

## As Storage Grows Exponentially, CommVault Galaxy Protects Critical Data, Dispels Backup "Management Nightmare" for Raymond James

### QUICK FACTS

#### Industry/Solution:

- Financial Services

#### Platform/File System:

- Windows
- Solaris

#### Applications:

- Microsoft Exchange
- Microsoft SQL Server

#### Partner Hardware:

- EMC (DMX3000, DMX2000, DMX1000, CX600, CX700, Centera)
- Quantum ATL tape libraries

#### Challenges:

- Local backup of remote offices was time-consuming and unreliable
- Simplify complex backup management
- Data to be backed up was growing fast, but backup window could not be expanded

#### Competitive Challengers:

- CA ArcServe
- Veritas NetBackup

#### Solution:

- CommVault Galaxy Backup & Recovery
- AUX Copy
- Synthetic Full Backup

#### Benefits:

- Eliminated local backups in branches, consolidate at data center
- Automate backup reporting, saving 6-8 hours per night
- Full weekend backups completed in available time, in spite of experimental data growth

#### Customer Profile

Raymond James & Associates, which has built a national reputation during the past 42 years as a leader in financial planning for individuals, corporations and municipalities, is a wholly owned subsidiary of Raymond James Financial, Inc. (NYSE-RJF), a financial services holding company. Through its three broker/ dealer subsidiaries, Raymond James Financial has more than 4,800 financial advisors serving 1.3 million accounts in 2,100 locations throughout the United States, Canada and overseas. In addition, total client assets are approximately \$154 billion, of which approximately \$28 billion are managed by the firm's asset management subsidiaries.

#### Data Management Environment

Raymond James' centralized IT operation at company head-quarters in St. Petersburg, Florida supports approximately 12,000 users, as well as 120 branch offices across the United States and in Europe and Asia. IT infrastructure in St. Petersburg includes a Tandem non-stop mainframe, 800 HP ProLiant servers running Microsoft Windows, and 20 Sun servers running the Solaris operating system. Each branch office has an HP ProLiant ML370 local file and print server. Data storage includes server-attached disks in each branch office, plus almost 200 terabytes (TB) of disk storage in St. Petersburg. Backup storage in St. Petersburg is provided by two Quantum ATL tape libraries, each with 16 Super DLT tape drives and 555 media slots.

The Raymond James Storage Administration team in St. Petersburg depends on CommVault Galaxy for reliable, easy to manage backup for all Windows and Solaris servers in the data center, and for all the branch office servers.

#### Data Protection is a Critical Business Priority

Backup of a wide range of business critical data is a top priority for the Raymond James IT team. Manager of Storage Administration Terry Poovey says, "For just one example, we have numerous developers in IT working on applications so our financial advisors can have the best software tools on the market. Our software development helps attract good financial advisors to Raymond James. With more than 200 developers working, if

a server crashes they could lose a week's worth of work. Email is another critical function. We turn to CommVault if we need to restore a mailbox, or if an email server dies. And the most critical contribution by CommVault is protecting client data on Windows servers."

#### Data Growing Exponentially

Raymond James is a fast growing organization in a financial services industry in which the demand for data storage is driven by growth, new technology, and the demands of regulatory compliance. In 2002, the Storage Administration team needed to re-evaluate their backup strategy. Explains Poovey, "We were using CA ArcServe, which, at that time, I considered to be a department-level tool. Our data was growing exponentially, and it was becoming a management nightmare to keep track of the backups."

#### Branch Office Backup

Backing up the branch offices was one of the biggest problem areas. The branch offices were backed up locally using CA ArcServe software and tape drives attached to branch servers. Managing this process remotely became a "huge pain" for the IT team in St. Petersburg. Each morning the technical liaison person designated in each branch pulled out the overnight backup tape, put in a new tape, and stored the previous night's tape in a safe location at the branch. "There were two critical issues with this methodology," says Poovey. "First, IT did not have good control of the data from a disaster recovery perspective. If the tapes were stored on-site, what would we do if the office burned down? Some of the tech liaisons took the tapes home, and we were not comfortable with that, either. Secondly, we were not confident that we had enough control to consistently restore data after routine human errors or equipment failures."

#### Choosing Galaxy

Poovey and the storage team looked at a number of backup software products, and did in-depth evaluations for several. Says Poovey, "We especially liked CommVault because we are primarily a Windows shop, and we really liked the way CommVault deals with Windows. In contrast, our impression of Veritas was that it is really a command-line utility with a GUI

front end added on. We thought that a product like Galaxy, which was natively a Windows product, developed in Windows, for Windows, using Windows tools, would be better." In mid 2002, Raymond James replaced all the servers in the field offices, removed all the local tape drives, and centralized all email servers and storage. They installed CommVault Galaxy to back up the data center servers and to do branch-office backups across the frame relay connection to St. Petersburg.

### Galaxy Synthetic Full Backup Capability is Key

One of the primary reasons Raymond James chose Galaxy was its ability to do Synthetic Full backups. Frame Relay connections from the branch offices and St. Petersburg are relatively slow, so the strategy for branch-office backup is optimized to reduce network traffic. Branch offices get daily incremental backups and weekly Synthetic Full backups. With Synthetic Full backups, the network is never burdened with a conventional full backup. In fact, when IT sends a new server to a branch office, which happens on an average of nearly once a month, they first set up the server in St. Petersburg and do a full backup before they ship it. That way, there is no need to download even the first full backup over the network.

Galaxy AUX Copy also plays a big part in branch office backup. Initial backups are done disk-to-disk over the Frame Relay connection to the data center, then Galaxy AUX Copy is used to do a streaming copy to tape. Says Poovey, "That way we don't tie up the tape library doing the primary backup. We still need a tape backup to send off site, but making the AUX Copy is fast, which again minimizes the time the tape library is tied up." Galaxy backup also frees up valuable human resources. Now, with Galaxy, there is no need to assign technical liaisons in the branch offices any backup related duties, tape and data security issues are resolved, and there is no need to take people away from their primary duties - and the branch offices get reliable, secure and consistent backups.

### Galaxy Reporting Saves "6 to 8 Hours Every Night"

The positive impact of Galaxy at the St. Petersburg data center has been at least as great as in the branch offices. Explains Poovey, "The reporting capability of Galaxy is outstanding. We send out nightly reports on the progress of backups, and report if a backup is not complete or if there is a problem. It is very important that we report and identify and track any problems that come up in backup, simply because the data we are backing up is very important. But with ArcServe this process was becoming an onerous burden on our backup administrators, who had to manually track all that information all night. The spent 90% of their time focusing on reporting when their time could best be utilized on other tasks."

With CommVault Galaxy, IT sends out a dozen different reports automatically every day, and the right people get the information they need: the applications administrators get a report on the application servers, and so forth. All the reports are scheduled and created automatically by Galaxy. IT just sends out the link. "That has bought me six to eight hours of time every night," says Poovey. "And it has made all the difference in the world for morale. We have two full-time backup administrators, and now they have time to do something productive, instead of spending all night manually generating reports."

### Backing up Much More Data in the Same Window of Time

The flexibility of Galaxy lets the backup team get more done in the same amount of time. With ArcServe, they had to manually assign backups to specific tape drives. "With CommVault Dynamic Tape Drive Allocation we can dynamically allocate jobs as drives become free," says Poovey. "That lets us keep all the drives going at full speed, for maximum productivity. That has been a godsend." The amount of storage they are backing up has increased drastically, says Poovey, "I just came across a backup report from 1999. We were backing up about one TB on the weekend.

Today, on a weekend we back up about 26 TB. Yet we have maintained the same 12-hour backup window. That's it in a nutshell: with CommVault we back up many times more data, in the same backup window, we have better, more consistent backups, with much less effort, and our people are much happier and more productive."

### CommVault Listens and Responds Quickly

The Raymond James team has found CommVault people "always straightforward and quick to react to our needs," says Poovey. "Something I really like about CommVault is that if we request a change, we usually get it. CommVault is very good about taking input from customers. We have probably put in a dozen change requests, and gotten all of them."

The backup infrastructure at Raymond James involves multiple vendors, says Poovey. "We sometimes call in all the vendors to deal with an issue – EMC, Quantum, HP, Microsoft, CommVault. The issue has never turned out to be a CommVault problem, but in every case CommVault has participated and assisted in resolving the issues. They have always given us great support."

### Future Plans

While branch office backups are initially disk-to-disk, today most of the servers in the St. Petersburg data center back up directly to tape. However, Raymond James' plan is to go to "virtual tape library" backup. Servers will first back up to disk (virtual tape library), then use Galaxy AUXcopy to make a copy to tape. "Now, when we do AUXcopy we go tape-to-tape. That means we can only use half of our drives for AUXcopy, because half are the source, and half are the target. But when we do AUXcopy disk-to-tape, we will be able to use all 32 tape drives as targets, and accomplish our tape copies twice as fast."

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