

SUMMARY

The principal goal of EU-IndiaGrid is to support interconnection between the most relevant European Grid infrastructure (EGEE) and the Indian Grids to build a common infrastructure available to support data processing for e-Science application areas where strong collaborations already exist between Europe and India.

Such common Grid infrastructure is intended to provide a concrete answer to specific requirements of several existing EU-India collaborative projects, characterized by very demanding computing needs. Coupled with this, the project is expected to trigger the use and development of Grids in India across a number of application areas and foster the creation of new Euro-Indian collaborations for the development of e-Science.

The project started on the 1st October 2006.

OBJECTIVES

The principal objectives of EU-IndiaGrid are:

- § To support the interconnection and interoperability of the prominent European Grid infrastructure (EGEE) with the Indian Grid infrastructure for the benefit of e-Science applications;
- § To identify and aggregate research, academic and industrial communities which may benefit from the use of Grid technology resulting in an e-Science Network Community published on the EU-IndiaGrid portal;
- § To promote the use of advanced Grid technologies within the created Network Community relying on pilot applications in Biology, High Energy and Condensed Matter Physics, and 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.

EXPECTED RESULTS

The projects aims at obtaining the following results:

- § To develop synergies between scientific research and industrial communities with ongoing Grid technology developments with the creation of an e-Science Network Community;
- § To increase international co-operation through the validation of the pilot intercontinental infrastructure which will act as a driving force at disseminating the results of the successful EGEE grid infrastructure in India endorsing the introduction of new user communities;
- § To offer an effective answer to the demanding computing needs of several common EU-India research projects and, at the same time, foster the deployment of grid techniques in research and industrial applications within the Indian subcontinent;
- § To bring together over 500 organisations from research, industry, and science communities to exchange experiences during the workshop and training events for an appropriate dissemination and outreach activity,
- § To deliver three workshops, a project conference and four training¹ events in strategic areas in India and Europe with major potential user communities, attracting European and Indian industrial communities too(each workshop will have 100-150 participants).

¹Training and education are meant as actions for the dissemination of knowledge.

COLLABORATION

The partners of this project are prominent actors on the European and Indian e-Infrastructures scene:

- Italian National Institute for Nuclear Physics (INFN, project coordinator),
- Metaware SpA,
- Consortium GARR - the Italian Academic and Research Network (GARR),
- Abdus Salam International Centre for Theoretical Physics (ICTP),
- Cambridge University,
- Indian Tata Institute for Fundamental Research ("TIFR", with an Institute in Mumbai and the National Centre for Biological Sciences, "NCBS", in Bangalore),
- Indian Education and Research Network (ERNET),
- University of Pune,
- SAHA Institute Calcutta, the Centre for Development of Advanced Computing (C-DAC)
- Bhabha Atomic Research Centre.

Deployment plan for EU-IndiaGrid

The project plans to support the interconnection between EGEE (and its thematic and regional extensions) with the Indian Grids (GARUDA and DAE grids) to achieve the goal of a common infrastructure capable of fulfilling the computing requirements of several e-Science application domains where well established collaborations already exist between Europe and India. The project will represent also an instrument to form new collaborations aggregating scientific as well as engaging industrial communities which may benefit from the possibilities offered by grid technologies.

The partners will capitalize the achieved experience within EGEE and the cooperation with the main Indian grid infrastructures: the GARUDA grid National Project and the Department of Energy (DAE) grid projects.

Pilot applications in Biology, High Energy and Condensed Matter Physics, and Earth and Atmospheric Sciences will be deployed on the newly implemented infrastructure in order to validate it and will furthermore be a first set of case-stories which can 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.

Existing and potential user communities in e-Science and Industry will be identified, contacted, and involved in the project, through a specific outreach and dissemination programme, ultimately aiming to create an EU-IndiaGrid community bringing together over 300 organisations from Research, Industry, and Academia.

Project acronym:
EU-IndiaGrid

Contract no.:
RI-2006-031834

Project type:
Specific Support Action

Start date:
01/10/2006

Duration:
24 months

Total budget:
1,280,821 €
EC Funding:
1,015,910 €

Total effort in person-month:
353

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Project participants:

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GARR	IT
ICTP	IT
Cambridge	UK
TIFR	IN
ERNET	IN
Pune	IN
Saha	IN
C-DAC	IN
BARC	IN

Key words:
Grid, e-Science

Collaboration with other
EC-funded projects: :
EGEE-II, BELIEF