Disaster Recovery in Mission-Critical Environments

Ensuring business continuity of mission-critical systems with Disaster Recovery Mirroring System from Stratus and ARI

Business situation

Companies running critical Stratus® VOS applications have essential data and system information that must be preserved and readily accessible, even in the face of disaster. Corporate business continuity plans typically include procedures for maintaining a backup of business-critical information in a disaster recovery (DR) module. While traditional backup solutions, which capture snapshots of the production system and data, are satisfactory for many business situations, they are insufficient for real-time transaction-based business operations.

During the process of updating their business continuity plans to reflect changing business priorities, several major operators in various industries identified critical VOS production systems and data that required a higher level of protection than previously provided:

- **A regional US bank** needed a real-time backup of ATM transactions to a remote DR module, to eliminate the risk of losing critical transaction data, which could lead to substantial financial losses, penalties and irreparable business damage.
- **A large international bank** doing business in more than 38 countries wished to replicate all of its VOS production system configuration files to its remote DR module, so that

Banks, retailers and processors authorizing ATM/POS transactions rely on VOS DRMS to replicate critical data to a DR module in real time — without disrupting production system performance.

Quick Facts

Sold and Supported by Stratus

Solution profile
- Provides reliable real-time data backup over TCP/IP or X.25 networks
- 24x7 availability without operator intervention
- Flexible, scalable, easy-to-use software solution
- Dynamically manages all aspects of error detection and handling
- Includes robust, user-friendly administrator interface with monitoring capabilities
- Helps ensure business continuity in the event of disaster

Products
- VOS Disaster Recovery Mirroring System from Application Resources, Inc. (ARI)
- Stratus VOS operating system
- Stratus Continuum® and V-Series systems

Services
- Ongoing technical support from Stratus

it would be prepared to get production systems working again quickly post-disaster.
- **A food retailer** with 2,300 stores in Europe wished to backup mission-critical payment data in real-time to a recovery site, so that the backup system could take over as the primary system at any time.

In each case, the risk of losing business-critical data became a major business concern, driving the organization to enhance its disaster recovery procedures. Replicating critical information in real time and storing it on a dedicated DR module away from the production site was the ultimate goal.

Business objectives

In seeking a disaster recovery solution, each company developed a similar set of objectives:
- Perform real-time data mirroring between the Stratus VOS production system and a hot-backup site
- Maintain the performance of the primary production system, ensuring the backup is transparent to users
- Ensure that remote database is identical to the primary database at all times
- Maintain transaction processing with no interruptions during security upgrades
- Provide hands-free operation 24x7.

Count On Stratus™

VOS Disaster Recovery Mirroring System (DRMS)

Since preserving the performance of the business-critical production system was a top priority, each organization selected the VOS Disaster Recovery Mirroring System (DRMS) solution, designed specifically to protect VOS business applications. The DRMS software solution performs real-time, bi-directional data backup and mirroring between the Stratus VOS system and the target backup system in a way that is completely transparent to the user. For more than 25 years, SoftMark and ARI have specialized in providing VOS tools to leading companies across multiple industries. Today, these proven solutions are sold and supported by Stratus.

> **"During normal system load the overhead of DRMS is not noticeable and during peak time we've measured an overhead of no more than 5%."**
>
> Stratus Platform Manager, European food retailer

Designed to minimize the impact on the VOS production system, DRMS intercepts all I/O operations performed on files identified as critical and passes the information to the primary DRMS server for transmission over existing TCP/IP or X.25 networks to the backup DRMS server. The backup server then executes the I/O operations on the target database, which can be any relational database system residing on any platform with sufficient processing power. DRMS reliably replicates sequential, fixed, relative and stream files — including transaction-protected files. The software runs 24x7 without operator intervention and requires no changes to the business application.

Business impact

Within a few days, the regional US bank had installed, configured and thoroughly tested DRMS and had begun using it for real-time, zero-delay mirroring of ATM transactions to its DR system hundreds of miles away. The bank's system administrator can easily monitor mirroring activities, analyze transaction throughput and generate detailed reports on system-level and per-file activity. Key to its successful operation is the software's ability to automate network error handling, including alternate routing to the backup system. By ensuring access to critical transaction data at all times, DRMS has become a crucial component of this bank's business continuity plan.

The international bank deployed DRMS to replicate its production configuration files to its remote DR system. DRMS monitors all static files on the VOS production system, including command macros, tables, program source code and other files, and replicates any changes made to these files to the DR module. The software also automatically detects and replicates newly-created critical files, eliminating the need for manual configuration changes. By ensuring the files in the DR system are identical to those in the production system, DRMS helps this bank achieve business continuity.

The European food retailer uses DRMS to maintain a DR backup site that is a complete copy of its Stratus VOS production system. DRMS replicates all mission-critical production data to the DR module in real-time, enabling the DR module to operate as the primary production system in case of disaster and as a test system at other times. Performance tests revealed that under normal load conditions, system overhead attributable to DRMS was negligible, and under peak processing conditions overhead never exceeded 5%.

VOS DRMS has proven to be an extremely reliable real-time backup solution for these and other businesses running critical applications on Stratus VOS systems. By ensuring the secondary DR database is identical to the primary database at all times, DRMS enables each organization to have continuous access to its critical data — minimizing the impact of a catastrophic IT event. VOS DRMS has become an essential component of each organization's business continuity plan.

About Stratus

Stratus Technologies focuses exclusively on helping its customers keep critical business operations online without interruption. Business continuity requires resiliency and superior availability throughout the IT infrastructure, including virtual environments. Stratus delivers a range of solutions that includes software-based high availability, fault-tolerant servers, availability consulting and assessment, and remote systems management services. Based on its 28 years of expertise in product and services technology for total availability, Stratus is a trusted solutions provider to customers in manufacturing, health care, financial services, public safety, transportation & logistics, and other industries. For more information, visit www.stratus.com.

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