

Private clouds have played key roles in the evolving financial services digital infrastructure, with their benefits exceeding expectations in many areas.

The Role of Private Cloud in Financial Services Digital Infrastructure

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Questions posed by: Nutanix

Answers by: Jerry Silva, Program Vice President, IDC Financial Insights

Q. How has the adoption of private cloud and its associated use cases and expectations evolved over the past few years?

A. Beginning as a seemingly slower, safer, and more controlled transition from traditional on-premises legacy environments to the cloud, the private cloud is now recognized as a critical business deployment model. Starting in 2019, the private cloud was adopted for many of the same reasons as the public cloud — such as cost efficiencies and productivity. However, many other business objectives became triggers for institutions deploying to private cloud, including faster access to new functionality and giving the business units more direct control over sourcing solutions demanded by market conditions. As of 2023, 80% of financial institutions surveyed by IDC are currently using private cloud to support production workloads, with a further 15% evaluating or planning to implement private cloud in the next 12 months (source: IDC's *Worldwide Industry CloudPath Survey*, April 2023).

This focus on using private cloud to address business needs was never more evident than during 2020, when global market disruptions forced the financial industry to innovate faster than ever in reaction to changing market needs. Although addressing business objectives through private cloud has remained a focus, as confidence grew in public cloud deployments for critical financial workloads over that time period, IDC's 2023 *Worldwide Industry CloudPath Survey* shows that the triggers for deploying on private cloud have shifted to more operational and IT-related needs, such as improving IT security, remote workforce environments, and resilience, as well as overcoming challenges for data growth. This last use case bears underscoring with the emergence of generative AI (GenAI) and the role of data in creating foundational models, over which the financial institution will look to tightly manage security, risk, and compliance.

Q. What are the challenges and strategies for modernizing and migrating legacy systems to a private cloud infrastructure?

A. The single most significant challenge in adopting private cloud for any institution is the ability of that organization to build, maintain, and govern the environment using its own resources. The creation of an on-premises production private cloud is attainable only by the largest of financial institutions. The exception may be when a managed services provider or hyperscaler is engaged to manage the platform, taking much of the operational responsibility and need for technical staff from the institution. For midsize and smaller institutions that may still want the control they believe comes from a private cloud environment, hosted or managed private cloud services are available, although with arguably less control and predictability of costs and performance than an on-premises deployment.

The other major challenge comes from regulatory oversight (particularly in data residency) in the context of hosted and managed private clouds. For instance, banks in Turkey are not permitted to store data on any platform outside the immediate control of the institution. There, an on-premises private cloud is the only deployment type allowed. Regulations of this sort, driven mainly by data sovereignty, vary widely from region to region, country to country, and at more local levels in some cases.

For these reasons, hosted and managed private clouds have gained popularity to overcome the cost and skills gaps that would otherwise prohibit smaller institutions from taking advantage of private clouds. In IDC's 2023 *Worldwide Industry CloudPath Survey*, 31% of respondents reported deployment of managed private clouds, both hosted and on premises.

Q. Where have private clouds significantly enhanced the efficiency or effectiveness of financial service operations?

A. The business and operation areas of institutions are the biggest benefactors of the adoption of private clouds. The single-largest benefit from the move to private cloud, according to IDC's *Worldwide Industry CloudPath Survey*, is the improvement of business agility and resilience. This is closely followed by the ability to quickly access new business functionalities, enabling a remote workforce, reducing costs, driving innovation, improving IT security, and strengthening regulatory compliance.

These results have been reported year after year, with most institutions underestimating the benefits that a private cloud can bring and many ironically reporting exceeded benefits in areas such as security and compliance, which are always cited as initial concerns and challenges to the adoption of the cloud. Two areas that should be noted are costs and the shift of capex to opex. While the institutions that benefitted from reduced costs exceeded those that expected this benefit by 20%, only 73% of those organizations that sought a shift from capex to opex experienced this advantage. This would make sense for institutions building their private clouds on premises and managing the infrastructure themselves, and it points further to a need to partner with a managed services organization for institutions in need of a shift from capex to opex.

Q. How do private clouds integrate with existing legacy systems and applications commonly used in the financial services industry?

A. There has already been a lot of work in the financial services industry on the building and maintaining of digital infrastructures that enable interoperability, security, and compliance of multiple location-agnostic platforms, including multiple cloud platforms, third-party providers of business functionality, and edge devices. Open application programming interfaces, microservices, and container-based applications make integrating a private cloud into architectures containing legacy platforms and other cloud types and providers easier. Most leading institutions worldwide are well on their way to evolving toward this ideal of ubiquitous computing, with organizations at various stages of the journey and many more playing catch-up.

An interesting question that has come up over the past year is whether workloads should be modernized (i.e., refactored to a microservices and container environment) before moving the application to the cloud or if it would be better to "lift and shift" the workload, as is, to the cloud. Clearly, there are benefits to moving platforms to the cloud with minimal reworking, but IDC believes that this will ultimately lead to the same integration and longevity issues experienced today with existing systems. In a future world of collaboration between heterogeneous industries, which IDC calls the *Future of Industry Ecosystems*, the modernization of all but the least strategically important workloads will be important to avoid integration challenges.

Q. In the context of modern financial services, how are private clouds addressing the growing demand for real-time data processing, advanced analytics, and AI/ML capabilities?

A. One need only look at the huge potential of GenAI to comprehend that the pace of business and technological progress will outpace the capabilities of all but the largest organizations to benefit from this potential. GenAI is only the latest in a string of technologies with real-world business benefits that strain the capabilities of most financial institutions. Data management, analytics, real-time processing, AI/ML, and now GenAI as a subset will continue to be challenging technologies to leverage.

It should come as no surprise, then, that in IDC's June 2023 *Future Enterprise Resiliency and Spending Survey*, when financial institutions were asked to indicate who their most strategic technology partners would be in the next 12 months, the top response was "my primary digital infrastructure provider" (23%). This underscores the importance of ensuring a digital infrastructure (including private cloud) that enables the development of next-level technologies, such as AI/ML, GenAI, and real-time processing.

The private cloud has become a critical deployment model for creating business agility and resilience, enabling tech-forward innovation, and maintaining control, security, compliance, and risk, particularly for institutions that seek a higher level of comfort over concerns such as data sensitivity and local regulation.

About the Analyst



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Jerry Silva is vice president for IDC Financial Insights responsible for the global retail banking practice. Jerry's research focuses on technology trends and customer expectations and behaviors in retail banking worldwide. Jerry draws upon over 35 years of experience in the financial services industry to cover a variety of topics, from the back office to customer channels to governance in the technology shops at financial institutions. His work for both institutions and vendors gives Jerry a broad perspective in technology strategies.

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Building or refreshing a private cloud is critical to digital strategies for most financial services. Power your business with a private cloud solution that can seamlessly extend to a hybrid multicloud model as needs arise. As business becomes increasingly digital, IT needs to deliver more applications and data services quickly, cost-effectively, and at scale. Defining the right cloud strategy can give IT the competitive edge to lead the organization through digital transformation and into the cloud era. Nutanix software and services merge the simplicity and agility of public cloud with the performance, security, and economics of private cloud solutions — inside your datacenter.

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