

## CUSTOMER PROFILE

### National Academy of Sciences

#### Overview

- The National Academy of Sciences (NAS) is an honorific society of scholars engaged in scientific and engineering research. The NAS has four offices that run more than 100 servers containing mission critical data needed for daily operations and research.

#### Industry

- Science
- Engineering
- Technology
- Education
- Non-profit

#### Hardware

- Dell PowerEdge 2950, 6500, and 6850 servers
- EMC CLARiON SAN

#### UltraBac Software Products

- UltraBac
- UBDR Gold
- TSM Device

#### Other Key Software

- Microsoft Outlook
- Microsoft SQL Server
- Vertical Research Applications

#### Benefits

- P2V (Physical-to-Virtual) and V2P (Virtual-to-Physical) backups are fully supported.
- Supports dissimilar hardware.
- Tested rock-solid disaster recovery and backup solution.
- UltraBac Software staff support is very responsive.
- Speed of backup and recovery is a plus.

### UltraBac and UBDR Gold Provide the Perfect Formula for the National Academy of Sciences

*"It saves us so much valuable time and effort compared to having to rebuild everything. It's a gigantic time saver for us."*

- Henry Hammock, Systems Engineer, NAS

#### The Challenge

As an honorific scholar society engaged in scientific and engineering research, the National Academy of Sciences (NAS) is committed to the advancement of science and technology and its use for the general welfare. The organization has been expanded since its inception in 1863 to include the National Research Council, the National Academy of Engineering, and the Institute of Medicine. Collectively, the organizations are known as the National Academies. The nation's leaders have often turned to the National Academies for advice on the scientific & technological issues that frequently pervade policy decisions. The Academy membership is composed of approximately 2,100 members and 380 foreign associates, of whom nearly 200 have won Nobel Prizes.

Operating such a large research organization requires an extensive IT system. Their infrastructure stores, processes, and delivers vital information regarding all operations and research done by the organization. The system includes more than 1300 desktop PCs, 175 production servers, and 67 mission critical servers. Ensuring the data contained on these systems is safeguarded & secure in the event of a minor file corruption or major disaster is of the utmost importance to the NAS.

By using image-based technologies, the IT staff realized they could have a complete disaster recovery solution that would boast dependable backups and rapid recovery times. The bonus in selecting UBDR Gold, besides the ability to restore to every type of storage device, is providing the NAS with the flexibility to perform dissimilar hardware and virtual restores as well. Furthermore, the staff could use the technology as a tool to provision new servers and accomplish server maintenance tasks.

#### The Situation

The NAS data center employees had experience with other backup and disaster recovery solutions, and had even installed a promising solution from another vendor. The solution had been procured to accomplish regular image-based backups and as a tool for building and maintaining servers.

"We needed a bare metal restore solution that would get our servers back online as quick as possible if one or more of them failed," said Henry Hammock, systems engineer for the National Academy of Sciences. "We had licensed a solution from another vendor that sometimes failed. This was very discouraging, and is what prompted us to search for a solution that would meet our server imaging needs for both disaster recovery and routine IT maintenance and management.

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### UltraBac Software Advantages

- Accomplishes dependable server imaging for backups as well as server management and maintenance.
- Speed of restores.
- Product features and benefits are nicely matched to the customer's real-world needs.

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THE NATIONAL ACADEMIES

"In addition to backup and disaster recovery, we've had many instances where we would have liked to image a drive so we could replicate it to provision a new server. Provisioning a new server would save us time in system building, and ensure the software was installed correctly since a production server is often used as the source. Before UBDR Gold we didn't have a solution in place that would allow us to accomplish the tasks we desired."

With more than 100 physical and virtual servers running mission critical processes for the operation of this internationally renowned organization, the NAS needed a solution that would deliver dependable imaging capabilities for both their backup and server administration needs.

### The Solution

The NAS wanted a rock-solid imaging solution that could assist the staff in the daily needs of managing and maintaining the organization's hundreds of servers, as well as providing a comprehensive disaster recovery solution.

After downloading and trying UBDR Gold, the academy met with a representative from UltraBac Software. While on-site, the full capabilities of the solution were demonstrated to key information system administrators of the NAS.

"All of the managers really liked what they saw," said Hammock. "We were particularly impressed with the speed and simplicity of restoring an entire server. The NAS recommendation group subsequently made the decision to seek approval for enough licenses to use the capabilities of UBDR on all of our servers."

Not long after the initial roll-out of UBDR Gold, the NAS staff began to recognize the flexibility and stability of the product. UBDR Gold had already proved itself invaluable in many situations. The organization quickly realized that they could also use certain features that were only available in the Gold version of UBDR. These features included UBDR Gold's ability to restore to dissimilar media such as a different brand and size of hard drive, a SAN, or a virtual server. The NAS was also able to take advantage of the Tivoli Storage Manager Device option available with UBDR Gold. Based on these capabilities, the NAS upgraded their UBDR Pro licenses to UBDR Gold as well.

### The Benefits

The NAS now uses UBDR Gold to accomplish a complete image-based backup of more than 87 physical and 13 VMware ESX virtual servers on a weekly basis. The backups are scheduled with UltraBac's robust integrated scheduler and are completely automated to occur once a week. All of the servers are backed up to a central Clariion Storage Area Network (SAN) device. At any given time two weeks worth of backups are on the SAN, and any one server can be restored to a new physical or virtual server in as little as 15 minutes. The ability to back up and restore to dissimilar media is another feature that the NAS has found integral to their operations.

"We used to have to keep extra hard drives on hand of a specific size and brand to restore a failed server. Now, with UBDR Gold, it no longer matters if the media we restore to is a different brand or size or even if it is a physical or virtual server. The support for dissimilar hardware has been a great feature and one we use daily," added Hammock.

Since deploying UBDR Gold, the NAS has moved their data center from Washington, D.C. to Vienna, Virginia. As part of the logistics planning, the IT staff executed an additional complete image-based backup of every server with UBDR Gold prior to the move just in case one did not survive the trip. After the move one server did indeed fail to start. Hammock says that less than 30 minutes later they had the server fully restored and online with UBDR Gold.

On a separate occasion UBDR Gold proved its value yet again. "One day our payroll server went down and we were getting support calls from staff that were frantic about the situation," said Hammock. "We launched UBDR Gold to initiate the restore process and rebuilt the server from the last known good image on the SAN. We ended up getting the entire server back online and running in about 15 minutes."

On the rare occasion that the NAS has had to use UltraBac Software's technical support, Hammock says they have been very helpful. In the event support is needed, being able to speak to a live representative with little to no waiting time just added reassurance to the busy staff at NAS.

When asked if UBDR Gold has saved the organization money, Hammock said, "Man-hour savings alone to restore a server would be at least four hours versus the 15 minutes the process takes using UBDR Gold. In addition to this, manually restoring applications on the same server would add several more hours and take a ridiculous amount of time compared to UBDR Gold."

He concluded by saying, "It saves us so much valuable time and effort compared to having to rebuild everything. It's a gigantic time saver for us."