



Client

Group Dekko
www.dekko.com

Industry

Manufacturing

Challenge

Group Dekko had older IBM Power Systems servers based on POWER6 and POWER6+ processors, which were coming off lease. And the older servers were a performance bottleneck; overnight, monthly and year-end batch processing times for the Infor and Domino workloads had steadily crept up until they threatened to interfere with workday processing tasks.

Solution

Dekko chose one new IBM Power S824 server for production, and two new Power S814 servers for dev/test and replication of the production server. The production servers are using all solid-state disk (SSD) and Virtual I/O Server (VIOS) to maximize performance and throughput.

"We've had a great relationship with Sirius and IBM over many years, and this is just the latest success for us."

– Chris Edwards
VP, Systems

Diversified Manufacturer Builds on History of Success with Latest Generation of IBM Power Servers



A Group Dekko employee builds an automotive wiring harness. For more than 60 years, Dekko has manufactured components across a wide variety of industries.

Group Dekko, Inc. (Dekko) was established in 1952 with five employees producing ready-made wiring harnesses for manufacturers of commercial refrigerators. Today, Dekko is a highly diversified company that employs approximately 1,500 associates across 11 facilities in three states and Mexico, manufacturing a broad variety of products for the office furniture, transportation, industrial, architectural lighting, appliance and medical markets.

Dekko has been an IBM® midrange computer client since the days of the IBM System/36 minicomputers. By October 2013, Dekko was running their primary business applications—including Infor™ LX, IBM Notes® and IBM Domino®—on three Power Systems™ servers based on POWER6® and POWER6+™ technologies. Those servers were approaching the end of their leases in 2014, so the time was right for a technology refresh. Dekko's timing worked out perfectly; their overnight, monthly and year-end batch processing times for the Infor and Domino workloads had steadily crept up until they threatened to interfere with workday processing tasks just as IBM was releasing the newest systems based on the POWER8™ processor family.



Dekko chose one new IBM Power® S824 server for production workload and one new Power S814 for application development and testing at the company's primary data center in its Garrett, Indiana headquarters. Another Power S814 for replication of the production server was installed at a secondary site in nearby Kendallville. The production server is configured with multiple IBM i LPARs for their Infor and Domino workloads, with a separate AIX® LPAR for IBM Tivoli® Storage Manager (TSM). The IBM i primary production LPARs are replicated to the secondary production server using Vision Solutions® MIMIX®.

To improve I/O performance and simplify the physical footprint, Virtual I/O Servers (VIOS) are used to host network connectivity for all IBM i LPARs. VIOS uses a combination of 2- and 4-port 10Gb Ethernet adapters, along with 2-port 8Gb Fibre Channel adapters. In the past, each LPAR had dedicated, physical I/O cards, but VIOS allows Dekko to dramatically reduce the number of cards in each server.

For performance reasons, Dekko went to all solid-state disk (SSD) technology on the two production servers, significantly reducing the number of mechanical drives while improving performance. The applications access (34) 775GB SSD internal drives through the IBM i virtual storage LPAR.

Dekko Vice President of Systems Chris Edwards knew there would be performance benefits to replacing his POWER6 and POWER6+ servers with new POWER8 hardware, but he wasn't prepared for how dramatic the change—and the savings—would be. "We realized a 70 percent reduction in physical rack space by configuring the POWER8 servers with fewer drive shelves. We also saw a 40 percent reduction in power usage, and a corresponding reduction in heat generated. Moving to SSD was a big part of it, since we were able to reduce the number of spinning drives – which also reduced the I/O requirements. The use of VIOS is another reason. Together, these fundamental technology changes not only increased our processing performance, but also had real cost advantages in the data center." Another cost benefit of moving to new hardware was the elimination of maintenance costs for the older servers, which is saving Dekko more than \$100,000 annually.

On the Domino side, processing times for overnight batch processing jobs were reduced by between 50 and 71 percent. For their Infor batch processing, the reduction on average has ranged from 23 to 35 percent. "The performance of these systems already goes well beyond what I expected, and I think we can squeeze even more out of them with a bit of tuning, so we'll be working with Sirius on that."

"We had a pretty good chunk of services as part of this migration, and we fundamentally changed how we built our IBM i LPARs. Sirius came in and helped us move our tape and Ethernet communication into VIOS servers, so that was a big change for us." VIOS also changed the way storage is handled for the IBM i LPARs, all of which is now hosted through a single, dedicated IBM i LPAR on each production machine. Those storage LPARs now "own" all the disk space, providing virtual assignment and capacity for all the other LPARs. "Sirius helped us plan that process out as well."

Dekko had been running mostly IBM i 7.1 and a few instances of 7.2 on their POWER6 and POWER6+ servers. Now that the workload has been migrated to POWER8, which natively supports IBM i 7.2, Edwards' team is in the process of upgrading the rest of the LPARs to the current version. The company is running Infor 8.3, Domino 9 and TSM 10.

Chris Edwards' satisfaction with Sirius and the implementation process is as enthusiastic as it is for the new Power Systems servers. "We've been working with Sirius for a long time, so I had a lot of comfort with the whole purchasing and planning process. In terms of configuring the new hardware, that whole process went seamlessly, as it always has."

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A helping hand with backup and recovery

Sirius Managed Services is providing day-to-day administration of Dekko's TSM server that's running on the AIX partition on the new POWER8 server, as well as the more than 350 servers and end-user computers that are backed up using TSM. All of Dekko's servers except for the POWER8 servers are running Windows Server®, and the end-user systems are running Windows® XP or Windows 7. In addition to routine daily maintenance and monitoring of the primary TSM server, the Sirius Managed Services team configures the servers, end-user PCs, and databases to backup to the TSM server, and can troubleshoot all backup client failures, performing diagnostics and remediation in the background as needed.

TSM backs up to the internal SSD storage in the primary POWER8 server, and to five IBM TS3310 LTO4 tape libraries. Five other TS3310s are allocated to the IBM i partitions. Sirius produces a daily TSM disaster recovery plan which, if there were an emergency failover or if Dekko chose to perform failover testing to their DR server, would help with the recovery process.



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