

Cloud Computing & its Importance

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Abstract— The concept of the cloud computing is important and becoming popular day by day due to its characteristics such as low cost storage, access of data at anywhere and at any time and also provide the easy maintenance of data. We can have access of the data from anywhere through the connected device in an easy and efficient manner.

Keywords: Cloud Computing

I. INTRODUCTION

The storage of data is remotely hosted servers is highly convenient. It makes information easily accessible and the sharing of data, services and outsourcing of processes easy .Because of this it is easy to see why cloud computing keeps growing in popularity.

However despite such positive aspects, the cloud poses a number of ethical questions, such as: what is good, or bad, use of the technology and what is the right, or wrong, way of engaging with it?

The users of cloud computing, as well as service providers, need to be aware such of concerns and to address them early. One concern is, who is in control? By putting data or services in the control they might have expected if they had kept them in the own services. While this can be seen as an ethical problem in its own right, it potentially creates others.

II. THE FEATURES OF CLOUD COMPUTING

- 1) Resource pooling and Elasticity
- 2) Self-Services & On Demand services
- 3) Pricing

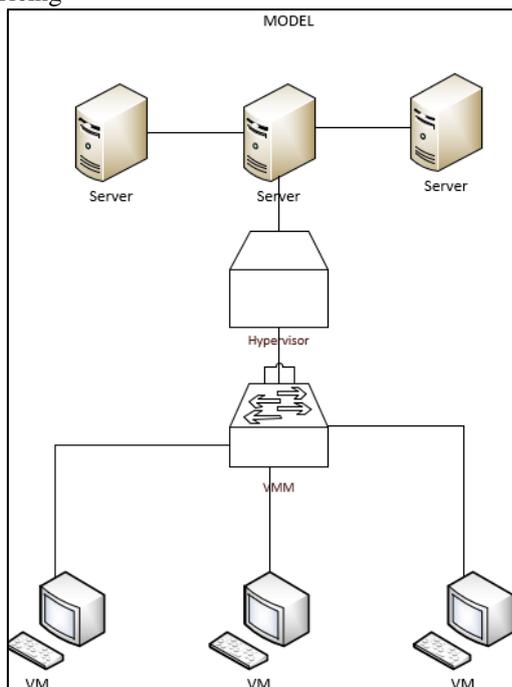


Fig. 1: Graphical View of Cloud Computing

III. EVOLUTION OF COMPUTING

Cloud computing has its roots as far back in 1970s, IBM came out with an operating system (OS) named VM. This allowed for simultaneous operation of more than one OS. This caused the concept of virtualization in computing to gain popularity. The 1990s witnessed telecom operators begin offering virtualized private network connections, whose quality of service was as good as those of point-to-point services at a lesser cost.

From the concept of grid, utility and SAAS the concept of cloud computing evolved. It provides user to have access of their application from anywhere irrespective of the location anytime through their connected device.

IV. COMPONENTS OF CLOUD COMPUTING

Cloud computing architectures refers to the components and sub components required for cloud computing. The components consist of a front end, back end platform and cloud based delivery.

Cloud computing have three basic components

A. Client Computers

In this the user can interact with the cloud using client computers.

B. Distributed Servers

A distributed system is a network of autonomous computers that communicate in each other in order to achieve a goal. The distributed server's different place but they act like they as working with each other.

C. Data Centers

It is the compilation of servers.

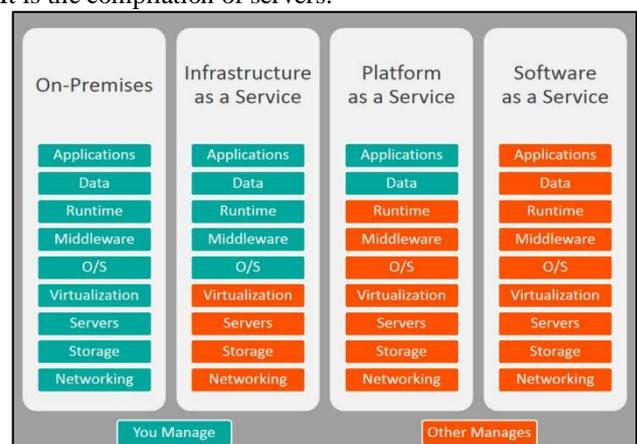


Fig. 2: Components of Cloud Computing

V. SERVICES OF CLOUD COMPUTING

A. Software as a Service (SaaS)

It represents the largest cloud market and are still going quickly. SaaS uses the web to deliver applications that are managed by a third party vendor and whose interface is accessed on the client's side. Most SaaS applications can be run directly from a web browser without any downloads or installations required, although some require plugins.

- Example: Google Apps, Salesforce, etc.

B. Infrastructure as a Service (IaaS)

In this we lease a physical server that is yours to do as we will and, for all practical purpose, is your data center or a part of a data center. We have access to the entire machine and the software on that machine. In short, it is less packaged.

- Example: Amazon, Web series, etc.

C. Platform as a Service (PaaS)

It is the set of tools and services designed to make coding and deploying those applications quickly and efficiently. The operating system and application server to obtain the management capacity of applications.

- Example: Linux, Apache, MySQL, PHP, etc.

VI. TYPES OF CLOUD COMPUTING

A. Public Cloud

A public cloud is one in which the services and infrastructure are provided off-site over the internet. These clouds offer the greatest level of efficiency in shared resources; they also move vulnerable than private clouds.

B. Private Cloud

A private cloud is one in which the services and infrastructure are maintained on a private network. These clouds offer the greatest level of security and control, but they require the company to still purchase and maintain all the software and infrastructure, which reduces the cost savings.

C. Hybrid Cloud

A hybrid cloud includes a variety of public and private options with multiple providers. By spreading things out over a hybrid cloud, you keep each aspect of your business in the most efficient environment possible.

VII. BENEFITS OF CLOUD COMPUTING

A. Cost Saving

The lack of on-premises infrastructure also removes their associated operational costs in the form of power, air conditioning cost. It's a common misconception that only large businesses can afford to use cloud.

B. Flexibility

The second company needs more bandwidth than usual, a cloud-based service can instantly meet the demand because of the vast capacity of the services remote servers.

C. Enhanced Security

It is the secure formation of the cloud computing. The cloud computing provides high security using the data encryption and provides strong access control, key management and security intelligence.

VIII. CONCLUSION

The conclusion of the cloud computing is a new technology which has a great potential impact in today's business world. It has great advantages associated with it which provide to its user and in business. For example, certain benefits such as a user can have access to their data through a connected device at anywhere and at any time. Along with it the major benefit of using cloud computing that it allows user to have access to their data at low cost storage and an easy maintenance of the data. With increase in security technology and data protection cloud computing will revolutionize the future.

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