**Cloud Computing in Banking**

Cloud services are on-demand services that provide access to shared resources, applications, or storage over the Internet. It enables banking institutions to store & process data in remote servers instead of local systems.

Here’s some insight into cloud adoption by banks:

* By building its cloud, [Bank of America has saved $2 billion annually](https://www.businessinsider.in/finance/news/bank-of-america-bucked-the-wall-street-trend-and-made-a-350-million-bet-on-its-own-internal-cloud-160and-the-payoff-has-been-striking/articleshow/71623072.cms) (on annual infrastructure savings). It helped reduce the firm’s servers to 70,000 from 200,000 and its data centres to 23 from 60
* [Wells Fargo is leveraging MS Azure](https://newsroom.wf.com/English/news-releases/news-release-details/2021/Wells-Fargo-Announces-New-Digital-Infrastructure-Strategy-and-Strategic-Partnerships-With-Microsoft-Google-Cloud/default.aspx) as part of its digital transformation focus and has moved strategic business workloads, including data centres, to the cloud
* [Goldman Sachs uses Amazon Web Services (AWS) solutions](https://aws.amazon.com/blogs/industries/goldman-sachs-a-legacy-financial-services-firm-transforms-its-operations-on-aws/) to transform the way it operates internally—from automated digital forensics to digital supply chain and procurement

**Applications of Cloud Computing in the Banking Sector**

Cloud services provide easy access to storage, apps, and shared resources enabling banks to analyse data in remote servers with faster processing speeds and enhanced security.

Fraud Detection & Prevention: Banks use cloud services to integrate fraud detection capabilities into their banking system. It enables them to analyse massive amounts of data from several sources and detect suspicious activity in real-time to prevent bank fraud.

Data Analysis: Banks use cloud-based analytics platforms to extract insights into customer segments, needs, patterns, and trends. Real-time data analysis lays the foundation for personalization and active engagement across touchpoints, which is impossible with legacy infrastructure. With instant access to deeper insights, banks can better understand customer pain points and buying behaviour to build loyalty and drive conversions. Banks use cloud-based analytics platforms, like Microsoft Azure & Amazon AWS.

Customer Relationship Management (CRM): Cloud-based CRM systems enable banks to manage customer data and interactions. They allow financial institutions to keep track of all customer interactions, regardless of location or time of day. And with the right cloud strategy, banks can truly offer personalized service based on customer needs and preferences.

**Cloud Deployment Models**

Banks using legacy systems running on an on-premise data center may find it daunting to modernize and migrate to the cloud. Fortunately, they can take an incremental approach if they don’t want to opt for an all-in-one cloud model. Banks can use a mix of hybrid and multi-cloud solutions based on their business needs, readiness, and maturity.

* **Private clouds:**Managed & governed by a third party that works in-house or the bank itself. Banks usually prefer private clouds for hosting their services as it ensures greater flexibility, security & control as it is deployed within the enterprise’s firewall.
* **Public clouds:**This IT model is easily accessible to the banking sector for owning, managing & sharing cloud services. Banks looking for economies of scale can opt for the public cloud.
* **Hybrid clouds:**Comprises the best from private and public cloud services environments that can be used separately for specific use cases. This model enables standard data management for both private and public clouds. It allows deploying the system on a private cloud while scaling with the help of a public cloud whenever needed.

**Cloud Service and Deployment Models**A diagram of a cloud service

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The Four main types of cloud services that banks can choose from:

**Business Process-as-a-Service (BPaaS**) – This model is used for standard business operations such as billing, payroll and human resources.

**Software-as-a-Service (SaaS):** This cloud service consists of mission-critical business software and its corresponding data that end-users can access on their web browsers. The systems hosted on SaaS solutions include accounting & invoicing, customer relationship management, **content management, and service desk management.**

**Platform-as-a-Service (PaaS):** This service delivery model offers a comprehensive development and deployment environment. It typically includes database development, web server, operating system, interface & software & hardware tools for hosting cloud-enabled enterprise apps. PaaS helps streamline the development, maintenance, and support of custom apps

**Infrastructure-as-a-Service (IaaS):** This cloud service model allows banks to use virtualized computing resources, including software, servers, and data centers, on an outsourced model instead of purchasing them.

**CLOUD COMPUTING BANKING MARKET**

**A graph of blue and yellow bars

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The Software as a service (SaaS) segment holds the highest market share in 2022, as it provides personalized services, accelerates throughput and reduces operational costs.

**Cloud Operating Models**

Choosing a suitable delivery model with the required mix of resources and assets is vital. Rishabh Software works with global customers across the listed three operating models:

* **Virtual Captive:** This model provides a dedicated pool of experts or centres to help with cloud operations and meet demand. It is an excellent alternative to an absolute outsourcing approach.
* **Leverage Skilled Talent:** Banks can achieve cloud proficiency by employing experienced people with the right skills from cloud service providers. This operating model allows banks to hire the best resources for their unique business needs and unleash new ways of working.
* **Outsourcing Vendors:** In this operating model, offshore centers, facilities, and resources from third-party vendors manage operations. It blends resources and investments to cater to the services of multiple banks.

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