PARIPEX - INDIAN JOURNAL OF RESEARCH | Volume - 10 | Issue - 02 | February - 2021 | PRINT ISSN No. 2250 - 1991 | DOI : 10.36106/paripex

	ARIPEX OF	ORIGINAL RESEARCH PAPER		<b>Computer Science</b>
		CLO REA	UD COMPUTING DISTINCTIVENESS IN THE L TIME ENVIRONMENT	KEY WORDS:
	Dr.V. Mathivanan		IBRA College of Technology, OMAN.	

Cloud computing is an Internet based computing where any kind of information can be shared, software and resources can be provided based on customer/ client demand devices such as computers, Tablet, Laptop, Smartphone[1]. The surfacing of cloud has significantly distorted the general insight of infrastructure, software delivery services and development models. This eventually lead to a steep transmission from mainframe computers to client/server deployment models, which in turn deputes cloud computing that encompasses elements from distributed computing, utility computing and autonomic computing, into a pioneering deployment architecture[2]. In this paper the author has analyzed worldwide revenue from Cloud service modes such as Infrastructure as a service (IaaS), Platform as a service (PaaS) and Software as a service (SaaS).

# INTRODUCTION

ABSTRACT

Cloud computing utilizes virtualization techniques for dynamic data centers for support the customer or client on demand service[4]. The infrastructure sources that are available incline up and down dynamically that assist the cloud technology for most effective load balancing architecture. Cloud design has some special features (Figure 1) like minimal downloading time, quick response time and low cost of deployment of physical infrastructure. Unique attraction of Cloud is easy for administration, cost based utilization, flexibility, cost effective and maximizing usage of infrastructure which makes the technology more useful [5].



# Figure 1: Computing Working Model [3]

Cloud Service providers provide their services which are accessible with help of web browser's where by the data and the software are stored in cloud server. It also facilitates the user for utilization of internet to take cloud advantages as well as it eradicates the requirement of possessing own physical infrastructure.

# CLOUD CSERVICE STRUCTURE

- Public / Enterprise Cloud: In Public Cloud, customer has no visibility of cloud infrastructure and vendor possess. Generally numerous vendors contribute common resource to client in cost effective way [6]. Here, user can access the unlimited data with internet through browser which is connected via laptop/smart phone/ computer/other devices with an unlimited storage capacity. For example, Vendors can build up their datacenter with Amazon Storage Service via a secure VPN connect storage and enterprise intranet.
- Private Cloud: Private Cloud which eradicates the issue of behalf data threat. It can be achieved by utilization of infrastructure inside an organization which can be monitored or controlled by same organization or third party. This focuses to increase the level of security

however, it's too is expensive compare to public cloud.

- Virtual Private Cloud: VPN as the name illustrates is a cloud that is offered a service via Virtual Private Network (VPN), where the user have the full access to control and modify the VPN [7]. Example Amazon Web Services (AWS) utilized a first virtual private cloud (VPC) that was available for all users. This system model was developed for a balanced privacy with a combination of private and public clouds advantages. VPN offers full privacy (some limited level) for user data, as well user application with full access and control.
- **Community Cloud:** It's structured a like a company which has similar mission, privacy needs, policy or compliance considerations. It is built-up as a group. This cloud provides paid based resource services for this group. For example, like any governance system, organization can contribute the data with same agency but not suitable for non-government agencies.
- **Hybrid Cloud:** This model is a combination of two or more clouds (public, private or community) with unique entities. This structure enables data and application portability. Here, the clients can place their non-critical data in public cloud, and can also place their critical application in private cloud. It gives the full security to data.

# CLOUD COMPUTING DISTINCTIVENESS IN THE REAL TIME ENVIRONMENT

The term Cloud Computing is analyzed by various research organizations and industries who have defined it in different ways and dimensions. TraianAnderiet.al [4] introduced cloud computing is a group of lowest amount of features which are available in most of the defined list of virtualization, cost-usage service model and reliability. The focus is on virtualization technology which makes it unique since it can operate without depending on any other technology for its existence.

National Institute of Standards and Technology (NIST) from United States of America in its 16th version stated, "Clouds are a large group of straightforwardly serviceable and reachable virtualized properties which contains hardware, software, and infrastructure based features". These sources can be lethargically re-configured to regulate an unpredictable pack (scale), as well as serving as a best option for possibility of resource exploitation. This group of assets is used to characteristically utilize price based model which can be accessed by Infrastructure service provider.

Cloud Research team eventually drives to get clear understanding of the basic components of cloud in the terms of technological point of examination for client or users. For instance, the preliminary description expressed in [6] conceives a cloud methodology. It is mirror bondage between

# PARIPEX - INDIAN JOURNAL OF RESEARCH | Volume - 10 | Issue - 02 | February - 2021 | PRINT ISSN No. 2250 - 1991 | DOI : 10.36106/paripex

the crucial cloud tools such as statistical hubs, hardware tools with respective locations. The NIST [5] is described major role Cloud Computing Community distinctiveness which is listed below:

### Self Services based on Demand:

Cloud computing offers services such as operational timing, value of the services, usability and others without having any kinds of human interactions.

# **Energetic Computing Infrastructure:**

People are looking for a standardized, simple and reliable physical infrastructure services. This is paid based services which are virtualized where subscribers get a chance to use their right choice immediately. Technologies such as VMware, Microsoft (or) Xen who currently offer the service that meets the user's needs by all possible ways.

## IT Services Centric Technique:

Various Cloud users wish to run services for unique work, for short duration, most affordable and reliable services with low cost without any human interactions. The main goal of this service is to utilize pre-defined computing environments that are premeditated exclusively for services.

#### **User Customized Platform Model:**

The requirement of this model is to customize and control their own application according to their needs. This model assists users with best graphical user interfaces that offer easy service delivery lifecycle with less of administrative involvement. Additionally, it saves user's time, money and helps users to gain confidence and focus towards high valued assignments.

#### **Broadband Network Accessibility:**

In order to provide best service in cloud environment, Cloud service providers make sure that services are been offered through Local Area Network (LAN), Wide Area Network (WAN), Internet with best support of several types of platforms and devices such as Smart phones, Desktop Computer Client, PDA and many more.

#### Flexible Resource Pooling:

Cloud services flexibility attract customers / client's to utilize cloud environment. It means totally dependency on operational flexibility, for instance a user can avail and cancel any service from the cloud service provider anytime. This also can be addressed as paid based services meaning, whenever customer wants to withdraw the application then they can do easily without interruption of clients operation. This makes service more robust and flexible in all points of view.

#### Service Utilization Based on Billing:

28

In cloud environment, it is a great service policy because the charges are based on the service utilized. It a great pleasure for customer as the bill is calculated based on the utilization of service and per active session.



Figure 2: Worldwide Revenue Based On Cloud Service Models

# Location Independency [5]:

The provisioning and de-provisioning of cloud services is done rapidly and elastically for every cloud user. These kinds of services do not have any location based service issues during any particular mode of communication.

## RESULT

Cloud service models such as IaaS, PaaS and SaaS has been evaluated in terms of revenue received by the cloud providers and sample data has been analyzed in Figure 2.In 2017, 74.3 % of income from SaaS cloud service model, 15.1% of income from IaaS cloud service model and 10.6% of income from PaaS cloud service model has been received from worldwide. In 2018, 70.5% of income from SaaS cloud service model, 17.4% of income from IaaS cloud service model and 12.1% of income from PaaS cloud service model has been received from worldwide. In 2019, 71.5% of income from SaaS cloud service model, 14.8% of income from IaaS cloud service model and 13.7% of income from PaaS cloud service model has been received from worldwide.

#### CONCLUSION

As per the result shown in figure 2, the cloud providers received most of the income has received from SaaS service model then from IaaS service model and PaaS service model.

## REFERENCES

- Ramakrishnan, R., &Mathivanan, V., "A Criticism of Contemporary Cloud Computing Productions and Encounters", International Journal of Computer Engineering & Technology (IJCET), ISSN NO 09766375 /67 Volume 06, Issue 07, pp. 41-50, 2015(Impactfactor 8.99).
- [2] Ramakrishnan, R., &Mathivanan, V., "Content Based Security Policy in Cloud Environment", International Journal of Applied Engineering Research (IJAER),, ISSN: 0973 4562, Volume 10, No. 14, pp. 34668 – 34663, 2015 (Impact factor 0.130).
- [3] https://en.wikipedia.org/wiki/Cloud\_computing.
- [4] Xinyi Huang, Joseph K. Liu, Shaohua Tang, Yang Xiang, Kaitai Liang, Li Xu, Jianying Zhou," Cost-Effective Authentic and Anonymous Data Sharing with Forward Security" IEEE Transactions on Computers, Vol. 64, Issue 4, Pages 971-983, 2014.
- [5] Larry A. Dunning, and Ray Kresma," Privacy Preserving Data Sharing With Anonymous ID Assignment", IEEE Transactions on Information Forensics and Security, Vol. 8, No. 2, Pages 402 – 413, 2013.
- [6] AyadBarsoum and Anwar Hasan," Enabling Dynamic Data and Indirect Mutual Trust for Cloud Computing Storage Systems", IEEE Transactions on Parallel and Distributed Systems, Vol. 24, Issue 12, Pages 2375 – 2385, 2013.
  [7] Cheng-Kang Chu, Sherman S.M. Chow, Wen-GueyTzeng, Jianying Zhou, and
- [7] Cheng-Kang Chu, Sherman S.M. Chow, Wen-GueyTzeng, Jianying Zhou, and Robert H. Deng, "Key-Aggregate Cryptosystem for Scalable Data Sharing in Cloud Storage" IEEE Transactions on Parallel and Distributed Systems, Vol. 25, No.2, Pages 468 – 477, 2014.