Quest™

Spansion upgrades Oracle database with SharePlex®

Flash memory technology provider enables real-time replication without degrading the production system's performance or availability — and saves big.

Spansion is a leading provider of Flash memory technology. The company's products power everything from the routers that run the internet to consumer and automotive electronics. The company has more than 3,000 employees and more than 4,500 customers worldwide. When Spansion needed to upgrade a large, business-critical database to a newer Oracle® version with minimal downtime, it turned to Quest.

Spansion's factory runs around the clock, producing Flash memory products. Production depends upon IT systems, including a number of Oracle databases. Chief among them is a 1.2 terabyte Oracle database that supports Spansion's statistical process control system (a system similar to SAS®). Every day, 300 to 400 users connect to the database.

Naturally, the database systems require periodic maintenance and upgrades. In particular, the statistical process control base was experiencing performance issues, so Spansion wanted to migrate it from Oracle 9i running on HP-UX 11.11 to Oracle 11g on Linux AS 5.5.

Spansion's infrastructure manager and four database administrators (DBAs) took on the challenge of migrating the database, choosing to use a manual export and import process. Unfortunately, the attempt failed. "It was critical to upgrade this database because it was heavily overloaded and could no longer support the factory loads," explains Hugo Tellez, section manager/DBA for IT infrastructure. "But even though we had a 24-hour downtime window, we were unable to complete the manual export and import process on such a large database; we had to go back to the previous HP-UX version."

A versatile, cost-effective solution

Due to the high costs of production downtime, the company did not want to risk another attempt at a manual migration. Instead, Spansion began investigating an alternative migration approach: using database replication. Spansion looked at Oracle's GoldenGate database replication tool, but was interested in a more cost-efficient tool suitable for one-time use. That's when the company turned to Quest. Spansion had used a variety of Quest® migration tools and application

CHALLENGE

Due to poor performance, Spansion wanted to upgrade the database that supported its business-critical statistical process control system. The company needed to migrate to a new system in a cost-effective way without downtime or manual export.

SOLUTION

The technology company deployed SharePlex® for Oracle for migration of its system data to a new Oracle 11g on Linux AS 5.5 system. This enabled real-time replication without degrading the production system's performance or availability.

BENEFITS

- Migrated a large database without downtime, avoiding six figures in potential losses
- Reduced migration risk with option of easy failback
- Replicated data automatically after the database shutdown and restart
- Improved the IT staff's reputation and relationship with the manufacturing organization

APPLICATION AREAS

- Database

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>
> *Hugo Tellez, Section Manager/DBA for IT Infrastructure, Spansion*

performance monitoring solutions such as Foglight® and Spotlight®.

Spansion had also used Quest's premier database replication solution, SharePlex for Oracle, a few years earlier, but for balancing load between servers—not for a database migration. "We'd had a lot of good experience with Quest tools," says Tellez. "There was a lot of flexibility in how we could use SharePlex for Oracle, which proved to be a cost-effective solution for this project."

SharePlex is a mature, high-performance, high-availability technology that offers a low-cost alternative to other Oracle replication tools. SharePlex also provides a real-time copy of production data—without degrading the production system's performance and availability. This real-time copy can be used for a variety of purposes: load balancing, offloading reporting from production systems, high availability and disaster recovery. SharePlex can also be used to ensure safe software and hardware upgrades and migrations with minimal downtime.

Six-figure savings and seamless migration
Spansion completed its database migration project in fewer than three months, from start to finish, without downtime because it used SharePlex. That potentially saved the company hundreds of thousands of dollars. "We set up SharePlex and synced the new database with our existing production database, all without downtime," says Tellez. "If we had done the migration manually, it would have been another 24-hour downtime window."

Spansion was able to proceed with full confidence that only minimal downtime would occur if something went wrong during migration. "If there had been a problem with the Oracle 11g database or hardware, SharePlex would have enabled us to switch the application and users back to the old version quickly," Tellez observes. "Having that failback option to ensure minimal downtime was very important to us."

Spansion was pleasantly surprised at how resilient SharePlex proved to be. "At one point during the replication phase, prior to cutover, the Linux server we were replicating needed to be shut down and restarted," says Tellez. "We thought we might have to restart replication from scratch again, but the SharePlex replication simply recovered seamlessly and continued without errors. That was impressive."

An improved reputation
Using SharePlex to deliver a critical migration with minimal downtime improved the reputation of IT within the company. "The relationship between IT and the factory hasn't been great in the past, and the failed migration didn't help matters," says Tellez. "We proved to them that we can do these upgrades with minimal impact, helping restore confidence in the IT team's abilities and helping improve the relationship, by using SharePlex."

The migration project also further solidified Spansion's strong relationship with Quest. "We were very, very pleased with Quest Support," notes Tellez. "Whenever we needed any kind of question answered,

wanted to confirm something or open a case for support—whatever we needed—Quest Support was immediately on top of it. They were very, very helpful."

Since this migration was so successful, Spansion is planning to use SharePlex again, this time to migrate another database from Oracle 10g to 11g.

ABOUT QUEST®
Quest helps our customers reduce tedious administration tasks so they can focus on the innovation necessary for their businesses to grow. Quest® solutions are scalable, affordable and simple-to-use, and they deliver unmatched efficiency and productivity. Combined with Quest's invitation to the global community to be a part of its innovation, as well as our firm commitment to ensuring customer satisfaction, Quest will continue to accelerate the delivery of the most comprehensive solutions for Azure cloud management, SaaS, security, workforce mobility and data-driven insight.

TECHNOLOGY AT WORK

SERVICES

Quest Support

SOFTWARE

SharePlex for Oracle

Linux AS 5.5

Oracle Database 11*g*

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