Introduction
- Is there the need for a Web portal to access Grid?

Grid Gateway (L-GRID)
- Architecture
- Dynamic Delegation inside GRID GW
- Access Grid via Web
- Job management: submission, check, output retrieval
- Features
- Performances and Security

References
- Sourceforge, Screen movie demo

Conclusions
- Who uses L-GRID?
Introduction

Is there the need for a Web portal to access Grid?

This is the old way to submit a job, check its status, retrieve the output. Too complex for a newbie!

- Create a JDL
- Get the WMS list
  - lcg-infosites --vo VO wms
- Search for a compliant Computing Element
  - glite-wms-job-list-match -a -e https://<WMS>:7443/glite_wms_wmproxy_server JDL
- Submit the job
  - glite-wms-job-submit -a -e https://<WMS>:7443/glite_wms_wmproxy_server -o ID JDL
- Save the job identifier
- Check the job status
  - glite-wms-job-info --jdl jobID
- Retrieve the output
  - glite-wms-job-output jobID
L-GRID Architecture

L-GRID is a portal based on a client-server architecture

- **Client side**
  - Java applet (< 5 MB) working on Web browser
  - Certificate management, secure communications, X.509 personal certificate does not get out from local machine
  - JDL editor
  - Job submission, check status, output retrieval
  - No Registration

- **Server side**
  - Relies on a gLite User Interface, exposing an Apache / Tomcat server
  - Dynamic delegation mechanism
  - Job management Services
L-GRID Architecture

L-GRID client-server architecture
The Dynamic Delegation mechanism to create a Proxy certificate on the server side – as from Kesselman, Foster et al., “X.509 Proxy Certificates for Dynamic Delegation”
L-GRID: access Grid via Web

A new way to access EGEE/EGI Grid resources

JDL editor

Job submission
L-GRID: Job monitoring

Proxy Dynamic Delegation in Grid Gateway

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L-GRID Features

- Java code and Opensource server [Apache2 licensed]

- Compliant to the EGI and CA certificate policies
  - The X.509 personal certificate does not get out from the local machine

- User needs only his own X.509 personal certificate
  - The portal can be surely used from an Internet point

- No-need of user registration on the server (UI, portal)
  - The user is trusted via X.509 certificate and VOMS credentials

- Highly customizable
An extra security improvement has been achieved implementing on site a dynamic delegation mechanism, according to the Grid Security Infrastructure.
References

- **L-GRID Portal**: [https://gridui.sns.it](https://gridui.sns.it) [hosted @SNS-PISA]

- **Sourceforge**: [http://sourceforge.net/projects/l-grid/](http://sourceforge.net/projects/l-grid/)

- **Screenmovie demo**: [http://www.youtube.com/watch?v=uGnmMiLqJ0s](http://www.youtube.com/watch?v=uGnmMiLqJ0s)

- **Wiki page**: [http://wiki.sns.it/wiki/L-GRID](http://wiki.sns.it/wiki/L-GRID)

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Conclusions

- It works!
- Chosen by the Theophys VO to access parallel cluster via Grid
  [1024 core, hosted @INFN-PISA]

A 3 minutes pre-recorded screen movie demo will be shown.
Thanks for your attention

Please feel free to send questions, [criticisms], suggestions to the authors