CLOUD COMPUTING

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1. Introduction

2008-2009, a different aspect of economic globalization has been realized – "The great depression" 2010 - Economy is moving to a new era, people starts thinking to adopt different business model where IT services will be adopted with reduced cost IT resources will be utilized in an effective way

Cloud Computing, though thinking has been stated before the economic down turn but all the global companies as well as SMEs(Small and Medium Enterprises) are seriously considering it now

2. What is Cloud computing?

In order for organizations to stay ahead of the strong market competition they need to and constantly innovate and improve while keeping the operation cost as low as possible

Cloud is an alternate delivery and acquisition model for IT services which allow organizations to optimize there IT cost Cloud provides an infrastructure and service engine which enables organizations to become more agile in service delivery to their customers, business partners and employees

Let it be elaborative

Cloud computing allows consumers to use a subset of resources from a massive pool of hardware, networking and software infrastructure managed by global vendors The computation capability is available on a pay by use basis either as infrastucture, platform or service and is used to deliver scalable business services

2.1 A practical example

Suppose there is online library management system is running in KGEC

If IT services to the institute is being considered, obviously it has cost for functioning. What are these?

1) A powerful server is required where the application is being deployed.
2) A data backup archival process is required.
3) An application maintenance team is to be formed for smooth functioning of the system
4) Significant energy is being consumed by the hardware components
5) Hardware component need to be updated year on year or as on when required.
6) Software components need to be as well.
7) Viability about security threats is to be considered

So, a serious thinking tells one that these become a huge cost to an organization. Now, imagine similar applications are running in hundreds of institution in our country If all has been considered the total cost is practically a significant amount.

Now, consider there is one company which has a huge infrastructure for providing library management system. What participating institute has to do? They have to register themselves with the company and use the library management services as usage basis.

Institute will have their own provision to customize the application as their requirement

This is cloud all about What institutes have to do? They have to share their library book master data with the Cloud provider

If one thinks twice it's a win-win situation for both the parties Institute has no headache to maintain its own servers and application. Cloud provider is serving hundreds of institutes with their common and shared infrastructure, so they are able provide quality services at reduced cost.

2.2 Security Issue

As participating organizations have to share their private data with a third party vendor so there is data security issue That's why cloud is categorized as public cloud and private cloud

Public Cloud Where anyone who has registered for that cloud facility has able to access

Private Cloud : Where access is restricted to privileged members only

Though professional are working globally to overcome this issue but planned and dedicated investments are require to achieve an accepted solution

2.3 Cloud – an outcome of technology revolution

Here is a flow how our application development strategy is being changing in time

1995-2000 Era of Desktop application

2000-2005 World Wide Web boom and web applications ruled the world

2005-2010 Web Services and Service oriented Architecture, Web 2 0 has been implemented

2010 Global players think about Cloud computing

3. What are the services Cloud can provide

1. **IaaS : Infrastructures as a Service :**
    Provides servers, storage infrastructure on pay by use model

2. **PaaS : Platform as a Service :**
    Runtime to deploy application leveraging platform services, computation power and storage

3. **Saas : Software as Service:**
    Multitenant finished applications configurable readily available for use

4. **Daas : Development as a Service :**
    Provides development environment for application developers for pay per use

Business where cloud can be used :
Even though the concern of privacy and data security exist with cloud computing adoption in the enterprises, the optimizing cost structures is driving the adoption day by day

This is the list of business scenario where cloud computing is applicable and seen to be adopted in enterprise level

1. **Cross enterprise Integration :**
    Extend line of business applications capability to the cloud such that partners can directly interface with the business process and redundant operations can also be eliminated

2. **Server and Desktop virtualization :**
    Move application to be hosted from on premises to Cloud

3. **Web 2.0 and social strategy :**
    Build social applications which can be powered from the infrastructure running on the cloud

4. **Data analytics and computation :**
    Use elastic computation and storage to perform analytics on large set of data

5. **CRM application :**
    SaaS based offering

6. **Development and Test bed Lab :**
    Ready provision and infrastructure and environment for development and testing

7. **Backup and Archival :**
    Cloud based durable storage for backup and archival functions for cloud based applications

Who are the present Market Players?
Amazon, Fujitsu, Dell, Hewlett Packard, IBM, VMware, NetApp and Microsoft
Indian IT giant like TCS, Infosys, Wipro also have their cloud initiatives

4. The last word

This is a general conception of Cloud computing What will be reaction on this technology

strategy change? It is no doubt cloud is great concept; it will be definitely adopted in the coming day. As a reader one question will definitely come to one's mind.

If the cloud provider will able to penetrate out IT services application market share, then what IT services company especially small companies which develop millions of IT applications across the globe will do?

May be the global IT delivery model will change.

References

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"He used to love running on the beach, chasing squirrels, catching a ball. That was before I got a computer."