IOSR Journal of Computer Engineering (IOSR-JCE)
e-ISSN: 2278-0661,p-ISSN: 2278-8727, Volume 17, Issue 2, Ver. 1 (Mar – Apr. 2015), PP 48-49
www.iosrjournals.org

Networking Issues and Challenges In Cloud Computing

Yogesh Kumar[1], Rajan Prasad Tripathi[2]
[1, 2,] *(Electronics & Comm., Amity School Of Engineering., India)*

Abstract: *It is used in designing of network architecture and computer resource. There is cloud of computers. Use of cloud network reduces the requirement of hardware and software.*
Keywords: *Cloud computing, Computer, Network, data breach, data authentication.*

I. Introduction

If we have more than one computer then no need to install the software on all of them. We need to have one application that would allow us to run the program using remote computer. The software and storage does not exist on computer. It is on the service's computer cloud. That is client computer need to run cloud computing system interface software. For example if we need to check our email then we need not to install the software. We require login to account remotely. But there are several challenges like data protection, user authentication, data breach etc that need to be considered. Also network computers traffic issue.

II. Operation

The cloud of network computers handles the task. So the hardware and software requirement reduces at client side. The client runs the application. The request is sent to the network computer. These computers access the server and database and after finishing of task sent to the client computer. It creates a virtual network which exists but physically not available.

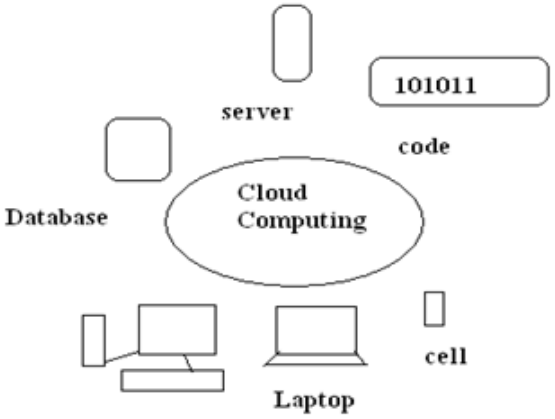

Figure 1.1

During implementation of a cloud computing strategy means placing critical data in the hands of a third party. Therefore we need to ensure the data must be secure. Data must be encrypted all the times, with clearly defined roles when it comes to who will be managing the encryption keys. In most cases, the only way to truly ensure confidentiality of encrypted data that resides on a cloud provider's storage servers is for the client to own and manage the data encryption keys. Another important challenge in cloud computing is cloud network should provide all necessary security measures to protect the data and the access to that data. In case of unexpected error data must be secured and there must be way to ensure the integrity and availability of that data.

III. Cloud Architecture

Cloud architecture,[1] typically involves multiple cloud components communicating with each other. It is based on frontend and backend. Both connected to each other through network. The network usually used is the internet. User interface is available at front end and cloud section is at back end.

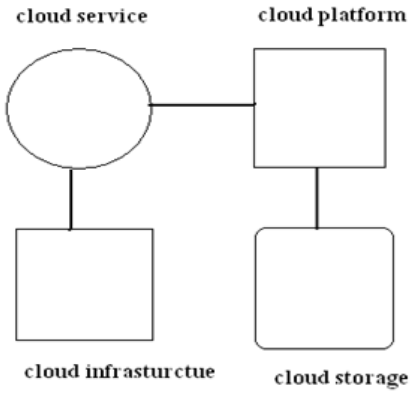

Figure 1.2

The service model for cloud provides accessing of service hosted in the cloud. It also enables client to deploy their own software and application in the cloud. The deployment model includes private cloud, community cloud, public cloud and hybrid cloud. Using cloud computing, the demand of client hardware and software decreases. Therefore it is economical as no need to install the software to all computers. Also hardware upgradation reduces as it works on cloud computers. But there are some security challenges. Cloud computing opens up a new world of opportunity for business, but mixed in with these opportunities are numerous security challenges that need to be considered and addressed prior to committing to a cloud computing strategy. Cloud computing security challenges fall into three broad categories: first is data protection as securing data both at database and during use. Second is user authentication as limiting access to data and monitoring who access the data. Third is disaster and data breach contingency planning. Some of these challenges may cause slow down the services in the cloud. It can be resolved by care and attention during planning stages. The security mechanisms between client and cloud network need to be robust. The alternate is use of hybrid cloud network. Also we can suggest an open cloud computing interface.

We can introduce agile technique i.e. agile in cloud. As the client requirements are changing with technology and we should welcome changes which result in dynamic network and support future extensions i.e. we should try to find agility in cloud.

IV. Conclusion

Cloud network can be used in full commercial exploitation. We can resolve certain degree of risks but cannot resolve all the problems. There is still much to explore.

References

[1]. "Building GrepTheWeb in the Cloud, Part 1: Cloud Architectures". Developer.amazonwebservices.com. Retrieved 2010-08-22.
[2]. "Cloud Computing entry". NetLingo. Retrieved 15 January 2014.
[3]. University of Michiganhttp://it.umich.edu/initiatives/cloud/content/what-cloud. Retrieved 15 January 2014.
[4]. "The NIST Definition of Cloud Computing". National Institute of Standards and Technology. Retrieved 24 July 2011.
[5]. "What is Cloud Computing?". Amazon Web Services. 2013-03-19. Retrieved 2013-03-20.