



## BNZ goes virtual and reduces carbon footprint

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### Overview

#### Background

In 2008, BNZ replaced its middleware product, Roma, with an IBM® WebSphere® process server. The implementation was successful and set BNZ on track to deliver its Service Orientated Architecture (SOA) strategy. With a goal of becoming carbon neutral by 2010, the next step was for the bank to reduce hardware spend and footprint and to consolidate software and hardware solutions.

#### Solution

In what was a major shift from traditional banking systems, the bank decided to replace its distributed system with a virtual system, two IBM z10 Enterprise Class mainframes running Red Hat Linux, attached to two IBM enterprise class storage DS8300's. All the applications it had been running were rewritten for the new system, and hardware and software were consolidated on one system.

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### About BNZ

BNZ is one of New Zealand's largest financial services providers.

BNZ had been using an IBM WebSphere process server to provide the medium between the front and back end, an implementation which had involved replacing middleware but also included a rewrite of its internet banking application.

In 2007, the company set itself a goal to reduce spend and consolidate hardware. Longer term, it also had the goal of becoming carbon neutral by 2010.

A multi-platform solution was one option for server consolidation, but taking its requirement to lower total cost of ownership and power usage into consideration helped the company decide to move from a distributed to a virtual system: an IBM z10 system running Red Hat Linux. The virtualised environment also offered cost savings around software licensing.

When it was delivered early in 2008, it was one of the first z10 to be shipped in the world. BNZ was the first bank in Australasia to migrate to a z10 and implement integrated features for Linux system. It was a cost-effective option and also gives the bank the flexibility to look at other open source solutions in the future.

During the implementation, IBM put BNZ in touch with other companies going down the same path, mostly in Australia but also in the United States. IBM also brought in one of its global experts to show BNZ how the platform worked at a high level.

"They were quite focused on outcomes and ensuring we achieved what we wanted to," Lyle Johnston, BNZ infrastructure architect, says. "With other vendors, once they've made the sale, the relationship often just peters out. With IBM the sale was just part of the relationship. Today, we see IBM as a technology 'partner', not just a supplier. We talk to IBM on almost a daily basis and they are constantly assessing new areas in which we can add further value."



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#### Benefits

Consolidating the number of service windows required has simplified the bank's systems. The z10 has allowed the bank to consolidate storage as well as provide in-house platform based disaster recovery capability.

The z10 implementation has increased speed, lowered total cost of ownership, reduced the server footprint by 20 percent and offered power savings of 40 percent over the system it replaced, an important step in the bank reaching its goal of becoming carbon neutral by 2010.

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The z10 platform enables both the core and front end to operate on the same hardware, giving them an end-to-end view, rather than having different applications sitting on different hardware.

The system includes three main tier one applications:

- MWF sitting on a WebSphere process server
- CRM branch teller application BTT (running on WebSphere)
- Internet Banking – personal and business
- Middleware layer

The z10 allows BNZ to not only scale out as much as it likes but has also given it the flexibility to scale up - a major difference from other products. It can also add capacity on the fly; for example when it needs extra capacity over the Christmas period to cope with the surge in internet banking transactions.

#### Service management

Moving to a virtualised environment on the z10 has dramatically increased the speed of new deployments, which now take seconds rather than hours. The system also requires fewer administrators than the distributed environment and is thus more cost-effective.

Migrating some of the workload from Melbourne has been key to improved service delivery and improved service level agreements.

“We haven’t performed a direct comparison yet as the front-end applications were rewritten as part of moving onto the platform,” Johnston says. “Not all applications have been fully migrated yet, but we are confident we won’t have performance problems with this system. Theoretically we could run the entire group on one box, if necessary.

It has also led to improved ease of use and service. Because both hardware and software are now primarily IBM, service is a one-stop-shop for the bank.

“In a virtualised environment it can be hard to pin point whether a problem is one vendor or another,” Johnston says. “With the z10, the call validates in both Red Hat and IBM systems and is resolved as one call.”

To date there has been one support call with Red Hat and the company has not needed to engage IBM for major support.

For a bank, security is paramount, and even more so during these economic times. The z10 has a Common Criteria EAL (Evaluation Assurance Level) of 5, which is not achievable in a distributed environment. Such a high EAL level is in fact more security than the bank requires but this additional security helps provide confidence that customer accounts are secure and the system is secure from worms, piracy, hackers and other security threats.

Enterprise-class storage is vital to an enterprise server; if there is any data loss on one site, it can be transferred to the other site both on the mainframe and on the enterprise storage.

The z10 has also allowed the bank to consolidate storage onto Tier 1 storage, removing the risk of data loss exposure and providing a storage capacity on several DS8300s.

The z10 is based on a two-site storage model (DS8300s), with production and disaster recovery in Auckland connected by a fibre link at each site. It uses Metro Mirror IBM software to manage replication between sites and TPC to provide insight into storage layer.

#### Energy efficiency

The z10 represents a 20 percent reduction in the bank's data centre footprint – a key infrastructure improvement. Power savings have also been significant due to consolidating numerous functions into one system. While the bank's premises account for the bulk of its power consumption; the z10 has resulted in power savings of 40 percent over the previous distributed environment, and a significant reduction in CO2 emissions.

IBM is now working with the bank to further extend the benefits of the consolidation and provide greater returns on the investment.

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## IBM Key Contacts

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## For more information

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