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Cloud Computing: A Study on Cloud Computing Services and Deployment Models

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Abstract: ***Cloud computing is one of the emerging and fast growing technology where peoples can use the resources at anytime and from anywhere. It is a pay and use approach. This technology depends fully on internet. Data and resources can be stored in cloud so that anyone can access. In some cases the resources and data should only shared by some organization or by some groups. In that case we use different cloud deployment models. Almost all big and small organizations use any one of the cloud deployment models. This research paper explained about basis of cloud computing, cloud computing service models and cloud computing deployment models.***

Keywords: MS Azure, Cloud computing, Hybrid Computing, Community Computing, IaaS, SaaS, PaaS

I. INTRODUCTION

Cloud computing [1]is one of the fast growing technology. More research is going on in this area. It can be said as a demand delivery of service through internet. The term cloud refers to internet. It can provide services over WAN and LAN. An IT company needs to handle lot of database, servers, hardware, software etc[7]. If the company having lot of branches means it is very difficult to handle the cost. Here comes the word cloud. In cloud we can store and share our resources, database, networks, etc. One important thing is we can only pay for what we used.

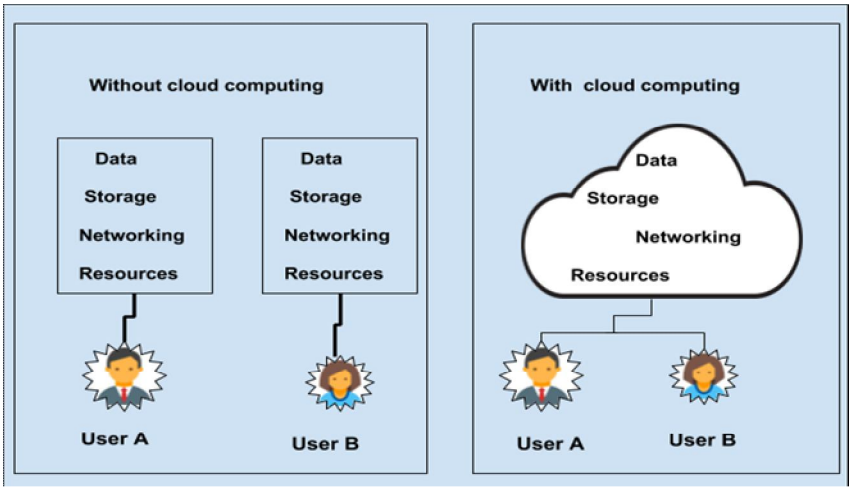

Fig 1 Cloud computing usage

II. CLOUD SERVICE MODELS

Cloud computing service models are mainly three types.

A. IaaS

Infrastructure as a Service is a cloud service model in which resources can be shared for executing some services.ie to make available of resources like hardware, storage, networks etc for the operating systems and applications. Using some API it can easily interact with switch, hub and bridge. IaaS is more flexible and Scalable computing model. If needed we can purchase the hardware. The client will get maximum control over the infrastructure. IaaS is best for starting company where there is less need of spending time for hardware and resources. For large companies IaaS is useful where the company having he full control over the infrastructure, and they have to buy the hardware or resources as they need. Examples for IaaS are AWS, Digital Ocean, and MS Azure etc [8].

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B. PaaS

Platform as a Service is one of the hardest cloud service model. It main idea is to provide some tools and capabilities to develop an application. The developer will get help from PaaS to develop the application easily. The developer will get a framework from PaaS for developing the applications. PaaS will always give a platform for creating software and applications. The application development and deployment is very simple and of less cost. PaaS is more scalable and easily available. It will reduce the coding. Since it developed on virtualization technology, it is easy to change the resources based on business needs. Many users can access the application at same time. PaaS can be used where more than one user uses the same development application. Examples for PaaS are Open shift, Heroku, Windows Azure etc.[2]

C. SaaS

Software as a Service is also called as Cloud application Service. With the help of internet SaaS deliver the applications to the users. Almost all application need not be installed in the client system. It automatically runs on the web browser. SaaS is more useful to employees and companies because they can reduce time and effort for installing the software. SaaS is mainly used in small organization where they need to launch small ecommerce applications. It can be used in application where it need mobile and web. Examples for Saas are GoogleApps, Drop box, Salesforce etc.SaaS provide Service on demand.[5]

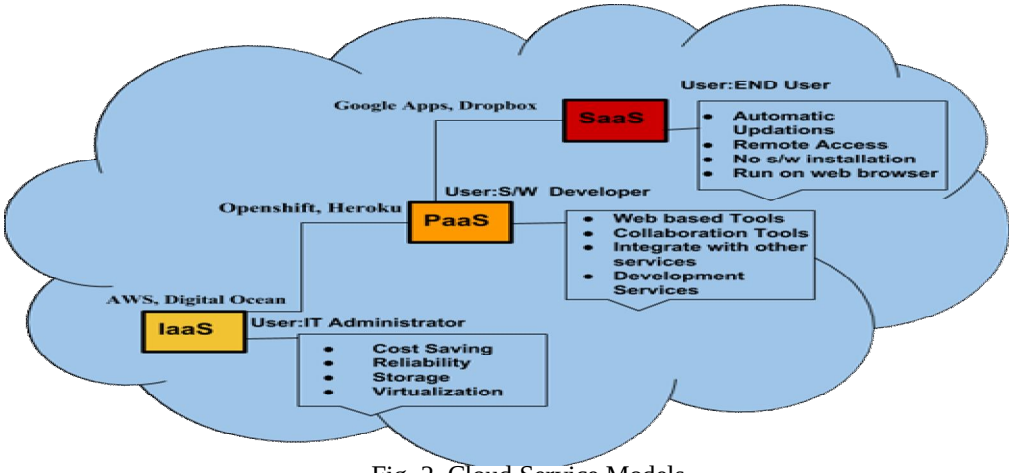


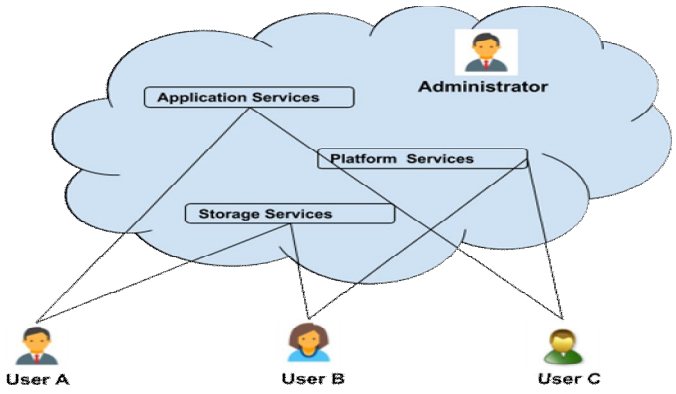
Fig 2 Cloud Service Models

III. CLOUD DEPLOYMENT MODELS

Cloud deployment models are of four types. They are explained below.

A. Public Cloud

Public Cloud model give the opportunity for many customer to access the cloud and is managed by an administrator or third-party. As the name indicates it can be accessed by the public. This type of cloud is managed by cloud service provider. The duties of CSP are installation, updating, maintenance, management etc. The user has to simply pay what they use. Users can get a chance to use other resources if any one of the resource fails to function. The services are fully delivered through internet. It can be easily integrate with other cloud model. Since everyone is accessing the cloud, Security is one of the main drawbacks.[4][3]



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B. Private Cloud

Private cloud is managed and owned by a single organization or an third party. Comparing to public cloud it is more secure and expensive. Here user access is limited. The resources can be controlled easily. Users had more control over the resources. To maintain private cloud the organization should have some skilled employees. To maintain the cloud is a difficult task and cost effective. If any problem in hardware resources then it should be fully replaces. [6][4][5]

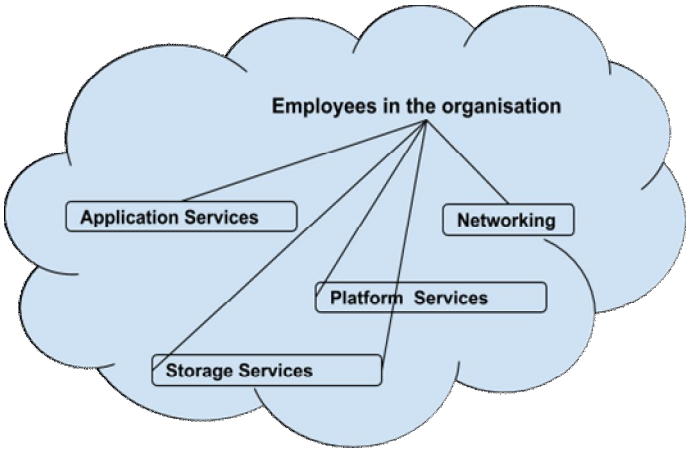

Fig 3 Private Cloud

C. Hybrid Cloud

A cloud model which support combination of one or more different clouds and data can be transfer between them without affecting others. Usually these types of clouds are seen in Banks and organizations having different branches.It provide scalability of both Public and Private Cloud. It is very costly. Lot of networking issues will occur due to private and public clouds.[3][6][5]

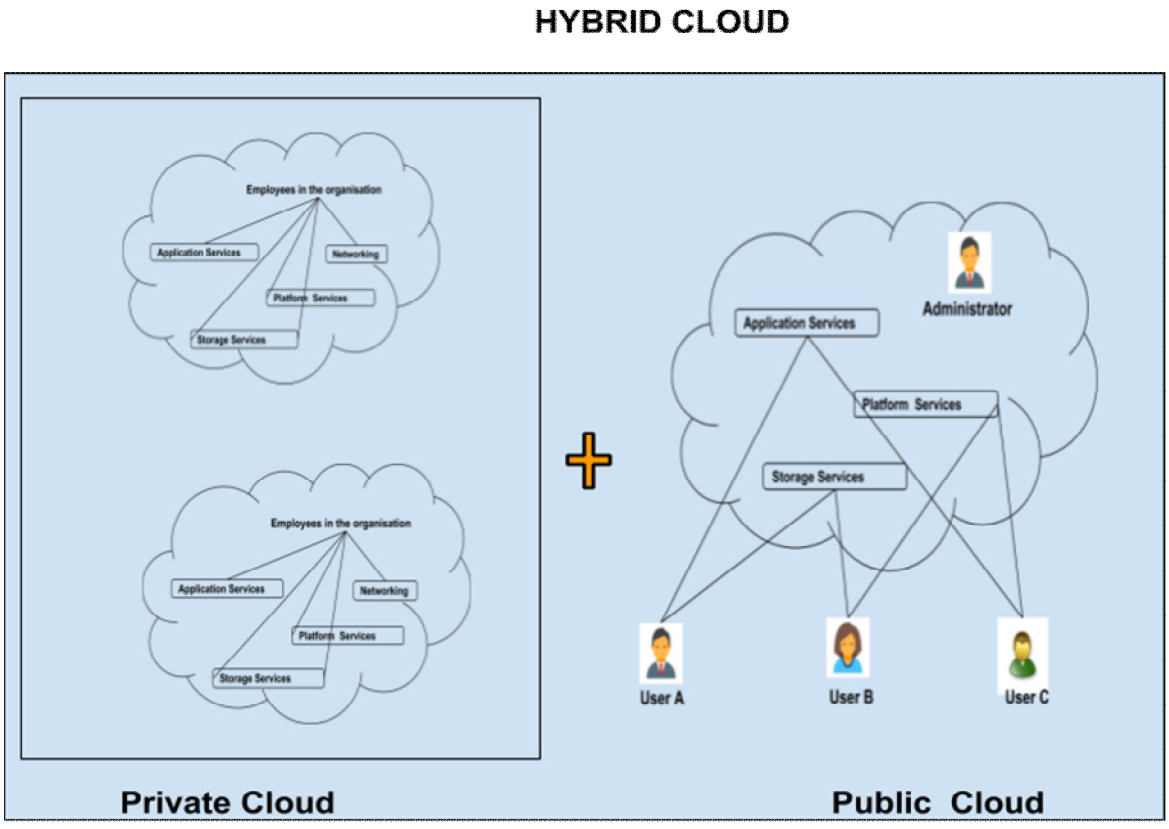

Fig 4 Hybrid Cloud

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D. Community Cloud

In community cloud the services are used by group of organizations. This type of cloud is managed by an organization or a third party. Here the organization can easily share the resources. Comparing to public cloud, the community cloud is more secure.[3][4]

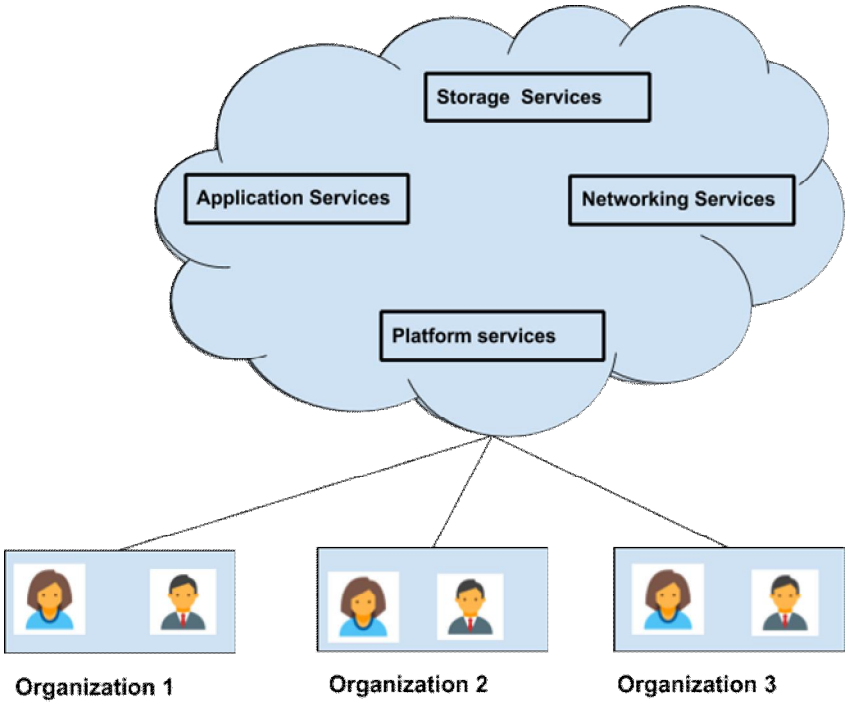

Fig4 Community Computing

REFERENCES

[1] Adnaan Arbaaz Ahmed, Dr.M.I.Thariq Hussan," CLOUD COMPUTING: STUDY OF SECURITY ISSUES AND RESEARCH CHALLENGES", International Journal of Advanced Research in Computer Engineering & Technology (IJARCET) Volume 7, Issue 4,April 2018, ISSN: 2278 – 1323.

[2] Bih-Hwang Lee, Ervin Kusuma Dewi, Muhammad Farid Wajdi , "Data Security in Cloud Computing Using AES Under HEROKU Cloud" , The 27th Wireless and Optical Communications Conference (WOCC2018)

[3] https://www.tutorialspoint.com/cloud_computing/cloud_computing_community_cloud_model.htm

[4] https://dzone.com/articles/cloud-computing-deployment-models

[5] https://www.rishabhsoft.com/blog/basics-of-cloud-computing-deployment-and-service-models

[6] Rabi Prasad Pady, Manas Ranjan Patra, Suresh Chandra Satapathy " Cloud Computing: Security Issues and Research Challenges" , IRACST - International Journal of Computer Science and Information Technology & Security (IJCSITS) Vol. 1, No. 2, December 2011

[7] Sultan Ullah and Zheng Xuefeng," TCLOUD: A Trusted Storage Architecture for Cloud Computing" , International Journal of Advanced Science and Technology Vol.63, (2014), pp.65-72

[8] Suyel Namasudra, Pinki Roy, Balamurugan Balusamy , "Cloud Computing: Fundamentals and Research Issues", 2017 Second International Conference on Recent Trends and Challenges in Computational Models.

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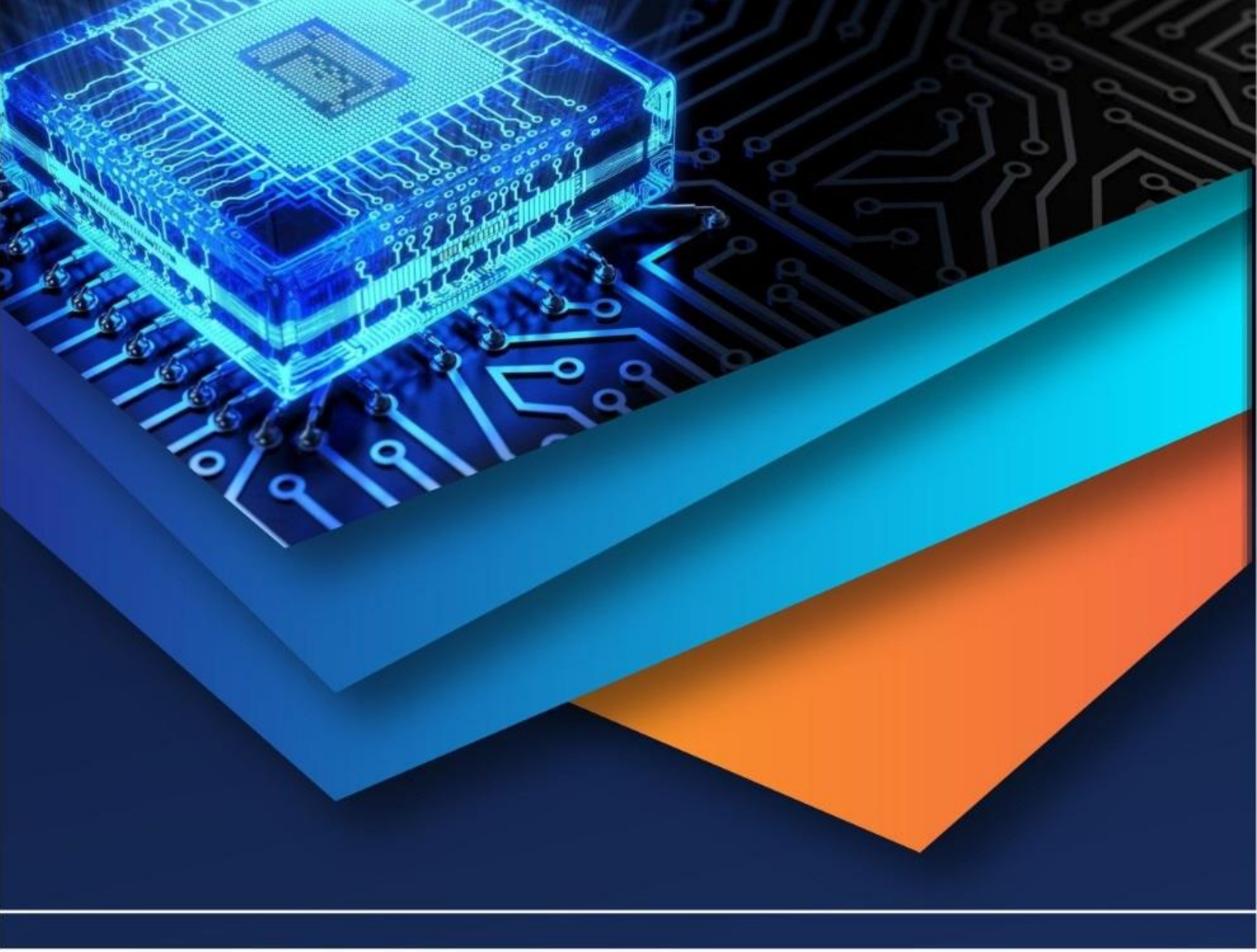

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