CLOUD COMPUTING

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Abstract : Cloud computing is the entirety of software as a service (SaaS) and utility computing . Its developing stage an a awfully modern innovation for the enterprises.

This research paper handle the issue for firm in term of cost and security. In this paper i discuss the advantage and defect an firm can have while they accept . cloud computing is better for medium and narrow firm as compared to huge enterprises

Index Terms – Cloud Computing , Types , Advantages

1. INTRODUCTION

- IBM
  Cloud computing, frequently alluded to as basically "the cloud," is the conveyance of on- request computing assets everything from applications to information centers over the web on a pay- for-use basis.

- NIST
  Cloud computing is a model for enabling convenient, on request arrange get to a shared post of configurable computing assets (e.g., networks, servers, storage and services) that can be quickly provisioned and discharged with minimal management effort or service provide interaction.

2. Definiton

In the simplest terms, cloud computing means it provide services to access programs, application, storage, network, servers over the internet through browser or client-side application on your PC or Laptop Mobile, TAB, Smart TV, by end user without installing and maintaining them.
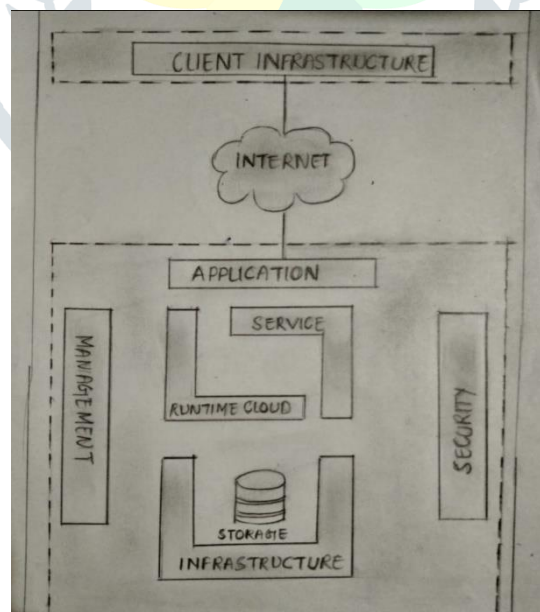

FIG : Graphical View of Cloud Computing Architecture

2.1 How Does Cloud Computing Work?

Cloud computing relies heavily on virtualization technology which can be divided into categories of application and server virtualization.

- Application virtualization allows an application to be hosted for many users on a single machine. Since multiple users access one application the costs are shared and driven lower.

- Serve virtualization allows hardware to host multiple virtual machines on one physical machine and be activated or deactivated instantaneously to accommodate for demand.

3.Types 0f Cloud Computing

- **Software as a service (SaaS)**
  It is a software distribution model in which application are hosted by a vendor over the internet for the end users freeing end users from complex software and hardware management.
  Users can sign up to the service and use the app, normally through a web browser or by installing a client-side app.

  SaaS Providers
  i.   Google- Mail, docs, presentation etc..
  ii. Microsoft- Mail, MSword, paint
  iii. Twitter, Facebook
  iv. Flipkart
  v.   Pixir (image editor)

- **Platform as a service (PaaS)**
  It is a category of cloud computing that provides a platform and environment to allow developers to build application, it frees developers without going into the complexity of building and maintaining the infrastructure.
  With PaaS, developers and organizations can create highly scalable custom apps without having to provision and maintain hardware and operating system resources.

  Paas Providers
  i.   AWS beanstalk
  ii. Google App Engine
  iii. IBM Bluemix
  iv. Window Azure

- **Infrastructure as a service (IaaS)**
  It is a form of cloud computing that provide virtualized computing resources, over the internet. Like CPU, harddisk, memory, firewall etc..

  Iaas Providers
  i.   Amazon AWS
  ii. Window Azure
  iii. Google Compute Engine
  iv. IBM SmartCloud Enterprise.

4.Advantages of Cloud Computing

- Scalability/Elasticity
  Demand on cloud infrastructures

- Cost saving
  Reducing up front IT cost buy server machines, no need for hiring/training manpower .

  Pay as u go, charges are applied hourly , monthly and yearly basis.

- Disaster recovery and Back up
  Cloud services have very high availability of ~99.9999% , by proactively by taking backups, having stand by virtual resources in place and moving failed instances of virtual resources across seamlessly.

4.1 So How Secure Is It?
This development in AWS security has arisen out of concern s voiced by consumers and businesses over the safety of their data and helps to display the power of private enterprises and innovation solving issues in the long-term to make a more efficient service.
Security of personal information is the responsibility of both the user and their cloud service provider , and this security can be ensured by following cautious procedures such as charging passwords and encrypting data.