How to Keep Complexity From Slowing Down Cloud-Based Transformation

MARKET TRENDS REPORT

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Introduction

The federal government is turning to the cloud to transform IT and create a dynamic environment that responds to users' needs at mission speed. With this in mind, the Office of Management and Budget unveiled the 2019 Federal Cloud Computing Strategy – Cloud Smart. This is a long-term, high-level strategy for agency cloud adoption to deliver savings, improved security and more responsive services over the next seven years.

To make this a reality, agencies must maneuver an increasingly diverse environment in which a growing number of cloud providers offer an expanding catalog of services that take advantage of constantly evolving technology. This raises the specter of complexity, which is the enemy of economy, security and productivity. In this diverse landscape, no one platform or cloud provider can do everything that agencies, their workforce and their customers require; each has its strengths and weaknesses. The reality is that agencies will be working in a hybrid and multi-cloud environment in which each agency will use five to 10 clouds – even more for larger agencies.

To help agencies successfully manage this transformation and avoid the pitfalls of complexity, Cloud Smart focuses on three interrelated pillars that agencies and the private sector identified as keys to success.

Workforce: Agencies must retrain existing workers and recruit new ones with the rapidly evolving skills needed to take advantage of cloud capabilities.

Security: Security policies must focus on risk-based decision-making, automation and the ability to move defenses closer to the data and systems they protect.

Procurement: New acquisition models must be adopted for flexible consumption-based acquisition of services, replacing the traditional purchase of static products.

To help agencies navigate this transition, GovLoop partnered with Citrix, which provides agencies with cloud-based unified workspace, networking and analytics solutions. In this report, we discuss how agencies can improve enterprise visibility, security and productivity aids to simplify an otherwise complex transformation. We also gained additional insights from Gary Pentecost, Systems Engineering Director for Networking at Citrix.

Government Cloud Computing Today

31.1 years

Average age of the 10 most critical legacy federal IT systems in need of modernization.

Source: Government Accountability Office

11%

Percentage of federal IT investments using cloud computing for fiscal 2019.
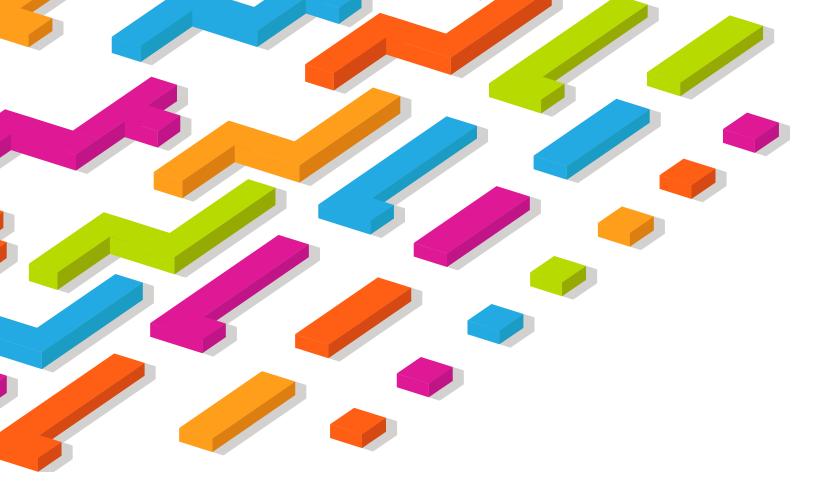
Source: Government Accountability Office

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federal agencies reported savings of $291 million from the use of cloud services since 2015.

Source: Government Accountability Office

"Cloud Smart embraces best practices from both the federal government and the private sector, ensuring agencies have the capability to leverage leading solutions to better serve agency missions, drive improved citizen services and increase cybersecurity."

– Federal Chief Information Officer Suzette Kent

72%

of cloud users have a mix of on- and off-premises clouds.

Source: IDC

36%

of organizations believe their networks do not satisfy current needs.

Source: IDC

THE CHALLENGE

Managing the Hybrid, Multi-Cloud Environment

Transitioning to a dynamic new environment and integrating or upgrading legacy applications to work in this environment can be challenging. Compounding the challenge is the need to continuously update applications and tools to meet changing demands and capabilities without disrupting users — all while managing the distributed enterprise and maintaining effective security across multiple locations.

Designing the new enterprise requires more than selecting a vendor.

To meet their complex needs, most organizations will adopt a multi-cloud strategy by 2021, said Gary Pentecost, Systems Engineering Director for Networking at Citrix. "There isn't a single cloud out there that's going to accommodate all of your needs. You're going to need a multi-cloud strategy." The number of clouds required will vary with the size of the agency, but even smaller agencies can expect to find themselves in five or more.

The definition of multi-cloud is simple: It's a distribution of applications and content across multiple locations, whether the locations are public cloud, private cloud or on-premises data centers.

Implementation isn't as simple. An average small to midsize size agency will typically have more than 100 Software-as-a-Service applications, and this number will only grow over time. Creating a seamless end-user experience with these applications distributed across multiple locations creates challenges in provisioning, managing and securing resources. Meeting this challenge requires a workforce with up-to-date skills. But that means competing with the private sector, which often pays more and has less cumbersome hiring policies.

THE SOLUTION

Prioritize Workforce, Security and Procurement

It is easy for the complexities of this new hybrid multi-cloud environment to overwhelm agencies. In most cases, the best solution is to focus on a few key priorities.

The first priority is the **workforce**. When it comes to workforce, government has one significant advantage in recruiting the talent needed for successful IT transformation: Many younger workers are motivated more by opportunity than by money. Government offers employees opportunities to work with cutting-edge technology and to learn and execute critical missions that impact people — in short, to make a difference — in ways the private sector can't match. But to ensure that skills do not become stale, agencies must implement continuous training programs to keep pace with new technology.

Next is **security** — and that means enterprise visibility. Because you can't secure what you can't see, effective cybersecurity requires a unified view of the enterprise and its resources. "You have to make sure that you can see what's happening across the workload and all the different clouds," Pentecost said. "You have to be able to manage and visualize your environment as one."

That is why complexity also is the enemy of security. Tools agencies use to monitor their data centers and end-user devices should be integrated with native cloud-based tools to provide a centralized view for network security and management in a "single pane of glass."

Procurement also must be addressed. Traditional federal procurement practices focused on acquiring goods and were not designed to function at the speed of technology. With the transition to on-demand cloud services, rather than hardware and software, the need for fast, agile procurement practices is even greater.

Agencies must avoid "cloud lock-in." They need to select among providers to find a mix that meets all of their needs. "With the agility that we have today in IT, and the ability to use multiple clouds, 'good enough' is no longer good enough," Pentecost said. "It needs to be perfect to match your mission."

HOW CITRIX HELPS

Citrix Cloud services simplify delivery and management of technologies to help agencies take full advantage of the hybrid and multi-cloud environment. Citrix provides a full suite of offerings to enable full management and security across the enterprise. Agencies can create and deploy secure digital workspaces in hours, not weeks — delivering resources from any cloud or data center for a consistent user experience.

Citrix offerings are available in packages or as standalone applications, and include Access Control, Analytics, Content Collaboration, Endpoint Management, Gateway, IT Service Management Adapter, Secure Browser, Virtual Apps and Desktops, Managed Desktops, and Workspace Environment Management.

To learn more visit: www.citrix.com/government

BEST PRACTICES

Excelling in a Hybrid, Multi-Cloud Environment

I. Gain executive buy-in

Without the full support of the chief information officer, an agency cannot successfully transition to a dynamic multi-cloud IT environment and will not be able to take advantage of economies of scale and flexibility in provisioning services. Successful transformation requires a willingness at the top to reimagine the role of IT and to apply new models for hiring and procurement to support this new role.

In practice, that means leadership needs to put a premium on continuous training to keep workers up to date with new technologies. In the past, training budgets have been convenient targets for cost-cutting, but investments in training in the new IT environment can produce significant returns in efficiency and productivity.

2. Dig deep into network performance

As noted earlier, you need end-to-end visibility into network and internet conditions to enable effective security and enterprise management. And don't let a time lag undermine visibility: Real-time network performance analytics can ensure a seamless user experience across the enterprise.

3. Create solid automation capabilities

Automated application deployment across multiple locations improves both productivity and customer service, while orchestration of networking services makes it possible to shift workloads among multiple clouds seamlessly.
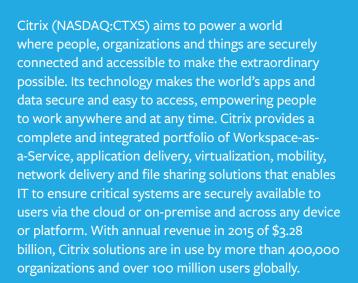
4. Plan for the future

Traditional workload management is based on the worst-case scenario: paying for an imaginable peak capacity even if it is rarely, or never, needed. That's no longer necessary. With on-demand scaling, agencies can adjust capacity as it ebbs and flows. In the same vein, it's important to have flexible management of software licenses that accommodate changing workloads so that users have access to the resources they need when they need them.

Conclusion

The cloud offers agencies the prospect of greater flexibility, economy and productivity. But taking advantage of this new environment requires planning and rethinking of how agencies approach the basic elements of successful IT transformation, which include workforce, security and procurement.

The transformation will likely not be simple. "There is no single cloud that's a perfect fit," Pentecost said. "Each cloud has its pros and cons." The result will be a hybrid, multi-cloud environment with computing resources distributed across multiple platforms. This will put a premium on visibility and control across the distributed enterprise to manage and secure this environment. Streamlined hiring, continuous training and the ability to leverage best-of-breed products and services will help tame this complex setting.

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ABOUT CITRIX

Citrix (NASDAQ:CTXS) aims to power a world where people, organizations and things are securely connected and accessible to make the extraordinary possible. Its technology makes the world's apps and data secure and easy to access, empowering people to work anywhere and at any time. Citrix provides a complete and integrated portfolio of Workspace-as-a-Service, application delivery, virtualization, mobility, network delivery and file sharing solutions that enables IT to ensure critical systems are securely available to users via the cloud or on-premise and across any device or platform. With annual revenue in 2015 of $3.28 billion, Citrix solutions are in use by more than 400,000 organizations and over 100 million users globally.

Learn more at www.citrix.com/government.

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ABOUT GOVLOOP

GovLoop's mission is to "connect government to improve government." We aim to inspire public-sector professionals by serving as the knowledge network for government. GovLoop connects more than 300,000 members, fostering cross-government collaboration, solving common problems and advancing government careers. GovLoop is headquartered in Washington, D.C., with a team of dedicated professionals who share a commitment to connect and improve government.

For more information about this report, please reach out to info@govloop.com.

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