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EGEE-0 / LCG-2 middleware Practical using GILDA testbed and GENIUS portal

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Acknowledgements



- Roberto Barbera and colleagues at Univ. of Catania
- Guy Warner of NeSC
- Colleagues in EGEE



Policy for re-use



- This presentation can be re-used for academic purposes.
- However if you do so then please let training-support@nesc.ac.uk know. We need to gather statistics of re-use: no. of events, number of people trained. Thank you!!

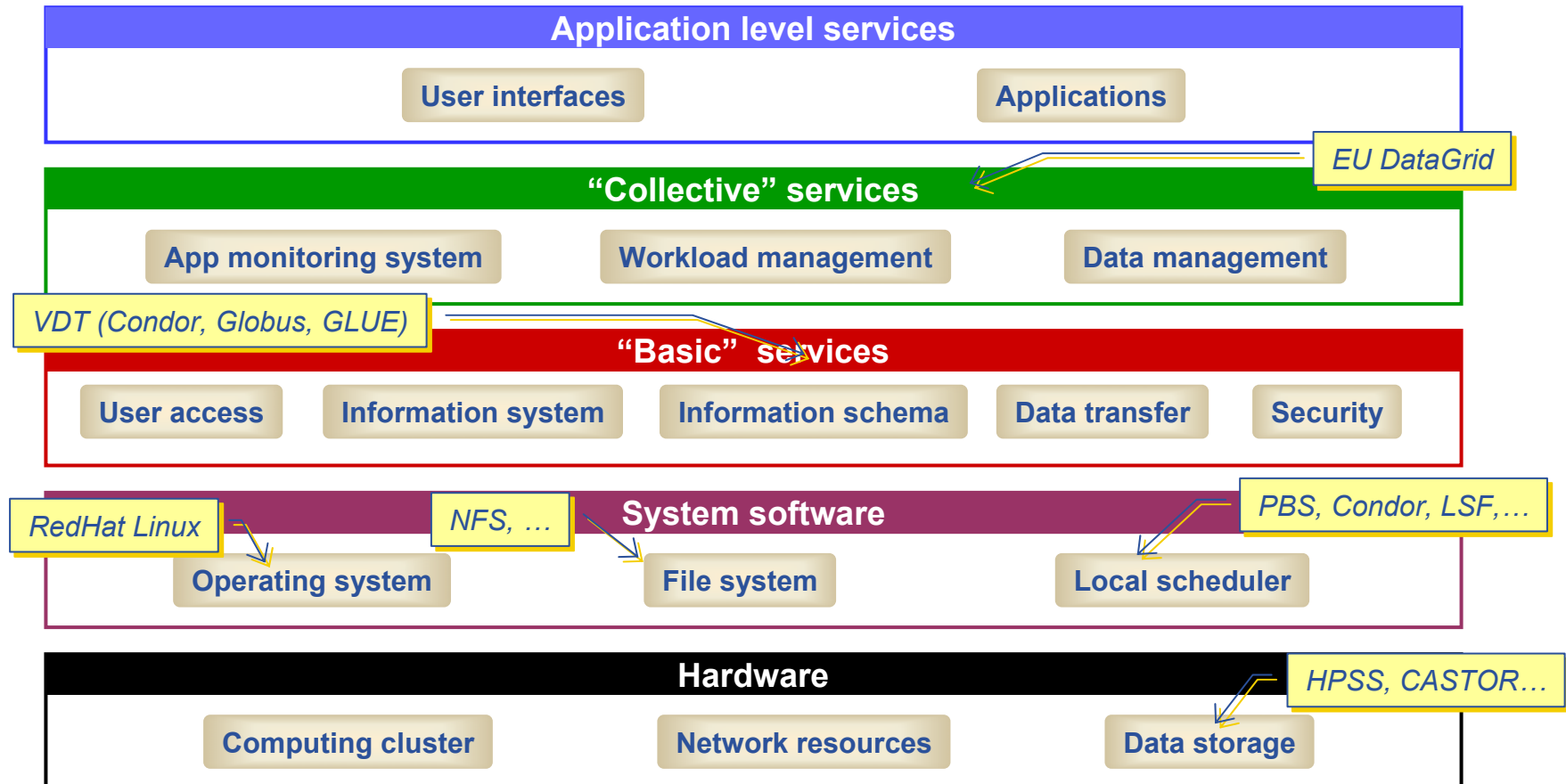


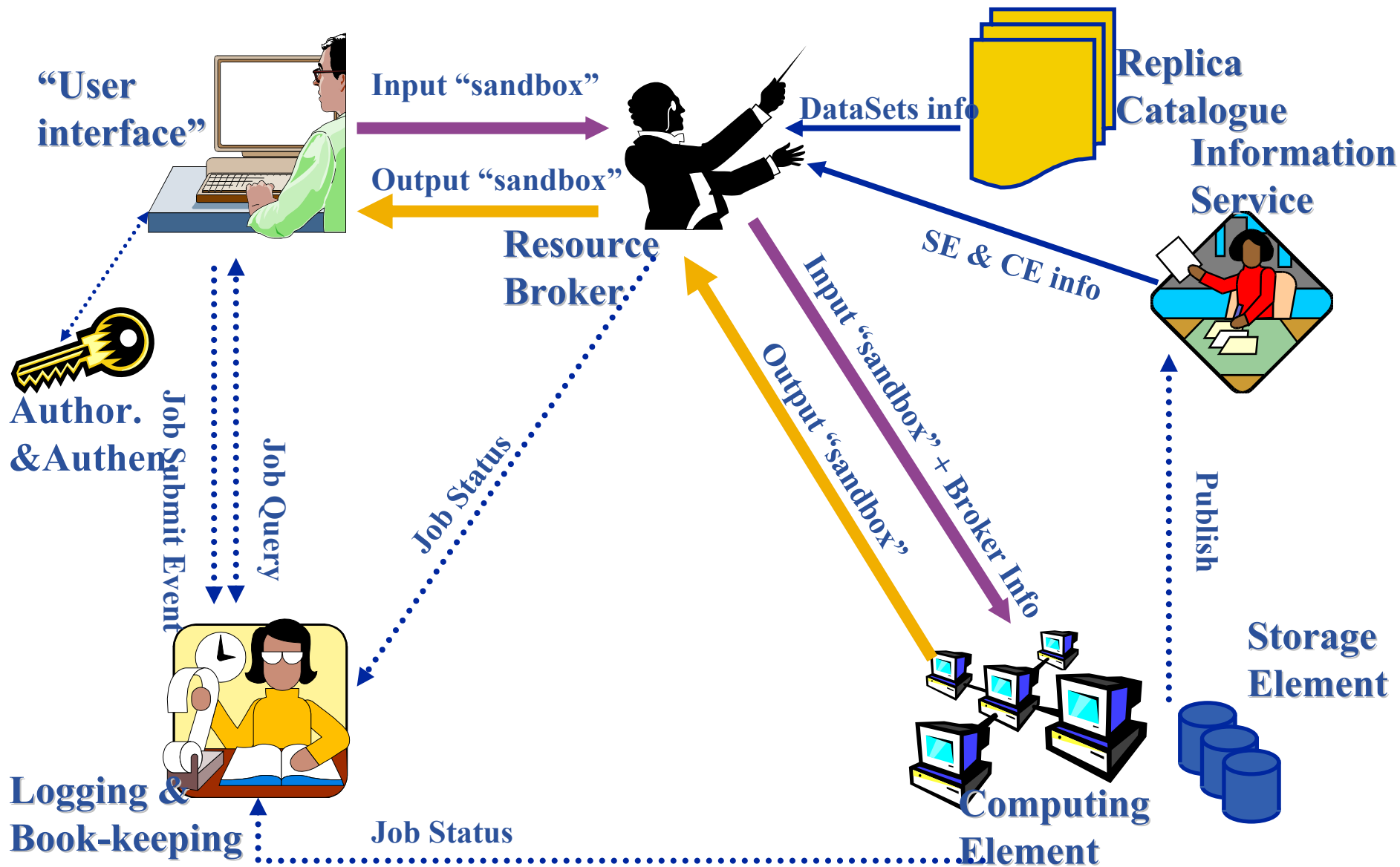
Contents



- LCG-2 (EGEE-0) middleware: higher services built on low-level tools
- GILDA testbed
- Portals:
 - Easy access from any browser
 - Enabled by MyProxy service – issues proxy certificates on user's behalf
 - GENIUS, portal for GILDA
- Practical

- **GT2: a toolkit**
 - not a turnkey solution
 - Current de-facto standard on which production grids are built
- **Need higher level tools**
 - E.g. so submit a job to “a grid” not a CE in a grid
- **...including services for**
 - **Logging** who's done what, statistics about jobs,...
 - **Monitoring** whats happening on the grid
- **Illustrate this using LCG middleware (Large Hadron Collider Compute Grid)**





- Submit job to “resource broker”, in LCG...
 - `edg_job_submit my.jdl`

Example JDL file

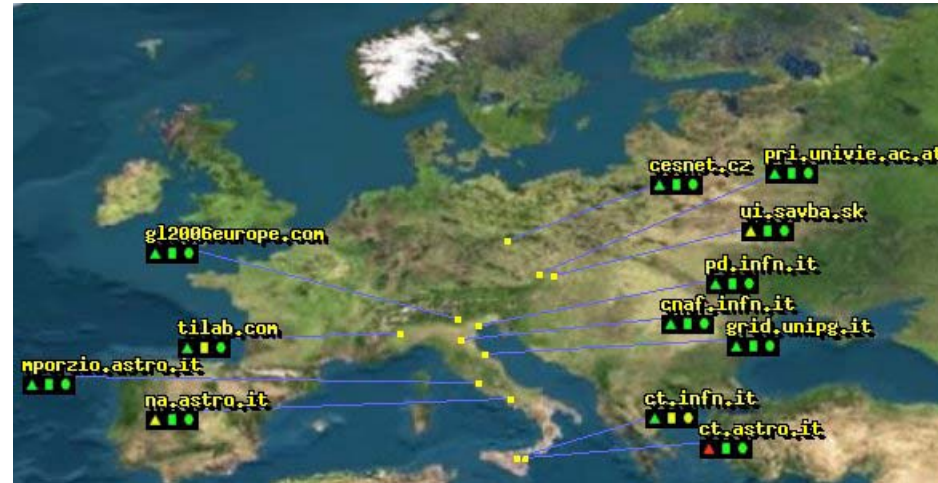
```
Executable = "gridTest";
StdError = "stderr.log";
StdOutput = "stdout.log";
InputSandbox = {"/home/joda/test/gridTest"};
OutputSandbox = {"stderr.log", "stdout.log"};
InputData = "lfn:testbed0-00019";
DataAccessProtocol = "gridftp";
Requirements = other.Architecture=="INTEL" && \
               other.OpSys=="LINUX" && other.FreeCpus >=4;
Rank = "other.GlueHostBenchmarkSF00";
```


A virtual laboratory for demonstration, dissemination, and porting new applications

Run by the EGEE team at INFN / University of Catania (Sicily) under Roberto Barbera

GILDA incorporates:

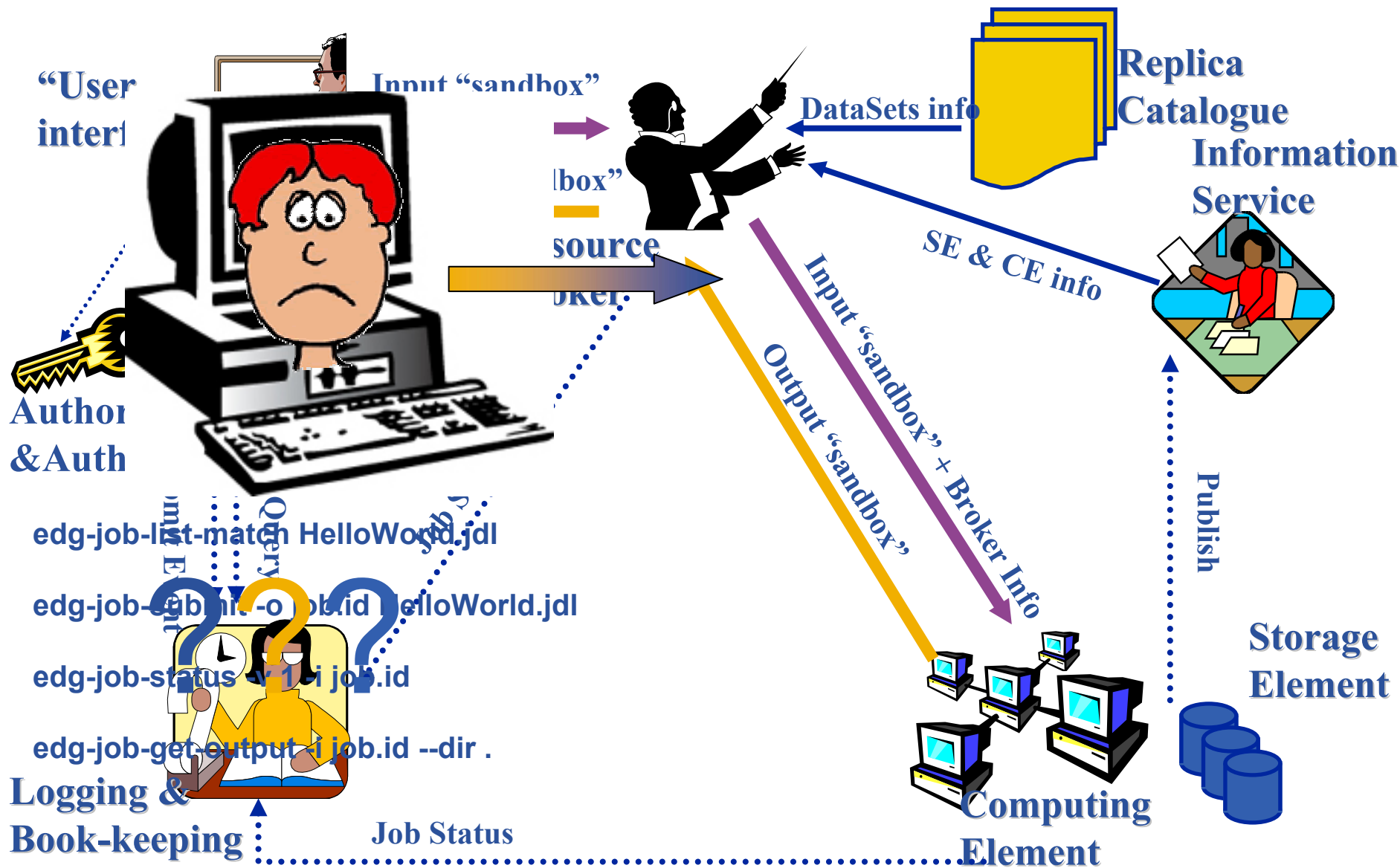
- **The Gilda Testbed**
- **GENIUS**
- **A monitoring system using GridICE (not covered here)**
- **Its own Virtual Organization and Certificate Authority (not covered here)**
- **Runs current EGEE operational middleware**

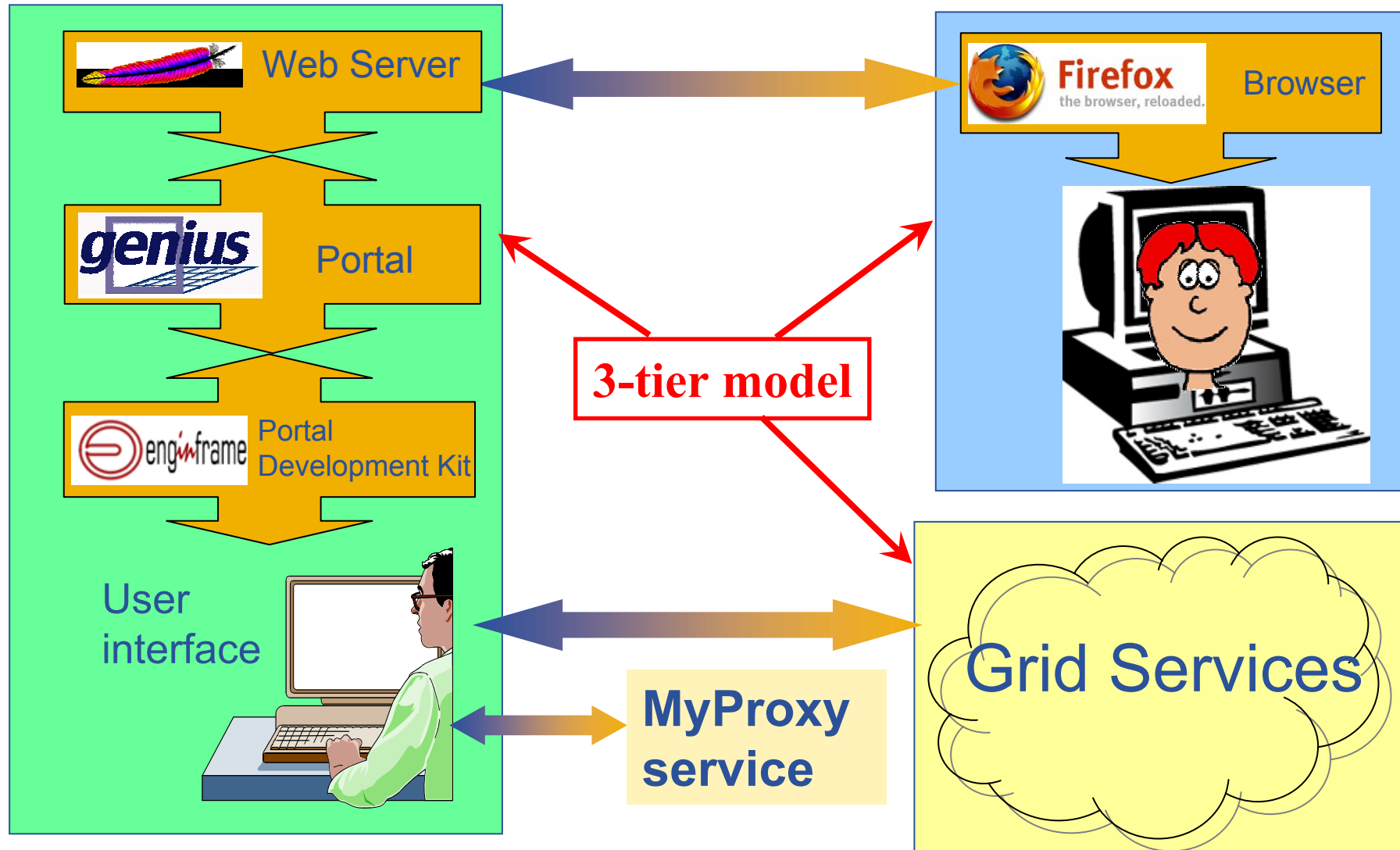


- 12 Sites
- 5 Countries

- Often want to access a grid from any machine – not just from a UI with your credentials uploaded
- **GENIUS:**
 - Used to access GILDA testbed
 - Portal developed by University of Catania with NICE, developers of EngineFrame

Using the Grid without a Portal





- **MyProxy service :**
 - temporarily stores the users credentials.
 - Starts a proxy service on behalf of the user.
 - providing a separate passphrase for the portal.

PRACTICAL using GILDA and GENIUS

Open a browser window at

<http://homepages.nesc.ac.uk/~gcw/GENIUS>