**Amazon Web Services (AWS)**

* **What is Cloud?**

The cloud enables anyone with an internet connection to access IT resources on-demand, such as those consumed by cloud-based applications. The basic resources available are compute, storage, and networking, all of which are needed for a business critical application to deliver a full experience.

In the simplest terms, cloud computing means storing and accessing data and programs over the Internet instead of your computer's hard drive.

* **Types of cloud**

1. **Public cloud services.**

Public cloud services are made available to anybody who wants to purchase or lease services. The three largest cloud service providers currently are Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform.

1. **Private cloud services.**

Private cloud services are built by enterprises for use by their employees and partners only and are often on-premises data centers.

1. **Hybrid cloud services.**

Hybrid cloud services combine the two to provide the benefits of a private cloud’s direct control and a public cloud’s speed and scalability.

* **Advantages of cloud.**

1. **Cost Saving.**

Cloud computing has invariable benefited businesses and organizations to help cut costs. The core strategy of every business is to churn out as much revenue as possible while keeping the expenses at a minimum. With Cloud Computing, you can save substantial capital costs, with zero expense as you don’t need to install applications or in-house servers. With no in-house servers, the operational costs of running and maintaining them are eliminated. If the servers were present physically this would call for massive expenses for maintenance, air conditioning, power, and other associated expenses.

The benefits of associating your business process with the cloud are that you pay for the services, and disengage whenever you don’t need the storage service. Organizations do not need to worry about expending a massive portion of the IT capital for an in-house server.

Often people wonder if it is extremely expensive to afford the cloud, but the fact is that it’s quite convenient even for small businesses to get on the cloud. Cloud services are quite affordable for small businesses as well.

1. **Scalability.**

While an on-premises data center has the ability to scale (especially when using hyperconverged infrastructure (HCI) or composable infrastructure), it can’t compare to a public environment. When a company is subscribed to a cloud service, it can easily scale resources up and down as needed.

1. **Resource Management.**

A key takeaway from all this is that cloud computing and networking allows companies to improve resource management from infrastructure to personal. Resources can be procured, paid for, and used with greater specificity. Monitoring tools allow organizations to watch resource use and adjust their usage so they aren’t paying for unused resources.

1. **Reliability.**

With the need to cater to a larger diverse audience, comes a massive bout of responsibility as well. The cloud infrastructure has to be very efficient in catering to the needs of several clients and maintain its consistency in its functionality and services. Most cloud service providers assure a guarantes assistance round the clock for all days of the contract and there is always close to 100% availability. You don’t need to worry about server maintenance and if the host server fails, the hosted files can easily be transitioned to other available servers.

1. **Strategic Edge.**

With competitions soaring high, you might be in need of the latest applications to catch up with the rest of the crowd. Through cloud computing, you will have access to the latest apps and infrastructure to create, develop and enhance your deliverables. Your company could access software that is the need of the hour, without actually having to invest in installations or in the maintenance of the software.

Cloud computing lets you focus on your key business objectives and not worry too much about the installation of applications and software.

* **Advantages of cloud computing in simple term.**

1. Back-up and restore data.
2. Excellent accessibility,
3. Low maintenance cost.
4. Mobility.
5. IServices in the pay-per-use model.
6. Unlimited storage capacity.
7. Data security.

* **Disadvantages of cloud.**

1. **Internet Connectivity.**

As you know, in cloud computing, every data (image, audio, video, etc.) is stored on the cloud, and we access these data through the cloud by using the internet connection. If you do not have good internet connectivity, you cannot access these data. However, we have no any other way to access data from the cloud.

1. **Vendor lock-in.**

Vendor lock-in is the biggest disadvantage of cloud computing. Organizations may face problems when transferring their services from one vendor to another. As different vendors provide different platforms, that can cause difficulty moving from one cloud to another.

1. **Limited Control.**

As we know, cloud infrastructure is completely owned, managed, and monitored by the service provider, so the cloud users have less control over the function and execution of services within a cloud infrastructure.

1. **Security.**

Although cloud service providers implement the best security standards to store important information. But, before adopting cloud technology, you should be aware that you will be sending all your organization's sensitive information to a third party, i.e., a cloud computing service provider. While sending the data on the cloud, there may be a chance that your organization's information is hacked by Hackers.

* **EC-2 (Elastic Compute Cloud)**

Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud. It is designed to make web-scale cloud computing easier for developers. Amazon EC2’s simple web service interface allows you to obtain and configure capacity with minimal friction. It provides you with complete control of your computing resources and lets you run on Amazon’s proven computing environment.