

A Short Note on Cloud Computing Infrastructure and its Applications

Justice Benjamin*

Department of Digital Technology, Raytheon Technologies Research Center, Waltham, Massachusetts, USA

ABOUT THE STUDY

Cloud computing is on-demand access to computing resources-applications, servers (physical and virtual), data storage, development tools, networking capabilities, then in a remote data centre controlled by a Cloud Services Provider and accessible through the internet (or CSP).

Cloud computing, as compared to traditional on-premises IT and depending on the cloud services people choose, help perform the following:

Person may also use the cloud to provide some individuals, such as developers and data scientists, access to software and support infrastructure.

Improve time-to-value and agility

Instead of waiting weeks or months for IT to reply to a request, acquire and setup necessary gear, and install software, the company can start utilising corporate apps in minutes using cloud. People may also use the cloud to provide some individuals, such as developers and data scientists, access to software and support infrastructure.

Easily and cost-effectively scale

People can scale capacity up and down in response to traffic spikes and dips in the cloud, rather of acquiring excess capacity that sits unused during dull periods. People may also use cloud provider's global network to convey apps closer to users all over the world.

Types of cloud computing

Public cloud: Third-party cloud service providers own and run public clouds, which provide computing resources such as servers and storage through the Internet. One example is a public cloud like Microsoft Azure. In a public cloud, the cloud provider owns and operates the hardware, software, and other supporting infrastructure.

Private cloud: A private cloud is a set of cloud computing services that is only used by one enterprise or organisation. A private cloud might be physically located at a firm's datacenter. Some companies use third-party service providers to host their own clouds. A private cloud's services and infrastructure are retained on a private network.

Hybrid cloud: Hybrid clouds mix public and private clouds, which are linked by technology that allows data and applications to flow between them. By allowing data and apps to move between private and public clouds, a hybrid cloud gives people company greater flexibility, more deployment options, and helps optimise people existing infrastructure, security, and compliance.

Types of cloud services

Infrastructure as a service, platform as a service, serverless computing, and software as a service are the four main types of cloud computing services. They're sometimes referred to as the cloud computing stack since they're constructed on top of one other.

Information as a service: Cloud computing services in their most basic form. People rent IT infrastructure-servers and Virtual Machines (VMs), storage, networks, and operating systems-on a pay-as-you-go basis from a cloud provider using IaaS.

Platform as a service: Platform as a service refers to cloud computing services that provide an on-demand environment for building, testing, delivering, and supporting software applications.

Serverless computing: Similar to PaaS, serverless computing focuses on offering app functionality without the need to manage servers and infrastructure. The cloud provider is in charge of setup, capacity planning, and server administration. Serverless architectures are scalable and event-driven, which means they require resources only when a certain function or trigger occurs.

Software as a service: Software as a service is a method of providing software programmes on demand and *via* subscription through the Internet. Cloud providers may host and manage software applications and underlying infrastructure, as well as provide routine maintenance such as software upgrades and security patches, using SaaS. Users use a web browser on their phone, tablet, or computer to access the software over the Internet.

Correspondence to: Justice Benjamin, Department of Digital Technology, Raytheon Technologies Research Center, Waltham, Massachusetts, USA, E-mail: Benjamin.justice@gmail.com

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