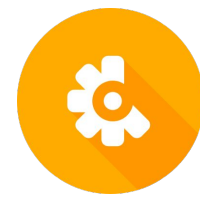


ML Kit

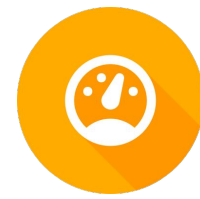
# Operate applications



## Improve app quality



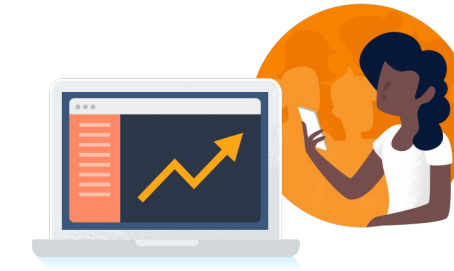
Crashlytics



Performance Monitoring



Test Lab



## Drive engagement



Analytics



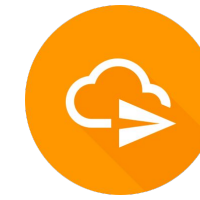
Remote Config



Predictions



A/B Testing



Cloud Messaging



Dynamic Links



In-App Messaging

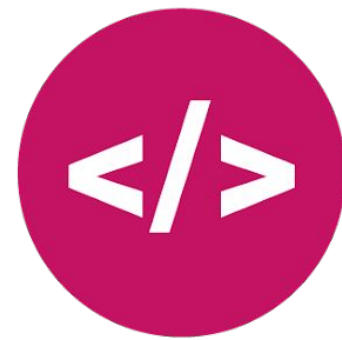




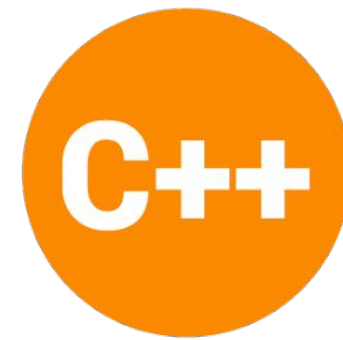
iOS



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.



Or visit [g.co/next/24offers](https://g.co/next/24offers)



**Thank you**