



Wachovia

A leading bank and one of the largest providers of financial services to retail, brokerage and corporate customers.

Industry: Financial Services
Geography: United States

Deployment Summary

- The grid-computing platform supports the bank's production system, harnessing idle computing resources to generate unparalleled levels of application performance, scalability and reliability.
- The bank has extended its grid computing infrastructure to include its credit, global risk, equity and mortgage-backed securities areas.
- The grid platform has been deployed over several hundred processors to maximize cross-platform resources, including under-utilized and intermittently available CPUs running on Sun Solaris and Windows.

Benefits

- The solution enables four times more volume and 25 times more modeling simulations, supporting the trading of complex financial products.
- Grid computing has improved report turnaround time: Generating risk reports has been transformed from a 15-hour process into a 15-minute intraday cycle, enabling traders to make better decisions based on the most timely data.
- The bank can run up to 100,000 simulations per deal as compared to 4,000 prior to deploying the grid-computing solution.
- Trading volume for exotic instruments has tripled, generating profits per deal of up to \$1 million.



“With GridServer, we can now turn around our mission critical reports in minutes, on a real-time intraday basis. Our group is enjoying about a 100x magnitude performance increase that has scaled effortlessly on the DataSynapse platform.”

Andy Cook, Head Exotics Trader, Wachovia

Improving Application Performance for Wachovia

Background

A leader among its banking peers in creating shareholder value, Wachovia Corporation (NYSE: WB) is one of the largest providers of financial services to retail, brokerage and corporate customers.

One of its core businesses and part of the Wachovia Securities entity, the Corporate and Investment Bank division provides capital-raising, market-making, financial-advisory and transaction-processing services to meet the needs of corporate and institutional clients worldwide. The group comprises several business units, including Investment Banking, Fixed Income, Treasury Services, Credit Capital Markets, Equity Linked Products, International and Principal Investing, Equity Capital Markets and Capital Finance.

The Corporate and Investment Bank division is headquartered in Charlotte, N.C., with offices in Baltimore, Philadelphia, New York, San Francisco, Atlanta, Boston, Chicago and London.

Challenges

After migrating to a new trading platform, Wachovia's Corporate and Investment Bank encountered performance problems when trying to leverage the system's enhanced analytic capabilities. The solution lacked scalability and processing speed,

and could not reliably guarantee failover capabilities in the event of hardware, software or network failures. In addition, it was not able to prioritize computing jobs; dynamically match jobs with available, appropriate resources; or automatically reschedule jobs in the event of an interruption.

Users also faced unacceptable report-turnaround times. For example, overnight risk reports with enhanced analytics took up to 15 hours, preventing traders from knowing their limits at the start of each day and affecting their decision-making abilities. In addition, certain complex but highly profitable products could not be priced accurately within necessary time constraints.

After assessing all of these challenges, Wachovia determined it needed a better infrastructure to support the significant increases in trading volume and reduce time-to-results of risk reports. To meet the traders' and risk managers' requirements, the bank decided it needed to either purchase additional hardware or implement a distributed computing solution.

Solution

Seeking to improve application performance and reliability while extending the value of its existing hardware, Wachovia focused on ways to leverage its underutilized resources. After exploring its options,

the Corporate and Investment Bank found a partner in TIBCO and its GridServer™ offering.

An award-winning, production-proven solution, GridServer eliminates current IT constraints and creates a new paradigm of capability expansion, delivering unparalleled advancements in time-to-results, resiliency, throughput, and time-to-deploy. Ideally suited to meet the needs of complex organizations like financial services companies, TIBCO's GridServer was first deployed by Wachovia's Corporate and Investment Bank in April 2001 to support the bank's production system.

The standards-based solution quickly proved successful, harnessing idle computing resources to generate unparalleled levels of application performance, scalability and reliability. Wachovia has gone on to implement GridServer within its Credit, Global Risk, Equity and Mortgage-backed Securities areas.

GridServer has been deployed over several hundred processors to maximize cross-platform resources, including underutilized and intermittently available CPUs running on Sun Solaris and Windows. As a layer between Wachovia's financial applications and its underlying computing resources and IT infrastructure, GridServer enables the Corporate Investment Bank to build a real-time application operating environment to meet critical service levels.

Results

Upon implementation, the Corporate Investment Bank realized GridServer drove significant application performance gains from time-to-build and deploy to improvements in scalability and resili-

ency. It was clear that the steps toward a service-oriented operating environment saved money and improved computing efficiency.

"TIBCO's ability to grid-enable a wide range of resources including transactional and service-based applications makes it a compelling solution," said Mark Cates, chief technology officer for Wachovia's Corporate and Investment Bank. "We rely on GridServer to scale the business, control infrastructure costs and maintain a high quality of service for our clients." Some of the benefits Wachovia has experienced using GridServer include:

- **Performance Gains:** The solution enables four times more volume and 25 times more modeling simulations, supporting the trade of complex financial products.
- **Improved Report Turnaround Time:** Overnight risk reports have transformed from a 15-hour process to a 15-minute intraday cycle, enabling traders to make better decisions based on the most timely data.
- **Increased Trading Volume:** Trading volume for exotic instruments tripled, generating profits per deal of up to \$1 million.
- **Increased Simulations:** The bank can run up to 100,000 simulations per deal as compared to 4,000 prior to GridServer. By unlocking the performance of mission-critical applications to improve operational efficiencies, Wachovia has been able to create new business opportunities and reap the benefits of TIBCO's GridServer technology.

"Our goal was to derive greater revenue from our desk by harnessing performance gains out of our production environment."

**Andy Cook, Head Exotics Trader,
Wachovia**

Looking Forward

In 2004, Wachovia's Corporate and Investment Bank's architecture team and TIBCO conducted an assessment and design process to determine how to extend the bank's use of GridServer. The evaluation was conducted utilizing TIBCO's patent-pending GRIDesign methodology, an approach for calculating the potential business value derived from implementing GridServer across application areas.

Not only did the joint discovery process uncover specific areas of opportunity where GridServer could be applied to drive significant improvements, it led to TIBCO's GridServer becoming Wachovia's enterprise standard.

Wachovia's Corporate and Investment Bank will continue to implement GridServer across its business to transform the performance of mission-critical applications into cost-savings and revenue-generating opportunities. Additionally, as Wachovia looks to enable service-oriented architectures across other areas of its business, the Corporate and Investment Bank will serve as model for the rest of the firm.



TIBCO Software Inc. (NASDAQ: TIBX) technology digitized Wall Street in the '80s with its event-driven "Information Bus" software, which helped make real-time business a strategic differentiator in the '90s. Today, TIBCO's infrastructure software gives customers the ability to constantly innovate by connecting applications and data in a service-oriented architecture, streamlining activities through business process management, and giving people the information and intelligence tools they need to make faster and smarter decisions, what we call The Power of Now®. TIBCO serves more than 4,000 customers around the world with offices in more than 20 countries and an ecosystem of over 200 partners. Learn more at www.tibco.com.

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