



## India's Ministry of Electronics and Information Technology To Establish a Quantum Computing Applications Lab, Powered by AWS

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*Pioneering initiative to apply quantum computing to advance India's science and technology development initiatives and bolster economy*

*World's first quantum computing applications lab on AWS to support a national government's mission to drive innovation*

**NEW DELHI, INDIA – JANUARY 19, 2021** – The Ministry of Electronics and Information Technology (MeitY) in India will establish a Quantum Computing Applications Lab in the country, in collaboration with AWS, to accelerate quantum computing-led research and development and enable new scientific discoveries. The MeitY Quantum Computing Applications Lab will provide quantum computing as a service to government ministries and departments, researchers, scientists, academia, and developers, to enable advances in areas such as manufacturing, healthcare, agriculture, and aerospace engineering. In addition to providing the managed quantum computing service, AWS will provide technical and programmatic support to the Lab. This MeitY initiative will provide scientific, academic, and developer communities access to a quantum computing development environment aligned with the government's science and technology priorities.

Quantum computing is an emerging field that harnesses the laws of quantum mechanics to build powerful tools to process information. It has the potential to solve computational problems that are beyond the reach of classical computers, and lead to new breakthroughs that can transform chemical engineering, material science, drug discovery, financial portfolio optimization, machine learning, and much more.

"India has a rich legacy in science, technology, and innovation. We believe that India's path forward will be driven by achieving world-class scientific solutions. Enabling our scientific community with advanced technologies plays a key role towards scientific advancements and learning," said **Ajay Sawhney, Secretary, MeitY**. Today, we are delighted to take another significant step in India's science and technology journey with the establishment of the MeitY Quantum Computing Applications Lab with the support of AWS."

"An early and successful foundation in quantum computing is important to achieve leadership in this emerging field. The MeitY Quantum Computing Applications Lab, established with the support of AWS, is the first of its kind initiative in the world, and aims to enable India's talented researchers to explore the uncharted applications of quantum computing, and pave the way for new discoveries and disruptions," said **Dr. Rajendra Kumar, Additional Secretary, MeitY**.

"A core mission of MeitY is to identify and deploy technologies to promote innovation and discovery to help India advance, and achieve a more sustainable future. Quantum computing has the extraordinary potential to help countries leapfrog technology generations, achieve scientific leadership, and deliver answers to complex economic and social challenges. This initiative will augment India's ongoing efforts in developing Quantum Computing Applications," said **Abhishek Singh, President & CEO, National e-Governance Division (NeGD), MeitY**.

"We congratulate MeitY for its visionary leadership as it empowers the scientific community in India," said **Max Peterson, Vice President, International Sales, Worldwide Public Sector, Amazon Web Services, Inc.** "By supporting the MeitY Quantum Computing Applications Lab, we aim to make quantum computing available to more scientists, researchers, developers and organisations, enabling them to access and experiment with the technology, and explore the practical applications of quantum algorithms."

The MeitY Quantum Computing Applications Lab will identify quantum computing problem statements for experimentation from among Central and State Governments, Research Institutions, and Academia. It will work with subject matter experts from the government sector to define the problem statements, and make them public, inviting applications from researchers, academia, and organizations to address them. The Lab will then provide select applicants with access to quantum computing hardware, simulators, and programming tools, on-demand and at no cost, via [Amazon Braket](#), that enables scientists and developers to build algorithms, conduct advanced simulations, and run experiments. Amazon Braket provides a development environment to enable users to explore and design quantum algorithms, test and troubleshoot them on simulated quantum computers, and run them on different quantum hardware technologies.

"Limited access to quantum computing hardware and expertise, and complex infrastructure setup and management, are challenges that scientists and researchers face today, in their quest for scientific discovery," said **Rahul Sharma, President, Public Sector – AISPL, AWS India and South Asia**. "Our collaboration with MeitY to establish the Quantum Computing Applications Lab will provide the breadth and depth of AWS services to the research, academic, and scientific community to overcome these challenges and focus on innovation."

The MeitY Quantum Computing Applications Lab will help government bodies and the scientific community to identify problems and opportunities rapidly, and test real-world challenges through experiments and prototypes in a low risk environment. Outcomes from these experiments will help researchers evolve the problem statements, proof-of-concepts, and prototypes that will lead to the development of new applications, models, and frameworks in quantum computing.

### About Amazon Web Services

For 14 years, Amazon Web Services has been the world's most comprehensive and broadly adopted cloud platform. AWS offers over 175 fully featured services for compute, storage, databases, networking, analytics, robotics, machine learning and artificial intelligence (AI), Internet of Things (IoT), mobile, security, hybrid, virtual and augmented reality (VR and AR), media, and application development, deployment, and management from 77 Availability Zones (AZs) within 24 geographic regions, with announced plans for 18 more Availability Zones and six more AWS Regions in Australia, India, Indonesia, Japan, Spain, and Switzerland. Millions of customers—including the fastest-growing startups, largest enterprises, and leading government agencies—trust AWS to power their infrastructure, become more agile, and lower costs. To learn more about AWS, visit [aws.amazon.com](https://aws.amazon.com).

### About Amazon Internet Services Private Limited

Amazon Internet Services Private Limited ("AISPL") undertakes the resale and marketing of AWS Cloud services in India.

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