NZ Bus Develops Applications 60% Faster, Improves Database Performance by up to 35%

NZ Bus
Auckland, New Zealand
www.nzbus.co.nz

Industry:
Travel & Transportation

Annual Revenue:
US$181 million

Employees:
2,000

Oracle Products & Services:

Oracle Database 11*g*
Oracle Active Data Guard
Oracle Application Express
Oracle Enterprise Manager
Oracle VM

Partner

Database Integrated Solutions
www.dbisonline.com

"With Oracle Application Express and Oracle Database 11g, we are no longer fighting a continuous battle to develop applications using different program standards, which takes the pressure off our development team and enables us to deliver innovative applications to our use base much faster." –Altmaar Visser, IT Manager, NZ Bus

New Zealand's largest bus operator, NZ Bus, was created in November 2005 after investment group Infratil acquired the public transport arm of Stagecoach plc. Since its inception, NZ Bus has recognized the need to improve bus services in New Zealand and introduced better buses and systems, more information at bus stops, and new measures that give buses priority on the road. NZ Bus operates a fleet of more than 1,000 buses, which provide up to 66 million trips per year.

In Auckland, the company operates 656 buses under the North Star, Metrolink, LINK, GO WEST, and Waka Pacific services. It also operates GO Wellington, a fleet of 223 buses in Wellington as well as 223 buses under the Valley Flyer and Airport Flyer services.

In the past, NZ Bus' core business applications used mainly for bus scheduling, maintenance, procurement, and HR were supported by a mix of databases including Oracle Database, Microsoft SQL Server, and IBM DB2.

"The different types of databases supporting these applications made cross-pollination of information very difficult," said Altmaar Visser, IT manager, NZ Bus. "We needed to clean out the house and decide on a single database strategy."

In February 2009, NZ Bus, through local Oracle Certified Partner Database Integrated Solutions, became involved in a beta testing group for Oracle Database 11*g* Release 2, over the seven months leading up to the official launch of the new database on September 1, 2009.

On that same day, NZ Bus became the first organization in New Zealand and one of the first in Asia-Pacific to deploy Oracle Database 11*g* Release 2.

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Key Benefits:

- Developed applications 60% faster
- Created development and test environments in minutes, compared to days and weeks previously
- Reduced server costs by 30% with server virtualization
- Saved NZ$40,000 in database administrator training costs
- Provided high availability features that keep the database and core applications up and running in the event of a server failure
- Introduced compression capabilities that improved database performance by 30% to 35%

The database has helped NZ Bus reduce IT and training costs, speed up application development with Oracle Application Express, and increase productivity by consolidating 10 disparate and individually maintained applications into a single, standardized environment.

NZ Bus also uses the Oracle Grid Control tool, part of Oracle Enterprise Manager, for centralized monitoring and management of its databases and application servers.

Browser-Based Tool Speeds Application Development

NZ Bus uses Oracle Application Express, a browser-based development tool provided free with the database, to develop a range of applications for road user licensing, fleet maintenance, driver cash reconciliation, route costing, and ticketing reporting.

"We can now develop applications once for a single, standard database platform 60% faster using Oracle Application Express," said Visser.

"With Oracle Application Express and Oracle Database 11*g*, we are no longer fighting a continuous battle to develop applications using different programmatic standards, which takes the pressure off our development team and enables us to deliver innovative applications to our user base much faster. This ultimately improves the service that we offer to customers."

NZ Bus is also using Oracle VM to create application development and test environments within minutes, compared to days or even weeks previously. This helps speed up application development times. "We no longer have a static development and test environment that continuously needs to be upgraded or refreshed," said Visser. "Oracle VM has reduced our server costs by 30%."

Beta Program Access Eliminates Training Costs

NZ Bus' access to the beta testing program for Oracle Database 11*g* Release 2 has saved the company around NZ$40,000 in database administrator training costs.

"We didn't have to spend anything because our developers received the training they required at the beta test center in Auckland," said Visser. "All our developers are now using a unified application development standard, and the money we saved on training can be used to invest in other projects across the organization."

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Live Data Recovery Eliminates Downtime

NZ Bus uses Oracle Active Data Guard to offload routine and resource-intensive processing from its core production database at its primary site in Auckland to its disaster recovery site in Wellington. If the production database becomes overloaded, the company simply moves reporting functions to servers at the disaster recovery site.

Oracle Active Data Guard enables data to be synchronized and updated between both sites in near real-time. This provides administrators with read-only access to standby databases at the disaster recovery site.

"We now have two live sites and if a server fails at our primary site, we can fail over without experiencing any downtime," said Visser. "This ensures that the core applications driving the business will keep running as normal in the event of a server failure."

Compression Offers Better Performance

NZ Bus also takes advantage of the compression capabilities of Oracle Database 11*g*, which has improved database performance by 30% to 35%.

"Oracle Database 11*g* accesses, captures, and updates information faster, which means less data is moving across our network," said Visser. "With Oracle Database 11*g*, we have saved a significant amount of money that would have been otherwise spent on upgrading our link between Auckland and Wellington to keep both sites in sync," said Visser.

Why Oracle?

Visser has deployed many successful Oracle applications and databases at other organizations in the past so it made sense to choose Oracle Database as the standard at NZ Bus.

"In the banking and finance industry, where I come from, Oracle is the de facto standard," said Visser. "Oracle delivers more 'bang for buck' than the competing players."

NZ Bus plans to use Oracle Database 11*g* to implement a new data warehouse and integrate new business intelligence and customer relationship management applications to better track and manage its customers, and improve bus and route services.

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Implementation Process

The implementation, which was managed by Database Integrated Solutions, began in February 2009 and was completed by September. The migration involved moving around eight different systems to the new database platform.

"Database Integrated Solutions understood the Oracle environment and guided us towards a standard database infrastructure," said Visser. "During the migration, they became part of our IT team and brought in the correct technical staff at various stages to ensure the project was a success."

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