

Multi Packed Security Addressing Challenges in Cloud Computing

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Abstract

Cloud computing efficiency, flexibility, greater agility, less capital expenditure is to overcome geographic limitations to compete in a global market. Most of the companies are shifting to Cloud based services, but at the same time they are concerned about the security risks. Hopefully after the definitions and illustrations of Cloud computing are given in this paper you will understand it better. This paper identifies security concerns arising in cloud computing environments and outlines methods to maintain compliance integrity and preserve security protection.

Index terms— cloud computing, multi packed security, privacy.

1 Introduction

Cloud computing use advanced computational power and improved storage capabilities. The main focus of cloud computing from the provider's view is extraneous hardware should be connected which can support downtime on any device in the network, without a change in the users' perspective. Also, the users' software image should be easily transferable from one cloud to another.

There are two characteristics of cloud model. They are Multi-tenancy and elasticity. Multi-Tenancy enables sharing the same service instance among different tenants. Elasticity enables scaling up and down resources allocated to a service based on the current service demands. Both characteristics helps in improving resource utilization, cost and service availability.

The Essential Cloud Characteristics are:

? Elasticity -this is useful for large and small organizations as it is pay-per-use basics and it will scale IT infrastructure requirements. ? Pay-as-you-go versus install-and-own -capital requirements from the user to the service provider is equally attractive -again, to large and small organizations alike

? Savings -it is useful in terms of cost as one of the surveys reported that government agencies can save 25% to 50% of their IT costs and increase their business agility by migrating IT infrastructure to cloud services. computing along with their competitors risk they are going to miss benefits such as the flexibility, agility and access to the latest versions of technologies.

2 II. The Cloud Computing Architecture

There are certain characteristics of cloud computing. There are several definitions that stem from the three main categories of Cloud computing which are Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS), and Software-as-a-Service (SaaS). ? Infrastructure-as-a-service (IaaS): providers deliver computation resources, storage and network as an internet-based services. This service model is based on the virtualization technology. Amazon EC2 is the most IaaS provider. III.

3 Deployment Models

There are four deployment models, each with specific characteristics that support the needs of the services and users of the clouds in particular ways.

? Private Cloud -The cloud infrastructure has been deployed, and is maintained and operated for a specific organization. The operation may be inhouse or with a third party on the premises. ? Community Cloud -The

cloud infrastructure is shared among a number of organizations with similar interests and requirements. This may help limit the capital expenditure costs for its establishment as the costs are shared among the organizations. The operation may be in-house or with a third party on the premises. ? Public Cloud -The cloud infrastructure is available to the public on a commercial basis by a cloud service provider. This enables a consumer to develop and deploy a service in the cloud with very little financial outlay compared to the capital expenditure requirements normally associated with other deployment options. ? Hybrid Cloud -The cloud infrastructure consists of a number of clouds of any type, but the clouds have the ability through their interfaces to allow data and/or applications to be moved from one cloud to another. This can be a combination of private and public clouds that support the requirement to retain some data in an organization, and also the need to offer services in the cloud.

4 a) Benefits

The following are some of the possible benefits for those who offer cloud computing-based services and applications:

? Cost Savings -Companies can reduce their capital expenditures and use operational expenditures for increasing their computing capabilities. The following are some of the notable challenges associated with cloud computing they can be reduced with advanced services by planning.

? Privacy and Security -Two important issues that surround cloud computing relate to storing and securing data, and monitoring the use of the cloud by the service providers. ? Standards Improvement -Clouds have documented interfaces; however, no standards are associated with these, and thus it is unlikely that most clouds will be operated in conjunction. Working is going on cloud computing standards and practices. ? Continuously Evolving -since cloud does not remain static as user requirements are continuously evolving, the requirements for interfaces, networking, and storage should also continuously evolve.

IV.

5 Administrative Access to Servers and Applications

Cloud computing offers "self-service" access to computing power, most likely via internet. This increases exposure and risk. It is extremely important to restrict administrative access and monitor this access to maintain visibility of changes in the system control.

6 V. Dynamic Virtual Machines : VM State and Sprawl

Virtual machines are dynamic. They can quickly be reverted to previous instances, paused and restarted, relatively easily which makes difficult to achieve and maintain consistent security. In the cloud

7 Conclusion

In this paper we have provided a definition of Cloud computing and highlighted the security issues/concerns related to Clouds. As more businesses today utilize Cloud services and architectures, more threats and concerns arise. Both public and private Cloud models have their own advantages and challenges; therefore security will always be an issue.

Cloud computing is a very wide subject area. Even though the scope scaled down to the security issues in Cloud computing it is still quite a challenge getting details on certain areas. ^{1 2}

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Figure 1: ?

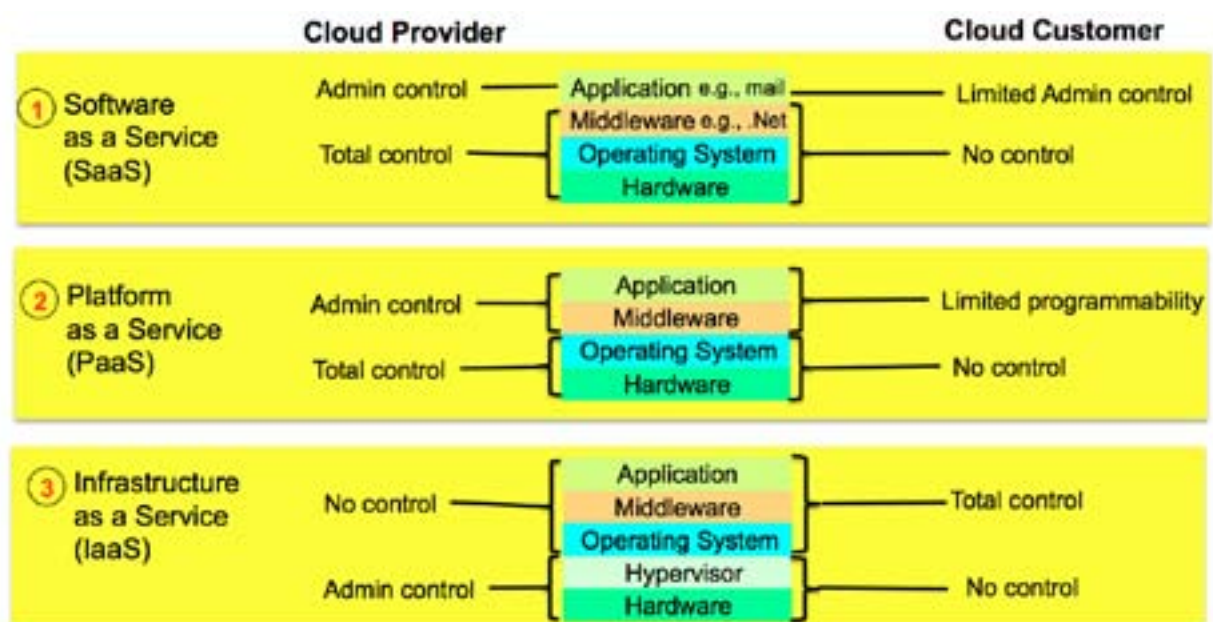


Figure 2:

[Note: ? Mobile Accessible -Mobile workers have increased productivity due to systems accessible in an infrastructure available from anywhere. b) Cloud Security Challenges]

Figure 3:

