



Sony Ericsson

Intel and Microsoft Case Study

Released: November 2006

Sony Ericsson Migrates SAP from UNIX to Windows Server, Boosts Reliability, Cuts Cost

Fast Facts

Profile

Sony Ericsson Mobile Communications serves the global communications market with innovative mobile phones, accessories and PC cards. Based in London, the company employs 6,000 people worldwide.

Business Situation

The company hosted its SAP solution on a UNIX and Oracle platform and had what it called “unacceptable” problems with reliability and performance of the mission-critical system.

Solution

Sony Ericsson migrated its SAP software to Microsoft® Windows®-based servers including Windows Server® 2003 and SQL Server™ 2000.

Benefits

- Saves a day of unplanned downtime
- Reduces database licensing costs
- Eliminates need for dedicated database administrators
- Gains flexibility to integrate with existing infrastructure

Software, Hardware and Services

Products

- Microsoft Windows Server 2003 Enterprise Edition for Itanium-based Systems
- Microsoft SQL Server 2000 Enterprise Edition
- HP Integrity rx4640 and rx2600

Sony Ericsson Mobile Communications, one of the world’s leading mobile phone providers, was running its SAP enterprise resource planning software on a UNIX and Oracle platform—and wanted to improve reliability, get batch jobs completed during available time slots, and avoid hitting memory and performance limits. After considering a UNIX and Oracle upgrade, the company decided to migrate its SAP system to Microsoft® Windows®-based servers running on Intel® Itanium®2-based computers. As a result, reliability is up, with the company saving a day per year in unplanned downtime. Batch jobs are processed faster, database costs are reduced, and the company expects to gain tremendous flexibility to integrate the infrastructure with—and, thus, leverage its investment in—its existing Windows-based environment.

Situation

Some people are born to greatness; some corporations, too. Sony Ericsson Mobile Communications may be one of the youngest major corporations on the planet—it was founded only in 2001—but it’s already one of the world’s leading suppliers of innovative mobile phones.

That’s no surprise, given that Sony Ericsson inherited its mobile phone expertise from parent Ericsson and its consumer products expertise from parent Sony. But that’s not all that Sony Ericsson inherited from those two companies. It also inherited the computer system that ran its SAP enterprise resource planning (ERP) software. Sony Ericsson used SAP R/3 ERP software for everything from manufacturing to human resources, including file and print services.

In addition, it ran SAP customer relationship management (CRM) and supplier chain management (SCM) software, as well as an SAP business warehouse (BW) to drive business decision making. Given the company’s size and the mission-critical nature of the functions handled by SAP, the infrastructure for the solution had to be as state-of-the-art as Sony Ericsson’s own products.

The platform on which it ran its SAP software was a legacy UNIX environment with Oracle

database software on Compaq Alpha hardware. The platform included a dozen computers hosted externally for Sony Ericsson at a hosting center in Stockholm, Sweden.

Sony Ericsson’s SAP environment included 12 SAP instances with a planned 6,500 named users (to accommodate all employees in the human resources system) and some 300 concurrent users. The solution was growing by more than 40 GB per month across its four key SAP applications and processing some 9 million dialog steps per month. The UNIX environment couldn’t keep up. The system continually bumped against both memory and CPU limits. Batch jobs could only run in relatively brief overnight time slots, in order to ensure that the system remained available to subsidiaries in Asia and the United States. But the system couldn’t process the ever-increasing batch jobs fast enough, which lead to more frequent unavailability than was acceptable in a rapidly expanding global enterprise

That, combined with a hardware configuration that wasn’t designed for high availability, led to problems. At 98.5 percent availability, the system was barely adequate to the company’s mission-critical requirements. And then there were the system outages.

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Peter James

Director of Global IT, Sony Ericsson

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limits,” says Peter James, Director of Global IT, Sony Ericsson. “And while we were trying to do the monthly closings, response times for everything else suffered, as well. When we had a database corruption, it took two days to recover. That was forever to us—and we were determined not to have a repeat of that situation.”

By 2004, Sony Ericsson was ready for a new platform to support SAP.

Solution

The company's outsourcer for SAP hosting suggested an expanded version of the UNIX and Oracle environment and James and his colleagues were ready to give their approval. Although the company ran most of its other operations—including its e-mail and collaboration system, infrastructure services, directory services, application servers, and management services—on Microsoft® Windows®-based servers, the company hadn't seriously considered Microsoft's server line for its SAP environment.

“We were concerned that Windows wouldn't be suitable,” says James. “We felt it would be limited in scalability and a problem as we tried to support our growth.”

But a visit from the company's Microsoft account representative raised the possibility that Microsoft servers—specifically, the Microsoft Windows Server® 2003 operating system and Microsoft SQL Server™ 2000—could support the Sony Ericsson SAP deployment.

So Sony Ericsson visited other companies deploying SAP on Windows Server System. Chief among them was Danfoss, Denmark's largest industrial company, with about 16,600 employees. Danfoss had begun migrating from UNIX and Oracle to Windows Server and SQL Server for its SAP deployment two years earlier. The Microsoft environment was providing all the scalability and mission-critical availability that Danfoss wanted; in fact, R/3 on Windows Server and SQL Server was running 40 percent faster, with batch

processes running up to 67 percent faster. As a bonus, costs for licensing and maintenance of SQL Server were far less than for Oracle.

On this evidence, Sony Ericsson made the decision to migrate to Windows-based server—while keeping the servers hosted at an outside facility—and implemented the migration between February and July, 2005. Most of that time was taken up with planning, application testing, and practice-runs of the migration. Working with the hosting facility, Sony Ericsson then migrated its four SAP applications over a month, one application per weekend.

“It was a fairly aggressive project, almost a big bang,” says Craig Stow, SAP Basis Manager, Sony Ericsson. “And we even upgraded our Business Warehouse in the middle of it. Because we owned the hardware outright, we wanted to begin to get our return on investment as soon as possible. The migration went off without a hitch.”

The hardware consists mainly of Intel® Itanium®2-based HP Integrity rx4640 and rx2600 computers. The 2- and 4-CPU Itanium-based computers run Windows Server 2003 Service Pack 1, Enterprise Edition for Itanium-based Systems and SQL Server 2000 Enterprise Edition (64-bit). A move to Windows Server 2003 Service Pack 2 is planned.

“We felt confident that 64-bit computing would fully support our current needs as well as anticipated growth for some time to come,” says Stow. “It made life easier for us and increased our comfort level with Windows and SQL Server.”

Two computers are dedicated to each SAP application—R/3, BW, CRM, and SCM—with one computer in each pair serving primarily as an application server and the other as a database server. Each pair is clustered using Windows and SQL Server Clustering and, should one computer in a pair go down, the other can assume both application and database functions until the failure is corrected.

With the Windows environment in place, Sony Ericsson is also contemplating its first disaster recovery infrastructure for the SAP deployment. The use of Microsoft servers gives Sony Ericsson the option of using SQL Server log shipping and mirroring technologies to support the disaster recovery function.

Benefits

Thanks to the migration from UNIX and Oracle to Windows Server 2003 and SQL Server 2000 running on Intel Itanium 2-based computers, Sony Ericsson has increased availability, reduced database costs, and gained flexibility for the future.

Availability Increase Saves a Day of Downtime

Sony Ericsson wanted a platform for its SAP deployment that would provide greater reliability to support the company's continued growth. That's what it's achieved with the migration to Windows-based servers.

Windows and SQL Server clustering have helped to increase availability to 99.5 percent, saving the company a full day of unplanned downtime compared to the UNIX and Oracle solution. "Given the mission-critical nature of our SAP deployment, saving the equivalent of a day's downtime is a tremendous gain for us," says James.

Moreover, the move to Windows-based servers has eliminated the need for narrow time periods for nightly batch jobs. The combination of Windows Server and SQL Server running on Intel Itanium2 computers is also handling 11 million SAP dialog steps per month, about 20 percent more than the previous solution.

SQL Server Cuts Licensing, DBA Costs over Oracle

Sony Ericsson is also seeing significant savings with the database migration from Oracle to SQL Server. "We struggled with the Oracle licensing model," says James. "We don't have any of those issues with SQL Server."

Another area of significant savings is in the maintenance of the SQL Server database compared to the maintenance for Oracle. "What stands out in my mind from our visit to Danfoss was that they told us we wouldn't need DBAs [database administrators] any more," says James. "Now I see what they meant. SQL Server pretty much runs itself. We no longer need a dedicated DBA team—the SAP basis guys can manage it."

Stow attributes SQL Server's easier manageability to a variety of factors. "There are far fewer system parameters to worry about with SQL Server," he says. "Oracle requires much more manual intervention for things that are taken care of automatically with SQL Server. For example, as long as you have the available disk space, you don't have to set new parameters for database growth with SQL Server, as you do with Oracle. And there's no need for database reorganizations; SQL Server takes care of it."

Windows Delivers "Choices for the Future"

The migration to Windows-based servers for SAP gives Sony Ericsson the option to bring the deployment in-house, where almost all other systems already run on Microsoft technology.

"We have the potential to save tremendously by bringing the SAP infrastructure in-house and integrating it with our existing Windows-based technology," says Stow. "The economies of scale from existing resources will be great. We'll avoid another layer of investment in people, time, and tools. There's a lot of pain we can avoid by running everything on Windows."

Greater productivity is another benefit that the company envisions by running its SAP and non-SAP applications on a single Windows-based environment. As an example, Stow cites the Microsoft Management Console, which he and his colleagues can use to monitor and manage a range of systems from a single, consolidated interface. And there are Microsoft technologies and applications that Sony Ericsson already uses—such as Microsoft



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Director of Global IT
Sony Ericsson



Live Communications Server 2005, Microsoft Office SharePoint® Portal Server 2003, Microsoft Operations Manager 2005, Systems Management Server 2003, and Windows Server 2003 Active Directory® service—which it will be able to use with SAP applications to extend the range and usefulness of those applications.

"With Windows-based servers, we have choices for the future," says James. "We have the flexibility to go down different paths. This was a major change for us but my message to anyone considering a similar change is: don't be afraid. There's no reason not to move SAP to Windows—and a lot of very good reasons to do so."

Windows Server 2003

The Microsoft Windows Server 2003 family helps organizations do more with less. Now you can: Run your IT infrastructure more efficiently; Build better applications faster; Deliver the best infrastructure for enhancing user productivity. And you can do all this faster, more securely, and at lower cost.

For more information about Windows Server 2003, please visit:

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Craig Stow

SAP Basis Manager
Sony Ericsson



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