SQL Performance Scorecard

Engine Software version: 15.0.165.1
Tested: January 30th, 2017

Summary

"How fast is the Windward Engine? Does it really produce pages per second?"

Yes, it does run that fast.

We know this because our customers and others regularly ask us to substantiate our claims regarding the speed of our solution. We test the performance metrics whenever we have a major change to the software. This ensures that we're always improving our reporting and document generation engine and provides us with the opportunity to share the up-to-date performance information.

Test Parameters

For this latest version of the Windward Engine, we tested the performance by creating a report 50 times and averaging the result. Performance results (number of pages created per second [PPS]) depended on which engine is used retrieving data from an SQL Database and the number of simultaneous threads called by the Windward application. When generating reports on a *4 core system with two threads*, our results ranged from 50 to 73 PPS. Using 16 cores with the same reports boosted performance to 24 to 142 PPS.

- **Processor:** Intel® Xeon™ E5-2673 v3 @ 2.4GHz (1 physical socket; 4 virtual cores)
- **Memory:** 14.0 GB
- **Operating system:** Windows 10 Professional 64-bit
- The Windward AutoTag template is a Microsoft® Word document two pages long. It contains text, images, headers, footers, multiple loops, and equations.
- The generated report is a 17-page Word document (DOCX). The number of pages generated per second is not affected by the output format. Both DOCX and PDF reports were generated in the same amount of time. The report is run 50 times for each test.
- The SQL Server contains the Northwind SQL database. The database server is located on the test machine.

Testing Notes

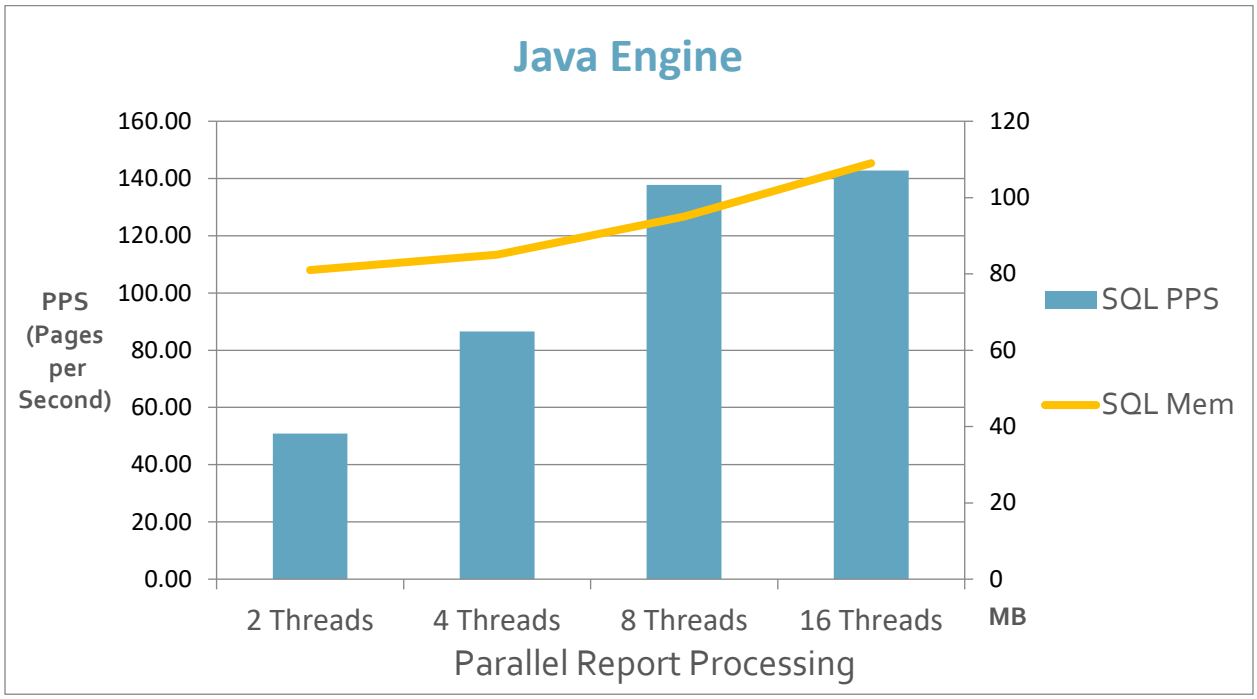
These Engine performance tests *assume the worst case performance in several aspects*, so your performance could easily be faster. In this test:

- We open the template each time the Engine generates a report. When you run the same template in bulk through the Windward Engine, it scans the template one time and caches it. This results in a speed increase as the time to read the template is removed from each successive run.
- The data source is loaded again each time, which may not be necessary in your use case.
- Both DOCX and PDF reports were generated in the same amount of time.

The Windward Java Engine

For each test of the Java Engine, we ran with an SQL data source and four different thread counts (2, 4, 8 and 16 threads). The exact results are listed in the table below.

*Running on an Intel® Xeon™ E5-2673 v3 @ 2.4GHz with 14 GB RAM on Windows 10 (64-bit)

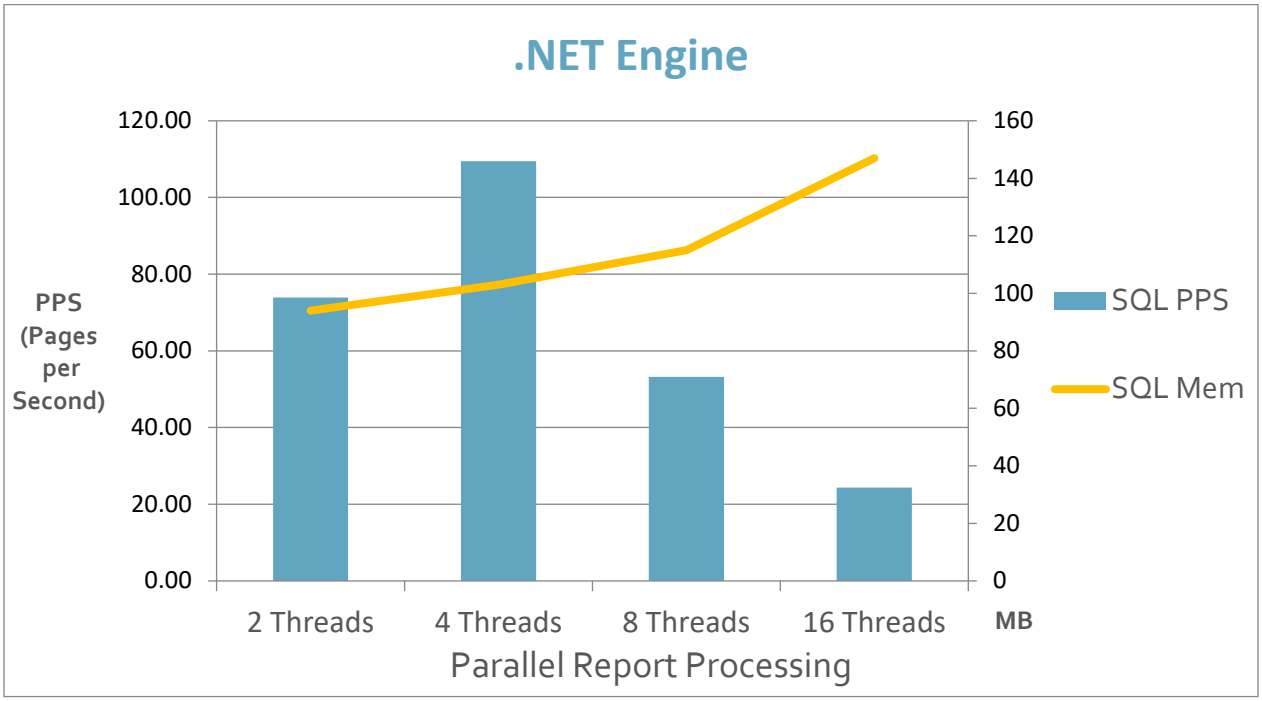


Number of Threads	Data Source Type	Peak Memory Usage	Pages per Second
2	SQL	81 MB	50.83
4	SQL	85 MB	86.49
8	SQL	95 MB	137.72
16	SQL	109 MB	142.79

The Windward .NET Engine

For each test of the .NET Engine, we ran with an SQL data source and four different thread counts (2, 4, 8 and 16 threads). The exact results are listed in the table below.

*Running on an Intel® Xeon™ E5-2673 v3 @ 2.4GHz with 14 GB RAM on Windows 10 (64-bit)



Number of Threads	Data Source Type	Peak Memory Usage	Pages per Second
2	SQL	94 MB	73.91
4	SQL	103 MB	109.46
8	SQL	115 MB	53.23
16	SQL	147 MB	24.38

Want to run this performance test yourself?

The most accurate results will come from running the Windward performance tests on your own target system. That is why we have embedded this testing code inside the Windward Engine.

You can find out more on how to run this Performance Analysis Test on the Windward Documentation Wiki.

Need a trial version of the Engine?

If you do not have a version of the Windward .NET or Java Engine, you can download a free trial from the Windward Web site.

You can also **request a live, personalized demo** with one of our friendly, experienced Windward sales engineers. Whether you want a simple, high-level overview or a deeper, more technical, and feature-rich discussion, our team can help answer your questions and satisfy your curiosity.