

Services in Cloud Environment and Security Issues

Bhanu Priya¹, Sarabjit Kaur², Ravinder Kaur³

¹M.tech Student, Dept. of CSE,CT Institute of Technology & Research, Jalandhar,India

²Assistant Professor, Dept. of CSE,CT Institute of Technology & Research, Jalandhar,India

³M.tech Student, Dept. of CSE,CT Institute of Technology & Research, Jalandhar,India

Abstract - Cloud Computing is now used in every fields. Cloud Computing provide fast access speed of internet. Cloud Computing is mostly uses by the people because it is cheaper and it provide fast services to clients. A large number of services can be provided by cloud computing. The cloud computing is used for storage and data accessing services purpose. A huge amount of files, and other type of data will be stored with the help of cloud computing. There is a large number of cloud service provider which provides cloud services. There are some security related issues in cloud computing. We are discussing some main security issues in cloud computing. In this paper we can discuss about the different concepts which are used in cloud computing.

Keywords: Cloud Computing Services, Drawbacks, Security Issues.

1. INTRODUCTION

Cloud Computing is used for accessing fast internet to perform different functions using internet. It is a network based environment which focuses on splitting computations or resources over the internet. It delivers online data storage to clients. Cloud computer refers to the distribution of resources over the internet. The idea behind the popularity of cloud computing is that it is very cheap. Cloud Computing can be used for different purposes .Cloud Computing can be used in many areas either in industries or others. But now a days, cloud computing can be applicable for IT industry. Different devices can be attached with the Cloud Computing like PC, Mobile Phones, Servers etc. Cloud Computing provides users to access data from remote as well as local locations, here clouds are known as remote locations. Cloud Computing allows us to access data from local computers or through remote Computers. Cloud Computing is also deals with mobile computing. It is also helpful for accessing data through mobiles. The main advantage of using cloud computing is that it will reduce the cost of purchasing expensive memory devices, because

- cloud will be store all the information. Cloud computing also deals with security issues. There are large number of security issues which are arises in cloud computing.

2. CHARACTERSTICS OF CLOUD COMPUTING

There are large number of characters tics of cloud computing re as following:

a. On-Demand Self Service

Cloud computing provide on-demand self service means in this, it will be automatically store data. No need of human interaction for storage purpose.

B. Broad Network Access

Cloud Computing provide different types of devices to access internet. It provides authority to access internet to thin client as well as thick clients.

a. Resource Pooling

The main feature of cloud is that it provides multiple users to access data from different locations. A large number of users can access data through cloud at same time.

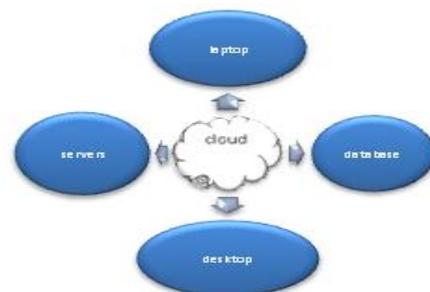
b.

Rapid ElasticityCloud can be used in many organizations. It fulfills the organizations needs. It is scalable as well as it provides flexibility.

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c. Measured Service

Cloud provides transparency. Transparency defines that user should pay only for how much accessing internet through cloud.



3. CLOUD DEPLOYMENT MODELS

Cloud Computing can be defined as different types of cloud models. Basically we can defined that four types of clouds can be used in cloud computing. This different cloud can be performing different functions. Following are the basic types of cloud deployment models:

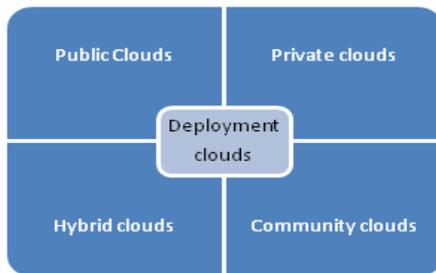


Fig. 2: Cloud deployment models

1. Public Cloud
2. Private Cloud
3. Hybrid Cloud
4. Community cloud

1. Public Cloud

Public clouds are those type of clouds which provide services to the all users. All users can access same type of information with the help of public clouds. The examples of public clouds are Amazon, Google, and email. These services can be provided to the all users. Public Clouds provide on-demand scalability to the users. Public clouds can be operated by the third party. The cost of public clouds is very low. This type of cloud can provide same resource pooling to the different types of users.

2. Private Clouds

Private clouds can be provided services within any particular organizations. Private clouds cannot be provides services to all the users because private clouds work with in organization. The services can be provided by the private clouds are more secure as compare to public clouds, because private clouds can be accessed by the authenticate persons. A limited number of users have rights to access services of private clouds. Private clouds are more suitable within organizations. Now a day's many IT companies can be used private clouds .Private cloud provides fast services as compare to public clouds. Example of private cloud is eBay.

3. Hybrid Clouds

Hybrid cloud is the third type of cloud. Hybrid cloud is the combination of two clouds (public or private). Hybrid clouds provide private services as well as public services to the users. Hybrid clouds are suitable for large companies

because companies can handle large number of clients, so company need public cloud for providing same services to the clients as well as use private clouds for provides security within the organization. Hybrid clouds are very costly as compare to both public and private clouds. A large number of services can be provided by the hybrid clouds. Hybrid clouds are not used as compare to others because it is very costly. So, it is less useful.

4. Community Clouds

Community clouds can be used by group of organizations which can interrelate with each other. Community clouds provide services within group of organizations. Community clouds are not mostly used as compare to others.

4. CLOUD SERVICES MODELS

Cloud provides a large number of services to the customers. So cloud having different types of service models. The main cloud service models which can mostly use are shown as follows:

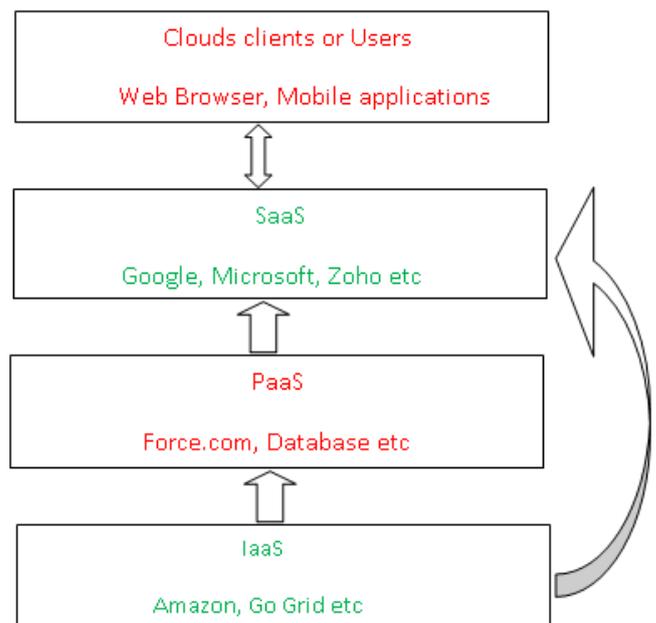


Fig. 3: Cloud computing services

1. SaaS (Software as a service)
2. PaaS (Platform as a service)
3. IaaS (Infrastructure as a service)

1. SaaS (Software as a service)

SaaS is a service model. SaaS service model provide to access messages through the internet .SaaS provide global accessing permissions of the different applications. SaaS can be mostly used. The main purpose of SaaS is that it should provide It support web services. SaaS provide on-demand software to the users. A large number of software's can be used by the customers with the help of SaaS model. SaaS provide different services to the user. The main advantage of accessing SaaS services is that no need of license for *accessing* its applications. If any user access applications of SaaS then user should pay for accessing application but if user want to stop accessing application then no need for paying. Users or clients only pay when they use. Now a day's SaaS is offered by many companies like Google, Zoho, and Microsoft etc.

2. PaaS (Platform as a Service)

PaaS cloud computing can be provided many development services to the users. User can develop many of their own services according to their needs. PaaS provide different types of platforms to the user for creating new applications. Google.com,Force.com ,App Engine are the examples of PaaS.

3. IaaS (Infrastructure as a Service)

IaaS provide the services which define the how data will be stored in clouds. This service reduces the cost of purchasing costly storage devices. This Service model provides virtualization for storage of data. This model describe how the heavy amount of data can be handled by the data centers. It also defines that how the resources can be allocated for accessing or storage purpose to the users. Some main examples of IaaS are Amazon web services, Go Grid etc.

4. ADVANTAGES OF CLOUD COMPUTING

Cloud computing provides a large number of benefits. Its main advantages are as follows:

A. Provide Fast Access Of Services

Cloud computing provides a very fast speed of accessing services.

B. Quick Response

Cloud computing provide quick response to the users. Users do not want to wait for accessing services through cloud because cloud provides quick response to the user.

C. Provide Security

Cloud computing provide high security of data. So it can be more preferable by the organization.

D. Increased Storage

It offers large storage area to the customers for storing data.

E. Low Cost

The services can be provided by the cloud computing is less expensive. Users only pay when access the applications otherwise no need for pay.

F. More Mobility

Customers who are using cloud services can access anywhere; either customer is on local location or remote locations.

G. Highly Automated

Cloud computing provide highly automatic services, it automatically update the software.

II. 6. DRAWBACKS OF CLOUD COMPUTING

A. Less Security

Cloud Computing provide less security .Sometimes, data share through public clouds can access publically by users so it does not provide more security.

B. Less Control

Using cloud computing customer does not have full support on services.

C. Data loss

Data will be more losses using cloud computing. Sometime it will not provide accurate data to the customer.

D. Less Confidentiality

Cloud computing provide less confidentiality of data because many unauthorized user can access the data. So, private or useful information can be lost.

7. CLOUD COMPUTING SERVICE PROVIDER

Cloud Computing services can be provided by service providers. There are different types of service provider which provides cloud computing. Some are described as follows:

1. Goggle
2. Rack Space
3. Microsoft
4. CSC

5. Amazon
6. Blue Lock
7. Sales Force
8. Net suite
9. IBM
10. VMware

III. 8. CLOUD COMPUTING SECURITY ISSUES

Security Issues are the major challenges in cloud computing. Cloud Computing provide large number of services to the user. User can access and store data through cloud computing. But there are some security issues in cloud computing. Some main security issues in cloud computing are discussed as follows:

A. Identification and Authentication

Cloud computing provide services to many users at a time. Sometime many users access the same service at a time. This may cause problem of identification and authentication. It is difficult to check the identification of the users.

B. Access Control

Sometimes confidential data can be accessed by the unauthorized users such that important data can be lost. This is the major security issue in cloud computing.

C. Encryption/Decryption

When user access data through cloud computing or any server, Encryption/Decryption is very useful. But cloud computing provide less encryption/decryption. So, it deals with the less security of data.

D. Policy Integration

Cloud Computing uses a large number of tools for providing security to clients. So policy integration is the major security issues in cloud computing.

E. Availability

Users can access large number of data from cloud. If data will not available in the cloud then it may occur the problems.

A. F. Government Restrictions

User can access data from within country as well as outside the country. But government can apply some

restrictions to access data from outside the country. So it deals with the issue regarding to government restriction.

9. CONCLUSION

In this small survey regarding to cloud computing, we are studied about different aspects related to cloud computing. Cloud computing can be mostly used due to its benefits. It can be applicable on each and every field. Cloud computing is a better technique but it has also some drawbacks. It do not provide full security features to access data. But as time passes it will also provide better security features to users.

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