



▶ **The Straight Truth about a
Cloud First Strategy**

MARCH 2017





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▶ INTRODUCTION

You are focused on building an infrastructure, which enables your organization to innovate at speed and gain new insights to stay ahead of the competition. You must deliver these capabilities while maintaining intelligent cost control and improving the productivity and responsiveness of your team.

ENTER THE CLOUD. The cloud is not only a key component in achieving these objectives but holds the promise of greater agility at lower cost.

[According to the State of the Cloud Survey from RightScale, 30-45% of cloud spend is wasted.](#)¹

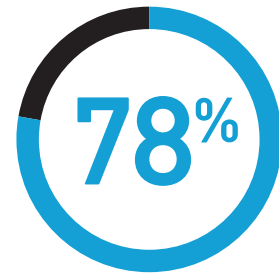
You have already had some success moving data to the cloud, working with cloud providers like Amazon and Microsoft, often on Dev/Test activities. At the same time, line of business units have made their own forays into the cloud, often without your knowledge or input. Do they always tell you where they are sending your corporate data?

Parts of your organization have stumbled into the cloud with no formal plan, creating more risk for the business. This threat continues to expand as more mission critical applications are deployed to the cloud. Not only is critical information fragmented, it's now tied to the unique platform of each different cloud provider and managed through single-vendor tools. How are you to control and synchronize all your data across these different environments? [With the average organization employing eight clouds today, you have a right to be concerned.](#)¹


Left unchecked a hybrid, multi-platform cloud infrastructure is the perfect environment to foster exposed, fragmented data. On top of that, [52% of companies lack a formal cloud strategy —skills and expertise were the most difficult tasks in creating this strategy.](#)³

Within this eBook, you will read about the challenges you might encounter when adding the cloud to your environment and the importance of taking a step back, to look at your data strategy and how your strategy should take a *Cloud First* approach.

It starts out with commentary from David J. King, on the weight of data and how that affects your ability to achieve a flexible and agile cloud infrastructure. Next, Don Foster discusses why a *Cloud First* approach is necessary, how the *Cloud First* model is apparent within Commvault software, and how that model can help you innovate for the future. In chapter 3, Matt Tyrer zeros in on three 'keys to victory' when creating a successful *Cloud First* strategy: data sovereignty, controlling costs and proper data protection. In the following chapter, Matt continues the discussion but steers you down the path of data center complexity of choice. How did choice become a source of pain and how should you fix it?



[of IT professionals said users have gone around their backs and put data in the cloud.](#)²



Mark Bentkower adds a fresh perspective on how 'one-off' solutions and complex scripting may provide a sense of job security, but in reality, it just leads you down the path to constant silo maintenance and manual updates. This sets the stage for the next chapter, where Matt Tyrer discusses the importance of agility within modern data management and how you should really be concerned with visibility and the data, versus where the data actually lives.

Don Foster jumps back in with a compelling commentary on the recent cloud outage heard round the world. He discusses the four lessons learned from this event and how they impact your disaster recovery and overall data strategy. Finally, Penny Gralewski chimes in with the importance of protecting applications and workloads in the cloud. At the end, you will find some additional resources available to you, to learn more about how the Cloud loves Commvault and how you can use Commvault to drive your *Cloud First* strategy.

▶ CHAPTER 1: WEIGHING DOWN THE CLOUD

Written by David J. King, Director of Solutions Marketing

In my new role on Commvault's Solutions Marketing team, it is important for me to stay connected with industry leading opinions from analysts and pundits. Storage Switzerland's George Crump recently launched a blog relevant to cloud technologies called: "[Where is the Cloud? The Cloud is a Method, Not a Location.](#)"⁴ It included some interesting views on the cloud (which I agreed with). That said, his statement "that data is weighing down the cloud, making it less flexible and less efficient," caused me to pause and question: is that true? It shook my intellectual being and I found myself staring off into the distance pondering the different angles and perceptions of this statement.

After all, when we began with the premise of cloud computing, it was a dynamic, flexible environment that should be able to adapt to a variety of computing, networking, business, availability and storage/data needs. How could data be weighing it down? I guess that probably starts with the premise of the blog – that although the cloud is not a location, many in IT view it as a destination. After all, it is "THE Cloud." But the reality is those cloud providers are selling outcomes to their clients, and those outcomes vary widely whether they are primarily focused on security, price/performance, availability, business dynamics, or IT agility service levels.

And if we have learned anything with our customers over the last five years, the outcomes that you will need in the next few years will probably be very different than the outcomes that you need today; at least for a portion of your environment, and who knows, potentially your entire environment the way technology has been innovating.

So how can our customers grow the amount of 'cloud data' by more than 400 percent during the last year and not have the experience of a 'weighed down cloud?'

Then a light bulb came on for me. Data becomes a burden when it isn't planned for and, more important, isn't properly understood. The reason our customers do not look at it that way is that our customers view the cloud as part of their data strategy and not as a one-time, final destination. We talk about the dozens of cloud providers that we are integrated with, and the hundreds that we work with, and the portability of data between those clouds; so our customers are conditioned to understand that there are lots of cloud options. They know that they need to have a plan, but they also understand their data and their workloads better than most of their peers. That makes it easier for them to execute upon their strategy – regardless of the changes in outcome needs.

The lesson for all of us to take away is that if we are not talking about the cloud being part of a data strategy AND we are not doing our best to understand all aspects of that data and the workload it belongs with, then data will be perceived as a burden. It will also weigh down the benefits of the cloud. That, of course, works against all of our best interests. So I challenge you: let's spend time talking about how important Commvault can be to a cloud strategy. George's blog is full of strong ideas, and with the right partner – Commvault of course - those data frustrations don't necessarily need to ever be experienced.

▶ CHAPTER 2: COMMVAULT SOFTWARE AND CLOUD FIRST STRATEGIES

Written by Don Foster, Sr. Director of Solutions Marketing

In my recent travels around the globe, I have had the pleasure to talk with a number of partners, customers and industry pundits about real cloud strategy and what it means for IT and business. As many would expect, these conversations often focus on being able to drive a tangible strategy for moving workloads to cloud-based environments, executing disaster recovery (DR) tests for the Cloud in the Cloud and even driving disaster recovery as a service (DRaaS) for many typical on-premises applications and workloads in the cloud. Many customers don't know where to start, as it seems very daunting and somewhat concerning to actually allow your workloads and services to be run somewhere else. Not to mention what it takes to actually operationalize such a strategy.

Storage Switzerland's Curtis Preston recently [blogged](#)⁴ that for a company with roots in the on-premises data center to suddenly claim to be a 'Cloud First' company, the proof should be fairly obvious in the product offerings. I couldn't agree more. So is Commvault one of those vendors helping customers deliver a 'Cloud First' strategy? You be the judge.

“As it develops new products and enhancing existing products, a company that adopts a *cloud first* strategy will continually ask, “Will this work in the cloud?”

W. CURTIS PRESTON
Senior Analyst at Storage Switzerland

NATIVE REST INTEGRATION INTO THE CLOUD

In order to deliver on any workload migration and disaster recovery operations in the cloud, you first need to get data to the cloud. It's a given that bandwidth is not endless and storage, even in the cloud, can be expensive if not leveraged appropriately. Many cloud providers, like Azure and AWS, provide many tiers of storage for this exact purpose (much like storage options many of you have on-premises) to match performance to price and capacity. Block, object and even cold storage are all pieces of the puzzle, even in the cloud.

As a part of our data strategy, Commvault offers integration for all of these storage services together by providing native REST integration into the cloud. Our ability to tier data based upon policies that we execute on in the data center is also applied to our cloud partners' storage offerings, making it easy for you as a customer to ask: 'Can this be placed or moved to the cloud?' before provisioning the infrastructure for that service on-premises. By providing this integration natively, all of our indexing intelligence and storage capabilities that have provided value to on-premises environments extend to these cloud providers. This means you have the ability to send data to the cloud in a secure, encrypted format that is also compressed and deduplicated directly to the appropriate block or blob storage location, and follow customer-defined retention and tiering policies within the cloud.

The native integration and indexed view of your data in the cloud is a major point in allowing a *Cloud First* strategy. Many vendors take the approach that cloud blob storage is nothing more than a bottomless pit

extension of the on-premises device or gateway that sent the data to the cloud. It usually means that the gateway MUST reconstruct the data back from the object storage before it can be used for any other purpose.

While doing this allows a vendor to check a box and say they are cloud ready, it really means that you, as a customer, will have a hard time moving beyond just eliminating on-premises tape as no control and the need to reconstruct information eliminates any cloud agility. Here is an analogy to these check box solutions: think of it much like the Virtual Tape Library (VTL) days when data was written to tape blind of the software that sent it. In many cases the entire tape had to be transferred back to disk cache before a data restore (even for one file) could complete. That certainly limits the value of these types of solutions.

ADOPTING A CLOUD FIRST STRATEGY

Luckily Commvault has taken a *Cloud First* approach, which is clearly reflected in our products. Our indexing that allows for the same level of policy management for cloud storage infrastructures as on-premises storage infrastructures also allows for explicit and accurate data retrieval from the object or blob storage directly to a compute instance in the cloud. No costs for bringing data back on-site. And now you can define a compute environment to run whatever operation is necessary, securely in the cloud.

It is not just files or a database that a *Cloud First* strategy would require. Entire workloads and VMs would need to be easily recovered to save much of the linkages that are defined in distributed applications. Commvault understands this, and we can transform VMs from VMware to Hyper-V and vice versa; we have enabled customers' ability to take those VM images that have now been protected to the cloud in a secure and efficient manner, and migrate them directly to an AWS virtual machine image or to a Microsoft Azure image. Just like that, complete workloads can be spun up inside a cloud and made available. The best part is that as a customer, you are only using compute services from Commvault in the cloud when you choose to drive this migration or execute on a DR test operation. That leaves you agile and extremely cost effective for cloud consumption. Again, this is all enabled because of the way we keep native access to all tiers of a cloud storage model.

Finally, all of the recovery orchestration Commvault has delivered in the last decade to improve on-premises recovery - both in the data center and in a co-location center - provides the perfect foundation for extending similar capabilities into cloud technologies and platforms. Automated VM migration, the portability to recover entire workloads spanning VMs and physical machines into cloud compute and storage environments, and the ability to drive the execution to multiple cloud providers properly maximizes their potential.

Commvault's ability to provide end-to-end VM backup, recovery and cloud management creates a significantly better way to build, protect and optimize VMs throughout their lifecycle. Read more on our website.

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Commvault solutions make getting to the cloud simple and fast while managing all your data and cloud resources. Read more about our Cloud Solutions on our website.

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BRINGING IT ALL TOGETHER WITH CLOUD READY INNOVATIONS

To mirror Curtis' SpaceX analogy, we are not just continuing innovation for on-premises technologies to help our customers better use their data and improve operational processes; we are doing so with the understanding that all of these innovations must be cloud ready and help our customers speed the execution of making their current cloud strategy a reality. So would you like to join Commvault and our customers who have already made this journey during your transition to an obvious *Cloud First* reality?

▶ CHAPTER 3: REQUIREMENTS OF A *CLOUD FIRST* STRATEGY

Written by Matt Tyrer, Solutions Marketing Manager – Americas

The Cloud: What do you really need to think about prior to jumping in? The momentum for Cloud and '*Cloud First*' thinking has been building for some time now, but not all are in a rush to embrace either. For example, in Canada, where I'm based, we've seen a much more wary and delayed approach to adoption. This attitude is primarily tied to data privacy and sovereignty rules in place, and a shortage of providers able to guarantee resilient localized copies of the data in their cloud. The concern of data in the cloud crossing borders is not just a Canadian one, but an issue faced by many global/multinational organizations. These organizations must adhere to myriad rules when faced with the possibility of data transitioning between nations.

The challenge to developing a comprehensive '*Cloud First*' strategy is echoed in [Joseph Ortiz's recent commentary](#)⁴ that "very large organizations may find that a whole migration may not be viable." He goes on to cover a number of points on the matter that mirror my own thoughts. I have several 'keys to victory,' if you will, which are necessary requirements in order to build out a successful cloud-first strategy.

Data Sovereignty I see this as an extension of the security discussion. One point of hesitation in the adoption of cloud for very large organizations with data outside of the U.S. has been the lack of local cloud data centers. I know firsthand that, for Canada, the recent opening of offerings from Microsoft - and soon from AWS - have those of us up north chomping at the bit as we see broader enterprise choices for cloud within the country. Similar concerns in EMEA and APJ are also being addressed as the cloud providers in the market continue to expand their geographical locations. This is a challenge that will be eliminated in the upcoming years.

Controlling Cost For very large organizations, being able to rapidly scale up in the cloud is an incredible benefit to leveraging it, but unchecked it can exponentially scale up your costs as well. Being able to not just limit/restrict who can create what in the cloud, but also define the lifecycles of that data or virtual machine, is key here. If you can deliver the means for your clients to self serve but also expire those resources automatically when the job is done, then you have a very cohesive cloud strategy that is key to large organizations' successes in leveraging the cloud.

Proper Data Protection Just because you made the move to the cloud does not mean that you can shirk your responsibilities as an IT organization. Does your provider offer similar coverage and SLAs to what you offered your clients within your own four walls? Recently I was involved in a discussion about a customer who negotiated, as part of a cloud-first business initiative, a service provider contract that inadvertently included no backup and no disaster recovery. It was an oversight the provider was looking to fix with their own approach that did not meet the existing SLAs the client had. We are in the process of working with the client to extend their current Commvault solution to include coverage of their new cloud solution, thus ensuring that '*Cloud First*' did not also mean 'protection later.' Make sure that as you extend your infrastructure to the cloud, that you also extend your coverage. If there is a gap between your standard SLAs and those of your providers, then you need to fill that somehow. Can your existing IT solution extend just as easily to the cloud? If not, how can you?

In the end, understanding that cloud is not just a location or a 'thing,' but a transformative process, will help you to wrap your head around what you need to construct as a strategy for making use of this powerful tool. It is my hope that you look to Commvault to be a partner to help enable that change.

▶ CHAPTER 4: DATA CENTERS NEED OPEN CLOUD INTEGRATION

Written by Matt Tyrer, Solutions Marketing Manager – Americas

In my [previous blog](#), I discussed the concepts of a *Cloud First* approach and the strategies that need to be explored before stepping into the Cloud. With the strategies examined, I wanted to move forward with the next key to victory in Cloud adoption: Integration. This is critical to the execution of any *Cloud First* Strategy your organization wants to implement as it pertains to how easy or hard it will be for you to manage the ebb and flow of data to/from the Cloud.

Before moving ahead, let's take a quick glance into the not so distant past. In the dark days, when legacy software solutions were incapable of writing to disk natively, the VTL was born to fill in that need. When those products of old caught up and integrated with the disk more tightly, folks didn't really need VTLs anymore. Next came deduplication, and the dedupe appliance was created for those solutions that needed it. Then everyone started doing it themselves in the software, and those specialty appliances weren't really needed anymore either as deduplication was integrated into most software solutions with varying degrees of effectiveness. Now we have the Cloud and not everyone can talk to the cloud without help, thus gateway appliances have been invented to facilitate the movement of data to/from the Cloud for applications and hardware that aren't integrated with the Cloud such that they can execute these operations themselves.

What is common across these tales of yore? Complexity. In each case, a stop-gap was required to allow for solutions to do what they should have been doing already. Added hardware, added siloes, added segregation of the data that organizations were trying to consolidate. It's easy to look back and see how having a solution that provided these integration points natively would eliminate redundant and costly specialty equipment from the stack.

This is where Commvault comes in. In all three of these areas Commvault has paved the way by simply providing these features natively as part of the Commvault Data Platform. We always were able to write to disk, we've had our own deduplication (source and target) for several generations of the platform and we've been talking REST for years. That's integration! Direct communication with the Cloud, and not just "a" Cloud, but more than 20 Cloud providers and solutions.

Why is that important? With the evolution of IT and the modernization of the data center, agility has become the key "feature" that most organizations are looking for. How adaptable is my infrastructure? How quickly can I adjust to new requirements and needs from the business? Take a gander over at what George Crump recently [discussed](#)⁴ on this subject and you'll find a great perspective on why integration, among other things, help mobilize

With source-side deduplication, efficiency is the name of the game — making your backups faster while sending less data over the network and using less storage space. Read more on our website.

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organizations to the Cloud with greater ease. Having a solution that is natively integrated with the Cloud drives this simplicity and flexibility. Not being bound by a black box makes it much easier to speedily embrace change as needed. In the context of Cloud, portability is pivotal. Without integration, your paths to the Cloud, and your overall freedom of options, become much more limited.

I recently had the pleasure of seeing Colin Powell speak. His central message focused on embracing risk, which in this case was new technology. The underpinnings of his message were simple: If you have a resilient, flexible, and trusted solution underneath you, then you have the confidence to step forward and not fear what others may see as "risk."

▶ CHAPTER 5: PROS AND CONS – ROLLING YOUR OWN BACKUP SCRIPTING

Written by Mark Bentkower – Director of Solutions Marketing, APAC

We're doing a lot of expansion and hiring in our APAC region right now, and one of the really fun parts of that process is helping on board some really talented new pre-sales and support engineers to our team. We got into a pretty lively discussion recently about writing shell scripts and wrappers. While it might make sense to try to use a pre-packaged solution to complete a complex backup that involves multiple layers and applications, versus 'rolling your own' solution with any number of languages and APIs.

Some of the engineers who had recently come to us from other backup companies were keen on the latter. They wanted to show me how easy it was to write their own programs that handled scheduling, inventory and tape control of the backup engines, hypervisors and other applications. I have to hand it to some of them; they are bright people who wrote some good scripts that worked really well. We hire some smart folks!

I complimented them on their cleverness and I asked them how they would feel about staying in one job all of their lives, with no chance of promotion? And how they would feel about using the same hardware and software for the rest of their careers? They looked confused. Also a little annoyed with me.

Maybe I was being a bit too cheeky with them. I had just read an interesting piece by Curtis Preston at Storage Switzerland called "[Bats Aren't Blind & IT Shouldn't be Either](#)."⁴ Curtis was writing about VM snapshot automation and cloud migration tools,⁵ so maybe I was already a bit too amped up that day.

But in the 25 years or so that I've worked in the data center, I've had the good fortune to have met and learned from some really smart people; I've also seen some clever automation programs written and implemented. The problem with all of them was this: once these 'one-off' solutions got put into place, the person who invented them had to stick around and maintain them forever. I've seen it in dozens of places - there is some absolutely burned out sysadmin who spends his days maintaining some brilliant labyrinth of custom scripts that only he understands and that only he can maintain. He spends all of his time updating those scripts, trying to keep up with version updates and security fixes for the scripting language and all of the applications in his ecosystem. Think about that list for a moment: Hypervisors, SAN/NAS firmware, databases, CRM applications, ITIL service desks and CMDBs, backup and archive software.... You get the idea.

There's precious little time for that sysadmin to learn new technologies or to do something else in his career, as the care and feeding of his custom automation software becomes more and more of a full time job. The thing that was originally supposed to be a time saver can become more cumbersome than the original problem that it was designed to solve.

We believe that the days of having to write lots of custom middleware and shell script wrappers to perform backup and archive tasks are over. That a modern data management strategy should include a robust backup engine that has the ability to natively communicate with lots of third-party hardware and software with simple radio buttons and drop down menus.

For more complex integrations, open APIs that use standard protocols - such as REST for cloud integration - should facilitate command communication. And built-in workflow automation tools should handle the logic and decision making.

The idea is that a well-trained staff should be able to learn a commercial application and be able to make changes to it quickly and easily, leaving the worry about compatibility between versions and hot fixes to the fleet of full time programmers and support staff who work for that commercial software vendor.

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▶ CHAPTER 6: IS YOUR BACKUP SOFTWARE AWARE OF YOUR DATA?

Written by Matt Tyrer, Solutions Marketing Manager – Americas

Today's agile environments require modern approaches to protection, recovery and overall data management.⁶ As the environments continue to evolve and scale beyond what many traditional approaches can handle, new methodologies have been required. Sadly, many of these newer, niche and hyper-converged solutions are focused on driving the speed of recovery and not looking at the recovery itself. Getting my entire virtual machine back instantly doesn't help me if I still need another few hours to get the application or database back into production. Getting faster doesn't always mean better with many of these new solutions. You need to be able to find the data or application, and recover it to the version or point in time needed. This actually leads to an overall faster RTO since you can get what you need, where you need it, and in the state you need it faster.

The team at Storage Switzerland highlight the need for awareness in their latest article, "Is Your Backup Software Aware of your Data?"⁴ Visibility to the data is paramount in terms of understanding what you have, where it is and how to recover it. Having your data is one thing; knowing where to find it is another, and knowing WHAT it is has now become more crucial than ever. Knowing what it is will let you drive intelligent data management policy, support governance and compliance initiatives, and execute on Copy Data Management strategies as you have clear insight of the data under your purview.

This is where Commvault can provide value, by giving you that "information about your data." It's not just random files and blocks. We can see into the content to help you manage it better and faster. We can help you find your data, not based on where you backed it up from or what server it was on, but based on what it is, which is "The Content." Need to recover all the emails related to "Project Neutron?" No worries. Don't know which copy of the application you need to use to refresh dev/test? We have you covered. Get the data you need, where you need it, when you need it - fast.

With source-side deduplication, efficiency is the name of the game — making your backups faster while sending less data over the network and using less storage space. Read more on our website.

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▶ CHAPTER 7: WHEN A CLOUD HAS AN OUTAGE, WHAT IS YOUR DATA RECOVERY PLAN?

Written by Don Foster, Sr. Director of Solutions Marketing

On Tuesday, just after noon U.S. Eastern Standard Time, the Amazon Simple Storage Service (S3) cloud storage buckets in US-East-1 region had a situation where 'increased error rates' were affecting connectivity to major websites and services across the nation.

It's a public cloud issue that IT departments dread getting calls about: 'Our website is down, ecommerce is down. What else is affected? What are you going to do about it and when?'

The effects were widespread. Government, tech, sales, marketing, academic and ecommerce sites were down or too slow to function. Companies lost money and people were upset.

While some customers were understanding, others threatened to pull their business. Many publicly shared their discontent on social media. Companies experienced the kind of media coverage they don't want.

The big lessons from today: know where your data lives and know how quickly you can recover data for your business.

CLOUD DATA RECOVERY LESSON #1: MANAGE DATA BY REGION

It's OK to put all your data in one public cloud, but you need a viewpoint of where the data lives across regions. If a region has an outage, your data management platform should give you a clear view of data across multi-regions.

If your data lives in the East, ensure you have a complete data backup in the West or a region on another continent. If an outage happens, you can recover quickly in the other region and keep your business running during the service outage.

The important part here is backup. Critical data and services native to the cloud should ensure backups are scheduled in/across/from clouds so your data is available. Automated backups- and the ability to verify those backups - make your life a lot less stressful.

CLOUD DATA RECOVERY LESSON #2: KNOW WHERE YOUR DATA LIVES

Unfortunately, today many companies found out what ran in the Amazon S3 US-East-1 region. Really, you should already have the locations of all of your data available at your fingertips.

When you move data to a public cloud, don't assume data is protected across regions. Actively manage your data storage so you know where your company's most vital asset – data – is located.

You need a dashboard that quickly shows you what data is affected by an outage, letting you create a quick report and have the answers before the CIO calls. So, if the East is down, you know and are already working to recover in the West.

Point solutions for data backup or cloud recovery don't give you a big picture view of the data landscape - and you'll have multiple versions of the truth. Plus, do you really have that much IT headcount to look at multiple point solutions and piece together a report of what data is affected?



CLOUD DATA RECOVERY LESSON #3: HAVE A DATA RECOVERY PLAN B

Hopefully you've been maintaining a copy of your data outside your primary region. Perhaps you've been making copies on-site and moving them to the cloud or vice versa. Regardless, you now have to look at how to bring your services online somewhere else. Do you even have that capability?

What if all your data was in Amazon AMI format and your on-premises infrastructure is Microsoft Hyper-V or VMware? How do you crack into the data and make it usable?

You need the portability to move data between locations and across platforms – flexibility that's beyond what the native cloud tools can offer today.

If a source is unavailable, you need to enable recovery in place, out of place, and between different hypervisor platforms. If US-East-1 is unavailable, you need flexibility to restore that data locally, or into AWS US-West, Microsoft Azure, Oracle Cloud, or others.

CLOUD DATA RECOVERY LESSON #4: DEVELOP A DATA STRATEGY TODAY

Many IT teams are working on data strategies that include from cloud to on-premises and from cloud to cloud.

Commvault has been talking about cloud data management with customers around the globe. An outage gives everyone a wake-up call to get serious about a data management strategy.

The Commvault focus on the management and protection of data is a differentiator for customers thinking about keeping their business running. Give Commvault a call; we're experts in helping you reach your data management goals.

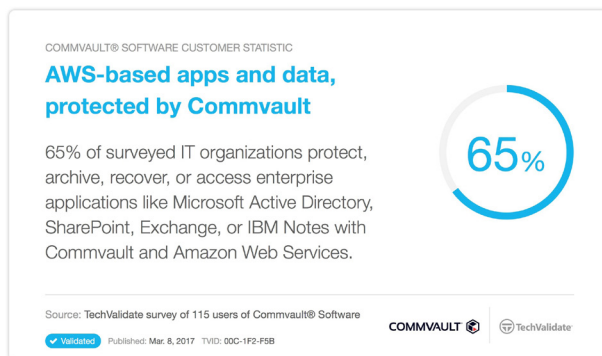
▶ CHAPTER 8: PROTECTING APPS AND DATA IN THE CLOUD: ARE YOU PREPARED?

Written by Penny Gralewski, Principal Solutions Marketing Manager

Are cloud-based apps and data the new normal in your company? If your CTO says 95 percent of your new application deployments are going to cloud,⁷ is your IT team prepared to protect apps and data in the cloud as well as on-premises?

Many organizations are already rethinking IT strategy and how the cloud impacts or accelerates their data protection strategy.

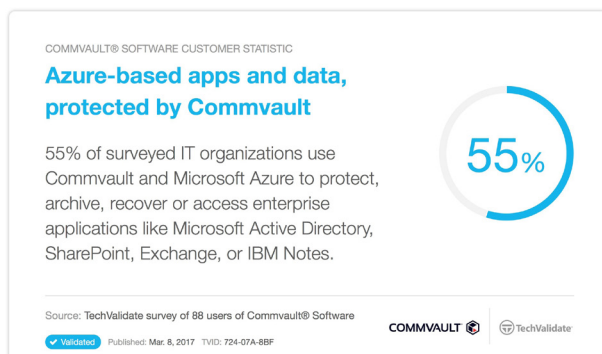
Commvault surveyed existing customers using public cloud for data backup and recovery and the results revealed a strong trend toward cloud-based app and data protection.



Data showed 65 percent (see graphic above) of Commvault customers on Amazon Web Services (AWS) and 55 percent (see graphic below) of customers on Microsoft Azure said they already protect, archive, recover or access enterprise applications with their cloud provider and Commvault.

According to Gartner, SaaS will have a 37 percent cloud shift rate through 2020.⁸

Gartner confirms, "IT spending growth for SaaS-based solutions will be nine times the rate of growth in IT spending generally."⁸



Critical to any SaaS strategy is a plan for the protection of apps and their related data, building on the work already in place for on-premises data protection and management.

Commvault provides a single solution for managing data across files, applications, databases, hypervisors and cloud. Organizations are quickly learning the same policies and processes that drive on-premises cloud data management can be extended to the cloud – and working with Commvault to manage their overall data protection strategy.

ENERGY COMPANY MANAGES APPS AND DATA IN THE AMAZON CLOUD

In time for a corporate spin-off, a large, public energy company wanted to aggressively move applications and data from parent company data centers to the Amazon Web Services (AWS) cloud. Rapidly evolving requirements and short implementation timelines required a streamlined process.

While the customer had no previous experience with Commvault or AWS, the team worked with Commvault to develop a documented, business-aligned and vetted application backup and recovery architecture. The team developed an optimized, rapidly scalable architecture in AWS for 320 TB with consideration for growth and flexibility as company needs have evolved.

Disaster recovery practices were designed into both the architecture and daily operations. With a seamless transition from architecture design phase to implementation and daily operations, the energy company is now currently operating reliably with 185TB back-end capacity utilization.

DATA PROTECTION: ON-PREMISES OR IN THE CLOUD

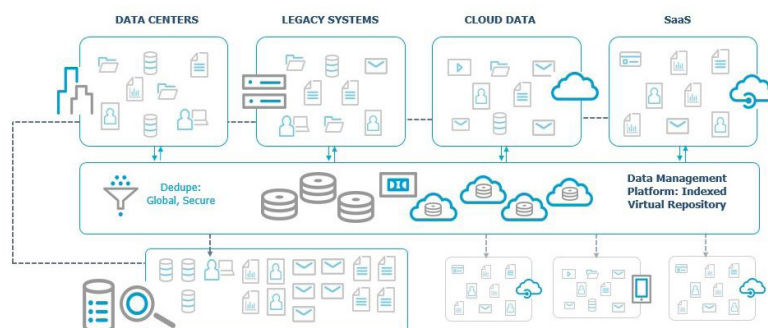
Supporting cloud apps and data from a single pane of glass, Commvault helps IT manage the shift to cloud-based apps and data. Commvault supports 40 public and private clouds, multiple hypervisors, and the evolution IT teams need to move to the cloud at their own pace.

Commvault provides:

- Backup/recovery to the cloud
- Backup/recovery in the cloud
- Application and data migration to the cloud
- Disaster recovery in place, out of place, on-premises and cloud-based
- P2V, V2V, V2P, physical-to-cloud, cloud-to-cloud and cross-hypervisor support

Should business needs require a change in cloud – such as from one region to another or private cloud to public cloud – Commvault lets IT change app and data location targets.

► Simply Powerful: the Commvault Data Management Platform



Whether its backup in the cloud, disaster recovery in the cloud, data protection in the cloud, Commvault gives IT full capacities to protect, manage and access data in the same way, regardless of where it resides.

Explore Commvault application and data management resources:

- Manage enterprise applications across the entire data lifecycle.
- Understand cloud data management, managed holistically.
- Learn how to manage cloud migration for applications and database structures.

▶ ABOUT COMMVAULT

Commvault's data protection and information management solutions provide mid- and enterprise-level organizations worldwide with a significantly better way to get value from their data

Commvault can help companies protect, access and use all of their data, anywhere and anytime, turning data into a powerful strategic asset.

Founded in 1996, Commvault is publicly traded (NASDAQ: CVLT) and headquartered in Tinton Falls, New Jersey.

▶ NEED MORE CONVINCING? – ADDITIONAL RECOMMENDED READING

Learn more about how you can overcome the initial challenges associated with the cloud, successfully design and implement a *Cloud First* strategy and achieve the business outcomes from the cloud that you desire. Commvault offers a wealth of cloud data management resources to help you speed cloud backup and delivery projects. Discover [Commvault Cloud Backup and Recovery videos](#), customer case studies, datasheets, whitepapers and technical resources that help you make your data work for you.

[What is a Cloud First Strategy? – Storage Switzerland eBook](#)

Your Data: Cloud or Bust On Demand Webinar - [Register here](#).

[Agile Data Recovery in the Cloud - Infographic](#)

[Cloud Loves Commvault](#) by Penny Gralewski, Principal Solutions Marketing Manager

[Commvault Demos & Trials](#)

▶ RESOURCES

1 commvau.lt/2ndUzNy

2 commvau.lt/2nwn3Ra

3 commvau.lt/2mMGT03

4 commvau.lt/2mVCVTE

5 commvau.lt/2ocJilg

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8 Gartner, Market Insight: Cloud Shift - The Transition of IT Spending From Traditional Systems to Cloud, Ed Anderson, Michael Warrilow, May 2016

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