is building the first European Quantum Data Center in Germany

June 15, 2023

A new European-based Quantum Data Center aimed at facilitating access to cutting-edge quantum computing for businesses, research institutions and government agencies will be built by the **IBM** in a small town in Germany. The data center in question is expected to be operational in 2024, with multiple IBM quantum computing systems, each of which will have utility scale quantum processors, i.e. those with more than 100 qubits.

The Data Center will be located at IBM's facility in Ehningen, Germany, and will serve as the European region for providing advanced Cloud services leveraging IBM Quantum (IBM Quantum European Cloud Region). Users in Europe and around the world will take advantage of the available services for quantum computing research and exploratory activity via Cloud. The Data Center is being implemented to help customers manage the requirements of European data regulations, including the processing of all work data within EU borders. The facilities in question will be Quantum's second data center and second region provider of IBM Quantum Cloud services, after Poughkeepsie, New York.

"Europe has some of the most advanced quantum computing users in the world with growing interest as we move into the era of large-scale quantum processors," said Jay Gambetta, IBM Fellow and vice president of IBM Quantum. "The planned quantum data center and associated cloud geo-region will give European users a new option as they seek to harness the power of quantum computing in an effort to solve some of the world's most challenging problems."

"The quantum data center in Europe is an integral part of our international ventures," said Ana Paula Assis, IBM General Manager EMEA. "It will provide new opportunities for our customers to work together with our scientists in Europe, and with their own customers, as they explore how best to apply quantum technology in their industry."

IBM Quantum in Europe

The IBM Quantum Network currently offers access to quantum hardware and software via the Cloud to more than 60 organizations across Europe, such as Bosch, the Bundeswehr University, Crédit Mutuel Alliance Fédérale, including its technology subsidiary Euro-Information, and Targobank, Deutsches Elektronen-Synchrotron (DESY), European

Organization for Nuclear Research (CERN), Fraunhofer-Gesellschaft, Poznan Supercomputing and Networking Center (PSNC) and T-Systems.

These customers across Europe are exploring potential uses of quantum computing, including materials science, high-energy physics, energy transition, sustainability and financial applications.

"We are pleased and proud to support the IBM Quantum team's decision to establish its European quantum data center in Ehningen, Germany," said Dr. Raoul Klingner, research director of the Fraunhofer-Gesellschaft. "The choice of location in the state of Baden-Württemberg will further strengthen the ecosystem that Fraunhofer has built with customers and partners from industry and research. We are pleased to further pursue our strategic partnership with IBM."

"At T-Systems, we are working with IBM to bring together quantum and classical computing in a seamless and scalable experience for our customers to explore the applications of quantum computing," said Adel Al-Saleh, member of the management board of Deutsche Telekom and CEO of T-Systems. "Access to a quantum data center in Europe will help lower the barrier to entry for our customers as they take their first, defining steps in exploring and using quantum technology."

The European Cloud Region is a key component of IBM's efforts to work with leading European industry, academia and government to advance quantum technology and build a quantum workforce in Europe. IBM Quantum and Qiskit® open source software are used in more than 100 university courses in Europe. One million learners in Europe have developed their quantum skills through hackathons, workshops and digital learning funded by IBM.

Source: Digital Life! **by** www.digitallife.gr.

*The article has been translated based on the content of Digital Life! by www.digitallife.gr. If there is any problem regarding the content, copyright, please leave a report below the article. We will try to process as quickly as possible to protect the rights of the author. Thank you very much!