

"A Precise Consulting expert installed Precise i³ for SQL and within one day it had identified a lack of indexes in tables. Straightaway, the CPU usage on the Microsoft SQL database server dropped from almost 100 percent to 5 percent. Performance leapt forward and our users had a much more productive environment in which to develop and maintain the Finnish road infrastructure."

Petri Pehkonen

IT Architect

Tieliikelaitos (The Finnish Roads Enterprise)

Tieliikelaitos (The Finnish Roads Enterprise), responsible for the development and maintenance of the country's traffic network, had struggled for weeks to determine what was causing one of its Microsoft SQL databases to respond so slowly. Within one day of the Precise Application Performance Management (APM) team having installed Precise i³ for SQL, CPU usage on the database server dropped from almost 100 percent to five percent. Users were instantly more productive; a costly server upgrade was avoided, and— most importantly of all—the business could get on with the important task of efficiently engineering the country's road network. Tieliikelaitos is now standardizing on Precise i³ to support the end-to-end database lifecycle: from database development and testing through to production.

Tieliikelaitos is a subsidiary of Finland's Ministry of Transport and Communications. Its primary function in the civil engineering sector is the planning, construction, and maintenance of the country's traffic routes, as well as related products and services. The Agency's operations are governed by the Finnish Road Enterprise Act. This law stipulates the general service and operational goals for Tieliikelaitos, which are determined annually by the Finnish Parliament in connection with the state budgetary estimates. During 2003, it recorded a turnover of €543 million (US \$650 million).

Tieliikelaitos operates from more than 200 locations in Finland and relies on up to 100 UNIX and Microsoft Windows servers and 2,000 workstations to manage its civil engineering work. Oracle and Microsoft SQL servers are the bedrock of the business. The company was recently experiencing serious performance shortcomings within its Microsoft SQL server environment and, as Petri Pehkonen, IT architect, Tieliikelaitos explains, it was proving difficult to identify the cause of this performance degradation.

Organization Profile

Tieliikelaitos (The Finnish Roads Enterprise) is responsible for the planning, construction, and maintenance of the country's traffic routes. It manages 200 regional sites across Finland.

Industry

Public Sector

Solution

Application Performance Management

By implementing a Precise Application Performance Management (APM) solution, the agency reduced CPU usage on the database server from almost 100 percent to five percent.

"Precise i³... enables us to proactively monitor, analyze, and tune our SQL and Oracle databases quickly and effectively. We can see which statements are using the most CPU power, pinpoint the cause of the problem, and fix it."

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IT Architect
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Database server running 100 percent of CPU power

"We were using the Microsoft SQL database heavily for the development of road engineering projects and it was clear that performance was very slow," Pehkonen says. "The database server was running almost 100 percent of the CPU power. Was the hardware to blame? The database design? It was very difficult to tell. We had already spent several days trying to understand the root cause of the problem, but without success. We switched the database to a new state-of-the-art Intel 32-bit processor server, and with this, the Microsoft SQL database was taking 30 percent of CPU power. This was better—but not good enough. The easiest option would have been to invest in a Microsoft SQL server upgrade, but there was no guarantee that this would resolve the problem."

Pehkonen and his team were introduced to the Precise Consulting team. "They were on-site almost immediately. Their professionalism, their understanding of the serious nature of our problem, and their experience were apparent," he explains. "They installed Precise i³ for SQL and within one day the software had identified a lack of indexes in tables. Straightaway, the Microsoft SQL database was demanding just five percent of CPU power. Performance leapt forward and our users had a much more productive environment in which to develop and maintain the Finnish road infrastructure."

Support the end-to-end database lifecycle

With this Microsoft SQL application performance problem quickly isolated and fixed, Tieliikelaitos subsequently standardized on Precise i³ for SQL and Precise i³ for Oracle to support the end-to-end database lifecycle: from database development and testing through to production. "Before we were introduced to Precise i³, we tried other application performance management solutions, but they all lacked the functionality we were looking for. Precise i³, on the other hand, enables us to proactively monitor, analyze, and tune our SQL and Oracle databases quickly and effectively. We can see which statements are using the most CPU power, pinpoint the cause of the problem and fix it. If a business user comes to me and says that performance was slow yesterday, I want to be able to tell that person immediately what the problem was and how we solved it. I can do that with Precise i³," Pehkonen continues.

It's not just the Microsoft SQL databases that are experiencing unprecedented performance. The company recently deployed a revised version of its critical road development and maintenance application in an Oracle environment and it wasn't long before users were commenting on the slow database performance.

Pehkonen says, "Using Precise i³ for Oracle we are able to continuously monitor the Oracle environment and capture key data for current and long-

term performance analysis—without impeding the day-to-day performance at all. We can drill down and quickly identify a performance problem caused by a resource bottleneck, a poorly written Microsoft SQL statement, or an inefficiently designed database object. There is no doubt that we have improved the performance of our road development and maintenance application as a result of using Precise i³ for Oracle.”

Watertight data protection and flexibility

Precise i³ has already enabled Tieliikelaitos to avoid at least one expensive server upgrade, and the business anticipates more savings from deferred server upgrades in due course. “If you want a total, accurate picture of applications and databases, look no further than Precise i³. And the Precise Consulting team is the expert to deliver it.” For months, application performance management was driving Tieliikelaitos around the bend—and costing the business a large amount of time, resources, and investment. Today, thanks to Precise i³, Microsoft SQL and Oracle performance have turned the corner.

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

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SOLUTION AT A GLANCE

Business Drivers

- Increase efficiency
- Reduce cost

Technology Challenges

- Over come performance degradation in SQL and Oracle database environment
- Avoid unnecessary server investment

Solution

- Precise Application Performance Management (MPM)

Precise Products

- Precise i³ for SQL Server
- Precise i³ for Oracle

Technology Environment:

- Microsoft SQL and Oracle environment
- 100 HP UNIX and Microsoft Windows servers
- 2,000 workstations
- 15 remote file servers

Services

- Precise consulting

Business Value and Technical benefits

- Accelerated and streamlined performance problem identification and resolution
- Reduced costs through improved efficiency
- Eliminated the need for a planned server upgrade
- Reduced CPU database usage from almost 100 percent to 5 percent
- Proactively monitored component usage, upgrade, and replacement
- Enhanced management of the country’s road infrastructure