

A GREENER WORLD WITH CLOUD DISASTER RECOVERY

GEI Consultants completes backups 95 percent faster while increasing efficiency of cloud computing resources



Engineering

United States

Business needs

At GEI Consultants, reliable and fast access to sophisticated data analytics is critical to the success of its engineering projects. Exponential data growth at GEI threatened this requirement when data backups began failing and not completing within specified windows.

Solutions at a glance

- [Dell EMC Cloud Disaster Recovery](#)
- [Dell EMC Data Protection Software](#)
- [Dell EMC Data Domain](#)
- Partners: Amazon Web Services (AWS), VMware

Business results

- Cloud backup success rate increased from 30% to 100%
- Restoration of VMs completed anywhere from instantaneously to 60 minutes
- Eliminated need for physical DR site, saving \$250,000 annually
- Orchestration chooses most efficient cloud resource for restores
- 10TB servers back up in 4 hours compared to 36–48 hours
- 70:1 data deduplication

“Cloud DR’s efficient orchestration of resources is magnificent. It automatically chooses the lowest-cost resource option for restores in Amazon EC2.”

Adam Schmitt
Network Operations Supervisor, GEI Consultants, Inc.

GEI Consultants, Inc. (GEI) is one of the nation's leading engineering and science consulting firms. At the heart of GEI's work are troves of data and analytics that help improve the safety and quality of its environmental and infrastructure projects.

With GEI's 10 percent annual growth over the past decade and advances in data analytics, the company's data has increased exponentially. Average data stores on virtual servers increased from 400GB to 4TB in the last two years alone. In addition, GEI's prior backup and cloud DR solution, Veeam, was not completing backups within night-time windows, and backup failures, along with failure to replicate those backups to the cloud, were increasing.

GEI solved its backup woes with Dell EMC. Today, it uses Dell EMC Data Protection Software to back up applications running on 140 VMware virtual machines (VMs) across 33 offices to Dell EMC Data Domain backup appliances in a data center. GEI also uses Dell EMC Cloud Disaster Recovery (Cloud DR) software to replicate backups to Amazon Web Services (AWS) S3 object storage in the cloud. In case of a disaster, GEI can run its VMs live on AWS Elastic Compute Cloud (EC2) and then fail back to its on-site data center when the issue is resolved. The Dell EMC environment protects BST and Stock Software solutions, among other applications.

Backups you can count on

Confidence in protection of data and servers has increased dramatically since GEI replaced Veeam with Dell EMC Cloud DR.

Adam Schmitt, network operations supervisor at GEI Consultants, states, "With Cloud DR, our backup success rate has increased from 30 percent to 100 percent. It's faster and more flexible than the DR capabilities offered with Amazon EC2. Our IT team is sleeping much better."

Using Cloud DR's testing features, GEI has verified that it can restore VMs in the cloud, depending on their size, anywhere from instantaneously up to a maximum of 60 minutes.

High efficiency for IT and the globe

Amazon's cloud services and Cloud DR eliminated the need for a second physical data center for replicating backups. Schmitt estimates GEI saves \$250,000 in physical data center expenses, such as rent, power, internet and security. "By reducing energy usage, Cloud DR is well aligned with GEI's focus on the environment," he says.

"Cloud DR's efficient orchestration of resources is magnificent," Schmitt says. "It automatically chooses the lowest-cost resource option for restores in Amazon EC2. Alternatively, we can select the speed, size and networking of each instance."

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GEI Consultants, Inc.

Simple. Fast. Scalable.

Another advantage is simplicity. IT uses Dell EMC Data Protection Software to manage backups to the central data center and the cloud.

Explains Schmitt, “With a few clicks, we can create and define our Cloud DR backup and restore jobs using Data Protection Software. Failback is just as simple. We found there is minimal expertise needed to use Cloud DR.”

GEI also credits the 70:1 data deduplication ratio enabled by the Dell EMC protection solution with contributing to up to 95 percent faster backups and almost unlimited scalability in the cloud.

“We have 10-terabyte servers that back up in four hours compared to 36 to 48 hours when we used Veeam,” Schmitt says. “It used to take several days to seed the initial backup to the cloud. Now, we get it done in four hours or less. It’s like night and day.”

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