



South Africa's RTT supports business growth with scalability and speed of HP ProLiant DL980 Servers and Microsoft SQL Server

For mission-critical logistics and transport system, Intel-based HP ProLiant DL980 Servers and Microsoft SQL Server reduce hardware costs by 25% and improve performance by up to 400%

Case Study



"HP has a high-performance solution with all of the parts talking to one another and humming like a symphony—it's exactly what RTT needs to take our business to the next level."

—Hemal Kalianji, Chief Information Officer, RTT

Objective

Achieve improved performance at a reduced cost for a mission-critical system to help a growing logistics and distribution business expand into new regions and retain competitive advantage.

Approach

Evaluated results from a proof of concept (POC) that provided benchmark data on reporting speed and uploading a vital RTT database.

Business technology improvements

- Expects to achieve ROI one year from install
- Improved performance by up to 400%, enhancing RTT team efficiency and client service
- Cut run time for reports and queries by more than 300% to deliver current information more rapidly
- Reduced development time for application enhancements, enabling IT team to focus on optimization of internal infrastructure

Business outcomes

- Reduced database licensing costs by 25%
- Cut hardware costs by 25%
- Reduced time to market for custom reporting, increasing revenue and improving customer service
- Supported ongoing business expansion with highly scalable, high-performance solution

Logistics leader expanding rapidly

RTT provides innovative logistics services to clients in industries that demand highly specialized supply-chain solutions including pharmaceuticals and consumer-packaged goods. Every day, the company delivers more than 70,000 shipments—more than one million kilograms of freight.

Headquartered in South Africa, RTT is the dominant force in third-party, supply-chain logistics and express distribution within South Africa and across sub-Saharan Africa.

With new facilities in Malawi and expanding branches in Kenya, Ghana, and Dubai among other locations, RTT has a growing customer base across Africa—one that demands the most advanced technology.

To address that need, RTT developed a proprietary logistics system to support its mission-critical requirements, and those of its clients. "This custom system is unique to RTT and it's fundamental to the largest and most critical part of our business—RTT's logistics and distribution side," says Hemal Kalianji, chief information officer at RTT.

"We're able to grow quickly into new regions because we have the underlying technology infrastructure to support this growth," says Kalianji. "We are constantly on a drive to improve our systems to be leading edge and maintain our competitive position."

HP customer

case study: HP ProLiant DL980 G7 Servers, HP Mission Critical Services, HP Insight Control, and Microsoft SQL Server 2008 replace IBM pSeries Servers and IBM Informix to improve performance and reduce costs of a mission-critical logistics system

Industry:

Supply chain, Logistics and Distribution & Transport services



Infrastructure challenges

RTT had been running its mission-critical logistics application on IBM pSeries 595 Servers and an IBM Informix database for 13 years. The company faced challenges with scalability, performance, and ever-increasing costs.

“Our issues with the IBM legacy platform were especially problematic on performance as RTT was growing and was making a significant expansion into new regions of Africa,” says Kalianji.

“Demands on our system were going up while costs were rising and efficiency was going down,” Kalianji says. “For example, the cost of maintaining Informix had gone up to about \$300,000 USD per year.”

At first, RTT decided to convert its Informix database to Oracle, because the cost of acquiring new licenses and maintenance for Oracle was less than the annual maintenance for Informix, according to Kalianji. “But during the migration process, we learned that Oracle is far more resource-hungry than Informix. To provide the same throughput, capacity, and performance, we would need to invest in more hardware. So we came to a fork in the road.”

Another issue was that RTT’s mission-critical proprietary logistics application was developed on the Microsoft .NET platform. “We had serious challenges getting the .NET platform to interoperate properly and effectively with an Informix or Oracle database,” Kalianji explains.

Kalianji and his team stopped the Oracle migration and began to look at other alternatives.

Technology transformation

“We talked with IBM at length, but they could not put a deal on the table that was matched to similar performance and financial viability,” Kalianji says. “So we began a series of investigations that ultimately led to an HP, Intel, and Microsoft strategy. The technology world has advanced so rapidly, and Intel and HP are working together effectively to provide a high-performance solution,” Kalianji says.

RTT chose HP and HP partner Datacentrix to replace the existing IBM infrastructure with four HP ProLiant DL980 G7 Servers powered by the Intel® Xeon® processor E7 family. RTT replaced its IBM Informix database with Microsoft SQL Server 2008 R2.

The HP ProLiant G7 Servers feature the HP PREMA Architecture, and RTT was confident that this HP solution would provide the performance needed by its 2,000 in-house users and hundreds of users at client sites. In addition, RTT recognized that the self-healing capabilities of the HP ProLiant DL980 would help ensure mission-critical resiliency.

RTT also chose HP Insight Control Management Software and HP Mission Critical Services to provide proactive and reactive support to sustain 24x7x365 availability of RTT’s business operations.

“In choosing HP, it was important to us that the HP DL980 is proven to process at the speeds we require,” Kalianji says. “The engagement with value-added HP partner Datacentrix was extremely effective, and that was also very important. Finally, technology vision was key: HP’s vision of providing highly scalable hardware is very much in line with RTT’s strategy of business growth, especially as we see our transaction volumes increasing dramatically in the next two to three years.”

Company profile

Name: RTT

Headquarters:

Bartlett, Boksburg,
Gauteng, South
Africa

Founded: 1980

Telephone:

+27 11 552-1000

Number of employees:

more than 7,000
across South Africa

Annual revenues:

more than 2.5 billion
South African Rand
(ZAR) or \$299.3
million USD

URL: www.rtt.co.za

RTT converted its mission-critical database from IBM Informix to Microsoft SQL Server in three months. "This was amazingly quick, and the reasons were exceptional planning and good communications with the partners involved: my IT team, HP, and Datacentrix," Kalianji says.

Proof of performance

As RTT evaluated the HP solution, a proof of concept (POC) managed by Datacentrix demonstrated that an HP ProLiant DL980 Server running Microsoft SQL Server would boost system performance and reduce costs.

The POC provided benchmark data on testing, reporting, and uploading the mission-critical RTT logistics database. "Tests showed that HP ProLiant DL980 running Microsoft SQL achieved dramatically improved results over IBM Informix and Oracle on IBM AIX," Kalianji says. "Some reports performed in excess of three times faster: 30 minutes versus 90 minutes on the legacy system," Kalianji states.

"To unload my database on an IBM p595, extract it, put it onto a disk and move it across the network to another server took about 14 hours. The import back into the HP ProLiant DL980 POC Server took 45 minutes," Kalianji says. "This was so quick that my database administrators thought it was wrong, and they re-ran the import five times and got the same result.

"In addition to the high performance and cost-efficiency of the HP ProLiant servers, we were impressed by the commitment of the HP and Datacentrix teams to customer satisfaction," Kalianji says.

Enhanced performance, time savings, and customer service

"With the HP and Microsoft environment, we've improved performance by 400%, and cut run time for reports and queries by more than 300%," Kalianji says.

One key report, Undelivered Consignment, runs faster than on the previous system, according to Kalianji. "On the IBM system, this report took about 35 minutes to run when it was successful, but generally it timed out because it ran out of processor capacity. Now it runs in about two minutes."

The Intel® Xeon® processor E7 family delivers record-breaking performance for mission-critical challenges. The advanced reliability and security features included, work to maintain data integrity, accelerate encrypted transactions, and maximize the availability of mission-critical applications.

RTT's software development lifecycle time has dropped significantly as well. One reason is that Microsoft .NET is optimized to use Microsoft SQL server with native calls—with no additional TCP layer or communications layer.

"The new environment reduces the time our developers need to deploy application enhancements, and that is a huge advantage for RTT," Kalianji says. "Many customers don't have their own IT shops, and they turn to us for dashboards and other reporting capabilities. The fact that we can deliver accurate, reliable reporting very quickly helps us win new customers and retain them."

The reduced development time also provides in-house benefits. Custom reporting solutions are a revenue stream for RTT, and the reduced time to market for this process increases profitability for the company. "In addition, my team has more time to focus on optimization of internal systems and to stay on top of the technologies out there and make sure RTT is in the forefront," Kalianji says.

Significant cost reductions

"The financial value of the HP solution puts us on track to achieve ROI in one year from deployment," Kalianji says.

The hardware cost of Intel was much lower than other options Kalianji evaluated. "Plus, the Microsoft licensing model—paying per CPU rather than per core—revealed the high expense of the Oracle and Informix per-core licensing model," he says.

"Our database licensing and hardware costs are down by 25% and we are looking to reduce operating costs by at least \$340,000 USD over three years," Kalianji states.

More insight and less worry

"We have a lot more insight than we had with our previous system," Kalianji says. "While we are not yet using HP Insight Control to its full capability, we are benefiting from the automatic, predictive reporting. The alerting mechanisms enable us to act quickly.

"HP Mission Critical Services has been really vital in helping my IT team focus on improving our infrastructure instead of constantly worrying about the performance of our key operating environment," Kalianji says.

"I rely on the HP Mission Critical Services team to be my left and right hands when it comes to the DL980 environment," Kalianji says. "I have confidence that HP is supporting the system, and I don't need to recruit someone to handle that full time."

Long-term vision of an internal cloud

RTT is on a growth curve, and is laying a technology foundation to meet the on-demand information needs of employees, clients, and partners of an Instant-On Enterprise.

"While we are focusing now on refining and optimizing what we have, I can see that the ideal in the long term could be an HP Converged Infrastructure—like an internal cloud environment," Kalianji says.

"We are considering the HP DL980 in another area here at RTT, and we're evaluating HP 3PAR Storage Systems. As our infrastructure evolves, our decisions are based on technology and on service commitments," Kalianji says.

"HP has proved that they are interested in us as a customer, they understand where we are going, and they want to be an effective part of the process," Kalianji says. "Meanwhile HP Servers have all of the parts talking to one another and humming like a symphony—I/O, CPU, memory, cache, and more—and it's exactly what RTT needs to take our business to the next level."

Customer solution at a glance

Primary applications

- Proprietary, in-house developed logistics and distribution applications

HP Services

- HP Mission Critical Services

Primary hardware

- HP ProLiant DL980 G7 Servers powered by the Intel® Xeon® processor E7 family

Primary software

- Microsoft SQL Server 2008 R2
- Microsoft Windows Server 2008 R2
- HP Insight Control



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