

INFN Cloud: an open, extensible, federated Cloud infrastructure and service portfolio targeted to scientific communities

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Starting at the end of 2019, INFN has been restructuring its internal organization and solutions for what regards support to computing and storage resources and services. One of the first tangible results of this effort has been the creation of INFN Cloud, a data lake-centric, heterogeneous federated Cloud infrastructure. Building on the INFN experience gained in the past 20 years with the development and operation of Grid and Cloud computing solutions for scientific communities, associated with a state-of-the-art country-wide infrastructure spanning multiple sites across Italy, INFN Cloud provides an extensible portfolio tailored to multi-disciplinary scientific communities. Based on community requirements, the INFN Cloud portfolio spans from traditional IaaS offerings to more elaborate PaaS and SaaS solutions. This contribution will discuss the INFN Cloud architecture, its governance, the security policies, the operational implementation, the main elements of the INFN Cloud portfolio, and will describe how private or public Cloud infrastructures can be federated with it.

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