



EGI 2004 – 2014

11 years of support to the European Research Area

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.... a short journey from the
conception to deployment
of an e-Infrastructures

The EGI Collaboration



Deployment Status

eGEE
Enabling Grids for
E-science in Europe

Core Sites already integrated



With the other sites (currently running LCG-1), the expected capacity will exceed the previsions foreseen for 2004:

around 4000 CPUs at about 30 sites

Site	CPU	
CERN (CH)	324	
FZK (D)	144	
PIC (E)	160	
FNAL (US)	4	
CNAF(I)	715	
Nikhef (NL)	250	
Taipei (AP)	98	
RAL (UK)	146	
Total	1841	



Excellence > 1200 publications (2010-2014)
> 100 research collaborations

Transnational access 1/3 of the compute capacity offered by foreign countries

Maximization of investment 5.42 M years CPU time
> 0.5 billion jobs/year

Integrated VRC > 490 integrated applications

Astro-particle project to measure ultra–high energy cosmic rays

500 scientists
111 institutes
18 countries



EGI added value according to AUGER

- Coordinated access to resources distributed over 3 continents
- Usage of opportunistic resources

Addressing the challenges of

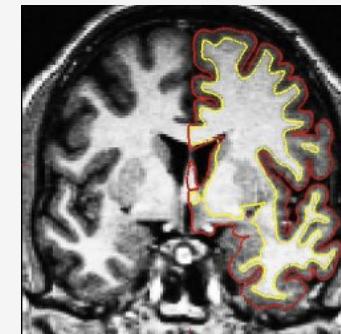
- Data management and efficient processing
- new resources and service provisioning paradigms (HPC, cloud)

Academic Medical Centre (Amsterdam)

The challenge

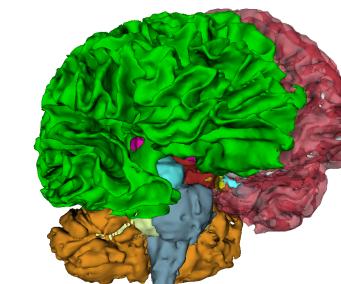
- Data analysis in **biomedical research** is complex and compute-intensive
- EGI through science gateways

Example:



 FreeSurfer

24-40h



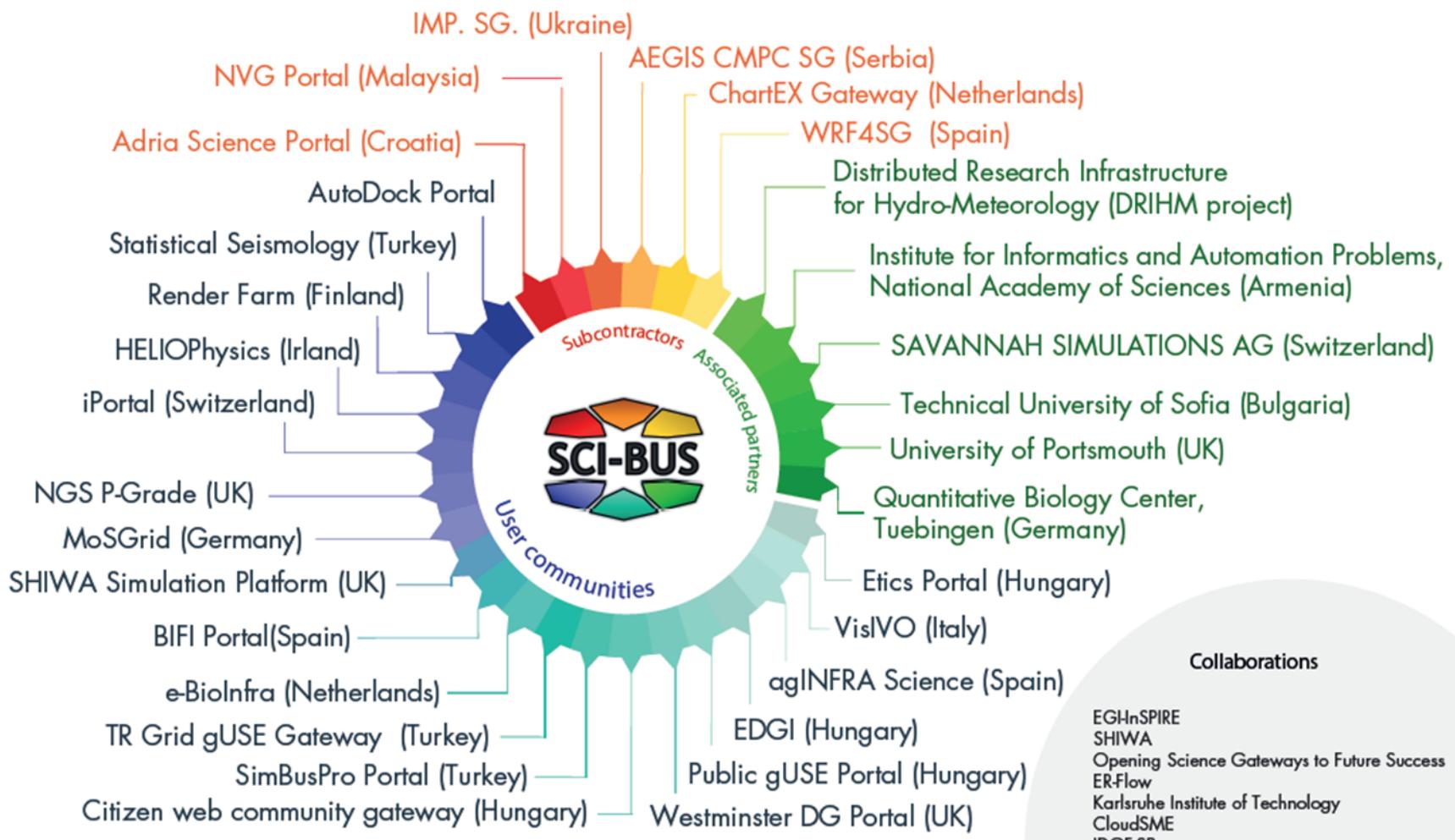
Since 2011 the AMC science gateways have processed...

- 123,000 CPU hours

The AMC neuroscientists have published on:

- Predictors of **psychosis**
- Persistent and reversible effects of **combat stress**
- Diagnosis of **mild cognitive impairment**
- **Depressive disorders**

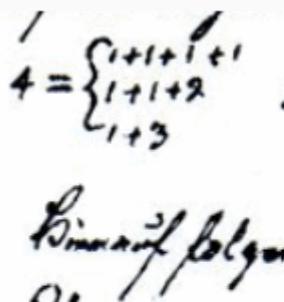
Gateway solutions



<http://www.sci-bus.eu/science-gateways>

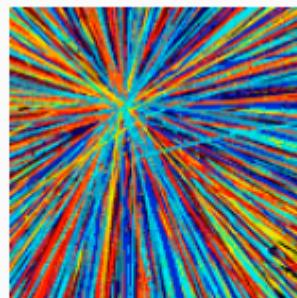
EGI Case Studies

- <http://www.egi.eu/case-studies>



Natural Sciences

Life Sciences, Earth Sciences, Mathematics, etc



Physical Sciences

Physics, Astronomy, Chemistry etc



Medical and Health Sciences

Medicine, Clinical sciences, etc



Engineering & technology

Material science, civil and mechanical engineering, etc



Agricultural sciences

Veterinary sciences, food technology, etc

Europe 5.42 million (CPU) years ago



- User-driven innovation
- Custom services for multidisciplinary science and big data
 - EGI federated hybrid cloud platform
- Integrated support actions for RIs
 - Knowledge marketplace through a network of competence centres
 - e-Infrastructure integration in Europe and worldwide
- Coordinated service provisioning
 - Commercial publicly funded providers

Network:

- Eduroam
- Univ Helsinki HUPnet
 - Hupnet16743 / pass: anna45pumaska

Programme

- Indico: <http://go.egi.eu/cf2014>
- Conference4Me App
 - Android / iOS



Social Media

- Hashtag on Twitter, Facebook and Google+ is #EGICF14
- Upload photos to Flickr with the tag EGICF14
- Blogs from the meeting at www.egi.eu/blog





MONDAY 19 MAY

11:30-13:00	<i>Lunch break</i>	
13:00-14:30	<ul style="list-style-type: none"> • Plenary session • Lehikoinen, Anita, Permanent Secretary, Ministry of Education and Culture of Finland • Van der Pyl, Thierry, Director "Excellence in Science", DG CONNECT, European Commission • Lightning Talks 	GFH
14:30-15:00	<i>Coffee break</i>	
15:00-18:00	<ul style="list-style-type: none"> • Helix Nebula Workshop • e-Infrastructure Services for Earth Science • Advancing security in federated clouds • EGI User Engagement Strategy and the NGI Int. Liaisons 	ROOM 8
15:00-16:30	<ul style="list-style-type: none"> • Tools for operating Research Infrastructures • Tutorial: Getting started with the European Grid Infrastructure 	ROOM 12
16:30-18:00	<ul style="list-style-type: none"> • Supporting users and crowd computing with Desktop Grids • Advancing accounting services for users 	ROOM 5
18:00-20:00	<i>Welcome reception</i>	ROOM 12

The full program is available online at:
<http://go.egi.eu/CF2014>

GFH - Great Festive Hall
SFH - Small Festive Hall

TUESDAY 20 MAY

09:00-10:30	<ul style="list-style-type: none"> • Plenary session • Ditter, Martin, European Space Agency • Wallom, Davis, Oxford e-Science Centre • Lightning Talks 	GFH
10:30-11:00	<i>Coffee break</i>	
11:00-12:30	<ul style="list-style-type: none"> • Going beyond grid to enable life science data analysis • RDA EUDAT OpenA TTA • Nordugrid • Environmental science on grids and clouds • Software Vulnerability Handling • Infrastructures for data preservation 	ROOM 6
12:30-14:00	<i>Lunch break</i>	SFH
14:00-17:30	<ul style="list-style-type: none"> • EGI and XSEDE: CompChem and Material Science 	ROOM 5
15:30-16:00	<i>Coffee break</i>	ROOM 13
		ROOM 8

Life Sciences

Computational Chemistry

WEDNESDAY 21 MAY

07:00-8:00 EGI run

09:00-10:30

NETWORKING SESSION Networking, demos & posters

10:30-11:00 Coffee break

11:00-12:30 • Posters, demonstrations and networking session

3RD FL.

• EGI-InSPIRE PAC meeting (closed)

ROOM 21

• Nordic e-Infrastructure Collaboration

GFH

12:30-14:00 Lunch break

14:00-15:30 • Astronomy and Astrophysics

ROOM 13

Astronomy & Astrophysics

- Open access to EGI research outputs
- GPGPU Integration and User Support
- Nordic e-Infrastructure Collaboration
- EGI-InSPIRE PMB meeting (closed)
- DIRAC hackathon

ROOM 6

ROOM 5

GFH

ROOM 21

ROOM 7

15:30-16:00 Coffee break

16:00-17:30 • Business development and pay per use

ROOM 6

• New data management solutions for EGI

ROOM 10

• Authentication & Authorisation

ROOM 8

• Science gateway frameworks

ROOM 13

• GPGPU Integration and User Support

ROOM 5

• Nordic e-Infrastructure Collaboration

ROOM 21

• EGI-InSPIRE PMB meeting (closed)

ROOM 7

• Galaxy hackathon

ROOM 7

• SHIWA hackathon

ROOM 4

18:30-00:30 Conference Dinner

THURSDAY 22 MAY

09:00-10:30 • Plenary session

• **Forsström, Pirjo-Leena**, Director, Information Infrastructure Services at CSC

• **Fisk, Ian**, Evolution of the LHC Computing Models

Coffee break

• FitSM Training

• European Globus Community Forum

• DIRAC VRE pilot for EGI

• EGI Council Workshop (open)

• Monitoring Availability & Reliability

• Web-processing services for climate data

• Managing virtual servers

• EGI-XSEDE Collaboration

Lunch break

• OpenStack hands-on

• Web-processing services for climate

data

• Training on Data Preservation

• Community building and engagement

Coffee break

• OpenNebula workshop

• Community building and engagement

• Training on Data Preservation

SFH

ROOM 8

SFH

ROOM 6

ROOM 12

ROOM 3

ROOM 7

ROOM 10

ROOM 5

ROOM 10

ROOM 7

ROOM 3

ROOM 5

ROOM 7

ROOM 10

ROOM 5

ROOM 3

Community-building and engagement

Excellent Science

Milovan Suvakov, Ass. Research Professor
Institute of Physics Belgrade, Serbia

*Large-scale search for periodic solutions to the
Newtonian three-body problem*

Societal challenges – climate

Anastasia Poupkou, Research Associate
Lab. of Atmospheric Physics,
Aristotle Uni. of Thessaloniki, Greece

*Implementing an air quality forecasting system
on the grid*

Supporting Research Infrastructures

Ingemar Häggström

Senior Scientist , EISCAT Research Infrastructure

Towards the big data strategies for EISCAT-3D