

## Major Retailer Protects SAP Applications with SIOS LifeKeeper for Linux

SIOS Chosen Based on SAP Certification and Amazon Web Services Recommendation

SIOS LifeKeeper for Linux provides full protection—complete with high availability clustering, continuous real-time data replication and disaster recovery functionality—for the entire SAP environment in a single, cost-efficient solution.



With customer service being a top priority at both its “brick-and-mortar” and online stores, customer relationship management is a mission-critical application for this retailer. In total, the retailer has 20,000 employees and operates 1000 outlets spread across 26 states, with online sales serving all 50 states and Canada. The CRM and related customer-serving applications all use SAP NetWeaver and SAP HANA software running on Linux servers on the Amazon Web Services (AWS) cloud.

### The Environment

The retailer operates its own data center, but has found AWS to be more cost-effective for its needs. And while the retailer has a mix of Windows and Linux servers, the latter is now preferred for the same reason: lower costs. Over time, the IT department plans to have its applications running entirely on Linux in the public cloud.

### The Challenge

Like most application software, SAP NetWeaver and SAP HANA offer

their own provisions for disaster recovery and high availability. But sometimes these encounter limitations associated with Linux and/or public cloud services.

Two such limitations confronted this retailer: The lack of robust HA provisions in the Linux operating system; and the inability of AWS at that time to support SAP HANA System Replication across multiple availability zones or regions. The retailer originally met its uptime, recovery point and recovery time objectives by sharing storage between server instances and backing up the data to another AWS zone. But as the application grew in both scope and sophistication, better protection was needed.

### The Evaluation

Recognizing the complexity of getting high-availability provisions to work as intended under all foreseeable failure scenarios, the System Engineer assigned to the project wanted to be assured that

the solution chosen had been proven in practice for SAP software running on Linux servers across multiple zones on the AWS cloud.

The decision to use SIOS LifeKeeper for Linux was made quickly and with confidence, according to the System Engineer: “We engaged a consultant who had hands-on experience with our same requirements, and he recommended the SIOS software as being the best-in-class high-availability solution available. When we then learned that the SIOS solution was certified by SAP, we decided to test it in our lab.”

The testing went quite well. “The result from one test of the failover cluster went so smoothly,” the System Engineer recalls, “that it took us a while to realize the SIOS solution had already automatically failed over to the secondary server.” Based on such a successful test, the retailer proceeded immediately to rolling out the production implementation.

## The Solution

SIOS LifeKeeper for Linux provides full protection—complete with high availability clustering, continuous real-time data replication and disaster recovery functionality—for the entire SAP environment in a single, cost-efficient solution. The SIOS software supports both the Java and ABAP (Advanced Business Application Programming) versions of SAP servers running on either Red Hat Enterprise Linux or SUSE Linux Enterprise Server.

The full protection for the entire SAP environment includes verifying that SAP is running, file shares or NFS exports are available, databases are mounted and available, and clients are able to connect. To do that the SIOS software continuously monitors servers, operating systems, SAP Primary Application Server (PAS) Instances, ABAP SAP Central Service (ASCS) Instances, back-end databases (Oracle, DB2, MaxDB, MySQL and PostgreSQL), SAP HANA, SAP Central Services (SCS) instances, volumes or file systems, file shares or NFS mounts, IP and virtual IP addresses, and Enqueue and message servers.

SIOS LifeKeeper for Linux has been certified by SAP for integration with SAP NetWeaver, and can be optionally used to control SAP HANA System Replication across the SIOS failover cluster.

SIOS also provides an Application Recovery Kit for SAP HANA, which simplifies the implementation with a working “out of the box” configuration. To provide protection against local disasters, the System Engineer is now able to use different zones for the primary and secondary server instances. He also uses open source software to automate the provisioning and configuration of the server instances in the failover cluster.

## The Results

While the retailer has yet to experience a failover event caused by an actual failure, the System Engineer is confident in the solution: “We tested and continue to test the high-availability configuration in the QA environment we set up in the AWS cloud. We run the tests again after every change in the configuration or any of the software, and the SIOS solution continues to work as intended every time. This rigor has given us great confidence that our failover cluster won’t fail us when we actually do need it someday.”

## About SIOS Technology Corp.

SIOS Technology Corp. makes software products that provide the insights and guidance IT managers need to optimize and protect business critical applications in large, complex data centers.

SIOS SAN and SANLess software is an essential part of any cluster solution that provides the flexibility to build clusters to protect your choice of Windows or Linux environment in any configuration (or combination) of physical, virtual and cloud (public, private, and hybrid) without sacrificing performance or availability.

Founded in 1999, SIOS Technology Corp. (<http://us.sios.com>) is headquartered in San Mateo, California, and has offices throughout the United States, United Kingdom, Singapore and Japan.



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