

An IaC approach to service deployments for supporting the INFN scientific communities

In this contribution, we describe how the CNAF user support group utilizes a comprehensive Infrastructure as Code (IaC) process to effectively support user service provision and customize the scientific computing platform.

Our project leverages the IaC paradigm to provide scientific resources and services to research communities. We integrate IaC into the INFN Tier-1 data center, using preexisting, reusable elements such as Ansible and Terraform scripts. The CNAF Tier-1 is part of the Italian supercomputing distributed infrastructure, serving more than 80 international scientific collaborations. Our contribution lies in integrating various phases of the scientific deployment procedure into a single approach. Although primarily designed for the INFN distributed infrastructure, we believe our project is easily applicable to any Cloud-based infrastructure, as its principles are universal.

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