CASE STUDY

Why Parsons Considers Its Data Protection Strategy a Business Advantage

Civil Engineering Company Modernizes Its Data Security Using Commvault Complete™ Backup & Recovery and Amazon Web Services (AWS)

A "cloud-first" mandate

Parsons Corporation is a leader in civil engineering. The firm has roots in project management, engineering, and construction and delivers technology-driven, quality services to government and private customers worldwide. Parsons' workforce and site locations cover the world, with 18,000 employees working across markets in 26 countries.

Understandably, retaining the integrity of Parsons' data is critical to its success. Regulations require long-term retention of copies—upwards of ten years. Traditionally, Parsons stored its data and files on tape. Recent acquisitions led the company toward a desire to modernize on Amazon Web Services (AWS). Threaded through the cloud-first strategy were key concerns about data security and access.

The firm needed to ensure the availability of data at critical sites in vulnerable locations, such as where weather-related events could render them inaccessible. Data security was essential, as well; the firm mandated that data stored on the cloud was as secure—or more so—than before. "We wanted absolute confidence that a bad actor in the business couldn't go and delete long-term retained files," explained Benjamin Roper, technical expert at Parsons.

An on-premises landscape with mandated security

Parsons' on-premises-based infrastructure included data centers with databases, servers, and virtual machines (VMs) with direct attached storage for Commvault backups to tape. Roper was challenged to keep all the backups "green" while growing data and files meant continually adding more storage.

At Parsons, internal security and risk management teams needed to approve large-scale IT initiatives that could impact customer data. "With our customer-base being partially government and defense, we take a proactive approach to securing our digital assets," said Roper. As Parsons saw high profile exposures and leaks in the news, it knew it needed to be extremely conscientious in this area. It certainly did not want to find itself in a similar position. "Public exposure risk and sensitive data leaks were a key concern for management," said Roper.

Additionally, in some regions of the company's global presence, certain data centers were disconnected from the global network due to localized events. "Network outages often meant sites were 'offline' for remote offices and workers—which impacts project delivery to clients," said Roper. The mission was clear: a move to the cloud must be done securely.

About Commvault and AWS

- Increase resiliency and recovery readiness across cloud regions.
- Track changes and problems at a glance using built-in reporting tools, audits, and alerts.
- Accelerate migration onto AWS efficiently through the use of automation, deduplication, and compression.
- Stay secure on the cloud with encryption, multi-factor authentication, and AWS Identity and Access Management (IAM) policies.

Challenge

An engineering firm with multiple global sites had a cloud-first mandate. The firm needed long-term retention, protection against cyber-attacks and regional disaster events, and data security.

Solution

The firm turned to AWS and Commvault to modernize its data security stance and deliver adaptive business resilience.

Results

- Eliminated tape woes: from bad tapes to manual restores
- Stayed in control with reports, dashboards, and alerts
- Met industry data storage regulations and requirements

The migration to cloud with Commvault

Already using Commvault Complete™ Backup & Recovery to protect its petabyte-scale business data, Parsons was well-equipped for a seamless migration from tape and disk to the cloud.

Commvault Complete Backup & Recovery enables teams to create, move, and manage primary, auxiliary, and secondary backup copies on premises, to and across cloud regions—enabling different backup methodologies across globally dispersed sites and across storage targets.

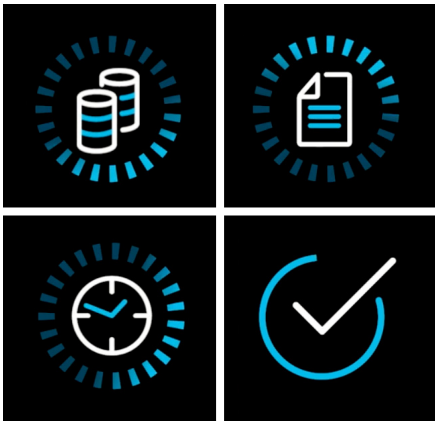
Tracking and reporting are built in, as are data reduction features including deduplication and compression—meaning data is moved and stored efficiently.

“We chose to work with Commvault due to their expertise and longstanding relationship with AWS,” explained Roper. “We saw how Commvault helped numerous other customers migrate hundreds of petabytes of data off tape and onto AWS. The choice was easy.”

Roper elaborated that the ability for Commvault to handle Parsons’ large environment with an easy, single management dashboard was critical. “We have hundreds of remote offices scattered worldwide. I’m a one man show and Commvault allows me to manage everything easily and effectively,” said Roper.

Why AWS

“A number of our acquisitions already used AWS,” explained Roper. “We took a closer look at our strategy and chose AWS for its resilience and scale. Our business leaders understood that the global presence of AWS Regions offered far greater resilience for our business. And existing AWS compliance programs gave our security teams the confidence that we could remain secure in Cloud. It’s a shared responsibility of course.”



About Commvault Complete™ Backup & Recovery

- No cloud connectors or gateways needed
- Application-consistent protection
- Native migration and conversion to AWS instances
- Single console to manage your data
- Dynamic power management powers up when needed, powers down when task completes

The migration process

Parsons, like many Commvault customers, began its cloud migration with a tape replacement initiative. Parsons used Commvault to copy disk and tape to Amazon S3, easily.

Commvault deduplication, compression, and replication helped move data to Amazon S3 fast and made the migration process more efficient—helping Parsons save on network and ongoing storage costs. Using Commvault, Roper was able to convert virtual machines (VMs) to Amazon EC2 instances from backup to perform a quick lift and shift of critical infrastructure components.

While the initial migration project was to move tape-based backups to the cloud, soon Parsons began consuming additional AWS resources, such as building new Amazon EC2 and Amazon RDS instances.

Results for Parsons: "ready to recover"

Now, using Commvault Complete™ Backup & Recovery to protect and manage data in Amazon S3, Parsons' daily restore tape swaps and media failures are a thing of the past. "I don't have to go to the data center to swap out tapes, repair or replace failed HDs, bad tapes, transport, or storing," said Roper. This saves manual work and reduces costs previously spent for storage cages, racks, and rented floorspace.

"Now my backups are stored with eleven nine's durability and across three availability zones. No more 'tape unavailable' events occur or the dreaded tape rot. And Commvault kept the data encrypted from source to Amazon S3," said Roper.

Commvault's Command Center keeps Roper informed and in touch with data locality. "Centralized reports, dashboards, and proactive alerts helped me stay in-control as I migrated into a multi-region distributed data center." Parsons also leverages exception-based management features of Commvault Command Center. Essentially, this lets Roper get a quick view of all data backups and swiftly identify any that need investigation. "It has made my day a lot more manageable," said Roper.

In terms of meeting its long-term retention requirements, Parsons can use Commvault to establish and manage object policies around data-aging and pruning that align to the company's vigilant security stance. In fact, the air-gapped solution ensures that no one—not even the backup administrator—can change or delete the data contained in the archival buckets.

Perhaps the most telling point: The process is simple. "I didn't need to be an expert in all AWS multiple offerings. Commvault just made it work," said Roper.

Beyond backup: a business continuity advantage

After the initial migration, Roper was able to harden protection of mission-critical systems and disaster resiliency. “I have Commvault performing regular continuous data replication so I can switch users over to the cloud copy if or when the site is unavailable,” said Roper, who recently leveraged this during an unanticipated snowstorm. “We are a lot more ready to recover our Amazon EC2 and Amazon RDS instances. Our backups are always available.” Parsons can lean on the Commvault and AWS implementation to ensure its data is recoverable and available with no interruption to users.

Today, Roper and Parsons feel confident that data is stored securely and to industry regulations.

In fact, the firm considers its move to a cloud-based data protection strategy to be a business advantage. “With everything on the cloud, it is reliable. It works. We have not had failures or hiccups. Reliability is a business advantage,” said Roper.

ABOUT COMMVAULT

Commvault is a recognized leader in data backup and recovery. Commvault’s converged data management solution redefines what backup means for the progressive enterprise through solutions that protect, manage, and use their most critical asset—their data. Commvault software, solutions and services are available from the company and through a global ecosystem of trusted partners. Commvault employs more than 2,300 highly skilled individuals across markets worldwide, is publicly traded on NASDAQ (CVLT), and is headquartered in Tinton Falls, New Jersey in the United States.

Learn more about Commvault on AWS.