



MIGRATION OF DATA FROM ONE CLOUD SERVER TO ANOTHER CLOUD SERVER

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Abstract: *Later engage in Cloud Computing has been determined by new offerings of registering assets that are engaging because of for every use valuing and versatile adaptability, giving a critical playing point over the commonplace procurement and arrangement of gear that was a while ago needed. The impact has been a movement to outsourcing of supplies setup, as well as the continuous IT organization of the assets too.*

Keyword: *Cloud Computing, Migration, Architecture, Protocol.*

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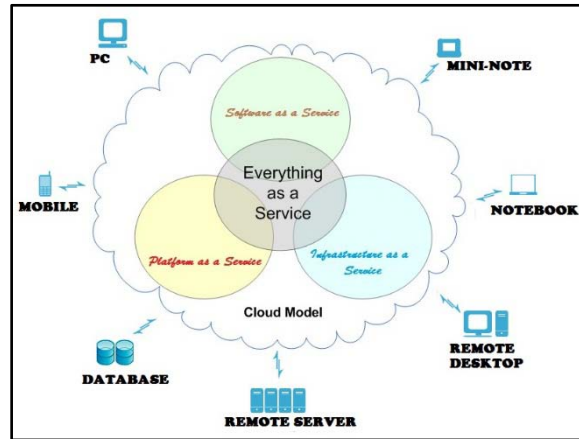
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1. INTRODUCTION

Cloud computing is the developing standard with changing definitions yet for this exploration venture, it is characterized in the term of a virtual framework which might be gives imparted data and correspondence innovation administrations, by means of a web "cloud," for "various outer clients" through utilization of the Internet or "huge scale private systems." Cloud computing furnishes a machine client access to Information Technology (IT) benefits i.e., requisitions, servers, information space, without obliging a comprehension of the engineering or even responsibility for foundation. To fathom Cloud computing, a relationship to a power computing network is to be handy. A force organization keeps up and possesses the framework, a circulation organization disperses the power, and the purchaser just uses the assets without the possession or operational obligations. Cloud computing is getting an incredible arrangement of consideration, both in productions and around clients, from people at home to the U.S. government. Cloud computing is a membership based administration where you can acquire arranged space and machine assets. One approach to consider Cloud computing is to think about your experience with email. Your email customer, in the event that it is live, Gmail msn, et cetera, deals with lodging the sum of the equipment and programming important to backing your particular email account. When you have to get access to your email you open your web project, take off to the email client, and log in. The most discriminating some bit of the numerical proclamation is having web access. Your email is not housed on your physical machine; you gain access to it through a web association, and you can gain access to it anyplace. Assuming that you are on a trek, at work, or down the road getting espresso, you can check your email as long as you have admittance to the web. Your email is unique in relation to programming introduced on your workstation, for example, an expression handling system. When you make an archive utilizing word handling programming, that record stays on the mechanism you used to make it unless you physically move it. An email customer is like how cloud computing functions. But as opposed to entering simply your email, you can pick what data you have admittance to inside the cloud. Essentially, a client's cloud computing access empowers "imparted assets, programming, and data on-interest" on an expense for-administration premise.



Cloud computing Model

According to the National Institute of Standards and Technology (NIST), cloud computing shows several characteristics:

- Agility improves with users' ability to re-provision technological infrastructure resources.
- **Application programming interface (API)** accessibility to software that enables machines to interact with cloud software in the same way the user interface facilitates interaction between humans and computers. Cloud computing systems typically use REST-based APIs.
- **Cost** is claimed to be reduced and in a public cloud delivery model capital expenditure is converted to operational expenditure. This is purported to lower barrier to entry, as infrastructure is typically provided by a third-party and does not need to be purchased for one-time or infrequent intensive computing tasks. Pricing on a utility computing basis is fine-grained with usage-based options and fewer IT skills are required for implementation (in-house). The e-FISCAL project's state of the art repository contains several articles looking into cost aspects in more detail, most of them concluding that costs savings depend on the type of activities supported and the type of infrastructure available in-house.
- **Device and location independence** enable users to access systems using a web browser regardless of their location or what device they are using (e.g., PC, mobile phone). As infrastructure is off-site typically provided by a third-party and accessed via the Internet, users can connect from anywhere.



- **Virtualization** technology allows servers and storage devices to be shared and utilization be increased. Applications can be easily migrated from one physical server to another.

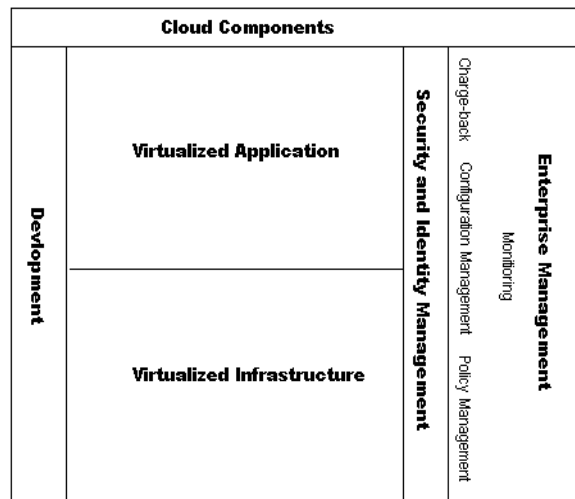
2. IT ARCHITECTURE EVOLUTION

Construction modeling develops over the long run. In the 1960s and 1970s, the first wave of computing involved of extensive, costly, work concentrated, solid servers that could be viewed as the progenitors of the mainframe. Inner assets were pooled and substantial utilization was made of virtualization to guarantee that the precise best was made of these exceptionally unmanageable assets.

In the 1980s and 1990s, with the ascent of Pcs, the contracting expenses of systems administration and computing foundation, and a requirement for additional spryness, client/server gave the capacity to part the provision level far from the server level. This was carried out to help Cloud customers running wealthier client interfaces and likewise to diminish sets back the ol' finances by offloading the client taking care of, provision workloads off solid servers. These bigger servers stayed to address monstrous group handling and exploratory workloads. In the 2000's, as server farms began to round out, and power, space and cooling got to be more unmanageable, ideas, for example, product lattice computing and virtualization began to get secured. Distributed computing takes these ideas further by permitting administration toward oneself, metered utilization and more robotized element asset and workload administration hones. As administrations got to be more disseminated, SOA developed as a technique to incorporate and organize conveyed business administrations. By and large, today's Cloud was dependent upon foundational ideas that tended to an unanticipated requirement to best power computing assets very nearly 40 years prior. An expansive solid server was not difficult to secure with respect to a virtualized asset on the Cloud. Security is still the most obvious concern of numerous clients who need to power open Cloud benefits today.



3. ARCHITECTURAL STRATEGIES FOR CLOUD COMPUTING



CloudBuilding Blocks

4. Review:

Migration of the entire data along with the architecture has always been an issue to be discussed. The main reason behind that is each and every cloud server uses its own type of protocol for the communication. Several researchers have put their methodology in this contrast. Here is an overview for some of them.

- The general migration issue raises when your data is not secure at the one platform. Now the issue comes that whether we can migrate the data with the architecture from one end to another. He proposed that if we can use the tcp ip technique to find out at which server the data is going to be migrated and if we can configure it to the server from where the data has to be migrated can make a difference into the migration but he did not talk about how an existing architecture allows the second server to be configured into itself.
- The issue of the tcp proto calling in their research work in their published paper. They said that to configure an IP which does not belong to the server at which you are currently in, one can use the IAAS SERVICES of the cloud .IAAS is the INFRASTRUCTURE AS A SERVICE thing which is one of the basic entities of the cloud platform. Now to configure IAAS at your system, one will have to purchase the licensed version of the cloud space. The migration can be done using any platform but the basic issue is whether hundred percent data will be migrated or some data loss would be there.



- The opinion about the database services of the cloud to solve out the upper issues of the cloud platform. They say that whatever cloud platform you are using, they provide sql query service to get the query execute into the system. So a scheme of scripts came into action from the very that moment. For this purpose Microsoft adapted a Script wizard service to migrate the data along with the architecture but somehow it did not work appropriately.
- The ecofriendly migration of data through the advanced scripting system. If we see for an example of SQL SERVER 08 it can encrypt the data along with the architecture and it consumes a less amount of energy also if we can run the advanced script over the cloud. For this proposal to take place, other cloud services started working on it and as a result we can see different cloud servers using run a script method into their architecture as software as a service parameter.

5. ALGORITHM

```
int counter =0;
int k=1;//for the fileds specified by user ;
if(model.Is Selected ) // If the client has selected the specific model for his entry
{for(int i=0;i<counterfiled;i++)
{if(counterfield.checked==true
{ Rbsc rbc=new rbac();
rbc.roles.add(counterfiled.text);
if(user.confirms.rbc.roles.added==true)
{put (xml.schema.action);
}
}
Else
{Move.next();
}
For(int i=0;i<filedcount;i++)
{for(k!=null)
Draw(xmlschema.xml.rbc());
Xmlschema.rbc.fieldcount=filedcount ;
```



```
Xmlschema.xmltag=new xmltag("<"+filename+">");  
Xmlschema.xmltag=new xmltag("<"+filename+"/>");  
Xmlschema.show();  
Put.Azure(spcefilled.rest.databaseschema);  
Exit  
Count++;  
}  
}  
Else  
{  
This .close();  
Goto whileback; // to return to main program  
}  
}
```

6. PROBLEM STATEMENT

In this quick moving universe of digitization, distributed computing is turning into a key some piece of the day by day life assuming that you are sort of identified with the business. Keeping the information secure on the server has turned into one of the significant issues. To beat this issue distributed computing has developed into the world yet it is truly unmanageable. Presently the issue is whether you need to relocate the information plus its construction modeling starting with one server then onto the next, it is vital to keep the information secure and protected until and unless it arrives at to the server end. As though for the time being, one convention construction modeling does not permit an alternate convention building design to convey specifically, our issue gets figuring out an exceptional crossbreed provision structural engineering which can change over one convention construction modeling into a halfway building design which is totally justifiable by an alternate administration structural engineering so we can climb the whole information building design plus the information starting with one server close then onto the next without any information misfortune.



7. SUMMARY

For IT divisions in bigger ventures, creating a private cloud frequently makes the most fiscal and business sense. The point when creating the design vision, a venture engineer might as well take notice the qualities of distributed computing and also think as of a percentage of the organizational and social issues that may get to be hindrances to the reception of what's to come state construction modeling. The point when pushing forward, choices must be made on if what's to come state specialized building design might as well accentuate similarity with the present standard or begin sans preparation to minimize cost. Future state frameworks building design outlines include exchange offs between more level cost/operational effectiveness and more terrific adaptability. Utilizing an Enterprise Architecture structure can help venture modelers explore the exchange offs and plan a framework that fulfills the business objective.

REFERENCES.

- [1]. Lombardi F, Di Pietro R. "Secure virtualization for cloud computing. Journal of Network and Computer Application (2010)", doi:10.1016/j.jnca.2010.06.008
- [2]. Mohammad Hajjat, Xin Sun, Yu-Wei Eric Sung, David Maltz, Sanjay Rao Kunwadee Sripanidkulchai, and Mohit Tawarmalani "Cloudward Bound: Planning for Beneficial Migration of Enterprise Applications to the Cloud", IJSC VOL 2 ,2011
- [3]. Sudipto Das† Shoji Nishimura Divyakant Agrawal Amr El Abbadi, "Live Database Migration for Elasticity in a Multitenant Database for Cloud Platforms" UCSB Computer Science Technical Report 2010-09.
- [4]. Chaim Fershtman and Neil Gandai, "Migration to the Cloud Ecosystem: Ushering in a New Generation of Platform Competition Forthcoming", COMMUNICATIONS & STRATEGIES, no. 85, 1st Q. 2012
- [5]. Aaron J. Elmore "Live Migration in Shared Nothing Databases for Elastic Cloud", Volume 1 2011
- [6]. Pat gelsinger, "Hybrid Cloud Data Migration", Amazon journal 2012
- [7]. Jayson Tom Hilter, "Elastic Migration of the cloud for security enhancement", Volume 2 , EC2 Journals
- [8]. Gribon Taylor "Planning the Migration of Enterprise Applications to the Cloud" White Paper, 2010 Cisco Systems, Inc. 2010



- [9]. Dan Morphy, "Virtualization and Cloud Computing: Security Threats to Evolving Data Centers", Microsoft Center of Excellence, Microsoft Journals, Volume 3 - 2011
- [10]. Rob Livingstone, "Will legacy kill the migration", IJSCT , Volume 12 2011
- [11]. C. Clark, K. Fraser, S. Hand, J. G. Hansen, E. Jul, C. Limpach, I. Pratt, and A. Warfield, "Live migration of virtual machines," in Proceedings of the 2nd Symposium on Networked Systems Design & Implementation (NSDIS). Berkeley, CA, USA: USENIX Association, 2005.
- [12]. Christoph Kleineweber, Axel Keller, Oliver Niehörorster, and André Brinkmann, "Rule-Based Mapping of Virtual Machines in Clouds," in Proceedings of the 19th International Euromicro Conference on Parallel, Distributed and Network-Based Processing, Paderborn Center for Parallel Computing, University at Paderborn, Germany, 2011.
- [13]. Jinhua Hu, Jianhua Gu, Guofei Sun, Tianhai Zhao, "A Scheduling Strategy on ACO of Virtual Machine Resources in Cloud Computing Environment," in Proceedings of the 3rd International Symposium on Parallel Architectures, Algorithms and Programming
- [14]. R. N. Calheiros, R. Buyya, and C. A. F. De Rose, "A heuristic for mapping virtual machines and links in emulation test beds," in Proceedings of the 9th International Conference on Parallel Processing (ICPP). Washington, DC, USA: IEEE Computer Society, 2009, pp. 518–525.