

NVIDIA Launches Cloud Quantum-Computer Simulation Microservices

Available Through Major Cloud Providers, NVIDIA's Quantum Simulation Platform to Help Scientists Advance Quantum Computing and Algorithm Research

GTC—NVIDIA today launched a cloud service that allows researchers and developers to push the boundaries of quantum computing exploration in key scientific domains, including chemistry, biology and materials science.

NVIDIA Quantum Cloud is based on the company's open-source [CUDA-Q™ quantum computing platform](#), which is used by three-quarters of the companies deploying quantum processing units, or QPUs. As a microservice, it lets users for the first time build and test in the cloud new quantum algorithms and applications — including powerful simulators and tools for hybrid quantum-classical programming.

"Quantum computing presents the next revolutionary frontier of computing and it's going to require the world's most brilliant minds to bring this future one step closer," said Tim Costa, director of HPC and quantum computing at NVIDIA. "NVIDIA Quantum Cloud breaks down the barriers to explore this transformative technology and lets every scientist in the world harness the power of quantum computing and bring their ideas closer to reality."

Quantum Cloud features powerful capabilities and third-party software integrations to accelerate scientific exploration, including:

- **The Generative Quantum Eigensolver**, developed in a collaboration with the University of Toronto, leverages large language models (LLMs) to enable a quantum computer to find the ground-state energy of a molecule more quickly.
- **Classiq's integration with CUDA-Q** allows quantum researchers to generate large, sophisticated quantum programs, as well as to deeply analyze and execute quantum circuits.
- **QC Ware Promethium** tackles complex quantum chemistry problems such as molecular simulation.

Adoption by Quantum Ecosystem

NVIDIA has more than 160 partners in its quantum computing ecosystem. Leading cloud service providers are integrating Quantum Cloud into their offerings, including Google Cloud, Microsoft Azure and Oracle Cloud Infrastructure, as are many leading quantum companies, such as IQM Quantum Computers, OQC, ORCA Computing, qBraid and Quantinuum.

NVIDIA Quantum Cloud Availability

Quantum computing innovators can get a head start on accelerating their quantum computing development with NVIDIA Quantum Cloud by signing up for early access.

To learn more about NVIDIA Quantum Cloud, watch the [GTC keynote](#) from Jensen Huang, and [register for GTC](#) for free to attend sessions from NVIDIA and industry leaders through March 21.

About NVIDIA

Since its founding in 1993, [NVIDIA](#) (NASDAQ: NVDA) has been a pioneer in accelerated computing. The company's invention of the GPU in 1999 sparked the growth of the PC gaming market, redefined computer graphics, ignited the era of modern AI and is fueling industrial digitalization across markets. NVIDIA is now a full-stack computing infrastructure company with data-center-scale offerings that are reshaping industry. More information at <https://nvidianews.nvidia.com/>.

Certain statements in this press release including, but not limited to, statements as to: the benefits, impact, performance, features, and availability of NVIDIA's products and technologies, including NVIDIA Quantum Cloud and CUDA-Q quantum computing platform; quantum computing presenting the next revolutionary frontier of computing and going to require the world's most brilliant minds to bring this future one step closer; NVIDIA Quantum Cloud exploring the transformative technology of quantum computing and letting every scientist in the world harness the power of quantum computing and bring their ideas closer to reality; and third parties' use and adoption of NVIDIA's products and technologies 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 most recent reports NVIDIA files with the Securities and Exchange Commission, or SEC, including, but not limited to, its annual report on Form 10-K and quarterly reports on Form 10-Q. 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

speaking 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.

© 2024 NVIDIA Corporation. All rights reserved. NVIDIA, the NVIDIA logo, and CUDA-Q are trademarks and/or registered trademarks of NVIDIA Corporation in the U.S. and other countries. Other company and product names may be trademarks of the respective companies with which they are associated. Features, pricing, availability and specifications are subject to change without notice.

Alex Shapiro
Enterprise Networking
1-415-608-5044
ashapiro@nvidia.com