

## Enhancing Cloud Security with Integrated Information Management

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One of the key strengths of cloud e-Infrastructures is their ability to ensure the security of stored information. Preserving data integrity and non-repudiation is a fundamental requirement for any virtual environment especially in contexts where confidentiality and regulatory compliance are critical aspects, such as in the healthcare, financial, and scientific research sectors.

In IT security, the techniques and procedures that regulate access to private resources are known as Identity and Access Management (IAM).

In this work, we demonstrate how to integrate FreeIPA, an open-source IAM solution, selected from several available options, in a cloud environment using Kubernetes, a container orchestrator, for a future integration among INFN Cloud Services.

This work extends upon previous efforts in developing a use case within the scope of ICSC Spoke 8 and Spoke 0, where we established a secure infrastructure for the processing and management of clinical data to support advanced healthcare research and decision-making through secure, data-driven simulations.

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