

## Service Models in Cloud

### Description

We will discuss the types of cloud computing in this article, how they are categorized based on the types of services they provide, and what types of service models they offer the customers. Before going over this post, I would recommend you to read my previous article on [“What is cloud computing”](#)

A cloud computing service is a technology that offers wide variety of services over the Internet, such as data storage, platforms, servers, software etc, which you can use from anywhere in the world. There are three different types of Internet service models for managing customer needs and costs. There are several service models that cloud companies use for providing their services to their customers and charging according to the services they provide. Let's look at the service model for cloud providers.

Below are the three types of cloud services we will discuss in detail

- Platform as a service (PAAS)
- Infrastructure as a Service (IAAS)
- Software as a service (SAAS)

Now Lets discuss about each in detail

### What is PaaS? Platform as a Service definition

In the platform-as-a-service (PaaS) cloud computing model, a third party provides hardware and software tools via the Internet. Applications usually require these tools for development. Most PaaS providers host their own hardware and software. This means that developers don't have to install additional hardware and software to develop or run a new application if they use PaaS.

PaaS tools are usually described as simple to use and convenient. Most often, they are available on a pay-per-use basis. When compared to using on-premises alternatives, a PaaS solution may prove a more appealing option for organizations. For software development, PaaS does not replace an entire enterprise's IT infrastructure. Cloud service providers offer these services. Customers typically access the services via web browsers. Cloud-based services such as application hosting and Java development can be delivered by public, private, and hybrid clouds. In most cases, PaaS will require users to pay on a per-use basis. For access to the platform and its applications, some providers charge a flat monthly fee.

### Advantages of PaaS

1. Development and deployment of apps that are simple and cost-effective.
2. Scalable
3. Highly accessible
4. Developers may personalize programs without having to worry about software maintenance.

5. There will be a significant reduction in the amount of code required.
6. Business policies are automated.
7. Migration to the hybrid model is easy.

#### **Features of PaaS**

- it is based on virtualization technology, resources may easily be scaled up or down as your company needs change.
- Offers several services to help with app development, testing, and deployment.
- Web services and databases are integrated.

#### **Examples of PaaS**

1. AWS Elastic Beanstalk
2. Windows Azure
3. Heroku
4. Force.com
5. Google App Engine
6. OpenShift

### **What is SaaS? Software as a Service**

In the cloud industry, Software as a Service, often known as cloud application services, is the most widely used choice for organisations. SaaS makes use of the internet to distribute programs to users that are controlled by a third-party vendor. The majority of SaaS services run on your web browser, thus there are no client-side downloads or installations required.

SaaS's web-based delivery model means there is no need for IT staff to download and install applications on each computer. The vendor manages all technical aspects of SaaS, including data, middleware, servers, and storage, enabling the business to perform maintenance and support more efficiently.

#### **Advantages of SaaS**

- By reducing difficult tasks like installing, managing, and upgrading software, SaaS software offers many benefits for employees and companies.
- As a result technical employees can then focus on more important tasks and issues within the organization.

#### **Features of SaaS**

- Controlled from a single place.
- The website is hosted on a remote server.
- Internet-based accessibility.
- Hardware and software updates are not the responsibility of the user.

### Example of SaaS

1. Google Workspace
2. Dropbox
3. Salesforce
4. Cisco WebEx
5. SAP Concur
6. GoToMeeting

### What is IaaS? IaaS: Infrastructure as a Service

Infrastructure as a Service (IaaS) is a type of cloud computing infrastructure service that provides highly scalable and automated computing resources. IaaS (Infrastructure as a Service) allows users to access and manage computers, networking, storage, and other services entirely on their own. Instead of purchasing technology fully, IaaS allows companies to purchase resources as needed and on-demand.

Through virtualization technology, IaaS provides cloud computing infrastructure such as servers, networks, operating systems, and storage. These cloud servers are usually offered to the business via a dashboard or API, providing IaaS clients complete control over the entire infrastructure. IaaS offers the same technologies and capabilities as a traditional data center without requiring physical maintenance or management. Clients of IaaS can still access their servers and storage directly, but it's all done through a cloud-based "virtual data center."

### Advantages of IaaS

- The most flexible cloud computing model is IaaS.
- The deployment of storage, networking, servers and computing power is simple to automate.
- Hardware purchases can be made based on usage.
- The infrastructure is generally under the control of the clients.
- Resources can be purchased as per requirement.
- High scalability

### Features of IaaS

- As a service, resources are offered.
- Cost varies depending on consumption
- The scalability of services is exceptional.
- A single piece of hardware can support multiple users.
- The infrastructure is under the entire control of the organisation.
- Flexible and dynamic

### Example of IaaS

1. DigitalOcean

2. Linode
3. Rackspace
4. Amazon Web Services (AWS)
5. Cisco Metacloud
6. Microsoft Azure
7. Google Compute Engine (GCE)

**Category**

1. AWS
2. Cloud

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**Author**

kk-ravi144gmail-com

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