

Cloud Providers

This article will introduce some of the most popular cloud providers.

Each cloud provider spends a lot of money trying to convince us to use its platform. But which one should we use? While the cloud providers have a lot in common, each has strengths and weaknesses that might make it more or less suitable for a given use case.

In this article, we will provide an overview of cloud providers: who they are, and what they do for us. We'll go into more detail on the three dominant cloud providers: Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform (GCP).

But first, what is a cloud provider and what does it provide?

What is a Cloud Provider?

A cloud provider is a company that offers access to its cloud infrastructure for other companies to use. Customers are able to interact with this cloud via infrastructure, platform, or software as a service offerings.

Cloud providers tend to charge customers using a pay-per-use model. This pricing model is like a utility bill, in which customers pay for the amount of the utility they use. Cloud providers base their billing on the number of services used by each customer. This model allows the customer to access and pay for only as much infrastructure as needed.

Using a cloud provider is not without its drawbacks. Creating an efficient solution with a cloud provider requires experience and training. Furthermore, understanding the cost of a particular system can be difficult.

Now that we have some background on what a cloud provider is, let's discuss some of the most widely used cloud providers around.

Major Cloud Providers

The following providers make up more than half of the total market share. When most companies are thinking of moving to the cloud, they consider AWS, Azure, and GCP.

AWS (Amazon Web Services)

[Amazon Web Services](#) launched in 2006 with initial storage and compute offerings. These services were some of the first of their kind, allowing Amazon to dominate the market. Over the years AWS has remained the largest cloud provider. What sets AWS apart from its competition?

Strengths

- Most established provider
- Hundreds of services spanning Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS)
- Strong free tier of services to try out offerings

Despite being the market leader, AWS does have its flaws.

Weaknesses

- Pricing complexity: it can be difficult to estimate the total cost of an AWS system due to the number of options and tiers affecting cost.
- Lock-in: Getting our applications out of AWS may require extensive work, making us "locked in" to using AWS' service. This problem is known as vendor lock-in.

While AWS is the market leader, Microsoft's Azure and Google Cloud Platform provide strong competition.

Microsoft Azure

[Microsoft Azure](#) launched in 2010 and has its own impressive collection of services. Azure offers thousands of different services that span a large variety of use cases. Why might a company choose Azure?

Strengths

- Strong SaaS offerings such as Microsoft Office 365
- Decades of experience providing enterprise server software and support
- Emphasizes hybrid cloud approaches, managing both private clouds and Azure

As with any option, using Azure has its downsides.

Weaknesses

- Ease of use: a common complaint of Azure is that its training materials are not sufficient to use the platform effectively
- Customer support: many customers describe difficulty in getting individual attention from Azure's team

GCP (Google Cloud Platform)

[Google Cloud Platform](#) became available in 2011, adding to its services over time. Why might a company use GCP?

Strengths

- Simpler pricing structure
- Tends to be the least expensive option
- Specialized in big data and machine learning

Let's take a look at some areas that Google Cloud Platform could improve.

Weaknesses

- Offers fewer services than Azure or AWS
- Fewer global data centers



Fill in the blank

Match the cloud provider to its strengths:

- ✓ **GCP** -> Simpler Pricing, Big Data
- ✓ **AWS** -> Market Leader, Free Tier
- ✓ **Azure** -> Strong SaaS offerings, Enterprise Experience



You got it!

Other Cloud Providers

The top three cloud providers are by no means alone in the market. Besides AWS, Azure, and GCP, there are many other cloud providers with their own specializations. Here we will provide some examples along with some distinguishing characteristics.

- [Red Hat Cloud Services](#) brings extensive experience with Linux administration with a focus on security.
- [Alibaba Cloud](#) offers services similar to those of AWS with a focus on the China region.
- [Oracle Cloud](#) optimizes for scale, targeting large enterprise companies.
- [DigitalOcean](#) focuses on small development teams looking to quickly create cloud-based applications.

There are many more cloud providers, with additional providers being released every year. Each provider tries to differentiate from the others through tactics like specialization or pricing.

We have now gained some understanding of the cloud provider landscape.

Review

In this article, we discussed cloud providers, what and who they are. We described the background, strengths, or weaknesses of various cloud providers. Using this information can help us pick a provider for our applications. Check out a variety of providers and find a solution that works best for you and your organization.

