



Enabling Grids for E-scienceE

# Welcome

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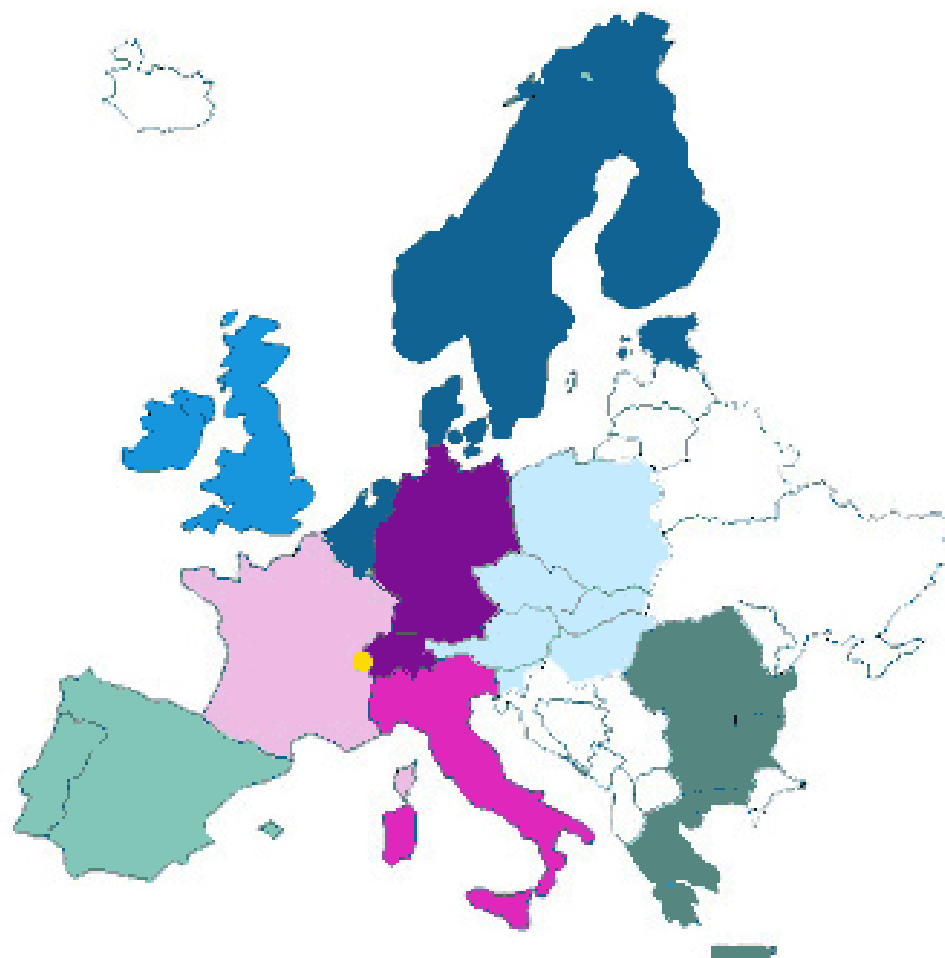
*University of Catania and INFN*

*First gLite tutorial on GILDA, Catania, 13-15.06.2005*

[www.eu-egee.org](http://www.eu-egee.org)



- **Short introduction**
  - EGEE
  - LCG
  - gLite
- **Agenda**
- **Useful information**
- **Tutorial layout**
- **Services layout**

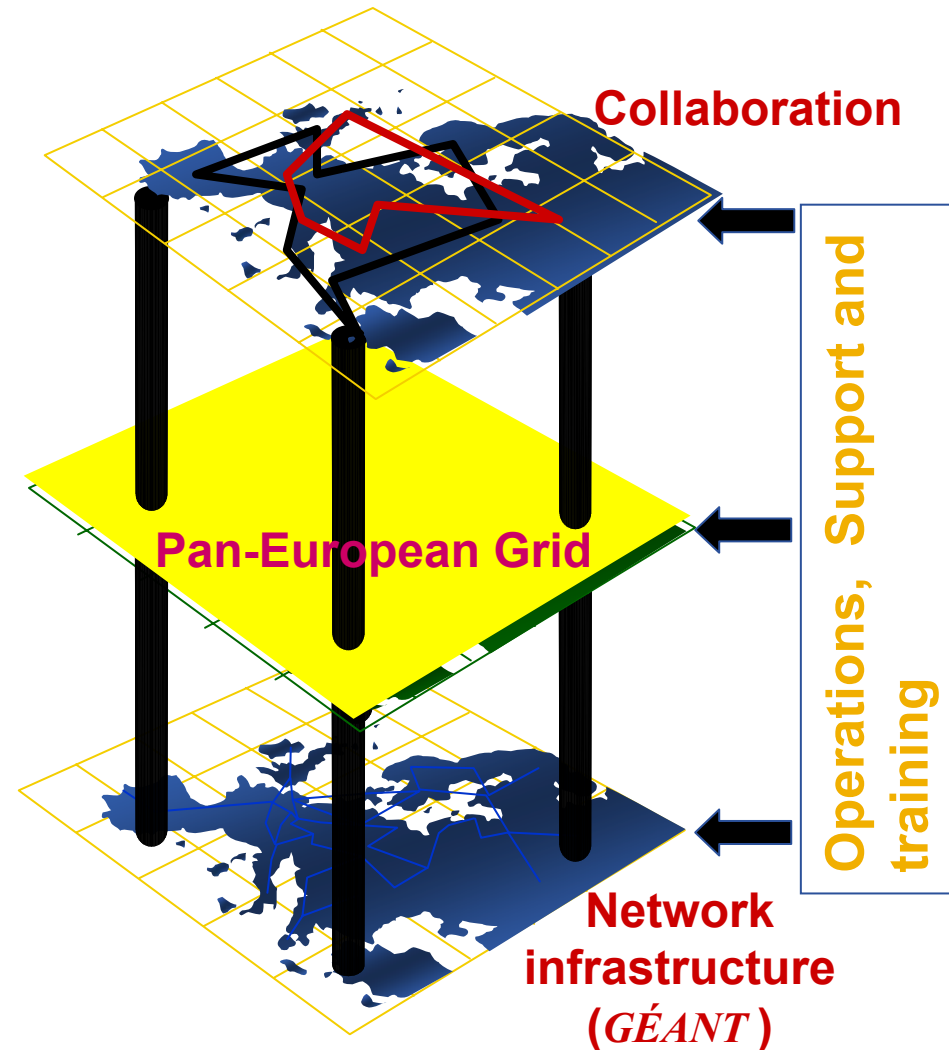


- CERN
- Central Europe (Austria, Czech Republic, Hungary, Poland, Slovakia, Slovenia)
- France
- Germany and Switzerland
- Ireland and UK
- Italy
- Northern Europe (Belgium, Denmark, Estonia, Finland, The Netherlands, Norway, Sweden)
- South-East Europe (Bulgaria, Cyprus, Greece, Israel, Romania)
- South-West Europe (Portugal, Spain)

**All work in EGEE will be organised on the basis of regionally based federations.**

Build a large-scale production grid service to:

- Underpin European science and technology
- Link with and build on national, regional and international initiatives
- Foster international cooperation both in the creation and the use of the e-infrastructure



- **I<sup>3</sup> Project**
- **The project start date is April 1st 2004**
- **The project duration is 24 months**
- **The total project budget is 46,109,200 Euros**
- **The EU financial contribution for the project is a total of 31,867,000 Euro**
- **There are 70 partners**
- **There are 27 participating countries**
- **Arranged in 12 federations**
- **Estimated 600 FTE's to be deployed during the project**
- **Target a combined 20,000 CPUs**

32 Million Euros of EU funding over 2 years starting 1<sup>st</sup> April 2004

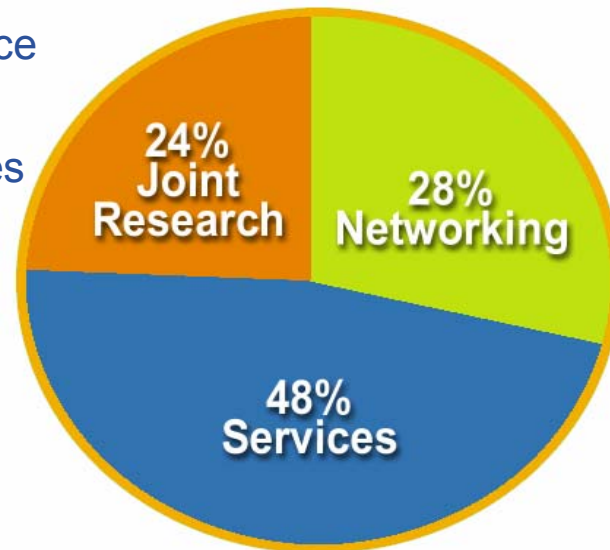
## 24% Joint Research

**JRA1:** Middleware Engineering and Integration

**JRA2:** Quality Assurance

**JRA3:** Security

**JRA4:** Network Services Development



## 48% Services

**SA1:** Grid Operations, Support and Management

**SA2:** Network Resource Provision

## 28% Networking

**NA1:** Management


**NA2:** Dissemination and Outreach

**NA3:** User Training and Education

**NA4:** Application Identification and Support

**NA5:** Policy and International Cooperation

Emphasis in EGEE is on operating a *production Grid* and on supporting the end-users.



**LCG - LHC Computing Grid Project - Mozilla**

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http://lcg.web.cern.ch/LCG/ Go Search

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**LCG home | Calendar | Meetings | Contact Us**

- Project Structure
  - Boards
    - CRRB
    - POB
    - PEB
    - GDB
  - Committees
    - LHCC
    - SC2
    - Architects Forum
- Project Planning
  - Documents
  - Dissemination
  - Related Projects
  - Press & Media
  - Jobs

The Large Hadron Collider (LHC), currently being built at CERN near Geneva, is the largest scientific instrument on the planet. When it begins operations in 2007, it will produce roughly 15 Petabytes (15 million Gigabytes) of data annually, which thousands of scientists around the world will access and analyse.

The mission of the LHC Computing Project (LCG) is to build and maintain a data storage and analysis infrastructure for the entire high energy physics community that will use the LHC.

**LHC Computing Grid**  
Distributed Production Environment for Physics Data Processing

[Project Overview](#)

**Activities**

- Distributed Analysis (ARDA)
- Grid Deployment
- LCG Middleware
- Security
- Service Challenges
- Physics Application Software

**LCG Users**

- New Users**
  - User Registration
- Registered Users**
  - User Support
  - Experiments Integration Support

**LCG Sites**

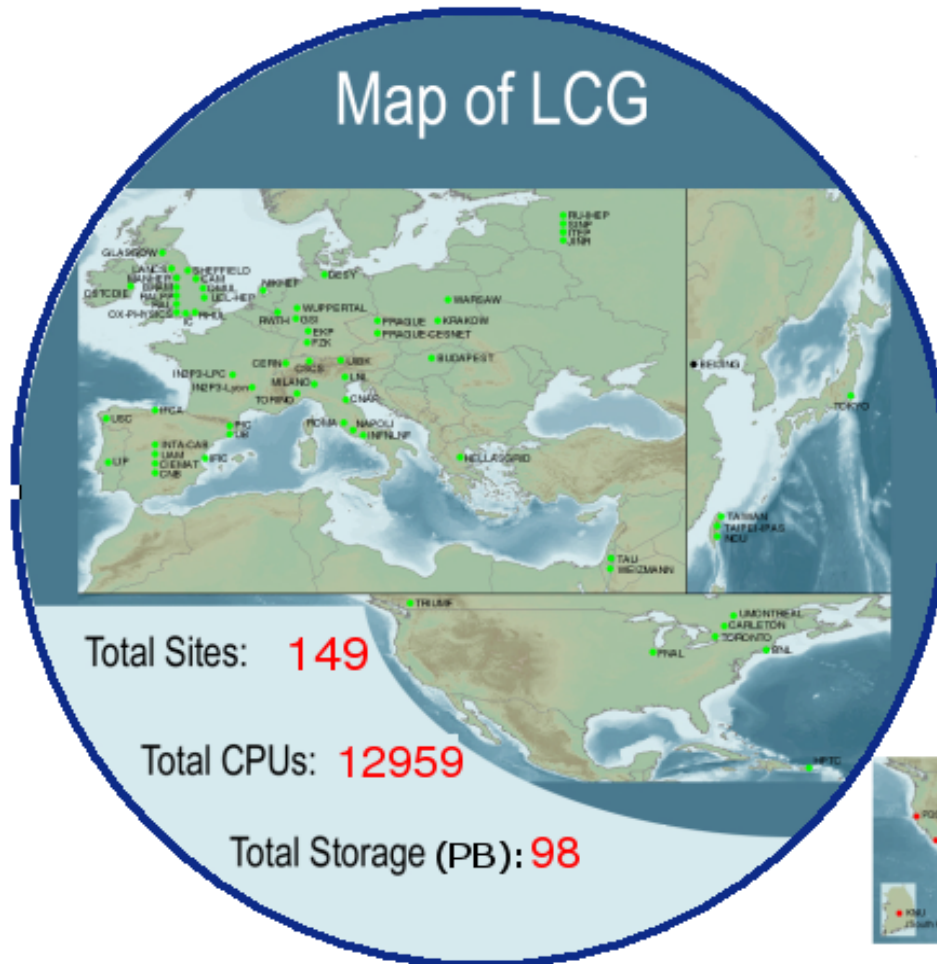
- Getting Started
- Software Releases
- Site Guides and FAQ
- Site Security

**LCG Operations**

- Monitoring
- Core Infrastructure Center
- Regional Centers
- Security Incidents

**News:**  
24-26 May - Second EGEE/LCG Grid Operations workshop in Bologna

**LCG news**



### Collaborating with LCG

#### NorduGrid



#### Grid3



[Click here to see the status now !](#)





EGEE > glite - Mozilla

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EGEE > glite

**EGEE**  
Enabling Grids  
for E-science

**gLite**  
Lightweight Middleware for Grid Computing

**What is gLite?**

gLite (pronounced "gee-lite") is the next generation middleware for grid computing. Born from the collaborative efforts of more than 80 people in 11 different academic and industrial research centres as part of the [EGEE Project](#), gLite provides a bleeding-edge, best-of-breed framework for building grid applications tapping into the power of distributed computing and storage resources across the Internet.

Want to know more about gLite? Read the following presentations on the current status of the project: [project-level overview](#) [development status](#)

**gLite News**

**gLite v. 1.1 has been released (13/05/2005)**  
The new version of the gLite Middleware (gLite 1.1) has been released today to General Availability. This release includes two new modules (the File Transfer Service and the Metadata Catalog) and improvements in all modules. All gLite v. 1.1 modules can be downloaded from the [gLite 1.1 packages](#) page. For more information about the release, user guides, installation guide and release notes, please refer to the [documentation](#) page.

**gLite v. 1.0 has been released (05/04/2005)**  
The first major version of the gLite Middleware (gLite 1.0) has been released today to General Availability. This release represents a year of hard work of all the people in the JRA1 and JRA3 activities of the EGEE project. Thanks to everybody for the effort and dedication. All gLite v. 1.0 modules can be downloaded from the [gLite 1.0 packages](#) page. For more information about the release, user guides, installation guide and release notes, please refer to the [documentation](#) page.

**New gLite web site unveiled (13/09/2004)**  
The new gLite web site has officially gone online on Monday 13 September. The web site offers a single point of access to public documentation, installation packages and guides and loads of other useful information. The web site has been developed by the gLite [Integration Team](#) with the collaboration of all project members using original web templates from [TERENA](#).

**GLITE SUBSYSTEMS**

- COMPUTING ELEMENT
- DATA MANAGEMENT
- ACCOUNTING
- LOGGING AND BOOKKEEPING
- INFORMATION & MONITORING
- SECURITY
- WORKLOAD MANAGEMENT

**DOWNLOAD**

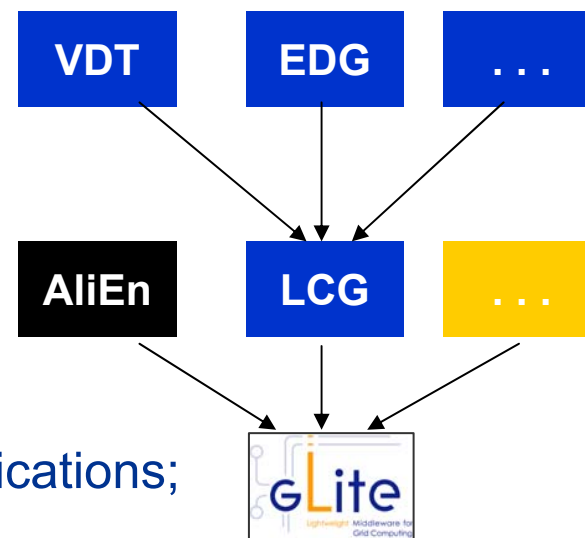
**QA METRICS**

- SLOC
- CODE STABILITY
- BUG REPORTS

**ABOUT GLITE**

- EGEE JRA1
- EGEE JRA3

- Exploit experience and components from **existing projects**
  - AliEn, VDT, EDG, LCG, and others
- **Design team** works out architecture and design
  - Feedback and guidance from EGEE PTF & applications; Operations, LCG GAG & ARDA
- Components are initially deployed on a **prototype infrastructure**
  - Small scale (CERN & Univ. Wisconsin)
  - Get user feedback on service semantics and interfaces
- After internal integration and testing, components are delivered to grid operations group and deployed on the **pre-production service**



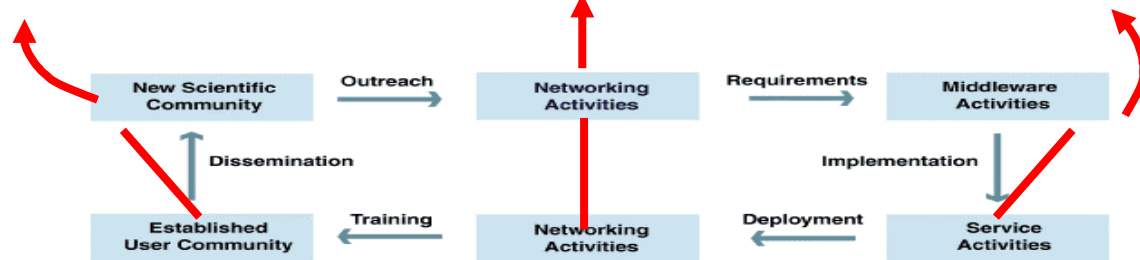
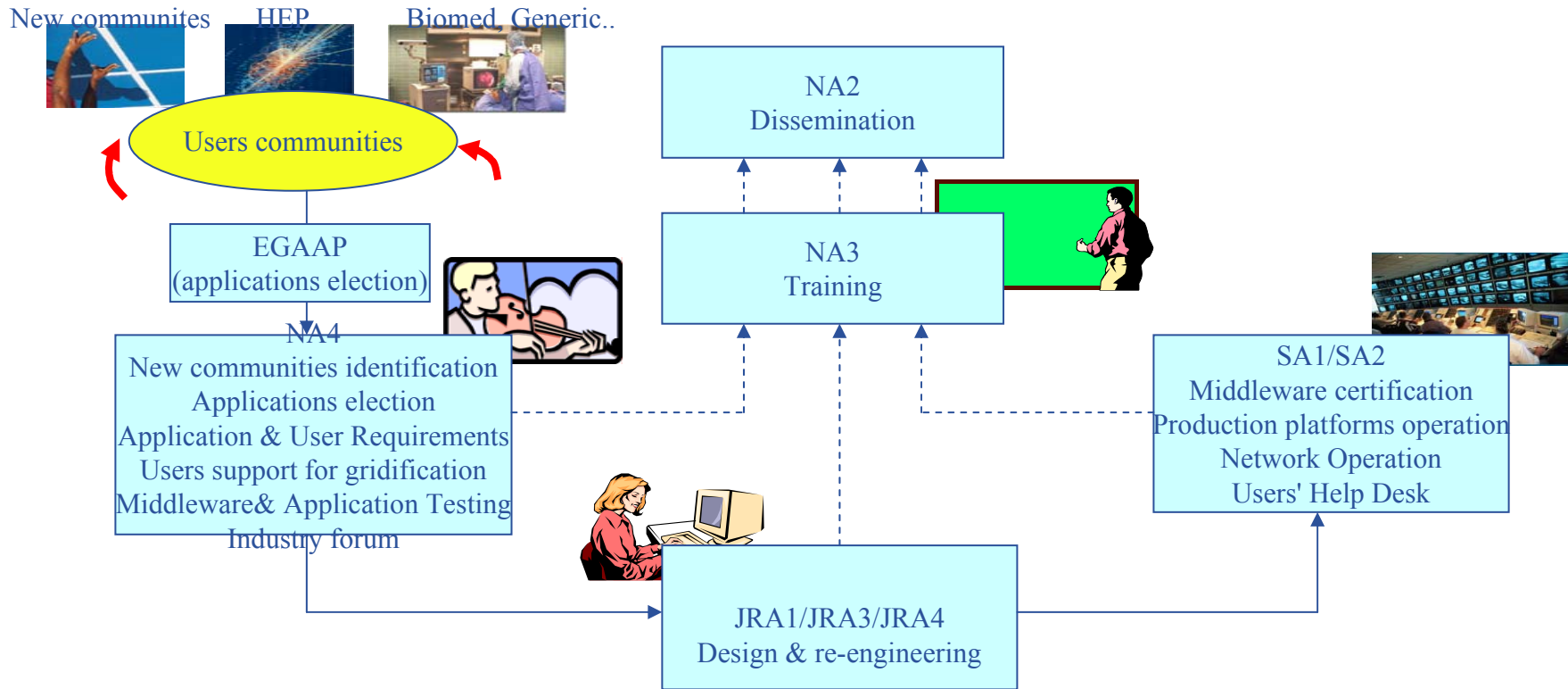
Draft Design - <https://edms.cern.ch/document/487871/>

PTF – Project Technical Forum (<http://egee-ptf.web.cern.ch/egee-ptf/default.htm>)

GAG – Grid Application Group (<http://project-lcg-gag.web.cern.ch/project-lcg-gag/>)

ARDA - A Realisation of Distributed Analysis for LHC (<http://lcg.web.cern.ch/LCG/peb/arda/Default.htm>)

# The EGEE "Virtuous Cycle"

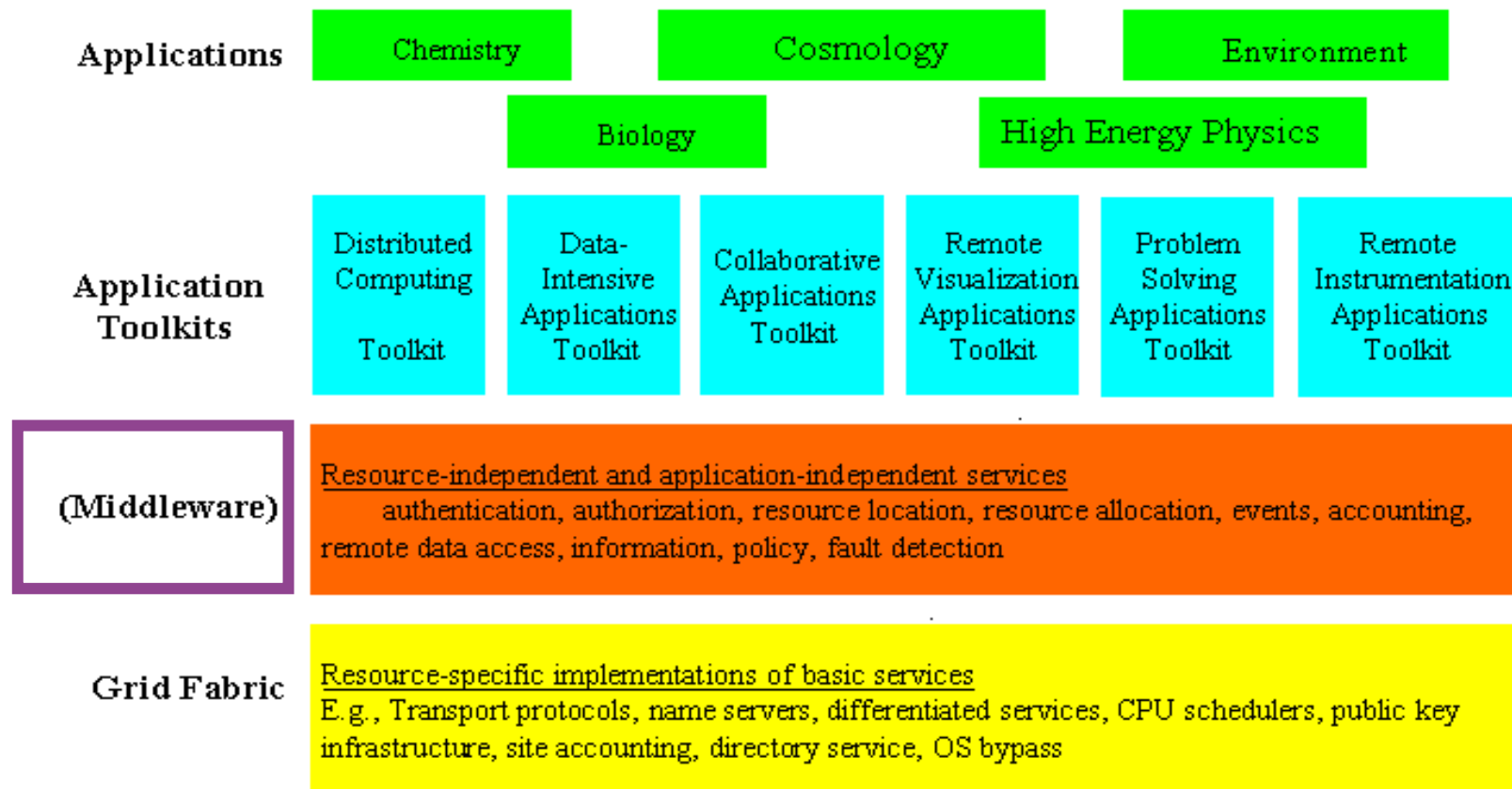


Activities mainly involved in the virtuous cycle

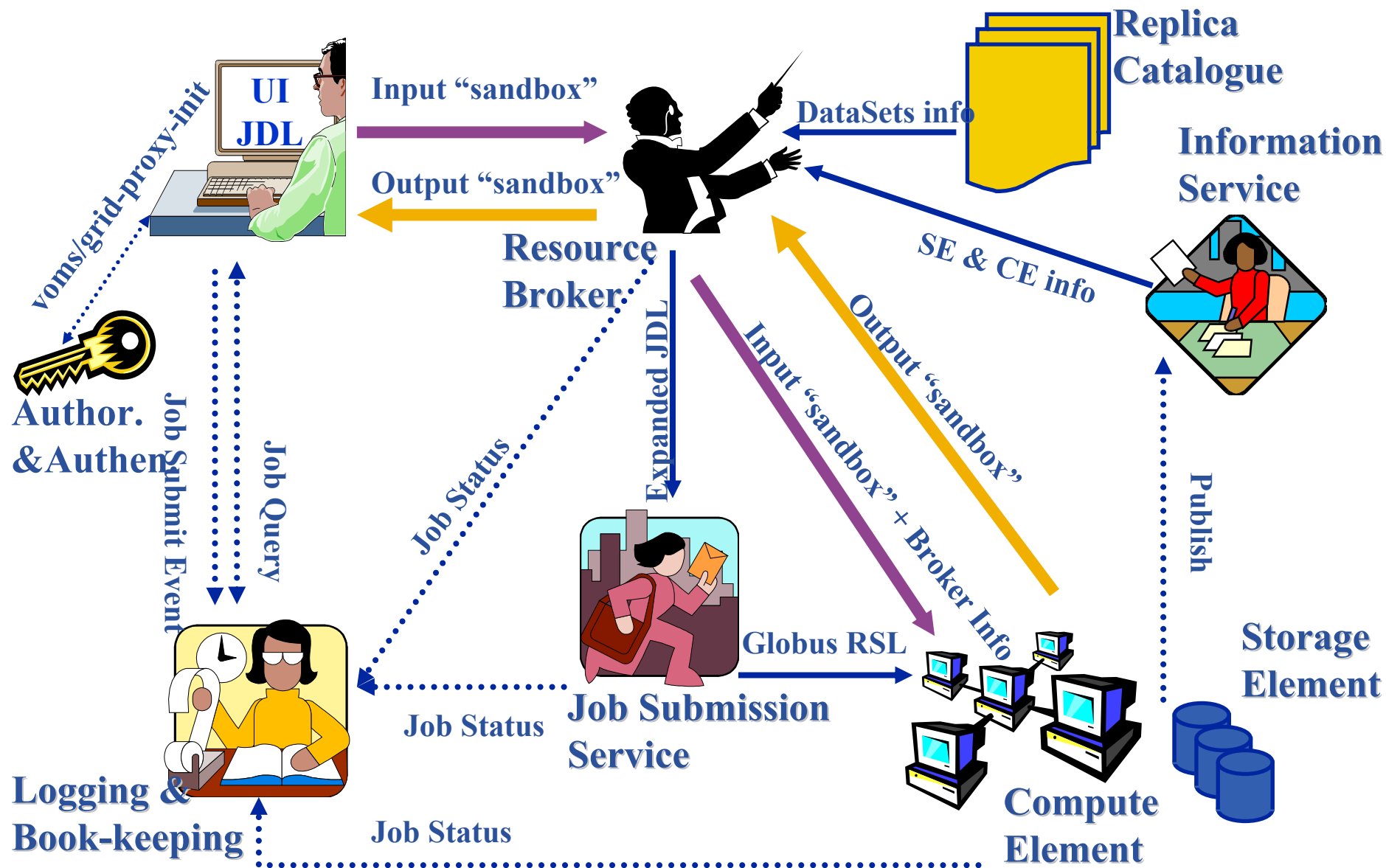
[Click here to see the Agenda](#)

- **GILDA home page:** <https://gilda.ct.infn.it> (see next presentation)
- **Middlewares used:** **LCG 2.4.0** and **gLite 1.0/1.1**
- **GILDA User Interfaces:**
  - UI PnP “combined”: <https://gilda.ct.infn.it/UIPnPcomb>
  - Central User Interface for LCG: [grid-tutor.ct.infn.it](http://grid-tutor.ct.infn.it)
  - Central User Interface for gLite: [glite-tutor.ct.infn.it](http://glite-tutor.ct.infn.it)
  - GENIUS portal for LCG: <https://grid-tutor.ct.infn.it>
  - GENIUS portal for gLite: <https://glite-tutor.ct.infn.it>
- **Account names on the User Interfaces PnP:**
  - **tutor01-tutor35**
- **Account passwords on the User Interfaces PnP:**
  - **gridct01-gridct35**
- **Certificate passphrase:**
  - **CATANIA**

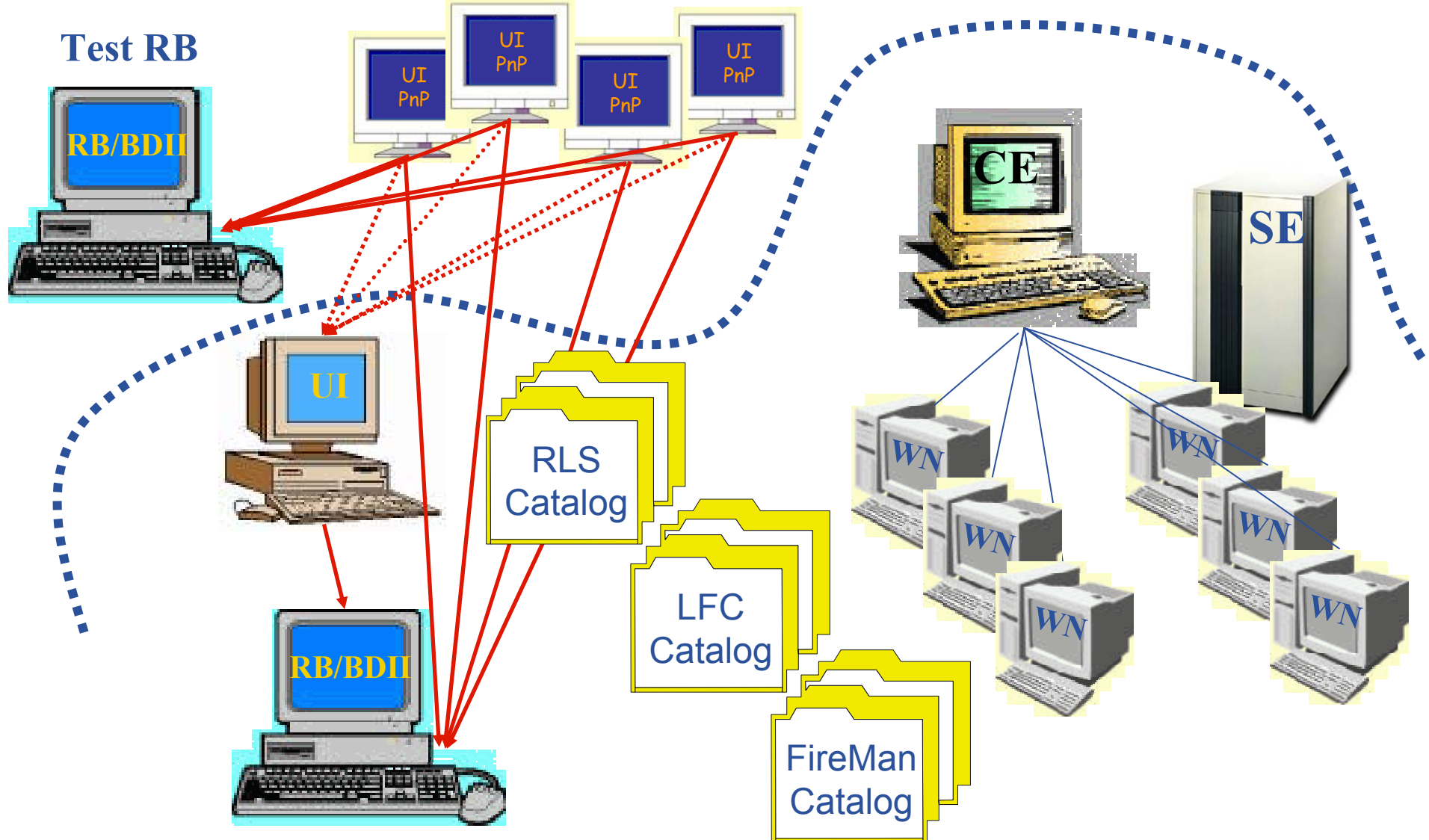
## The Grid from a Services View



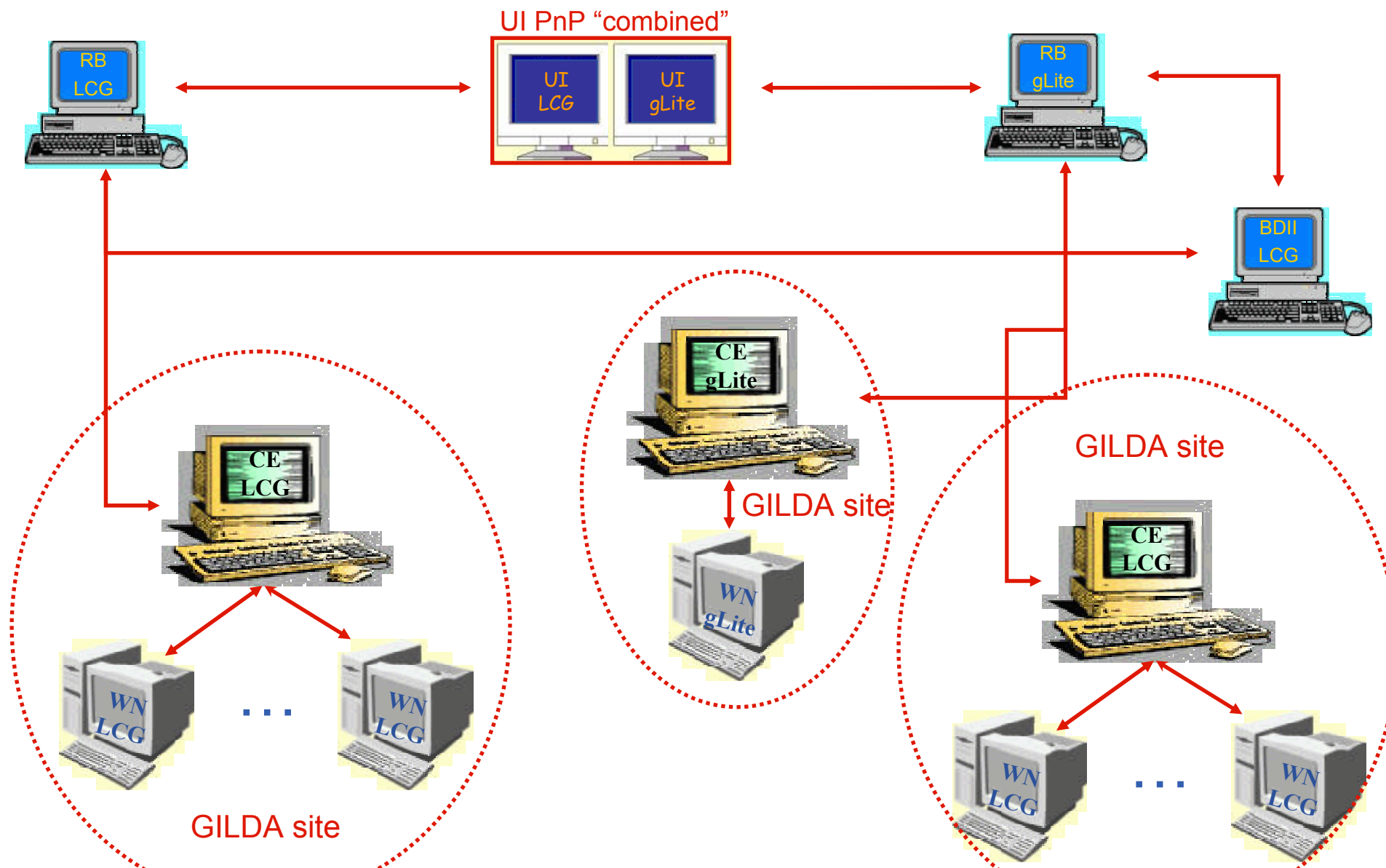
# The tutorial in two slides (2/2)

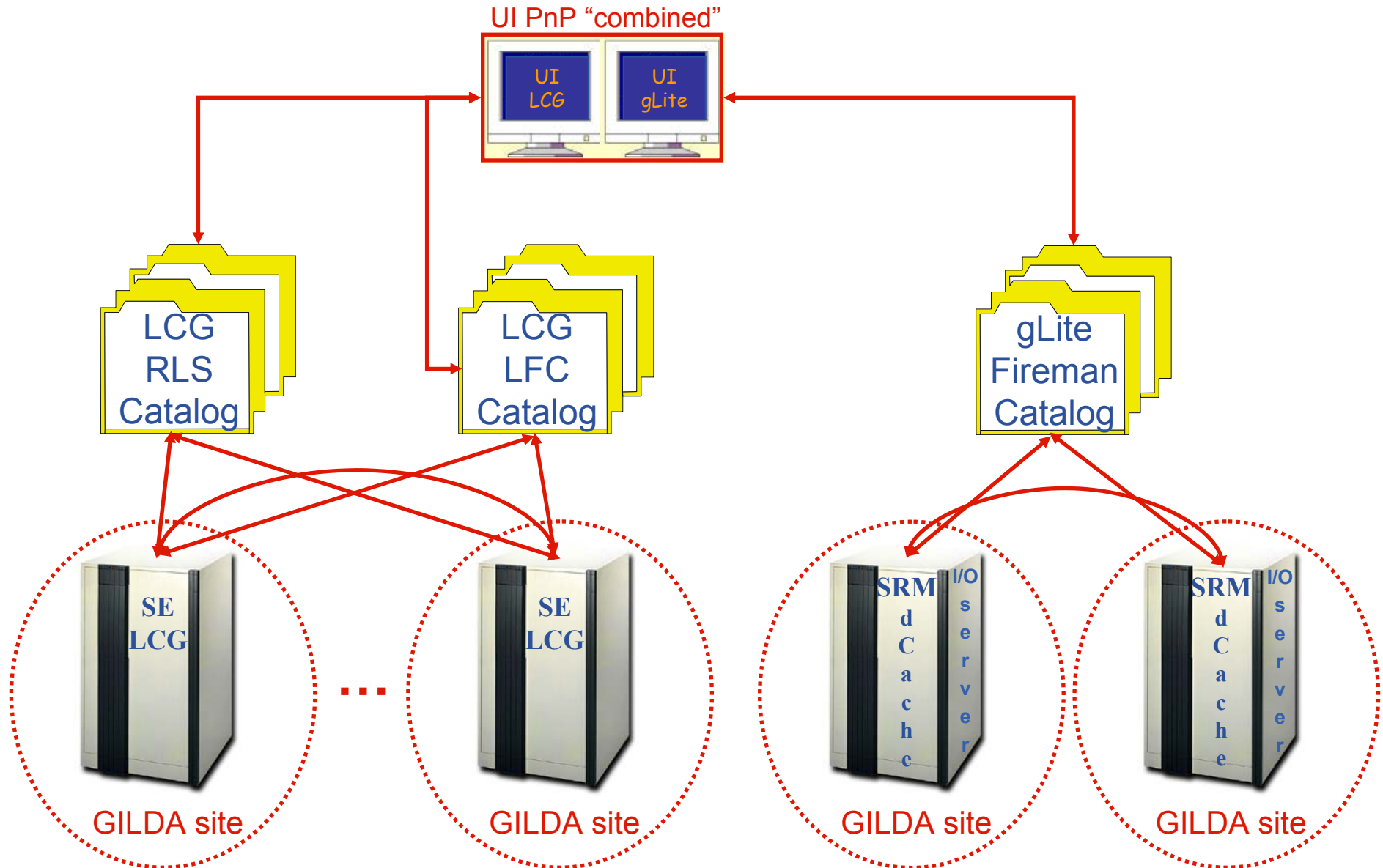


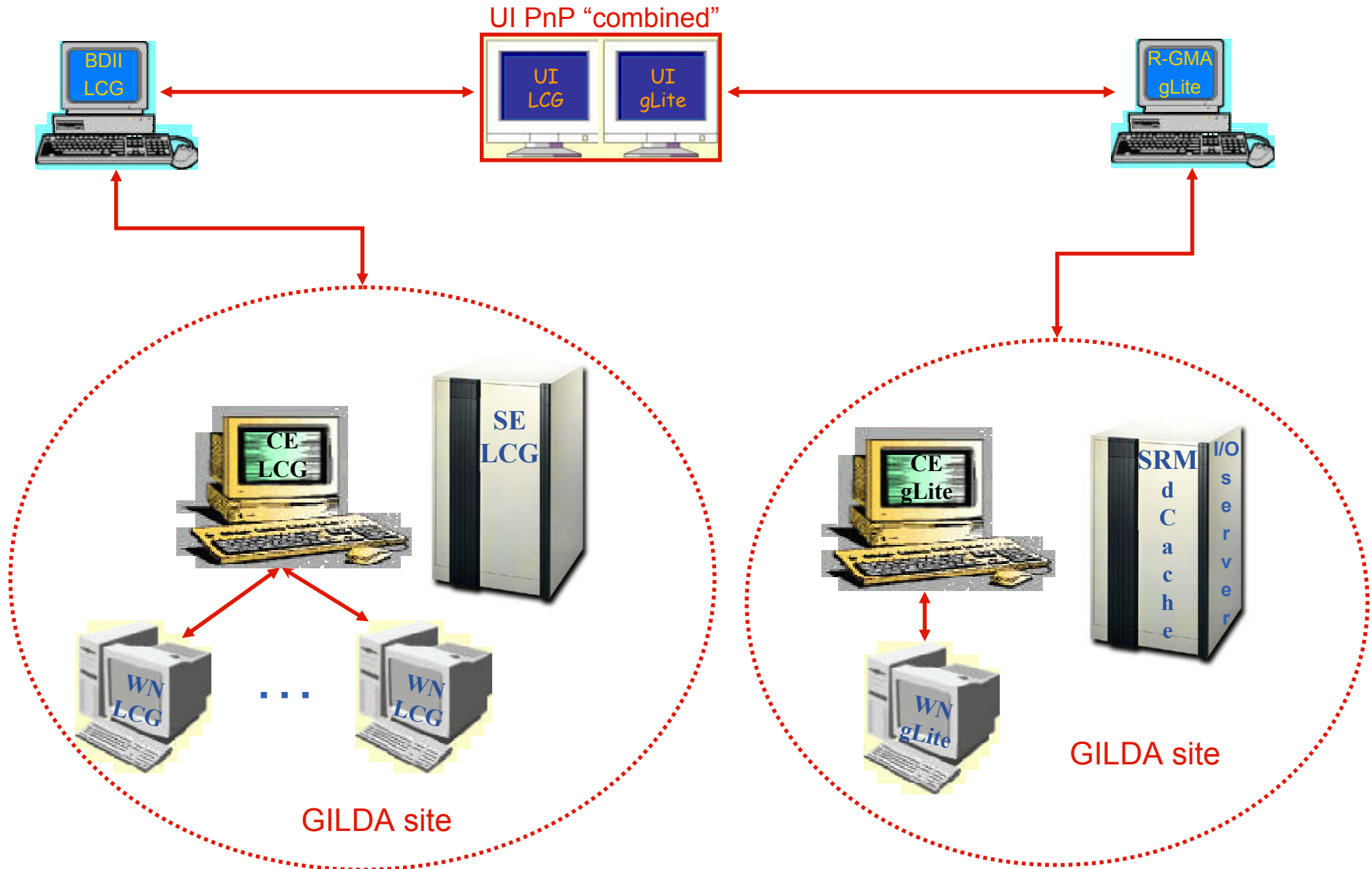
## Students User Interfaces











**Any questions ?**  
**Are you ready to start ?**