

Supporting Open Science with the EGI Federated Cloud - Experiences, success stories, lessons learnt

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The use of cloud computing for scientific research is on the rise: majority of scientific projects and communities are either already using clouds to store, share and process research data, or considering/implementing the transition to clouds. The EGI Federated Cloud offers a scalable, flexible and highly customisable platform to cater for researchers' needs. The EGI Federated Cloud is a multi-national cloud system that integrates institutional Infrastructure as a Service (IaaS) clouds into a unified computing platform which can power data and/or compute intensive applications and services. Since its start in 2014, the EGI Federated Cloud has evolved into a hybrid system composed of public, community and private clouds. The participating clouds offer OpenStack-specific and Open Standard Interfaces to research users - depending on local capabilities and on the users' preferences. The federation is enabled by the EGI operational backbone, based on capabilities such as usage accounting, service registry, service availability monitor, Virtual Machine Image marketplace. This talk will present the current status of the EGI Federated Cloud, will demonstrate examples of scientific communities and use cases that already benefit from the system, will display some of the lessons learnt while we were serving research needs, and will provide an outlook into the future of the infrastructure services. The talk will highlight opportunities for cloud providers and for research communities of the Asia-Pacific region to participate or use the EGI Federated Cloud.

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