A TON OF REPORTING

With 120 stores in 11 Midwestern states and a growing online retail business, Slumberland is a large quantity furniture manufacturer and retailer conducting a substantial amount of transactions. To keep track of the high level of retail activity, that also streamlines reporting, making it more effective and flexible, Slumberland’s data center is using a Progress DataDirect middleware solution in establishing a state-of-the-art data warehouse and business intelligence (BI) system to offload much of the analytical processing from the retail systems, as well as to streamline reporting and make it more effective and flexible.

The company has traditionally been running transactional and analytical processes directly off its core line-of-business systems, including a minimum of 10,000 reports daily on the company’s point-of-sale (POS) system. Anticipating an ever-increasing load of both business transactions and data processing, the company wanted to ensure that the BI analytics and reporting workloads would have no adverse impact on business operations.

“We do a ton of reporting,” explains Seth Mitchell, Infrastructure Team Manager at Slumberland’s data center in St. Paul, Minnesota. “All the stores run off our centralized systems here, and all the data processing, storage, and information are handled here as well. We want our customers to be able to come into our stores or go online and have a very positive experience that’s quick and easy. Part of that is ensuring that our reporting processes take place on a separate system and have no potential impact on the transactional side.”

64-BIT SUPPORT ESSENTIAL

The heart of Slumberland’s data center process is comprised of two major line-of-business systems: a retail system from Escalate Retail designed to provide POS, inventory, accounting and merchandising functionality, and a warehouse management system from RedPrairie used in managing the products flowing into and out of the company’s distribution centers. The Escalate system relies on an Oracle database platform running on an IBM AIX operating system.
The data generated by that system—from accounting, inventory, POS, and other core business processes—is what Slumberland’s data center team is pulling into the BI system, which is based on SQL Server 2008 on a Windows Server platform, using Microsoft SQL Server Integration Services (SSIS) and Microsoft SQL Server Business Intelligence Development Studio.

There is good reason that many IT analysts believe BI will be the single biggest killer application for 64-bit architecture. It is a boon for the many BI tools that leverage memory in performing calculations online, require considerable caching to deliver acceptable performance, or require memory to boost the performance of browser—or client—based user interactions.

“We realized that 32-bit Windows running SQL Server, with a native memory capacity limitation of 4 gigabytes, would be inadequate for the amount of data we need to process,” Mitchell says. Commercial databases such as Oracle and Microsoft SQL Server all offer some providers, or drivers, for application access to their relational database products; however, database vendors do not focus their development on these drivers. For this reason, these “free” data connectivity providers typically do not provide the latest advances in technology and may also reflect competitive considerations having nothing to do with optimized connectivity performance for their customers.

“While Oracle offered a simplistic data provider solution involving a port of its 32-bit client to the 64-bit platform, it really didn’t give us the performance or capacity we needed. In addition, the Oracle provider that was previously included with SQL Server was deprecated by Microsoft, discouraging future development using it.”

Researching user groups, Mitchell found that many others who’d faced the same situation were recommending Progress DataDirect providers as their preferred solution. Progress DataDirect Connect64 for ODBC is the only complete suite of 64-bit ODBC drivers for all major databases, including Oracle and SQL Server. Today Slumberland is using it for absolutely reliable 64-bit connectivity to its Oracle-based applications.

NO TIME FOR UNRELIABILITY

One of the most compelling factors for Slumberland’s BI initiative is a product ordering system that applies a variety of algorithms to data such as sales movement history to determine appropriate ordering amounts, with the goal of enhancing customer satisfaction.

“The reliability that the Progress DataDirect products give us is undoubtedly what we value most of all,” Mitchell says. This is attributable not only to the accuracy of data transfer delivered by the DataDirect technology, but also to its exceedingly high performance. “If a process takes hours and something fails in the course of it, we won’t have time to repeat that process from the beginning before our merchandising team is in and ready to place orders. Knowing we can trust the Progress DataDirect products to work every time, and quickly, is vital.”

In addition to Progress DataDirect Connect64 for ODBC, Slumberland’s data center has implemented Progress DataDirect Connect64 for SSIS in its BI system, which enables every phase of Microsoft’s SSIS application life cycle for organizations needing access to databases such as Oracle, DB2, and Sybase – including the rapid data extraction, transformation, and loading (ETL) process Slumberland’s BI system requires. The memory-intensive nature of what SSIS does delivers the best performance when executed in 64-bit mode enabled by the 64-bit OLE DB provider component of Connect64 for SSIS.

“A step in the process that would take 4.5 hours now takes about 45 minutes; it really changes the options available to us.”
Seth Mitchell
Infrastructure Team Manager
Slumberland
"We’re moving millions of records per night; that can take a really long time if you’re using tools that aren’t optimized," says Mitchell. "We need an extremely quick and reliable transport for our ETL processes. With Progress DataDirect’s products, a step in the process that previously took 4.5 hours now takes about 45 minutes. It really changes the options available to us; we now have that much more time available overnight to accomplish many more things, where before no such possibilities existed."

RAPID RETURN ON INVESTMENT

Mitchell reports that a key criterion for Slumberland in implementing its BI solution is that it can quickly provide a return on investment and show an incremental proof of concept for any IT expenditure.

“Our position as a furniture retailer is that every dollar we spend has an effect on our customers,” he says. “So we can’t really invest a lot of money and time into something without seeing a return on it. You can take a Big Bang approach and obtain an excellent high-end, comprehensive solution; but that involves a lot of risk in terms of whether or not you’ll get the value you need out of it right away. Our data warehouse strategy has been more of a one-step-at-a-time, see how things work, then go from there.”

The Progress DataDirect products used in Slumberland’s BI strategy require no installation and maintenance of database client software and libraries. This unique clientless architecture communicates at the database’s native (wire) protocol, effectively eliminating a communication layer. It not only dramatically improves performance, it also eliminates the need to install and maintain the various versions of database client libraries such as Oracle Net, thus streamlining the implementation process.

“Having a product that’s designed from the ground up for involvement in system-to-system, back-end processes was key to our decision to partner with Progress DataDirect,” Mitchell says. “In terms of connectivity we looked at similar products, but they were lacking one thing or another we required: good 64-bit support, for instance, or strong support for the very latest version of SQL Server. And then many other tools available—including those freely available with the databases—are more client-oriented. That works fine to a certain point, but if you’re talking about doing any serious work with ETLs, you need something specifically designed to do that. The performance of Progress DataDirect’s products was far beyond that of any competing products we looked at.”

The vastly reduced processing times Progress DataDirect has brought to Slumberland’s data warehousing solution has allowed the data center team to consider improved ways of doing things that weren’t feasible before. The general approach to date has been that IT resources are devoted predominantly to retail processing during the day, after which both human and automated processes occur overnight to make the data coherent, actionable and in a format in which the appropriate staff can view it in a report the following business day.

“You can’t run reports that use the same tables that another—say, a retail process—will need to use at the same time,” Mitchell explains. “So if the lag is going to be significant, you don’t want to risk contention. What Progress DataDirect’s products do is make things happen much faster than before, so processes get out of the way of other processes that can then take place. Our goal with our data warehouse roadmap is to get it to something more responsive for the processes that would be useful to have in a more timely fashion – potentially every couple of hours or possibly even as often as every 15 minutes if that’s what the business deems necessary.”
A SMART MOVE

Mitchell says he is sold on partnering with a third-party vendor specializing in data connectivity and providing the backing and support that ensure the reliability so vital to Slumberland’s data center.

“What we have found is that, if you just want to tinker with getting some application talking to a database, you can probably get it done using the free tools available with the databases,” he says. “But if you’re trying to construct something that’s well designed and reliable and will be sustainable for many years, having products like Progress DataDirect’s in there is a really smart move to make. It takes some of the question out of the lifetime of our applications to know that DataDirect is there and will be there to support the processes using their software. It’s a huge plus.”

THE WORLD LEADER IN DATA CONNECTIVITY AND MAINFRAME INTEGRATION

Progress is the only comprehensive provider of software for connecting the world’s most critical business applications to data and services, running on any platform, using proven and emerging standards. Developers worldwide depend on DataDirect products from Progress to integrate disparate IT systems and to connect their applications to an unparalleled range of data sources using standards-based interfaces such as ODBC, JDBC, ADO.NET, XQuery, and SOAP. More than 300 leading independent software vendors and thousands of enterprises rely on Progress DataDirect to simplify and streamline data connectivity for distributed systems and to reduce the complexity of mainframe integration.

MOST COMPREHENSIVE PRODUCT LINE

The breadth and depth of the DataDirect products from Progress are unparalleled. Customers depend on Progress DataDirect for comprehensive, reliable data access and for meeting their entire range of mainframe integration needs. The Progress® DataDirect Connect® line of data connectivity products supports all major databases, platforms, and connectivity standards. This wide-ranging support enables corporate developers to simplify development, complete projects more quickly, and reduce database vendor lock-in. It also enables ISVs to broaden their market and gain competitive advantage. The Progress® DataDirect® Shadow® product line provides the only unified platform for integrating mainframe data, Web services, and real-time events. For organizations with significant investments in mainframe systems, Shadow dramatically reduces the cost and complexity associated with mainframe integration.
PROGRESS DATADIRECT FACTS

- Member of Microsoft’s Visual Studio .NET Integration Program (VSIP), a worldwide technology partnership program.
- Sun Microsystems’ J2EE Licensee and member of JDBC, Row Set, and XQJ JSR expert panels. Also, our JDBC product was specifically chosen by Sun to serve as the reference platform for JDBC within its J2EE architecture.
- Member of various standards bodies like ANSI and the World Wide Web Consortium (W3C) to help evolve standards around XML and data.
- Shipped the industry’s first commercial ODBC drivers.
- First to port ODBC to non-Windows platforms such as UNIX.
- First and only vendor to provide a full suite of wire-level protocol ODBC drivers.
- Shipped the industry’s first commercial JDBC drivers.
- First vendor to ship a full suite of Type 4 JDBC drivers for all major databases and full JTA support across all databases.
- First vendor to be certified under Sun’s J2EE Certification Test Suite (CTS), and the only vendor to offer a full suite of J2EE 1.4 certified drivers.
- First vendor to ship a complete set of ADO.NET data providers for the Microsoft .NET platform allowing 100% managed data access.
- Shipped the industry’s first embeddable, database-independent XQuery component for processing and aggregating XML, relational, and legacy data.

PROGRESS SOFTWARE

Progress Software Corporation (NASDAQ: PRGS) is a global software company that simplifies the development, deployment and management of business applications on-premise or in the cloud, on any platform or device, to any data source, with enhanced performance, minimal IT complexity and low total cost of ownership.

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