

# Case Study



## National Oceanic and Atmospheric Administration National Weather Service, Southern Region

*The National Oceanic and Atmospheric Administration (NOAA) conducts research and gathers data about the global oceans, atmosphere, space, and sun, and applies this knowledge to science and service. A U.S. Commerce Department agency, NOAA provides services through five major organizations, including the National Weather Service (NWS), the country's primary source of weather data, forecasts and warnings. The NWS Southern Region encompasses one-quarter of the U.S. contiguous land and is home to the world's most active weather. Nearly 1,000 field employees work in 32 forecast offices, four river forecast centers, seven Center Weather Service Units, the Spaceflight Meteorology Group, the FAA Academy, weather service offices, and regional headquarters.*

"I think two things differentiated the DS3 DataVaulting solution: responsive service and the underlying Asigra technology. Now at the weather service, backups run 10 times faster, they've reduced costs, and they report rock-solid reliability."

Stacy Hayes  
Vice President  
Operations and Business Development  
DS3 DataVaulting

### The Challenge: Implement Secure, Offsite Storage of Critical Operations/Email Data and Enable Rapid Recovery

The IT staff at the National Weather Service knows better than most just how devastating a natural disaster can be to business operations and communications. That's why offsite storage of critical data has long been an important component of the NWS Southern Region's backup program. Recently, the weather service went one step further in protecting its data, implementing an online backup service that in a single operation provides secure, offsite storage to a remote, fault-tolerant data center.

Mario Valverde, a meteorologist and chief of the NWS Southern Region Systems Integration Branch, explains the shortcomings of the previous processes. "We have always done tape backups of our systems here in Ft. Worth, Texas, rotating tapes offsite to an operational office just north of this facility. But recovering data from those tapes can take hours or even days. Data security was also of increasing importance."

### The Solution: DS3 DataVaulting Backup/Recovery Service with Agentless Asigra Televaulting Technology

As might be expected, competition was fierce in the efforts to earn the business of the high-profile NOAA agency. Valverde says that the weather service team evaluated proposals from multiple vendors and service providers before making a final decision.

Stacy Hayes, vice president of operations and business development at DS3 DataVaulting, explains key factors in the selection. "I think two things differentiated our solution: responsive service and the underlying Asigra Televaulting software. We provided a 30-day, in-house evaluation and worked with the weather service team to set up the backup/recovery service for their Netscape mail system. Other vendors considered the Netscape system 'non-standard' and either would not support it or proposed additional customization fees."

The DS3 DataVaulting service based on Asigra agentless software now enables automated, daily backups of the Southern Region's critical data, including email stores, financial information, and observational weather data from the weather service's custom IVROC Oracle-based application. The DS3 online backup/recovery service protects data from multiple platforms ranging from HP-UX, Linux, and Sun Solaris servers, to Windows XP and Windows 2003 systems.

To date, the weather service has realized the following solution benefits:

- **Secure, offsite storage.** In one step, data is automatically encrypted, backed up and vaulted in AT&T secure, fault-tolerant data centers. Systems are very solid today, but even so, there have been occasions to conduct complete system restores. Restore processes are much faster and less complicated than in the previous tape-based environment.
- **Rapid, location-independent disaster recovery.** Just recently, a weather service user lost a hard drive and was back up and running, with all data restored, in less than four hours. In the past, that process would at best have taken five or six hours, longer if the backup tape was offsite. Today, the weather service can recover data within hours, sometimes minutes. And, because the service can restore to anywhere with an Internet connection, business is protected even in the event of a wide-impact disaster. There is no longer any worry about retrieving tapes from another location that might also have suffered major damage.
- **10x faster backups.** Doing disk-to-disk backup with Asigra software is at least ten times faster than what the weather service achieved with tape. That's particularly important in backing up the email system—email never really stops, so the IT team has to get in and back it up quickly, without interference to users.
- **Message-level restore.** The Southern Region hosts mail services for some 900 users working in 41 offices. It's a critical system for weather service users, particularly those employees who travel extensively and maintain a lot of mail on the central server. With the Asigra message-level restore technology, an administrator can be very granular, picking up and restoring a single email for a single user at any location. One user back from vacation realized there were emails missing, but was not sure of their content. Previously, the administrator would have had to retrieve the right backup tape, load it (and possibly interrupt current processes), search through 1,000 email accounts, pull the right files, load them back into the server and restore them to the user. Now the administrator simply goes to the backup and retrieves only the missing messages.
- **"Negligible" administration.** In the past, one person spent at least part of every day dealing with tape backups. Even then, the weather service could not count on having a full, validated backup. If an overnight backup exceeded the capacity of the autoloader, someone the next morning had to change out the autoloader, finish the previous night's backup, and re-set for tonight's backup. It took at least an hour each day to change the autoloader, sequence the next system, check the tapes and validate the file system to make sure data could actually be restored off of the tapes. There was also considerable maintenance—cleaning heads, etc.—and overhead associated with tape. Now the process is automated, with daily email confirmation of completed and validated backups.
- **Cost efficiency.** The cost of this solution was one third lower than the nearest competitor. That's important to any business, but particularly relevant to a very cost-conscious government entity. The weather service has been trying to move away from tape-based backup. Ten years ago, the tape system cost more than \$175,000, and today the NWS Southern Region spends close to \$1,000/month for maintenance. Particularly considering the additional functionality of D2D backup/recovery, the DS3 DataVaulting service is a much better value. And it's portable—any data can be restored to any user, anywhere. The Asigra software also captures the software version to ensure restoration of old files, so there is no concern about aging technology and tape formats that might not be readable in the future.
- **Simplified ILM management and regulatory compliance.** The Asigra software enables password protection and 256-bit AES "in-flight" and "at-rest" encryption for added security in both data transfer and storage. This solution will enable the weather service to address the security aspects of regulatory requirements and also to more easily implement data retention policies.
- **Heterogeneous platform and application support.** Multi-platform and -protocol support ensures that the weather service can seamlessly protect an always-changing mix of systems and application data. Almost one third of weather-service users at Southern Region HQ run entirely from laptops, so it is important to have the ability to back up their data as well.
- **Seamless scalability and version control.** The DS3 DataVaulting service enables seamless scalability, allowing the weather service to instantly add capacity for growth or to enhance the speed and flexibility of recovery with multiple versions of backup data.
- **Exceptional support.** The weather service says that the DS3 team was a step above everyone else in terms of hands-on support, from the initial configuration and backup to a local staging system, to ongoing administrative phone support.

Overall, the National Weather Service Southern Region reports the DS3 DataVaulting based on Asigra Televaulting agentless software has met all expectations, noting specifically that the service is easy to use and that it has been rock-solid reliable.

## NOAA's National Weather Service:

The National Weather Service is an office of the National Oceanic and Atmospheric Administration, an agency of the U.S. Commerce Department. NOAA is dedicated to enhancing economic security and national safety through the prediction and research of weather and climate-related events and providing environmental stewardship of our nation's coastal and marine resources. Through the emerging Global Earth Observation System of Systems (GEOSS), NOAA is working with its federal partners and nearly 60 countries to develop a global monitoring network that is as integrated as the planet it observes.

## DS3 DataVaulting:

DS3 DataVaulting solutions feature regulatory-compliant best practices and state-of-the-art offsite data vaulting facilities designed to ensure persistent availability of critical enterprise data. Leveraging DataVaulting service, clients can reliably protect all mission-critical information resident on servers, desktops, laptops, and home-office PCs.

## Asigra:

Asigra is the award-winning leader in remote office/branch office online backup/recovery with more than three petabytes of data under protection. Since 1986, the company's agentless Televaulting solution has centralized data management and eliminated the pricing and performance problems created by agent-based tape backup software in multi-site enterprises. Televaulting addresses state, Federal and international regulatory compliance demands by backing up remote/branch office data to the data center. Data is encrypted both "in-flight" over the WAN and "at rest." Televaulting is offered by leading resellers and service providers worldwide to deliver highly secure data protection. Privately held Asigra is headquartered in Toronto, Canada with partner offices located globally.