* **What is Cloud Computing ??**

While the world is getting confused with multiple definitions and concepts around cloud computing , it become imperative to understand how is cloud computing different to traditional computing world today.

**Cloud computing** solves this problem by using multiple computers connected via a digital network, as though they were one computer providing infrastructure , platform or applications as a service .Often, the services available are considered part of cloud computing.

* **Defination of cloud computing ::**

Cloud computing offers the ability to access software or information that can be delivered on-demand, over the internet, without the need to store it locally.

Cloud computing is the realization of the long-held feram of utility computing.

The “Cloud” is a metaphor for the internet, derived from a comman representation in computer network drawings showing the internet as a cloud.

**Example :**

Consider electricity and telephony services.when we come home or go to the office, we plug into the electric outlet and get electricity as much and as long as we want without knowing how it is gemerated or who the supplier is.

Similarly for telephony, we plug in dial and talk as long as we want without knowing what kind of networks or servce providers the conversation is traversing through.

**Characteristics of cloud computing ::**

1.The illusion of infinite resources.

2.Multi-tenancy(shared resources).

3.Scale on demand(scalability).

4.Elasticity

5.Self-provisioning of resources.

6.Pay-for-play(pay as you use/go)

7.High availability and on SLA(Service level agreement).

8.Geographically distributed data centers.

**1.The illusion of infinite resources.**

-Illusion of computing and storage resources.

-User do not require capacity planning and provisioning for own individual storage and computing infrastructure.

**2.Multi-tenancy(shared resources).**

-Cloud computing is based on a business model in which resources are shared at

-Network level

-Host level

-Application level.

-Multiple user use the same resources.

**3.Scale on demand(scalability).**

-Ability to scale to tens of thousands of systems.

-Ability to massively scale bandwidth and storage space.

-Batter than length sales-and-provosion process.

-Rapidly scale the computing capabilities up or down.

**4.Elasticity**

-Rapidly increase and decrease user’s computing resources as needed.

-Release resource for other uses when they are no longer require.

-Always elastically to maintain cost efficiencies.

-If anything, the cloud is flexible and scalable to suit your immediate business needs.

-You can quickly and easily add or remove users, software features, and other resources.

**5.Self-provisioning of resources.**

-Users can self-provision for additional resources like,

-Processing Capacity

-Software

-Storage

-Network

**6.Pay-for-play(pay as you use/go)**

-Pay only for what you use.

-Do not require any upfront investment reservation or major setup fees.

-Do not incur huge capital expenditure and operating expenditure.

-Capabilities are charged using a metered.

-Fee-for-service or advertising based billing model to promote optimization of resources use.

**7.High availability and on SLA(Service level agreement).**

-Gaurantee for 24\*7 availability.

-Most cloud providers have a SLA for uptime and refund mechanism if SLA isn’t meet.

**8.Geographically distributed data centers**

-To serve customers around the globe, data centers are at multiple geographical locations.

-This require because of,

* + Legal/regulatory concerns.
  + Geopolitical considerations
  + Load balancing
  + Network latency
  + Edge caching
  + And many more….