

USE OF CLOUD COMPUTING IN INDIAN BANKING SERVICES

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Abstract : The objective of every business is to uplift the profit of business by introducing the products at the global level, In the era of Globalization. Earlier, it was possible with help of export-import, but in the era of computerization, most of the entrepreneurs are launching their new and old products in the market only with the help of mobile applications and this is all possible due to the IT sector. Cloud computing is important concept which plays very important role to increase the efficiency of the business. Most of the banks are offering number of services at the free of cost which are related with the Cloud Computing. Currently, cloud computing covers every business in the market. Most of the Companies are adopting pioneering cloud apps to support their everyday business operations. Banks are adopting this technology due to the increase in competition. In these days, almost every youngster has the smart phone and banks are trying to attract the customers by launching apps which are useful in many ways. So in the present study we will discuss various variant, advantages, disadvantages and solutions that improve accessibility of cloud banking of cloud banking..

IndexTerms- cloud, banking, computing.

I. INTRODUCTION

In this rapidly changing world, where non-traditional competition prevails and even dominates, latest technologies are required either in banking system or in a market to satisfy the consumer who, too have become complex in the complicated world society. Now a days regulator are coming up in the modern set up and banks are required to make necessary technological changes to survive in this nontraditional competition. **Cloud computing** can help the banking sector to introduce the unconventional business model for delivering the better services, better data security, reduced operating cost. Under this model various noncore applications and business operations such as recruiting, billing and organization wide travel management are easily moved to cloud. Because of its own computing power, it can store the information about users preferences which can enable product and service customization. It is internet based system whereby shared resources, software and information are provided to computers and other devices on demand. Banks using this system are able to develop new customer experience, effective collaboration to earn maximum profits and respond to current economic uncertainties.

1.1 What Is Cloud Computing?

The cloud computing is a paradigm shift from mainframe to client server in the early 1980's. It is a digitalized system by which infinite computing capabilities and resources (servers, storage, networks, applications and services) are delivered as a service to customers using internet technologies. Users can access these services available on the internet cloud without having expert knowledge. It is network based system where virtual shared services are offered to customers in standardized and customized form .There are two components of cloud computing such as front end and back end front end is that part which is seen by client i.e. computers. Back end is the cloud itself .it includes servers and data storage devices .The Microsoft Windows Azure platform, which serves as the foundation for developing and running applications in the cloud (and offers all the required development tools, management and services from Microsoft), is built to be flexible and give customers the ability to run the technologies they choose and scale as necessary – paying only for what they consume. For smaller banks in particular, cloud computing is the most cost effective IT solution available on the market today, as it allows them to benefit from the consumption-based pricing model, as well as the scalability of Windows Azure as they grow. It gives customers the ability to run technology according to their requirement and financial budget. The customer makes payments only for those services which is actually consumed by them. A cloud-based model provides rapid acquisition, low capital investment, relatively low operating costs and variable pricing tied directly to use. Cloud computing services operate at several levels: infrastructure as a service, software as a service, platform as a service and business process as a service. There are several different “flavors” of cloud, each bringing its own specific implications for banks.

II THE MAIN VARIANTS ARE:

- **Public clouds**
These are made available to public over the internet and managed by those organizations selling cloud computing services. Examples are Amazon EC2 , Google app .All customer on public cloud share same infrastructure tool with limited configuration and security protection.
- **Private clouds**
Only trusted parties are authorized to use the information presented in a private cloud. Such clouds are managed by organizations itself.
- **Hybrid clouds**

Hybrid cloud is the combination of both public and private clouds depending on the sensitivity of the data and applications in each process, and the degree of business criticality and differentiation. Most banks will follow a “hybrid” cloud strategy which can also be a cloud owned by and located within the bank, but operated by a thirdparty.

➤ **Public “sovereign” cloud**

Public “sovereign” cloud is an emerging variant, under which a public cloud provider commits to keeping the cloud data and processing within a specific jurisdiction. This facilitates compliance with data protection regulations forbidding personal data from passing beyond national borders. The all service layers, regardless of deployment model (private, hybrid, and public), a banking sector must implement a consistent model to govern, provision, and operate activities across all layers. This encompasses provisioning not just the infrastructure, but all components and services required to deploy the bank service, for example, hardware, network services, operating system, database, middleware, application, and third party service provisioning.

➤ **Infrastructure as a Services.**

Many banks are currently building an internal cloud IT infrastructure. This layer is often called IaaS. Various types of resources are offered by IaaS cloud like IP addresses, virtual local area network.

➤ **Platforms as a Servicet.**

It allows the customers to manage their application in a effective way . It also works as a public cloud where customers can manage their software with minimum configuration.

➤ **Business as a Service.**

Various types of services such as retail banking, wealth management, risk management and loan payments are provided with the help of external service providers. Mostly all these services are embraced on the SAP. .

➤ **Collaboration**

Collaboration refers to working together on a comman document. In cloud computing , documents are uploaded to central “ cloud” for storage , which are easily accessible by all users in same format.

➤ **Desktops as a devices**

It is a desktop virtualization service where customers can manage their virtual application by using any device they need. It performs various functions such as data security , personalization , cost reduction and unintruptes data supply.

➤ **Development and testing**

As we know that all industries are different in all aspects .they need different software and hardware for performing their tasks . That’s why cloud computing is playing the vital role to deploy the applications .

➤ **Industry applications**

Enabling payment providers to standardize and modernize transaction processing. now cloud computing is being used by many companies such as automobile , entertainment, education and healthcare.

III ADVANTAGES

➤ **Cost saving**

There is no need to incur extra expenditure on new hardware and software. The fixed cost is converted in to variable cost. It allows the bank to make payments only for those services which are actually consumed by them.

➤ **Business continuity and scalability**

Cloud computing provides high level of data protection, fault tolerance , redundancy and back up at low cost to support growth.

➤ **Data Virtualization**

Cloud banking also supports data virtualization ,because in cloud computing, data is collected from the various external sources in order to provide such data to the users in virtualized manner when it is demanded by them.

➤ **Supports green IT organizations**

It is used to transfer the services in to virtual environment that reduces the energy consumption and leads to the optimum utilization of computer power.

➤ **Flexibility**

There is a higher rate of flexibility.

➤ **Increased storage capacity**

It can store the more data as compared to personal computer.

➤ **Automatic updating**

It saves the companies time and efforts to update the multiple servers.

➤ **Customized setting**

It also allows you to uses their own computer application.

IV DISADVANTAGES

➤ **Higher level of dependency**

Users are totally depended on the service provider. They do not take initiative individually to perform their activities.

➤ **Network problem**

It is internet based system. without internet connection, it cannot work.

➤ **Risk involved**

Risk regarding security and privacy always prevails there.

V SOLUTIONS THAT IMPROVE ACCESSIBILITY of CLOUD BANKING

Cloud computing promises business agility, efficiency and speed at lower costs. In recent times, cloud technology is one of the key enabler of digital transformation. Cloud technologies help organizations to achieve scalability, increase operational flexibility and decrease time-to-market.

Nous as a cloud consulting and implementation partner is equipped with industry centric proven methods, frameworks, multi-vendor alliances that accelerate the migration of your traditional infrastructure to the cloud at a most secured and cost effective manner. Some of our success stories in cloud enablement includes (<https://www.nousinfosystems.com/banking-and-financial-services/solutions/cloud-enablement>):

- Consulting, design and deployment services of KYC solution to cloud
- Engineered a cloud based analytics framework
- Data center transformation to cloud
- Mobile applications implementation on cloud for catering to services like Analytics and Risk and Compliance.

VI CONCLUSION

While banks will benefit in a similar way to other cloud users from this particular offering, especially in terms of lower total cost of ownership, enhance their operations and help them develop new offerings with flexibility and a rapid time to market. Cloud computing may soon prove indispensable as an answer to the daunting new demands for agility, transparency, and efficiency. Shrinking markets and global competition pose numerous challenges for banks – the Cloud offers the speed, flexibility and real-time information needed to meet those challenges on a cost-effective basis. Global economic situation to more stringent regulatory controls, nimble new competitors, and shifting Customer expectations—bankers and others now face a dramatically different market reality. Banks must collaborate and technology must be part of that collaboration. We successfully integrated on promise and cloud-deployed bank sector for web service. The benefits can include not only lower costs, but increased revenue and optimized customer relationships. Cloud computing represents game-changing shifts in how banking services organizations acquire and leverage IT resources. Cloud computing also provides a high level of redundancy and back-up at lower price than traditional managed solutions. The Cloud vendor provided infrastructure services are used to address scalability, performance, security, availability, disaster recovery, monitoring requirements of the systems.

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