THE VIRTUAL MIGRATION:
How the Public Cloud Transforms IT Strategies

INTRODUCTION

Cloud services are transforming business operations and information technology (IT) in various industries, including the financial sector. Driven by innovation and expanding capabilities, cloud adoption among financial institutions has accelerated in recent years. As institutions navigate an increasingly complex environment of regulatory requirements and strive to meet customer demands, the cloud can provide a reliable, accessible and compliant IT infrastructure while optimizing costs.

Due to the availability of affordable, high-speed network connections and meaningful security enhancements—including controlled network access and the use of artificial intelligence to identify risk—the possibilities awarded by the cloud far exceed those of even a few years ago. With the prevalence of remote workforces, many organizations are favorably viewing the resilient, highly available IT environments provided by cloud technology and prioritizing a migration strategy.

This white paper will provide an overview of the cloud, discuss the benefits of adoption for financial institutions and break down common misconceptions about migrating IT infrastructure to the public cloud.

TYPES OF CLOUD ARCHITECTURE

Though available in different forms, the cloud is simply a service delivery model. The primary difference between physical, onsite servers and the cloud is in the method of service delivery. Referred to by IBM as "one of the most important shifts in the history of enterprise computing," adoption of the public cloud is growing as organizations become more familiar with the variety of benefits this technology provides.[1]

Generally, the public cloud refers to a type of cloud computing in which resources are publicly available for subscription and consumption by any organization. Common examples of the public cloud include Microsoft® Azure, Amazon Web Services and Google Cloud Platform. In this type of delivery model, the provider owns and manages the infrastructure, removing that burden from the customer.

With the private cloud, the infrastructure can be hosted in a provider's datacenter or on-premise at a customer's institution. Although a customer can manage their environment in the private cloud, the provider may own and operate the environment on their behalf.

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Instead of public availability, a private cloud infrastructure is only available to specific customers of the provider. Further, many institutions opt for a hybrid cloud environment, maintaining some data on-premise and deploying other applications or infrastructure through a public or private cloud. A hybrid cloud approach allows an institution to continue using legacy applications that cannot be migrated to the cloud while offering the flexibility to run new cloud-enabled applications.

A private cloud is an option for institutions seeking greater control over the underlying hardware, operating systems and management systems in the IT environment on which their production applications run. But the public cloud often provides institutions with a more scalable, accessible and cost-efficient infrastructure.

And since the public cloud supports more digital and remote operations, cloud usage is likely to continue growing among financial institutions. In a recent survey from Celent, more than half of financial institutions reported they expect to run their workloads in a cloud within five years.[2]

There is no one-size-fits-all option when it comes to cloud computing, so institutions should weigh the benefits and drawbacks of each cloud architecture before developing a migration strategy.

BENEFITS OF THE PUBLIC CLOUD

Security and Compliance

A secure, cloud-based infrastructure ensures compliance with regulatory requirements through proper configuration and security measures, providing institutions with peace of mind during daily operations and audits. By partnering with a public cloud provider, many compliance challenges and responsibilities are outsourced, allowing the institution to utilize a provider's established compliance framework. A McAfee study recently found that over 50% of organizations experience better security in the cloud compared to on-premise IT environments.[3] Additionally, most trusted public cloud providers have invested large amounts of capital in security measures that would be unattainable and unsustainable for most organizations maintaining their infrastructure onsite.

Scalability

If relying on physical servers, an institution must anticipate future needs, essentially sizing current operations from where the institution expects to be in the future. By migrating IT infrastructure to the public cloud, institutions can start with what is needed and scale accordingly, which yields greater flexibility, agility and potential cost savings. Migrating to the public cloud allows institutions to easily add more resources to their environment while enjoying cost efficiencies from scale.

Cost Efficiencies

Out of necessity, many institutions buy as much infrastructure as their budget allows. This practice results in waste if the institution only utilizes a portion of the infrastructure purchased. And for many institutions, building and maintaining their own IT infrastructure is too expensive. With the public cloud, institutions can purchase exactly what they need at any given time and expand their infrastructure to support business growth when necessary. The potential cost savings extend to include all the benefits of a large environment—such as built-in redundancy, availability and disaster recovery capabilities—without an institution having to financially cover these features directly. The public cloud allows institutions to reap the benefits of a managed IT environment without bearing the entirety of the expense.
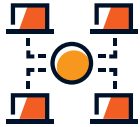
Highly Available

With a highly available infrastructure in the public cloud, an institution will have a resilient and redundant IT environment. Even if a single server malfunctions, the redundancy of operations offered by the public cloud allows another piece of hardware to take action without negatively affecting the customer experience. With the level of availability offered by the public cloud, it would take a catastrophic event to fully interrupt service.

Agility

The public cloud also allows for easy incorporation of new services for customers, increasing speed to market compared to other service delivery methods. With on-premise servers, an institution could face weeks or months of waiting for hardware, installation and licensing before deploying a new service. The public cloud offers a much quicker alternative, as an institution could launch the same service within hours or days. The public cloud's agility and streamlined deployment also encourages and supports innovation.

Accessibility

The public cloud is readily accessible, which presents a valuable benefit for institutions managing a remote workforce. Institutions can use an increasing range of high-speed connectivity options to interact with cloud-based resources. And with proper controls, these dispersed connectivity options become an extension of the institution's private network as well.

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ENHANCING USER EXPERIENCE WITH VIRTUAL DESKTOP INFRASTRUCTURE

A key consideration for institutions developing a public cloud strategy should be the inclusion of virtual desktop infrastructure (VDI), which is hosted in the public cloud and builds upon the benefits of this technology. As the next logical evolution of business, VDI provides enhanced mobility for workforces.

With a properly structured cloud service that includes hosted virtual desktops alongside servers, users will have a uniform experience no matter where they connect from and which device is used. If employees have network connectivity, they are no longer confined to a particular office or building but can use virtual desktops to perform their jobs without facing challenges of security or latency.

VDI removes the physical barrier that previously constrained digital channels, empowering organizations to easily pivot their business operations should the need arise. With virtual desktop hosting, desktops and servers share the same environment, so latency is not introduced as it might be if applications were running over a virtual private network (VPN).

While some institutions plan on reverting back to legacy business approaches, forward-thinking organizations are embracing the new reality with VDI. Launching VDI or incorporating virtual desktop access as a component of a public cloud strategy will open considerable opportunities for institutions as they navigate the changing landscape of remote, in-office and hybrid workforces.

WHAT'S LIMITING PUBLIC CLOUD ADOPTION?

While some financial institutions are exploring the benefits of public cloud, others are hesitant to move toward a complete cloud migration. CSI's 2021 Banking Priorities Executive Report revealed that nearly 60% of bankers did not have enough information about investing in the public cloud.[4] For years, risk-aversion also contributed to the slow pace of adoption, but as more information becomes available, institutions are more likely to embrace the cloud on some level.

A common misconception about migrating to the cloud is that the transition must be an "all or none" event, meaning that everything occurring on-premise must be moved to the cloud all at once. While there may be instances where that is the case, institutions can deploy a hybrid environment in which some of the infrastructure remains on-premise. The idea of an all or nothing transition deters some institutions from even considering the cloud, but the reality is many organizations already utilize cloud applications in their daily operations. Any institution with

employees using Office 365, Dropbox or even a hosted core platform is already in the cloud.

Since security breaches often make the news, another common misconception involves security or vulnerabilities. While cybersecurity is a concern for any organization, financial institutions must be extremely vigilant due to the risks involved in a breach. For this reason, securing an institution's data in the public cloud is paramount. Partnering with a trusted cloud provider can enhance an institution's overall security posture by leveraging the provider's existing frameworks and controls.

Institutions should approach a cloud migration strategy thoughtfully and with the proper security considerations in mind. Most breaches that do occur within a cloud environment result from misconfigurations, and such risks should be mitigated with the proper security measures.[5] Institutions must work with the right provider and ensure the proper configuration of their environment to maximize the cloud's security benefits.

MOVING FORWARD WITH THE CLOUD

When considering the cloud, there are several steps institutions should take to save themselves time and money in the long run while determining when or if a cloud migration is the right move. Reviewing technology annually and determining whether a cloud version of an application exists is a helpful exercise. For example, an organization can inch closer to a full migration by simply deploying Office 365.

As an institution begins developing its strategy, it is important to reflect upon overall goals. Is the goal to execute a successful digital transformation? Increase workforce mobility? Once goals and desired outcomes are determined, institutions should have a conversation with a trusted provider about the best way to achieve those outcomes using the technology capabilities available.

In providing a mechanism for financial institutions to move to an environment with minimal impact to their day-to-day operations, a cloud-based IT infrastructure will empower institutions' digital transformation initiatives. An IT infrastructure hosted in the cloud is no longer an impediment to a successful digital transformation, because it allows for quick pivots, scalable resources and nearly limitless capabilities. Indeed, it becomes an essential tool to help an institution achieve its goals.

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[1] What Is a Public Cloud?

[2] Public Cloud Adoption in Banking

[3] New McAfee Report Finds 87% of Companies Experience Business Acceleration from Use of Cloud Services

[4] 2021 Banking Priorities Executive Report

[5] Cloud Misconfigurations and the Security Problem Coming from Inside IT