Adoption of Cloud Computing in UAE: A Survey of Interplay Between Cloud Computing Ecosystem and its Organizational Adoption in UAE

Juno Srivastava, Middlesex University Dubai, Dubai, United Arab Emirates
Krishnadas Nanath, Middlesex University Dubai, Dubai, United Arab Emirates

ABSTRACT

With the advent of new technology, the IT industry continuously strives to innovate in terms of deploying products or providing services and Cloud Computing is rapidly moving in the hype cycle. With practically all the service providers offering products and services with cloud features and functionality and investing in creating a cloud computing ecosystem, it has become important to understand what these ecosystem means to the organizations based out of UAE who have to decide whether to adopt cloud computing or shun it. There are several factors impacting an organization’s decision on its choice of cloud computing adoption (like data security, Legal implications and derived benefits especially in UAE) (Al Tamimi & Company, 2005). There is a need for an assessment of cloud ecosystem in UAE which would be one of the significant factors considered cloud adoption in this region. This study analyzes the current cloud ecosystem providers in UAE and their product and services on cloud computing. It also tries to relate the relation between the cloud ecosystem and the factors impacting organization’s decision to adopt cloud computing.

KEYWORDS
Cloud Adoption, Cloud Computing, Cloud Ecosystem, Cloud Infrastructure, Cloud UAE, Public Cloud

INTRODUCTION

Cloud computing is a model for facilitating expedient, on-demand network access to a shared pool of configurable computing resources (e.g., Networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction (Mell & Grance, 2011).

Cloud computing services are mainly offered in three service models, Software-as-a-Service, Platform-as-a-Service and Infrastructure-as-a-Service on public, private or hybrid deployment model. The main objective of cloud computing is to utilize IT resources effectively by combining the distributed resources to gain higher throughput and be able to resolve large scale computation glitches.

To reduce large CAPEX expenditure, total cost of ownership and to increase the return on Investment, business across the world are appreciating the speed at which cloud can be deployed with minimum lead time and implementation duration. Instead of building its in-house capability and capacity to manage and support in-house and on-premise IT infrastructure and systems, cloud-based applications and services, storage and processing can be provisioned from cloud service providers.

DOI: 10.4018/IJISSS.2017100101

Copyright © 2017, IGI Global. Copying or distributing in print or electronic forms without written permission of IGI Global is prohibited.
Studies show that many companies are adopting cloud computing to gain IT operational and cost benefits compared to traditional IT systems.

Though there is an adoption of cloud computing in other geographies, there is still a room for debated on the extent to which cloud is adopted in UAE. The disputes on the benefits of cloud computing can leave the room for debate on the extent of its adoption. Further study in this area can bring to light the current concerns that business has on the adoption of cloud computing in UAE. This paper discusses the extent of adoption and relates the rate of adoption to the available cloud computing ecosystem in the region. The focus will be on the available ecosystem for cloud computing in UAE and does the presence or absence of strong ecosystem has any impact on the decision of organization to adopt cloud computing. We want to answer these questions with our research:

- What is the available cloud computing ecosystem in UAE? Whether this ecosystem can be regarded as a strong ecosystem?
- What is the extent of adoption of cloud computing by organizations in UAE? Does presence or absence of strong system influence the decision of an organization to adopt ecosystem as part of their strategic IT roadmap?

RELATED WORK AND RESEARCH GAP

The main objective of cloud computing is to utilize IT resources effectively by combine the distributed resources to gain higher throughput and be able to resolve large scale computation glitches.

Studies shows that many companies are adopting cloud computing to gain IT operational and cost benefits compare to traditional IT systems. To reduce large CAPEX expenditure, Total cost of ownership and to increase the Return on Investment, business across world are appreciating the speed at which cloud can be deployed with minimum lead time and implementation duration. Instead of building its in-house capability and capacity to manage and support in-house and on-premise IT infrastructure and systems, cloud-based applications and services, storage and processing can be provisioned from cloud service providers.

The demand for storage and computing facility for Internet Service Providers were growing exponentially since the internet boom started in early 90s. Technology giant Google developed their data centers to use cheap commodity hardware platform to meet the growing demand of computing resources .Eventually various software technologies have developed to achieve on demand hardware elasticity which has led 3 major cloud computing style based on underlying hardware abstraction technologies, the Amazon style based on server virtualization pioneered in Infrastructure as a Service (IaaS) under the name Amazon Web Services released in 2006-2007 period. Google style based on technique-specific sandbox provide Platform as a Service (PaaS) called Google App Engine released in 2008. Microsoft Azure works on, windows Azure Hypervisor (WAH) as the fundamental cloud infrastructure and .NET application framework (Qian et al., 2009). Software as a Service (SaaS) provide software applications to end user, Salesforce is a leading provider of CRM software platform.

Back in 2011, organizations in Middle East were not fully aware of the value of cloud and concern about security, data availability and service level agreements (Arabian Computer News, 2011). Even though many organizations in Middle East have exhibited their interest in cloud computing, the implementation rate is not at par with companies based out of US or European region. Most customers are suffering from cloud confusion as the technology stretches across a wide variety of capabilities and not clear about the potentials and the limitations of cloud computing in a well-structured way (Forrester Research, Inc.).

Most of the commercial data centers and telecom companies in the Middle East provide colocation and managed services. Service providers do advertise the availability of disaster recovery (DR) as a service and other infrastructure as a service (IaaS), but on closer inspection, they are not “cloud” services. Specifically, they are not multitenant and do not have elasticity and agility automatically.
Fuzzy Multi-Choice Goal Programming for Supplier Selection
[www.igi-global.com/chapter/fuzzy-multi-choice-goal-programming/64151?camid=4v1a](www.igi-global.com/chapter/fuzzy-multi-choice-goal-programming/64151?camid=4v1a)

A Design Theory for Vigilant Online Learning Systems
[www.igi-global.com/article/a-design-theory-for-vigilant-online-learning-systems/142869?camid=4v1a](www.igi-global.com/article/a-design-theory-for-vigilant-online-learning-systems/142869?camid=4v1a)