Amazon Braket: an integrated software development environment for quantum computing in the cloud

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Amazon Braket is a fully managed quantum computing service that helps you get started with quantum computing and accelerate your research using cloud resources on Amazon Web Services (AWS). Amazon Braket integrates in a single development environment everything you need to build, test and run quantum algorithms. It has been designed to be technology agnostic, removing the need to code against quantum programming environments, which commonly exist for different quantum computers. It includes a unified development platform, a choice of classical circuit simulators, and access to different types of quantum processing units (QPU) from our hardware providers (D-Wave, IonQ and Rigetti). A single source code can be run on the high-performance simulator and at the same time test it against the quantum hardware available in the environment.

In this presentation we will introduce Amazon Braket and how this is integrated with other AWS cloud services. We will demonstrate how to develop and test your algorithms against the high-performance simulators and access the QPU for running your first cloud quantum computing program.