P-Grade Grid Portal installation & configuration handson

Gabor Kecskemeti

• MTA SZTAKI, Hungary
• Univ. Westminster, UK
kecskemeti@sztaki.hu

Prerequisites

- Software dependencies:
  - Scientific Linux 3.0.8
  - gLite UI 3.0.0
  - GT-2 development headers (use gtp-build --nosrc gcc32dbg gcc32dbgpthr)
  - For further details, see: http://portal.p-grade.hu/v24/index.php?m=6&s=0
- Hardware requirements:
  - 1 MB memory
  - Strong processor (~3GHz)
  - 20GB disk or more depending on usage

Installation

- Create a user for the portal: adduser pgportal
- Unpack the gzipped tarball: tar zxf pgportal-2.4.1.tgz ; cd pgportal
- Configure the portal installation with the portal_config.txt
  - Be aware that the portal interprets this file as a shell script so quoting is necessary

Configurable items #1

- HOSTNAME: hostname of the machine running P-GRADE Portal. Optional the installer can detect it with the hostname command.
- Supporting multiple tomcat installations on the host:
  - DEFAULT_PORT: non-secure listening port of P-GRADE Portal
  - DEFAULT_SECURE_PORT: HTTPS listening port of P-GRADE Portal
  - SHUTDOWN_PORT: shutdown port of Apache Tomcat

Configurable items #2

- Portal appearance:
  - DEFAULT_VO: default VO of P-GRADE Portal. This VO name will appear on the welcome screen
  - PORTAL_NAME: name of the Portal
  - REG_URL: registration URL link on the welcome screen
  - EMAIL: support team e-mail address on the welcome screen
- Automatically generated certificates:
  - KEYSTORE_PASS: Tomcat keystore password for HTTPS key.
  - JAR_PASS: Tomcat keystore password for jar-file key.

Configurable items #3

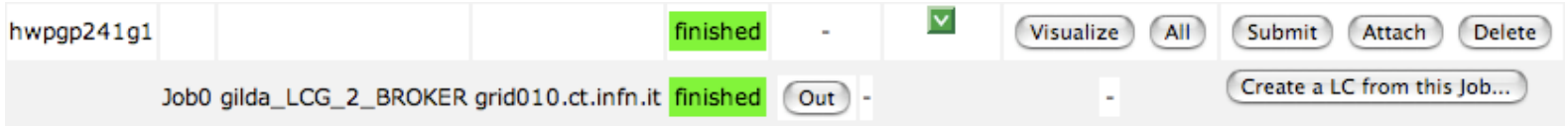
- MDS2 Query setup
  - MYPROXY_HOSTNAME: hostname of the MyProxy server for MDS2 authentication
  - MYPROXY_PORT: MyProxy port for MDS2 authentication
  - USER_NAME: user name on MyProxy server for MDS2 authentication
- Example workflow store setup:
  - FTP_URL: URL of the example FTP repository
  - FTP_PORT: port of the example FTP repository
  - FTP_USER: login username of the example FTP repository
  - FTP_PASS: password of the example FTP repository

Configurable items #GEMLCA

- PWC_ALLOWED_HOSTS: list here the allowed hosts (FQDNs or IP numbers separated by spaces) for the PWC servlet.
- GT4_LOCATION: the path where the gt4 resides. (improper globus location will give security exceptions - see catalina.out)

Configurable files

- GEMLCA - GT2 mapping:
  - Portal certificate setup for unified GEMLCA access
  - GT2 and GEMLCA service pairing for simplified Legacy Code Creation.
  - Named NGS_CONFIG_FILE, should be placed next to the portal_config.txt



- Hibernate configuration
  - Called hibernate.properties next to the portal_config.txt
  - The necessary jars should be placed in the jars folder of the installer.
  - An example MySQL, and PostgreSQL setup is present in the installer.

The site check script

- Before starting the installation, this script will test all the dependencies of the portal, and start the installer if they are met:
  - ./inst_check.pl
  - Answer the upcoming questions
- The site check might be skipped - only the sites accepted by the site check script are supported by SZTAKI:
  - ./install.sh

Example Workflow store, FTP layout requirements

```
<pgportal>
<demoapp>
<name>LM_DEMO testuser</name>
<comp>MTA SZTAKI</comp>
<file>LM-9-DEMO.tar.gz</file>
<desc>Env. Modeling seegrid</desc>
</demoapp>
</pgportal>
```

- There should be a file called <GRIDNAME>.xml for each grid configured in the portal with demoapps described as follows:
  - Name - the name of the stored example workflow
  - Comp - the publisher
  - File - the filename the example workflow is stored in - should be placed next to the xml.
  - Desc - user friendly description of the workflow

Administrative files - Multiple brokers per LCG2 VO

- The portal has a job submission mechanism that can handle multiple LCG-2 brokers per a single VO
  - Round robin
  - Stops on success
- The resource broker configs are stored under
  - ~pgportal/pgportal/poral_work/gridConfigs/edg_wl_ui.conf.<GRIDNAME>*
  - The format of the config file is the same as the regular EGEE VO description. - the file is passed directly to the EGEE command line utilities.

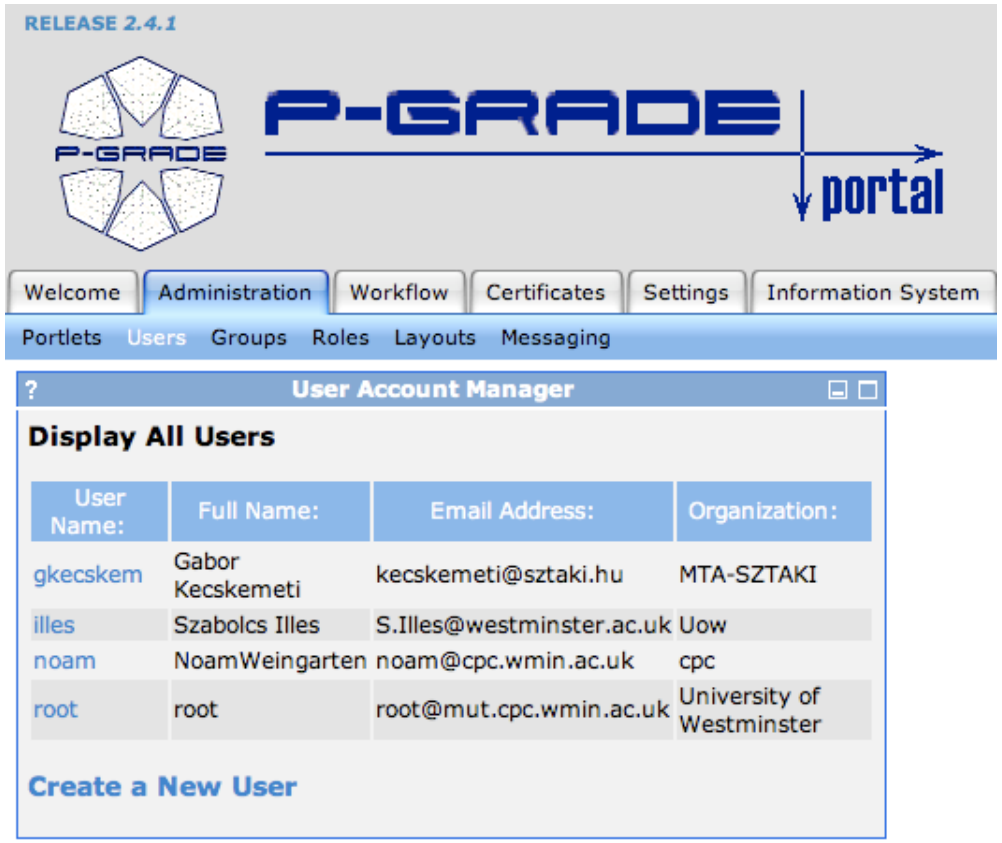
Administrative files - GRAM/GridFTP Map

- The mapping file is located under the name of:
  - ~pgportal/pgportal/portal_work/GridFTP_mapfile
- The portal handles this file line by line, a single line composed as follows separated by spaces:
  - Gridname
  - GRAM contact URL
  - GridFTP location to be used for the site

Portal startup

- Execute ~/pgportal/portalstart.sh
- Open a web browser:
  - http://yourhost:NOSECPORT/gridsphere
  - https://yourhost:SECPORT/gridsphere
- Give the name of the root user and password, then login.

User listing in the portal

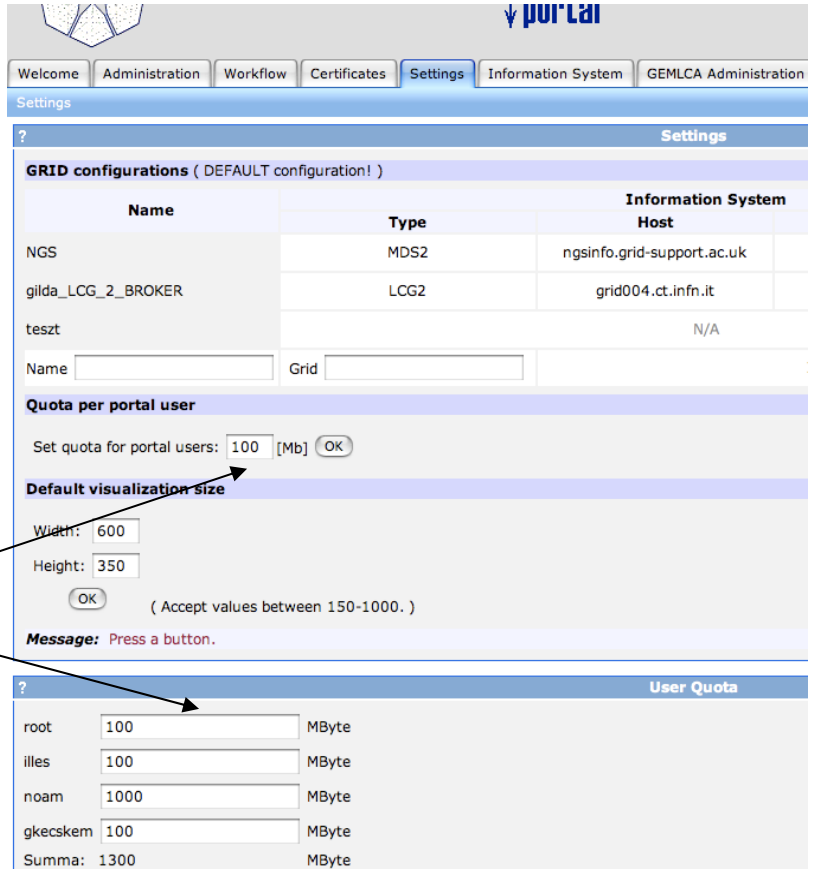


User adminsitration in the portal

- Don’t forget to add the user to the Szupergrid portlet in the Groups tab
  - Users can add themselves however this is more convenient
- Now the users can log in and use the P-Grade portlets.

User quota management

- Soft quota management - no further submissions after quota exceeded
- Quota setup in the settings portlet:
  - Default - for new users
  - Individual



Grid and VO management

- Broker - naming scheme of the brokered grids:
  - VOname_LCG_2_BROKER, VOname_GLITE_BROKER
  - The Voname is the same as in the configuration of the UI machine
- Resources
  - Contact URL and jobmanager defaults for the users
  - GEMLCA Services should use their URL and GEMLCA as jm
- Information system integration
  - MDS2
    - Basic info: hostname, port and baseDN of the MDS2
    - Access info: username, password for the myproxy server to acces a certificate - remember MYPROXY_* configuration values.
  - BDII
    - Named LCG2
    - Same basic info has to be given

Further information

See any installed portal’s help portlet.