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# Cloud Computing: Platform and Applications

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***Abstract—****Cloud computing is the practice of using a network of remote servers hosted on the Internet to store, manage, and process data and information rather than a local server or a personal computer. Cloud computing is a better way to run your business. Instead of running your apps yourself, they run on a shared data center. The actual term "cloud" borrows from telephony in that telecommunications companies, who until the 1990s primarily offered dedicated point-to-point data circuits, began offering "VIRTUAL PRIVATE NETWORK (VPN)" services with comparable quality of service but at a much lower cost. The cloud symbol was used to denote the demarcation point between that which was the responsibility of the provider from that of the user. Cloud computing extends this boundary to cover servers as well as the network infrastructure. Cost is claimed to be greatly reduced and capital expenditure is converted to operational expenditure. Device and location independence enable users to access systems using a web browser regardless of their location or what device they are using. It's a new era Technology which is famous in Different areas like Business, Education, medical research etc. In this paper we are introducing some applications of cloud Computing such as email,virtual application access,e-learning,backup of online data,with the areas where we can implement these application., we are also focused on real time appliactios of cloud computing. In this paper we focused on different service models of cloud computing such as SAAS,PAAS,IAAS.In Infrastrure as services we have explained private,public, hybrid,distributed,community cloud.*

***Keywords— Cloud computing, Applications, implementation issues.***

## I. INTRODUCTION

Cloud computing is a completely new technology. The 21st century is said to be the revolutionary era for scientific technology. First computer and then the internet both have played a very elevated role in carrying out this achievement. Since then there have been ameliorations that have emerged and always fetched a recuperated face of technology in front of us, which has been easy to Create and implement. Cloud computing is one of the philanthropy given by technology to us. Cloud computing has been insinuated recently for business purposes but its idea was given years back. Cloud computing technology is a open standard, service based, Internet-centric, safe, convenient data storage and network computing service. It is an internet based model from which we can access shared pool of computing resources.

Cloud computing technologies are distinguished into mainly 3 types viz. Software-as-a-Service(SaaS), Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS). Nowadays different fields like medical research, Education and industry. The special ability of cloud is its capability to provide hardware and software resources over a network.

**Organization.** The rest of the paper is organized as follows: In Section II, we define services models such as Software as a Service (SaaS), Platform as a Service (PaaS), Infrastructure as a Service (IaaS) and Data as a Service (DaaS). In Section III we explain some popular cloud computing platforms in Section IV, we include few applications of cloud computing. We further explained challenges of cloud computing in Section V, and finally we conclude in a section VI.

## II. SERVICE MODELS

Following are the service models in cloud computing are explained in this section

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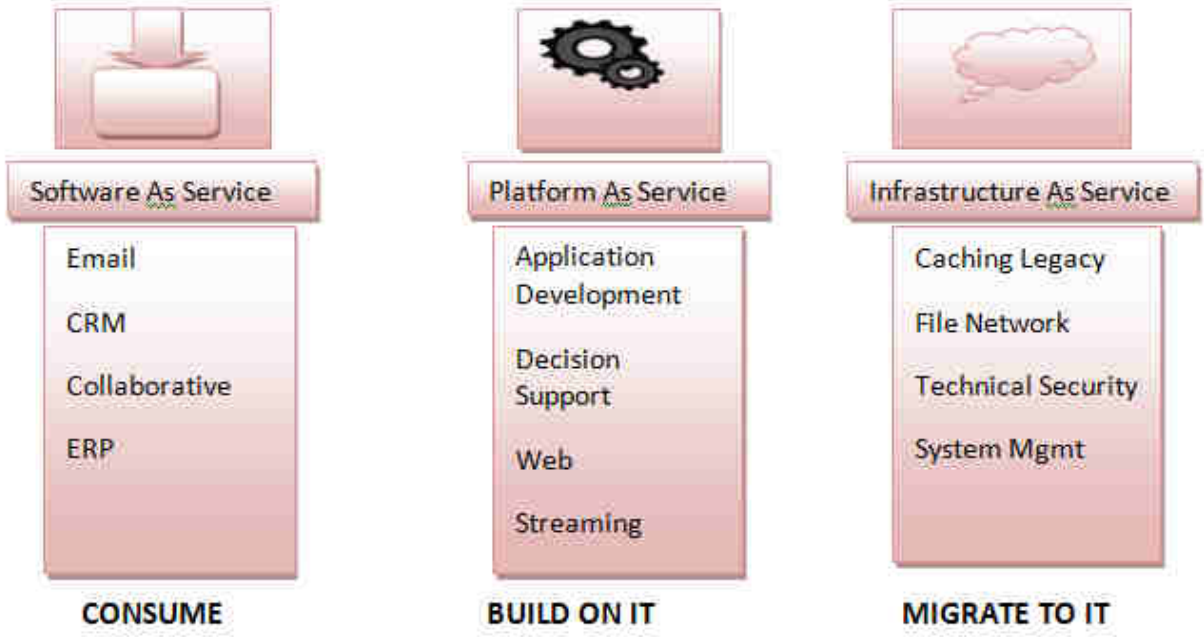


**2.1)Software as a Service (SaaS).** Software as a service (SaaS) is defined as software that is deployed over the Internet. A provider licenses a SaaS application to customers as an on-demand service, through a subscription, through a pay-as-you-go model, or at no charge, when there is opportunity to generate revenue from streams other than the user, such as from advertisement.SaaS has become commonplace within almost every organization, and so it is important that buyers and users of technology understand what SaaS is and where it is suitable.

**2.2) Platform as a Service (PaaS).** Platform as a service (PaaS) brings the benefits that SaaS brought for applications to the software development world. PaaS can be defined as a computing platform that enables the quick and easy creation of web applications without the necessity of buying and maintaining the software and infrastructure underneath it. PaaS is similar to SaaS except that, rather than being software delivered over the web, it is a platform for the creation of software, delivered over the web.

**2.3) Infrastructure as a Service (IaaS).** Infrastructure as a service (IaaS) is a way of delivering cloud computing infrastructure—servers, storage, network, and operating systems—as an on-demand service. Rather than purchasing servers, software, data-center space, or network equipment, clients instead buy those resources as a fully outsourced on-demand service.

Generally, IaaS can be obtained as public or private infrastructure, or a combination of the two.

**2.3.1 Private cloud:** This type of cloud works within a specified network. For example cloud for a specific organization.

**2.3.2 Public cloud:** A cloud is called a "public cloud" when the services are provided over a network that is open for public use. Public cloud services may be free.

**2.3.3 Community cloud:** In a community cloud the services are provided to organizations with similar interests.

**2.3.4 Hybrid cloud:** As the name suggests it comprises of two or more clouds. Though the clouds are combined, still each retains its individual identity thus aiding multiple deployments.

**2.3.5 Distributed cloud:** A cloud computing platform can be assembled from a distributed set of machines in different locations, connected to a single network or hub service. It is possible to distinguish between two types of distributed clouds: public-resource computing and volunteer cloud.

## III. APPLICATIONS OF CLOUD COMPUTING

Cloud computing is one of the easiest ways for business owners to take advantage of some of the latest technologies without spending a fortune on expensive computer parts, software and IT specialists.

To be able to easily understand the true benefits of cloud computing, it's always best to see some examples of it.

**3.1] Email Communication**

The emails are among the most popular ways used by people to communicate today and the service is constantly evolving to become faster and more reliable. Email clients

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are popular way to check your emails, but they often use your physical memory to store communication data.

Cloud computing enables webmail clients to use cloud storage and give you the opportunity to check your emails from any place in the world. All big technology corporations use cloud computing to make their email messaging service more reliable.

**3.2] No Need to Upgrade Local Storage**

Data saved on your home or business computer is accessible only when you use the particular device. With cloud computing users are able to store all the files they need to access later on over the internet.

When reading this you probably ask yourself how safe it is to use online storage services – you will be provided with unique username and password allowing only you to access the files in your online storage space. All cloud storage solutions have several layers of security making it nearly impossible for you to lose any of your data.

With most cloud storage applications you will be able to choose among wide range of free and premium solutions. The most popular among these are the Microsoft SkyDrive and Amazon S3.

**3.3] Collaboration Made Easy**

Sharing documents and other files between your connections used to consume a lot of time and required buying sometimes expensive storage devices. With cloud computing, all this went to the last century – now with applications like Google Wave users can create files and invite others to edit, comment and collaborate with it in real time.

Cloud computing collaboration is similar to instant messaging, but offers users to complete particular work activities that are likely to take few months, in just few hours. Although, the Google Wave is the most popular cloud collaboration solution out there, other great choices are Mikogo and Vyew.

**3.4] The Virtual Office**

Probably the most popular use of the cloud computing is to enable business owners to "rent" software instead of buying it. Google Docs is the most popular suite for running virtual office, but there are lots of other solutions available such as ThinkFree and Microsoft Office Live.

The main benefit of using virtual office applications is that you will not overload your PC with tons of heavy programs, but instead transfer most of the work online. Other benefits that come with using virtual office suites include improved accessibility, options for collaboration and secure cloud storage space.

**3.5] Extra Processing Power at Lower Cost**

Cloud solutions also allow you to hire extra processing power in the cloud for just a fraction of what you will have to pay for having all this infrastructure running in your company.

With most infrastructure as a service cloud providers, you will be able to completely customize it to suit your exact business needs. Using the cloud to harness extra processing power can save you thousands of dollars required as an up-front investment without making any sacrifices when it comes to service quality.

## IV. CONCLUSION

At the end of this paper we conclude with, Cloud Computing is the ultimate technology which will become more and more famous and will help you to access your personal information that we have saved on cloud all over the globe,without spending money on configuring system.We need to start up this technology in our daily lives by creating many applications of cloud.

At low cost.It will also help you

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