



Big science teams up with big business to kick-start European cloud computing

(1st-March-2012) Geneva, Switzerland – Today a consortium of leading IT providers and three of Europe’s biggest research centres (CERN, EMBL and ESA) announced a partnership to launch a European cloud computing platform. ‘Helix Nebula - the Science Cloud’, will support the massive IT requirements of European scientists, and become available to governmental organisations and industry after an initial pilot phase.

The partnership is working to establish a sustainable European cloud computing infrastructure, supported by industrial partners, which will provide stable computing capacities and services that elastically meet demand.

This pan-European partnership across academia and industry is in line with the Digital Agenda of the European Commission and will foster innovation for science and create new commercial markets.

During a two-year pilot phase, Helix Nebula will be deployed and tested based on three flagship projects proposed by CERN, EMBL and ESA: to accelerate the search for the elusive Higgs particle, to boost large-scale genomic analyses in biomedical research, and support research into natural disasters.

First, CERN, the European laboratory for particle physics, will have access to more computing power to process data from the [ATLAS experiment](#) at its [Large Hadron Collider](#) accelerator.

“CERN’s computing capacity needs to keep-up with the enormous amount of data coming from the Large Hadron Collider and we see Helix Nebula- the Science Cloud as a great way of working with industry to meet this challenge,” said Frédéric Hemmer, head of CERN’s IT department.

Second, the [European Molecular Biology Laboratory](#) (EMBL) is setting up a new service to simplify the analysis of large genomes, such as those from mammals, allowing a deeper insight into evolution and biodiversity across a range of organisms.

“The quantities of genomic sequence data are vast and the needs for high performance computing infrastructures and bioinformatics expertise to analyse these data pose a challenge for many laboratories. EMBL’s novel cloud-based whole-genome-assembly and annotation pipeline involves expertise from the Genomics Core facility in Germany, EMBL’s European Bioinformatics Institute, and EMBL Heidelberg’s IT Services. It will allow scientists, at EMBL and around the world, to overcome these hurdles and provide the right infrastructure on demand,” said Rupert Lueck, head of IT services at EMBL.

Third, the [European Space Agency](#) (ESA), in partnership with the [Centre National d'Etudes Spatiales](#) (CNES) in France, and the [German Aerospace Center](#) (DLR) is collaborating with the [National Research Council](#) (CNR) in Italy, to create an Earth observation platform focusing on earthquake and volcano research.

This undertaking is done in the framework of the [Group on Earth Observations](#) (GEO), a voluntary partnership of governments and international organisations. Volker Liebig, ESA Director for Earth observation programmes, said, "Helix Nebula- the Science Cloud is a partnership with the potential to support an utmost exploitation of ESA satellite data, as well as to bring other communities on board to better understand the geophysical phenomena of our planet."

The commercial partners are [Atos](#), [Capgemini](#), [CloudSigma](#), [Interoute](#), [Logica](#), [Orange Business Services](#), [SAP](#), [SixSq](#), [Telefonica](#), [Terradue](#), [Thales](#), [The Server Labs](#) and [T-Systems](#), along with the [Cloud Security Alliance](#), the [OpenNebula Project](#) and the European Grid Infrastructure ([EGI.eu](#)). They are working together to establish a federated and secure high-performance computing cloud platform.

More scientific organisations and service providers are welcome to join Helix Nebula- the Science Cloud. For more details and updates about Helix Nebula - the Science Cloud, please visit us [on Facebook](#) (<https://www.facebook.com/HelixNebula.TheScienceCloud>), follow-us on Twitter (<https://twitter.com/#!/HelixNebulaSC>) or send an email to contact@helix-nebula.eu.

About CERN

CERN, the European laboratory for particle physics, is the world's leading laboratory for particle physics. Its headquarters are in Geneva. At present, its Member States are Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, the Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom. Romania is a candidate for accession. Israel is an Associate Member in the pre-stage to membership. The European Commission, India, Japan, the Russian Federation, Turkey, UNESCO and the United States of America, all have Observer status.

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About EMBL

The European Molecular Biology Laboratory (EMBL) is a basic research institute sponsored by public research funding from 20 member states (Austria, Belgium, Croatia, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom) and associate member state Australia. Research at EMBL is conducted by approximately 85 independent groups covering molecular biology. The laboratory has five units: the main laboratory in Heidelberg, outstations in Hinxton (the European Bioinformatics Institute), Grenoble, Hamburg, and Monterotondo near Rome. The cornerstones of EMBL's mission are: to perform basic research in molecular biology; to train scientists, students and visitors at all levels; to offer vital services to scientists in Member States; to develop new instruments and methods in the life sciences, and to actively engage in technology transfer activities. Around 190 students are enrolled in EMBL's International PhD programme. Additionally, the laboratory offers a platform for dialogue with the general public through various science communication activities such as lecture series, visitor programmes and the dissemination of scientific achievements.

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About ESA

The European Space Agency (ESA) is Europe's gateway to space. Its mission is to shape the development of Europe's space capability and ensure that investment in space continues to deliver benefits to the citizens of Europe and the world. ESA is an international organisation with 19 Member States. By coordinating the financial and intellectual resources of its members, it can undertake programmes and activities far beyond the scope of any single European country. ESA's job is to draw up the European space programme and carry it through. ESA's programmes are designed to find out more about Earth, its immediate space environment, our Solar System and the Universe, as well as to develop satellite-based technologies and services, and to promote European industries. ESA also works closely with space organisations outside Europe.

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