

# Westpac Institutional Bank



## Virtual infrastructure for critical financial application leaves no margin for error

### Business situation

Money never rests. Deposits, settlements, transfers, payments, investments, and purchases race across global networks to satisfy fiduciary commitments, only to be sent off again and again. This is how bond interest is paid, raw materials are purchased, payrolls are met, and grocers' shelves are stocked. This is how economies function.

Whether a transaction is a \$20 ATM withdrawal or multimillion dollar funds transfer, it crosses networks that are owned and operated by service providers. Ostensibly, service providers assume responsibility for assuring the money arrives where and when it's supposed to. As with most services, variables such as consistency, reliability, attitude, and customer commitment will stress service-level quality.

**“The ftServer is more than technology. It's peace of mind.”**

**Leigh Mahoney**  
Executive Director, Core Banking  
and Transactional Services  
Westpac Institutional Bank

### QUICK FACTS

#### SOLUTION PROFILE

- Customer-facing file transfer service with transaction values exceeding AUD\$1.25M per minute
- Virtualization platform supports 13 virtual machines and replaces 20 physical servers plus storage devices
- SLA commitment: total solution availability of 99.99 percent
- Reduces utility and operational costs, contributing to “greener” operation

#### PRODUCTS

- Stratus® ftServer® fault-tolerant servers with ftScalable™ storage array for fibre channel SAN
- VMware® vSphere™ 4 software with VMotion™ technology
- Microsoft® Windows® 2008R2/2003R2 applications

#### SERVICES

- Stratus support services

Uptime. **All the time.**



Westpac Institutional Bank manages the financial needs of corporate, institutional, and government clients with interests in Australia and New Zealand. Exceeding customer expectations is at the core of its mission, as it is with each division of the Westpac Group, Australia's oldest financial institution and a top-five listed company on the Australian Securities Exchange Limited.

Having earned its clients' trust over decades, Westpac Institutional Bank launched a managed file transfer application in 2007, called Westpac Integrated Banking Service (WIBS), to take responsibility for driving clients' daily payments and receivables, and other financial data. Using WIBS, customers send and receive critical files between their systems and Westpac's via straight-through processing. Files include real-time or batched payments, receivables data, or a range of other financial information.

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## Business objectives

The bank wanted to design a new front-end processing system to run WIBS, along with a dozen other critical applications, in a virtual production infrastructure. System resiliency was a primary concern, both because clients interact directly with the file transfer application and, now, with virtualization, the platform would support many critical applications on less hardware. Furthermore, the system also had to seamlessly integrate with Westpac's back-end banking systems. The client-facing nature of this application combined with the design requirements made the hardware evaluation criteria clear:

- Fast, available, and dependable: the front-end servers needed resiliency and configuration simplicity designed in
- A technology provider willing to guarantee performance: the vendor had to match the bank's own commitment to deliver exceptional SLAs to its clients
- Augment availability features of VMware vSphere 4 software: consolidating applications and data management on less hardware required “belt and suspenders” availability for the software, servers, and storage, in order to guarantee 99.99 percent availability

While the evaluation criteria may have been clear, it was felt that familiar high-availability solutions fell short of the mark.

## A surprising uptime assurance solution from Stratus

The challenge of finding better alternatives for platform availability fell to Leigh Mahoney, executive director of core banking and transactional services for Westpac Institutional Bank. He had experience using additional hardware to achieve resiliency, but doubling up on servers and storage was not the direction

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he wanted to go for WIBS and virtualization. This traditional clustering approach meant greater management time and effort to monitor, patch, and control individual nodes; and more power, air conditioning, and rack space. “It is not very efficient and it’s hard to manage,” said Mahoney.

He researched the current state of fault-tolerant technology, expecting to find hardware enclosures the size of refrigerators and two of everything cabled together. Instead, he found a compact single server, with complete redundancy pre-engineered in and taking up just 4U (16 centimeters/seven inches) of standard rack space. The Stratus ftServer system was powered by current Intel® processors and supported both Windows and Linux® applications, as well as VMware vSphere 4 software. “I was very surprised. Then I started pulling components out of a running machine and it just kept going. This was a real value-add solution, especially when coupled with VMware.”

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The WIBS application now runs as one of seven virtual machines on two ftServer dual quad-core servers configured as a VMware cluster. A third ftServer system supports six more virtual machines. Combined, the three servers represent most of the production server infrastructure for the Web and application layers of the architecture; the database layer is separated out for security reasons and runs on an alternative back end. Additional applications include help desk, security, proxy servers to integrate front- and back-end processing, and other proprietary applications. The ftServer systems connect via fibre to a Stratus ftScalable storage-based high-availability SAN. The new virtualized infrastructure eliminates 20 individual servers and several storage devices. “We take comfort in the hardware resiliency Stratus provides, and the software resiliency of VMware,” said Mahoney. “The ftServer is more than technology. It’s peace of mind.”

### **Business impact**

Westpac Institutional Bank’s WIBS services approximately 100 banking clients. These clients send or receive 300,000 workflows monthly containing AUD\$40BN of payments, or an average of \$1.262M per minute/day. Since most transfers occur between 8 a.m. and 5 p.m., each processing minute may actually represent three to five times more transaction dollar value that would not complete if WIBS was offline.

“Measuring effectiveness in terms of whether the system is up and running undervalues the importance of the service. The only meaningful measure is, can the customer use it,” said Mahoney. “At the heart of our client relationship is a fundamental trust that transactions will execute the first time, every time.”

Since first implementing the new virtual infrastructure for WIBS, Westpac has had no unplanned downtime. Mahoney says that he has been alerted by Stratus customer service that something in the server needed attention, but the platform has never stopped running. “That’s how it’s supposed to work. We sometimes even get a call asking if we knew our Internet connection was down, which is something Stratus is not even responsible for. We don’t call Stratus, they call us. Service like that allows me to attend to more important things in my life, such as my family, because I know the machinery will not let me down.”

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## About Stratus

Stratus delivers uptime assurance for the applications its customers depend on most for their success. With its resilient software and hardware, backed by proactive availability management services, Stratus products help to save lives and to protect the business and reputations of companies, institutions, and governments the world over.

To learn more about worry-free computing, visit [www.stratus.com](http://www.stratus.com).

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