

## An approach creating application for Private cloud and its security issues

Surbhi Sahu<sup>1</sup>, Sarvesh Singh<sup>2</sup>

<sup>1</sup>M. Tech Scholar, CSE, Jayoti Vidyapeeth Women's University, Jaipur,

<sup>2</sup>Jayoti Vidyapeeth Women's University, Jaipur, Rajasthan (India)

### ARTICLE INFO

Received: 23 June 2015

Accepted: 18 July 2015

#### Corresponding Author:

**Surbhi Sahu**

Department of Computer Science and Engineering, Jayoti Vidyapeeth Women's University, Jaipur

**E-mail:** Surbhi.ssb@gmail.com

**Key words:** Cloud Computing, IaaS, SaaS, PaaS and private cloud.

### ABSTRACT

Cloud computing is a latest topic in Information technology. Cloud computing is based on other computing such as grid computing, utility computing. With the help of cloud computing, we don't need to download any software and install it, when we have demand any software then use on directly on cloud. Only for the resources (data and application) you use, as you go in cloud computing. Key feature of cloud computing is improved reliability and scalability, saving cost. In this paper include step for creating application of private cloud and security issues of private cloud.

© IJICSE, All Right Reserved.

### INTRODUCTION

Cloud computing is technology for storage of data that allow you can access your file from anywhere from Internet. It stores all information in cloud server not in your computer. Cloud computing technology uses virtualization technique. If we want use cloud technology so we need only browser in our computer and connect to the cloud. In traditional technology, if

we want to use five application to run then we have to use five server but with the help of virtualization we use just one server instead of five. There are many example such as G-mail, Facebook etc. services transform over internet called cloud computing. In this paper discuss we will discuss step for creating application of private cloud and security issues of private cloud. It will reduce the cost and space constraint.



Figure 1: Cloud Computing pros and cons.

### Services in cloud computing

There are three types of services provided by cloud computing technology.

1. PaaS (Platform as a services)- In this model computing platform delivered by cloud including database, web server, operating system. Application developers can develop and run their software

solutions on a cloud platform without the cost and complexity of buying and managing the underlying hardware and software layers.

2. SaaS (Software as a service)- cloud providers install and operate application software in the cloud and cloud users access the software from cloud clients by saas model. SaaS allows a business the potential to reduce IT operational costs by outsourcing software and hardware maintenance.

3. IaaS (Infrastructure as a service)- to deploy application, user install operating system and application software on cloud infrastructure.

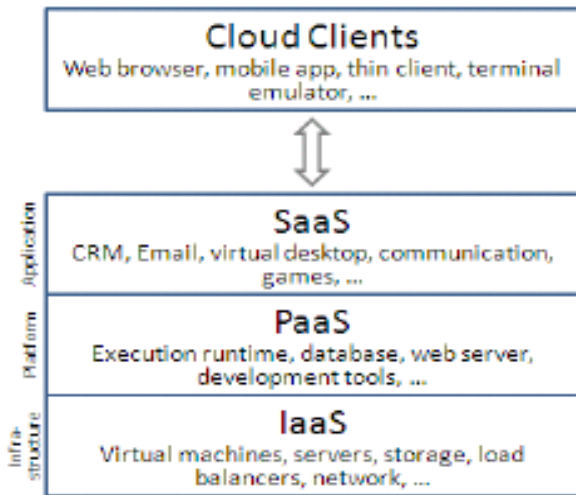


Figure 2: Services of cloud Computing

**Deployment modal of cloud computing:**

There are four type of deployment modal

1. Public cloud- it is owned by an organization selling cloud services and it sells services to general public.
2. Private cloud- services offered from third party or any organization. It allows accessing the resource by means of centralization access from different location, department of organization.
3. Hybrid cloud-It is a combination of one or more deployment of cloud modal. It is a complex architecture.

**Define Private cloud:**

Private cloud is type of cloud computing and it provide same feature as public cloud computing. It is secure cloud computing environment. There are only specified client can perform and combines essential hardware and other computing resources into a unified virtualized unit. It can be achieve with the help of virtualization. Some companies host their private cloud with an external third party provider, they allows these deployments to tap into external compute resources on an on demand basis. It allows businesses significant reduce cost over legacy hardware based deployments. It also maintains

greater flexibility and in contrast to a public cloud more privacy and security.

**Characteristics of private cloud**

A private cloud, resides within the organization and its access is restricted, usually to company employees or business partners.

Characteristics of private cloud:

- Offering resources as services
- Fulfill demands of client such as scale and flexibility
- Resource sharing
- Payment and measurement according to use of the service by client

Use of different Internet technology and protocols to access cloud resources **Creating private cloud application and their deployment** Private cloud also called a pool of computing resource. It is used for increasing speed and flexibility of organization. Application used resources on demand.

If we want to implement a private cloud then Microsoft provides a platform called Windows azure pack. Firstly installation of windows azure sdk and I have to deploy application create in Dot net, java or Php platform at windows azure hosted service. Our implementation present in Visual Studio 2010 and choose c#. Workrole is used to perform background task and it uses input from windows azure.

Application has two service configuration file and their extension is .cscfg

1. Service Configuration cloud cscfgfor local deployment
2. ServiceConfiguration.local.cscfgused to deploy to Microsoft Data Center.

In application program contain another file is WebRole. cs used to host a web application in windows azure.

Our application deployed in two steps. First it deployed locally to test that code is working correctly. Windows azure also run in locally called Windows Azure emulator or windows azure development fabric.

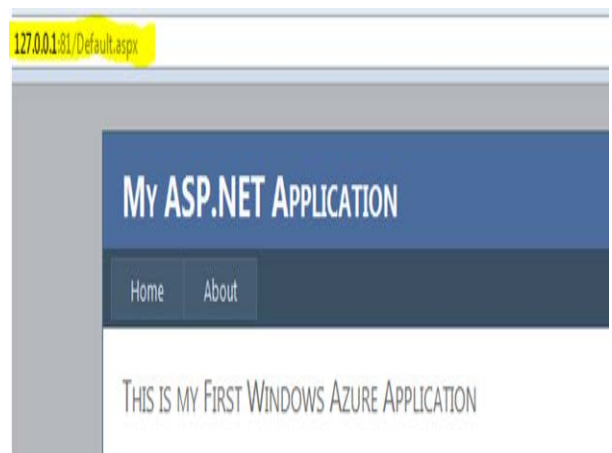


Figure 4: Windows Azure Application running on local development fabric.

Second step to deploy application on Microsoft Data Center. After successful registration select package in visual studio then Service Package File and Cloud Service Configuration file show in the folder explorer and these file will be upload to deploy application on Microsoft Data Center. To deploy on Microsoft Data Center, first create Hosted Service and select Hosted Service, Storage, Account and CDN.

Provide some necessary information to create host service then upload package and select browse locally. After successfully create and deployment web application in windows azure. We can see application running in cloudapp.net from Microsoft

Data Center

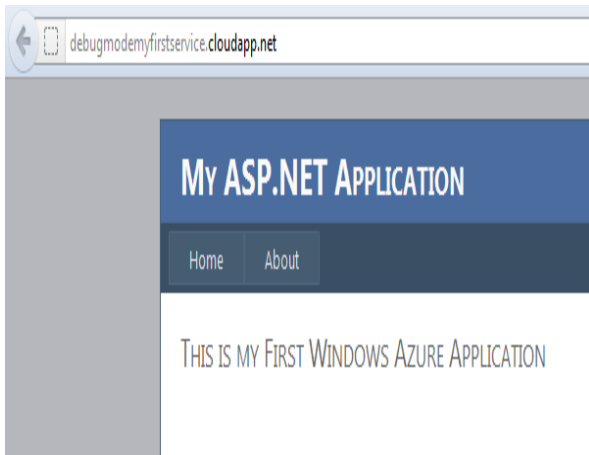


Figure 5: Application running from Microsoft Data Center.

## Conclusion

Cloud computing is latest and vast technology. There are many advantages of private cloud to maintain their data. There are many benefits for business such as cost effective and successfully deploy a scalable private cloud. Developing of any windows azure web application and deploy application locally in storage fabric and finally deployment in Microsoft data center.

## Reference

1. Siegle, D. (2010). cloud computing: A free technology option to promote Collaborative learning. Gifted child Today.
2. Spinola, M. (2009) law libraries in the cloud. The five characteristics of cloud computing, retrieved

march Mullin, R. (2009): The new computing pioneers, Chem. Engg New 87, 10-14.

3. Schebert, L. (2010): The future of cloud computing-opportunities for European cloud computing beyond, European Communities Information Society and Media.
4. Schebert, L. (2010): The future of cloud computing-opportunities for European cloud computing beyond, European Communities Information Society and Media. Mashups, SaaS and Cloud Computing: Evolutions and Revolutions in the Integration Landscape. [http://www.redcad.org/summerschool09/slides/Bentallah\\_CTDS09\\_Mashups%20and%20SaaS.pdf](http://www.redcad.org/summerschool09/slides/Bentallah_CTDS09_Mashups%20and%20SaaS.pdf).
5. Zouheir Trabelsi, Hamza Rahmani, Kamel Kaouech, Mounir Frikha, "Malicious Sniffing System Detection Platform", Proceedings of the 2004 International Symposium on Applications and the Internet (SAINT'04), pp. 201-207, 2004, ISBN: 0-7695-2068-5.
6. Robert Minnear, "Latency: The Achilles Heel of Cloud Computing," March 9, 2011, Cloud Expo: Article, Cloud Computing Journal. <http://cloudcomputing.syscon.com/node/1745523>.
7. Wayne Jansen, Timothy Grance, "NIST Guidelines on Security and Privacy in Public Cloud Computing," Draft Special Publication 800-144, 2011. [http://csrc.nist.gov/publications/drafts/800-144/Draft-SP-800-144\\_cloudcomputing.pdf](http://csrc.nist.gov/publications/drafts/800-144/Draft-SP-800-144_cloudcomputing.pdf).
8. "Database Security in Virtualization and Cloud Computing Environment: The three key technology challenges in protecting sensitive data in modern IT architectures," Whitepaper, McAfee. [https://portal.mcafee.com/downloads/General%20Documents/database\\_security\\_in\\_virtualization\\_and\\_cloud\\_computing\\_environments.pdf](https://portal.mcafee.com/downloads/General%20Documents/database_security_in_virtualization_and_cloud_computing_environments.pdf).
9. Jon Marler, "Securing the Cloud: Addressing Cloud Computing Security Concerns with Private Cloud," Rackspace Knowledge Centre, March 27, 2011, Article Id: 1638.