



# HPC Cloud day, 4 October 2011

Jaap van den Herik, chairman BiG Grid directorate; chairman of the day



**BiG Grid**

the dutch e-science grid

# BiG Grid - project

Start: 2007. End: 2012. Budget: 28,8 M€.

NCF: National computing facilities

Nikhef: CERN-experiments

NBIC: life sciences

Aim: building a grid based e-Science infrastructure in The Netherlands

SARA: partner from the start

The logo for NCF (National Computing Facilities) features the letters 'NCF' in a blue, sans-serif font. A blue curved line arches over the 'C'.The logo for Nikhef consists of the word 'NIKHEF' in a bold, black, sans-serif font. The letters 'K' and 'H' are highlighted in red. The text is contained within a black rectangular frame with a white border.The logo for NBIC (Netherlands Bioinformatics Centre) features the lowercase letters 'nbic' in a bold, black, sans-serif font. The letters 'b', 'i', and 'c' have vertical bars of blue, yellow, and red respectively. To the right, the full name 'netherlands bioinformatics centre' is written in a smaller, black, sans-serif font.The logo for SARA features the lowercase letters 'sara' in a blue, italicized, sans-serif font. The text is set against a background of two overlapping orange rectangular shapes.

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# BiG Grid – high lights

Central facilities at SARA, Nikhef, RUG-CIT and Philips Research (High Tech Campus). Local life science clusters at NBIC selected sites.

Serving many different research communities, such as the CERN-experiments (Netherlands Tier-1), astronomy (Lofar), life sciences, social sciences and humanities.

Experienced support and development team to help implementing applications on the infrastructure.

Diversifying infrastructure to address the varying needs of the research communities ... **hence HPC Cloud!!**



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# Future – excellent prospects

Bringing all national e-Infrastructure elements (network, (super)computing and data facilities under the roof of SURF: SURFnet and SURF-SARA



e-Science Center: joining factor between scientific demand and e-infrastructure supply



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# Agenda

## **10h00 - 10h30**

*Opening and welcome* by Jaap van den Herik, chairman BiG Grid

*'HPC Cloud: Focus on your research'* by Floris Sluiter, project leader HPC Cloud SARA

## **10h30 - 11h45** Theme: **Bioinformatics**

*'eBioGrid: Dealing with the sins of bioinformaticians'*  
by Machiel Jansen, SARA

*'Customized Pipelines for the Processing of Medical Images in Large Population Studies'*  
by Henri Vrooman, Erasmus MC Rotterdam

*'Validating biomolecular NMR structures using Cloud computing'*  
by Jurgen Doreleijers, CMBI & [wenmr.eu](http://wenmr.eu)

*'Using the BiG Grid HPC Cloud Infrastructure in Transcriptomics'*  
by Han Rauwerda, Microarray Department/Integrative Bioinformatics Unit,  
Swammerdam Institute for Life Sciences, University of Amsterdam

*'The Cloud for Biologists'*  
by Mattias de Hollander, Netherlands Institute of Ecology (NIOO-KNAW)



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# Agenda (continued)

## **11h45 Keynote**

*'HPC Cloud Computing with OpenNebula'*

by Ignacio Llorente, OpenNebula Project Director, Complutense University of Madrid,  
and Chief Executive Advisor at C12G Labs

## **12h30 - 14h00** Lunch: demo & poster market

(Live) demonstrations by researchers on the Cloud: Hadoop, Cinegrid, Multitouch table,  
Webdav, Scilens, NMR structures, Historical maps, e-BioGrid, bioinformatics, NBIC,  
EGI, eScience Center, e.a.

## **14h00 - 15h00** Theme: **Finance & linguistics & earth science**

*'Scalable and sustainable - OCR & document image analysis in the cloud'*

by Lotte Wilms, IMPACT Koninklijke Bibliotheek

*'Finance in the 21st Century'*

by Dominik Roesch, Rotterdam School of Management, Erasmus University

*'HPC clouds for flood early warning systems: Modeling dike stability and inundation  
dynamics with real-time sensor input and remote invocation from UrbanFlood  
decision support system'*

by Valeria Krzhizhanovskaya, University of Amsterdam

Presentation by Marc Kemps-Snijders, Meertens Instituut



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# Agenda (continued)

15h00- 15h45 Tea break: demo & poster market

15h45 **Keynote**

*'Exacycle: 1 Billion CPU Hours of Computational Capacity for Researchers'*

by David Konerding, Software Engineer at Google

16h30

*'Cloud Computing: a gift from the skies:*

*How Cloud Computing can help recovering from the recession'*

by Anwar Osseyran, director SARA

Festive launch of the new HPC Cloud infrastructure

17h00 Reception



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