

# CLOUD ADOPTION IN INDIAN BANKS

<sup>1</sup> Gayathri.A,<sup>2</sup> Nikunn.S

<sup>1</sup> Department of commerce (P.A)

<sup>1</sup> KG College of Arts and Science

**Abstract :** Cloud computing is an on demand delivery of compute, storage, applications, and other IT infrastructure with metered payment based on usage. Cloud Computing (CC) helps to reinvent and optimize relationship with technology for quickening go-to-market, automating and strengthening security, increasing stakeholder value and customer experiences while reducing costs. Using CC, banks and payment organizations around the world are optimizing operating operations that range from customer service delivery models to risk management and building a foundation for long-term innovation and growth. CC provides access to the larger ecosystem of consulting and technology partners and business solutions that elevate its performance. Banks can scale and employ resources as needed and pay for what is used without large upfront capital investments. In this paper we are going to present the paper on cloud adoption in Indian banks .

*IndexTerms-* Cloud computing in banks, Essential, Reason, Benefits.

## I. INTRODUCTION

Cloud computing is an on demand delivery of compute, storage, applications, and other IT infrastructure with metered payment based on usage. Cloud Computing (CC) helps to reinvent and optimize relationship with technology for quickening go-to-market, automating and strengthening security, increasing stakeholder value and customer experiences while reducing costs. Using CC, banks and payment organizations around the world are optimizing operating operations that range from customer service delivery models to risk management and building a foundation for long-term innovation and growth. CC provides access to the larger ecosystem of consulting and technology partners and business solutions that elevate its performance. Banks can scale and employ resources as needed and pay for what is used without large upfront capital investments.

Cloud computing can help banks to lower the capital investment in IT infrastructure. Cloud computing convert's 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.

## II. ESSENTIAL CHARACTERISTICS OF CLOUD COMPUTING IN BANKS

There are five essential characteristics of CC, which mean that if any of these characteristics is missing, then it is not CC, and these are as under:

- . On-demand Self-service: Banks can request and consume a cloud service without interaction with the selected service provider based on their need.
- A. Resource pooling: provider pools the resources (applications, storage, bandwidth, virtual machines) to service many banks using a multi-tenant model.
- B. Broad Network Access: Cloud resources are available over network and access to network is available through multiple devices such as laptop, smartphone and table, etc. This network connectivity from CSP datacenter to end user may be through internet or bank' LAN depending on the application deployed. For sensitive applications that contain customer data, the access would be typically from CSP datacenter to bank datacenter and end users access it through the LAN/WAN of the bank
- C. Rapid elasticity: Elasticity is the ability to scale-up or down computing resources (cores, storage and RAM) in real-time as per need'
- D. Measured Service: Provider transparently meters and measures services, monitors controls and documents service usage for billing just like any other utility metering.

## III REASON FOR ADOPTION OF CLOUD COMPUTING IN BANKS

- 1 Reduced costs
- 2 Improved flexibility
- 3 Auto scalability
- 4 Improved operational efficiency and Business agility
- 5 Efficient client service
- 6 Business Continuity

## IV. BENEFITS OF CLOUD COMPUTING IN BANKS

### 4.1. Area

The fundamental difference between CC and traditional IT is the cloud model banks pay only for the resources consumed instead of investing heavily on datacenters and serves before using them.

### 4.2. Benefit from massive economies of scale

Can achieve a lower variable cost because millions of customer's usage is aggregated in the public cloud. Typically, Cloud Service Providers (CSPs) have higher economic of scale, which translates into lower, pay-as-you-go prices. CSPs focus on reducing datacenter hardware costs, improving operational efficiencies, lowering power consumption to passing the saving back to consumers.

### 4.3. Scalability

Combining software-defined infrastructure with CSP products featuring modern programming methods let's banks design their system to rapidly scale resources (and their costs) up or down based on actual demand on.

### 4.4. Access to greater service breadth and depth

Allows customers to access industry-shaping technology quickly, at an affordable cost, no matter what the scale. CC provides access to cutting edge technologies and services that range from compute, storage, networking, database, call center automation, IoT, mobile and more.

### 4.5. Increase speed and agility

New IT resources are only a click away, which means you reduce the time it take to make those resources available to your developers from weeks to just minutes. This result in a dramatic increase in agility for the banks since the cost and time it takes to experiment and develop is significantly lower.

### 4.6. Global footprint

Allows banks to deploy application in multiple regions around the world with just a few click with lower latency and a better experience at minimal cost. However, the data sovereignty need to be validated before deployment as it varies from country to country.

### 4.7. Focus on core Competencies

The ultimate benefit of the cloud is that banks can spend less time on undifferentiated tasks and more time focusing on the core competencies that add value to their organizations.

### 4.8. Security and compliance

Banks can benefit from far greater security postures in the cloud than they can achieve in traditional datacenters. CSPs design and manage their platforms in alignment with the most stringent of global regulations, standards, and industry best practices.

## V. BANKS NEED TO DO GET READY FOR THE CLOUD

There could be extensive preparations, such as optimizing hardware for faster bandwidth or training staff to understand the new operating model including monitoring. As a first step, most of the banks could do a portfolio analysis/assessment to identify applications and IT requirements that can move to cloud with internal resources or by leveraging external consultants.

At this stage, it should be clear which applications are appropriate for what type of cloud. E.g. some applications may be suitable only for Private Cloud, some for Hybrid Clouds and some may be best deployed in a Public Cloud environment. Once the application assessment and high level plan is ready, banks should perform cost benefit analysis. Banks may seek the approval of IT Steering Committee and/or Board approval with a Cloud Policy document.

The policy document may contain an overview on cloud computing, Benefits, Risks and Challenges and broad plan/strategy on adoption. After the policy document has been finalized, banks must evaluate carefully which CSPs will be best suited for the set of applications being considered for cloud. Although most of the major CSPs have similar cloud services and features, it's very important to objectively select the best CSP based on application characteristics and bank's requirements. At this stage, banks may also directly interact with CSPs or engage an SI for leveraging private/community/public cloud based on the requirements.

### 5.1. For Public Cloud Adoption:

Banks could assess areas that cloud use SaS for scale as against on premise software. Some of the possible areas are CBS (for smaller banks), HRMS, Knowledge Management Solutions, CRM, e-mail, etc. Banks could establish a direct connectivity from their datacenters to the CSP for establishing hybrid integration as well as for accessing application deployed on public cloud.

### 5.2. For Private Cloud Adoption:

Application that have continuous IT resource requirement or application requiring hardware/OS refresh/upgrade could cover the initial scope. Based on improved comfort in cloud usage, banks can extend it for other applications and also adopt Community/Public/Hybrid cloud subsequently. Banks should also hire/have skilled IT resources to identify suitable application and migrate to the cloud.

### 5.3. Banks save by using cloud computing services

There are many aspect (reduction in capital expenditure and related opportunity costs, people costs, time to market, etc.) to the IT saving that bank can achieve by using cloud computing services. Based on some of the industry studies, banks can expect to save more than 20% of the cost of running a premises-based application by moving to a cloud-based service (SaaS). Cloud Navigator/Metering tools can determine more precisely IT saving by moving to cloud-based services.

## IV. CONCLUSION

Here is where a deep dive into costs and benefits can come in handy. Banks should get a complete understanding of all cloud-related expenses (e.g. hardware upgrades, monthly fees and outsourced IT consulting), and then compare with what it might cost to run the same level of computing in-house. It is very important to consider all relevant cost parameters while compiling the TCO for a three or five year period, include the spend/effort on productivity and revenue loss during patch upgrades/rollbacks as well. Many companies save money through cloud computing because they do not have to revamp their infrastructure and hire addition IT staff to realize productivity gains. While moving to the cloud, apart from cost, other parameters like agility, operational efficiency, protection against infrastructure obsolescence, security posture, the agility, operational efficiency, protection against infrastructure obsolescence, security posture, the range and breadth of services available from the CSP are equally important.

Cloud Computing benefits both large and small banks. For example, smaller banks need not invest in CapEx-driven infrastructure and can start their operations quickly with faster development and deployment cycles. Larger will benefit from environment like High Performance Computing, Risk Management, etc. Simultaneously, CC provides small and medium-sized banks economically attractive access to professional IT operation and resources that were previously reserved for companies with much larger IT budgets.

