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Hosting an HTCondor workload on INFN Milano bare metal Kubernetes cluster

INFN with its DATAcloud infrastructure provides a scalable network of federated cloud sites. The ICSC project (National Research Center in High-Performance Computing, Big Data, and Quantum Computing), funded by the PNRR (National Recovery and Resilience Plan), was established to drive R&D efforts focused on advancing high-performance computing, simulations, and big data analytics innovation.

As part of the ICSC initiative, the INFN Milano computing center has expanded its capacity by deploying a bare metal Kubernetes cluster to limit the number of virtualization layers.

This contribution describes how to deploy an HTCondor cluster on Kubernetes via Docker containers. Resource segregation between multiple users has been achieved by mapping users to Kubernetes namespaces. As a representative use case, a workload generating production events for the LHC ATLAS experiment has been tested.

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