IBM Newsroom

IBM and Indian Institute of Science Launch Innovation Lab to Advance Hybrid Cloud Research in India

Research work will be made accessible to the open-source community for wider adoption and acceleration of innovation in AI for Hybrid Cloud

BANGALORE, India, June 23, 2021 /PRNewswire/ -- IBM (NYSE: IBM) and Indian Institute of Science (IISc), one of the premier academic research institutions in India, today announced the launch of the IBM-IISc Hybrid Cloud lab to advance research in hybrid cloud technologies and drive breakthrough innovations in this area. Located at the IISc campus in Bengaluru, students and faculty across departments of the institute will work alongside IBM Research scientists to conduct cutting-edge research that can help organizations leverage the true power of hybrid cloud by enabling faster, seamless, and more secure adoption of hybrid cloud & Artificial Intelligence (AI).

An IBM Institute for Business Value (IBV) study on hybrid cloud reveals that the value derived from a hybrid, multi-cloud platform technology and operating model at scale is 2.5 times the value derived from a single platform, single cloud. Hence, businesses are increasingly investing in hybrid multi-cloud platform capabilities to unlock value and drive business transformation.

The IBM-IISc Hybrid Cloud lab will bring together a talented community of scientists, faculty and students, who are passionate about solving some of the toughest research challenges that enterprises face today, in scaling the adoption of cloud computing across industries. The lab will engage not just with academia, but also the broader open-source community for wider adoption and acceleration of innovation. The lab will start with an initial set of projects, involving faculty and students from the IISc Departments of Computational and Data Sciences, Computer Science and Automation, and Supercomputing Education and Research Center, alongside scientists from IBM Research's India lab, on several areas including:

- **Building autonomous, self-healing computing systems** that use AI to predict emerging issues, diagnose and heal faults while maximizing availability and minimizing the cost of operations.
- Adopting microservices and optimization of cloud-native applications that leverage and advance cloud-native technologies such as Kubernetes and serverless. This will enable enterprises to bring substantial agility into their IT services and drive new cloud-enabled business models.
- **Creating Al-based Information Management** that enables enterprises to govern, consume, draw insights and create value from data across a hybrid footprint of edge, cloud, and diverse data sources.
- Developing AI systems that can analyze human and machine languages, with advances in AI for Code, to model and optimize computing systems. This will be fundamental to enabling innovations and automation in the above-mentioned areas.

In addition to IBM's commitment to foster innovations that enable faster adoption of Hybrid Cloud technology, the lab will take an open access approach by jointly presenting the research findings in premier conferences, hosting workshops, and releasing open-source material to the community. It will also give IISc students exposure to industry-driven problem statements and mentorship from IBM researchers on research and open source. The lab will serve as a hub for fostering the exchange of ideas, not just for the members of the two institutions, but for the research and industry community in the region. **Gargi Dasgupta, Director, IBM Research India said,** "*The IBM - IISc lab will bring together two leading research organizations in industry and academia to create an ecosystem for Hybrid Cloud research, in India, for India and the world. IISc has a strong record in research areas like Hybrid Cloud, AI, Security, which compliments the expertise of IBM Research, and we are excited to collaborate with IISc to create innovative, industry relevant solutions. Our Hybrid Cloud platform is Open, and we will jointly develop open-source software that provides interoperability, portability, and security that can be easily accessible to the vast community of developers to accelerate innovation."*

Navakanta Bhat, Dean, Division of Interdisciplinary Sciences, IISc Bengaluru said,

"IISc is very grateful to IBM for partnering with us on this ambitious initiative to establish this state-of-the-art lab on campus. We are particularly excited about making the joint research findings open source and accessible to a wide community which will significantly accelerate innovation in the emerging areas of AI and Hybrid Cloud. Such industry-academia partnerships are key to boosting the impact of research, and we are proud to work together with a technology leader like IBM."

The lab will be co-chaired by Prof. Yogesh Simmhan, Associate Professor, Department of Computational and Data Sciences at the Indian Institute of Science (IISc), Bengaluru and Dr. Amith Singhee, Senior Manager and Senior Technical Staff Member at IBM Research, India. The new lab builds on a strong 15 year relationship between IBM Research and IISc on knowledge exchange through guest lectures, collaboration in the form of the open science program, internship opportunities, and more. In 2020, IISc and IBM Research conducted the ACM Winter School on Hybrid Cloud that offered students (at the postgraduate level and above) a deep understanding of the foundations of cloud computing. IBM Research also sponsors a STEM education program at IISc for secondary school students.

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