**AWS For DevOps**

What is Cloud Computing

[**https://aws.amazon.com/what-is-cloud-computing/**](https://aws.amazon.com/what-is-cloud-computing/)

Cloud computing is the on-demand delivery of IT resources over the Internet with pay-as-you-go pricing. Instead of buying, owning, and maintaining physical data centers and servers, you can access technology services, such as computing power, storage, and databases, on an as-needed basis from a cloud provider like Amazon Web Services (AWS).

Cloud Computing video from Azure

<https://www.youtube.com/watch?v=txZrgdehLaw>

Who is using cloud computing?

Organizations of every type, size, and industry are using the cloud for a wide variety of use cases, such as data backup, disaster recovery, email, virtual desktops, software development and testing, big data analytics, and customer-facing web applications. For example, healthcare companies are using the cloud to develop more personalized treatments for patients. Financial services companies are using the cloud to power real-time fraud detection and prevention. And video game makers are using the cloud to deliver online games to millions of players around the world.

# Benefits of cloud computing

* Agility
* Elasticity
* Cost saving
* Deploy globally in minutes

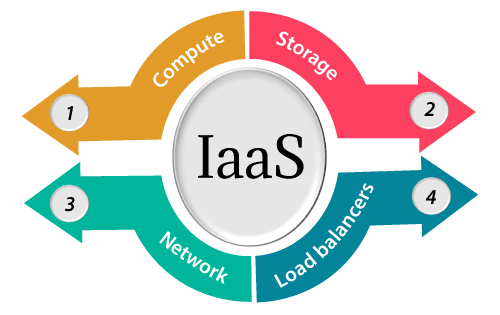
# Types of cloud computing

* Infrastructure as a Service (IAAS)
* Platform as a Service (PAAS)
* Software as a Service (SAAS)

**Infrastructure as a Service (Iaas)**

Iaas is also known as Hardware as a Service (HaaS). It is one of the layers of the cloud computing platform. It allows customers to outsource their IT infrastructures such as servers, networking, processing, storage, virtual machines, and other resources. Customers access these resources on the Internet using a pay-as-per use model.

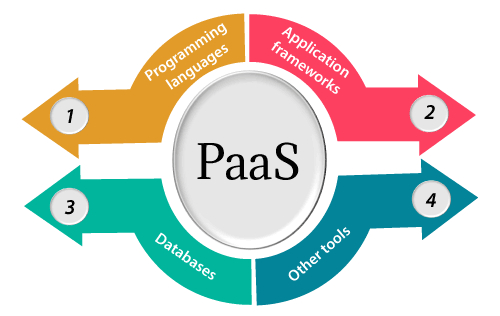
IaaS is offered in three models: public, private, and hybrid cloud. The private cloud implies that the infrastructure resides at the customer-premise. In the case of public cloud, it is located at the cloud computing platform vendor's data center, and the hybrid cloud is a combination of the two in which the customer selects the best of both public cloud or private cloud.



**Platform as a Service (PaaS)**

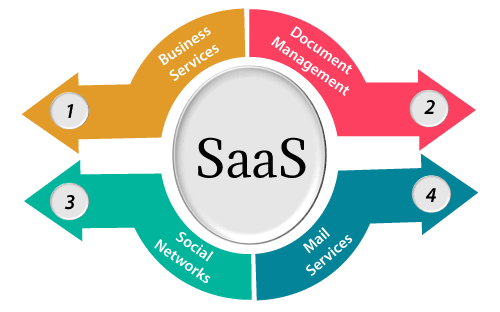
Platform as a service (PaaS) is a complete development and deployment environment in the cloud, with resources that enable you to deliver everything from simple cloud-based apps to sophisticated, cloud-enabled enterprise applications. You purchase the resources you need from a [cloud service provider](https://azure.microsoft.com/en-us/resources/cloud-computing-dictionary/choosing-a-cloud-service-provider/) on a pay-as-you-go basis and access them over a secure Internet connection.

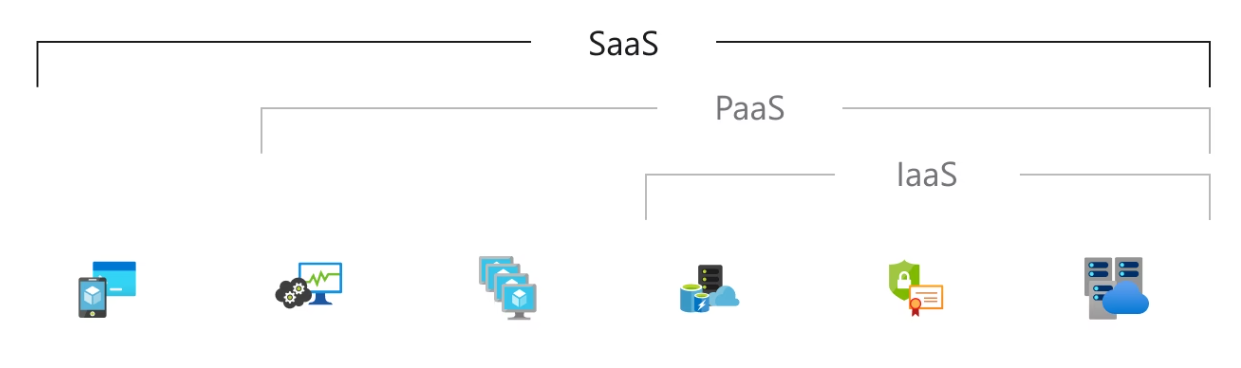
Like [IaaS](https://azure.microsoft.com/en-us/resources/cloud-computing-dictionary/what-is-iaas/), PaaS includes infrastructure—servers, storage, and networking—but also middleware, development tools, business intelligence (BI) services, database management systems, and more. PaaS is designed to support the complete web application lifecycle: building, testing, deploying, managing, and updating.



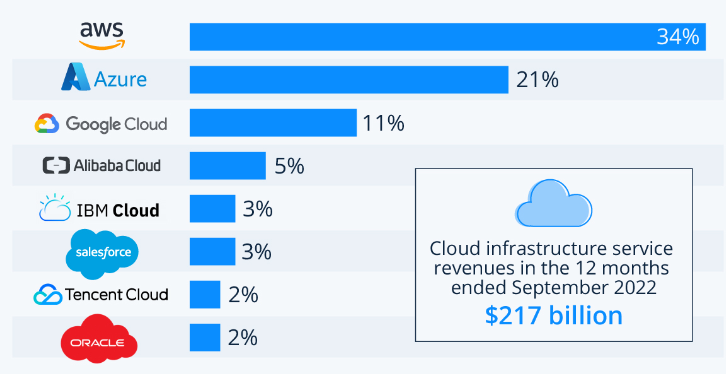
**Software as a Service (SaaS)**

Software as a service (SaaS) allows users to connect to and use cloud-based apps over the Internet. Common examples are email, calendaring, and office tools (such as Microsoft Office 365).





**TOP Cloud Providers**



**AWS Global Infrastructure**

The AWS Cloud spans **96** Availability Zones within **30** geographic regions around the world, with announced plans for **15** more Availability Zones and **5** more AWS Regions in Australia, Canada, Israel, New Zealand, and Thailand.

<https://aws.amazon.com/about-aws/global-infrastructure/>

**Regions, Availability Zones, Edge Locations**

**Regions**

* **Regions are Large geographic areas**

**Availability Zones**

* **Datacenters**

**Edge Locations**

* **Edge locations allows users to access content with lower latency**
* **A site that CloudFront uses to cache copies of your content for faster delivery to users at any location**

