



The Startup's Guide to Google Cloud

Google Cloud



Decisions, decisions: Why choose Google Cloud for your startup?

Choosing a cloud provider is one of the biggest decisions you'll ever make as a startup, just after how you're going to bring your killer idea to the world.

As a young company, time is of the essence, and you want a cloud partner that can help get your idea from the back of a cocktail napkin to taking orders, fast.

Building a business is a creative process; you want a cloud provider that can help you glean intelligent insights from the products you're building and the data you are collecting, so you can make smart refinements to your business model.

Of course, you want to do all this while being mindful of costs. Your dream cloud provider not only offers competitive prices for foundational services, but also offers a more efficient model of working, so you save money by default.

Finally, you want a cloud provider that will partner with you to make great things happen. Like any good mentor, your cloud provider understands intuitively where you are coming from. At the same time, your cloud provider has the resources and relationships to help you make connections, and scale to terrific heights.

Read on to learn how Google Cloud is checking these boxes for today's innovative startups.

Meet the need for speed

Speed is the new currency of business—especially for startups. There's the speed of the underlying infrastructure, of course, but also the speed with which you can get your product to market, manage operational tasks, and make strategic pivots. Google Cloud delivers speed to startups in all of these ways.

By running on Google Cloud, fin-tech startup [Current](#) improved time-to-market for app development by 400%, while eliminating downtime for users of its debit card app. [Idwall](#) improved developer productivity by 30% and [Rakuten Viki](#) freed up engineers from managing infrastructure to focus on scaling the business to serve rapidly growing user demand.

Let's take a closer look at some of the ways that your startup can move faster with Google Cloud.



Run fast with containers

Google Cloud offers a full complement of compute platforms, but many startups these days choose to build their cloud-native applications on a foundation of containers, because of the flexibility and efficiency that they provide: Containers streamline interactions between development and operations teams because they are portable across various environments. And the same container created in the build process can be scanned, secured, and promoted up through production in the cloud, reducing risk and streamlining hand-offs and approvals.

Google itself runs billions of containers, and we manage them all with our own container management system that eventually became the basis for Kubernetes, which we open-sourced in 2014. Google Kubernetes Engine (GKE), the resulting managed Kubernetes service, provides you with the most mature and configurable Kubernetes service on the market, letting you:



Scale seamlessly, automatically and high

GKE's industry-first four-way autoscaling automatically resizes your cluster based on the demands of your workloads—no manual provisioning or overprovisioning required. It also supports an industry-leading 15,000 nodes in a single cluster, handling whatever workload you can throw at it.



Minimize management overhead

Autopilot, a GKE configuration option, provides automated management of your Kubernetes infrastructure, including both control nodes and user nodes, and applies all Google-known secure settings by default.



Integrate with developer toolchains and processes

Tight integration with Google Cloud's built-in DevOps toolchain makes it easy for developers to automatically build, test, deploy, and manage code changes, so applications are built and improved faster.

Developers find GKE easier and faster to use than other Kubernetes services

See for yourself!

Create a Kubernetes cluster using the [GCP console](#); you can do it with just three clicks!

GKE's simplicity combined with its advanced features makes a difference. [17 Media](#) increased their development cycle by 80% using GKE and is now releasing daily rather than every one to two weeks.

Run faster with serverless

For all its power and ease of use, Kubernetes is nevertheless a more high-touch offering than some organizations want. But for many startups, not packaging their apps as containers is a non-starter. What if you want both the benefits of containers and simplified configuration and scalability? You can get the best of both worlds with [Cloud Run](#), which runs ordinary containers serverlessly, i.e., with no server configuration or maintenance.

Cloud Run lets you start running containers with no up-front work; the environment is pre-configured, and you can deploy a container with a single command. As the load on your application changes, Cloud Run automatically increases and decreases the number of running container instances to handle this load, bringing the number (and your cost) to zero when it's warranted.

“Cloud Run promises to dramatically reduce the operational complexity of deploying containerized software. The ability to put an automatically scaling service in production with one command is very attractive.”

Jamie Talbot,
Principal Engineer at Mailchimp

In short, Cloud Run's serverless containers bring real benefits:



Get from container to production in seconds

Cloud Run is the fastest way to write, run, and manage applications.



Eliminate infrastructure management

Focus on code while we handle the infrastructure management, including security, reliability, redundancy, and availability.



Write your code your way

Cloud Run lets your developers use any language (Go, Python, Java, Ruby, Node.js, and more), any library, any binary. You're not limited to whatever languages are supported by a cloud platform's FaaS technology.



Use your containers in other environments

There's nothing Google-specific about the containers in Cloud Run, so they'll work unchanged in other environments. They fit into the standard container ecosystem, for example, including the local Docker environment on your desktop and your CI/CD workflow. You can also run them in GKE or in Kubernetes on another cloud platform.

Go from concept to production, fast

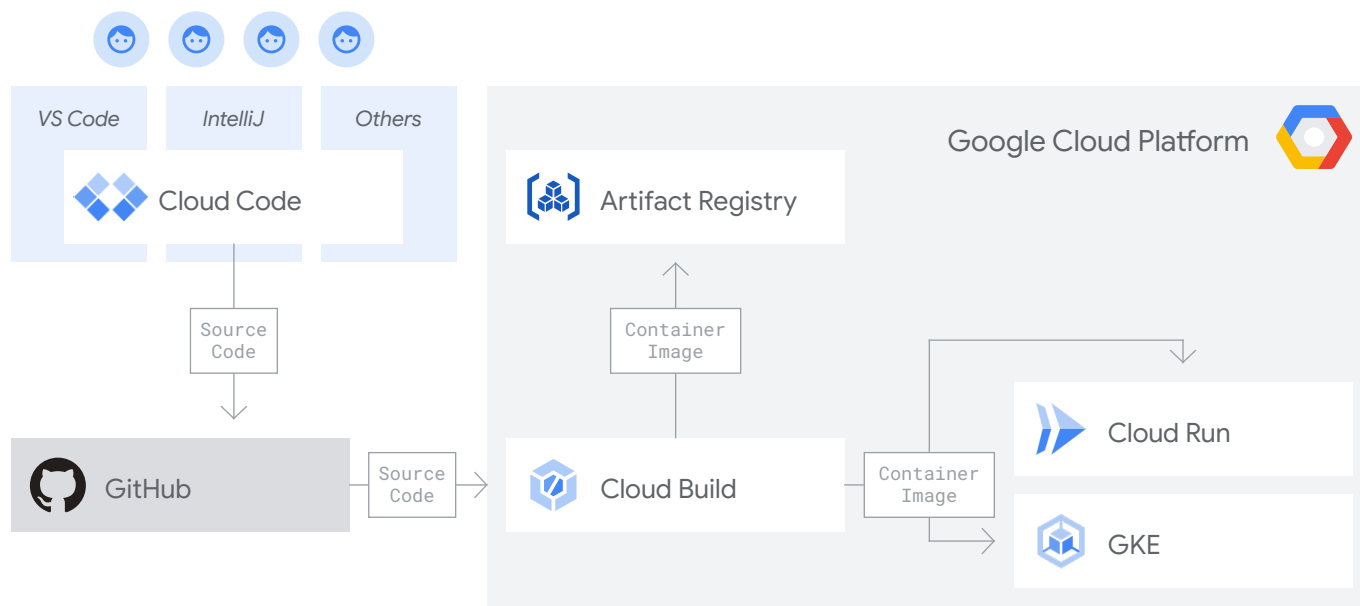
Especially in a startup's early days, success depends on creating and deploying code quickly, then easily changing it as you learn what your customers want. To help you do this, Google provides a set of integrated CI/CD tools, which help you get code from your developers' laptops to production, safely and automatically. For example:



Let developers use the tools they prefer while providing single-command environment setup, with Cloud Code IDE plugins.



Incorporate security and testing early on in developers' workstreams, so your CI/CD pipelines have baked-in best practices, and can save time.



Cloud Run and GKE also have built-in integrations with security and management tools, removing setup and configuration challenges. This simplified operations experience lets you view, analyze, and query logs from all services, while giving operators an integrated one view of alerts, SLOs, events, and logs in the monitoring dashboard.

“GCP is a huge improvement for our developers. They are maybe 30% more productive. It’s because we’ve more easily implemented a DevOps approach and added Kubernetes to our continuous integration.”

Gabriel Prado,
Chief Technology Officer, idwall

Be open for business

No one knows what the future holds, which can make it hard to say yes to any one cloud provider. Google Cloud's commitment to open technologies, flexibility and portability alleviates concerns around lock-in, so your startup has the freedom to move as fast as it needs. With support for countless open technologies, you can always:



Hire from a vast and vibrant community of experts in open-source technology.



Lean on community for rapid-fire innovations and quicker problem resolution.



Write one base of code, leveraging extensible continuous integration and delivery pipelines and established APIs.



Choose from a wide range of tools: Open-source databases, tools and programming languages serve to eliminate lock-in.



Run your apps where you need them.
With distributed cloud solutions, you get consistency between private and public clouds (including AWS and Azure), giving you the foundation for future success.

Get smart

Once your startup's application is up and running, it's time to look at it with a critical eye, and learn from what the data is telling you.

Data is crucial to driving innovative product direction and user experiences, but it can be hard to access, analyze and use. In particular, setting up the infrastructure to collect, report on and analyze that data can be complicated – more so as that data grows. Third-party data analysis tools are often unwieldy and hard to learn, and can make it hard to extract the level of insights that you need to make it as a scrappy startup.

That's where our data analytics and AI capabilities come in, offering a comprehensive set of services from data management to analysis to providing the right information in the right moment to take action. It's why we believe Google is a leader in *The Forrester Wave(TM)*: *Cloud Data Warehouse, Q1 2021* and why so many technology companies rely on Google Cloud.



Fast and easy insights from data analytics

Setting up and learning a data analytics environment doesn't have to be hard. Nor should data analytics be confined to only the richest, most established organizations. With Google Cloud's comprehensive suite of data analytics tools, there's nothing standing between your data and your ability to gather insights from it. Whether it's to understand sales trends or customer behavior, organizations large and small turn to BigQuery to:



Rapidly analyze structured and unstructured data

BigQuery seamlessly integrates with open-source tools, and securely share real-time insights within your organization to inform decisions and accelerate innovation.



Run predictive and real-time analytics

Stream data directly into BigQuery for real-time analytics and operationalize machine learning models right in the data warehouse using BigQuery ML and without the need to move data.



Reduce your IT overhead

As a serverless data warehouse, BigQuery lets you get up and running in minutes and run petabyte-scale queries, without ever having to worry about system provisioning, maintenance, fault tolerance or performance tuning.

“Migrating from Redshift to BigQuery has been game-changing for our organization. We’ve been able to overcome performance bottlenecks and capacity constraints as well as fearlessly unlock actionable insights for our business.”

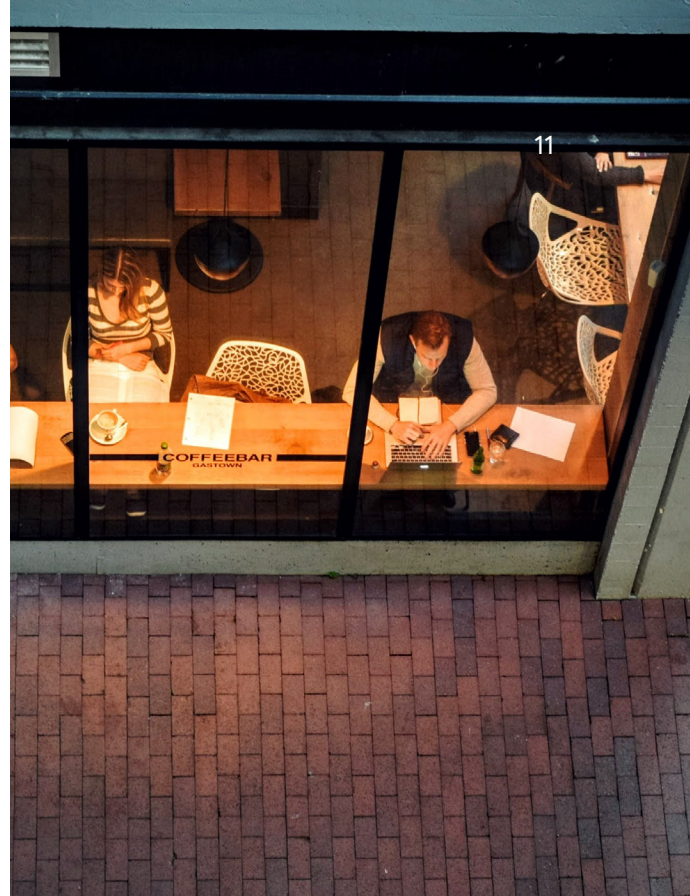
Spencer Aiello,
Tech Lead and Manager, Discord

Google Cloud

“We really experienced a difference with BigQuery, compared to other data analytics solutions we had tried before. It has sped up the data analysis process with a 10-fold increase in credit risk model deployment speed. We don’t see slowdowns in performance or issues such as bottlenecks, even when running lots of data.”

Palm Phuwarat

Chief Product and Data Officer, Credit OK



“The combination of Looker and Google Big Query is powerful, allowing us to get data-hungry analysts essential information much faster. After we moved to Google BigQuery, query time was reduced exponentially. It’s an astonishing difference, allowing us to run 300 queries per day.”

Sam Chase,

Tech Lead, Data Operations, Blue Apron



Let machine learning tackle the hardest problems

Even the newest organization rapidly finds itself swimming in a sea of data. What can be lacking is the ability to make sense of all that data—or to use it to innovate new capabilities. Enter machine learning (ML), which offers a way to use data to solve problems that can otherwise be out of reach.

Your startup might use machine learning (ML) technologies in a variety of ways – image recognition, recommendations, natural language understanding, to name a few. Whatever the problem set that you choose to use machine learning for, our industry-leading research, including that performed at Google Brain and DeepMind, translates into a rich set of easy-to-use ML services for developers and data scientists alike. Consider some of the benefits your startup can enjoy with Google Cloud's ML offerings:



Access pre-trained models for language translation, image recognition, and many other areas, all via API

Your developers get the benefit of machine learning without having to hire hard-to-find data scientists. Google Cloud's models are widely viewed as more accurate than those of other cloud platforms. For example, Google Cloud's models support more language variants than any other, so your startup can be global from day one.



Create new ML models with minimal ML knowledge

Developers can create ML models in BigQuery using a variant of familiar SQL, or use Cloud AutoML to train high-quality models tailored to your business.



Leverage flexible, advanced ML tools

For the data scientists on your team, AI Platform includes support for deep learning, distributed model training, model hosting, and more.



Do deep learning with TensorFlow and Cloud TPUs

As the creator of this open-source framework, we drive today's broadest and deepest TensorFlow ecosystem, including hosting the TensorFlow Summit. Google Cloud also lets you train your models on Google tensor processing units (TPUs), which provide a speed advantage for running TensorFlow.

“Offloading some of the heavy lifting in developing machine learning models to Cloud AutoML is a huge accelerator, because the work can be done in days instead of weeks.”

Erik Andrejko,
Co-founder
and CTO,
wellio



Save money

You want to choose the cloud platform that offers the best technology to build on. But success also depends on using your available cash well—especially for startups. Whether its competitive pricing for compute, network and storage, money-saving recommendations, or tools that are inherently more efficient, Google Cloud offers startups a range of ways to save money.



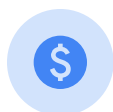


Efficiency with infrastructure that instantly scales up and down in response to traffic and growth

SMBs surveyed by IDC saw a 41% increase in efficiency when using Google Cloud across development, operations and infrastructure.



Billing transparency to control costs with the ability to forecast and optimize spend with AI-powered recommendations and billing reports in the Cloud Console



A simpler pricing model

Other cloud providers require up-front commitments to get discounts, such as a promise to use five VMs for a year. Google Cloud doesn't do this. Instead, sustained use discounts automatically reduce the per-second cost of a VM the longer you run it. You don't need to make an upfront commitment to save money. Further, preemptible resources are an easy way to run non-time-sensitive jobs cost effectively.



Right-sized compute

Compute Engine custom machine types allow you to rightsize your resources so that you have exactly the right amount of CPU and memory that you need—no wasted resources!



Serverless economics

Cloud Run, Firebase, BigQuery, and other many other Google Cloud services are all serverless, letting you pay only for what you use and scaling down to zero when you can.

Startups around the world are seeing real savings with Google Cloud:



Kapten saw

2x

Sustained volume for the same price,
by adjusting nodes and pods.

Takopedia saw

30x

Automated scaling

90%

Reduced operating costs



Current saw

60%

Reduced total cloud hosting costs

60%

Reduction in error resolution times

7x

Growth in user base



Work with a strong partner

Get financial, business and technical support for your startup

When you're choosing a cloud provider, you want more than just infrastructure and services; you want a partner that understands where you're coming from and can help you accelerate your startup's growth.

Working with Google Cloud means tapping into a vast ecosystem: Google's global infrastructure, a community of founders, technical experts, mentors, and investors, as well as integrations with the full complement of Google products and services (e.g, Google Ads, Google Maps and Google Play).

On the technical front, Google Cloud experts can help you get the most from your implementations so you can build better products and scale more efficiently, from the get-go. Google Cloud offers technical training resources and workshops to upskill your team, get one-on-one strategic planning and implementation guidance from Google engineers and help with piloting, planning and migrating your cloud infrastructure.



The Google Cloud Startup Program helps accelerate your growth in three ways:



Financial support

As part of the Google Cloud for Startups program, you'll get Google Cloud credits depending on your stage of growth. Additional credits and support might be available for Google Workspace, Google Maps, Google Ads, Google Play, and more.



Business support

The Startups program helps you scale your business with opportunities to join accelerators, participate in events with our global community of startups, and receive 1:1 mentorship. Qualified startups are also eligible for tailored go-to-market opportunities with Google including co-marketing and co-selling via the Google Cloud Marketplace.



Technology support

Upskill your team via online training courses and workshops. For example, Google is second to none in our knowledge of site reliability engineering (SRE), and we're happy to share our expertise. Select startups also qualify for personalized support from a dedicated Google Cloud team.

“Working shoulder-to-shoulder with Google Cloud and partner engineers in an everything-is-code environment enabled us to easily build new products and features, adapt to changing customer, market or business circumstances, and move on quickly to new projects and activities.”

Firman Gautama,

VP Infrastructure & Security, [Tiket.com](https://www.tiket.com)

“We saw a difference with Google Cloud from the very beginning because the interactions felt like a strategic relationship. Google gave us startup credits and a lot of face-to-face support, which we hadn't experienced with other cloud providers.”

Jim Hanifen,

Head of Product, [Brandfolder](https://www.brandfolder.com)



Make the move

Growing from 'exciting startup' to 'successful business' demands a focus on speed, intelligence, cost savings, and strong partnership. At Google Cloud, we're committed to helping you achieve these foundations for success. Ready to soar? Apply for our Startup Program [here](#).