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Aspect of Cloud Compute for Advancement of Data Centres

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ABSTRACT: This article provides an overview of the main features of cloud computing, identifying the key components and their applications. In addition to evaluating the implemented technology, this has also been implemented. Understanding how cloud computing can lead to strong competition among SMEs in organized competition in a world where the role of information systems has long reflected IEMs whose main business is not technology, this should apply

KEYWORDS: Cloud computing , SME, IEM

I.INTRODUCTION

Cloud Computing (CC) has become an excellent platform in recent years for developing IT solutions in various knowledge areas. This new approach to computers has many advantages, but it also presents many challenges. CC is in response to an ongoing scenario in which activities such as sharing, retrieving and editing large amounts of information become reality. However, this scenario proved to be very demanding in terms of IT resources that should have been available to carry out these activities.

When it comes to calculating resources, CC has an unlimited view of resources. Not because they are in reality, but because of the transparent scale approach. That is, the ability to expand resources in the cloud (adding resources to a distributed cluster) has proven to be invisible to end users. Build and use resources only and increase this invitation based on temporary needs without the fear of scarce resources. In reality, this is not a CC client company but a resource provider. This view of computers has significant benefits for users (usually organizations). This no longer relates to infrastructure management, maintenance and processing. Someone is starting to exceed the vision of IT resources, whether it be infrastructure, services or development platforms. Regarding simple internet access: use, connect, it is possible and someone (provider) is responsible for ensuring the quality of the service. With the help of CC, companies can focus on their business and provide a scalability scenario for both services and infrastructure that becomes "unlimited". Cost, a detailed analysis that is not the purpose of this work, is presented worldwide as economical. KS violates the traditional beliefs of organizations where infrastructure is no longer an exclusive organization (which has existed for decades) and is considered a resource managed by a third party. Watch how the submarine takes the form of a service (Carr, 2009).

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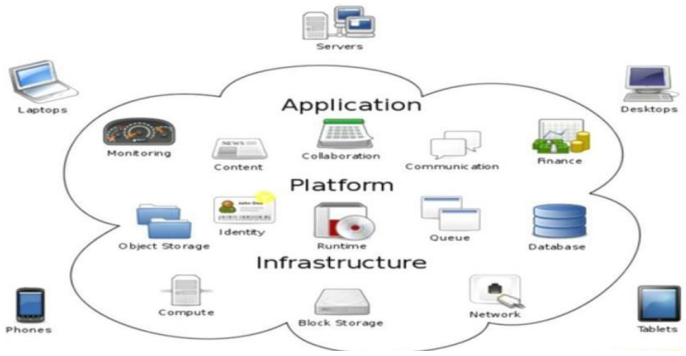

Fig 1: Overview of Cloud Computing Platform

This new approach contradicts the previous one, with ownership, management and maintenance of infrastructure resources owned by all organizations. Even if they make a radical decision based on their current perspective, all that really matters is the concept that companies need to focus on their core business. In this case, organizations whose business goals are not used in their facilities begin to convince other people to manage their work processes and focus their energy on the company's business operations. For this reason, the CCP has many challenges. First, it is a change in the organizational culture of managing technology components. Security, property and legal issues, along with other issues, are described as new challenges for organizations.

Before we discuss the concept of CC, it becomes crucial to define it. Cearley (2009) defines CC as a model with scalable, sustainable technology capabilities that allow users to complete services over the Internet. The National Institute of Standards and Technology (NIST) defines CC as a model that allows for easy and advanced access, a mix of IT resources (e.g. networks, servers, repositories, programs and services) that can be quickly acquired and that are able to use reduced management. Try or use email interaction with me (Nist, 2012). Armbrust (2010) states that CC is a suite of active network services that provides scalability, service quality, economical infrastructure for computers and is available in a simple and complete manner. The second CC Vaquero (2008) can be considered an important archive for virtualization services such as hardware and software processing platforms. Easily accessible; And the dynamic configuration may be more suitable for different processing taxes with a value model based on paying the amount of resources actually used. For Buyya (2008), CC is a parallel distribution system consisting of a collection of dynamically controlled and interconnected computers that function as one or more general sources. These amounts are determined on the basis of a commercial agreement between the service provider and the customer of that service and against the background of the commercial customer agreement. Figure 1 shows a conceptual image of CC.

II. CLOUD COMPUTING FUNCTIONS

CC has many features that distinguish it from other paradigms and is briefly identified and described below for better understanding.

2.1. Source virtualization:

IT resources can be verified; There are many virtualization technologies on the market that can be used to virtually authenticate computers, networks, and storage systems. This allows for separation of physical infrastructure services. This level of abstraction allows services to be used as services rather than physical components, making direct and physical manipulation (i.e. hardware) impossible.

2.2. Elasticity and Scaling:

This feature demonstrates the originality of data processing and allows it to provide or access data processing resources while driving.

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With regard to contextual elasticity, we have the concept of size reduction, which in addition to new features means capacity to increase capacity.

2.3. Function Independence:

This function, one of the assigned NCs, is carried over to all available functions, regardless of the position of the user (and even the access device) and the availability of the internet connection. This is the only essential element for full access and manipulation of subscription services. In this way, the cloud is reflected in the eyes of consumers, the central access point and is available everywhere and on every platform.

2.4. Measurement and Monitoring Service:

CN monitors resource consumption and is the basis for measuring the value of these resources. So this is a paradigm used by all other suppliers of resources used in society (eg electricity, gas or water gas). Parties define this approach as a certain service level and a certain quality to ensure compliance with the contract conditions and in the event of a malfunction. He is being punished.

2.5. Resource location:

While the location of resources on CN can be dynamic, the location, especially the country and data center, can be determined by priorities and powers. Questions, perhaps the legal order of each country, give this characteristic an important element in the recruitment of ski equipment.

2.6. Models of service

The CC State Exam includes a three-level model, as shown in Figure 2 IaaS_PaaS_SaaS. Each layer defines a service model. The three layers are Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS). Below is a brief description of each tier or model of this service.

3. Infrastructure as a Service (IaaS)

This layer is the lowest level in the CN concept model. This takes into account the service provider's functions to deliver the IT infrastructure at a certain level of processing and storage. Because this layer must be transparent to the user. IaaS is typically a suite that uses virtualized engines for IT assets. This layer has the potential to dynamically increase or decrease the available resources depending on the application requirements; This approach includes optimizing the maximum power when not in use, Inability to act. Some examples of IaaS are Utility Elastic Computing Architecture, which links the programs to useful (Eucalyptus) systems (Liu, 2007) and Amazon Elastic Cloud Computing (EC2) (Robinson, 2008). Ultimately, IaaS translates as an alternative available to organizations, as opposed to buying their own computing power (which can be weak or redundant), you can calculate resources based on your organization's needs without developing any thought. Update or buy new equipment, but just write to increase cloud computing capabilities. So the cloud was created as a customer base, as an unrestricted resource platform where there is no need to know how and when to improve these resources.

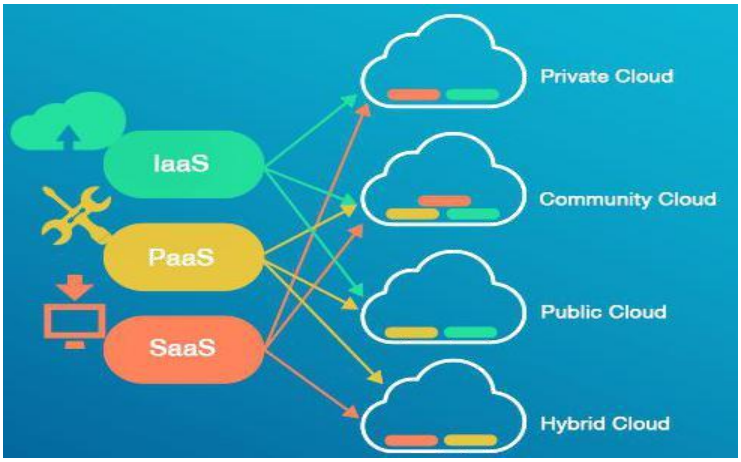

Fig:2 Various methods of Cloud Computing

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3.1. Platform as a Service (PaaS)

It is the middle layer of the conceptual model CN. PaaS offers consumer systems, software development platforms and programming languages, as well as storage and database solutions. This facilitates the development of integration programs, tests and services; As long as they meet the restrictions imposed by these developmental conditions, such as available programming languages or potential database systems. However, it has a layer that significantly improves application development. Some examples of PaaS are Aneka (Vecchiola, 2009; Vecchiola, 2012) and Google App Engine (Ciurana, 2009; Prodan, 2012).

3.2. Program as a Service (PgaaS)

This layer is the main layer of CN. SaaS is a suite of applications that work in cloud environments. These programs are available with a browser. This access is available anywhere and from any device to an Internet connection. SaaS does not require the purchase of software licenses, which reduces costs; In addition to optimizing entire programs. Some examples of SaaS are Google Docs, Face book or Microsoft SharePoint.

3.3. Implementation Model

The creation of CN, or more specifically cloud, can be done with different models. Art CN mode refers to private cloud, public cloud, public cloud, hybrid cloud. Each has its own characteristics, which are briefly described and illustrated in Figure 3.

3.4. Personal cloud

In this model, the cloud infrastructure belongs only to the organization that owns it. Check for issues and access restrictions with this style. This model is typically associated with the high cost of building and maintaining these clouds using public clouds. However, keep in mind that more extensive and in-depth research involves resources that make up the cloud. This model gives an organization full control over the configuration of all parameters and services of existing IT resources.

3.5. Public cloud

In this model, clouds are generally represented as a common resource area for many organisms of common interest. These common concerns concern the harmonization of safety requirements and guidelines and flexibility in use.

In this model, one of the organizations typically plays the role of cloud management. This scenario may be interesting for online scenarios. In addition to common interests, it is worth noting that shared networks share the cost of building and maintaining the cloud and can combine the benefits of better control and resource design. Cloud. Public cloud backgrounds and / or third party boundaries.

3.6. Social cloud

In this model, clouds are generally represented as a common resource area for many organisms of common interest. These common concerns concern the harmonization of safety requirements and guidelines and flexibility in use.

In this model, one of the organizations typically plays the role of cloud management. This scenario may be interesting for online scenarios. In addition to common interests, it is worth noting that shared networks share the cost of building and maintaining the cloud and can combine the benefits of better control and resource design. Cloud. Background public cloud and / or third party

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3.7. Hybrid cloud

Of course, this model is difficult to use because it actually works in two cloud settings. One is dedicated to essential biological processes and the other is dedicated to secondary processes. In this way, it is possible to create a private sector with high security and internal control. And another cloud of public property, at least not strictly controlled, is more focused on resistance in the most demanding areas of the process. This is a difficult transition hybrid. This is mostly because it is difficult to connect the two clouds.

IV. CONCLUSIONS AND FUTURE WORK

Small and medium-sized businesses are not technology companies in the companies, so they focus more on their core business and are less available to process information and complete the technological aspects of IT services. However, modern organizations unanimously accept that information is a valuable tool for competitiveness and success. But how can companies that do not have the resources or structure to develop the latest technology manage and develop large technology components? We believe CC is responding to this challenge. With CC, PMI can transfer technology infrastructures to third parties (cloud providers) that customize this part of management, infrastructure development. This is a vision for the development of small and medium-sized businesses, where technology is part of the "never" obsolete. Someone has to manage it and be responsible for all its operations. Where this person needs to save resources, always aligned with the actual needs of the organization. Under the proposal, a former IT department is based on usage that can be changed to third-party contracts. This vision may not be exactly how the company's internal resources always benefit from the cloud's capabilities. However, many problems are solved and this is very positive for SMEs that do not have the resources or profiles and face their technological challenges, regardless of their activities. However, the legal issues related to the location of IT resources, especially in the public cloud, are physically required and lead to confidential matters related to retaining confidential information from companies. In fact, the law that applies to the country where the information is located is the reliability of that information. Often these laws are very different from the homes of organizations that use the cloud.

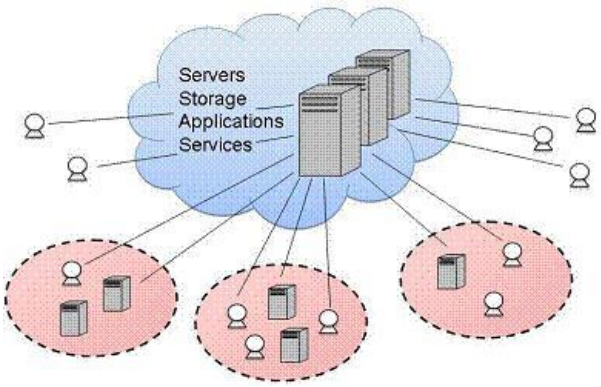

Fig.3 : SME network

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