



CLOUD COMPUTING AND ITS APPLICATIONS

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Abstract

Cloud computing is a network which is located at a remote location which act as a server which can be accessed by using internet resources and are used to manage memory space, processing and accessing of the data of user. Cloud computing basically provides us with a facility by which we can store the data without carrying it around physically and access is available at any time and at any place. Cloud computing is used by many companies to store database on a host sever at a low cost and maintenance. The third party which stores the data acts as a cloud which stores data of all its users and also their employees. Cloud computing is a technology by 65` which we can easily access the data on any platform i.e. Portability is achieved. Clouds are classified into two types deployment model and servicing model. on the basis of servicing model Clouds are divided into 3 types PaaS (platform as a service), SaaS(software as a service) NaaS(network as a service) and IaaS(infrastructure as a service). And on basis of deployment model it is divided as public, private, community and hybrid clouds. In cloud computing three members participate these are host, company/organisation and the individual. The data of the companies are stored with the host and is kept confidential and the pin is changed by the companies time to time to maintain security. For this, the company needs to pay the host i.e. the third party. By this procedure, storage unit of company is not required and hence costing of this unit is saved.

Index terms: storage, accessibility, availability, network, costing, portability.

CLOUD COMPUTING OVERVIEW:

Clouds computing are a paradigm where the large amount of system is interconnected to provide an infrastructure for application, data and file storage. With the advancement in the technology, problems like storage were increasing and to deal with it cloud computing came into existence. Cloud computing provides with a service by which we can store our data to another host and need not to keep it with us.

1. Introduction

The cloud is a portable device which allows a execution for multiple networks. Cloud gives relationship between the hosting company and the user. Cloud is presented at a remote location . The cloud connects various mobile apps, browser based

apps , system apps, etc via internet. The server directly provides the storage and maintenance without need of installation and downloading of software by the user.

Cloud computing can be classified as:

- 1) Front-end
- 2) Back-end

Front-end is the end which is accessible to the user whereas the backend is accessible only to the server. Backend is used as functioning unit accessible only to the programmer. Front-end is also known as UI(user interface) visible to the client.

2. History

The concept of cloud computing came into existence in 1950 due to increasing demands in it sector. It also increased due to demands of personal computers and

localised infrastructures. In 1960's, cloud computing was started with the use of main frame computers, giving rise in the demand of PC till 1960's. In 1960's, there was rise in demand of PC's and designation of decentralized computing also gave birth to IT services industries. Later on in 1990's cloud computing provided NaaS services. Ex. Virtual Private Network(VPN). So, there was high demand for bandwidth from client/server architecture. In 2000, hosted environment increased the use of virtualization and it lead to high development of IT infrastructure management from beyond 2010, there was development of service mode called as Emergence of a service delivery of IaaS, PaaS, SaaS, NaaS comes under this service model.

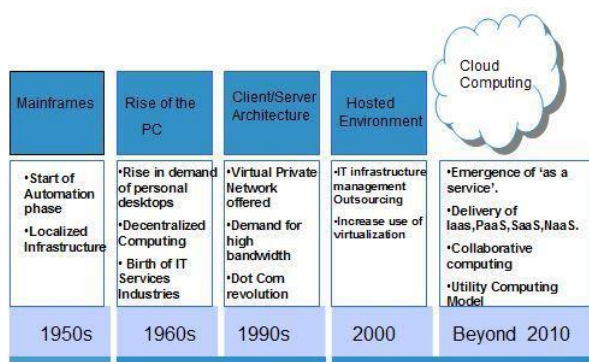


Fig:1 history of cloud computing.

3. Basic concepts

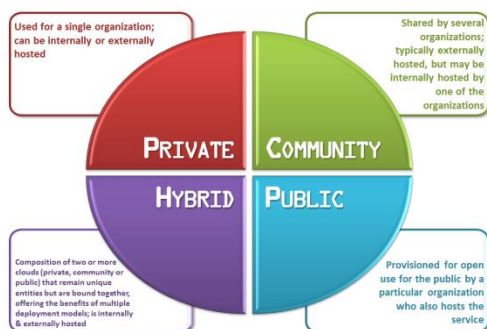
The cloud computing is becoming more accessible and feasible to the clients behind the scene certain models working for providing the services. They are categorised into 2 models:

- 1) Deployment model
- 2) Servicing model

4. Deployment model

On the basis of location of a cloud and its accessibility deployment model is classified as:

- Public cloud
- Private cloud
- Community cloud
- Hybrid cloud



TYPES OF CLOUD COMPUTING

Fig: 2 Types of cloud computing

4.1 Public cloud

An access space which is accessible to everyone is known as public cloud. Public cloud provides various services which are easily accessible to the general public .as this is open to all, the security level is very less.

4.2 Private cloud

An access space which is accessible solely to a single organisation and its customers is known as private cloud. This cloud keeps the information secure and accessible to its customers providing the data security with time to time change of its pin by the user.

4.3 Community cloud

The community needs space in the website that website is only accessible by that community. Such clouds are known as community clouds. The community cloud allows the access to a system and service by a group of organization.

4.4 Hybrid cloud

hybrid cloud is a combination of private and public cloud. The confidential activates are performed using private cloud while the non confidential activities are performed by the public cloud.

5. Servicing model :

Three types of people participate in service mode , it has a pay as you use relation . On the basis of relation of these 3 participant the servicing mode is categorised into 3 different aspect of service:



5.1 SaaS (software as a service) :

software as a service .when a client want to use any software it is not compulsory to buy that software or to have a licence of it. The hosting company provides a complete operating environment to its client, so that the client can easily run the required software by giving the power of virtual computing without actually buying it. Any individual or a programmer can easily download, install and run the application for programming the same website created by the host keeping a storage space for its client and all the all the necessary tool kit needed by the client

making a client server relationship of software platform .

5.2 IaaS (infrastructure as a service):

Infrastructure as a service .this relation is in between Business Company and business company .as a business company needs to maintain a different unit for managing the data of its employees and also have to spend high amount of money for infrastructure and maintain a different unit of managing engineers. So a switch to a infrastructure of managing data lead to less investment in managing unit. Hosting company located as remote location contains its hardware, software, band width, high speed internet, etc. Which is ready to provide a memory space to Business Company to store their data bases and on pay as you use relation?

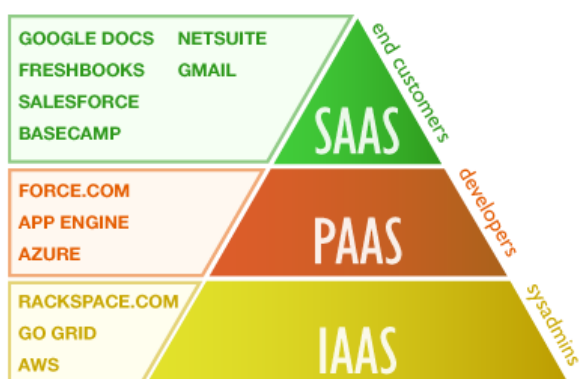


Fig : Types of servicing models.

5.3 PaaS (platform as a service) :

Platform as a service in this a mode host provide a virtual kit operating system for developing framework of website or another programming to its user and provides then all the software ,hardware support needed.

1. Benefits

1. Cloud computing is an information technology (it) paradigm, a model for enabling data access to shared pools of configurable resources.
2. It reduce the efforts or minimize the often over the internet.
3. It helps the user to store and process the data privately or with third party server located at any place and at any time.
4. It makes data accessing mechanism more reliable and efficient.
5. It control and configure the online application

Cloud computing used to access programming applications as public service corporation, over the internet.

6. It designed for a general support of the process of a computer provides utility program to perform the task needed by most users.
7. Cloud computing offers online development and deployment tools, programming runtime environment through platform as a service model it provides online development and deployment tools, programming runtime environment by cloud computing.
8. it provides platform independent access to any type of clients by internet resource.
9. the resources can be used without interaction with cloud service provider it offers on-demand self-service.
10. Cloud computing just requires an internet connection. It is highly cost effective because it operates at higher efficiencies with greater public service corporation.
11. Cloud computing is more efficiencies and reliable.

2. Risks

Despite of growing concern about cloud computing there remains some drawbacks about the model :

1. Data security,
2. Management ,
3. Finance,
4. Lock in,
5. vendors,
6. isolation failure,
7. operational,
8. Technology.



Fig : risks in cloud computing.

3. Applications :

- Communication
- Finance
- Environment friendly
- Software integration

- Cost proficient
- More secure
- More flexible
- Infinite storage
- Rapid development
- Stream line work flow
- Backup and recovery
- Document control

4. Conclusion

In this paper, we described the frame idea of data management on the basis of cloud computing technology. We discussed about the ways by which we can store data and about the security levels which are being provided by the server.

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