Survey on Cloud Computing Technique

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ABSTRACT

Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. Cloud computing is a technology, which provides low cost, scalable computation capacity and services to enterprises on demand for expansion. Although, cloud computing is facilitating the Information technology industry, the research and development in this arena is yet to be satisfactory. In the current cloud market the benefits of leveraging the infrastructure of a large cloud provider can be beneficial in many ways. The cost structure works like a utility which provides for an operating expense model with no upfront infrastructure costs.

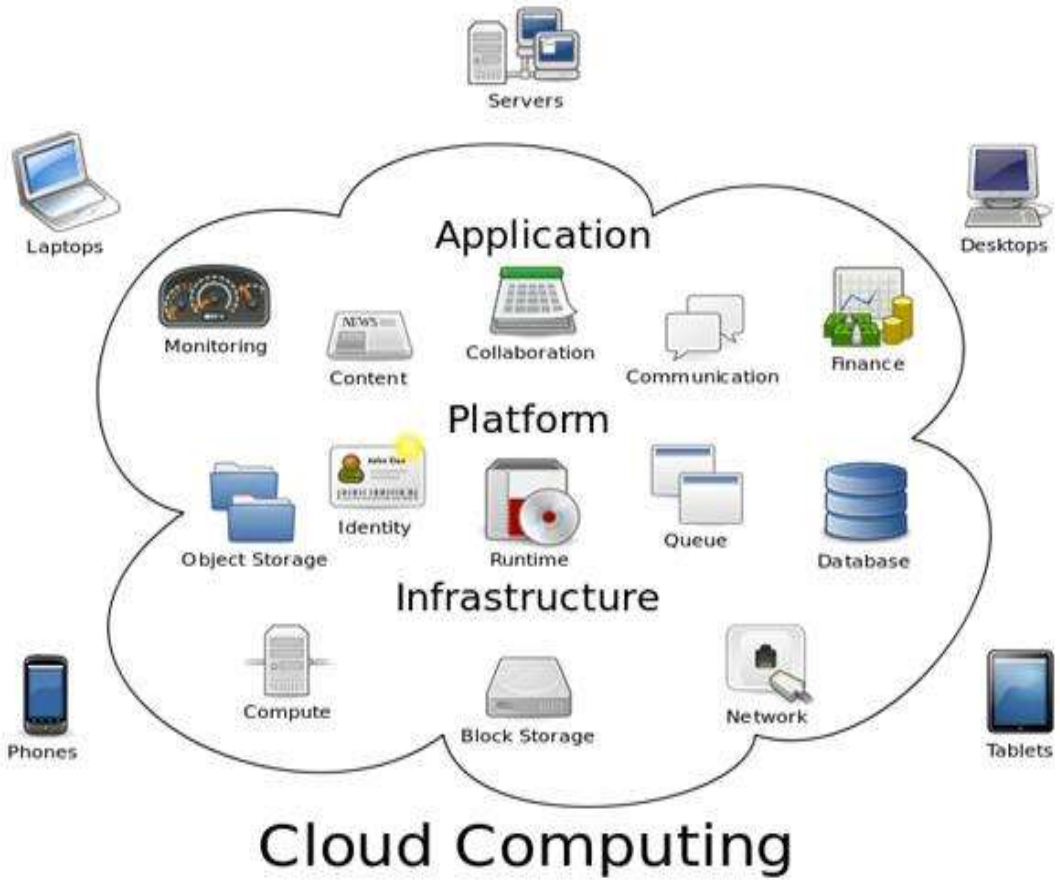
Introduction

Cloud computing allows you to access your data and programs outside of your own computing environment. Rather than storing your data and software on your personal computer or server, it is stored in 'the cloud'. This could include applications, databases, email and file services.

A common analogy to describe cloud computing is renting versus buying. Essentially, you rent capacity (server space or access to software) from a cloud service provider, and connect over the internet. Instead of buying your own IT requirements, you are renting from a service provider, paying for only the resources you use.

An **example** of a **Cloud Computing :-**

Cloud Computing is the use of hardware and software to deliver a service over a network (typically the Internet). With **cloud computing**, users can access files and use applications from any device that can access the Internet. An **example** of a**Cloud Computing** provider is Google's Gmail.



Benefits of cloud computing:-

Cloud computing offers your business many benefits. It allows you to set up what is essentially a virtual office to give you the flexibility of connecting to your business anywhere, any time. With the growing number of web-enabled devices used in today's business environment (e.g. smartphones, tablets), access to your data is even easier. There are many benefits to moving your business to the cloud:

Reduced IT costs

Moving to cloud computing may reduce the cost of managing and maintaining your IT systems. Rather than purchasing expensive systems and equipment for your business, you can reduce your costs by using the resources of your cloud computing service provider. You may be able to reduce your operating costs because:

- the cost of system upgrades, new hardware and software may be included in your contract
- you no longer need to pay wages for expert staff
- your energy consumption costs may be reduced
- there are fewer time delays.

Scalability

Your business can scale up or scale down your operation and storage needs quickly to suit your situation, allowing flexibility as your needs change. Rather than purchasing and installing expensive upgrades yourself, your cloud computer service provider can handle this for you. Using the cloud frees up your time so you can get on with running your business.

Business continuity

Protecting your data and systems is an important part of business continuity planning. Whether you experience a natural disaster, power failure or other crisis, having your data stored in the cloud ensures it is backed up and protected in a secure and safe location. Being able to access your data again quickly allows you to conduct business as usual, minimizing any downtime and loss of productivity.

Collaboration efficiency

Collaboration in a cloud environment gives your business the ability to communicate and share more easily outside of the traditional methods. If you are working on a project across different locations, you could use cloud computing to give employees, contractors and third parties access to the same files. You could also choose a cloud computing model that makes it easy for you to share your records with your advisers (e.g. a quick and secure way to share accounting records with your accountant or financial adviser).

Flexibility of work practices

Cloud computing allows employees to be more flexible in their work practices. For example, you have the ability to access data from home, on holiday, or via the commute to and from work (providing you have an internet connection). If you need access to your data while you are off-site, you can connect to your virtual office, quickly and easily.

Access to automatic updates

Access to automatic updates for your IT requirements may be included in your service fee. Depending on your cloud computing service provider, your system will regularly be updated with the latest technology. This could include up-to-date versions of software, as well as upgrades to servers and computer processing power.

Cloud Computing Service Models:-

There are 3 main types of cloud computing service models available, commonly known as:

- Software as a Service (SaaS)

- Infrastructure as a Service (IaaS)
- Platform as a Service (PaaS).

Depending on your needs, your business could use one of these service models, or a mixture of the 3.

Software as a Service (SaaS)

It is the top layer provider in which customer with ready to use applications running on the infrastructure provider. SaaS can be explained as a process by which Application Service Provider (ASP) provide different software application over the internet. SaaS applications are pattern for end users, deliver over the internet. SaaS is the most common form of cloud computing for small businesses. You can access internet-hosted software applications using a browser, rather than traditional applications stored on your own PC or server. The software application host is responsible for controlling and maintaining the application, including software updates and settings. You, as a user, have limited control over the application and configuration settings.

A typical example of a SaaS is a web-based mail service or customer relationship management system.

Infrastructure as a Service (IaaS)

IaaS typically means buying or renting your computer power and disk space from an external service provider. This option allows you access through a private network or over the internet. The service provider maintains the physical computer hardware including CPU processing, memory, data storage and network connectivity.

Examples of an IaaS include Amazon EC2, Rackspace and Windows Azure.

Platform as a Service (PaaS)

PaaS can be described as a crossover of both SaaS and IaaS. Essentially you rent the hardware, operating systems, storage and network capacity that IaaS provides, as well as the software servers and application environments. PaaS offers you more control over the technical aspects of your computing setup and the ability to customize to suit your needs.

Future of Cloud Computing:-

The future of cloud computing will most likely represent a combination of cloud based software products and on premises compute to create a hybrid IT solution that balances

the scalability and flexibility associated with cloud and the security and control of a private data center.

In the current cloud market the benefits of leveraging the infrastructure of a large cloud provider can be beneficial in many ways. The cost structure works like a utility which provides for an operating expense model with no upfront infrastructure costs. You could also choose a cloud computing model that makes it easy for you to share your records with your advisers

Conclusion:-

This Paper is outlined a survey in Cloud computing services, concentrating on the SaaS, PaaS and IaaS service models, also articulate areas where these models might be best suited. Cloud services are available to achieve security with the varying techniques and methods. To address the challenge of selecting one of the cloud service based on the user requirements of security, an assessor tool is proposed. Trust based evaluation is proposed in the form of trust model. It covers various aspects of security that are necessary to be checked at the time of cloud service selection. Trust value is the output of the trust model that measures the security strength. Strength in terms of various parameters is proposed for cloud services. Static and dynamic parameters are proposed and can be collectively used to evaluate security of the cloud services.

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