

CloudBank for Europe

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Abstract. The vast amounts of data generated by scientific research pose enormous challenges for capturing, managing and processing this data. Many trials have been made in different projects (such as HNSciCloud and OCRE), but today, commercial cloud services do not yet play a major role in the production computing environments of the publicly funded research sector in Europe. Funded by the Next Generation Internet programme (NGI-Atlantic) from the EC, in partnership with the University California San Diego (UCSD), CERN is piloting the use of CloudBank in Europe. CloudBank has been developed by the UCSD, University of Washington and University of California, Berkeley with NSF grant support, to provide a set of managed services simplifying access to public cloud for research and education, via a cloud procurement partnership with Strategic Blue, a financial broker SME, specialised in cost management and optimisation. The European NGI experiment is provisioning cloud services from multiple vendors and deploying a series of use-cases in the domain of Machine Learning and HPCaaS, contributing to the scientific programme of the Large Hadron Collider. The main objective is to address technical, financial and legal challenges to determine whether CloudBank can be successfully used by Europe's research community as part of its global research activity.

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