Cloud Computing Oriented Services a Comparative Study

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ABSTRACT

Cloud computing is a new emerging trend in Information Technology and Communications. It is the service on an internet by cloud computing service providers. It provides various types of services on internet which are helpful to understand cloud computing task. Cloud Computing applications as being composed of a set of layers upon which distributed applications may be built. These services modules are Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). This paper is an approach to introduced comparative user's utility services offer by cloud computing providers like Google, Amazon and Microsoft.

Keywords: Cloud Computing, Cloud Computing Provider, IaaS, PaaS, SaaS**.**

Introduction

Cloud Computing is the delivery of computing and storage capacity as a service to a community of end-recipients. Cloud computing entrusts services with a user's data, software and computation over a network. Using Software as a Service, users also rent application software and databases. The cloud providers manage the infrastructure and platforms on which the applications run.
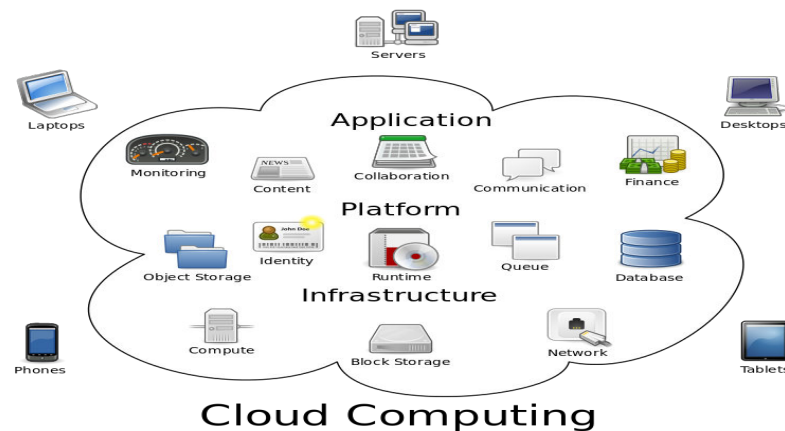
Figure 1: Cloud Computing

Cloud computing is a new technology of data processing in which computer resources and infrastructure are provided to the end user as an Internet services. The user has access to their

own data, but should not care about the operating system, storage device and software he works with. cloud computing is a paradigm in which information is permanently stored in servers on the Internet and access temporarily on clients that include desktop computers, entertainment centers, table computers, notebooks, wall computers, sensors, and monitors (Sosinsky, 2013).

Benefits of Cloud Computing

1. On-demand self service
2. Broad network access
3. Rapid elasticity
4. Measured service
5. Lower costs
6. Ease of utilization
7. Quality of Service
8. Reliability
9. Outsourced IT management
10. Simplified maintenance and upgrade
11. Low Barrier to entry

Cloud Computing Service Model Layers
Table 1: Cloud Computing Service Model Layers

Software–as-a-Service (SaaS)	Platform –as- a- service (PaaS)	Infrastructure-as-a-service (IaaS)
Virtual Machine, server, storage, network.	Operating System, database, web servers, programming language environment.	E-mails application software, games, virtual desktop.

Source: Secondary Data

Software as a Service (SaaS)

 In this layer of service model, Cloud Computing Service Provider (CCSP) provides and is responsible for running and maintaining application software, operating system and computing hardware. The customer views the SaaS model as a web-based application interface where services and complete software applications are delivered over the Internet and are accessed via a web browser (Youssef, 2012).

Example of SaaS providers: GoogleApps, Oracle on Demand, SalesForce. com, SQL Azure.

Platform as a Service (PaaS)

In this layer Platform as a Service, a CCSP provides software environment in which a specific types of development languages, application framework or other construct. The

customer manages and runs the application software under the operating system and on the virtual resources provided by the CCSP. The customer has little or no control over the operating system and hardware resources (Youssef, 2012).

Example of PaaS providers: Force.com, GoGrid CloudCenter, Google AppEngine, Window Azure Platform etc.

Infrastructure as a Service (IaaS)

In this model of Cloud Computing hardware is virtualized in the cloud. The service vendor owns the equipment: server, storage, network infrastructure

in the cloud. It is the responsibility of the customer to run and maintain the operating system and the software applications on this virtual hardware. IaaS uses virtualization technology to convert physical resources into logical resources that can be dynamically provisioned and released by customers as needed (Arutyunov, 2014).
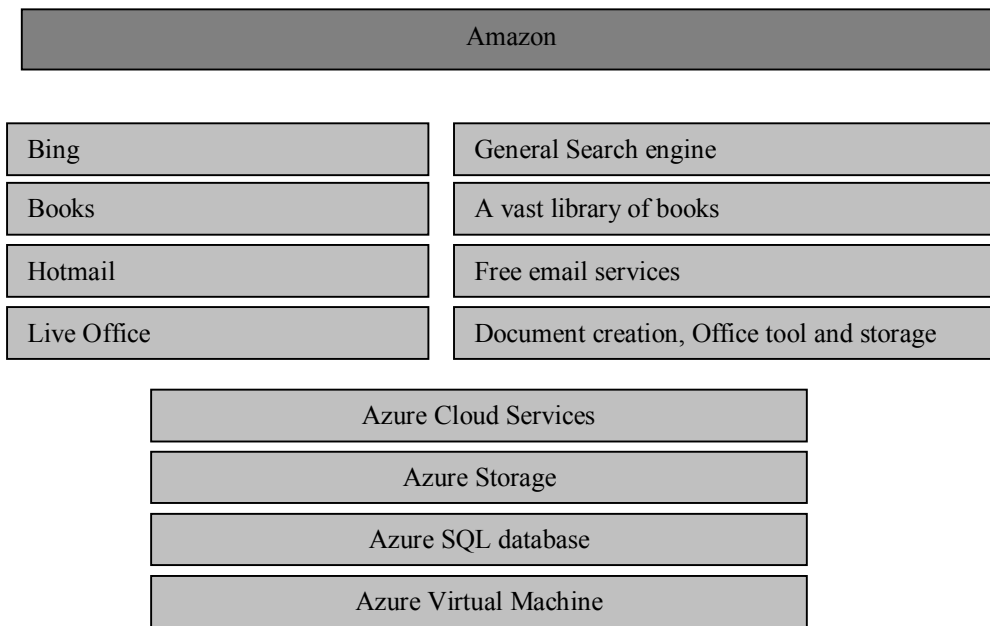
Example of IaaS providers: Amazon Elastic Compute Cloud (EC2),FlexiScale,,RackSpace Cloud,Terremark etc.

Google as a Cloud Computing

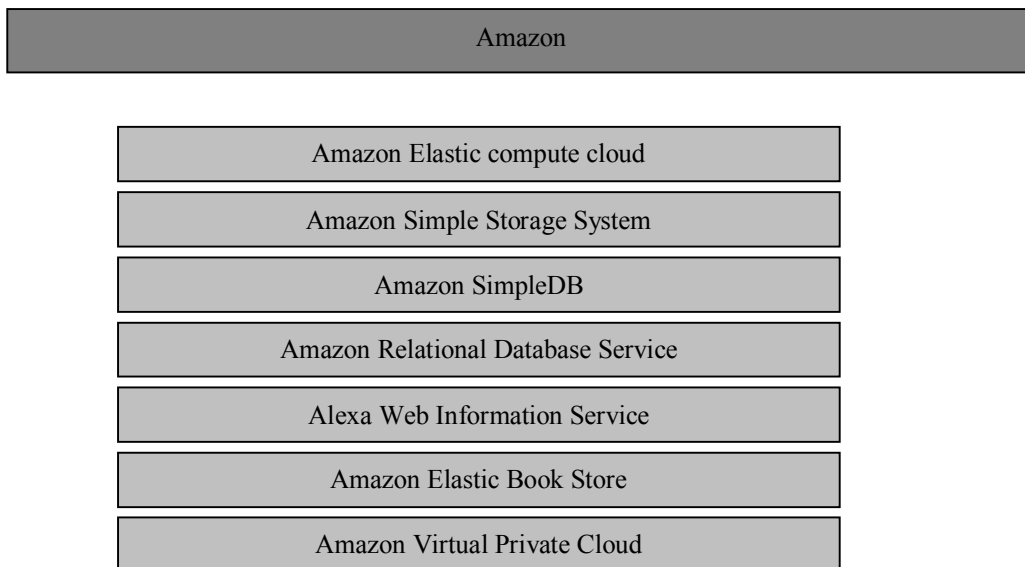| Google	
Books	A vast library of books
Calendar	Calendar service for managing the schedule
Custom search	Web browser
Chrome	Custom search utility for a particular Web
Directory	Search web by topic
Docs	Online productivity applications
Finance	A financial news service
Google Health	Health information management system
Gmail	E-mail services
Image	Web image search
Orkut	Social media service
Maps	Mapping and direction service
Scholar	Search site for search and scholar
Translate	Language translation utility
Video	Search for video on web
Web search	Web search engine
You Tube	Flash video sharing

Figure 2: Google products

Microsoft as a Cloud Computing

Amazon

Bing	General Search engine
Books	A vast library of books
Hotmail	Free email services
Live Office	Document creation, Office tool and storage

Azure Cloud Services
Azure Storage
Azure SQL database
Azure Virtual Machine

Figure 3: Azure product

Amazon as a Cloud Computing

Amazon

Amazon Elastic compute cloud
Amazon Simple Storage System
Amazon SimpleDB
Amazon Relational Database Service
Alexa Web Information Service
Amazon Elastic Book Store
Amazon Virtual Private Cloud

Figure 4: Amazon product

Table 2: Comparison of CCPS Search Engine

CCPS	Search Engine	Page Indexed	Daily Direct Queries
Microsoft	Bing	13.5 billion	Unknown
Google	Google	40 billion	319 million
Yahoo	Yahoo	10 billion	Unknown

Source: Secondary Data

Table 3: Comparison of CCPS Web Mail

CCPS	Product	Released	Mail box Storage	Supported Languages	Maximum Attachment	Account Expiration
Microsoft	Outlook	July 1996	Unlimited	106	24 MB	24 Months
Google	Gmail	Apr 2004	15+ GB	71	25MB	9 Months
Yahoo	Yahoo	Oct 1997	1 TB	27	25 BM	12 Months
Rediff	rediffmail	1997	Unlimited	11	25MB	3 Months
Rockspace	Rockspace	Oct 2007	25	12	50 MB	None

Source: Secondary Data

Table 4: Comparison of CCPS File Hosting

CCPS	File Size	Storage Size	File Expiration
Amazon Cloud Drive	2 GB	5 GB free	None
Asus web storage	500MB	5 GB free	None
Copy	None	15 GB free	90 days for free users
File drive	50 GB	20 GB	None
Google drive	5 TB	15 GB	None

Source: Secondary Data

Conclusion

The internet is the largest publicly available information repository and a natural source of attention. An immediate consequence for information on web becomes a current and important task. In this research paper I focus on various cloud computing service from Google, Microsoft, Amazon and other. Offered Cloud computing applications as being composed of different effective services distributed to the end users. It is further interested for researchers to find out its effect on internet users.

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