

Setting up a new FedCloud site in collaboration with the industry

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Doñana National Park is a natural reserve in the south of Spain, which biodiversity is unique in Europe and is tagged as an UNESCO World Heritage Site. The importance of this place requires an infrastructure capable to provide environmental data at different scales and on-line available that support monitoring of environmental changes in short, mid and long term. Supported by European FEDER funds and Spanish Ministry, Doñana Biological Station, institute that manage the research in Doñana, is developing different actions to improve and adapt the internationalization of the e-infrastructure for Lifewatch ESFRI. Within these actions, different companies are working to deploy a computing based on cloud site and integrated with EGI FedCloud. The deployment of this site is distributed in four different tasks focused in different features that give the site an added value to become a reference for Lifewatch ICT:

- Set up of the infrastructure needed: installation of servers and packages needed to support a cloud system based on OpenStack and compatible with EGI FedCloud.
- Distributed Control: this task adds new features for Lifewatch managers and makes all the resources easily available and manageable: monitoring, accounting, deployment of new services, SLA management...
- Collaborative environments: user-oriented task to make the resources available for the final user through higher abstraction layers: PaaS, SaaS, WaaS (Workflow as a Service), etc.
- Data preservation: This set of features makes the resources very data-oriented and allows users to manage the whole data lifecycle.

This presentation will show the collaboration between with the industry in the deployment of the new EGI FedCloud site as well as all the features added and cloud-based tools used (or tested) for that like OpenShift, Cloudify, Mesos, Kubernetes, as well as which solution has been adopted and why.

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