



NetApp®

Success Story

ING DIRECT Innovates Faster with NetApp, Cisco, and Microsoft Private Cloud



Another NetApp solution delivered with:



KEY HIGHLIGHTS

Industry

Financial services

The Challenge

- Speed up delivery with rapid provisioning of copies of the bank environment.
- Improve developer productivity.
- Accelerate time to market for new products and services.

The Solution

A new, fully integrated testing and development architecture, including hardware, software, and professional services

Benefits

- Reduced provisioning time from 12 weeks to 10 minutes
- Improved developer productivity with self-service provisioning, replacing a process that previously took eight people three months
- Streamlined development, test, and deployment phases of delivery into one integrated, end-to-end solution, enabling ING DIRECT to deliver projects faster

Customer Profile

ING DIRECT is the world's leading direct savings bank and is wholly owned by the global ING Group. Launched in 1999, it pioneered branchless banking in Australia, reinventing the way Australians bank. It went on to revolutionize the mortgage market with straightforward home loans, growing to become the country's fifth-largest mortgage lender. It now has more than 1.5 million customers with US\$27 billion in deposits and US\$39 billion in mortgages. The bank's award-winning team of 950 people is proud to continue this history of innovation, with an in-house IT team of 150 employees managing all of the bank's software and application development.

The Challenge

Creating a more agile testing and development architecture

With a large project backlog, the development and test infrastructure at ING DIRECT Australia could not meet the bank's appetite for innovation. The bank's in-house team of 49 developers and 18 testers needed a faster way to create new copies of the bank so they could accelerate time to market for new products and services.

"We're a very innovative bank," says Ben Issa, head of IT Strategy, ING DIRECT Australia. "People were coming to our team asking us to test the impact of their ideas on our complex banking environment. We could only test so many projects at once, so we had long lead times. As a strategic priority, we needed to deliver innovation faster."

Because provisioning of a single copy of the bank for testing took eight people three months, ING DIRECT wanted to fully automate end-to-end provisioning, making staff more productive and focusing on the things that matter. "Our team is lean and efficient and very engaged, but our delivery model severely limited how many concurrent projects and changes we could manage," says Andrew Henderson, CIO, ING DIRECT Australia. "We asked ourselves: How can we speed things up in a smart way?"

The ING DIRECT team had a vision: to provide a copy of the bank to anyone, at any time, for any purpose, at the lowest possible cost. This includes the full set of the bank's applications, services, and configurations and 5.5 terabytes of data.

“Our staff can now provision complete environments in minutes, not months, so we can test new ideas very rapidly. It’s given us a competitive edge.”

Andrew Henderson
CIO, ING DIRECT Australia

“What we were looking for was a Bank in a Box, an instant environment that reproduced our own in all its complexity,” says Henderson. “We recognized that getting this right would be an important part of transforming IT to a strategic enabler.”

The Solution

Bank in a Box: a brand-new solution

ING DIRECT developed a vision for Bank in a Box, a fully integrated solution that would enable rapid provisioning of complete environments, accelerating time to market for new ideas. To pinpoint the best solution across hardware, software, and services, the bank talked to different vendors. “We wanted to take an architectural approach, and it became clear early on that no single company would be able to deliver what we needed,” comments Henderson.

NetApp engineers worked for six months with systems integrator Dimension Data and ING DIRECT to understand what they were trying to achieve. “ING DIRECT wanted to use Microsoft® virtualization technologies so they could integrate with Microsoft Visual Studio,” says Corey Adolphus, consulting systems engineer and Microsoft Solution Specialist at NetApp. “But with up to 90 concurrent copies of the bank, each taking up 5.5 terabytes of storage, it would have been very intensive on their net-

works, servers, and storage arrays. They asked us to help them make it work.”

The solution was ground breaking. “Our idea for the solution was unique, uniting technology from across the market to give us the capability to innovate and differentiate faster and better,” Issa says. “As far as we know, it was a world first.”

Developed collaboratively by NetApp, Cisco, and Microsoft working with Dimension Data and ING DIRECT, the solution features Microsoft applications built on Cisco and the NetApp FlexPod® data center platform, a prevalidated, highly scalable data center solution that tightly integrates the Cisco® Unified Computing System™, Cisco Nexus® switching, and NetApp® FAS storage system components. This lets developers at ING DIRECT provision environments easily as part of their workflow using Microsoft Visual Studio with Team Foundation Server and Virtual Lab Management. Behind the scenes, Microsoft System Center orchestrates the provisioning processes for them.

“Cisco’s server infrastructure helps us break down data center silos and establish a single compute platform that’s completely integrated with those of other vendors,” says Issa. “It’s integrated with NetApp technologies, which help us off-load the storage seamlessly behind the scenes without overloading

our infrastructure, saving a huge amount of network bandwidth, storage space, and processing power. For one environment that’s a saving—when you’re deploying many concurrently, it’s critical.

“NetApp technologies give us the ability to provision copies of the bank efficiently and quickly. Currently the technology is amplifying storage by 4,000%,” says Issa. “NetApp FlexPod provides efficient delivery lifecycles, letting us set up and tear down copies of the bank faster on as many virtual machines as we need. With NetApp Snapshot™ and deduplication we can create instant snapshots of our environment and mount them on our blade servers while automatically removing duplicate data to free up 20% more space. NetApp FlexClone® ensures these multiple copies of the bank are created quickly and occupy negligible space on the storage array. And because NetApp integrates with Microsoft standard technologies, the solution components talk to each other very easily to form a seamless IT workflow.”

The solution design required little custom code to enable NetApp FlexClone technology to intercept the Microsoft Visual Studio workflow, make an instant zero-space replica of the source data, and attach it back into the workflow—all without overloading ING DIRECT systems. “This was the glue that made



the whole idea of self-service for the ING DIRECT team possible,” says Adolphus. “We knew we had the capability, but when we started working on this project we weren’t sure how to intercept the workflow.”

Having identified the Bank in a Box components, ING DIRECT needed to be sure that the idea would work before investing in the solution. Working closely with NetApp, Cisco, and Microsoft, which provided extensive hardware, software, and technical expertise, Dimension Data used its lab in The Rocks, Sydney, to show the solution in operation.

Henderson was impressed at the way the vendors rose to the challenge and collaborated to prove the solution. “We didn’t run this as a traditional IT project—we gave everyone space to get us the proof we needed,” he says. “The way NetApp and the other vendors collaborated to deliver a workable solution was very impressive.”

“We couldn’t find any reference or case studies to support where we wanted to go—it hadn’t been done before,” Issa says. “But the vendors gave us confidence. When we sat down with them we were surprised at how responsive they were. Each brought their passion and ideas, and fed off each other’s enthusiasm and innovation. The solution was a combination of all those ideas.”

The pilot was successful. “When we showcased it to our executive team they were amazed to see how this technology came together to reduce a process that used to take months down to minutes,” enthuses Henderson. “They saw straight away that it would dramatically reduce development times so we can get new products and services to market faster.”

ING DIRECT commissioned Dimension Data to deliver the entire solution. This included end-to-end systems integration of hardware, software, professional services, and managed services across all three vendors.

“By integrating NetApp technologies with the other solution components, ING DIRECT can run many copies of the bank in parallel without overloading their systems,” says Pero Radosevic, account executive for ING DIRECT, NetApp. “We worked very closely with Dimension Data and the other vendors, particularly Microsoft, to make what was a very complex integration possible. It was a very collaborative process.”

Business Benefits **Faster, more cost-effective provisioning of test environments**

“The solution enables us to streamline processes that previously took eight people three months with a very simple self-service model,” says Henderson. “Our staff can now provision copies

of the bank in minutes, not weeks, so we can test new ideas very rapidly. It’s given us a competitive edge.”

“Now we can provide a copy of the bank to anyone in the bank at any time—in 10 minutes,” says Issa. “At the click of a button, developers can get all the data they need, all the servers, applications, configurations, testing, and everything that goes with it, completely verified, ready to rock and roll, completely off the shelf. Then they can run any test they like. It’s amazing.”

“We’re using this solution in so many scenarios and we’re seeing new use cases all the time,” adds Issa. “For example, we can give a customer service representative access to all our customer-facing applications for training purposes. Or give a developer a full version of the bank at induction. And when we have customer or operational issues, it’s much easier to study and solve them. In fact, everything we do is faster—our capability now supports our appetite for transformation and change and delivering faster for our customers.”

Easier innovation with an efficient platform for testing ideas

The solution has also freed the development team at ING DIRECT to focus more on differentiating the bank with an efficient and accessible platform

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Ben Issa
Head of IT Strategy, ING DIRECT Australia

for testing new ideas. “We can now redirect our skilled people and our cost base toward innovation,” states Henderson. “We’ve said to our people: If you’ve got a good idea, go for your life—test it. Now the only thing holding us back is how fast we can come up with the ideas.”

A cloud-enabled operating model

ING DIRECT has also laid the foundation for the bank’s continued IT transformation by establishing a cloud-enabled operating model, paving the way for more efficient cloud-based business processes in the future. “A huge benefit is that we’ve cloud enabled ourselves in terms of our operating model and our IT strategy,” says Henderson. “It’s not just technology—wrapped around the solution is a whole set of new, more efficient work processes.”

SOLUTION COMPONENTS

NetApp Products

NetApp FAS3270 storage system
SnapMirror® technology
FlexClone
Deduplication
MetroCluster® technology
NearStore® technology
SyncMirror® technology
SupportEdge Premium

Protocols

iSCSI, FCP, CIFS, NFS, FCoE

Third-Party Products

Cisco Nexus
Cisco Unified Computing System
Windows Server® 2008 R2 Hyper-V™
Microsoft System Center
Microsoft Visual Studio
Microsoft Visual Studio Team Foundation Server
Microsoft Virtual Lab Management

Partner

Dimension Data
www.dimensiondata.com.au

Solution delivery partner:



www.netapp.com

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Go further, faster®

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