

Inici > European Grid Infrastructure launches an academic cloud for the European Research Area

# European Grid Infrastructure launches an academic cloud for the European Research Area

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The European Grid Infrastructure (EGI) today launched the Federated Cloud - a cloud service tailored for European researchers. The announcement was made at the annual EGI Community Forum, in Helsinki and the Barcelona Supercomputing Center is one of the technology providers supporting the work.

Built on the experience of supporting scientists' IT needs for over ten years, EGI's Federated Cloud provides researchers with a flexible, scalable, standards-based cloud infrastructure. The service includes support and expertise provided by EGI and its partners to ensure researchers benefit fully from the infrastructure.

The Federated Cloud pools resources and services provided by various partners, both public and private, and offers them through a single point of contact. This unique set up has allowed EGI to create a cloud that offers researchers:

- Access to advanced compute capabilities for their research
- Virtualised resources to run any environment they choose
- Support services to ensure applications run as efficiently as possible

The Federated Cloud has been built to support development and innovation within the European Research Area. The infrastructure has been designed in collaboration with communities across Europe and supports all fields of research. All researchers working within the EU may use the Federated Cloud to manage, disseminate and process their data flexibly, quickly and efficiently.

Work on the Federated Cloud started back in 2011 to address the need to provide community-specific cloud services through open standards. This quickly grew into creating a federation of resource providers/cloud services that would provide the scalability and flexibility that modern research needs.

This interpretation of the cloud paradigm and its application to the European academic sector introduces unprecedented versatility in delivering an e-Infrastructure tailored to the European Research Area.

Over the last three years EGI has worked with many research communities to provide requirements for, advise on and test many aspects of the infrastructure. The communities involved are the WeNMR project (structural biology), the European Space Agency (satellite image processing), Peachnote (musicology), EUBrazil OpenBio/BioVeL (biodiversity), CHAIN-REDS (promoting international collaborations) and EISCAT-3D (geospace).

At its launch, the Federated Cloud pools resources and the expertise of 19 countries around Europe: Bulgaria, Croatia, Czech Republic, France, Germany, Greece, Hungary, Israel, Italy, Latvia, the Republic of Macedonia, the Netherlands, Poland, Portugal, Slovakia, Spain, Sweden, Turkey, United Kingdom. There are many countries outside Europe also involved helping make this a truly global activity.

Any European researcher can start using the Federated Cloud today by contacting EGI (<a href="mailto:support@egi.eu">support@egi.eu</a>), or consulting the instructions at <a href="http://www.egi.eu/how-to/use\_the\_federated\_Cloud.html">http://www.egi.eu/how-to/use\_the\_federated\_Cloud.html</a>.

# Quotes

David Wallom, Chair of the Federated Clouds Task Force – I am delighted to be able to announce that after so much hard work from everyone involved we now have a research orientated cloud platform based on open standards that is ready to support every researcher in Europe. This is an important milestone for all areas of research in Europe.

Yannick Legré, EGI.eu Managing Director – The Federated Cloud is the next step in evolution for EGI. We have to support the researchers and understand their needs so we can engage, grow and innovate together.

Michel Drescher, EGI.eu's Technical Manager – It has been amazing watching the Federated Cloud grow from a simple idea just a few short years ago to a fully-fledged service. I am proud to have been involved and look forward to where our users take us in the future.

Alexandre Bonvin, WeNMR project coordinator – It has been great to be involved from the start, we have helped shape the Federated Cloud and hope to make good use of it in the future to better serve our users.

Federico Ruggieri, Project Director for CHAIN-REDS – Our collaboration with EGI has been very successful. Their use of open standards is key and the interoperability between the Federated Cloud and our cloud testbed has opened up many new possibilities for collaborations between researchers from all over the world.

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### **Notes to Editor:**

### About EGI

The European Grid Infrastructure (EGI) is a pan-European federation of publicly funded computing, storage and data resources to support excellent science, research and innovation in Europe. Building on over a decade of investment by national governments and the European Commission, EGI pools together resources from more than 40 countries and supports more than 22,000 researchers across many scientific fields with solutions such as high-throughput data analysis, federated cloud, federated operations and community-driven innovation and support. EGI is coordinated by EGI.eu, a not-for-profit foundation, supported by the EGI-InSPIRE project and governed by the National Grid Initiatives (NGIs) and international research communities.

For further information, please contact press@egi.eu or visit www.egi.eu

# **About BSC**

Barcelona Supercomputing Center (BSC) is the national supercomputing centre in Spain. BSC specialises in high performance computing (HPC) and its mission is two-fold: to provide infrastructure and supercomputing services to European scientists, and to generate knowledge and technology to transfer to business and society.

BSC participates in the EGI Federated Cloud as technology provider contributing the COMPSs programming framework to support the execution of the applications across multiple resource providers. In the EGI Federated Cloud COMPSs helps users to abstract the actual computational technology and provides scaling and elasticity features allowing to adapt the number of available resources to the actual need of the execution. COMPSs is one of the core technologies of the implementation of the Ecological Niche Modelling Service developed by the EUBrazil OpenBio project and offered to the BioVeL community to allow the execution of ENM workflows in cloud infrastructures.

# List of resource providers

The EGI Federated Cloud pools resources from a many providers both public and private. The current providers are:

- 100 Percent IT Ltd in the UK http://www.100percentit.com/
- The University of Zaragoza's Institute for Biocomputation and Physics of Complex Systems (BIFI) in Spain http://bifi.es/

- Academic Computer Centre CYFRONET AGH (Cyfronet) in Poland http://www.cyfronet.pl/en
- The Supercomputing Centre of Galicia (CESGA) in Spain http://www.cesga.es/
- The Czech Education and Scientific NETwork (CESNET) in the Czech Republic http://www.cesnet.cz
- Gesellschaft für wissenschaftliche Datenverarbeitung mbH Göttingen (GWDG) in Germany http://www.gwdg.de
- Consejo Superior de Investigaciones Científicas (CSIC) / Instituto de Física de Cantabria (IFCA) in Spain -?http://www.ifca.unican.es/
- ~Okeanos by the Greek Research and Technology Network (GRNET) in Greece http://okeanos.grnet.gr
- Institute of Informatics, Slovak Academy of Sciences (II SAS) in Slovakia http://ui.sav.sk
- Italian National Institute of Nuclear Physics, Division of Catania in Italy http://www.ct.infn.it/
- The Royal Institute of Technology, Sweden (KTH) in Sweden www.kth.se/
- Italian National Institute of Nuclear Physics, Division of Bari in Italy http://www.ba.infn.it/
- The Hungarian Academy of Sciences Institute for Computer Science and Control (MTA SZTAKI) in Hungary http://www.sztaki.hu/
- Turkish Academic Network and Information Centre (*ULAKBIM*) in Turkey http://www.ulakbim.gov.tr
- The European Information & Innovation Centre (UKIM) in the Republic of Macedonia www.ukim.edu.mk/

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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