

# 3rd Gen Intel® Xeon® Scalable Processors under STAC-A2™



Understanding market risk is critical to pricing and hedging deals in addition to the overall integrity and smooth functioning of capital markets. STAC-A2, a vendor independent benchmark suite based on real-world market risk analysis workloads, enables financial institutions to compare and contrast different configurations that optimize market risk and help achieve key business outcomes.

Intel® Xeon® Scalable processors play a key role in helping leading financial services institutions with their most demanding computational tasks. A solution using 3rd Gen Intel® Xeon® Scalable processors demonstrated up to 59% higher throughput and up to 53% faster response time for warm runs over the previous generation. Additionally, the solution with 3rd Gen Intel® Xeon® Scalable processors handled 4% more assets than the previous generation. These improvements, which were found in a Securities Technology Analysis Center (STAC) audit (<http://STACresearch.com/INTC210315>), show financial institutions can use Intel's latest technology to process more, faster. This is critical for companies that are looking to use technology as a competitive advantage and translate data into insights.

Compared to 2nd Gen Intel® Xeon® Scalable Processors:

Up to  
**59%**  
higher throughput

Up to  
**53%**  
faster response time

## Intel® Xeon® Scalable Processors Generational Comparison under STAC-A2

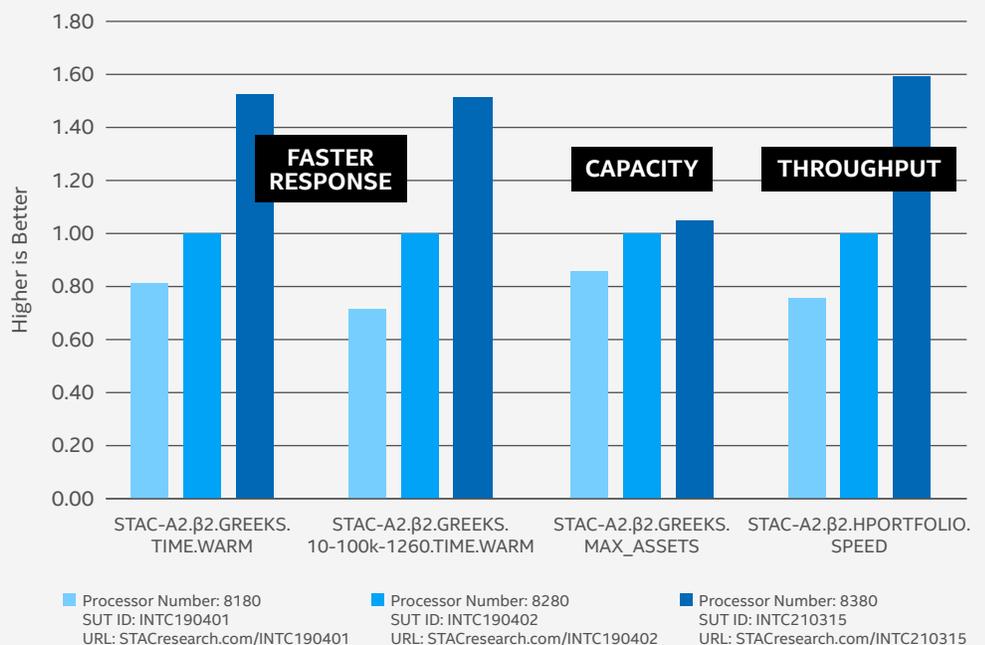
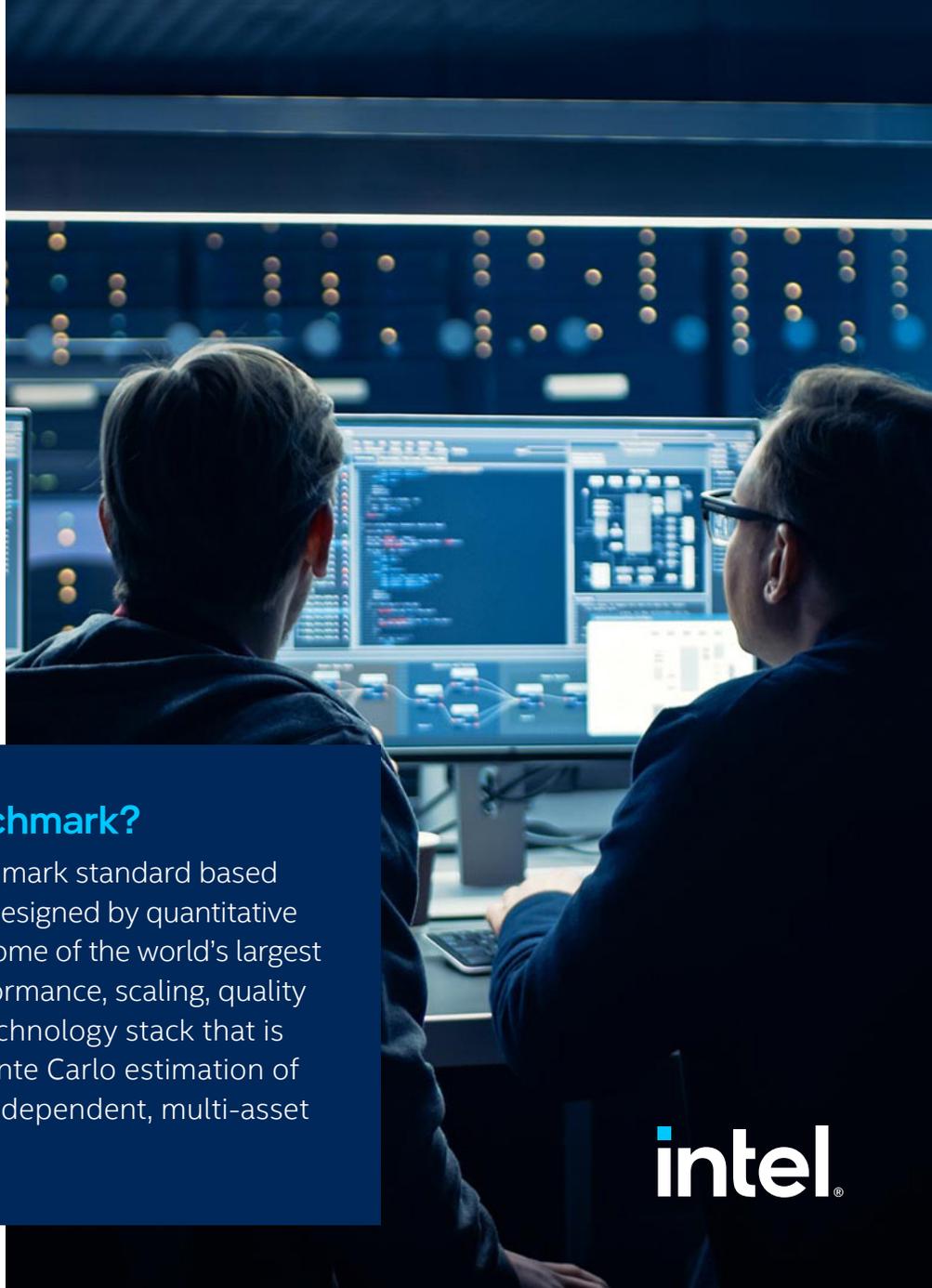


Figure 1: STAC-A2 Generational Performance: Response Time, Capacity and Throughput

One method to optimize performance on 3rd Gen Intel® Xeon® Scalable processors is through code modernization which enables customers to leverage the benefits of Intel® Advanced Vector Extensions 512 (Intel® AVX-512). Intel® AVX-512 is an x86 instruction set which helps accelerate performance for workloads and usages such as financial analytics, deep learning and other key applications. Take advantage of 3rd Gen Intel® Xeon® Scalable processors' increased memory bandwidth and improved frequency management to enable greater performance than ever before.



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## What is a STAC-A2 Benchmark?

STAC-A2 is the technology benchmark standard based on financial market risk analysis. Designed by quantitative analysts and technologists from some of the world's largest banks, STAC-A2 reports the performance, scaling, quality and resource efficiency of any technology stack that is able to handle the workload (Monte Carlo estimation of Heston-based Greeks for a path-dependent, multi-asset option with early exercise).

## System Configuration

**SUT ID: INTC190401:** STAC-A2 Pack for Intel® Parallel Studio XE (Rev K2) / 2 x Intel® Xeon® Platinum 8180 processors / 192GB DRAM / Intel® C620 Series Chipset 2S Software Development Platform <https://www.STACresearch.com/INTC190401>

**SUT ID: INTC190402:** STAC-A2 Pack for Intel® Parallel Studio XE (Rev M) / 2 x Intel® Xeon® Platinum 8280 processors / 768GB DRAM / Intel® C620 Series Chipset 2S Software Development Platform <https://www.STACresearch.com/INTC190402>

**SUT ID: INTC210315:** STAC-A2 Pack for Intel® oneAPI (Rev N) / 2x Intel® Xeon® Platinum 8380 processors / 512GB of RAM / Intel® Server System M50CYP Software Development Platform <https://www.STACresearch.com/INTC210315>

## Notices & Disclaimers

Performance varies by use, configuration and other factors. Learn more at [www.Intel.com/PerformanceIndex](http://www.Intel.com/PerformanceIndex).

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See backup for configuration details. No product or component can be absolutely secure.

Your costs and results may vary.

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Details related to the STAC A2 benchmark can be found at <https://www.stacresearch.com/a2>

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