Cloud Based Services models

Cloud Computing can be defined as the practice of using a network of remote servers hosted on the Internet to store, manage, and process data, rather than a local server or a personal computer. Companies offering such kinds of cloud computing services are called cloud providers and typically charge for cloud computing services based on usage.

Types of Cloud Computing

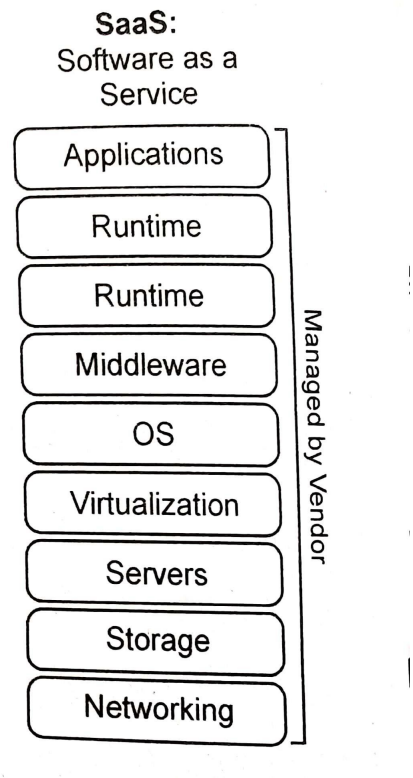
Most cloud computing services fall into five broad categories:

Software as a service (SaaS)
Platform as a service (PaaS)
Infrastructure as a service (IaaS)

Software as a Service(SaaS)
It is a way of delivering services and applications over the Internet. Instead of installing and maintaining software, we simply access it via the Internet, freeing ourselves from the complex software and hardware management. It removes the need to install and run applications on our own computers or in the data centers eliminating the expenses of hardware as well as software maintenance.

SaaS provides a complete software solution that you purchase on a pay-as-you-go basis from a cloud service provider. Most SaaS applications can be run directly from a web browser without any downloads or installations required. The SaaS applications are sometimes

called Web-based software, on-demand software, or hosted software.



Advantages of SaaS

Cost-Effective: Pay only for what you use.

Reduced time: Users can run most SaaS apps directly from their web browser without needing to download and install any software. This reduces the time spent in installation and configuration and can reduce the issues that can get in the way of the software deployment.

Accessibility: We can Access app data from anywhere.
Automatic updates: Rather than purchasing new software, customers rely on a SaaS provider to automatically perform the updates.
Scalability: It allows the users to access the services and features on-demand

The various companies providing Software as a service are Cloud9 Analytics, Salesforce.com, Cloud Switch, Microsoft Office 365, Big Commerce, Eloqua, dropBox, and Cloud Tran.

Disadvantages of Saas :

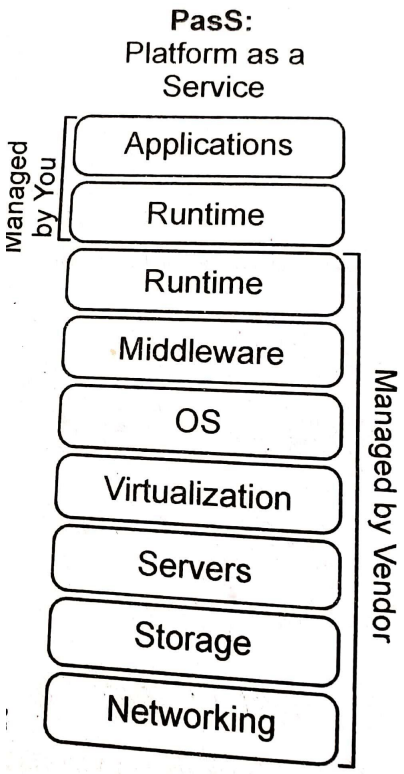
Limited customization: SaaS solutions are typically not as customizable as on-premises software, meaning that users may have to work within the constraints of the SaaS provider's platform and may not be able to tailor the software to their specific needs.

Dependence on internet connectivity: SaaS solutions are typically cloud-based, which means that they require a stable internet connection to function properly. This can be problematic for users in areas with poor connectivity or for those who need to access the software in offline environments.Security concerns: SaaS providers are responsible for maintaining the security of the data stored on their servers, but there is still a risk of data breaches or other security incidents.

Limited control over data: SaaS providers may have access to a user's data, which can be a concern for organizations that need to maintain strict control over their data for regulatory or other reasons.

Platform as a Service

PaaS is a category of cloud computing that provides a platform and environment to allow developers to build applications and services over the internet. PaaS services are hosted in the cloud and accessed by users simply via their web browser.
A PaaS provider hosts the hardware and software on its own infrastructure. As a result, PaaS frees users from having to install in-house hardware and software to develop or run a new application. Thus, the development and deployment of the application take place independent of the hardware.
The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly configuration settings for the application-hosting environment.



Advantages of PaaS:

Simple and convenient for users: It provides much of the infrastructure and other IT services, which users can access anywhere via a web browser.

Cost-Effective: It charges for the services provided on a per-use basis thus eliminating the expenses one may have for on-premises hardware and software.

Efficiently managing the lifecycle: It is designed to support the complete web application lifecycle: building, testing, deploying, managing, and updating.

Efficiency: It allows for higher-level programming with reduced complexity thus, the overall development of the application can be more effective.

The various companies providing Platform as a service are Amazon Web services Elastic Beanstalk, Salesforce, Windows Azure, Google App Engine, cloud Bees and IBM smart cloud.

Disadvantages of Paas:

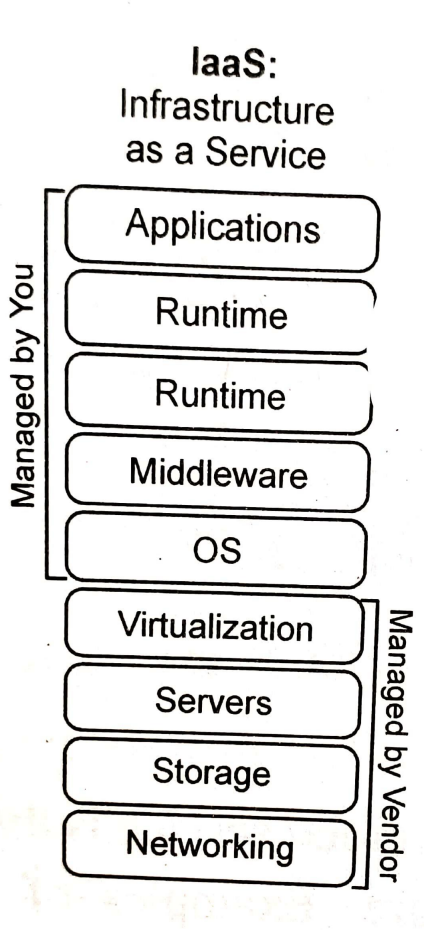
Limited control over infrastructure: PaaS providers typically manage the underlying infrastructure and take care of maintenance and updates, but this can also mean that users have less control over the environment and may not be able to make certain

customizations.Dependence on the provider: Users are dependent on the PaaS provider for the availability, scalability, and reliability of the platform, which can be a risk if the provider experiences outages or other issues.

Limited flexibility: PaaS solutions may not be able to accommodate certain types of workloads or applications, which can limit the value of the solution for certain organizations.Infrastructure as a Service

Infrastructure as a service

Infrastructure as a service (IaaS) is a service model that delivers computer infrastructure on an outsourced basis to support various operations. Typically IaaS is a service where infrastructure is provided as outsourcing to enterprises such as networking equipment, devices, database, and web servers.
It is also known as Hardware as a Service (HaaS). IaaS customers pay on a per-user basis, typically by the hour, week, or month. Some providers also charge customers based on the amount of virtual machine space they use.
It simply provides the underlying operating systems, security, networking, and servers for developing such applications, and services, and deploying development tools, databases, etc.



Advantages of IaaS:

Cost-Effective: Eliminates capital expense and reduces ongoing cost and IaaS customers pay on a per-user basis, typically by the hour, week, or month.Website hosting: Running websites using IaaS can be less expensive than traditional web hosting.Security: The IaaS Cloud Provider may provide better security than your existing software.Maintenance: There is no need to manage the underlying data center or the introduction of new releases of the development or underlying software. This is all handled by the IaaS Provider.

The various companies providing Infrastructure as a service are Amazon web services, Bluestack, IBM, Openstack, Rackspace, and Vmware.

Disadvantages of IaaS :

Limited control over infrastructure: IaaS providers typically manage the underlying infrastructure and take care of maintenance and updates, but this can also mean that users have less control over the environment and may not be able to make certain customizations

Security concerns: Users are responsible for securing their own data and applications, which can be a significant undertaking.

Limited access: Cloud computing may not be accessible in certain regions and countries due to legal policies.