

A Study on Cloud Computing Applications in Banking Sectors

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Abstract— Technology changes so fast now a day that whatever we have implemented as smart solution yesterday is a history today. Cloud computing is opening new horizons for various sectors of business as well as banking sector also. The knowledge of Cloud has been built by many years of study in distributed systems, grid computing, parallel processing etc. and can bring a drastic positive change in the present systems. Today cloud computing is changing the scenario of computing. With the help of cloud computing even the High performance computing capabilities are coming within budget. It reduces the concerns of installation and updation on the client side, which reduces the initial project cost for small scale organizations. Everything is going to be on pay per use basis. Whatever technology seems complex is coming under coverage of cloud and being provided as a service to the user and gives its users the reliability, desired, outcomes, and levels of trust necessary to truly usher in a “cloud revolution”.

Key words: Cloud Computing, Banking

I. INTRODUCTION

The first computer in banking was introduced to process checks in 1955. The cloud banking is the future of banking technology. It's just a matter of time before all financial institutions move their technology to the cloud. As banks adopt to market changes and new technology landscape cloud computing is playing a major role providing an alternative way to access core banking technology[1]. Banks that make the switch to cloud computing could get into a subscription model which allows them to pay per branch or per use for accessing certain software and hardware solutions. Also, rather than needing a team of skilled IT workers on site at each branch location, the entire bank can share their talent across the cloud. Cloud computing enables banks to quickly scale processing capacity up or down in order to react to changes in customer demand[5]. Capital One has listed more benefits that cloud computing brings into banking among which are velocity, elasticity, availability and more. A number of banks are now adopting cloud technologies to fulfill their varied purposes. Cloud banking can use information to enhance customer segmentation techniques and to develop more focused services that are aligned with customer needs. Banks also can optimize their channel investments and differentiate themselves through customer service excellence. Perceived cost savings, ease of scaling-in and scaling-out, faster time-to-market for deploy systems, virtualization of enterprise-wide data as a service, enterprise technology standardization, and the ability to access data and applications on the move are all critical consideration factors that can drive financial services firms to adopt cloud computing. There are limitless opportunities for financial services firms to leverage the profit of cloud computing by migrating a variety of applications to the cloud. Non-core

applications and such business processes as recruiting, billing and organization-wide travel management can—and should—easily move to the cloud. A number of transportation operations, such as data center management, data storage and disaster recovery, should also move to a cloud after a thorough costing of different vendors offerings and based on the elasticity of cloud vendors in documenting bond.

II. KEYWORDS

Cloud, data centre, service, virtualization, bank.

A. Potential Benefits of Cloud Computing for Banks Includes:

A banking institution does not need to deploy the computer resources and hardware for storage and also does not need to separately install or pay for the software applications as all these will be given by the service provider. Similarly cloud computing makes it possible to deliver contents and other services over mobiles, ipads tablets and other devices[3]. So cloud computing has a big role and impact on the banks apart from cost saving also.

- Better cash flow and greater financial visibility
- Rapid provisioning and elastic scaling of services
- Allow the IT department to focus on competencies that are core to the business
- Environmental benefits
- Lack of transparency and compliance

B. Challenges for the Cloud to Banks:

Challenge associated with this cloud is of connectivity which is also becoming better and better day by day and also 4G is almost here. For good reason, security and data privacy remain prime concerns for cloud implementers in the banking sector, according to several studies[1]. The fear of having their data “in the cloud” is the single greatest hurdle that banking leaders must overcome to build trust and gain the benefits from cloud computing.

C. Why Collaboration with Technology Partners for Banks?

Collaboration is the future. It is about what we can do together. Collaboration solutions can help banks address their business imperatives. Collaboration can save banks money to invest in the future by allowing them to intelligently reduce costs to fund investments for improvement and focus on profitability and capital efficiency without reducing the bottom line. It can also help banks unlock employee potential by providing them a vehicle by which they can work harder, smarter, and faster, ultimately doing more with less by leveraging their collaborative network[4]. Collaboration is also opportunity. Businesses are looking for new and innovative ways to work with their partners and supply chains, deal with

globalization, enter new markets, enhance products and services, and unlock new business models.

D. Restriction of Cloud Computing in Bank

Access, protection of privacy, culture, education, confidence in providers, standards of interaction with service providers, uncertainties about emerging technologies in cloud computing, cloud services integration with existing infrastructure, support for clients, some of the challenges for banks to move to cloud platform are limitations to move clouds in banking industry[10].

E. Suitable Areas for Moving to the Cloud in Banking Services

The unique feature of cloud computing is the most important, the opportunity to share resources and infrastructure as well as access to them without the need for a platform is necessary for the client. Now banks to reduce the cost of investment in the development of infrastructure and become strategic capital expenditure costs and development services, trend to use cloud computing.

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III. RESEARCH STRUCTURE

The banks that do a lot of work with a limited budget and various cost reduction and saves power consumption and their energy[6]. to gather information on various sectors related to information technology pay a bank the process of selecting a bank to implement information technology services described and criteria, The process of collecting materials is briefly as follows

- Choose the bank, which processes and procedures and also show the bank selection criteria.
- Gather information, which includes the following steps:
- General information banks through public relations and obtained Bank.
- Specialized technical information that was obtained through interviews and questionnaires.

IV. ADOPTION OF CLOUD COMPUTING TECHNOLOGY IN THE BANKING

One of the most important parameters for the use of new technologies in organizations and agencies, the acceptance and adoption of information technology and how to use it in the field of human resources and senior managers and decision-makers in any organization In this research, more than 70% of ICT experts and organizations agree with the implementation of the project for reasons such as increasing the efficiency of IT operations and reducing capital and operating costs and optimize power consumption and energy and money save time and energy consumption of the main

reasons for and advantages of the proposed technology Also 30% of the population of 10 people the main reason for their opposition to the project, security issues and the lack of communication infrastructure and appropriate training and 70% of the reasons for his agreement to reduce cost, increase performance and reduce power consumption were considered.

V. ADVANTAGES

Cost Savings: Business sharpness is determined by the cost an organization incurs. Billing is a non-core process for banks, and out sourcing it to a less expensive mediator allows them to route their capital into core technology-based functions.

A. Scalability:

If well designed, cloud solutions empower banks to meet customer demands and scale quickly and system for peak loads. Banks can tackle the challenges of security and data privacy by devising a hybrid cloud where precise data can reside on a private cloud and computing power can be available on a public cloud.

B. Time to market:

time to market can be reduced from months to weeks or days, depending on the size of a bank [9]. A self-service based, on-demand and Real-time monitored cloud helps by:

- Phasing out procurement delays for computing Hardware and software
- Computing power for when current applications need to deal with peak loads
- Eradicate the capital and time investment for procuring hardware for proof of concept work.

C. Data Virtualization:

Data virtualization is the assimilation of data from multiple and diverse sources across the enterprise or external sources for the on-demand consumption by a wide range of applications in a virtualized manner[7]. Combining such harsh data from public and private domains is a test .Accordingly, accessing that data from a single virtual source would drive scores of data consolidation within banks

VI. PROS FOR ACTUAL LEVEL

A. Reduced costs:

using cloud banks do not have to invest so much in the software, Hardware and labor.

B. Highly flexible:

Cloud Platform provides the ability to respond quickly to Market changes, customer needs but also to respond quickly technological.

C. Faster customer service:

Free Cloud services and products developed and released easily[8]. Banks will be able to increase computing power to meet peak

Demand without having to improving technology.

VII. CONS FOR ACTUAL LEVEL

A. Security and Privacy:

These two concepts are the most important when it comes to date. Keeping in mind that your client entrusts his personal data, shows a very high confidence and the bank must ensure the security and confidentiality of date.

B. Vulnerability:

We have to consider that any system is vulnerable to cyber-attacks, and banks in turn are not protected from hackers.

C. Loss of the application service:

Very much depends on the application and the bank branch.

D. Data loss:

If such an incident data may be lost and this has a financial impact but also legal.

VIII. CONCLUSION

There is a good opportunity for banks to enter into cloud computing and thus offer better and efficient services to its customer. Due to restrictions on access to financial information of the cost of cloud services platform and calculate these costs on a monthly basis, the cost will be effective on results and about the risks of implementing this technology in the banking ownership and operations of their cloud systems.

REFERENCES

- [1] J. Deng, S. C-H. Huang, Y. S. Han, J. H. Deng. Fault Tolerant and Reliable Computation in Cloud Computing. 2010.
- [2] M. M. Alabbadi. 14th International Conference on Interactive Collaborative Learning (ICL)-11th International Conference Virtual University (vu'11). Slovakia. Cloud Computing for Education and Learning: Education and learning as a service. 2011.
- [3] Cloud Computing: What you should Know, ELC Technologies, 2010.<http://www.techrepublic.com>
- [4] Sosinsky, B., 2011, Cloud Computing Bible book.
- [5] Karimkhani, F., Nematzadeh, F., 2014, Above the cloud computing: Banking Operations on the Cloud, 22, 163-171
- [6] "Virtualization vs. Cloud Computing: What's the Difference?" - Sara Angeles, Business News Daily, 2014\\
- [7] "Advantages and Disadvantages of Cloud Computing – Cloud computing pros and cons", Ilias Tsagklis, 23.04.2013
- [8] "Cloud Computing Security – Network and Application Levels" -CloudTweaks.com
- [9] M. Sharma, H. Bansal, A. K. Sharma ,” Cloud Computing: Different Approach & Security Challenge”International Journal of Soft Computing and Engineering (IJSCE) , Volume-2, Issue-1, March 2012 .
- [10]K. Hwang, D. Li ,”Trusted Cloud Computing with Secure Resources and Data Coloring“,IEEE Computer Society.