



"Without Replicate1, we wouldn't be able to have the reports we have now and people would give up waiting for their data to come back."

Shawn Archibald, I.T. Manager

Business Profile

Company Name:
Wheeler Machinery Co.

Headquarters:
Salt Lake City, Utah, USA

Industry:
Caterpillar Equipment Dealer,
Sales and Service

Business Environment:

- Founded in 1926
- 600 employees in 13 locations
- 75 field service trucks

Implementation Team:
Vision Solutions and Wheeler

Vision Solutions Products:

- iTERA HA
- Replicate1

Critical Issue

Wheeler's business is all about providing high levels of service to their heavy equipment customers. Its managers need timely access to information in order to make critical decisions quickly. The business intelligence (BI) software used to provide this information accesses vast quantities of data and then "slices and dices" it in ways that allow Wheeler's managers to spot important issues that demand attention. These BI processes can consume considerable disk I/O bandwidth and processor resources.

As a result of their data-intensive nature, when BI applications run on production systems they can impair the performance of other business applications. Traditionally, these applications were run on a separate server, against nightly or weekly snapshots of production data. But this approach forced managers to work with data that was not current. Wheeler needed a way to remove the BI workload from production systems while also providing managers with access to up-to-the-minute data.

Results

- Managers can make time-sensitive decisions rapidly using real-time data.
- No need for nightly extracts to stock the data warehouse.
- BI functions don't place any strain on operational systems.
- Specialized database indexes optimize BI performance, without impacting production systems.
- iTERA HA protects the continuity of Wheeler's business operations.
- Neither Replicate1 nor iTERA HA requires any day-to-day management.

Technologies

- IBM DB2®
- Microsoft® SQL Server
- DBS (Caterpillar Corporation proprietary ERP); migrating to Lawson® Equipment Service Management & Rental
- Replicate1™
- iTERA HA™
- AS/400® model 8203-E4A (production system)
- AS/400 model 9405-520 (backup system)
- Dell® R710 with VMware® virtualization



Business Challenge

Effective business decision-making requires ready access to all relevant information. That's nothing new. What's new is that over the past couple of decades the pace of the business world, and the world in general, has accelerated rapidly. As a result, we've reached the point where yesterday's data may be stale today.

At one time, Wheeler's managers ran queries, reports and analysis directly on data in the production databases. However, because these processes are processor- and disk I/O-intensive, they placed an undue strain on the production system.

To alleviate this problem, Wheeler bought a data extract, transform and load (ETL) product to extract data nightly and load it into a second database reserved for BI purposes. However, that product was cumbersome to use, required nightly extract runs and resulted in a data warehouse that was as much as 24 hours out of date. What's more, the BI database frequently got out-of-synch with the production database and had to be refreshed.

Wheeler needed a way to eliminate these problems.

Providing data for BI purposes wasn't the only data availability challenge that Wheeler wanted to address. Like all companies, Wheeler wanted a way to ensure that all of its data and applications will still be accessible should the primary system become unavailable for any reason.

Solution

Wheeler now makes timely BI information available with the help of Replicate1. Wheeler's employees update the production database primarily through DBS, a Caterpillar-provided ERP application. Now, whenever the database is updated through DBS or any other means, Replicate1 recognizes those updates and copies them, in near real-time, to a Microsoft SQL Server hosted data warehouse that is dedicated to BI applications.

With Replicate1, sharing data between these otherwise incompatible databases is transparent to users and requires no operator intervention. Most importantly, thanks to Replicate1, the nightly ETL jobs that the company used to run are now a thing of the past and Wheeler's managers now base their decisions on real-time information.

Having a separate BI database helps in other ways as well. For example, Wheeler maintains additional indexes on the BI database to optimize performance, but because those indexes are not on the production database, maintaining them does not affect the performance of operational applications.

Replicate1 is also helping to smooth Wheeler's upcoming migration to the Lawson Equipment Service Management & Rental application from its existing ERP application. Staff can perform data cleansing queries on the BI server, ensuring a cleaner migration to the company's new ERP application, without straining the production server.

Replicate1 has also helped to reduce the number of complaints that Wheeler's I.T. department receives. "Before implementing Replicate1, when I got comments from the users, they were mostly complaints," said Shawn Archibald, I.T. manager at Wheeler. "They would complain that we took away a paper report to give them an online report, but they would have to wait and wait for their data. And running their reports would slow down the other systems. Now, users see their reports quickly, and without any impact on the other applications, so I don't hear from them."



Archibald is also happy with how easy Replicate1 was to install and he appreciates the tools and training that Vision provided to make that happen.

Wheeler also turned to Vision Solutions for help with its other information availability challenge—ensuring that data and applications will continue to be available no matter what. This is a central issue for Wheeler because its Salt Lake City data center is located in an earthquake zone.

Thanks to ITERA HA, Wheeler is confident that its data and applications are now protected from the threat of destruction due to an earthquake or any other eventuality. ITERA HA maintains a real-time replica of all production data and applications on a second IBM i-based system located in St. George, Utah, which is 300 miles from Salt Lake City. The distance between the two facilities is great enough that a single seismic event is highly unlikely to knock out both data centers.

Unlike tape backups, which can be up to 24 hours out of date, ITERA HA protects Wheeler's data and applications right up to the moment of a failure. "I'm amazed at how fast the replication process is," said Doug Warner, systems administrator at Wheeler. "Every once in a while I'll create a physical file on my primary system and before I can switch to another screen it's already replicated."

For Wheeler, up-to-the-minute BI reports and real-time backup to a high-availability system boil down to confidence. As Archibald put it, "Our customers depend on us to help keep their equipment and their businesses running. With Replicate1 and ITERA HA, no worries, we will be there for them, whenever they need us."



15300 Barranca Parkway, Irvine, California 92618
1-800-957-4511 ▪ 1-801-799-0300 ▪ visionsolutions.com



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