

## CommVault Galaxy Delivers Fast, Reliable Backups and Restores... and a Full Night's Sleep

### QUICK FACTS

**Industry/Solution:**

- County Government

**Platform/File System:**

- 65 HP/Compaq servers, Windows 2000, Windows NT, Windows XP Pro

**Application(s):**

- Office automation, GIS, Engineering, Web support, Microstation, Desktop publishing

**Challenge:**

- When their previous backup software became unreliable, Maricopa County looked for a new solution, and "stumbled" on CommVault Galaxy. Faced with a backup crisis, they installed Galaxy without a pilot test.

**Solution:**

- CommVault Galaxy Backup & Recovery

**Benefits:**

- Backups are reliable and trouble free
- Full backups are completed in the one quarter the time than the previous solution required
- Direct-to-Disk backup makes possible restores "in a heartbeat"
- Faster backups allow time for more system maintenance

**Customer Profile**

Maricopa County, Arizona, includes the cities of Phoenix, Scottsdale, and Mesa, and has a population of over 3 million people spread across an area of over 9,200 square miles — making it bigger than the state of Massachusetts and six other states. The Network Solutions Group is part of the County's Office of the Chief Information Officer, and provides technology support for a number of major departments, including the Department of Transportation (builds and maintains county roads), Department of Emergency Management (plans and coordinates emergency services), Division of Telecommunications/ Wireless (supports county radio network used by sheriff's office and fire department), and the Department of Equipment Services (maintains a fleet of vehicles from patrol cars to road graders). It takes a huge amount of information to deliver all these services, and CommVault Galaxy is one of the group's most important information management tools.

**Data Management Environment**

The Network Solutions team works out of the Infrastructure Technology Center in Phoenix, in a Windows environment with 65 HP/Compaq Window servers at the IT Center and 500 desktops in a dozen locations throughout the client departments. The storage environment is a combination of internal and attached Compaq disk drives and arrays. Backup infrastructure includes two Compaq MSL5026 libraries, each with 4 SDLT 220 Super DLTtape drives and 50 media slots. Each library is attached to a dedicated Compaq ProLiant DL760 backup server.

All the servers are backed up to the libraries, over a gigabit Ethernet backbone. Network Solutions does differential backups each night, Monday through Thursday. On Friday afternoon they initiate a full backup of about 1.4 terabytes (TB), which takes less than 12 hours to complete. Direct-to-Disk backups of

critical servers are made every Saturday to a Compaq ProLiant NAS B3000 Network Attached Storage unit.

**Move to Galaxy**

The Network Solutions Group installed Galaxy in 2002. Previously, they were using Veritas Backup Exec, but were not happy with its performance. "Backup Exec just was not meeting our requirements," explains Marty Scott, Manager, Network Solutions. "Jobs were failing, and it was missing backups. Backup Exec was really a workgroup solution. It was not an enterprise solution. It did not scale to meet our needs as we grew. Backup Exec may have been OK when we had ten or fifteen servers, but it was not OK when we got a lot bigger."

Unfortunately, Scott did not have a ready solution at the time. "We limped along for years, because there was nothing out there that we saw that we thought would do the job," he recalls. "We looked at Veritas enterprise solutions, Net Backup, but it looked very expensive. We also looked at ADSM from IBM, but that also looked expensive, and complicated."

Early in 2002, however, something new showed up on the horizon. "We really just stumbled across Galaxy in the trade press," says Scott. "We called CommVault, and they came in and gave us a dog-and-pony show. We liked what we saw, and decided to go ahead and get Galaxy."

Scott was working together with two other people, his peers in the County's IT organization, one in the Enterprise Business Center, and the other works in the Administrative Technology Center. "All three of us were using Veritas Backup Exec and experiencing problems," Scott recalls, "so we banded together to solve our mutual problems and get better pricing by buying in bulk."

### Backup in Crisis

By the time they had decided to make the move to Galaxy, Scott felt that his backup situation had become a crisis. "We didn't really have time to do a pilot installation. We were all suffering the same problems with Veritas, but I was having major problems. It was so bad that I felt I had to do something right away. So we just pushed ahead and said let's get Galaxy installed as fast as we can. The installation went well. Our CommVault field engineer gave us a training class. He knew that we had a lot of experience, so he gave us a 30,000-foot overview of Galaxy that helped make the installation simple."

### Confidence Restored

With the combination of Galaxy software, new Compaq ProLiant DL760 backup servers, and a gigabit Ethernet backbone, backups are dramatically faster. But speed isn't everything. As Scott tells it, peace of mind is a major benefit. "For me," he says, "the most obvious benefit from Galaxy is a full night's sleep. We are just a whole lot more confident that the backups are being done on time. We get much better reporting and alerting than we did with Backup Exec. Backup Exec just did not have the custom report options that Galaxy has. With Galaxy, we get reports that give us exactly what we want to know."

### Faster Backups Yield Benefits

However, speed is still a major benefit, one that pays off in a number of ways. "Before," explains Scott, "it would take until Sunday afternoon to complete the full weekly backup, almost 48 hours. Now, the full backup is usually done by 3:30 AM, Saturday morning. So we've cut the time from nearly 48 hours to less than 12 hours. Those time savings translate into cost savings in several ways. For example, because the full backup is done by early Saturday morning, that gives me time to do maintenance and make changes, and be confident that if something goes wrong, I've still got two days to fix it. I know I can restore whatever I need to before we need to be up and running on Monday morning."

### Direct-to-Disk Backup

Another feature of Galaxy that saves time and improves response to customers, and thus translates into savings, is Direct-to-Disk backup, which allows backup directly to a Compaq ProLiant 3000 Network Attached Storage (NAS) unit. The Direct-to-Disk backup feature wakes up on Saturday afternoon and backs up critical servers (for example, key server clusters for the Department of Transportation) to the NAS. "This is important," says Scott, "because on Monday morning we take our tapes from the weekend full

backup and ship them to our off-site archive. Before, if we needed a restore, we'd have to call the tapes back, which took time. Now, we just do the restore off the NAS, as long as it's for one of the critical servers, which of course are the ones for which we need a fast restores. Now we can get restores done in a heartbeat. Today, we back up about 600-800 gigabytes direct to disk. Eventually we will do the whole backup Direct-to-Disk."

### Looking Ahead

"As our storage needs grow, we will want to take advantage of new capabilities from HP/Compaq and Galaxy," says Scott. In the future, he plans to look at the hierarchical storage management capabilities of Galaxy. Scott's faith in future Galaxy performance is based solidly on experience. "We've had instances in which major restores had to be done, and Galaxy comes through in those situations. Because of the architecture and the structure of our backups, the data has always been there, and Galaxy performs the way it is supposed to."

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