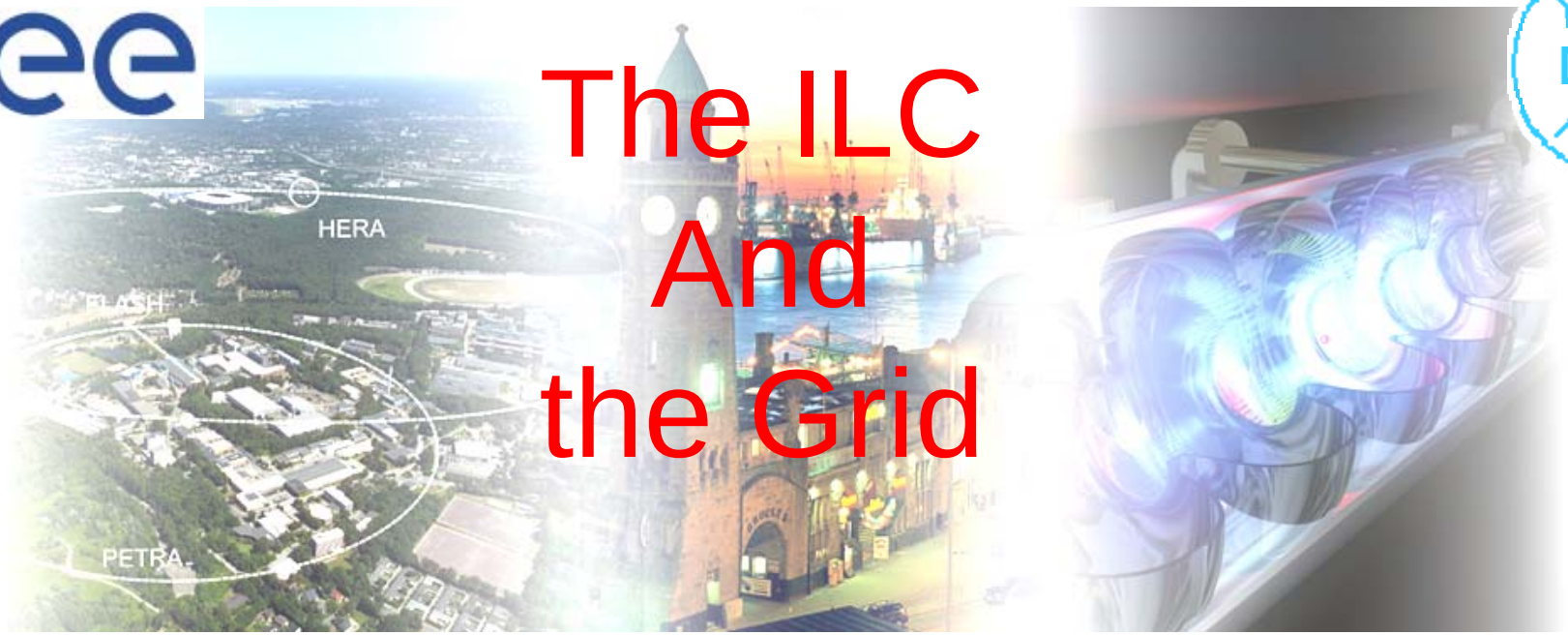

The ILC And the Grid

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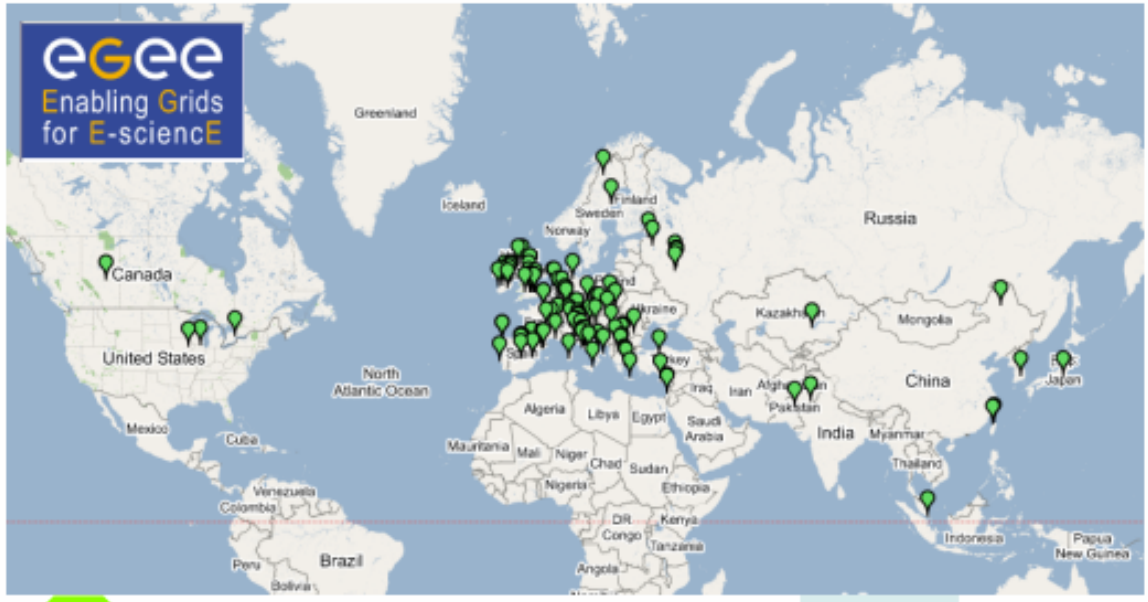
Introduction

- 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 Grid

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

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-siencE* (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

http://grid.desy.de/ilc

The Home of the ILC VOs

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 …

http://grid.desy.de/ilc

VO Support

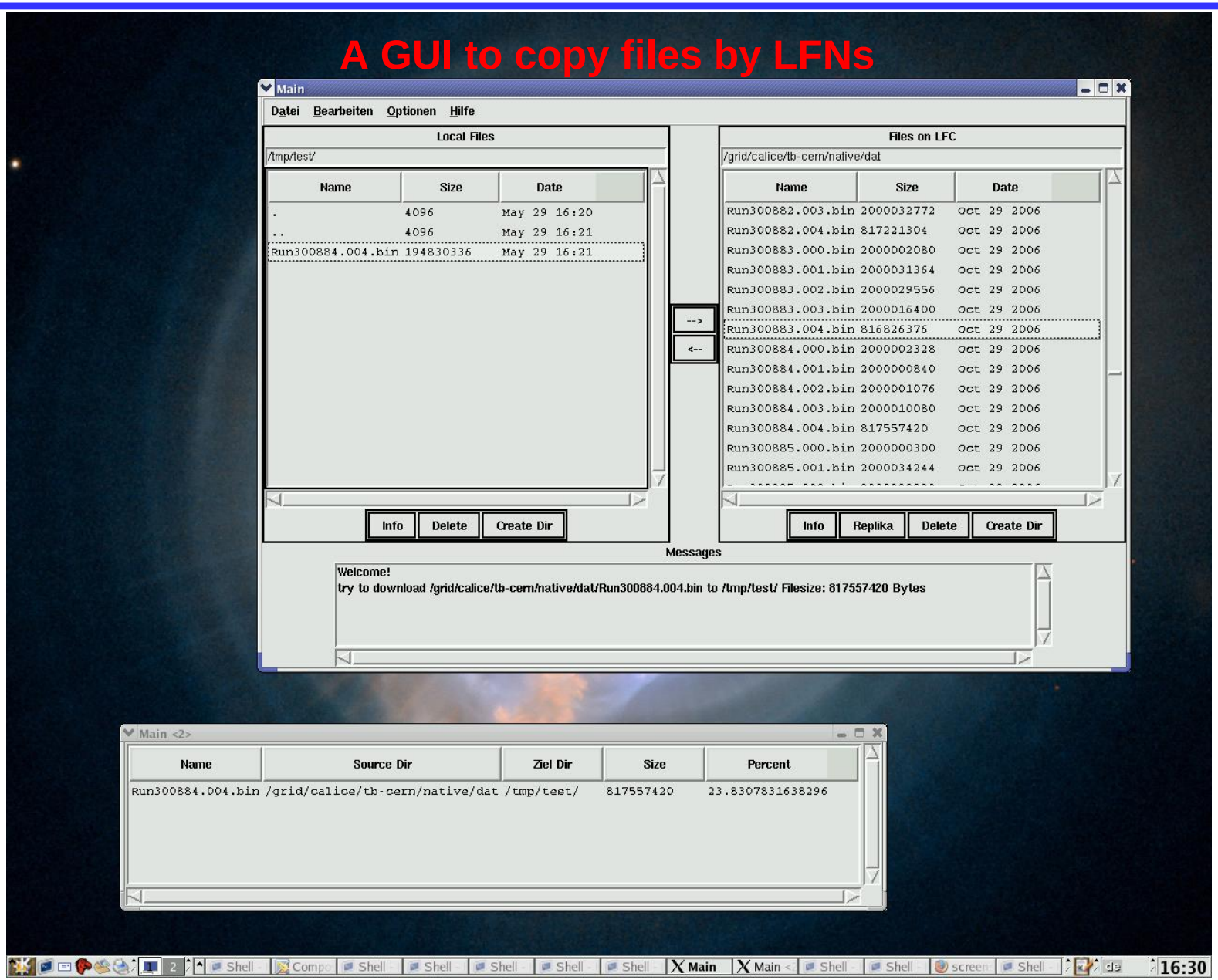
- EGEE provides the *Global Grid User Support* (GGUS) portal for all global EGEE VOs, e.g. 'ilc':
  - http://gus.fzk.de/
- In addition, mailing lists (ML) are hosted by DESY:
  - calice-vo-support@desy.de
  - calice-vo-users@desy.de
  - ilc-vo-support@desy.de
  - ilc-vo-users@desy.de
- So far we have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

Conclusions

- 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

http://grid.desy.de/ilc

Perspective



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

http://grid.desy.de/ilc

Grid @ Web

http://grid.desy.de/ilc

- 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