22 Nov 2005 -10:05

Belgian research grid connects to world-wide grid

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BEgridBEgrid, the Belgian research grid infrastructure which resulted from a BELNET initiative in 2003, has grown, in two years, into an environment featuring about 300 CPUs and 4 Terabytes of storage capacity. A Terabyte is a thousand billion bytes. One byte corresponds with one letter of text. Four Terabytes, typed on paper and bound in books, would fill about a hundred kilometres of book shelf.Eight institutes contribute today to BEgrid with their computers: the Centre d'Excellence en Technologies de l'Information et de la Communication, the Facultés Polytechniques de Mons, the Katholieke Universiteit Leuven, the Universiteit Antwerpen, the Universiteit Gent, the Université Libre de Bruxelles, the Vlaams Instituut voor de Zee and the Vrije Universiteit Brussel.BELNET has made its high-speed multi-gigabit-network available to connect the computers of these institutes; it is the Certification Authority that gives users access to BEgrid, it provides a grid-co-ordinator to develop BEgrid, assists new BEgrid partners and is responsible for the central grid services.In 2004, spread over four years, the Flemish government has earmarked an equipment budget of 700,000 euro for BEgrid. It is divided among the Flemish institutes that contribute to the grid. The partners can use the money to buy equipment and connect it to the grid.A whole range of applications already uses BEgrid's combined computing power and storage capacity. They concern

research projects in physics, astrophysics, hydrology, medical imaging, fluid dynamics and mathematical calculations.EGEEThe EGEE project (Enabling Grids for E-sciencE), funded by the European Commission, is deploying a world-wide infrastructure with the help of about 90 partners. EGEE is already operational in 27 countries and has links to grid initiatives in the US, Japan, China and Korea. EGEE's aim is to give researchers, irrespective of their geographical location, both in the academic and industrial worlds, permanent access to immense computing power and storage capacity.Belgium is an EGEE partner. As from the launch of BEgrid the idea has always been to connect to other national and international grid infrastructures. EGEE was the most obvious choice to put BEgrid on the international grid map.Each infrastructure that wants to connect to EGEE has to go through a series of tests conducted by EGEE's Regional Operation Centre (ROC). The Dutch ROC conducted these tests for BEgrid.The EGEE BEgrid certification procedure consists in running the tests consecutively on each of the BEgrid clusters. BEgrid's EGEE certification was successful. The BEgrid clusters in EGEE are visible on http://gridice2.cnaf.infn.it:50080/gridice/site/site.php.Particle acceleratorThe BEgrid-EGEE integration has already proven its worth for researchers working on the 'Compact Muon Solenoid' (CMS). This is a detector that will produce a large amount of data from the gigantic accelerator (the 'Large Hadron Collider' or LHC) in Geneva. As from 2007 the European laboratory for particle physics or CERN wants to use this huge accelerator to investigate which particles matter is made of. The project may close a chapter in the history of physics and open a whole new one.When the LHC and its detectors -- including the CMS -- are switched on, the data production in the world will at least double. The CMS alone will produce more digital data than all computers, DVD players, televisions, telephones and cameras of the planet put together.This measurement data needs to be stored, processed, analysed and distilled to a format that will make further breakthroughs possible. Non-Belgian CMS physicists connected to EGEE are able to use BEgrid as part of their virtual computer environment. Physicists at Belgian universities working on CMS will, on their part, use EGEE.Some people believe that CERN's use of the grid may result in grid computing's final breakthrough. It would not be the first time that CERN researchers' need for data processing were to result in something that has turned out to be useful to the entire world: CERN also invented the World Wide Web.For more information about BEgrid please go to http://www.begrid.be.For more information about EGEE please go to http://public.eu-egee.org.About BELNET - "The knowledge network"The government agency BELNET provides Internet access with a very high bandwidth to Belgian educational institutes, research centres and government services. More than 550,000 end-users use bandwidths of up to 2.5 gigabits per second; this is about a thousand times faster than the Internet access for consumers. References include all Belgian universities and most non-university higher education institutions, the computer network of the Federal Government services (FedMAN), all federal scientific institutes, the largest public research centres and various government administrations. BELNET provides high-quality Internet access with access control via the CERT (Computer Emergency Response Team) and a direct connection with world-wide research networks, including the American Internet2 and the European Géant. Internet pioneer BELNET was founded in 1993 at the Federal Research Policy's initiative. The network encourages research, training and scientific co-operation.For more information, please go to http://www.belnet.be and http://cert.belnet.beBELNETVeerle Custers, external communication managerWetenschapsstraat 4, B-1000 BrusselT: +32 (0)2 790 33 33E: veerle.custers@belnet.beContact for journalists:Quadrant CommunicationsBart InslegersFranklin Rooseveltlaan 348, B-9000 GentT: +32 (0)9 265 0258M: +32 (0)472 480 186E: bart@quadrantcommunications.be