

PRECISE



Raymond James Financial

CUSTOMER SUCCESS

Raymond James Financial Charts Course to 64-Bit Platform with help from Precise and HP

Raymond James, a diversified financial services firm, needed to carefully plan its migration to a next-generation computing platform. It worked with Hewlett-Packard (HP) to set up and perform a series of tests comparing the performance and load thresholds of 32- and 64-bit platforms. During the tests, Precise i³ software played a crucial role in identifying the source of bottlenecks while keeping the tests on schedule during a tight two-week window. As a result, Raymond James can now effectively predict application performance improvements with the HP Superdome 64-bit Itanium platform and prioritize those applications based on which ones will achieve the most immediate performance benefits.

Company Profile

Raymond James Financial and its more than 5,000 financial advisors provide financial services to over one million individual and institutional accounts in 2,100 locations throughout

Industry

Financial Services

Solution

Application Performance Management

“Precise and HP work well together at every level, from sales and support to technical staff. Their close working relationship was a major factor in making the project a success.”

Bruce Philipoom

Vice President of
Information Technology
Raymond James
Financial

A reputation for excellence in finance and IT

Raymond James Financial (NYSE-RJF) is a Florida-based diversified holding company providing financial services to individuals, corporations, and municipalities through its subsidiary companies. Its three wholly owned broker/dealers, Raymond James & Associates, Raymond James Financial Services, and Raymond James Ltd. have more than 5,000 financial advisors serving 1.3 million accounts in 2,100 locations throughout the United States, Canada, and overseas. In addition, total client assets are approximately \$136 billion, of which approximately \$25 billion are managed by the firm's asset management subsidiaries.

“When you have a more than one million client accounts, with more than \$136 billion in assets, you need a powerful information technology (IT) system to run your business operations,” says Bruce Philipoom, vice president of information technology at Raymond James. A vital part of Raymond James's technology portfolio is its brokerage system software, Q Securities Processing Software, from Comprehensive Software System (CSS), which manages the execution of securities trades.

Ensures rapid ROI

“As we were designing our next-generation platform, we realized that the key to scalability was 64-bit processing power,” explains Philipoom.

Raymond James deferred a 274,00 hardware investment by extending the life of its existing 32-bit platform for another year through benchmark testing using Precise i³ in an HP IQ Center Lab.

“Our employee benefits program could only support 67 concurrent users. After we analyzed the results with Precise i³ for SQL Server, we identified a few simple code changes that improved the performance to 500 concurrent users. That’s more than a seven-fold increase.”

Chad Miller

Director of Database Administration

Raymond James Financial

Raymond James identified the Itanium-powered HP Superdome as its top candidate for a 64-bit platform. Raymond James has already developed and implemented a Data Warehouse on the HP Superdome utilizing Microsoft SQL Server and Analysis Services. The critical question for porting additional databases and applications to the Superdome was timing.

Before making the change, Raymond James had to be certain that the combination of CSS’s Q and Microsoft SQL Server was ready to take advantage of the 64-bit architecture. After conferring with representatives from HP, CSS, and Microsoft, Philipoom decided to base his decision on the results of a benchmark test directly comparing the performance of 32- and 64-bit platforms running Q on SQL.

Raymond James has enjoyed an excellent relationship with HP over the years, which is why the company turned to HP to help with the test. HP set aside two weeks in an HP IQ Center Lab in Houston, Texas to perform the Raymond James test and also provided technical assistance in test planning. Chad Miller, director of database administration at Raymond James, describes the overall test objective: “We wanted to run an apples-to-apples comparison of 32and 64-bit platforms to evaluate the impact of the processor architecture on performance.” They wanted to identify the break threshold, that is, the number of users at which the application failed to respond. Both CSS and Microsoft sent representatives to observe and assist in the test.

Precise plays central role in benchmark test

A test is only as good as its tools, and Raymond James had a powerful one: Precise i³ for SQL Server. Raymond James has been using Precise i³ software for application performance management since 2002. Chad Miller recalls his first big success with Precise: “Our employee benefits program could only support 67 concurrent users, not enough to support our expanding workforce. After we analyzed the results with Precise i³ for SQL Server, we identified a few simple code changes that improved the performance to 500 concurrent users. That’s more than a seven-fold increase, far exceeding our expectations.” Over the years, Precise i³ software has helped Raymond James maximize the performance of a number of key applications, in the process saving |over \$85,000 in servers and SQL licenses that weren’t needed due to enhanced performance.

Products from four different vendors were involved in the benchmark test: HP, CSS, Microsoft, and Mercury, the maker of the LoadRunner™ simulator. Raymond James chose Precise i³ software as a diagnostic tool to analyze the end-to-end performance of the entire system and identify opportunities for performance improvement. “Precise i³ provides reports with actionable information, important to have in a multivendor environment,” explains Miller. “It helped us locate potential problem areas before we committed to the new architecture, a huge plus for Raymond James.”

Tight test schedule demands efficient troubleshooting

Raymond James prepared meticulously for the benchmark test, spending six weeks developing test scripts and plans, followed by a week in HP's lab setting beforehand. Randy Baklini, infrastructure architect at HP, has high praise for the test methodology. "Raymond James's test plan and methods were flawless," he maintains. "They cut no corners, make no compromises." Raymond James wanted to simulate the performance of Q and SQL for two configurations of the Superdome— four 32-bit processors and eight 64bit processors—under a range of simulated operating conditions. With 24 separate test runs planned, fitting it all into the fixed two-week window was a concern. "We were on a tight schedule," Miller remembers. "We couldn't afford to spend a lot of time doing analysis. We had to zero in right away on the source of the problem."

Each test run used LoadRunner to increase the simulated load until the break threshold was hit—that is, when the application stopped responding. Then Miller and his team analyzed test data to locate the root cause. That's where Precise i³ software proved its worth. "Once LoadRunner gives us the time point, we use Precise i³ to drill down to locate the cause," says Miller. "We pinpointed problems quickly, and there was no arguing with the conclusion, because Precise i³ showed it in black and white." With the cause clearly identified, the team could make changes, such as fixing a code error in a test script or changing database configuration parameters. Thereafter, the test can rerun.

Charting the best migration plan

At the end of the two-week test, Raymond James had a clear picture of the performance gains it could expect from moving to the 64-bit HP Superdome with the current version of Q Securities Processing Software. Philipoom decided that the best course of action was to defer the 64-bit migration until scalability constraints could be analyzed and remediated. Tom Loney, vice president of information technology for Raymond James and leader of the company's Premier Information Platform Initiative, explains, "Q will run on a HP Superdome at Raymond James. It's a matter of when, not if."

Rare outcome: Everyone wins

The Raymond James benchmark test did the proverbial win-win scenario one better: All four participants walked away very pleased. CSS gained valuable insight for its ongoing efforts. Microsoft learned more about how to configure SQL Server to provide maximum performance for 64-bit applications. HP strengthened its relationship with a valued Superdome customer and solidified its commitment to continued Superdome investment.

And for Raymond James, the benchmark test translates into substantial

"Precise i³ was invaluable. All the vendors involved in the project accepted the i³ reports as definitive. Without Precise i³, I doubt that we would have completed the full test series in the time period"

Bruce Philipoom

Vice President of
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SOLUTION AT A GLANCE

Business Drivers

- Support rapid growth in financial transaction volume and number of concurrent users
- Minimize capital investment while providing adequate infrastructure

Technology Challenges

- Quantify performance advantages of moving to 64-bit computing platform
- Complete challenging set of load tests within tight two-week window
- Troubleshoot test quickly to identify root cause of break points

Solution

- Pinpointed source of bottlenecks during load testing of 32- and 64-bit platform

Precise Products

- Precise i³ for SQL Server

Technology Environment

- Servers: HP NonStop S86000 and HP Integrity Superdome running Microsoft Windows 2003 DataCenter Edition
- Processors: Intel® 32- and 64-bit Itanium®
- Database: Microsoft® SQL Server 2000 Enterprise Edition
- Application: Q Securities Processing Software from Comprehensive Software Systems Inc. (CSS)

Precise Business Partner

- Hewlett-Packard Company (HP)

BUSINESS VALUE AND TECHNICAL BENEFITS

Cost Avoidance

- Deferred a \$273,000 hardware investment by extending life of exiting 32-bit platform
- Saved \$85,000 in servers and SQL licenses not needed due to enhanced performance

cost savings—and peace of mind. “Now we know exactly how far we can scale our current platform to maximize the value of that investment,” explains Philipoom. “Raymond James will defer \$273,000 in hardware upgrades by extending the use of the 32-bit platform another year.” In addition, the experience has confirmed Philipoom’s faith in HP as a strategic supplier as well as increased its confidence in its internal roadmap for future infrastructure expansion. “How many vendors will work with you wholeheartedly to delay a major purchase of their hardware when it’s in your interest to do so?,” Philipoom asks. “In all my years in the business, I’ve only met one: HP.”

Philipoom is equally expansive in his praise for Precise. “Precise i³ was invaluable,” he asserts. “All the vendors involved in the test accepted the i³ reports as definitive. Without Precise i³, I doubt that we would have completed the full test series in the time period.”

More customer success stories can be found at: www.precise.com

Productivity

- 7 Finished 24 hour benchmark tests in two-week time window

Business planning

- Developed roadmap for 64-bit Itanium migration based on test results

Performance

- Seven-fold performance increase in key employee benefits application