4 Factors to Consider When Making the Jump to Cloud



govloop NetApp COMMVAULT

Quick quiz: Which of the following statements are true?

A. Cloud isn't secure.

B. Cloud is prohibitively expensive.

C. You can't move just a portion of your resources to the cloud.

D. Putting our data in the cloud means we'll never be able to find it.

The answer? **They are all false.**

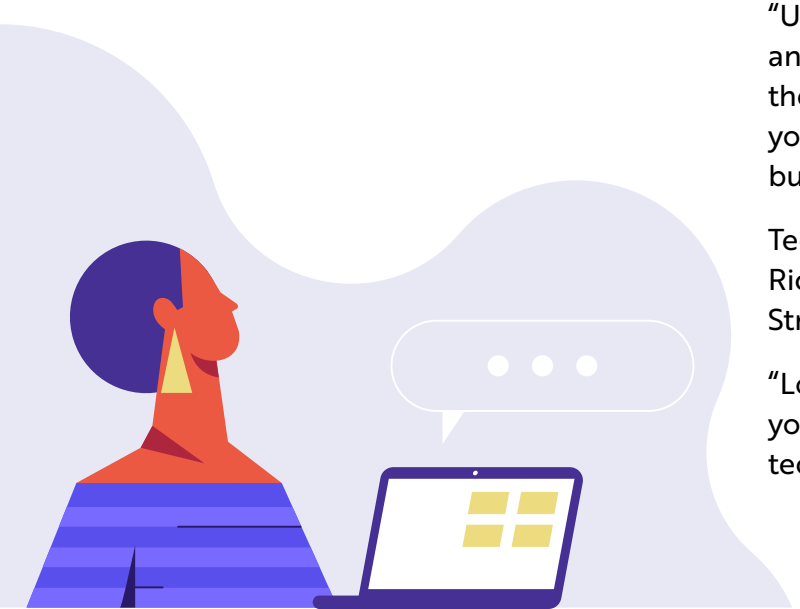
There are many misconceptions about the cloud today, and federal agencies aren't immune from them. Yet despite these untruths, agencies are still adopting the cloud aggressively because of the benefits it provides. According to a recent survey, about one-third of federal agencies are currently using multiple cloud solutions, a relatively low number. Dispelling misconceptions is critical to increasing that number.

In this report, we will highlight issues agencies should think about before committing to any type of cloud resource. The content is drawn, in part, from GovLoop's recent virtual event, Myth Busters: Addressing Common Cloud Misconceptions, sponsored by Commvault, provider of data-focused products and services; and NetApp, which focuses on secure data storage.

Reality Check: Cloud Lessons Learned

The federal government has been bullish on cloud for several years, first mandating a policy known as Cloud First and then revising its strategy to Cloud Smart, which provided more guidance to help agencies better determine effective use cases for the cloud.

At the same time, agencies have experimented on their own. Over the years, through trial and error, agencies have learned a lot about what works, what doesn't and what needs to be changed to make the cloud work for them. Here are some of the biggest misconceptions and lessons learned in migrating and adjusting to the cloud.



Don't Assume Cloud Is the Best Solution

While it's tempting to consider the cloud a catch-all solution for improving processes and efficiencies, that's simply not the case. In fact, anecdotal evidence indicates that more than half of what gets moved to the cloud eventually returns to systems on premises. In some cases, it's a cost issue, and in others, it's about mission effectiveness.

"To make sure you're using the cloud in ways that make the most sense, start with the mission," said Chief Warrant Officer 5 Matt McDougall, Senior Signal Warrant Officer for the U.S. Army's 18th Airborne Corps at Fort Bragg, North Carolina. "Understand what processes are required, and what data needs to be where and then you can do the analysis based on your use cases, business model and business architecture."

Technology comes second, agreed Richard Breakiron, Senior Director for Strategic Initiatives at Commvault.

"Look at the business and figure out your problem – it might not even be a technological problem," he said. "It could be a business process. I can remember many times when I was brought into a meeting at the Pentagon to solve a technical problem, but it turned out to be a business process that automation wouldn't help."

To make it easier, agencies might look for a cloud optimization tool, which can help them determine which are the best candidates for the cloud, and which might be more cost-efficient to keep on premises.

Take a Data-Centric Approach

Agencies understand that data is a strategic asset, but they often lose sight of that when making decisions about the cloud. But it is all about the data. In a nutshell, it's about knowing where data is located, protecting it effectively and being able to access that data on demand to make decisions and conduct business.

To Breakiron, it's a question of readiness.

"Readiness is a core mission; agencies need to be ready to respond to issues as they occur. And today, operational readiness means data readiness," he said. The velocity, volume and variety of

data that agencies must deal with today require extremely resilient platforms and partners that can meet requirements and adjust when requirements change.

Don't Go it Alone

Cloud is a complex undertaking, and it's easy to overlook issues in the process of migration if it's not something you do for a living. So it makes sense to turn to people who make a living at it. But even then, it must be a collaborative effort.

That's because cloud has a shared services responsibility model. While a cloud service provider will take responsibility for the underlying infrastructure, the agency is still responsible for such issues as data protection and compliance and business processes.

Breakiron compared it to going to a hotel on a business trip. Hotel management will ensure you have a desk and internet connectivity, but "they won't tell you how to dress in the morning, or how to get ready for your business meeting."

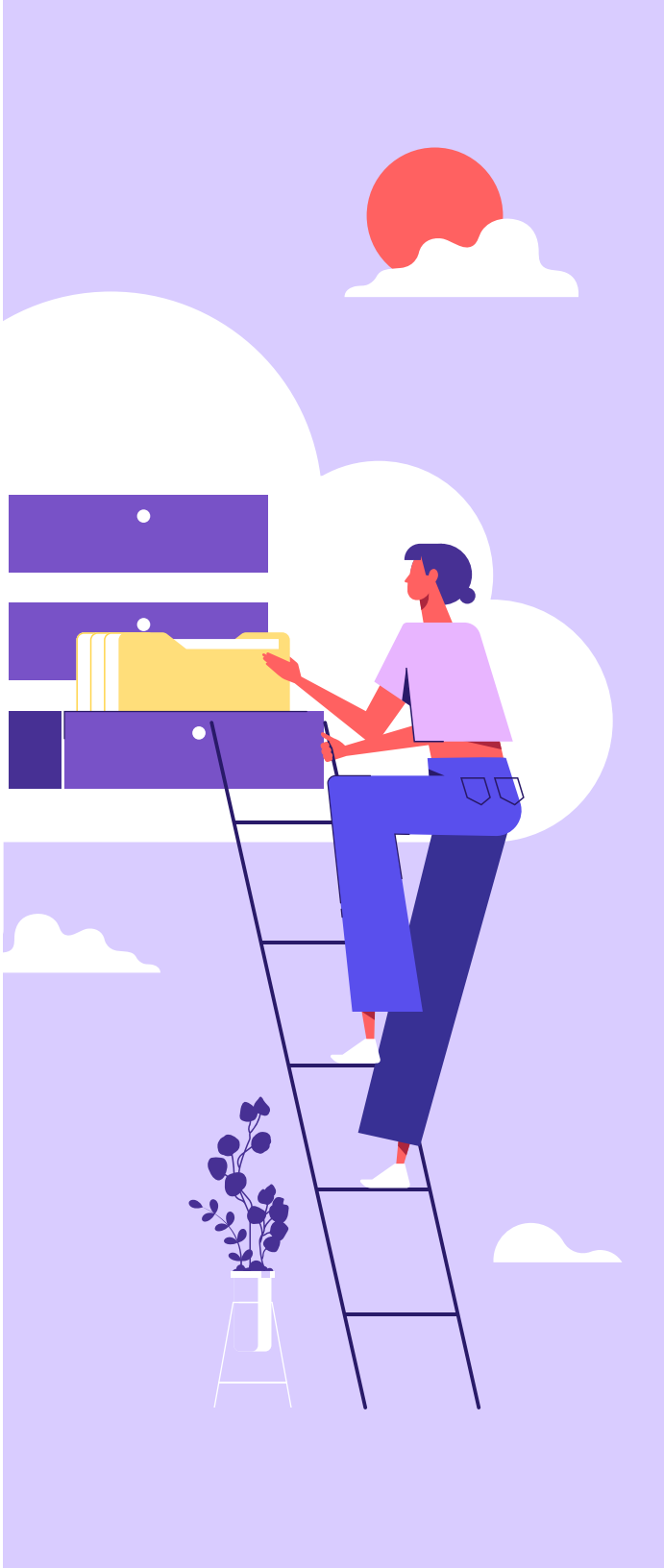
Educate Your Users

There's no way around it: Running workloads in the cloud is simply a different model from running them on premises, and users across the organization need to understand that difference.

"Education is key, and that means educating everyone from technicians performing administrative actions to senior leaders," McDougall said. Without understanding the intricacies of the cloud, it's virtually impossible to avoid mistakes and ensure regulatory compliance.

Agencies are still coming to grips with how to best plan and manage an environment with dozens of variables that don't exist in the data center, but that's something that can be addressed with training, added Indira Donegan, Senior Strategist at NetApp. "People have to be prepared to take on the responsibility of managing workloads in the cloud efficiently and optimizing the cloud," she said.

With the right mindset, training, technology and partners, agencies can reap the many benefits of cloud. "At the end of the day, it's about making the outcomes better than what we have today," McDougall said.



Key Focus: Understanding Cloud Spend

For the past decade, conventional wisdom has been that moving workloads to the cloud saves money because agencies can pay for them with operational funds (OpEx) instead of capital funds (CapEx). While this remains true, that's only part of the story. Cloud costs can still spiral out of control if they aren't tracked and reported properly.

A recent report from the Government Accountability Office points this out, noting that agencies often used inconsistent data to calculate cloud spending and weren't clear about the costs they should be tracking.

These include not only visible costs, but hidden costs such as data egress fees (the fees charged when data is moved out of the cloud). GAO recommends that the Office of Management and Budget require agencies to explicitly report cloud savings, and that agencies establish a repeatable mechanism to track cloud savings and avoidances.

Agencies also should consider ways to keep costs as low as possible. One of the most effective methods is adopting a hybrid multi-cloud strategy, which enables agencies to choose the best option for specific workloads. According to one report, organizations that choose from multiple cloud providers based on price can save an average of 45% for applications like compute and storage.



Tech Spotlight: Data Management in the Cloud

The Federal Data Strategy includes a "maturity ladder" that agencies are expected to climb, beginning with foundational activities around governance, planning and infrastructure and moving toward true data-driven decision-making. Cloud plays an increasing role along the way.

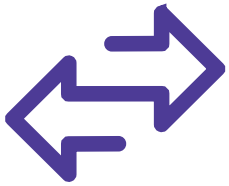
Managing data more effectively wherever it resides – whether on premises or across multiple clouds – requires a thoughtful and intelligent approach. Instead of managing datasets individually, it's more effective to consolidate all workloads under one umbrella.

One way to do this is with cloud data management software, which ensures that all data is present and accounted for and provides options for safely moving, managing and using data across all environments. Effective cloud data management encompasses:



Backup and storage

With data residing in so many places, agencies need a way to ensure that everything is backed up and recoverable to the cloud, between clouds and on premises. Increasingly, this also includes data on virtual machines, in applications and databases and on endpoints. Look for a solution that covers all of these bases.



Optimization and automation

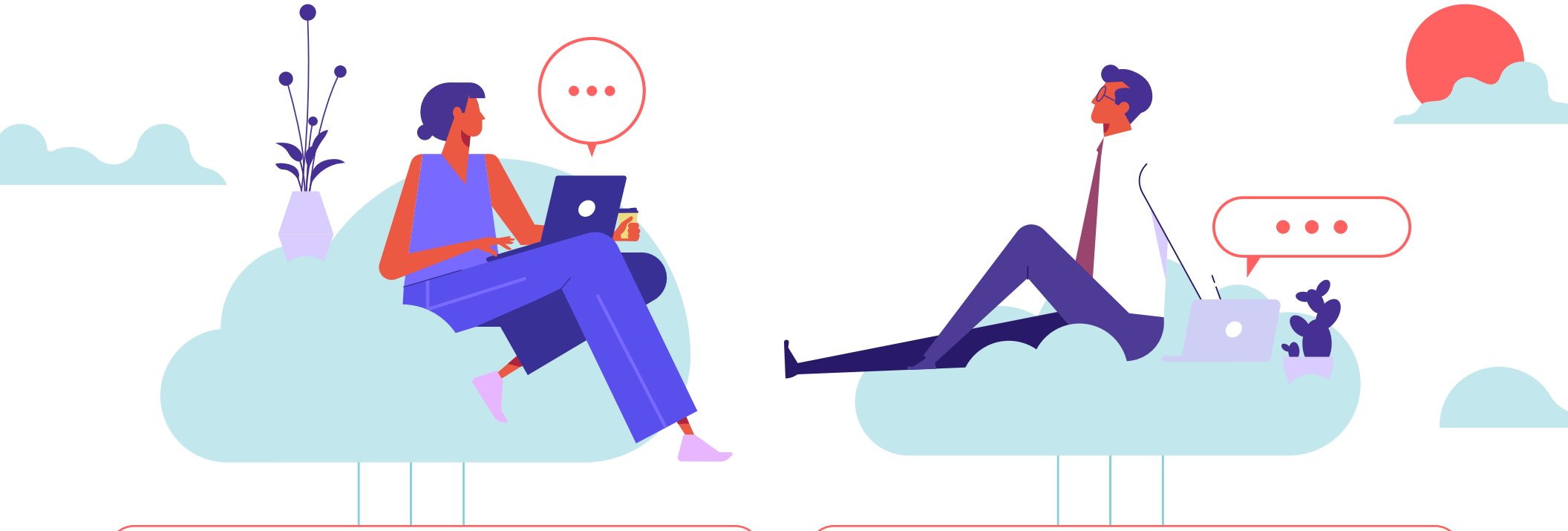
Data is usable only if it's easy to find and in usable formats. The best way to ensure that is by automating the movement of data across environments.



Protection and security

Accidents, natural disasters and cyber events are going to happen. It is critical to ensure that data is protected and recoverable within acceptable timeframes, no matter where it resides. Standardizing on a single solution for all disaster recovery requirements streamlines the process. To ensure secure data, the solution also should enable agencies to set automated data policies and provide full encryption at rest and in flight.

How Commvault and NetApp Help



Commvault has been helping public sector organizations store, manage and protect data for more than two decades. As agencies move to the cloud, Commvault is there to help with a series of products and services aimed at effective data management in the cloud, ranging from backup, recovery and storage to eDiscovery and compliance to intelligent data services. All solutions are centrally managed through the Commvault Command Center. Metallic, Commvault's SaaS backup and storage service, is currently the only such service that has reached FedRAMP High status.

NetApp is a global, cloud-led, data-centric software company that empowers organizations to lead with data in the age of accelerated digital transformation. The company provides systems, software and cloud services that enable agencies to run their applications optimally from data center to cloud, whether they are developing in the cloud, moving to the cloud or creating their own cloudlike experiences on premises. Commvault and NetApp have joined together to offer an integrated solution that provides industry-leading backup and recovery across the entire NetApp storage portfolio.

Thank you to Commvault and NetApp for their support of this valuable resource for public sector professionals.



About GovLoop

GovLoop's mission is 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 the public sector. For more information about this report, please reach out to info@govloop.com.

www.govloop.com | @GovLoop