Cloud Computing for Business: Advantages, Challenges and Solutions

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Abstract- **Cloud computing is one of the most popular technological services that has grabbed everyone's attention. The organizations all over the world have been looking forward in making this technology as a prime reach. However, with the enhancement of cloud in the businesses and industries it is important to learn their advantages. Understand the risks and challenges. Look out for solutions. In this paper we will be talking about the real practical usages of cloud, hence it is designed not only to the business organization but also to the research groups.**
Keywords- **Cloud Computing, Advantages of cloud for business, Risks, Solutions to using cloud effectively.**

I. INTRODUCTION:

Cloud Computing are the IT Services that are being provided by suppliers. These are hosted to the organization via Internet. These services are mainly on demand and priced only for the service usage.
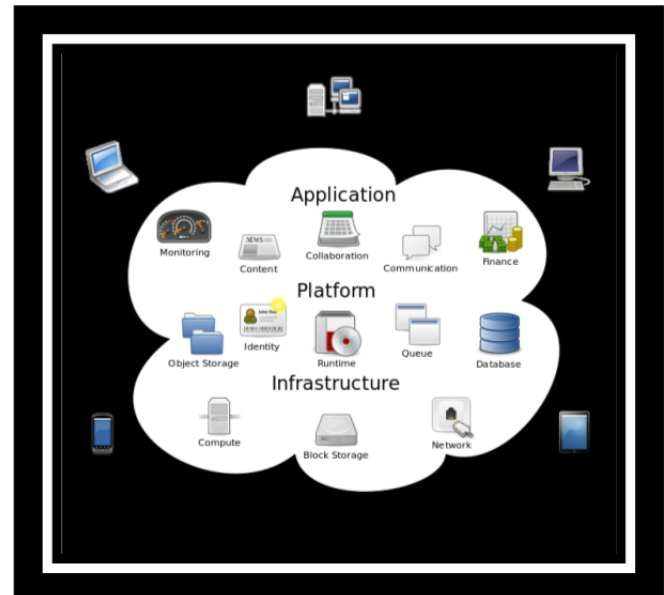
Business units from across the world have drastically moved on to using the cloud services as they focused on cost optimization. Large scale business units have been practicing the usages of cloud. However, the small-scale industries are still skeptical on using cloud services. Also, having to learn a new technology would prove to be going back to school. In this paper, we discuss the basic purposes of cloud computing and how it is useful. Having stated that we will also consider possible risks that surface during the reads. Also, we will understand the possible solutions to make an easy transition. As mentioned earlier in the abstract, the research depends on real time practical usages and the solutions to the real time practical problems are eradicated on research and development.

II. CLOUD FOR BUSINESS PURPOSES:

There is huge risk associated with storing data that aren't manageable. Traditional storage environments are overly-dependent on conventional methods and technologies. Also, this hampers the security as well as increases the cost. Deteriorates the quality of information sharing so on and so forth.
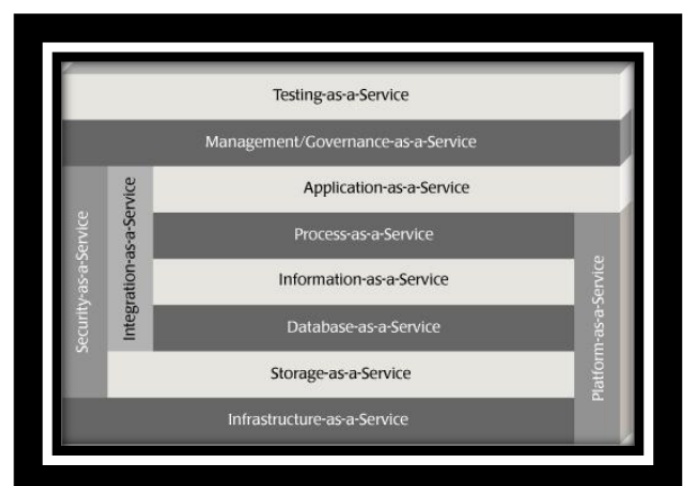
These are some of the many reasons why cloud computing is now a prime attraction for business all around the globe.

As we know that Cloud Computing is a set of IT services that are being provided to the customers on leased basis over a network. Cloud Computing comes with the ability to scale up or down the requirements per the customers' requests.

Cloud has proven over the years that it is most cost efficient, reliable Scalable and easy solution. Cloud computing can be easily made available to any business size. Cloud transforms the business into much more flexible and adaptive environment

In the above image, helps us to understand that the cloud connects all the infrastructure to one place.

Public Cloud Computing have many levels or as they say types. Which includes: Infrastructure as a service(IAAS); Platform as a Service(PAAS); Software as a Service (SAAS); Data as a Service (DAAS) etc. These types/levels work in correlation with each other.Here is a practical overview of all the levels:

(SAAS) Software as a Service is the most commonly accepted level in most of the business units. However, for larger groups (PAAS) Platform as a Service and (IAAS) Infrastructure as a Service are vital and prove very useful.

Based on the usage of the types and their contribution to the organisation's cloud has slowly but surely made a wave in the Organisations all over the world.

III. UNDERSTANDING CLOUD: ADVANTAGES AND REALISTIC OF USING CLOUD

Cloud concept in business has greater advantages. Some of the advantages are listed below:

a. Cost Optimisation:

Cloud Computing is a key player when it comes to cost optimisation. Many organisations have branched out throughout the world which makes the networking to complex. If any business adopts to the functionalities of cloud the efficiency is increased. This also helps the pockets of the small-scale business. They do not have to invest heavily on software, data management, security of the data. It's all centralised. The governance is also easy. Which brings us to the next advantage.

b. Lower Risk of Sharing Data:

When the data is centralised, the management does not have to worry about the update of the data or even loss of any data. They can easily manage the entire system with a simple process.

c. Accessibility:

When we talk of cloud we talk of accessibility with ease. Cloud is a perfect computing of easily obtaining data from anywhere in the world with secure network channels.

The other features of cloud include integrity of data, multi-threading and multi-processing, hardware level virtualization, and complete resource utilization.

In terms of realistic figures, it is estimated that within the next 3 years' cloud computing business will rise to about 240-billion-dollar industry [1].

Keeping this in mind we can only contemplate the business utilization of Cloud computing in our day to day activities.

IV. RISKS INVOLVED IN CLOUD AS A SERVICE:

It is thought that the newer the technology the greater are the risks. Some of the most commonly thought of risks in utilizing cloud in the business units are as follows:

a. Different party involvement:

The risk of having a third party involved to is a table turner itself. Since the services are being provide by a different party there is never full control on the services provided.

In an article published by the Bloomberg Businessweek: "A recent study by the International Working Group on Cloud Computing Resiliency, made up of academic and technology industry representatives, tried to quantify the cost of outages. It estimated the combined downtime at 13 major cloud service providers to be 568 hours since 2007—with an economic impact on customers of at least $71.7 million. [2]

b. Fight to get the information:

The business owners are always in a constant flux to gain access to their own information. In terms of surveys and number of hits, it's a huge task to get the proper tally.

c. Data expansion:

Believe it or not, the more data that is expanded the risk of losing the data increases. The data which are recognized by the government for the organization is highly confidential.

But since the paperwork increases the chances are that you might loss the previous data.

These are some of the risks that can be reasoned with.

V. ABATING RISK IN CLOUD:

a. Knowing what you want:

It is a different thing to know what is needed but it's a completely different game to know what you want. One should be specific in getting what is right for the organization at the best of interests.

b. Smart a consumer better the service

It is wise to select only the services needed for the organization. As it becomes easy to keep a track of data and update the services smoothly.

c. Right people for the right task:

Assigning of responsibilities to the right people who can take care of asset management, security concerns, SLA Agreements etc. proves to be one of the best mitigations for cloud services

d. Building a steady repo:

It is wisely said slow and steady always wins the race. Building a steady foundation with the providers is useful and much required. In situations, it is mandatory that the organization handles confidentiality very seriously and makes sure they are on the same page as the service providers are.

e. Defining Objectives:

One of the primary considered solutions is to make the objectives of introducing cloud services to the organization.

f. Educating the masses:

People generally used to traditional methods find the transition quite uncomfortable and tedious. Make them understand the Objectives and introducing them the basic makes the transition much smoother.

VI. CONCLUSION:

As earlier stated, Cloud computing is the widely-used services due to the increase in demand. It promises to optimize the standard of Network so to speak. This in turn increases the productivity and efficiency of lifestyle and working. It is however, advised to take necessary steps to find solutions to the queries raised.

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