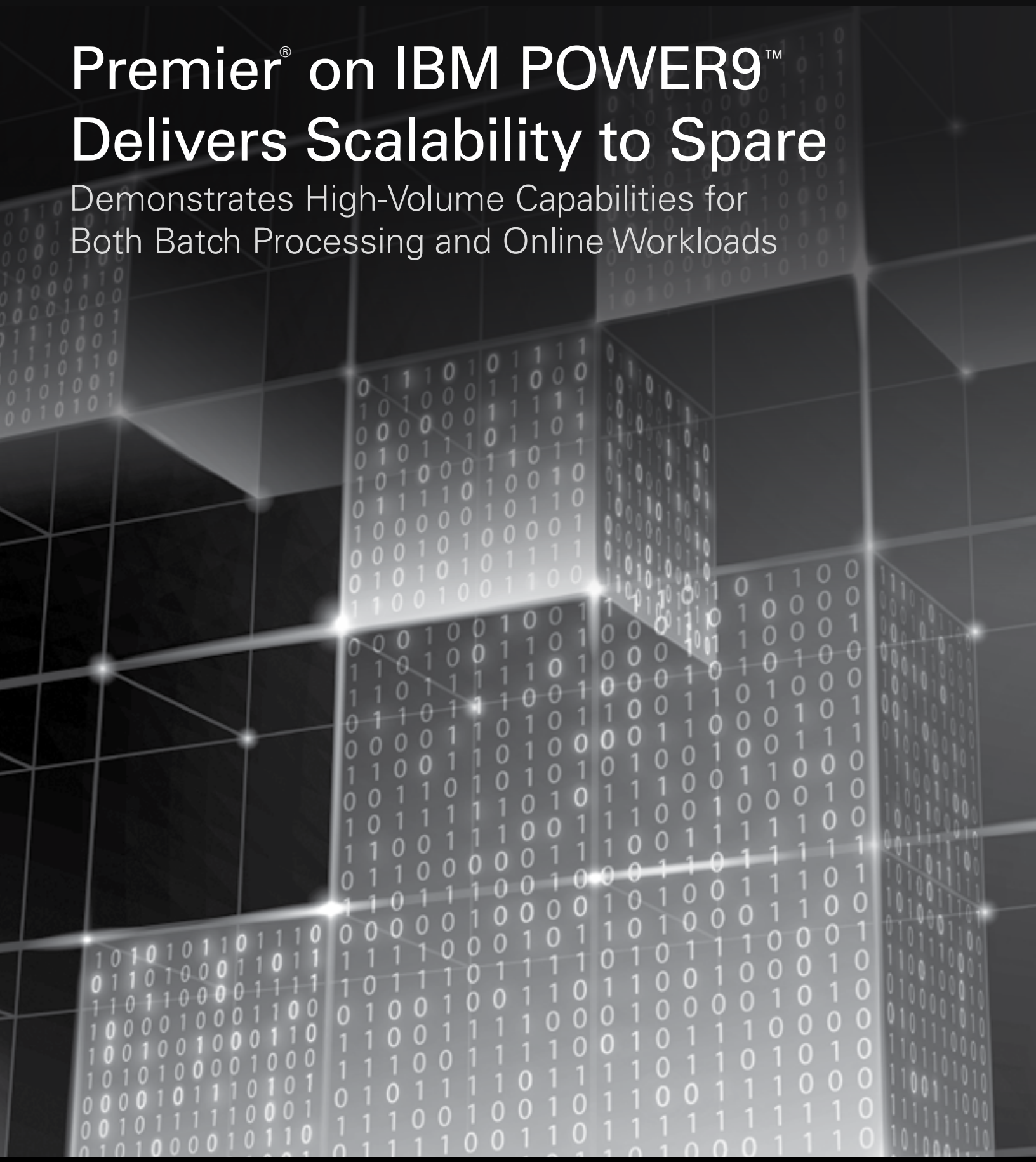
Premier® on IBM POWER9™ Delivers Scalability to Spare

Demonstrates High-Volume Capabilities for Both Batch Processing and Online Workloads



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About Premier

Premier from Fiserv is a market-proven account processing solution designed to support financial institutions with diverse business models, asset sizes, customers, technology strategies and operating environments.

It is used by more financial institutions than any other account processing solution in the United States. Known for its robust functionality and integration, Premier is especially suited to meet the needs of financial institutions that serve small business and commercial customers.

Scalability to Spare

Many financial institutions in the United States are looking to acquire or merge with other banks in order to increase efficiency, expand their geographic footprint and access capital for lending and investment. A logical consideration for those pursuing merger and acquisition strategies is the scalability of their current account processing system to meet future requirements.

In performance benchmark testing, Premier on an IBM POWER9 system handled batch processing requirements four times the current levels of a large regional bank. Premier on POWER9 also accommodated an online transaction volume at least five times the current peak online transaction volume of that same bank.

Testing Methodology

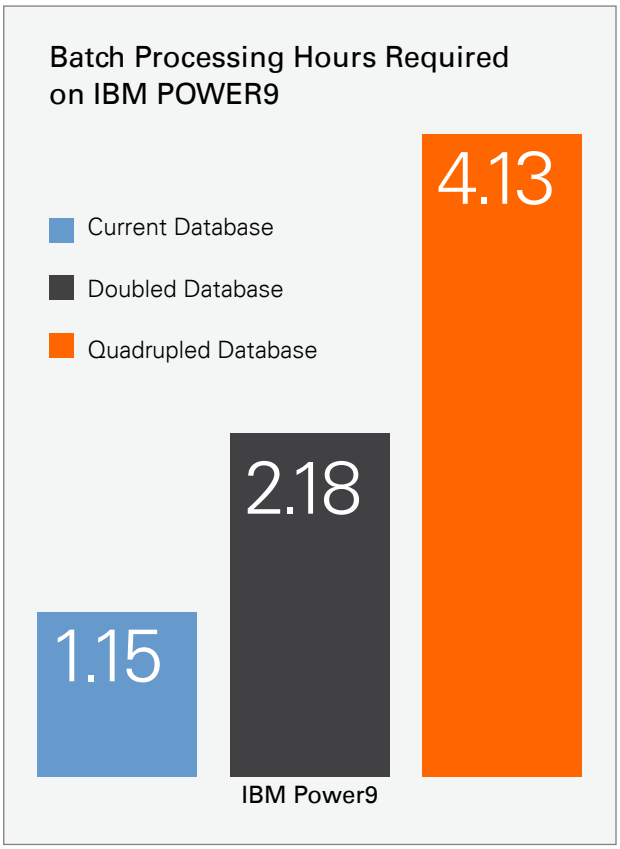
Performance benchmarks were established using a large regional bank's current actual production database on the POWER9. Performance benchmark testing was repeated after doubling and then quadrupling the current production database.

For online transactions, both requests per hour and average response times were measured using the POWER9 with workloads of more than three million and more than five million requests per hour. To simulate real-world online traffic, a combination of four different kinds of online requests were used for testing: ATM, Business Online™, Retail Online™ and internal Navigator for Premier online requests. The intent was to make the workloads as realistic and legitimate as possible, representing the traffic today's data centers are expected to support.

These benchmark testing results were originally published in IBM Systems Magazine, Power Systems.

Impressive Results

Benchmark testing on the POWER9 demonstrated that even with a quadrupled database (simulating $120 billion in assets and 7.2 million accounts), batch processing was completed in slightly more than four hours (4.13).



	Assets	Batch Processing Time (hours)
Current production database	$30 billion	1.15
2x current production database	$60 billion	2.18
4x current production database	$120 billion	4.13

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The batch workload for the tests was representative of typical nightly processing at month's end, including a broad range of programs that support deposits, loans, safe deposit boxes, exception items, general ledger, customer information file, custom programs and regulatory reporting.

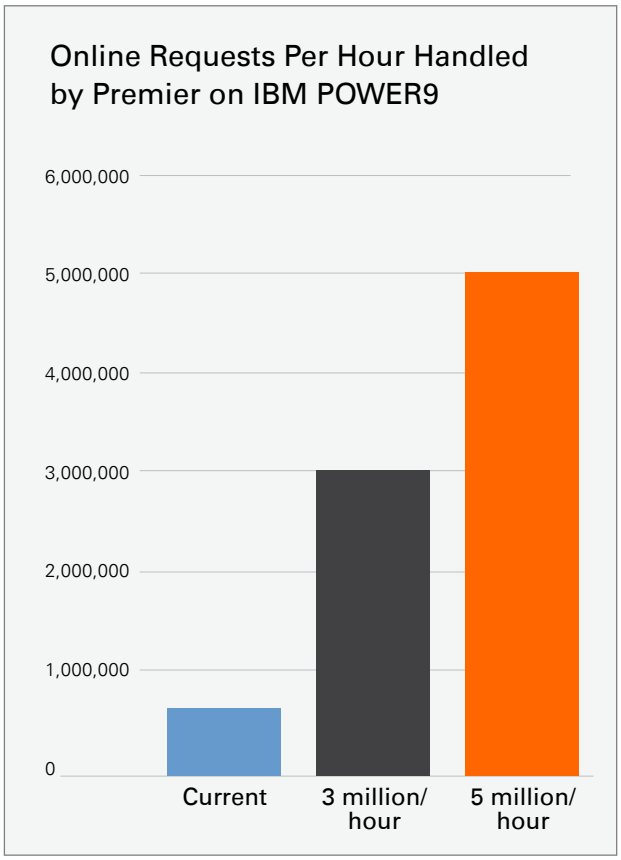
It should be noted that these benchmark performance results were achieved using a single database quadrupled to simulate a single financial institution of 7.2 million accounts, not four separate databases processed simultaneously or in parallel. Batch processing is more challenging when all the accounts and processing are done as one institution.

	1x Database	2x Database	4x Database	Delta from 1x to 2x	Delta from 2x to 4x
Elapsed time	01:09:00	02:11:00	04:08:00	89.86%	89.31%
Average CPU usage (%)	9.93	10.09	11.58	1.61%	14.77%
Accounts per hour	1,576,530	1,660,773	1,754,526	5.34%	5.65%

Doubling and then quadrupling the database resulted in less than comparable increases in the time required for processing. These results demonstrate economies of scale for Premier on the POWER9 as account volume and processing requirements grow.

Again, with online requests, the performance of Premier and commonly deployed ancillary solutions on the POWER9 was impressive, accommodating a workload of more than 5 million requests per hour, greatly exceeding the online request workload of any current Premier production deployment. The workload represented a combination of requests through customer-facing channels (ATM and commercial and consumer online applications) and internal requests through Navigator, the Premier user interface.

The average response time for all tested workloads was less than 0.02 seconds



	3 million online requests per hour	5 million online requests per hour	Delta (%)
Average response time (seconds)	0.015	0.019	26.67%
Average requests per hour	3,133,968	5,173,462	65.08%
Average CPU usage	21.78	33.78	55.10%

The results for online workloads, like the results for batch processing, demonstrated economies of scale. Neither average response time nor CPU usage increased to the same degree as the number of requests per hour that were accommodated.

A Future-Ready Solution

The results of the performance benchmark testing of Premier deployed on an POWER9 system demonstrate that this combination can support considerable future growth of a mid-size to large regional bank, whether that growth is organic or through mergers and acquisitions. Premier on POWER9 scales well beyond the current and even future processing requirements of most financial institutions in the United States.

Connect With Us

For more information about Premier,
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About Fiserv

Fiserv is driving innovation in Payments, Processing Services, Risk & Compliance, Customer & Channel Management and Insights & Optimization. Our solutions help clients deliver financial services at the speed of life to enhance the way people live and work today. Visit fiserv.com to learn more.

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