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Resiliency has become the new keyword added to transformational strategy for financial services. Increasingly complex infrastructures demand visibility from the center to the edge.

Bringing Visibility to Resiliency: Unifying the Bank's Network Management

March 2021

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AT A GLANCE

KEY STAT

More than 60% of banks surveyed don't have the tools necessary to successfully manage the modern, hybrid infrastructure that will drive tomorrow's financial organization.

KEY TAKEAWAYS

A consolidated network and application monitoring strategy is a critical component of maintaining service levels and avoiding disruption in the bank's operations. Customer satisfaction and the bank's own efficiency are at stake.

The Future State of Banking Infrastructure

2020 saw a disruption to the global financial services industry unlike any other before. Almost every area of the bank's operations was affected, including customer engagement, middle-office business operations, and back-office infrastructure. Although most of the industry was in the midst of transformation to more modern platforms and architectural paradigms, the disruption from the coronavirus pandemic forced much of that work to stop, and it is reshaping the priorities and strategies around digital transformation across the entire enterprise.

Transformation: Disrupted

Prior to 2020, spending on technology by banks worldwide was growing by 6.3% every year, a trend that indicated investments were increasingly turning to infrastructure modernization to accompany the usual investments in digital customer engagement.

The spring and summer of 2020 changed many of the priorities in banking as institutions struggled with the initial effects of a disrupted market. Social distancing drove customers out of the branch. Contact center agents were forced to move to work-from-home environments, small businesses overwhelmed the capability of most institutions to keep up with new credit demands, and fraud increased significantly as retail transactions moved from in-person payments to digital commerce. Much of 2020 was spent on shorter-term initiatives to help overcome the point challenges that affected every institution in unique ways based on their specific weaknesses. But the unifying message from every bank was that they need to add "resiliency" to efficiency and innovation in all future technology strategies.

Transformation: Accelerated

The third and fourth quarters in the bank's calendar are typically dedicated to strategy and budgeting for the coming year. In 2020, these discussions focused acutely on the failure to respond to the disruption and how to modify earlier transformational strategies to focus as much on resiliency as they did on innovation. Research conducted by IDC during 2020 around the recovery stages across multiple industries pointed to a "digital divide" between institutions that had

already been investing in transformational technologies and those that hadn't. The digital divide serves as a warning that banks that failed to respond with fundamental changes to their digital weaknesses would fall behind their more advanced peers. For this reason, IDC predicts that the industry as a whole not only will resume but also will accelerate investments in transformative technologies in 2021. IDC research from December 2020 shows that nearly 70% of banks in Asia/Pacific already consider themselves to be in this accelerated pace of investing. Fewer than 50% of banks in North America and fewer than 10% of banks in EMEA claim to be in this same phase of recovery. This difference is easily explained as a result of the path of the crisis as it swept from east to west. IDC estimates that overall growth in IT spending by banks will be 5.9% through 2024, not quite back to pre-2020 levels, but indicative of acceleration coming out of a challenging year.

Hybrid Infrastructures Will Rule

The Future Is Hybrid

Many of the considerations during strategic planning in 2020 had been concentrated on what was already an increasingly complex infrastructure that was moving toward hybrid environments consisting of a combination of traditional on-premises and outsourced platforms, private cloud workloads within the bank's own walls, and rapidly growing instances of applications and services deployed in the public cloud. In IDC's *Worldwide Industry CloudPath Survey* (May 2020), over 57% of the banks surveyed were operating in a hybrid environment. Another 40% were planning to operate in a hybrid environment within 24 months. This trend toward hybrid environments brings the following benefits:

- **Inherent resiliency.** The move to cloud inherits that architecture's ability to inherently include business continuity as an outcome. Workloads can be moved and spun up or down as market conditions require. All major cloud providers have resiliency technologies that are often superior to traditional banking capabilities.
- **Efficiency and lower costs.** One of the interesting outcomes from the 2020 crisis was that organizations that had platforms deployed in public cloud environments were able to scale *down* as markets fell. The fundamental principle of "paying by the drink" not only is proving to be beneficial when additional capacity is needed but also proves resiliency in pricing as the operation needs to scale down.
- **Modernization.** Perhaps the biggest benefit of a hybrid infrastructure, and one that uses cloud as a keystone, is that it allows the industry to modernize based on progressive transformation. That is, modernizing workloads in a phased way, using the business strategy to determine the pace and order of transformation.

Interestingly, in the previously mentioned *CloudPath Survey,* banking respondents that had moved to cloud as part of their infrastructure strategy cited "improved customer experience" as the top benefit they gained from the move. As much as cloud is seen as a purely back-office strategy, it is clear from these institutions that the move to cloud has a real impact at the customer level.

The Challenges of Hybrid

As much as hybrid infrastructure provides multiple benefits to the institution and is intrinsically more resilient than most business continuity strategies using traditional, on-premises architectures, moving to this infrastructure paradigm poses several challenges that are relatively new to the industry, including:

- **Increased dependence on multiple technology partners.** Hybrid infrastructure allows the institution's operations and IT executives to best deploy and source applications and workloads based on the needs of the business. But this flexibility is accompanied by a potential increase in the number of technology partners that the bank then must manage.
- **New skills are required.** Operating in a virtual environment consisting of platforms across multiple sites and partners demands that the institution have an internal governance infrastructure that can manage partnerships, holistic security policies and procedures, enterprisewide data management, and cloud management — to name a few areas that require specialized skills that haven't always been a forte in the industry. The cloud architecture brings a higher level of standardization, but the management of such a hybrid environment requires bolstering skills in areas such as security, application monitoring and resolution, and governance.
- **Increased dependence on multiple monitoring technologies.** Most important, these increasingly complex operating environments introduce a challenge for the institution to monitor and resolve problems that may occur at any point in this composite chain of supply, from back-office core systems to the customer's channel of engagement. Using a collection of different monitoring systems is nearly as ineffective as not using one at all. A customer who cannot log on to his or her mobile banking app doesn't care where the problem is. It is incumbent on the institution to implement a monitoring system that is unified across the enterprise to inject simplicity and unified visibility where there are complexity and silos.

The Need to Modernize and Simplify Network Visibility

All technology and operational leaders in financial services aim for simplification as a goal. Simplification translates to fewer disruptive events, greater efficiency and cost savings, better use of human resources, and easier transitioning of new IT staff from one area to another. This goal is difficult to accomplish as more and more of the operations spread out beyond the bank's own walls. Resiliency, a focus coming out of 2020, requires real-time insight into the network of applications and services the bank is managing and providing to its users.

Resiliency doesn't just mean keeping the operation running 24 x 7. It also means detecting potential or actual incidents, large and small, that impact the customer experience. Author Arthur C. Clarke once said, "Any sufficiently advanced technology is indistinguishable from magic." In the sense of optimizing and monitoring the hundreds and thousands of individual applications and services that join to provide the customer a seemingly simple service, resiliency does require sufficiently advanced technologies all working together, including the following:

- **Data.** Arguably the most important element in optimizing, monitoring, and resolving application incidents, data is key to the enterprise's vision of a modern infrastructure. The paradox is that data is typically generated by multiple and disparate systems, making it difficult for the institution to effectively manage its networks and applications. But modern performance management systems can aggregate and make sense of multiple data sources and apply modern analytics to identify and resolve potential and realized disruptive events, simplifying the task of resilient operations.

- **Span.** In addition to the bank's own infrastructure spreading to outside locations, customers and staff are increasingly moving to edge capabilities. One of the impacts of 2020 on the industry was the move of contact center agents to work-from-home environments. Over 90% of the executives surveyed in 2020 reported that they foresaw at least some of these workers continuing to work remotely even after restrictions are lifted. In an April 2020 IDC survey, organizational executives listed "a drop in productivity" as their single biggest concern from moving to a remote workforce. But in a follow-up survey conducted in August 2020, they cited improved productivity as the second largest benefit of having moved to a remote workforce, after employee health and safety. This response indicates that work-from-home environments will continue to be used to the organization's benefit and that network performance management tools must be considered an essential capability to continue to support productivity and security as well as limit risks.

- **Workload optimization.** Infrastructure monitoring must also support the continuous practice of workload optimization. One large regional bank experienced a failure in its online banking service in 2020 because of failure to stress test and/or optimize the applications in the face of a disruption that caused a massive influx of requests. Again, resiliency strategies need to include a sense of continuous work to optimize and accelerate applications to prevent these kinds of disruptions, especially as they move to cloud infrastructures.

- **Staff optimization.** Historically, little was said about the impact of technology on the institution's own IT and operations staff. But this changed when banks embarked on digital transformation journeys. The pace of change in areas such as cloud security, agile development, microservices, and containers, for example, has caused a need for updated staff skills. Additionally, new aspects of governance, risk management, security, and partner management have arisen from the modernization of the bank's operations. In the sense of monitoring and optimization, the danger is that banks will consider IT and operations staff as an afterthought once the new platforms and deployment models are in place. IDC believes that all tools the institution uses to optimize, monitor, and restore operations in a hybrid environment should be qualified based in part on ease of use and universality across the enterprise. All operational staff should have visibility into consistent data in a likewise consistent way, creating an ideal environment for immediate response to any threat.

- **Security.** One of the most significant benefits of centralizing network and application intelligence is to detect and prevent security threats across the enterprise. As the infrastructure moves to an expanding environment of platforms, both in-house and external, and as applications move to microservices-based deployments, keeping an eye out for signs of intrusion or denial of service, or even subtle signs of bad actors looking to exploit weaknesses, becomes a significant challenge. The implementation of a holistic approach to security monitoring across the entire enterprise is not only needed but also significantly reduces the institution's operational risk, particularly in such a regulated industry as financial services.

By monitoring network and application performance in real time across the modern, virtual infrastructure, these combined abilities directly affect the institution's efficiency (and, therefore, costs), resiliency to natural and man-made disruptions, and promise to customers to deliver excellence in service. Additionally, by implementing tools that look at the entire network, the institution will gain operational insights not possible with individual and disparate points of performance monitoring. Standardization of this vital aspect of network operations benefits the institution's customers and staff as well as the organization itself.

Conclusion

The future of financial services will be based on an underlying infrastructure that is inherently virtual in that applications and networks will expand out of the institution's datacenter. Critical applications may run in a public cloud environment operated by a third party, services could be supplied "as a service" from partners, and some workloads will continue to be run in-house. Managing such a widespread infrastructure to both maintain service levels and detect and resolve disruptions will be one of the most challenging aspects of this transformation.

But modern network and application performance management platforms can pull data from this distributed architecture, analyze performance, detect anomalies, and provide a "single pane of glass" visibility into the organization's operations. Best-in-class platforms like this should also provide the capability to infer and reveal potential and real disruptive events across seemingly disconnected sources that would not have been caught by disparate and disconnected monitoring systems.

The move to cloud and partner ecosystems for the institution's infrastructure may seem like added complexity from an operations perspective, but the data and technologies intrinsic in these models are more standardized than ever. Luckily, this allows institutions to use an approach of consolidated network and application performance management and resolution that will be critically required. The consolidation will help successfully leverage hybrid infrastructures to create a leaner, more responsive, and more resilient organization.

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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.

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