



P-Grade Grid Portal installation & configuration hands on

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 #GEMMLCA

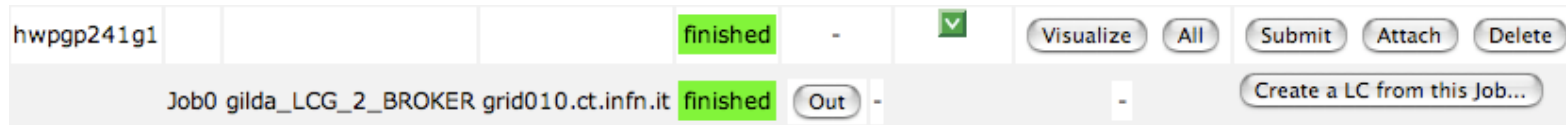


- **PWC_ALLOWED_HOSTS**: list here the allowed hosts (FQDNs or IP numbers separated by spaces) for the PWC servlet.
- **GT4_LOCATION**: the path where the gt4 resides. (improper globus location will give security exceptions - see catalina.out)



Configurable files

- GEMMLCA - GT2 mapping:
 - Portal certificate setup for unified GEMMLCA access
 - GT2 and GEMMLCA 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



RELEASE 2.4.1



P-GRADE portal

Welcome Administration Workflow Certificates Settings Information System

Portlets Users Groups Roles Layouts Messaging

? **User Account Manager** [] []

Display All Users

User Name:	Full Name:	Email Address:	Organization:
gkecskem	Gabor Kecskemeti	kecskemeti@sztaki.hu	MTA-SZTAKI
illes	Szabolcs Illes	S.Illes@westminster.ac.uk	Uow
noam	NoamWeingarten	noam@cpc.wmin.ac.uk	cpc
root	root	root@mut.cpc.wmin.ac.uk	University of Westminster

[Create a New User](#)

User administration in the portal



RELEASE 2.4.1

P-GRADE portal

Welcome Administration Workflow Certificates Settings Information System

Portlets Users Groups Roles Layouts Messaging

User Account Manager

Edit User Information

LEAVE PASSWORD FIELD BLANK TO KEEP EXISTING PASSWORD IF EDITING AN EXISTING USER

User Name:

Full Name:

Email Address:

Organization:

Disable account?

Select Roles	Role name
<input type="checkbox"/>	USER
<input type="checkbox"/>	ADMIN
<input type="checkbox"/>	SUPER

Password:

Confirm password:

- 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

The screenshot shows the 'Settings' portlet in a portal interface. It is divided into three main sections:

- GRID configurations (DEFAULT configuration!)**: A table listing grid configurations.

Name	Type	Information System Host
NGS	MDS2	ngsinfo.grid-support.ac.uk
gilda_LCG_2_BROKER	LCG2	grid004.ct.infn.it
teszt		N/A
- Quota per portal user**: A section for setting the default quota for portal users. It includes a text input field with '100' and a unit selector '[Mb]', followed by an 'OK' button.
- Default visualization size**: A section for setting the default visualization size. It includes input fields for 'Width: 600' and 'Height: 350', followed by an 'OK' button and a note '(Accept values between 150-1000.)'. A message below reads 'Message: Press a button.'

Below these sections is the **User Quota** portlet, which displays a table of individual user quotas:

root	100	MByte
illes	100	MByte
noam	1000	MByte
gkecskem	100	MByte
Summa:	1300	MByte



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
 - GEMMLCA Services should use their URL and GEMMLCA as jm
- Information system integration
 - MDS2
 - Basic info: hostname, port and baseDN of the MDS2
 - Access info: username, password for the myproxy server to access 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.