CLOUD COMPUTING IN BANKING INDUSTRY

[1] Dr. M.Parameswari,[2] A.Arunkumar,[3] A.Ratheeshkumar

[1] Associate Professor,[2] II M.COM (CA),[3] II M.COM (CA),
[1] PG & Research department of commerce (CA),
[1] Hindusthan College of arts and science, Coimbatore-28

_____

Abstract : Banking industry needs to address the ever-growing data input demands, and there is a need to explore the systems that do not rely on like-system migration so that infrastructure can be customized without any disruption. Banks have been slow in adopting cloud computing as there are apprehension regarding lack of control and environment spread out which can lead to reliability issues and security risks. Banks also want their financial data to be secured with controlled access. Public clouds come with the issues such as location, regulation, recoverability and liability, and this has led to slow adoption and deployment of cloud computing in the banking sector.

IndexTerms- Banks, cloud computing,financial Data, Adoption and Deployment**.**

_____

I. INTRODUCTION

Banking industry needs to address the ever-growing data input demands, and there is a need to explore the systems that do not rely on like-system migration so that infrastructure can be modified without any disturbance. Banks have been slow in adopting cloud computing as there are apprehensions regarding lack of control and environment spread out which can lead to reliability issues and security risks. Banks also want their financial data to be secured with controlled access. Public clouds come with the issues such as location, regulation, recoverability and liability, and this has led to slow adoption and deployment of cloud computing in the banking sector. However, cloud computing can change the way consumers cooperate with banks, and migration to the suitable cloud computing model offer several benefits.

II CHARACTERISTICS OF CLOUD COMPUTING:

1. **On-demand self-service:** A consumer can unilaterally condition computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service provider.
2. **Broad network access:** Capabilities are available over the network and accessed through standard mechanisms that promote use by heterogeneous thin or thick client platforms (e.g., **mobile** phones, tablets, laptops and workstations).
3. **Resource pooling:** The provider's computing resources are joint to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand. There is a sense of location self-government in that the customer generally has no control or knowledge over the exact location of the provided resources but may be able to specify location at a higher level of abstraction (e.g., country, state or datacenter). Examples of resources include storage, processing, memory and network bandwidth.
4. **Rapid elasticity:** Capabilities can be elastically provisioned and released, in some cases automatically, to scale rapidly outward and inward commensurate with demand. To the consumer, the capabilities available for provisioning often appear to be limitless and can be appropriated in any quantity at any time.
5. **Measured service:** Cloud systems automatically control and optimize resource use by leveraging a metering capability at some level of abstraction suitable to the type of service (e.g., storage, processing, bandwidth and active user accounts). Resource usage can be monitored, controlled and reported, providing transparency for the provider and consumer.

III ADVANTAGES:

3.1 Cost-saving– The large up-front capital expenditure can be turned into ongoing, smaller operational cost without any bulk funds in new software and hardware.

3.2 Business continuity– In cloud computing, the service provider manages the technology, and banking firms can have higher levels of mistake tolerance, data protection and disaster recover. Cloud computing also offers a high level of back-up and redundancy at lower cost.

3..3 Usage-based billing– Institutions can pick and choose the services based on pay-as-you-go basis.

3.4 Business agility– As the cloud is vacant on demand, the infrastructure savings is minimized, saving the time for initial set-up. The increase cycle for the new goods is reduced, leading to more efficient and faster response to the customers.

35 Business focus– Financial firms can move non-critical services such as software patches, maintenance etc. to the cloud, and can focus on their core business areas, not IT.

3.6 Green IT– Transferring banking services to the cloud reduces carbon footprint and energy consumption, and there is minimized idle time with more efficient deployment of computing rule.

IV SUCCESS FACTORS FOR CLOUD IMPLEMENTATIONS

When considering cloud solutions for financial services, banks should partner to
gain cloud expertise. Cloud services providers should have:

- ■A clearly defined cloud strategy
- ■Demonstrable return on investment
- ■Proven cloud service delivery capabilities

Capgemini has experience advising large financial institutions on cloud computing.
We've developed four key success factors that banks should consider when launching cloud initiatives:

4.1 Clearly define the ROI for cloud-based projects.

Banks should be cautious about making significant investments in cloud computing until tangible benefits
are available. As a first step, cloud providers should give details the costs and implications of migrating existing banking applications and infrastructure to the cloud.

4.2 Choose service providers with proven expertise in cloud services management.

Banks should use a road map to best manage cloud services delivery programs. Service providers who have invested in pilot projects will have real-world experience and business cases for cloud computing initiatives. Banks can start small with less significant applications such as CRM and then move on to core business applications.

4.3 Sign outsourcing contracts that use pay-per-use cloud delivery models.

For cloud initiative, banks need service level agreements (SLAs) that link billing to consistent system performance.

4.4 Understand data confidentiality and regulatory requirements.

Banks may need to keep sensitive data within firewalls to fulfil local regulations and client good judgment requirements. Therefore, private cloud-based operating models are currently a better first selection than public or hybrid clouds. As public clouds gain trust and confidence among consumers, banks can gradually transition to these models. Initiatives such as the Cloud Security agreement 1are looking at these concerns. But to best take advantage of cloud computing, banks must have a clear understanding of privacy and regulatory issues to make informed decisions.

V CONCLUSION

As the technology matures, cloud computing is bound to have a wide range of applications in the financial sector in the future. Generally speaking, cloud computing solutions can be firstly adopted at banks' secondary businesses, and then gradually move closer to their core businesses. For big banks, they can start from "private cloud" to improve IT infrastructure security and high availability of IT infrastructure, and achieve on-demand IT infrastructure services; on this basis, large banks can gradually try "public cloud" and "hybrid cloud". Relative to large banks, small banks are limited in capital, technology, talent and other resources. So these banks are clearly difficult to enterprise their own data centers because of the high cost. For many of the small banks, adopting the public financial cloud services of cloud service providers should be a better choice. As for the cloud service providers, they should do greater investment in security and to advance understand the objective needs of the banking industry, thus to work out cloud computing application solutions with high availability, high business connection and high flexibility that are enough to support the banks' business development requirements.

REFERENCES:

[1] 1.Sunita Rani and Ambrish Gangal, 2012.SECURITY ISSUES OF BANKING ADOPTING THE APPLICATION OFCLOUD COMPUTING, International Journal of Information Technology and Knowledge Management, Volume 5, No. 2, pp. 243-246.

[2] 2.Shi, W.,Y.Lu,Z.Li, and J. Engelsma (2011) "SHARC: AS calable 3DG raphics Virtual Appliance Delivery Framework in Cloud,"Journal of Network and Computer Applications(34)4,pp.1078–1087, doi:10.1016/j.jnca.2010.06.005.

[3] 3. Lin, Y.–K., andP.–C. Chang (2011) "Maintenance Reliability Estimation for a Cloud Computing Network with Nodes Failure,"Expert Systems with Applications(38)11, pp. 14185-14189, doi: 10.1016/j.eswa.2011.04.230.

[4] 4. Q. Chen and Q. N. Deng , "Cloud Computing and its Key Techniques", Journal of Computer Applications, vol. 4, pp. 25-62, July 2009 Bart Narter, "Banking In The Cloud"

[5] 5.T. Velte, A. Velte and R. Elsenpeter. Cloud Computing, a Practical Approach. New York: McGraw-Hill, Sep. 2009.

[6] Berger, A.N. (2003) The Economic Effects of Technological Progress: Evidence from the Banking Industry, Journal of Money, Credit, and Banking, 35, 2, 141-176.

[7] Dr. Rao Mikkilineni, Vijay Sarathy. Cloud Computing and the Lessons from the Past.2009 18th IEEE International Workshops on Enabling Technologies Infrastructures for Collaborative Enterprises.