

# CLOUD COMPUTING

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① API is the acronym for application programming interface, which is a software intermediary that allows two applications to talk to each other.

EX: Imagine you're sitting at a table in a restaurant with a menu of choices to order from. The kitchen is the part of the "system" that will prepare your order. What is missing is the critical link to communicate your order to the kitchen & deliver your food back to your table. That's where the waiter or API comes in.

The waiter is the messenger - or API - that takes your request (a) order & tells the kitchen - the system - what to do. Then the waiter delivers the prepared back to you; in this case, it is food.



## ② Infrastructure as a Service (IaaS)

The basic layer of cloud is the infrastructure - IaaS. This layer is basically hardware & network. This from a regular server (or) hosting company are mainly two things: Scalability & Virtualisation.

Scalability is most important. The some IaaS vendors are scaling their IaaS layer into such huge quantities that the marginal cost of adding more GHz, GB, storage & so on.

Ex: Gmail, the Google mail service where we use around 15 GB for free. In order to do this, Google built gigantic data centers consisting of millions of servers.

## Platform as a Service (PaaS)

The second layer of the cloud is the platform - the PaaS. The platform layer provides resources to actually build applications. In combination with IaaS, PaaS provides the ability to develop, test, run & host applications.

Ex: PaaS is Microsoft Azure. This platform provides developers with swift access to a full development & deployment environment & even let you



host the application you are building.

## Software as a Service (SaaS)

It has been used for many years, but in a cloud setting, it is the layer in which the user consumes the offering from the service provider.

The SaaS layer must be web-based & hence accessible from everywhere & preferably on any device. The key is to understand that it makes no sense to ask whether a service is cloud or SaaS, as SaaS is a layer in cloud stack.

PaaS is often the most cost-effective & time effective way for a developer to create a unique application. It allows developer to focus on the creative side of app development.



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1. In cloud architecture, the server hardware is provided & maintenance of it is done by the service provider. User can draw the services they require over the internet eliminating the need to purchase any new hardware.

2. User pay for the services they use. It does away the need to pay any fixed monthly plan fee as in traditional hosting. It also ensures user do not have to buy resources they do not require & leave them unutilized.

3. Cloud architecture is scalable on demand. user can increase (or) decrease their resources depending on their business needs with just a few clicks without the need of any physical effort as in traditional hosting.

4. Cloud hosting is capable of handling workloads seamlessly without any possibility of failure. Since it functions as a network, even if there is a failure in one of the components, the services are available from the other active components.



5. cloud offers better data security & recovery from any natural disaster & human error as its backup data on multiple locations.

③ ~~the~~ Most Commonly used cloud computing are.

(a) Storage (Amazon S3).

S3 is an object storage service that offers industry leading durability, security, data availability & performance.  
eg: S3.

(b) Computation (EC2)

- EC2 is an Scalable Computing resource model.

→ Enable developer to let server in the cloud

→ It is integral part of AWS ecosystem.

(c) Database.

→ At AWS database in the cloud the supports both relation & non-relation database systems.

eg: Dynamodb.



④ Service management

→ It is used to configure management service that provides managed instances of all the infrastructure  
e.g. cloud watch.

The statement is false  
cloud service components are not economical.