Technological Race Dependency on Cloud Computing

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Abstract- *We are living in the era in which all the technologies that interact with human somehow connect to the cloud, consider the smart phones in the peoples' hands from which they are always communicating for any kind of retrieval or submission of information are directly and indirectly communicating to the cloud. As being accounted cloud has somehow become the brain on which technologies are being relayedto. But for how much longer? This is the question that has arisen.*

As in the metaphorical term "As the cloud gets heavier and heavier there will be the time it will burst" means to say that this whole sum amount of data in the cloud can for how much long be managed so it can meet to its task as a storage provider.

Keywords- Cloud Computing, SaaS (Software as a service), PaaS (Platform as a Service), IaaS (Infrastructure as a service)

I. INTRODUCTION

As the network connectivity is in the reach of every other person walking beside you to connect to the internet as an information/data wizard of every existing object now a days. People are more and more indulging themselves in for communicating and getting any kind of information through internet.

As the internet act as the hub for the enormous amount of information there comes the question that "From where this data is being coming or where it is stored?" That enlightens us to an emerging new technology known Cloud computing.

And hence we ask for ourselves that what actually the cloud is and its computation, how does it work and is it good to be trusted or not?

Cloud is an enormous storage, which works on network based architecture from where the data can be stored and processed. The process of building applications has been a journey and it varies depending on one's application requirements and purpose [1]. There are so many reasons that organizations are turning to cloud services these days- first it is a cost effective method in which you can eliminate capital expenses of buying hardware and software, data centers set-up and run [2].

The Working Aspect

Cloud is an enormous storage, which works on network based architecture from where the data can be stored and processed.

Cloud computing has become a popular model for reducing cost of business, improvise quality of services, and provide good & secure computing [3].

Cloud computing is simply changing the ongoing used model of having application software that is installed on hardware systems from desktop or laptop or any hand held device such as mobile to a sever hub containing a large amount of servers that depends on the size required by an organization.

By the implementation/use of cloud computing organization access different application of any communication system using network or internet.

Cloud computing architecture.

Cloud computing architecture is made up of two parts back-end and the front-end technology that is connected by the internet. Front-end is the technology that deals or interact with end users like us to access the cloud computing simply and efficiently through the internet and makes us able to use it. Backend consist of the database that stores all your files and information, communication network and servers that response to the client request made at the frontend.

There are also centralized server that allows networked computer to communicate each other.

The shared infrastructure means it works like a utility you only pay for what your needs are.

Scaling up or down is easy i.e. The data is not actually going to the cloud, but goes to an integrated system of servers.

Cloud computing working is based on a model known as cloud computing service model (IaaS, PaaS, SaaS)

Cloud Computing Service Model

In cloud computing there are three different service models that are as follows:

1. **SaaS** (Software as a service)
2. **PaaS** (Platform as a Service)
3. **IaaS** (Infrastructure as a service)

To understand these service model we have to understand the different areas of responsibilities that are being in concern with the consumer or in concern with the service provider.

Infrastructure as a service

For providing the service there should be a physical location, such as the organizational building that holds all of the technological tools required to provide the service such as the servers, the storage, and the network.

In Iaas the provider is going to be delivering everything from servers to network and also managing them as well as the data center. It also takes care of day to day feeding and handling of these physical machines.

Now the customer in Iaas is responsible for virtual machine that they work on the top of the infrastructure provided by the provider. Iaas offers the maximum amount of control for the customer as he/she can directly administer these physical entities.

Platform as a Service

In Platform as a service model the provider delivers the runtime and virtual environment and also the infrastructure that the customer uses.

In PaaS the customer has no longer responsibilities such as operating system and runtime, and just have all the focus on software they want to run in the environment and managing the data that is being processed or has processed or ready for processing by using that software.

Software as a Service

In software as a service model the provider of the service delivers everything all the way up to the software that also include all the virtual environment, operating system, runtime in the infrastructure.

In Saas the customer only focuses on the data being processed and the software being used for that processing that is provided by the provider.

Here maximum responsibilities are on the service provider rather than the customer and the customer has loosen any control over the specifics of administration.

Some Real World Example *of these service models are as follows:*

1. ***For SaaS***
   - *Web mail*
   - *Mobile Application*

2. **For PaaS**
   - Programming In JAVA, PYTHON As A Platform.
   - YOUTUBE

3. **For IaaS**
   - Working with Virtual machines
   - Google Compute Engine

Dependency On Cloud Computing.

It is believed that in not so long time in the future people will be making the use of cloud computing, how they use the cloud will vary according to their need, but everyone will be using the cloud. It is expected that cloud computing will follow a similar path as the internet into the personal as well as the corporate environment. And that also comes with some of the mentioned dilemma:

- There will always be the anxiety with the data security.
- There will be the possibility of being dependent on the services that are controlled by the third parties.
- Many organizations will be challenged by existing corporate functionalities.
- There is a chance that some organizations will be leader while others will be totally dependent on these organizations for their existence.

II. CONCLUSION

As the cloud computing is gaining popularity day by day and being accepted everywhere, there are many different

thinking that whether cloud computing is rebranding or a new service, and it is also appeared to be gaining acceptance in the economic field as organizations are focusing on getting acknowledgement of financial challenges.

Cloud computing is much more than just making use of servers according to their need As cloud computing eliminates many kinds of problems as hardware and software are not being managed by a normal end user that is the responsibility of the experienced personalities.

So it should be in contrast that these emerging new technologies must be developed and handled in such a way that it does not affect the race in the negative aspect. It can monitor wireless access points, the private, public as well as the hybrid clouds environment, and can identify the occurrence of the problems [4].

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