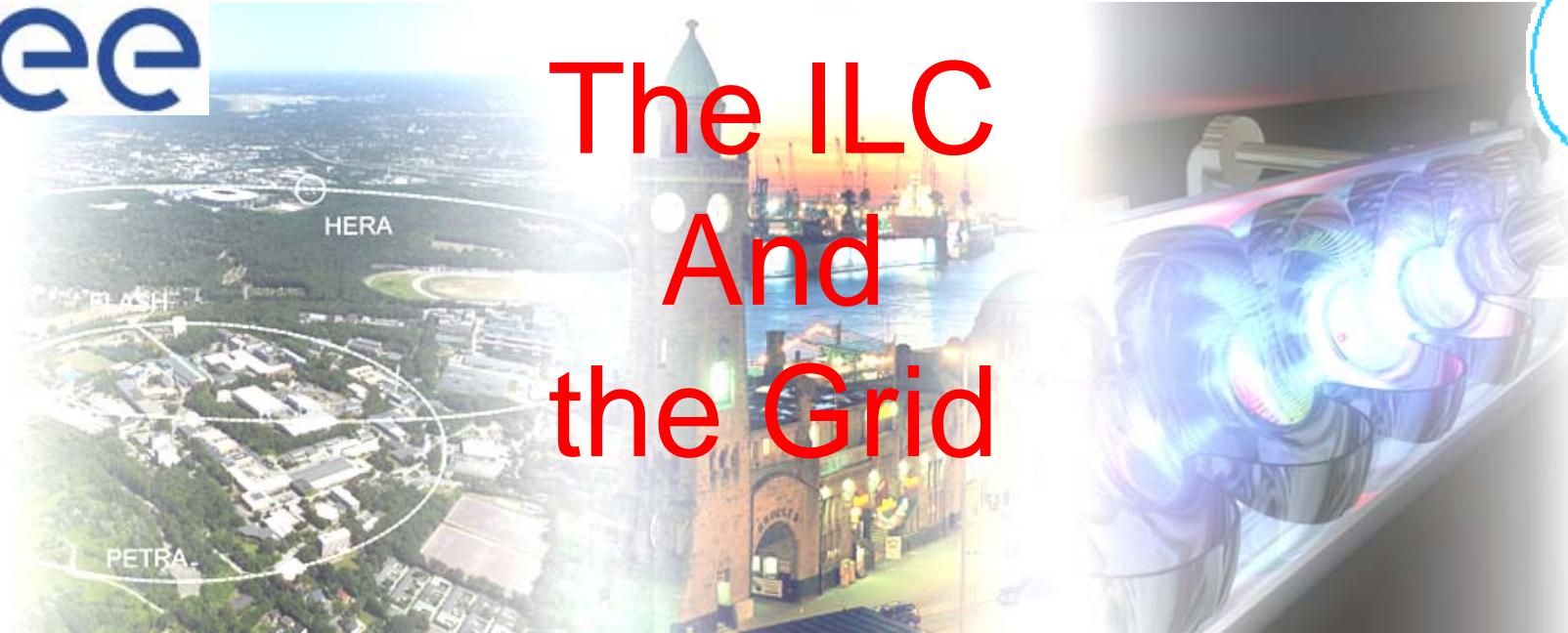


eGEE



# The ILC And the Grid



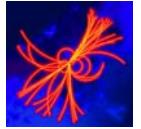
Andreas Gellrich  
DESY

LCWS2007  
*DESY, Hamburg, Germany*  
31.05.2007



eGEE

<http://grid.desy.de/lhc>



# Introduction

---

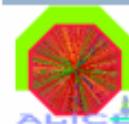
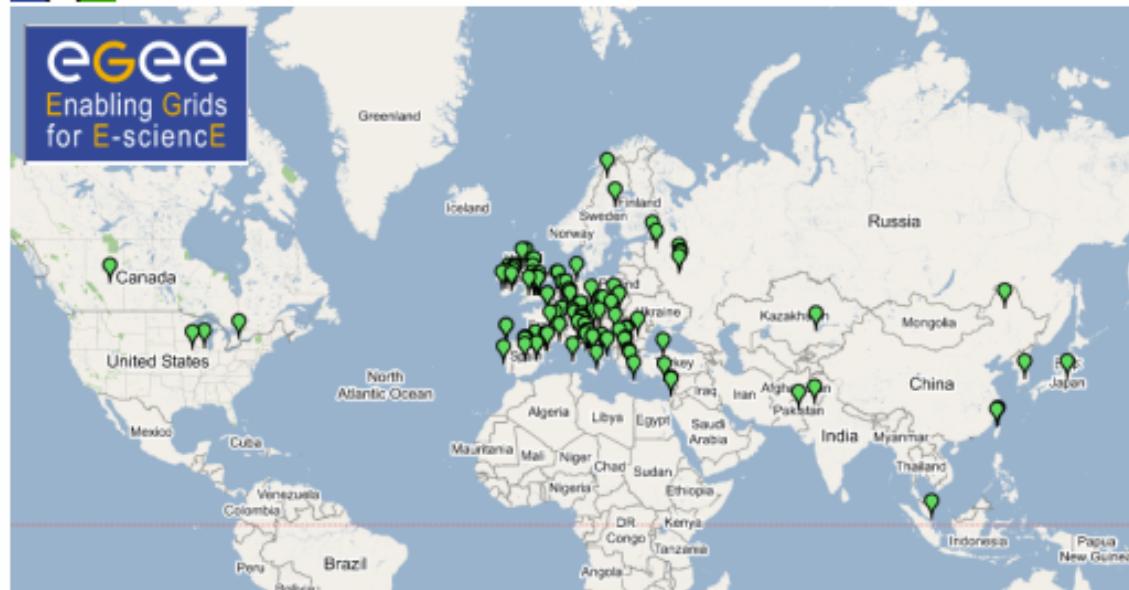
- Grid Computing is a *strategic* technology future computing in e-science (not only HEP!)
- Significant *resources* will be available in the Grid only
- User access is gained within the context of *Virtual Organizations* (VO) by way of *certificates*
- Grid is NOT distributed computing, but is a service infrastructure with *open standards*, *protocols* and well-defined *interfaces*
- The Grid is a *global* approach and requires global thinking!
- The computing is the easier part since *jobs* are *volatile*
- *Data* are *persistent* and require integrity



<http://grid.desy.de/ilc>

The LCG logo consists of four colored squares (yellow, red, blue, green) arranged in a 2x2 grid, with the letters "LCG" in white in the center.

Grid Projects Collaborating in LHC Computing Grid



EGEE Operations Information

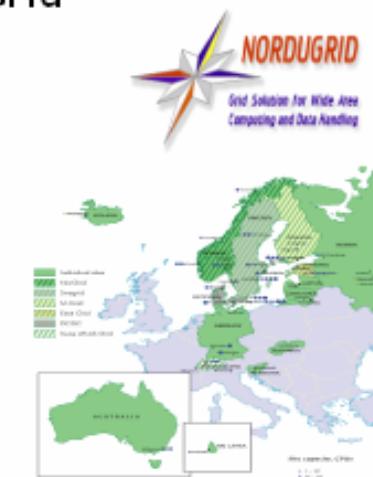
Active Sites 177

Available CPU 31092

Available Storage (TB) 2953727

---

LastBuild:Wed May 30 13:16:01 BST 2007 GstatQuery:2007-05-30



Open Science Grid





eGee

<http://grid.desy.de/ilc>

# Status



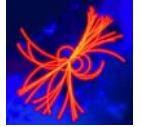
- Two Virtual Organizations (VO) are in place for ILC ('calice', 'ilc')
- 'ilc' is a *global VO* of the EU's *Enabling Grid for E-sciencE* (EGEE)
- The ILC VOs are hosted on DESY's Grid infrastructure, also hosting HERA VOs and is a Tier-2 for ATLAS and CMS
- A number of Grid sites world-wide support ILC
- DESY supports a repository for ILC data files incl. tape back-end
- The CALICE test beam data (14 TB) reside at DESY and are currently being replicated to IN2P3 Lyon
- Thousands of jobs were run all around Europe on the Grid



eGee

<http://grid.desy.de/ilc>

# The Home of the ILC VOs





eGEE

<http://grid.desy.de/ilc>

# Open Issues (to be attacked)



- Stability and Performance of the middleware is a concern
- The Grid is about to move to Scientific Linux 4
- The *Open Science Grid* (OSG) must be interfaced
- There is (almost) no common ILC software to utilize the Grid yet
- Has anybody looked into the framework GANGA?
- VO and user support ...



eGee



# VO Support

http://grid.desy.de/ilc

- EGEE provides the *Global Grid User Support* (GGUS) portal for all global EGEE VOs, e.g. 'ilc':
  - <http://gus.fzk.de/>
- In addition, mailing lists (ML) are hosted by DESY:
  - calice-vo-support@desy.de
  - calice-vo-users@desy.de
  - ilc-vo-support@desy.de
  - ilc-vo-users@desy.de
- So far we have NO user and VO support concept for ILC
- There is also NO coordinated efforts to develop Grid tools for ILC



eGEE



# Conclusions

---

<http://grid.desy.de/ilc>

- Grid Computing is a **strategic** technology for the future; its infrastructure is developing as a core component of LHC in EGEE
- Significant **resources** will be available in the Grid only
- The Grid requires **global** thinking!
- The ILC VOs '**ilc**' and '**calice**' are in place and filled with members
- A repository for the CALICE test beam data is maintained at DESY and heavily used
- Let's go the next step and supporting the **ILC Grid user**



eGee



# Perspective

<http://grid.desy.de/ilc>

A GUI to copy files by LFNs

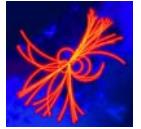
The screenshot shows the Perspective application interface. The main window, titled 'Main', has a menu bar with Datei, Bearbeiten, Optionen, and Hilfe. It contains two tables: 'Local Files' (under /tmp/test/) and 'Files on LFC' (under /grid/calice/tb-cern/native/dat). The 'Local Files' table shows three entries: a file named '4096' with size 194830336 and date May 29 16:21, and two other unnamed files with size 4096 and date May 29 16:21. The 'Files on LFC' table lists numerous files starting with Run300882.003.bin through Run300885.001.bin, all dated Oct 29 2006. Between the two tables are two buttons: a right-pointing arrow labeled '-->' and a left-pointing arrow labeled '<--'. Below the tables are four buttons: Info, Delete, Create Dir, and Replika. A 'Messages' box at the bottom displays a welcome message: 'Welcome! try to download /grid/calice/tb-cern/native/dat/Run300884.004.bin to /tmp/test/ Filesize: 817557420 Bytes'. The second window, titled 'Main <2>', shows a table with one row: Name (Run300884.004.bin), Source Dir (/grid/calice/tb-cern/native/dat), Ziel Dir (/tmp/test/), Size (817557420), and Percent (23.8307831638296). The bottom of the screen shows a toolbar with various icons and a status bar indicating the time as 16:30.



eGEE

<http://grid.desy.de/ilc>

# Practical Advises



- Find out about resources via: (same for ‘calice’!)
  - > lcg-infosites -vo ilc all
  - > lcg-infosites -vo ilc rb
  - > lcg-infosites -vo ilc ce
  - > lcg-infosites -vo ilc se
  - > lcg-infosites -vo ilc lfc
- We maintain dedicated *Resource Brokers* (RB) via aliases:
  - ilc-rb.desy.de
  - calice-rb.desy.de
- The catalogue is:
  - grid-lfc.desy.de
- The data repository is:
  - srm-dcache.desy.de



eGee

http://grid.desy.de/ilc



# Grid @ Web

- DESY Grid Web Sites:
  - ✓ <http://grid.desy.de/>
  - ✓ <http://grid.desy.de/ilc/>
  - ✓ <http://grid.desy.de/install/DESY-VO.html>
- Grid Computing Web Sites:
  - <http://gus.fzk.de/>
  - <http://cern.ch/lcg/>
  - <http://www.eu-egee.org/>
- ILC VO user registration:
  - <http://grid-voms.desy.de:8443/vomses>

