

## CommVault® protects documents and drawings for a Top Engineering Firm with Continuous Data Replicator, Data Migrator, and Galaxy® Backup & Recovery

### QUICK FACTS

#### Industry/Solution:

- Engineering, procurement, and construction for the petrochemical industry

#### Platform/File System:

- Microsoft Windows 2003
- Sun Solaris
- Linux
- Oracle

#### Applications:

- Microsoft Exchange 2003
- Engineering databases and file systems

#### Partner Hardware:

- Dell and Sun servers
- StorageTek tape libraries
- NetApp Network Attached Storage (NAS) device
- StorageWorks Storage Area Networks (SANs)

#### Challenges:

- Provide data protection for critical engineering documents and drawings
- Manage large volumes of constantly changing data through a multi-stage engineering development project process
- Provide reliable, consistent backup at multiple remote sites with minimal IT presence
- Provide fast, reliable restores to prevent project delays
- Reduce hardware and personnel costs for multi-site backups
- Provide a single enterprise-level data protection solution in a multi-operating system environment

#### Solution:

- CommVault Continuous Data Replicator
- CommVault Data Migrator
- CommVault Galaxy Backup & Recovery
  - AUX copy

#### Benefits:

- Fast, reliable restores
- Simplified, centralized, easy-to-manage backup
- Reliable remote site backup with reduced costs using Continuous Data Replicator
- CommVault Data Migrator automatically manages a large amount of data, moving less needed data off primary storage and freeing space for new data
- Reduced administrative time for backup from "all day Friday" to 5 to 10 minutes per day
- Automated solution minimizes need for human intervention
- Responsive CommVault technical support

#### Customer Profile

A global, fully diversified engineering, procurement, and construction (EPC) firm offering a full scope of project services to customers in the petrochemical, refining, chemical, and power generation industries, uses CommVault's software suite to protect its most valuable assets.

#### Data Management Environment

IT resources are located in the company's Texas headquarters. Centralized IT supports multiple remote locations, including customer job sites and a number of sites in the Houston area and elsewhere.

The IT infrastructure includes servers at headquarters running a mix of Microsoft Windows, Sun Solaris, and Linux operating systems, and servers at all of the remote locations. Users across the network access enterprise applications, databases, and e-mail running on headquarters servers. Primary storage in the Texas data center is a NetApp Network Attached Storage (NAS) device and Storage Area Network (SANs). Remote sites have direct attached RAID devices on the servers.

#### Protecting Engineering Data Is Important

At all the supported sites, engineers are creating documents and drawings for customer projects. To protect this valuable information, the company uses the CommVault® suite of data management software for recovery management, archive management, and data protection. Products include Continuous Data Replicator, Data Migrator, and Galaxy® Backup & Recovery software. They have CommVault Galaxy Media Agents and StorageTek tape libraries at each site, and all backups – including those for remote-site servers – are controlled from a single CommCell control panel at their headquarters.

Reliable data protection is a top priority for the Systems Administrator. He explains, "The end result of our work is the documents we produce – plans, reports, data, and all the drawing files created by our designers. Loss of those drawing files would require a complete re-creation of the drawings. This could impact other processes that depend on the completion of the drawings in order for the design/construction project to go forward. Lost files mean additional man-hours to produce deliverables to the client. One of our strengths as a company is our ability to deliver projects on time. Loss of last minute changes that occur between backup cycles can be costly. Therefore, protecting our product by continuously replicating documents as they are created or modified is a key element of our overall data protection strategy."

#### Continuous Data Replicator Delivers A Cost Effective Solution

CommVault's Continuous Data Replicator software is playing an increasingly important recovery management role. The firm had been backing up one remote site with Windows NT backup utilities and an attached stand-alone tape drive. The on-site backups were not adequate. Due to the large amount of data involved, it would have taken too long to back it up over the network to headquarters. "We had just replaced a server there, so we thought it was a good opportunity to try Continuous Data Replicator. We chose to replicate to lower cost tier-2 storage (SATA disk), and then do backups to tape, using CommVault's Snapshot capability. Because CDR replicates changes as they happen, it minimizes network traffic and also delivers continuous data protection for our critical plans, drawings and data. Replication continuously occurs automatically. Now, at any time, we have a mirror of the remote-site data at headquarters."

Using CDR enabled the engineering firm to back up the remote site more economically than previously possible. Explains the Systems Administrator, "There was no need to buy a tape library, and we don't need to change tapes at the remote office. That saves manpower cost, and we will have higher reliability, because we don't need to depend on someone from outside IT to change tapes. The tight integration of backup policies with replication allows the backup to be a scheduled, hands-off operation. CDR saves us dollars on manpower and hardware and has significantly increased the reliability of our backups."

Today the firm is using CDR to replicate data between a number of other remote sites and the Houston data center. "CDR helps increase our operational efficiency; it enables us to replicate data to another site for simultaneous processing. Now both sites can work on the same data at the same time. CommVault's flexible data management policies can be easily configured to suit our company's specific needs. We establish a policy once to perform an operation automatically on a weekly basis. CDR enables us to associate a recovery point with an established storage policy on the backup side. This policy allows us to define whether to perform full, incremental, differential, or an Auxiliary Copy of our weekly full which we send offsite. We use data management policies to create a separate sub-client backup for those servers that do not require a full backup copy for recovery."

The firm anticipates using CDR in other sites in the future. "If CDR had been available when we set up our other remote sites, we would have greatly benefited from using it. It will definitely be considered for future remote locations."

### **Data Migrator Manages A Large and Constantly Evolving Data Set**

The firm leverages the power of an integrated data management solution by incorporating Data Migrator to systematically migrate engineering data off primary storage. "In addition to saving storage space and reducing backup time, we anticipate Data Migrator will also help us to reduce long-term storage cost by slowing the growth of primary storage," says a top IT Manager. Engineering projects naturally progress through a series of stages. In the beginning there is a lot of process design work. This is followed by structural, mechanical, and piping design. As the process advances, many of the early documents are no longer used and can therefore be migrated off. One example would be a series of photos taken at the beginning of a project. As the project progresses, those photos might no longer be needed. Data Migrator makes it easy to use age of files as the primary criteria for migration of the old, unused files.

### **Variable Backup Routine Depends On Criticality and Change Level**

The IT team runs incremental backups every night, and full backups on the weekend. Some servers are backed up every week, and some once a month, depending on criticality and on how much the data changes. Critical backups include databases, file systems, Windows Active Directory, and Microsoft Exchange e-mail. The flexible storage policies provided by CommVault's common technology engine allow the firm to easily customize their backup routines to meet their needs.

### **Choosing CommVault**

The engineering firm started using CommVault software in 1998, with the Vault 98 product, the predecessor to Galaxy, and installed Galaxy in September 2001. Before

they got CommVault, they used native operating system utilities, backing up to direct-attached tape drives on each server. At that time, they had fewer servers and locations. But growth and the unreliability of doing backups with utilities dictated the need for a new backup solution. "The utilities were just not adequate," recalls a Systems Administrator. "They required lots of manual operations just to run the backups, and we spent all day Fridays swapping tapes. Then as the backups got bigger, we could no longer do a full backup automatically at night on one tape. The backup began taking two tapes. Once the first tape was full, someone would have to be there to swap tapes and restart the backup. We were spending more time and money chasing this backup process than we would spend on getting a new, more automated process. Also, the old approach invited human error. If we added a new server and forgot to add a backup script, we would go along without backup until something happened."

At that time they had multiple UNIX-based operating systems, along with Microsoft Exchange and Lotus Notes. "As we shopped around, looking at the available products, CommVault was the only one that did it all on one platform. CommVault products are built on a common technology engine, which provides common services for every data management application in the product suite. This enables us to run replication and backup using the same interface and leveraging the same back-end hardware. It also expands our functionality and allows us to leverage existing skill sets. With CommVault, we would not need ArcServe for one thing, and Veritas for another, and Legato for another. We chose CommVault because CommVault did it all."

**Ability To Restore Is The Number One Benefit**

A top IT manager says one of the greatest benefits they have realized with CommVault software is the ability to restore easily. "All the backups in the world are worthless if you can't restore. CommVault restores are easy and fast. Since most restores are done within a week or two of when the data was lost, we can restore from a recent backup right off the library, in just a few minutes. I can say that we have never lost anything that was backed up with CommVault. If it was backed up, we have always been able to recover it. With CommVault, you can always see exactly what the backup looked like, and you can easily find what you are looking for. We have always been able to retrieve the files."

**Reduced Costs, Plus Protection Against Their Worst Enemy**

CommVault software has enabled the engineering firm to save time on backup administration. "Before deploying CommVault, we used to spend a minimum of 8 hours every Friday swapping tapes. Now, we just simply look at daily reports, which take 5 or 10 minutes. This has saved us approximately 30 hours per month which we can now dedicate to other critical functions. We no longer spend valuable man hours on backup. CommVault's automation protects us from our selves. If we add disk and forget to set up a backup, CommVault will automatically back it up without being told."

**"Excellent From The Start"**

The original installation of CommVault software went extremely well. "Up front, CommVault's excellent service exceeded our expectations. They treated us like their most important customer. We were on a first name basis with our support team. Several years have passed since we began working with CommVault, and I am happy to report that their service is still excellent. We are really happy with CommVault as a vendor. CommVault is one of the few software vendors we still like, one of the few that has actually delivered on their promises. The product works, and it works well."

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