# What is cloud computing.

The term cloud refers to a network or the internet.

It is a technology that uses remote servers on the internet to store, manage, and access data online rather than local drives.

The data can be anything such as files, images, documents, audio, video, and more.

# Advantages of Cloud ComputingAdvantages of Cloud Computing:

# Types of Cloud

There are the following 4 types of cloud that you can deploy according to the organization's needs-

* [Public Cloud](https://www.javatpoint.com/types-of-cloud#Public)
* [Private Cloud](https://www.javatpoint.com/types-of-cloud#Private)
* [Hybrid Cloud](https://www.javatpoint.com/types-of-cloud#Hybrid)
* [Community Cloud](https://www.javatpoint.com/types-of-cloud#Community)

[**Public Cloud**](https://www.javatpoint.com/types-of-cloud#Public)

Public cloud is **open to all** to store and access information via the Internet

**Example:** Amazon elastic compute cloud (EC2), IBM SmartCloud Enterprise, Microsoft, Google App Engine, Windows Azure Services Platform.

**Private Cloud**

It is used by organizations to build and manage their own data centers internally or by the third party.

**Hybrid Cloud**

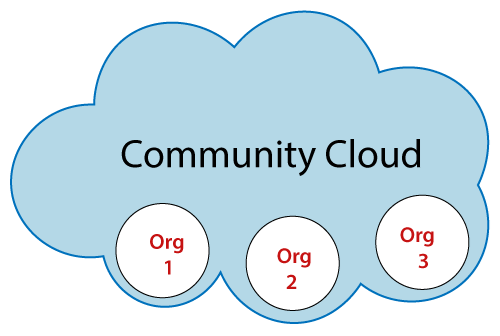
Hybrid Cloud is a combination of the public cloud and the private cloud. we can say:

**Hybrid Cloud = Public Cloud + Private Cloud**

Hybrid cloud is partially secure because the services which are running on the public cloud can be accessed by anyone, while the services which are running on a private cloud can be accessed only by the organization's users.

**Example:** Google Application Suite (Gmail, Google Apps, and Google Drive), Office 365 (MS Office on the Web and One Drive), Amazon Web Services.

**Community Cloud**

Community cloud allows systems and services to be accessible by a group of several organizations to share the information between the organization and a specific community. It is owned, managed, and operated by one or more organizations in the community, a third party, or a combination of them.

# Cloud Service Models

There are the following three types of cloud service models -

1. [Infrastructure as a Service (IaaS)](https://www.javatpoint.com/cloud-service-models#IaaS)
2. [Platform as a Service (PaaS)](https://www.javatpoint.com/cloud-service-models#PaaS)
3. [Software as a Service (SaaS)](https://www.javatpoint.com/cloud-service-models#SaaS)

[**Infrastructure as a Service (IaaS)**](https://www.javatpoint.com/cloud-service-models#IaaS)

IaaS is also known as **Hardware as a Service (HaaS)**.

It is a computing infrastructure managed over the internet.

The main advantage of using IaaS is that it helps users to avoid the cost and complexity of purchasing and managing the physical servers.

**Example:** DigitalOcean, Linode, Amazon Web Services (AWS), Microsoft Azure, Google Compute Engine (GCE), Rackspace, and Cisco Metacloud.

# WHAT IS AWS .

AWS (Amazon Web Services) is a [cloud computing](https://www.techtarget.com/searchcloudcomputing/definition/cloud-computing) platform provided by Amazon that includes a mixture of infrastructure-as-a-service ([IaaS](https://www.techtarget.com/searchcloudcomputing/definition/Infrastructure-as-a-Service-IaaS)), platform-as-a-service ([PaaS](https://www.techtarget.com/searchcloudcomputing/definition/Platform-as-a-Service-PaaS)) and packaged-software-as-a-service ([SaaS](https://www.techtarget.com/searchcloudcomputing/definition/Software-as-a-Service)) offerings.

Amazon.com Web Services launched its first web services in 2002 from the internal infrastructure that Amazon.com built to handle its online retail operations. In 2006, it began offering its defining IaaS services.

# FOLLOWINF SERVIES PROVIDED BY AWS

More than 200 services comprise the AWS portfolio, including those for compute, databases, infrastructure management, application development and security. These services, by category, include the following:

Compute , storage ,databases ,data management ,migration ,[hybrid cloud](https://www.techtarget.com/searchcloudcomputing/definition/hybrid-cloud) , networking ,development tools ,management ,monitoring ,security ,governance, [big data management](https://www.techtarget.com/searchdatamanagement/definition/big-data-management) , analytics , artificial intelligence ([AI](https://www.techtarget.com/searchenterpriseai/definition/AI-Artificial-Intelligence)) , mobile development , messages and notification

# Availability Zone

An AZ is a location that contains multiple physical data centers.

87 availability zones in the world.

A region is a collection of AZs . 27 region .

In 1 region 🡪 3 AZ or max (6) .

example asia pacific (mumbai)

# Elastic Compute Cloud ([EC2](https://www.techtarget.com/searchaws/definition/Amazon-Elastic-Compute-Cloud-Amazon-EC2))

Amazon Elastic Compute Cloud ([EC2](https://www.techtarget.com/searchaws/definition/Amazon-Elastic-Compute-Cloud-Amazon-EC2)) is a service that provides virtual servers – called [EC2 instances](https://www.techtarget.com/searchaws/definition/Amazon-EC2-instances) .

The EC2 service [offers dozens of instance types](https://www.techtarget.com/searchaws/feature/Amazon-Elastic-Compute-Cloud-features-explained) with varying capacities and sizes.

# Storage

# S3

Amazon Simple Storage Service ([S3](https://www.techtarget.com/searchaws/definition/Amazon-Simple-Storage-Service-Amazon-S3)) provides scalable object storage for data backup, collection and analytics.

An IT professional stores data and files as S3 objects -- which can range up to five gigabytes – inside [S3 buckets](https://www.techtarget.com/searchaws/definition/AWS-bucket) to keep them organized

# [Elastic Block Store](https://www.techtarget.com/searchaws/definition/Amazon-EBS-Amazon-Elastic-Block-Store)

[Amazon Elastic Block Store](https://www.techtarget.com/searchaws/definition/Amazon-EBS-Amazon-Elastic-Block-Store) provides block-level storage volumes for persistent data storage when using EC2 instances. [Amazon Elastic File System](https://www.techtarget.com/searchaws/definition/Amazon-EFS-Elastic-File-System) offers managed cloud-based file storage.

# Companies using AWS include the following:

Verizon ,Netflix,PBS ,FOX ,United Airlines ,Air Canada ,Salesforce ,BMW Group ,Siemens ,GoDaddy