



**E**-science grid facility for  
**E**urope and **L**atin **A**merica

# EELA-2 Interoperation

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# The EELA-2 Infrastructure



- 40 sites
  - 33 in LA
  - 7 in EU
- ~ 3000 CPUs
- ~ 600 TB of Disk
- 2 Interoperation sites
  - OurGrid
  - OSG
- Why not EGEE?



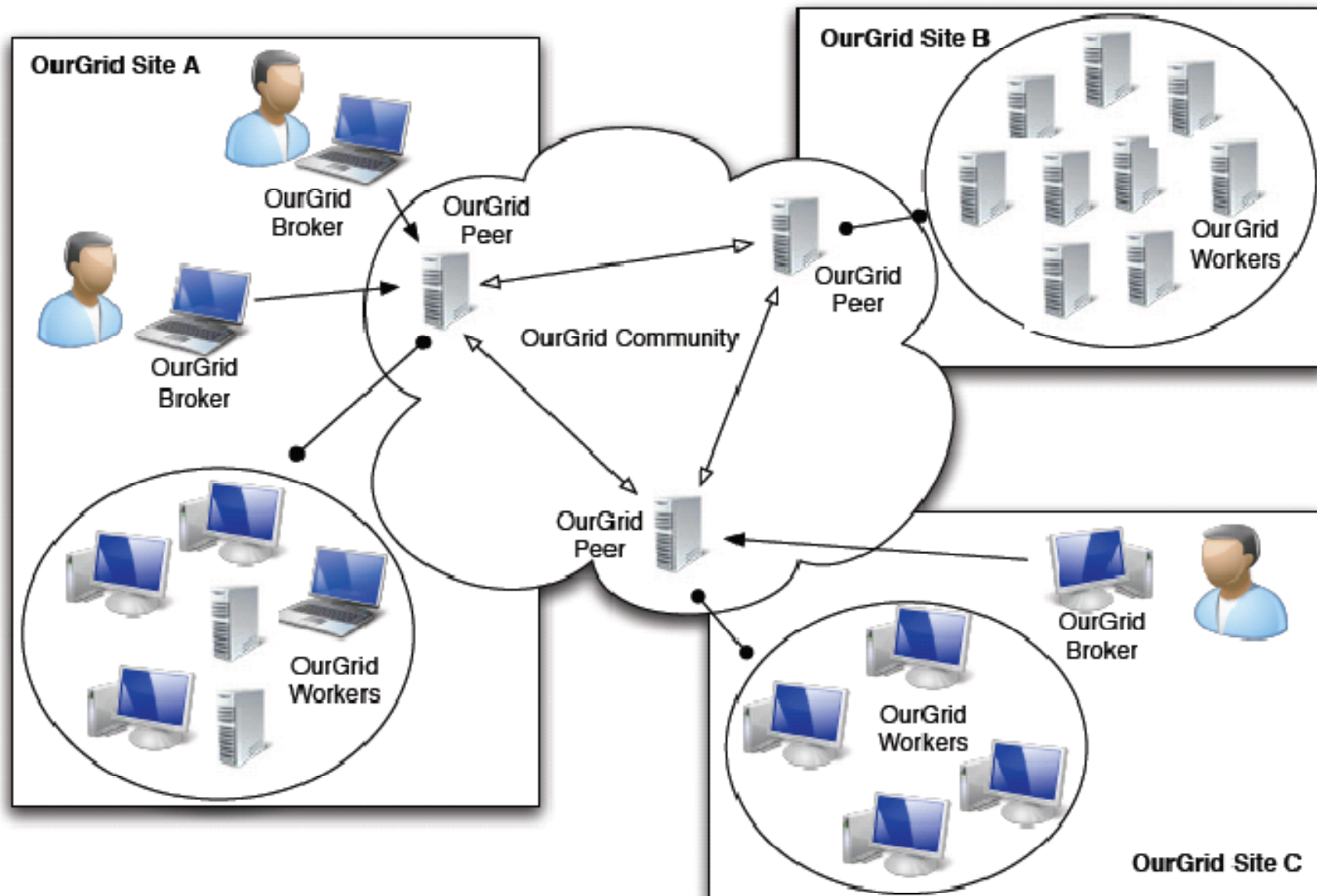
- **EELA-2 and EGEE infrastructures interoperate seamlessly**
  - Are based on the same middleware
  - Use the same operation and monitoring tools
  - Have equivalent operational and security policies
  - Several EELA-2 sites participate also in the EGEE infrastructure
- **EELA-2 is conducting now the signature of a SLD fully compliant with the EGEE SLD between ROCs and sites**
- **EELA-2 and EGEE have a site certification agreement**
  - An EGEE-certified site can participate in the EELA-2 infrastructure without being re-certified
  - An EELA-2-certified site can participate in the EGEE infrastructure without being re-certified



- **OurGrid is a Peer-2-Peer grid middleware developed in Brazil ([www.ourgrid.org](http://www.ourgrid.org))**
  - Conceived to use idle cycles from machines at universities and research labs
- **OurGrid supports Bag-of-Tasks applications that:**
  - Have relatively short tasks
    - Due to the best-effort nature of the worker nodes
  - Have no inter-task communication
  - Are self-contained
    - no need for special dynamically linked libraries
- **EELA-2 JRA1 is developing the grid services to make gLite and OurGrid interoperable**



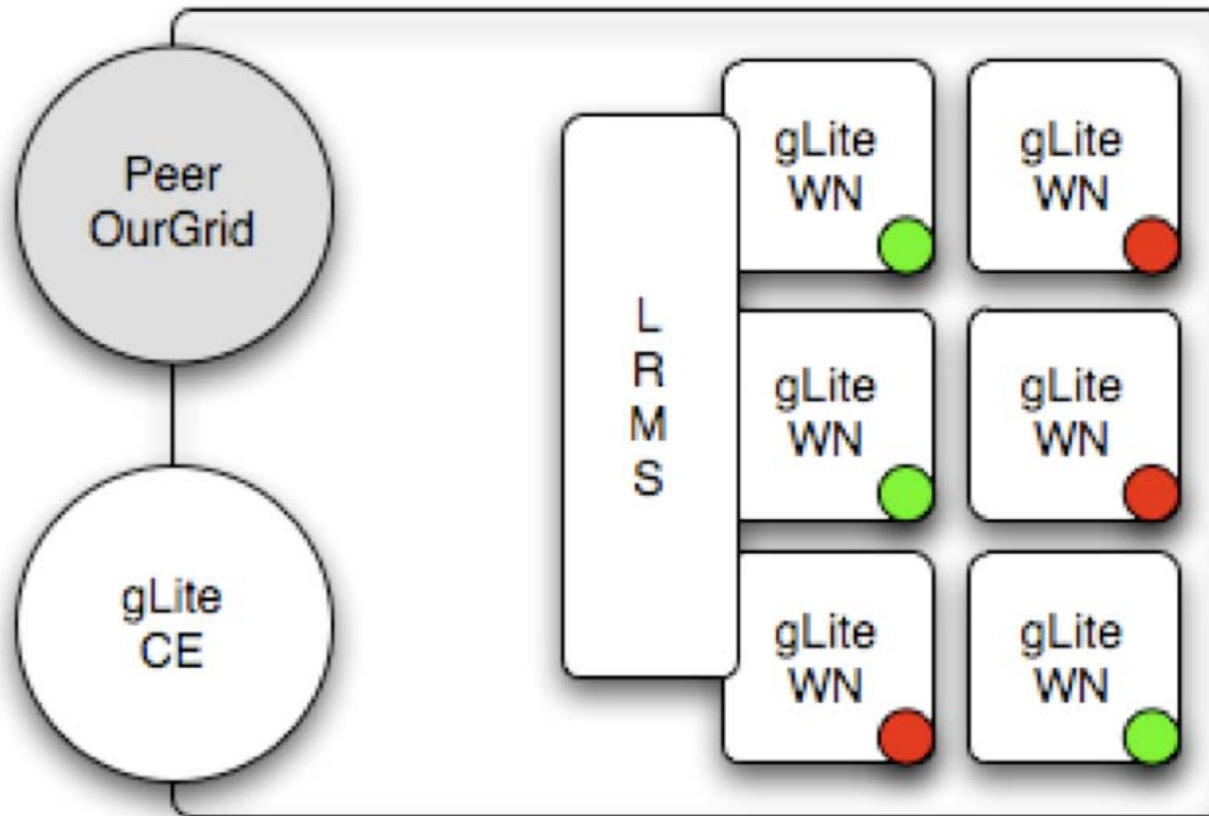
- Increasing the **reach** of the EELA-2 infrastructure by:
  - Allowing the scavenging of idle resources
    - Very important where there aren't a lot of dedicated resources to be put in the grid
  - Allowing the usage of diverse hardware/software platforms
    - OurGrid is a pure java solution so any platform with a Java Virtual Machine can be used to run grid services
- Increasing the **usability** of the EELA-2 infrastructure by:
  - Leveraging on the grid services provided by the OurGrid middleware to execute bag-of-tasks jobs
  - Facilitating the management of resource centres







# gLite ↔ OurGrid Interoperability (1/2)

gLite ⇨ OurGrid

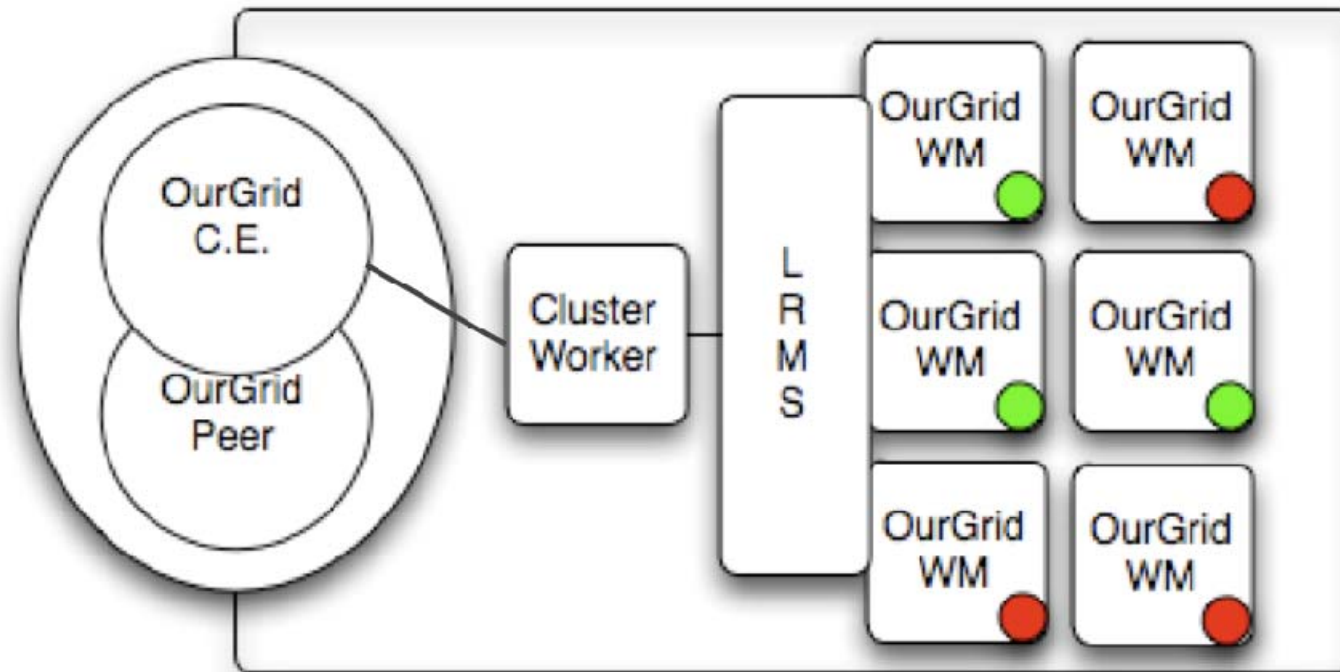


-  gLite WN idle - OurGrid Worker Manager (WM) running
-  gLite WN busy - OurGrid WM not running



# gLite ↔ OurGrid Interoperability (2/2)

OurGrid ⇨ gLite



- OurGrid Worker Node (WN) not allocated to the CW - idle or running preemptible OurGrid WN
- OurGrid WN allocated to the CW - running non-preemptible OurGrid WN or gLite WN





Thank you very much!  
...Questions ?

