



Boise State University Protects Academic Data and Applications with SIOS Protection Suite®

Data replication, high availability solution guards institution's Linux-based resources from downtime

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- Monty Morland, systems engineer, Boise State University Office of Information Technology



Serving nearly 19,000 students and supporting nearly 170 academic programs, Boise State University is Idaho's largest university. In recent years, it has witnessed rapid enrollment growth, the implementation of several new academic offerings, national recognition for its research efforts and acknowledgement as one of the nation's "top up-and-coming schools" by U.S. News & World Report.

The school provides both traditional in-classroom courses as well as online courses using Blackboard technology. The Blackboard software system is supported by the university's Linux-based network file system. It is accessed by thousands of students, faculty, and staff and provides a wide range of services, including course management, delivery, and collaboration.

The university's data protection requirements include maintaining continuous availability of their Linux-based network file system and replication of all data and applications located within its Linux Red Hat server environment.

To ensure students, faculty and staff have continuous access to Blackboard resources, Boise State IT staff implemented a SIOS

#SANLess cluster using SIOS Protection Suite for Linux solution. This cluster uses local attached storage for each server in the cluster. SIOS software keeps this storage synchronized using real time block-level replication. It eliminates the cost, complexity, and single point of failure risk of traditional shared storage clusters.

"If the system is down, we know everyone on campus is going to contact us," says Monty Moreland, systems engineer with Boise State's Office of Information Technology. "We want to avoid that situation. SIOS Protection Suite for Linux solution allows our IT staff to focus on the other tasks we need to do."

The Challenge

"We don't want anyone on campus to lose their data," said Moreland. "The solution also has to provide high availability. Our systems must experience very little downtime, if any."

In addition, the university wanted technology that was easy to implement and maintain while providing the highest level of protection and availability of data and applications contained inside the Red Hat servers.

The Solution

The Boise State University IT department implemented a cluster solution using SIOS software. This cluster maintains high availability for their Blackboard and other critical applications and data by monitoring system and application health, preserving client connectivity and providing uninterrupted data access. If SIOS Protection Suite detects a failure in the application, network, or server hardware, it attempts to restart the application. If the restart fails, it automatically moves operations to backup servers and redundant copies of the data in the Linux cluster through a system failover process. The solution also enables continuous operations during planned downtime for maintenance or upgrades.

SIOS software creates a fault resilient environment that meets the University's stringent high availability requirements. SIOS Protection Suite for Linux works on both physical servers and virtual machines.

Benefits

SIOS software not only provides failover and disaster recovery protection, but it also eliminates the risk associated with a single point of failure contained in shared storage SAN cluster configurations. The SIOS failover process enables automatic system and application recovery if a server goes down.

"For that single point of failure, you need to put in a lot of additional protection," says Moreland. "If you eliminate that single point of failure, and thoroughly replicate the data and applications on the servers, you can save money. You also can reduce complexity. With SIOS there is a simplification of the server configuration."

SIOS Protection Suite's ease of use is another benefit Moreland cites. "SIOS software is easy to use and maintain, yet it also provides very robust protection," he says. Moreland adds, "You don't have to jump through several hoops. It's not a complicated set-up process, and that made the product stand out."

SIOS software's dependability and hands-free characteristics allow the university's IT staff to concentrate on other tasks, which has increased workforce productivity.

"This platform does not require us to babysit," says Moreland. "It's easy to verify that it's functioning. It has improved productivity because it frees us to do our other work. You don't have to maintain it all the time."

SIOS' reputation for protecting Linux environments also attracted Boise State's IT professionals.

"SIOS is very experienced with the protection of Linux configurations," says Moreland. "SIOS has spent a lot of time in the Linux market and the reliability of the SIOS Protection Suite product is well-known in Linux circles."

About SIOS

SIOS delivers innovative software solutions that provide application availability and disaster protection for Windows and Linux environments.

Clusters Your Way.™

An essential ingredient in any cluster solution, SIOS SAN and SANless clustering software provides the flexibility to build clusters your way to protect your choice of Windows or Linux environment – and any configuration (or combination) of physical, virtual and cloud (public, private, and hybrid) storage – without sacrificing performance or availability. SIOS provides unique SANless clustering software that eliminates both the cost and the single-point-of-failure risk of traditional SAN-based cluster solutions.

Founded in 1999, SIOS Technology Corp., is headquartered in San Mateo, California, and has offices throughout the United States, United Kingdom, and Japan.

About Boise State University

Boise State is a university of imagination and innovation. From its creative football play calling as two-time Fiesta Bowl champions to its recognition in U.S. News & World Report's "America's Best Colleges" for its striking improvements and changes, Boise State is on the rise. Learn more at www.boisestate.edu

