How cloud storage **enables innovation**

Cloud-based storage has evolved to rival the security and performance of on-premises systems

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THE FEDERAL GOVERNMENT'S 2010 Cloud First policy focused on moving resources from on-premises data centers to the cloud. Nine years later, the Cloud Smart policy acknowledged the challenges involved in moving to cloud-based architectures. That's because fitting compute, storage and applications that were designed for on-premises systems into a cloud environment is more difficult than officials imagined in 2010.

The evolution from Cloud First to Cloud Smart underscores the reality of the current hybrid and multi-cloud world. The latest policy instructs agencies to use multiple cloud-based solutions to augment on-premises solutions. Cloud-based storage is often the easiest piece of the IT puzzle to outsource and is a good first step on that journey.

From 'cheap and deep' to live applications

In the early days, cloud storage was designed to be "cheap and deep" — a place to inexpensively store data without worrying about capacity. At the time, cloud could not compete with on-premises storage in terms of access speeds. Thanks to technological advances in the past several years, however, data is as quickly accessible and available in the cloud as it is via on-premises systems.

As a result, the number of applications that are eligible for cloud storage has increased dramatically, and cloud has become a primary storage option for enterprises. Beyond backing up data, agencies can use live applications in the cloud for video surveillance or active archiving, for example.

Cloud-based storage also supports innovation because it reduces the amount of full-time hours that government storage administrators spend on maintaining components and platforms on-site — installing new equipment, migrating data from one storage appliance to another, and patching and upgrading software. By moving those daily tasks and routines to the cloud and contracting out those activities, agencies can redirect storage administrators to more complex activities, such as applying next-generation technologies to solve government challenges.

Significant advances in security

Cloud-based storage also has a vital role to play in security. Off-site data storage locations are often more secure than on-site locations, which can be vulnerable to mishaps, malicious behavior or events that block physical access. During the pandemic, for example, many government data centers were locked down, which made it impossible

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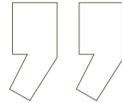
or extremely difficult for employees or contractors to physically access systems for necessary upgrades or patching. In those situations, cloud is a valuable alternative.

In addition, agencies can more readily meet compliance requirements by moving data off-site into specially designed, cloud-based data centers because the security of those centers has improved substantially since 2010, when the Cloud First policy was initiated.

Today's cloud-based data centers comply with SOC 2 and ISO/IEC 27001 standards, which means they've been audited by outside organizations to ensure that the physical security of the data centers cannot be breached. It is also commonplace for those data centers to adhere to Europe's General Data Protection Regulation, the California Consumer Privacy Act and regulations that govern the protection of information related to criminal justice, health, finance and education.

In the early days, government agencies had valid concerns about the security of cloud environments, but in the past decade, cloud technology has advanced significantly. In fact, cloud-based storage is more secure today than many on-premises data centers, and it gives agencies the ability to focus on innovation instead of maintenance. ■

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