

# NVIDIA Tesla GPUs Used by J.P. Morgan Run Risk Calculations in Minutes, Not Hours

# Global Leader in Financial Services Uses GPUs to Increase Speed of Risk Computations While Reducing Cost

SANTA CLARA, CA -- NVIDIA announced today that its Tesla<sup>TM</sup> GPUs are being used by the largest investment bank entity, J.P. Morgan, to deliver a 40X increase in the end-to-end speed of its risk calculations, while reducing the cost of ownership.

As part of a three-year plan to reduce the computational costs of risk calculation by 75 percent, J.P. Morgan's Equity Derivatives Group added NVIDIA® Tesla M2070 GPUs to its datacenters. More than half the equity derivative-focused risk computations run by the bank have been moved from running on just CPU-based systems, to running on hybrid GPU/CPU-based systems. Utilizing GPUs as companion processors has accelerated application performance by 40X compared to running them on CPUs alone and delivered over 80 percent savings, enabling greener data centers that deliver higher performance for the same power.

For J.P. Morgan, this is game-changing technology, enabling the bank to calculate risk across a range of products in a matter of minutes rather than overnight. Tesla GPUs give J.P. Morgan a significant market advantage. Even the longest-running exotics instruments can be calculated on an as-needed basis, faster than ever before, enabling more frequent runs and more complex scenario calculations.

NVIDIA Tesla GPUs are deployed in multiple data centers across the bank's global offices via its Compute Backbone infrastructure. With this technology, J.P. Morgan is able to seamlessly share the GPUs between tens of global applications. This integration of GPUs into the shared global computational infrastructure has resulted in GPU utilization rates approaching 70 percent, 24 hours a day.

Risk management is a huge and increasingly costly focus for the financial services industry. A cornerstone of J.P. Morgan's cost-reduction plan to cut the cost of risk calculation involves accelerating its risk library using GPUs as companion processors and the integration of NVIDIA Tesla GPUs into its global grid computing infrastructure. This change has not only reduced the total cost of ownership of J.P. Morgan's risk-management platform but it has also created a leap forward in the speed of risk calculations and the speed with which client requests can be serviced.

J.P. Morgan recently received an award for Innovation in Risk Computation for its work with GPUs -- for more information on this, please go <u>here</u>. For more information on NVIDIA Tesla GPUs for high performance computing, please go <u>here</u>.

## About NVIDIA

NVIDIA (NASDAQ: NVDA) awakened the world to the power of computer graphics when it invented the GPU in 1999. Since then, it has consistently set new standards in visual computing with breathtaking, interactive graphics available on devices ranging from tablets and mobile phones to notebooks and workstations. NVIDIA's expertise in programmable GPUs has led to breakthroughs in parallel processing which make supercomputing inexpensive and widely accessible. The Company holds more than 1,900 issued patents worldwide, including ones covering designs and insights that are essential to modern computing. For more information, see <a href="https://www.nvidia.com">www.nvidia.com</a>.

Certain statements in this press release including, but not limited to statements as to: the impact and benefits of NVIDIA Tesla GPUs; and the effects of the company's patents on modern computing are forward-looking statements that are subject to risks and uncertainties that could cause results to be materially different than expectations. Important factors that could cause actual results to differ materially include: global economic conditions; our reliance on third parties to manufacture, assemble, package and test our products; the impact of technological development and competition; development of new products and technologies or enhancements to our existing product and technologies; market acceptance of our products or our partners products; design, manufacturing or software defects; changes in consumer preferences or demands; changes in industry standards and interfaces; unexpected loss of performance of our products or technologies when integrated into systems; as well as other factors detailed from time to time in the reports NVIDIA files with the Securities and Exchange Commission, or SEC, including its Form 10-Q for the fiscal period ended May 1, 2011. Copies of reports filed with the SEC are posted on the company's website and are available from NVIDIA without charge. These forward-looking statements are not guarantees of future performance and speak only as of the date hereof, and, except as required by law, NVIDIA disclaims any obligation to update these forward-looking statements to reflect future events or circumstances.

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## **About NVIDIA**

Since 1993, NVIDIA ( NASDAQ: NVDA) has pioneered the art and science of visual computing. The company's technologies are transforming a world of displays into a world of interactive discovery — for everyone from gamers to scientists, and consumers to enterprise customers. More information at http://nvidianews.nvidia.com/ and http://blogs.nvidia.com/.

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