Quantinuum Unveils Nexus Roadmap to Deliver the First Developer Platform Designed for the Fault-Tolerant Quantum Era

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- Roadmap connects application development and deployment with each generation of Quantinuum hardware through Apollo, its universal, fault-tolerant quantum computer planned for 2029.
- Nexus is designed to be the first developer platform that integrates automated error-correction encoding, execution on Quantinuum hardware, and hybrid workflow orchestration.
- Nexus will progressively handle the complexity of fault-tolerant application development and deploy programs that can scale and grow in capability as hardware advances.

BROOMFIELD, Colo., Nov. 5, 2026 /PRNewswire/ -- Quantinuum (NASDAQ: QNT), the leading full-stack quantum computing company, today unveiled a new roadmap to evolve Quantinuum Nexus, its platform as a service, with the aim of delivering the quantum industry's first developer platform designed for the fault-tolerant era. The roadmap introduces new capabilities with each generation of hardware through Apollo—the company's first universal, fully fault-tolerant quantum computer planned for 2029—that further simplify and automate how customers build, deploy, and operate quantum applications.

Since its launch in 2024, Nexus has expanded from managing cloud-based quantum workflows to end-to-end application development and deployment, bringing programming, validation, compilation, and execution into one environment. Nexus provides managed access to the software tools and computing resources customers need for hybrid applications and workflows. Nexus offers flexible access and integration options, both in the cloud and on-premises.

Through 2029, successive releases aim to progressively automate and simplify error correction, resource management, orchestration, and deployment, enabling developers to build and integrate increasingly capable applications at the logical level.

By developing its quantum hardware and software together, Quantinuum helps improve application performance across the entire system and turn hardware advances into capabilities customers can use. Nexus is designed to align those capabilities with each hardware generation, giving customers a simpler development path and Quantinuum a stronger platform for winning and expanding user adoption. Developers can already automatically apply supported error-correction techniques to programs and run them on Helios.

Today, Nexus already supports more than 200 organizations, up 45% in 2026, while total job submissions increased tenfold in the 12 months through August 2026 compared with the preceding 12-month period. This growing engagement establishes a customer and developer base that Quantinuum can continue to grow as its hardware matures.

"Our full-stack approach means each advance in hardware can become a capability customers can build on through Nexus," said Dr. Rajeeb Hazra, Quantinuum CEO. "Our aim is to build the first developer platform specifically for the fault-tolerant era so customers can start developing applications today and carry that investment forward. Nexus is designed to help them deploy applications and hybrid workflows and integrate the platform into their computing environments. As our systems become more capable, our aim is for the applications, workflows, and expertise customers develop in Nexus to become more valuable, giving them a compelling reason to build with Quantinuum and making Nexus an enduring part of their computing environment."

Building a Developer Platform for the Fault-Tolerant Era

The Nexus roadmap organizes its capabilities around three stages of the application lifecycle—develop, optimize, and deploy —helping customers build hybrid quantum-classical applications that can advance with successive generations of Quantinuum hardware:

- **Develop:** The roadmap includes pre-built primitives, fault-tolerant libraries, and domain-specific tools that help developers move from individual quantum circuits to complete applications. The platform will progressively automate error-correction encoding, compilation, and resource management, allowing developers to focus more on the application and less on the underlying hardware complexity.
- **Optimize:** The roadmap outlines tools to analyze runtime behavior, resource requirements, and application performance. Future releases plan to introduce more error suppression, real-time diagnostics, and increasingly automated error recovery to help customers run larger computations and make more efficient use of quantum resources.
- **Deploy:** Nexus is being designed to coordinate quantum and classical computing across Quantinuum processors, high-performance computing systems, cloud infrastructure, and third-party tools—helping customers integrate quantum workflows into their existing computing environments and deploy larger fault-tolerant applications.

"Quantum computers are on the brink of achieving fault tolerance at scale. It's exciting: we are entering terra incognita for what we can compute. The new challenge is putting our high-level quantum algorithms into the right form to successfully run on error-corrected hardware. Developer platforms like Nexus help us bridge that gap between quantum algorithm design and deployment," said José Ignacio Latorre, Director of the Centre for Quantum Technologies, Singapore's flagship national research center for quantum technology.

Optimized specifically for Quantinuum systems, these capabilities are expected to provide a continuous path from early application development on Helios to increasingly capable implementations on Sol and Apollo to help customers carry their investments forward as the hardware advances.

Building the Foundation Today

Quantinuum is already delivering key elements of this approach. Released in September 2026, Guppy FT and Guppy Algorithms expanded Nexus with supported error-correction schemes, fault-tolerant operations, and composable algorithmic building blocks.

Developers can write programs, automatically encode them for supported error-correction schemes, test them in emulation, and execute supported programs on Helios. Advanced users retain the flexibility to customize architectures for specialized applications.

These capabilities establish the foundation for future roadmap releases, including the upcoming December release which is expected to expand hybrid workflows so that applications can respond to quantum results as they become available. It is also expected to add supported error-correction codes and execution analytics to help developers optimize performance.

Connecting Quantum Applications with Enterprise Computing

Researchers and enterprises are already using Nexus to develop applications across chemistry, materials science, life sciences, and AI, while also integrating Nexus into new environments:

- Qubit Pharmaceuticals and CQT used Nexus to execute quantum Monte Carlo experiments on Quantinuum's System Model H2 and Helios systems.
- Researchers at RIKEN and the University of Tokyo simulated atomic nuclei on Reimei, using Nexus. They also used Nexus to integrate hybrid quantum-HPC workflows to calculate excited-state energies in a model biomolecular system.
- University of Cambridge researchers used Nexus compilation tools to prepare efficient quantum chemistry circuits while Maastricht University researchers used Nexus to simulate, compile, and run a quantum particle tracking algorithm exploring new approaches to reconstructing particle trajectories.
- Unitary Foundation's Metriq gym uses Nexus to access Quantinuum hardware for reproducible benchmarking across quantum computing platforms.
- Quantinuum is integrating Nexus into Oracle Cloud Infrastructure's environment to help support the on-prem deployment and integration of Quantinuum's Helios computer into OCI's cloud services offering.

Explore the full Nexus roadmap here. Click here to register for access to the Nexus cloud platform.

About Quantinuum

Quantinuum is a leading quantum computing company offering a full-stack platform designed to make quantum computing deployable in real-world environments. The company has commercially deployed multiple generations of trapped-ion based quantum systems built on the well-established QCCD architecture, which it has implemented with novel designs and capabilities to achieve the industry's highest accuracy levels based on average two-qubit gate fidelity. Quantinuum has active engagements with market leaders across pharmaceuticals, material science, financial services, and government and industrial markets, as well as academic and research institutions globally. The company has a global workforce of approximately 800 employees, including top scientists and researchers. Over 70% of its technology team holds PhDs or Master's degrees. Quantinuum's headquarters is in Broomfield, Colorado, with additional facilities across the United States, United Kingdom, Germany, Japan, Qatar, and Singapore. For more information, please visit www.quantinuum.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which are intended to be covered by the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact are forward-looking statements, including statements about the Quantinuum Nexus roadmap and the expected features, capabilities, benefits and timing of future Nexus releases, including the expected development, capabilities and timing of Quantinuum's hardware, including Sol and Apollo, and the planned availability of Apollo in 2029; the expected adoption and use of Nexus by customers and developers and Quantinuum's ability to expand that adoption into broader commercial use; the integration of Nexus with Oracle Cloud Infrastructure and other third-party computing environments; and the potential of fault-tolerant quantum computing. Words such as "aim," "anticipate," "believe," "could," "expect," "explore," "intend," "may," "plan," "potential," "seek," "will," "would" and similar expressions identify forward-looking statements, although not all forward-looking statements contain these words.

Forward-looking statements are based on Quantinuum's current expectations and assumptions and are subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied. These risks include, among others: delays or difficulties in developing, testing or releasing new Nexus capabilities or Quantinuum hardware, including Sol and Apollo, on the expected timelines or at all; the possibility that error-correction techniques do not perform as expected at scale; the pace of technical progress in quantum computing; Quantinuum's ability to maintain the availability and performance of its systems, including Helios; the level of customer and developer adoption and continued use of Nexus; Quantinuum's reliance on third parties, including cloud and high-performance computing providers; competition; the availability of funding, personnel and government support; and the other risks described under "Risk Factors" in Quantinuum's Quarterly Report on Form 10-Q for the quarter ended June 30, 2026 and its subsequent filings with the Securities and Exchange Commission. Forward-looking statements speak only as of the date of this press release. Quantinuum undertakes no obligation to update any forward-looking statement, except as required by law.

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