

# **CLOUD COMPUTING FOR BANKS – BENEFITS AND CHALLENGES**

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## **Abstract**

Banking industry have many of the same IT challenges like any other industry like the need for application of modernization and a pressure to use data to build and retain better customer experiences and relationships . At the same time, banking firms also face some of the most stringent security issues and compliance standards of any industry. Customer is the king of each and every organization. So banks also need to react and cope up with the new customer and technology driven environment with lot of innovations in each model and operations. Cloud computing is one such solution that provides a platform for bettering the services offered by creating and extending the kind of innovative services that helps to become a successful financial enterprise according to the changes and customer preferences. Cloud services deliver remarkable performance that empowers the banking industry to automate and manage their processes. This study is an attempt to know the benefits and challenges of cloud computing for banks.

## **Keywords**

Banking, Cloud computing, Cloud

## **INTRODUCTION**

Cloud computing is making its presence felt in almost every business sector across the globe and the banking sector does not want to be left behind. Cloud computing is an advanced IT technology that allows individuals and organizations to utilize the

internet for tapping into robust hardware and software programs and tool. The resources from where they can utilize these services are usually powerful and sophisticated computers placed in remote locations for safety purpose. **Cloud computing** is the deliverance of compute services—servers,

storage, databases, networking, software, analytics and more – over the Internet. Companies provide these computing services are known to be the cloud providers and typically charge for cloud computing services based on usage, similar to how you are billed for water or electricity at home. Cloud services are delivered on demand. Cloud computing has become a one-stop solution for all the hurdles related to any kind of information. Mainly in the concern of banking and Finance sector, cloud computing made many things easier like interoperability, secure storage, 24×7 uptime, etc. This advancement in IT sector led to many extreme changes in a way of treating information. Instead of using a traditional way of storing the info ample of new techniques like big data, machine learning & AI, came into the picture to store and function the information directly via internet.

In last decade, Banks have observed transformation of banking experience end customers led by Information Technology (IT) enabled solution and services such as Core Banking, Internet Banking, Mobile Banking, Wallet, Cards and Kiosk Banking. Both banks and their customers are

advantaged by the evolution of IT in banking sector. The business hierarchy of Banks are now concentrated around achieving customer delight through IT enabled solutions and services.

A big slice of Banks' annual budget is now being divided to their IT department. To meet the demand of authoritarian and customer satisfaction banks need to waste more on procuring and maintaining IT Solutions, IT hardware, system software and Networking. Banks with lesser financial background find difficulties to meet the aspiration level of IT Implementation due to higher capital expenditures.

Cloud computing can help banks to lower the capital investment in IT infrastructure. Cloud computing converts big capital expense into smaller operational expenses. Worldwide not only smaller banks but larger banks too are now perceiving vision to adopt cloud based IT solutions to control the expenses on IT infrastructure.

Cloud technology enables banks to adopt a new model at lower cost for delivering innovative channels, reduced TAT to market new offering, meeting customer expectation and comply regulatory guidelines. Cloud based solutions deliver a higher value

proposition of IT solutions and services in rapidly changing technical paradigms.

In cloud computing, system admin can remotely assemble, install, configure and deploy virtual resources to run the business solution. Moreover, cloud IT infrastructure can be expanded or reduced at any time based on the expected utilization and requirement without any astonishing financial burden.

### **The key benefits of the cloud**

#### **Cost Reduction:**

As banks are spared the hassle of investing in dedicated hardware, premium software and skilled professionals, moving to the cloud can prove to be a major money-saver. Most providers offer free update for the cloud and IT infrastructure. By using the pay-on-demand model, they will have to pay only for technology that's needed for smooth day to day operations.

#### **Offers High Flexibility and Scalability:**

With cloud technology, banks can keep pace with the changing market and respond to needs of clients faster than before. Technology can also be utilized on a need basis thanks to the high scalability and flexibility associated with cloud technology.

#### **Improves Efficiency:**

With newer and user-friendly technologies easily accessible, banks will be able to optimize utility of all resources effortlessly. The cloud also makes it easier to integrate newer technologies and applications within the system for achieving better results in the future. As all key tasks are simplified, efficiency is the major gainer of employing cloud technology.

#### **Helps Serve Clients Better And Faster**

With cloud computing solutions customized for banks, professionals can create bundled products and services easily. If you need a specific type of hardware or software solution, you can simply go ahead and develop it instead of having to wait for a long time. Computing power can be increased to meet growing demands of the industry. Clients can benefit immensely as key services can be delivered speedily. Unlimited computing power of the cloud will allow banks to develop systems capable that can make them understand the needs of the clients better. They can create customized solutions that can help them offer high quality services consistently.

**Enhanced Security:** NetAnd Host's cloud computing services provide a high level of security for bank's private information and systems. The data centers go through tremendous testing against attacks and are hardened with stringent authentication methods. The robust APIs are the secure pillars of NetAndHost's cloud security. We understand the criticality of bank's security

requirements and constantly keep updating our systems with latest security applications. Our 24/7 dedicated support safeguards your data and provides constant assistance to address your queries.

With these technologies, banks can streamline and automate processes more quickly and easily than ever before. By automatic manual processes, bank employees can concentrate on more strategic and customer-facing activities, which increases an extra layer of value and productivity to their role. Such automation also reduce the likelihood of costly human errors, enabling banks to organize larger volumes of transactions while reducing unnecessary spending. This also means banks are able to offer customers a larger suite of services, which are easy to upgrade, available on a range of platforms, and potentially at lower prices.

Such that the cloud computing models are ready to aid the banking sector in ample of ways, but the banking industry has serious concerns about their sustainability. Some of their core and prominent concerns are security, privacy, confidentiality, data integrity, and authentication requirements, along with location of data, availability, and recoverability.

## **Challenges**

When a bank moves into cloud computing, there are two foremost challenges that must be noted:

**Security** : The confidentiality and security of financial and personal information and mission-critical applications is paramount. Banks cannot balance the risk of a security breach.

**Regulatory compliance** : Customers are more responsible for the safety and reliability of their own information, even when it is held by a service provider. Traditional service mainly focusing on to external audits and safety certifications. Many banking regulators needs more financial information for banking customers exist in their home country. Certain compliance regulations needs that information not be intermixed with other data, such as on shared servers or databases. The banks must have a clear understanding of where their data resides in the cloud. Financial institutions must adopt the right service, deployment, and operating models to address security and compliance concerns. In the cloud computing adoption, it is predictable that banks will own and

govern the cloud themselves with service providers taking increasing ownership and control of the cloud infrastructure. There should be a clear cut strategic policy for cloud computing and management, prioritizing data that can be entrusted to the cloud operator, with clearly defined service level agreements (SLA) with milestones and a set timeframe, backed by a wide-ranging governance structure. While selecting the cloud service provider, it is core to look into the firm's financial stability, ability to progress functionality and service levels and integrate data across various technology platforms and cloud services. The policy-based core management, with industry-standard encryption, is rising as the cryptography model for superior control on information in the cloud as the common encryption key management techniques are disposed to vulnerability. Cloud security services are emerging to address data security, privacy and compliance risks, as well as prevention of data theft, ensuring disaster management, and detecting compliance violations with robust server security for virtualized data centers.

### **SECURITY RISKS**

**Privileged user access:** There resides sensitive data that is processed outside the organization inherent risk of safety of information because outsourced services bypass the “physical and logical IT controls”.

- **Regulatory compliance:** Customers are accountable for the safety of their information. Traditional service providers are mainly focusing to external audits and safety certifications.

- **Data location:** When users use the cloud, they have no awareness about the hosted information. Allocated information storage is a core reason of cloud providers that can cause lack of control and that is risky for customers.

- **Data segregation:** As cloud is mainly in a shared environment in that data can be shared, so there is the risk for data loss.

- **Recovery:** It is very important to recover the information when some problem occurs and creates failure. Cloud services are mainly difficult to investigate, because logging and information for dual customers may be co-located and may also be spread across an ever-deviating set of hosts and information centers.

- **Long-term viability:** The cloud computing provider will never get acquired

by a larger company with maybe new policies. But clients must be positive with their data will remain available even after such an event.

## CONCLUSION

Cloud computing is a broad range of specifications that banks need on a flexible basis.

It aids the bank to transform the entire business processes and thereby increases the ability to grow in new sectors without the involvement of the cost burden. It create new markets to distinguish from the competitors and improvise on the modes or mediums through which the customers use the services of banks. By this method banks would be capable to offer consistent service to customers across branches and closely understand the information

irrespective of the location they reside. But inspite of these benefits it has to face a lot of challenges and risks. There is a need to design a proper network and architectural solution to overcome these challenges.

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