WLCG Tier2 in Asia - EU-IndiaGrid HEP Applications Workshop
1-4 December 2006
Tata Institute for Fundamental Research
Mumbai

The EU-IndiaGrid Project Joining European and Indian grids for e-science

Alberto Masoni
EU-IndiaGrid Project Manager

INFN Sezione di Cagliari

The EU-IndiaGrid project, RI-031834, is funded by the European Commission, DG INFSO under the Research Infrastructures Programme

European Commission
Information Society and Media

PARTICIPANTS

EUROPE

- INFN (project coordinator),
- Metaware SpA,
- Italian Academic and Research Network (GARR)
- Cambridge University

INTERNATIONAL

- Abdu Salam International Centre for Theoretical Physics

INDIA

- Indian Education and Research Network (ERNET),
- University of Pune,
- SAHA Institute of Nuclear Physics, Kolkata,
- Centre for Development of Advanced Computing (C-DAC),
- Bhabha Atomic Research Centre, Mumbay
- TATA Institute for Fundamental Research (Mumbay)
  National Centre for Biological Sciences(Bangalore)

www.euindiagrid.eu

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Eu-Indiagrid Project Goals

- To support the interconnection and interoperability of the prominent European Grid infrastructure (EGEE) with the Indian Grid infrastructure for the benefit of eScience applications;
- To identify and aggregate research, scientific and industrial communities which may benefit from the use of Grid technology resulting in an eScience Network Community
- To promote the use of advanced Grid technologies within the created Network Community relying on pilot applications in Biology and High Energy Physics Material Science, Earth and Atmospheric Sciences and specific outreach and dissemination activities

- To disseminate European EGEE Grid technology achievements in India and leverage on Indian Grid experiences and skills.

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APPLICATIONS

- Pilot applications in Biology, High Energy Physics, Material Science, Earth and Atmospheric Sciences will be deployed
- These applications will help to validate the newly implemented infrastructure and will furthermore be a first set of case-stories which will be used in the dissemination of the Project.
- By this way it will be possible:
  - to provide support to several already existing EU-India collaborative projects;
  - to contribute to increased awareness of Grid developments among new research and industrial communities;
  - to improve the effectiveness of the Grid infrastructure for new applications and to promote scientific and industrial developments;
  - to foster the creation of new Euro-Indian collaborations in e-Science and Industry.

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HEP APPLICATIONS

- ALICE
  - Saha Institute for Nuclear Physics Kolkata
  - Involvement of VECC Kolkata
- CMS
  - Bhabha Atomic Research Centre
  - Tata Institute for Fundamental Reasearch
- Direct benefits
  - Support to ALICE & CMS applications:
    - Person Months funded by EC: 38 (2 staff level for the duration of the project)
  - Support at improving the EU-India link
  - Support at creating an Internationally recognized Indian CA

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Project Effort

- BUDGET:
  - 1208 k-EUR total fund
  - 1015.9 k-EUR from European Commission
- Person months
  - 353.3 PM total
  - 226.4 PM funded from European Commission

- Project start: October 2006
- Duration: 24 months

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WORKPACKAGES

Work-package	Work-package title	Leading contractor	Person-months[1]
WP1	Project administrative and technical management	INFN	26.2 (9.1)
WP2	Building an eScience Network Community	MTW	23.4 (15.9)
WP3	Network Planning & Support	GARR	28.0 (19.0)
WP4	Pilot grid infrastructure operational support	INFN	84.9 (55.5)
WP5	Applications	INFN	155.9 (95.5)
WP6	Dissemination & Networking Events	MTW	34.9 (31.4)

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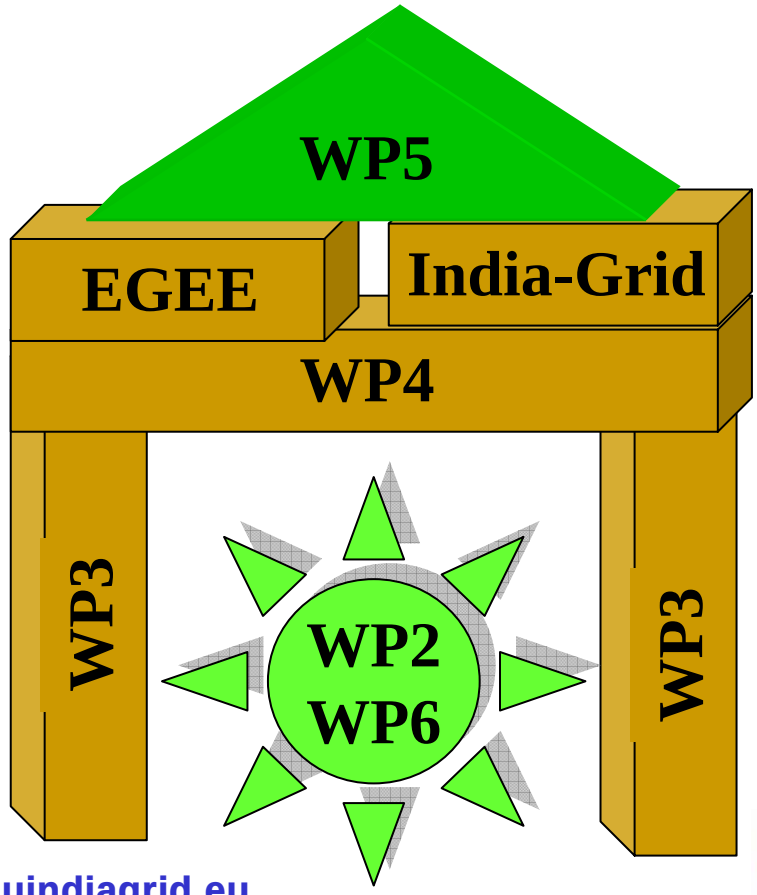
WORKPACKAGES

WP2	Building an eScience Network Community
WP3	Network Planning & Support
WP4	Pilot grid infrastructure operational support
WP5	Applications
WP6	Dissemination & Networking Events



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Participants involvement

WP1	**Project administrative and technical management**	**INFN +all**
WP2	**Building an eScience Network Community**	**MTW +GARR,ICTP,NCBS,ERNET, PUNE, CDAC, BARC, TIFR**
WP3	**Network Planning & Support**	**GARR, ERNET**
WP4	**Pilot grid infrastructure operational support**	**INFN +CAMBRIDGE, ERNET CDAC, BARC, TIFR**
WP5	**Applications**	**INFN +ICTP,CAMBRIDGE, NCBS, PUNE,SAHA, CDAC, TIFR**
WP6	**Dissemination & Networking Events**	**MTW +all**

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MILESTONES

Milestone No[1]	Work-package No[2]	Milestone description	Date[3]
M1.1	WP1	Kick-off meeting & nomination of Project Board Members	M1
M6.1	WP6	EU-IndiaGrid portal fully operational	M2
M3.1	WP3	Initial study of the network connectivity between Europe and India	M3
M2.1	WP2	Database populated	M4
M4.1	WP4	Policies and Certification Authority check	M6
M4.2	WP4	First studies of Pilot Grid services interoperability	M8
M2.2	WP2	Review of database population	M11
M4.3	WP4	Operational support of advanced services achieved	M12
M6.2	WP6	General EU-IndiaGrid Conference (India)	M16
M5.1	WP5	Demonstration of Applications running on the intercontinental infrastructure	M18
M2.3	WP2	Sustainable action definition	M23
M1.2	WP1	Final Report	M24

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NEWS

INDIA MARKS LATEST POST ON GLOBAL GÉANT2 MAP

DANTE announces the first ever research and education link to India with the ERNET network

Cambridge, UK and New Delhi, India: 2nd October 2006 – Research networking organisation, DANTE, has announced that high-speed communication links for students and researchers between India and Europe are now live. Co-funded by the European Commission and Government of India, the new link delivers first time connectivity at speeds of 45 Mbps from Milan to Mumbai. Whilst welcoming India into the global research arena, the link also supports Indian academics in collaborative research with organisations including CERN, Geneva, in the field of high-energy physics

Co-ordinated by DANTE in Europe and India's National Education and Research Network, ERNET, the link enables universities and academic and research institutes in India to collaborate on a global level via the world's most advanced international research and education network, GÉANT2. The connection is facilitated by Telecom Italia from Europe in Milan and VSNL from India in Mumbai and augments the global GÉANT2 map, which now links all the major continents.

ERNET's partnership with GÉANT2 is supported by the EUIndiaGrid initiative, a project that aims to interconnect European Grid infrastructures with related projects in India. The link will also be utilised for collaborative research with CERN (European Organisation for Nuclear Research) connecting European researchers to colleagues at the Tata Institute of Fundamental Research (TIFR), Mumbai. These experiments will generate huge amounts of data which will be quickly transferred between the two continents

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Conclusions

- Project just started
- Work is progressing
  - Towards supporting the EU-India link upgrade at 622 Mb/s
  - Towards supporting the creation of an National Indian CA recognised internationally
  - First Workshop and training event NOW
  - Next Workshop and training event Spring 2007
  - Project Conference Fall 2007
  - EU-IndiaGrid Session and presence at the Conference of the Belief project (Bringing Europe's eLectronic Infrastructures to Expanding frontiers) Delhi 15-16 December 2006

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