

Cloud Computing Terminology

Cloud

In cloud computing, "cloud" is used as a metaphor for the internet, so the phrase cloud computing means a type of Internet-based computing.

Cloud services

Cloud services are applications, services or resources made available to users on demand via the Internet, such as IaaS, PaaS, SaaS, and data storage.

Clusters

A computer cluster is a collection of interconnected stand-alone computers or servers that can work together as a single integrated computing resource.

Containers

A container is a "wrapper" that allows software to travel between operating environments. Containers create a unique virtual instance of an operating system (OS) that separates an application from others in the same environment. Containers can run separate instances of an application within a single shared OS.

Hybrid cloud

A hybrid cloud is a combination of traditional IT and public or private clouds (or both) that remain separate but are bound together by technology that makes the data or application portable.

Infrastructure as a Service (IaaS)

IaaS delivers computer infrastructure on an outsourced basis to support a company's operations. It includes servers, network, operating systems, and storage, through virtualization technology which doesn't require that the company physically maintain or manage it. Its cloud servers typically include a dashboard or an API that gives the company control of the entire infrastructure.

Startups and small companies may prefer IaaS to avoid spending time and money buying and creating hardware and software such as servers, storage, or networking resources.

Kubernetes

Kubernetes is an open-source platform for managing containerized workloads and services.

Multi-cloud

Multi-cloud is the use of more than one public cloud, a strategy that allows enterprises to choose specific services from a combination of public IaaS clouds such as IBM Cloud, Amazon Web Services, and Microsoft Azure. This enables companies to avoid locking in to any one cloud provider.

On premise versus off premise

On premise refers to a solution installed and hosted in-house. Private cloud is hosted in a company's own data center.

A solution that is hosted on dedicated hardware that happens to be in a different physical location is referred to as **off premise**.

Platform as a Service (PaaS)

Platform as a Service (PaaS) provides cloud components for software programs. PaaS delivers a framework for developers that they can use to create customized applications. The platform typically includes an operating system, a programming language execution environment, a database, and a web server.

When you hear PaaS, think of development tools, database management, and business analytics.

Private cloud

A private cloud is an on premise or off premise cloud infrastructure operated solely for one organization. It may be managed by the organization or by a third party.

Public cloud

A public cloud is available to the general public or a large industry, owned and managed by an organization selling cloud services.

Software as a Service (SaaS)

SaaS refers to a model of software deployment where online software is provided as a service to customers.

When you hear SaaS, think of hosted subscription applications or web email, Google apps, or Dropbox.

Virtualization

Virtualization is the creation of a virtual (rather than actual) version of something such as a server, a desktop, a storage device, an operating system, or network resources.

Virtual machine

A virtual machine (VM) is a software program or operating system that behaves like a separate computer that can run applications and programs.

Workload

A workload is a discrete capability or amount of work to be run in the cloud, such as serving up a Web site.