



IT SOLUTIONS GROUP

THERE IS NO UPSIDE TO

DOWNTIME

Experts in IBM i High Availability, Disaster Recovery, System Management and Data Migrations

The Benefits of Working with an Unbiased Business Partner When Evaluating IBM i High Availability Solutions

Learn how a Texas-based manufacturing company worked with such a business partner to perform an in-depth evaluation to find the best type of HA solution for its business requirements.

There are significant advantages to working with an IBM business partner that understands, sells, installs and supports both types of high availability solutions for IBM i. Logical replication solutions use the integrated journaling as well as the remote journaling capabilities of the IBM i OS, while hardware replication uses physical disk mirroring. Each replication technology has advantages and disadvantages, depending on the company's needs and budget.

Unfortunately, there are not many IBM business partners that sell, install and support both types of high availability technologies. However, such a partner will be less biased to one type of technology or the other as the goal is simply to ensure the customer gets the best type of solution for its IBM i environment.

Mueller's IT staff, Evanet Gallant, Michael McClure and Michael Hoten met with Matt Staddler of ITSG after Matt's high availability presentation at a COMMON user group conference where he talked briefly about the pros and cons of logical and hardware replication. They wanted Matt to explain more about the advantages and disadvantages of each, which he gladly did.

COMPANY

Mueller, Inc. is a leading manufacturer of pre-engineered metal buildings and roofing products with headquarters in Ballinger, Texas and branch offices throughout the Southwest. What began as a family business over 75 years ago has grown into a thriving corporation. Today Mueller serves the Central and Southwest U.S. markets from 32 distribution and three manufacturing locations, employing approximately 600 people while continuing in its heritage of directly serving the end user with quality metal building products. www.muellerinc.com

CHALLENGE

With rapid expansion to 32 sales branches and three manufacturing sites, the company's old disaster recovery solution was outdated and could not meet their recovery time and data loss requirements. Due to the relatively small IT staff, Mueller needed a third-party resource to assist with analysis, selection and implementation of a new disaster recovery solution.

HIGH AVAILABILITY INFRASTRUCTURE

- IBM Power S824 CBU server, 8286-42A
- 6 core two socket server using 387 GB SSD disk drives
- IBM 740 Power 7 server, 8205-E6C
- IBM i OS
- IBM Power HA's Geographic Mirroring with asynchronous replication for backup and recovery

CRITICAL BUSINESS APPLICATIONS

- Oracle's JDEdwards EnterpriseOne 9.0 human resources and payroll modules
- OneWorld B7333 General Ledger, AR, AP, Fixed Assets, Manufacturing, Inventory Control, Sales Order Processing, and Purchasing modules with custom programs to support call center operations, shipping, logistics and miscellaneous interfaces to manufacturing machinery
- Kronos Timekeeping System
- Cognos BI
- Lotus Notes on Windows server





After their meeting with Matt, they scheduled in-depth demos of each type of solution with ITSG's HA technical specialist, Pete Mayhew, where he and the Mueller IT team went through both the Maxava's logical replication HA solution and the IBM disk-based PowerHA solution in detail, and in consideration of both Mueller's IT environment and their tolerances for data availability and data loss.

After additional evaluation discussions among themselves and with customers of both solutions, the IT team at Mueller determined that PowerHA for IBM i to be the best fit. PowerHA is an integrated extension of IBM's storage management architecture that functions like RAID protection or disk mirroring and takes very little time to manage, a feature that was critical for Mueller's limited IT team. PowerHA also provides the replication they needed to keep data updated in near real-time on the pool of shared disks. In the event of a planned or unplanned outage, production applications can be switched from the primary node to the secondary node without users even being aware it happened. With logical replication, users can experience 10 minutes or more of interruption.

IMPLEMENTATION

To start the process, Mueller ordered a bandwidth increase from their telecom provider to accommodate the traffic necessary for the data replication. At the same time, the company purchased the PowerHA for i Enterprise Edition software from ITSG as well as an IBM Power 8 S824 CBU server to be used as their backup or "target" machine.

As soon as the bandwidth upgrade was complete, Pete Mayhew, together with the Mueller IT team, implemented IBM PowerHA on the existing production server in Ballinger, TX. Then they implemented the new Power 8 CBU in Mueller's Dallas data center. Once installed, the team also used IBM PowerHA's Geographic Mirroring feature with asynchronous replication due to the distance between Ballinger and Dallas.

There were multiple phases of implementation including getting the new IBM Power 8 system installed and running, and moving to the new system configuration with both IBM i machines (an existing 740 and the new Power 8) in Ballinger. In addition to testing the configurations and business applications, there was waiting on the Windows disaster recovery solution to be implemented and ready, and finally, moving the S824 Power 8 CBU server to the Dallas data center and synchronizing the S824 with the 740 Power 7 server in the Ballinger location.



OUTCOME

“Delighted” was the word Mueller IT staff used when describing their IBM i PowerHA solution and the business and systems assurance and availability it now provides. The company now has a comprehensive HA/DR solution that exceeds its recovery time and data loss requirements – all with real-time replication and automated processes for ease of use. And both IBM and ITSG are there to support the solution.

Steve Finnes, IBM’s worldwide product offering manager for PowerHA and the Power Systems Capacity Backup (CBU), says, “PowerHA customers love the solution because it is highly automated, which significantly reduces the time required for IT staff to manage it. Once PowerHA is implemented, it’s largely self-managing.” Finnes continues: “The idea behind building a shared storage and/or replicated storage cluster topology is that a failover operation to another node—whether planned or unplanned—is simple and automated. It’s all about simplicity and certainty of outcome. A PowerHA cluster is designed for on-demand role-swap operations (switching between production and backup machines), and our clients do so regularly.”

Mueller also enjoys the benefit of reduced business interruption insurance premiums now that a high availability disk-based clustering solution is in place. “Our owner and company president can sleep better at night when a West Texas thunderstorm comes rolling through,” says Corporate IT Manager, Evanet Gallant. “Our recovery time in the event of an outage has been reduced from days to less than an hour, and our potential for data loss went from a minimum of 24 hours to only a few minutes. Plus, the solution is automated and self-managing. We couldn’t be happier.”

Continues Gallant: “IT Solution Group was an invaluable resource from the first discussions about ‘what is PowerHA’ and ‘what is logical replication’ to the final ‘IT’S DONE!’ celebration. Pete Mayhew and Matt Staddler were knowledgeable, patient and responsive with a focus on educating the Mueller team and making the go-live process as painless as possible. Cora Thelen, the ITSG account executive, brought a wealth of knowledge about IBM products and services as she managed and organized the project from beginning to end. We’ve built a solid business relationship between Mueller and ITSG as a result of the success of this HA/DR project.”

ABOUT IT SOLUTIONS GROUP, INC.

IT Solutions Group, Inc. (ITSG) is an IBM Advanced Business Partner and recognized leader in North America and the Caribbean for installation of High Availability solutions on IBM i (AS/400, iSeries), with successful installs in the small-medium business (SMB) market to Fortune 100 companies in 36 of the 48 contiguous states. Having data centers in Orlando and Chicago, they offer Backup/recovery, High Availability, Disaster Recovery, and Cloud-based business recovery solutions and services.

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