

# Grid Infrastructure at DESY

Mathias de Riese

eg ee DE CH Federation Meeting

March 7<sup>th</sup>, 2005

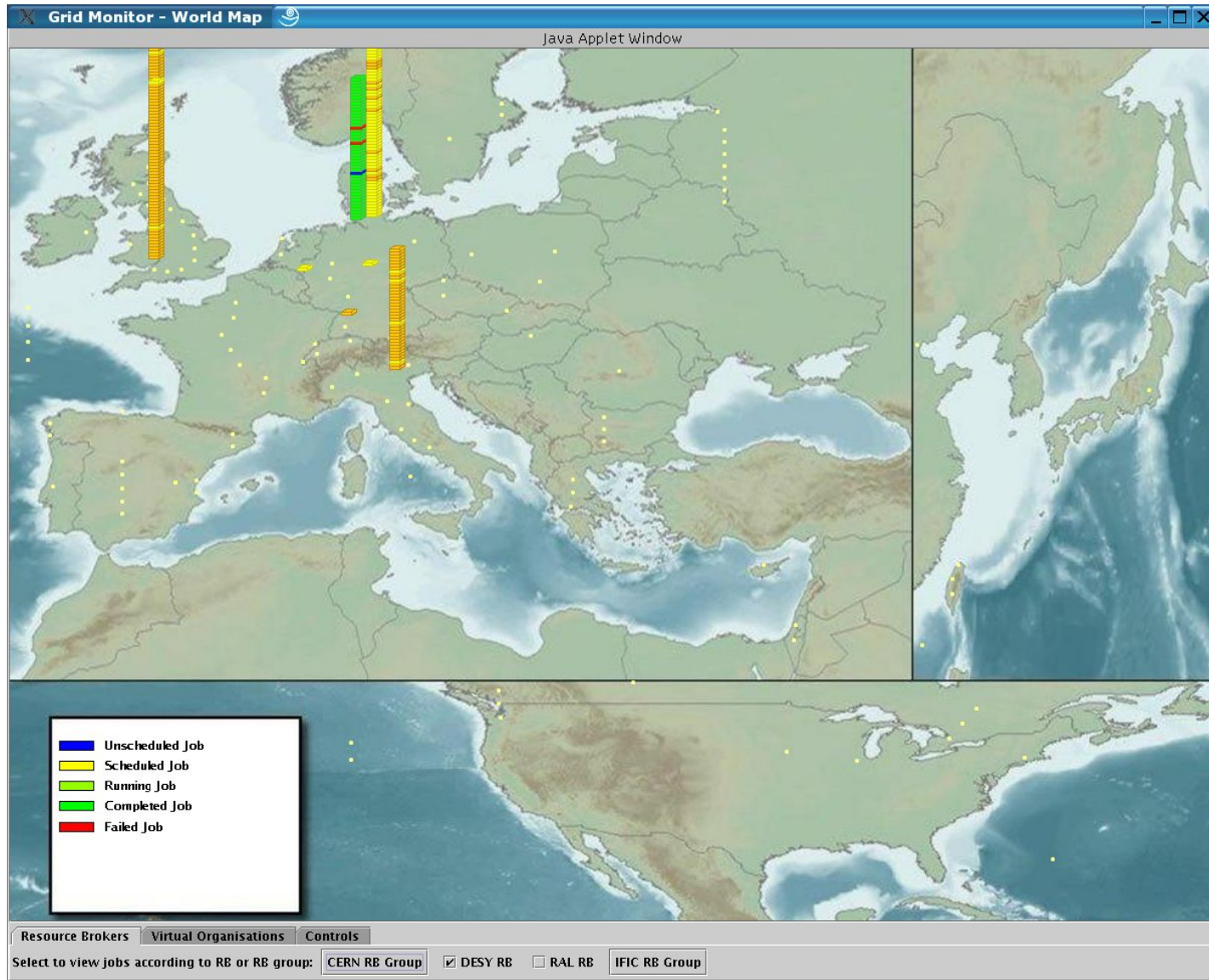
- **Standard RC Services**
  - CE (88 CPUs), SE (dCache), MON (+ Classic SE for Tests)
- **VO Service**
  - **Redundant** LDAP Server grid-vo.desy.de
  - VOs: zeus, hone, ghep, dcms, calice, ildg (LatFor)
  - New VOs easily added
  - **VOMS** in preparation
- **Catalogue Service**
  - EDG LRC/RMC for all VOs
  - **LFC** in preparation
  - Visible to the entire LCG

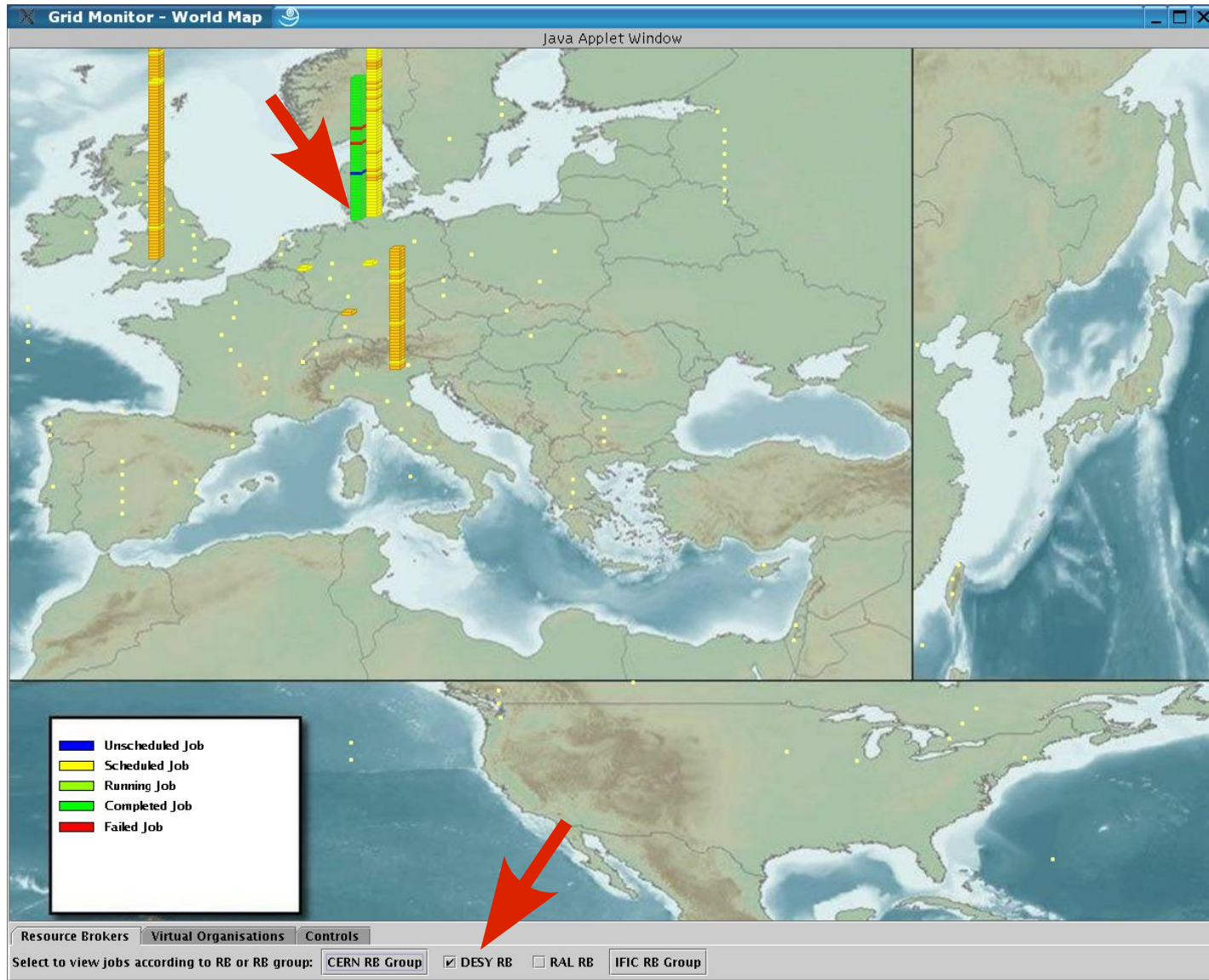
- **Central Services**

- LCG BDII (Sites supporting DESY VOs)
- Resource Broker
- myProxy Server
- User Interfaces

- **Monitoring**

- DESY RB in GOC **Life Monitoring** Applet  
<http://www.hep.ph.ic.ac.uk/e-science/projects/demo/index.html>
- Site Functional Tests  
<http://grid-web.desy.de/cgi-bin/lastreport.cgi>





Test History for grid-ce.desy.de - Mozilla

File Edit View Go Bookmarks Tools Window Help

http://grid-web.desy.de/cgi-bin/sitereports.cgi?site=grid-ce.desy.de

Home Bookmarks IT Grid dCache Devel Physics Pers Lookup Nice Bookmarks for ... Site Functional...

Ganglia Cluster Toolkit: Cluster Rep... Savannah Grid Computing at DESY LCG2 Real Time Grid Monitor Test History for grid-ce.desy.de

## Test History for grid-ce.desy.de

### History of results for site: grid-ce.desy.de

Colours definition

|                                      |         |
|--------------------------------------|---------|
| Job list match failed                | #ffc399 |
| Replica Management failed            | #cc3cff |
| OK                                   | #99ff99 |
| Test job still waiting for execution | #ff7f33 |
| Job Submission failed (Job Manager)  | #cc3c00 |
| Wrong LCG version (too old)          | #c0c0c0 |

| Test date           | Version   | Software Version | CA RPMs Version | BrokerInfo | R-GMA client | CSH test | CP  | CR  | DEL | REP | SE    | SE2   | SE3 | SE4 | SE5 | SE6 | SFT   | Start               | End                 |
|---------------------|-----------|------------------|-----------------|------------|--------------|----------|-----|-----|-----|-----|-------|-------|-----|-----|-----|-----|-------|---------------------|---------------------|
| 2005-03-02 16:40:51 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 27/18 | 0/7 | 0/7 | 0/7 | 0/7 | 27/18 | 2005-03-02 16:42:08 | 2005-03-02 17:04:57 |
| 2005-03-02 16:30:55 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 26/18 | 0/7 | 0/7 | 0/7 | 0/7 | 26/18 | 2005-03-02 16:32:09 | 2005-03-02 16:54:45 |
| 2005-03-02 16:20:53 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 26/18 | 0/7 | 0/7 | 0/7 | 0/7 | 26/18 | 2005-03-02 16:22:07 | 2005-03-02 16:44:43 |
| 2005-03-02 16:00:51 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 26/18 | 0/7 | 0/7 | 0/7 | 0/7 | 26/18 | 2005-03-02 16:02:08 | 2005-03-02 16:24:43 |
| 2005-03-02 15:51:04 | LCG-2 3 0 | n/a              | n/a             | n/a        | n/a          | n/a      | n/a | n/a | n/a | n/a | n/a   | n/a   | n/a | n/a | n/a | n/a | n/a   | n/a                 | n/a                 |
| 2005-03-02 15:20:48 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 15/16 | 22/10 | 0/7 | 0/7 | 0/7 | 0/7 | 22/10 | 2005-03-02 15:22:40 | 2005-03-02 16:03:33 |
| 2005-03-02 15:10:50 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 26/18 | 0/7 | 0/7 | 0/7 | 0/7 | 26/18 | 2005-03-02 15:12:40 | 2005-03-02 15:53:41 |
| 2005-03-02 14:50:51 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 26/18 | 0/7 | 0/7 | 0/7 | 0/7 | 26/18 | 2005-03-02 14:52:41 | 2005-03-02 15:15:16 |
| 2005-03-02 14:40:52 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 26/18 | 0/7 | 0/7 | 0/7 | 0/7 | 26/18 | 2005-03-02 14:42:06 | 2005-03-02 15:04:45 |
| 2005-03-02 14:30:55 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 26/18 | 0/7 | 0/7 | 0/7 | 0/7 | 26/18 | 2005-03-02 14:32:04 | 2005-03-02 14:54:39 |
| 2005-03-02 14:20:48 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 26/18 | 0/7 | 0/7 | 0/7 | 0/7 | 26/18 | 2005-03-02 14:22:05 | 2005-03-02 14:44:36 |
| 2005-03-02 14:10:48 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 26/18 | 0/7 | 0/7 | 0/7 | 0/7 | 26/18 | 2005-03-02 14:12:05 | 2005-03-02 14:34:28 |
| 2005-03-02 14:00:56 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 26/18 | 0/7 | 0/7 | 0/7 | 0/7 | 26/18 | 2005-03-02 14:03:13 | 2005-03-02 14:25:49 |
| 2005-03-02 13:50:50 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 26/18 | 0/7 | 0/7 | 0/7 | 0/7 | 26/18 | 2005-03-02 13:56:16 | 2005-03-02 14:18:56 |
| 2005-03-02 13:40:51 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 26/18 | 0/7 | 0/7 | 0/7 | 0/7 | 26/18 | 2005-03-02 13:42:30 | 2005-03-02 14:05:07 |
| 2005-03-02 13:20:50 | LCG-2 3 0 | LCG-2 2 0        | OK              | OK         | OK           | OK       | OK  | OK  | OK  | OK  | 17/14 | 22/19 | 0/7 | 0/7 | 0/7 | 0/7 | 22/19 | 2005-03-02 13:25:36 | 2005-03-02 13:55:48 |

- **Non-LHC HEP Applications**

- Zeus Monte Carlo Production

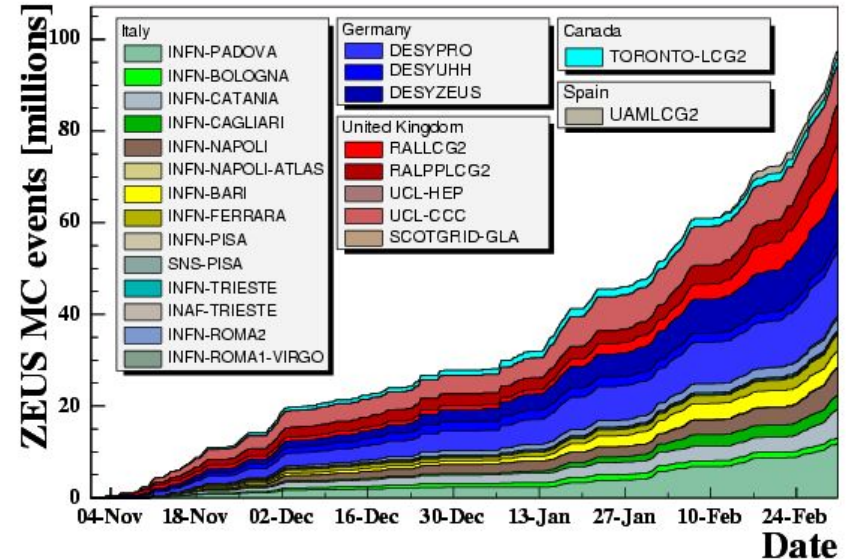
22 Sites

1800 CPUs

100 000 000 Events simulated

More Information:

<http://www-zeus.desy.de/~stadie/>



- H1 Monte Carlo Production (in preparation)
- Lattice QCD: **Grid-of-Grids** (LCG and other grid technologies)
- International Linear Collider:
  - SUSY Lagrange Parameter Fits (LHC and ILC)
  - Calice: Raw Data from Calorimeter Tests stored on dCache SE

- **dCache – joint development of DESY and FermiLab**
  - Distributed Disk Storage on commodity hardware
  - **Disk-only** or **Cache** for a Tertiary Storage System (HSM)
  - High degree of **Scalability** and **Configurability** (FNAL/CDF:150TB)
  - Integrated **SRM** → Grid Storage Element
- **LCG 2\_4\_0 will contain a dCache SE**
  - Installable with Generic Installation Tool **YAIM**
- **Will be deployed at most LCG Tier 1 Centers**  
FNAL, BNL, IN2P3/Lyon, GridKa, RAL
- **Other Sites:**  
USCMS/Tier 2, UK/Tier 2, BNL/Phoenix, ZIB, FZ Juelich, DESY