



Revolutionary Mission-Critical Technology Takes Banking Solution to the Next Level



TEMENOS™

“We have always been committed to providing our customers with the widest possible choice of hardware and software platforms on which they can run T24. With this benchmark we bring to market a revolutionary solution which we are confident can serve the needs of large banks while delivering a superior cost strategy.”

– Andreas Andreades,
CEO, Temenos

CHALLENGE

- Meeting demand for flexible, scalable, and cost-effective mission-critical banking solutions

SOLUTION

- Intel® Xeon processor 7500 series-based NEC Express 5800/A1080a* 8-CPU server system, integrated with Microsoft* SQL Server* 2008 R2, and Windows Server* 2008 R2 Datacenter

Challenge: Delivering Cost-Effective, Robust Solutions

Today's businesses are challenged with reducing costs and the banking industry is no exception. With the vast amount of data being managed by financial organizations, banks need robust systems in place to manage services such as payments, cash management, lending, compliance, and more. And customers expect these services to be functioning without service interruptions, which mean the reliability of banking systems is critical.

Temenos is a global provider of banking systems serving the retail, corporate, universal, private, Islamic, and microfinance and community banking markets. They serve more than 1000 customers in over 120 countries, supported by 56 offices worldwide. One of their key banking solutions is T24, a fully integrated, modular core banking system that provides a solid foundation for banks to manage customers, processes, risks, and activities. It also provides specialized line-of-business functionality for a full range of banking segments.

To ensure they continue to provide top-of-the-line services with T24, Temenos was looking for an innovative solution to increase the scalability and reliability of T24, while helping customers reduce costs.

The Solution: Harnessing the Power of Intel, Microsoft, and NEC Technology

Through its alliance with Microsoft, Temenos participated in a benchmark performance test to measure high-end scalability and performance using real-world banking activity volumes, involving a scenario of 25 million accounts and 15 million customers across 2,000 branches. The test system was a T24 running on an Intel® Xeon processor 7500 series-based NEC Express 5800/A1080a* 8-CPU server system, integrated with Microsoft SQL Server* 2008 R2, and Windows Server* 2008 R2 Datacenter.



"This close collaboration with Microsoft, focused on optimising T24 for the Windows and SQL Server platform, confirms our ongoing effort toward helping our customers to remain the most profitable in the industry."

– Andreades, Temenos

SOLUTION PROVIDED BY:



The results of the benchmark were impressive with scenarios demonstrating massive scalability and peak performance that surpassed expectations. At peak performance the system processed more than 3,400 transactions per second in online testing and averaged a record-breaking 5,203 interest accrual and capitalizations per second during close of business processing. The maximum CPU utilization of the NEC database server during the peak hour did not exceed 70 percent, providing considerable additional capacity.¹

The solution also helps reduce costs through greater energy efficiency and the ability to centralize management. The Intel Xeon processor 7500 series uses x86 architecture and provides approximately 20x better performance per server and a 20:1 consolidation ratio, 95 percent floor space reduction, and up to 92 percent lower energy costs compared to older single-core processor-based servers.² The Intel processor also works with Microsoft technology to intelligently adjust server performance according to application needs. And with the ability to manage the infrastructure with Microsoft System Center, the solution reduces the unique IT skills required to operate separate management tools, provides the ability to create automate processes, and increases visibility across applications.

Each piece of the solution played a pivotal role in the success of the test. The Intel Xeon Processor 7500 series provided powerful processing power and features that increase reliability, availability, and serviceability. To meet mission-critical needs, the processor supports redundancy and failover of key system components to ensure that systems stay up and running. The Intel Xeon Processor 7500 Series was combined with NEC's Express 5800/A1080a series server, providing a

solid architecture for the test. SQL Server 2008 R2 provided an ideal database platform, helping to process data faster. SQL Server 2008 R2 provided an ideal database platform and is able to leverage the scalability features of the Intel Xeon Processor 7500 series, which can handle eight sockets or more, eight cores and 16 threads per socket, and up to two terabytes of RAM in an eight-socket configuration.

Conclusion: World-Class Solution through Joint Technologies

Intel, Microsoft, and NEC were excited with the success of the test and how it can help banking institutions reduce costs while improving performance and scalability. It also provided Temenos an opportunity to take T24 to the next level, with enhanced capabilities tailored to large-scale banks to help increase flexibility and operational efficiency, while maintaining a mission-critical environment. Temenos now has a solution to help them continue to meet the growing compute needs of the banking industry and is thrilled about the possibilities.

Learn More

For more about Intel Xeon processors, visit www.intel.com/xeon.

For more about Windows Server 2008 R2 Datacenter, visit www.microsoft.com/windowsserver2008.

For more about SQL Server 2008 R2, visit www.microsoft.com/sqlserver.

For more about NEC Express 5800 Servers, visit www.nec.com.

For more information about Temenos Internet solutions and services, visit www.temenos.com.

¹ Microsoft, 2010, "Benchmark Results for Temenos T24 with SQL Server 2008 R2 on Intel-based NEC Servers"

² Less than one year ROI claim estimated based on comparison between 4S single-core Intel® Xeon® processor 3.33 (Potomac) and 4S Intel® Xeon® processor X7560-based servers. Calculation includes analysis based on performance, power, cooling, electricity rates, operating system annual license costs, and estimated server costs. This assumes 42U racks, USD 0.10 per kWh, cooling costs are 2x the server power consumption costs, operating system license cost of USD 900/year per server, per server cost of USD 36,000 based on estimated list prices and estimated server utilization rates. All dollar figures are approximate. Performance and power comparisons are based on estimated SPECint*_rate_base2006 benchmark results (Intel Corporation, January 2010). Platform power was estimated during the steady-state window of the benchmark run and at idle. Performance gain comparison to baseline was 20x. Baseline platform (score 34:1): Intel® E8500 Chipset-based server with four single-core Intel Xeon processor 3.33 GHz estimate. New platform (score 688): Intel internal reference server with four Intel® Xeon processor X7560 (24 M Cache, 2.26 GHz, 6.40 GT/s Intel® QuickPath Interconnect, Intel® Hyper-Threading Technology, Intel® Turbo Boost Technology), 256 GB memory (64x 4GB QR DDR3-1333), SuSE® Linux® 11, cpu2006.1.1.ic11.1.linux64.binaries.nov242009.tar.bz2 binaries.

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