

A REVIEW ON SECURITY ISSUES IN CLOUD COMPUTING

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Abstract: Now a days the user or the customers can use the software's or the resources according to their requirements and they can get the services over the network .this is cloud computing .and services are given by the third party .This is famous because of its advantages .the main advantages of the cloud computing is it has the ability to handle the increased load. {Add some more advantages}This cloud computing is useful for the growing organizations where the organization need not to invest on the infrastructure rather than cloud cab be handled for this growing organizations. Since there is a heavy use of the cloud by it arise some doubt and the security which is provided by the third party .Since cloud contains the information about the personal and confidential data of an organization or the personal. Hence security data of the user it need to be handled securely. Providing the security to the stored in the cloud should be very necessary .In this paper it contains various security issues in the cloud deployment models.

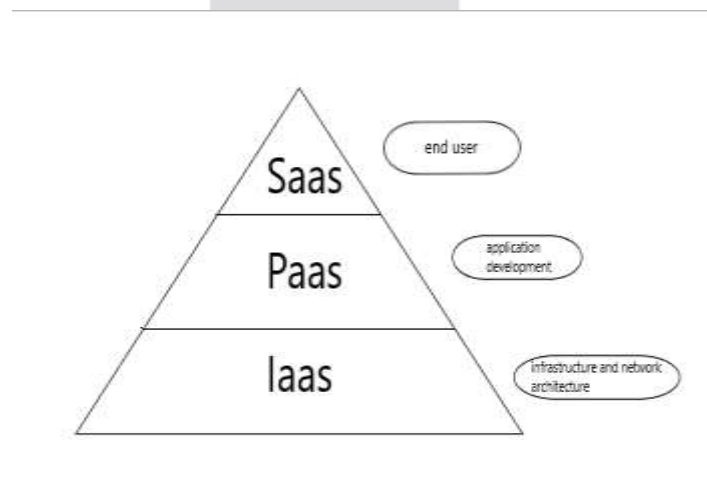
Keywords: Saas, Iaas, Paas, public cloud, private cloud, Hybrid cloud, community cloud.

I. INTRODUCTION

In today's life Internet has become an important part of life. So the need of Internet as well as computing is increasing very rapidly which leads to the increase in cost of hardware , software and power consumption .On the other part Cloud computing has become one of the most popular segment emerging in IT industry .As here are more users storing their data in cloud , security of data is the major concern, this aspect declined the growth of cloud computing. The Cloud computing technique is a beam of hope to solve these problems by cutting down the cost of software and hardware services offered by this technique has the following features like it is highly scalable, reliable, flexible and dynamic property. The advantage of using cloud computing includes-Reduce hardware and maintenance cost, Accessibility around the globe, and Flexible and highly automated processes where the customer need not worry about concerns like software up gradation. Cloud computing is a large scale distributed system . At present it is becoming very popular in educational and business fields because it is offering different types of services Because of the availability of Cloud computing services , large organisations can avoid spending the memory on purchasing of the software and hardware required for a growing organisation .Cloud is the collection of virtual Resources which can be easily accessible and it's resource can be (pay per use concept) we need to pay for what we used . Cloud computing provides the service over the Internet and it provides service like hardware as a service , which provides service using () Data centres is where all the applications which is used by the applicants are collected . Presently , day by day there is growth of cloud computing is increasing popularly because it provides services over the Internet and the day centres that resides anywhere in the world .

As there are some issues that occur in the cloud computing is the security issues. The main issues in cloud is security. The user or organization may use the cloud to store the information which may be confidential. Since the cloud provides services on shared resources, there may chance that third party may can see the information or any unauthorized person can see the data hence providing the security to the data of the user is very important .In this paper we are giving the information about the different security issues in the cloud.

II. DIFFERENT CLOUD COMPUTING MODELS



A. Platform as a service(PAAS)

This service provide the software that are required to develop an application and the tools required for the development on the users system. To develop an application in this service, it is not necessary to have knowledge about internal procedure or any other process that the cloud computing systems provide. The platform as a service provide complete environment for the development of a software from the steps of planning, scheming, trialing and executing on the client side. In this it is required to make the virtual machines secure from any attacks.

B. Infrastructure as a service(IAAS)

It provides an infrastructure for the development of software. In this service only contracted clients will share dedicated resources with pay-per-use. Means the clients can use the services by paying charge according to the use. It will reduce the large amount of beginning cost to setup the cloud which may not offer the installation of separate servers and other devices of networking. While the applications transferring into cloud it is necessary to take prevention about the security.

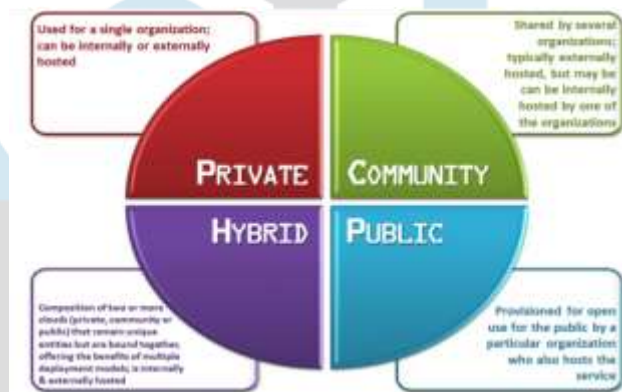
C. Software as a service(SAAS)

In this service all the applications are hosted by a dealer and customer can access those services over a network. Here security plays a very important role because software is accessed using a web browser. Software as a service model is very famous because of its support to web services and service oriented architecture. SaaS allows multitenancy. Some mechanisms that can be applied in order to secure our data are web services security, secure socket layer .examples are Facebook, GoogleApps, Dropbox etc.

III. DIFFERENT DEPLOYMENT MODEL

There are four different deployment model. They are

1. Public cloud deployment model
2. Private cloud deployment model
3. Community cloud deployment model
4. Hybrid cloud deployment model



A. Public Cloud Deployment Model

It is a cloud that is accessed by public. It is less secure compared to other models because the data's are shared in public. Public clouds are flexible. Public cloud services are provided to the users at low cost. Since it is a pay per used model it can match the IT expenditure by decreasing its capital. In public cloud trust and privacy are common issues. Public cloud is used for general purpose, it can be accessed by any user. In public cloud services are provided to the public on rent. . It is based on pay per use model Depending on the services charges are applied.

B. Private cloud deployment model

The private cloud is highly secured and it will be owned by particular organizations. Only the authorized person can access the services that are provided by the cloud. The services and operations will be managed by the private organizations and that organization itself is the one who implement this cloud. Users can share the applications among themselves that are combined together. This cloud is established by any organizations or companies for their own purpose and for their private benefits. This cloud can be managed internally or sometimes by third party servers.

Community cloud deployment model

A community cloud is similar to the public cloud. Here infrastructure are shared among the member of a particular community. It can be managed operated or organized by the particular organizations. The cost are spread over fever user than the public cloud

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C. Hybrid cloud deployment model

It is the combination of the private cloud and the public. In the hybrid cloud the one private cloud is linked with more than one external clouds. This external cloud may be any kind of the cloud. Here more than one cloud are combined to form the hybrid cloud. These clouds can be either public or private. The services provided by the cloud are maintained by the centrally managed by any one cloud.

IV. SECURITY ISSUES IN CLOUD COMPUTING

Cloud computing is becoming very popular in now a days because of the service provided by the cloud computing. The some of the security issues related to the cloud computing is listed below:

A. Reliability

This is the problem which is similar to what we are facing at our resident server. There may server uptimes, downtimes which may occur in the cloud computing. This may be occurred when the user who are depending on the data stored on the cloud, who are accessing the data frequently.

B. Location issues:

The location of the datacenters centers are unknown to the cloud computing the users. Hence the location of the datacenter may be one of the issues since the data of the user may be very confidential that it cannot be crossed across the border.

C. Soft issues:

The sharing and storing the personal data in cloud may have different types of the attacks:

- a) Denial of service
- b) Sniffing
- c) Mediator attack

This are the common attack which may happen in the cloud computing.

D. Data loss in cloud:

This is the one of the problem which arises in the cloud. If research related data or any banking sector data which is lost, that will create the problem to that organization who is using the cloud to store. These are the sensitive and confidential data.

E. Security at the user level:

The user who is using the cloud service which make sure that because its own action, it should not affect the data which is stored in the cloud which belongs to the others.

F. Malicious Insider:

Cloud service provided by the organization will hire some employee to operate, manage the cloud. There may be chance that the employee who working in the cloud service provider's organization will misuse the data of the user stored in the cloud.

G. Issues related to the communication with cloud:

Since the data is stored in different datacenters. Large amount of data transferring and communication with the Cloud. Hence communication between the clouds will be an issues in cloud.

H. Recover of the data:

The server which contains the user data. If the data which is stored in the server is lost in the server then question arises that how to recover the data, what mechanism provided by the cloud. This recovery of the lost data will be an issues in the cloud.

V. CONCLUSION

Adoption of the cloud computing services are now a days are very necessity. In this paper we given a detail about the cloud computing different services, different types of the cloud. The Cloud computing is one of the emerging and evolving technology. But these are system are under the chances of the security related issues. There are under the attacks or any unauthorized person can access the data which is there in the cloud. In this paper we discussed about the various security issues in the cloud computing.

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