

**GPE Clients
UNICORE Tutorial
25.-26.07.2007**

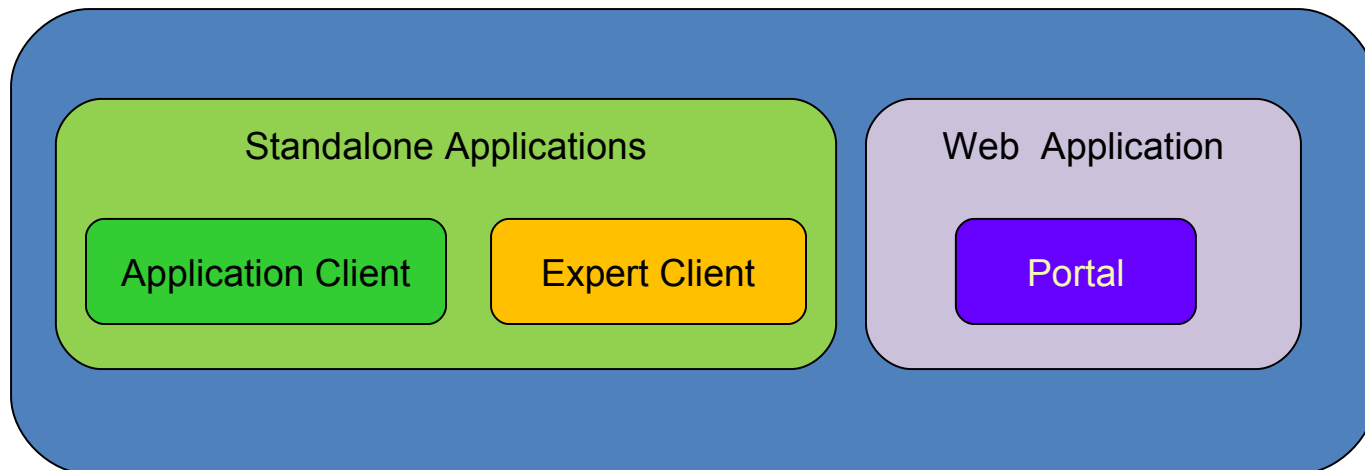
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UNICORE GPE Clients

- ▶ Application Client for running a single application
- ▶ Expert Client for experienced users
- ▶ Portal as a web solution



UNICORE Application Client

- ▶ Lightweight Java application
- ▶ Runs a single application a time
- ▶ Connects directly to the atomic services => fast
- ▶ Uses Java Swing components



UNICORE Expert Client

- ▶ Java application
- ▶ Provides the whole functionality of the application client plus advanced features
- ▶ Runs simple jobs and sequences of jobs with dependencies (workflows) to combine a set of Grid services in a complex Grid application
- ▶ Allows to launch an application on several different systems simultaneously
- ▶ Provides graphical user interface for workflow editing, submitting and debugging
- ▶ Uses BPEL as a workflow language



UNICORE GPE Portal

- ▶ Web application deployed to a JSR-168 compliant portlet container
- ▶ acts as an intermediate between an inexperienced Grid user and the GPE grid system
- ▶ User doesn't need to install any applications
- ▶ Requires a web-browser and the portal account only
- ▶ Uses MyProxy server to generate proxy certificates
- ▶ Takes care of more complicated issues such as the security or the complexity of the GRID
- ▶ Provides a central place for administration tasks (management of user accounts, applications, jobs, etc.)
- ▶ Uses portal GUI components



UNICORE GPE Client Installation

- ▶ Prerequisites:

- ▶ Java SDK 1.5 or JRE 1.5

- ▶ execute „`java -version`“ to check the current java version

- ▶ Installation:

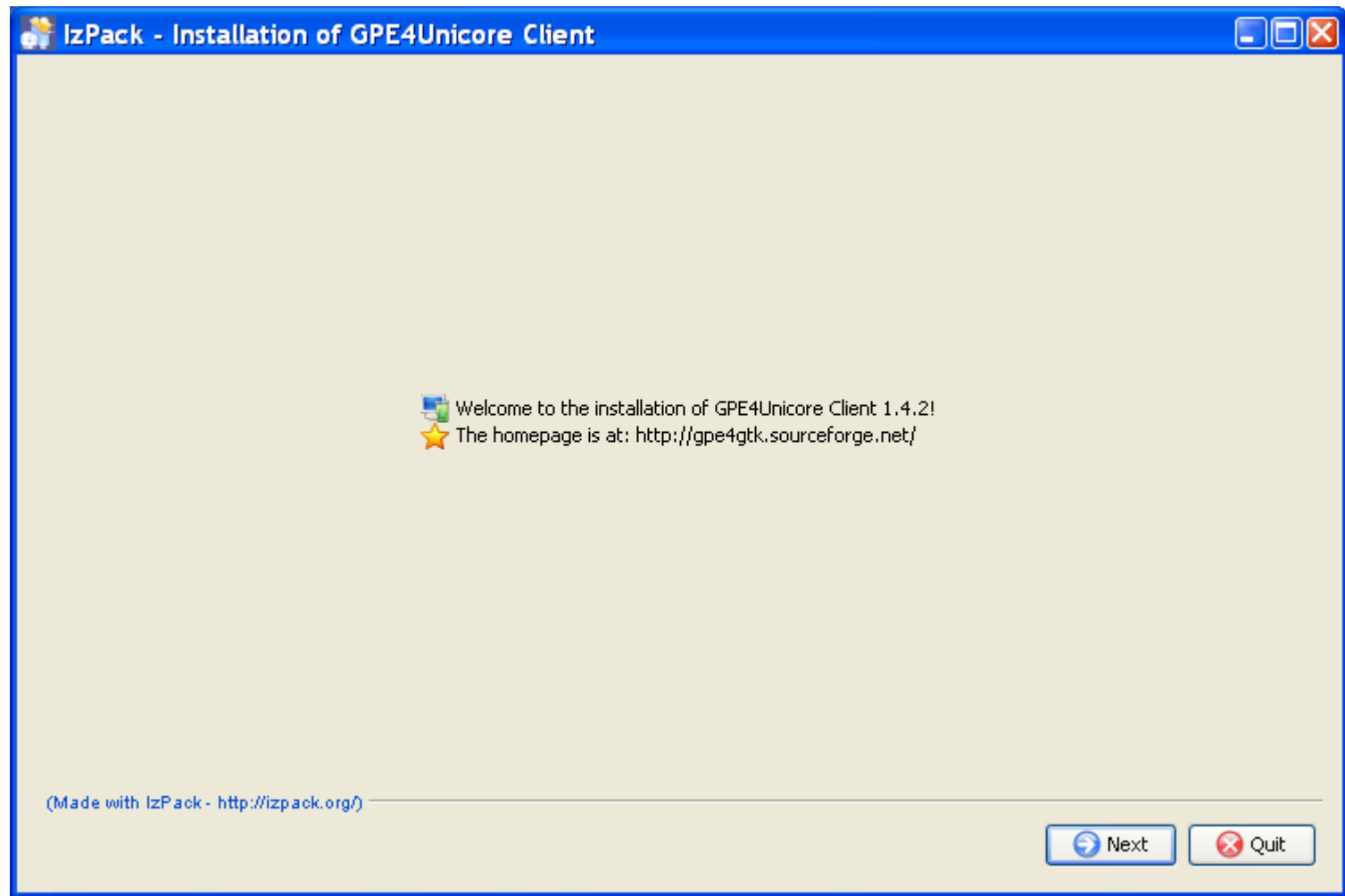
- ▶ `java -jar gpe4unicore-client-package-1.4.2-RC2-installer.jar`

- ▶ Configuration:

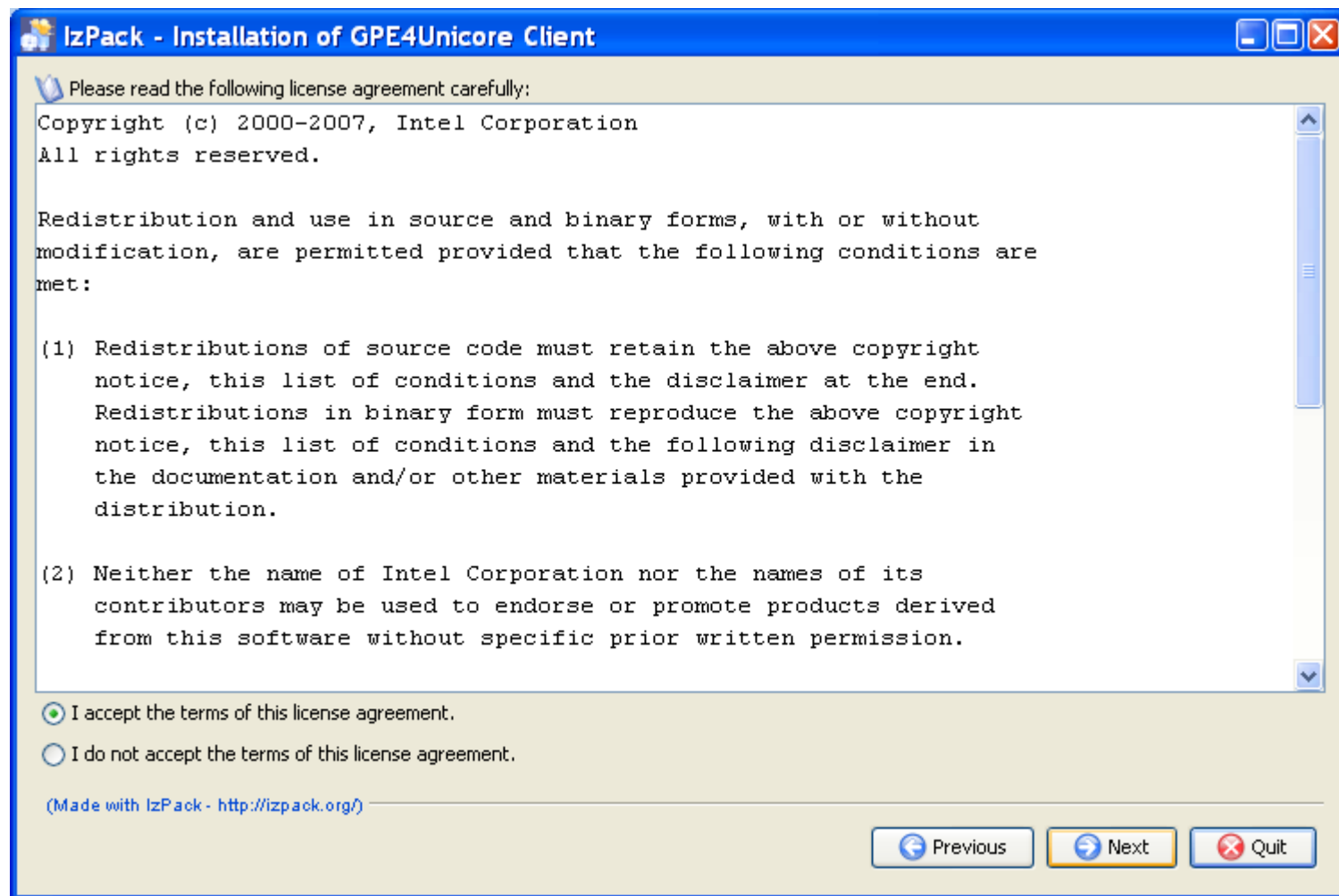
- ▶ set the `JAVA_HOME` environment variable to point the java 1.5 installation directory



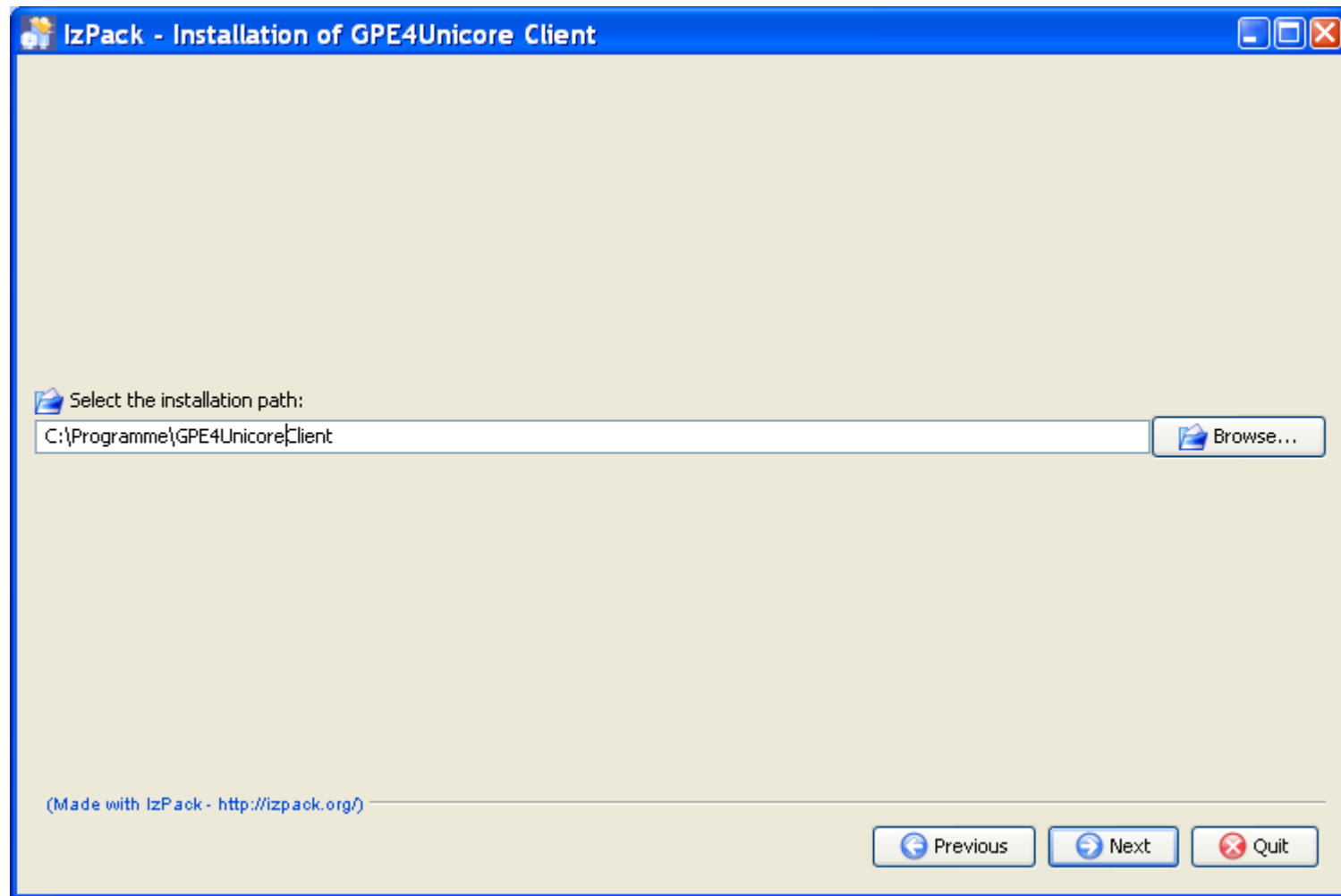
UNICORE GPE Client Installation



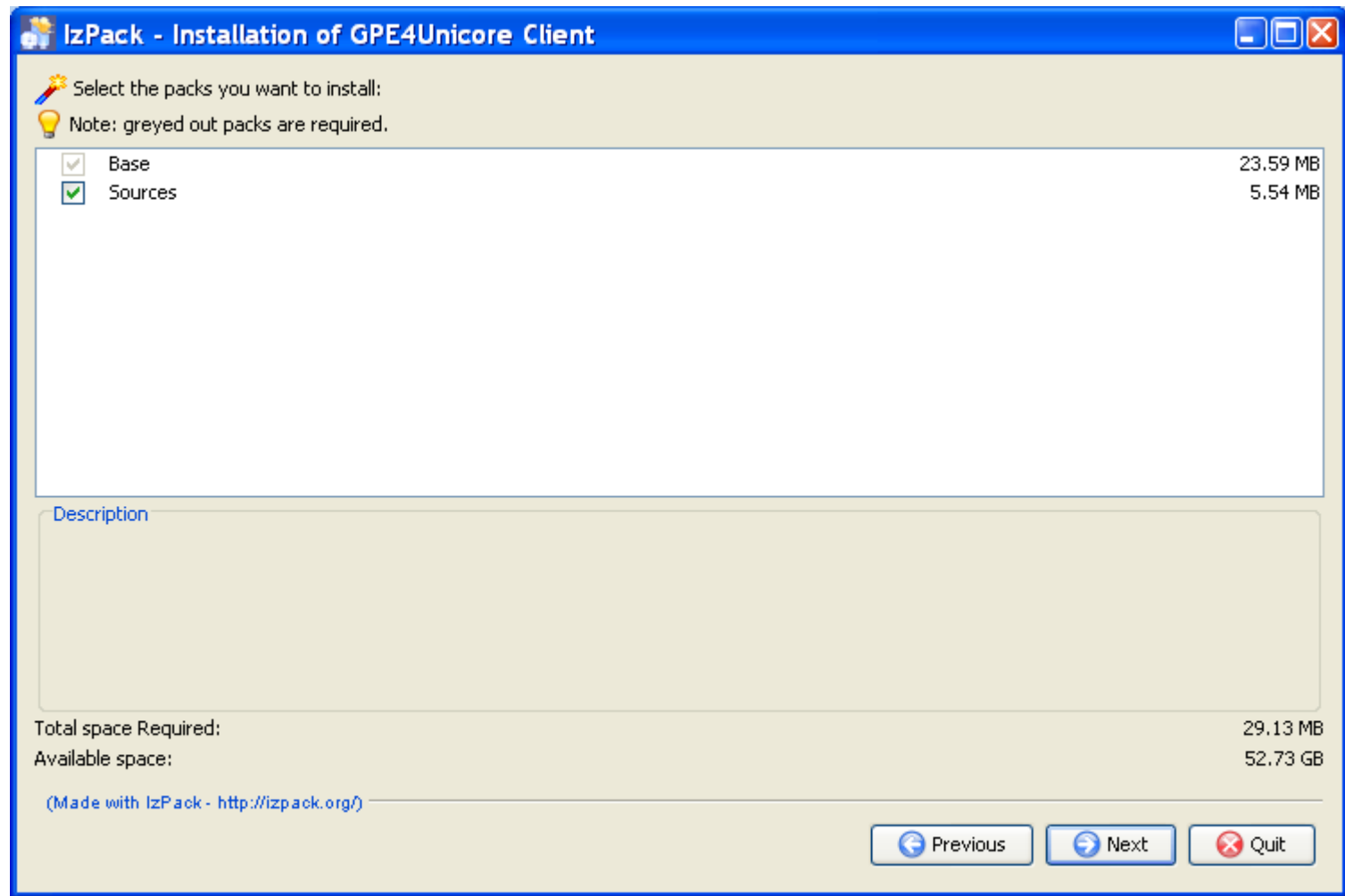
UNICORE GPE Client Installation



UNICORE GPE Client Installation



UNICORE GPE Client Installation



UNICORE GPE Client Installation

IzPack - Installation of GPE4Unicore Client

The installer will generate the default service addresses using values entered below.

Gateway Hostname:

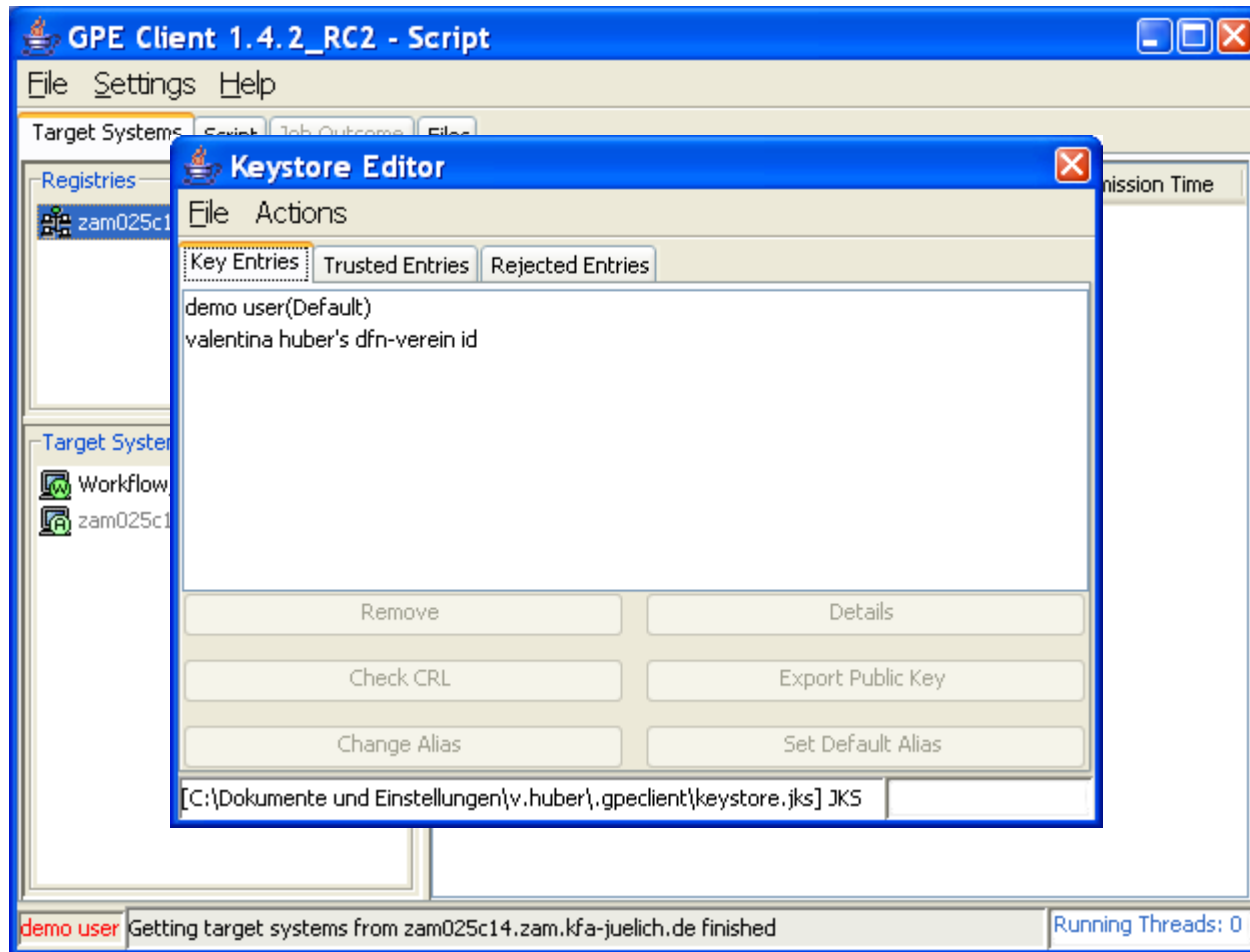
Gateway Port:

Site Name:

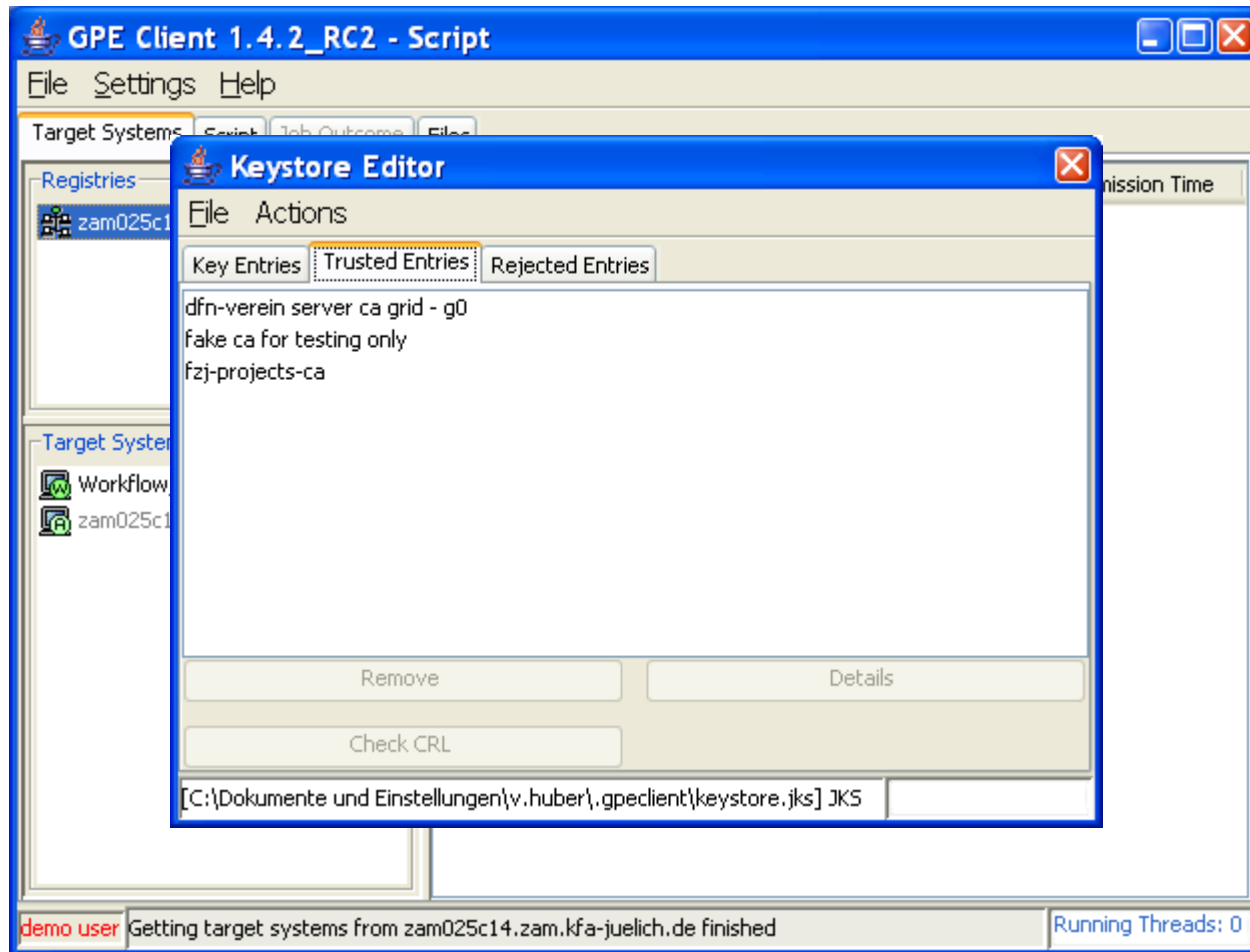
(Made with IzPack - <http://izpack.org/>)



UNICORE GPE Client Configuration



UNICORE GPE Client Configuration



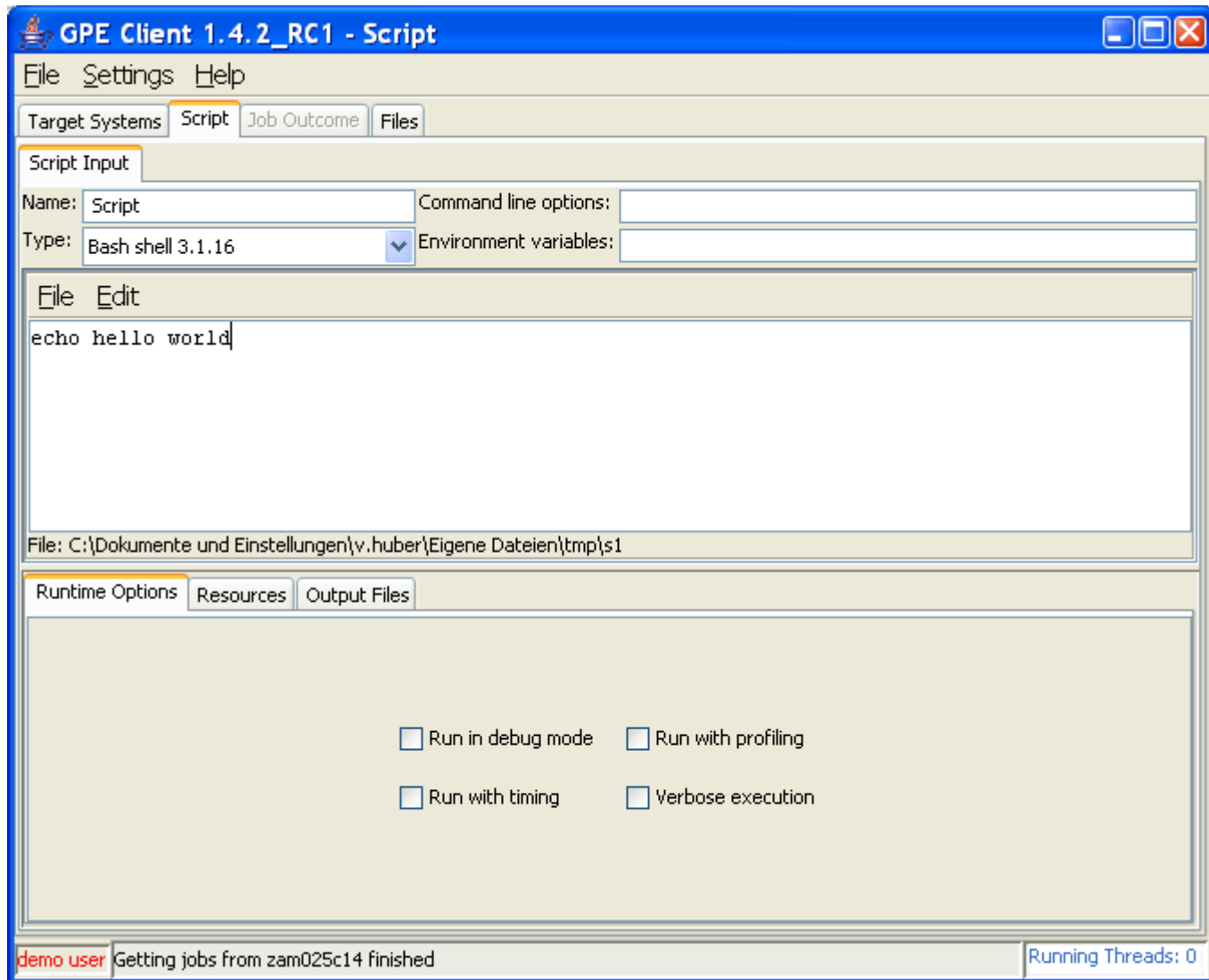
UNICORE Application Client

The screenshot shows the GPE Client 1.4.2_RC1 - Script window. The window has a menu bar with 'File', 'Settings', and 'Help'. Below the menu bar are tabs for 'Target Systems', 'Script', 'Job Outcome', and 'Files'. The 'Script' tab is active, displaying a table of job execution results. The table has four columns: 'Job Name', 'Application', 'State', and 'Submission Time'. A single row is visible, showing a job named 'Script' with application 'Bash shell-3.1.16', state 'SUCCESSFUL', and submission time 'Jul 26, 2007 4:35:4...'. On the left side of the window, there are two panels: 'Registries' and 'Target Systems'. The 'Registries' panel shows a registry named 'zam025c14.zam.kfa-juelich.de'. The 'Target Systems' panel shows two target systems: 'Workflow_zam025c14' and 'zam025c14'. At the bottom of the window, there is a status bar with the text 'demo user Getting jobs from zam025c14 finished' and 'Running Threads: 0'.

Job Name	Application	State	Submission Time
Script	Bash shell-3.1.16	SUCCESSFUL	Jul 26, 2007 4:35:4...



UNICORE Application Client



UNICORE Expert Client

The screenshot displays the GPE Expert Client 1.4.2_RC1 interface. The main window is titled 'workflow1' and contains a 'Workflow Input Parameters' section. The workflow is visualized as a 'Generic' task (represented by a coffee bean icon) leading to a 'Script' task (represented by a document icon). The 'Script' task is currently selected and highlighted with a dashed green border.

The 'Script' task configuration is shown in the right-hand pane, which is divided into several tabs: 'Input', 'Outcome', 'Input and Output Parameters', and 'Script Input'. The 'Script Input' tab is active, showing the following details:

- Name: Script1
- Type: Bash shell 3.1.16
- Command line options: (empty field)
- Environment variables: (empty field)

Below the configuration fields is a text editor with the content:

```
echo hello world
```

The status bar at the bottom of the window shows the message: 'demo user Updating entry workflow1-WORKFLOW v.1.0 finished' and 'Running Threads: 0'.



UNICORE Expert Client

The screenshot displays the UNICORE Expert Client 1.4.2_RC1 interface. The window title is "GPE Expert Client 1.4.2_RC1". The menu bar includes "File", "Settings", and "Help".

The left sidebar shows a tree view of the Grid structure:

- Grid
 - zam025c14.zam.kfa-juelich.de
 - zam025c14
 - Workflow_zam025c14
 - workflow workflow1 S
 - workflow workflow1 S
 - workflow workflow1 S

workflow1 workflow1 workflow1

Workflow Workflow Input Parameters

Input Outcome Input and Output Parameters

Options Source File Info

Name:

Width: Height: Anti Aliasing:

Animate Initial Frame: Final Frame:

Subset Start Frame: Subset End Frame:

Initial Clock: Final Clock:

The workflow diagram shows a sequence of steps: Generic (checked), Script (checked), and POV-Ray (checked and highlighted with a dashed green box). Arrows indicate the flow from Generic to Script to POV-Ray.

demo user Fetch outcome for POV-Ray v.3.5 finished

Running Threads: 0



UNICORE Expert Client

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 - Workflow_zam025c14
 - workflow workflow1 S
 - workflow workflow1 S
 - workflow workflow1 S

demo user Fetch outcome for POV-Ray v.3.5 finished

Running Threads: 0



UNICORE Web Portal

Pluto Portal Driver - Mozilla Firefox

http://zam461.zam.kfa-juelich.de:9129/pluto/portal/jsr168

Pluto Portal Driver (pluto-driver/1.0.1) deployed in Apache Tomcat/5.5.15 [Login](#)

Test
Admin
[GPEPortalClient](#)

GPEPortalClient
GPE JSR-168 Portal Client [config](#) [edit](#) [help](#) [view](#) | [max](#) [min](#) [nor](#)

Login

► Enter your login name and password.
Contact GPE Portal administrator for registration if needed.

Login Name:

Password:

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UNICORE Web Portal

The screenshot shows a Mozilla Firefox browser window titled "Pluto Portal Driver - Mozilla Firefox". The address bar displays the URL `http://zam461.zam.kfa-juelich.de:9129/pluto/portal/jsr168`. The browser's menu bar includes "Datei", "Bearbeiten", "Ansicht", "Chronik", "Lesezeichen", "Extras", and "Hilfe". The toolbar contains navigation buttons (back, forward, home, stop, refresh) and a search bar with "Google". The browser's status bar shows "Fertig" and system information: "Jetzt: Bewölkt, 21° C", "Do: 22° C", and "Fr: 21° C".

The main content area of the browser displays the "Pluto Portal Driver" interface. At the top, there is a logo for "Pluto Apache Portals" and a status bar indicating "Pluto Portal Driver (pluto-driver/1.0.1) deployed in Apache Tomcat/5.5.15" with a "Login" link. A left sidebar contains navigation links: "Test", "Admin", and "GPEPortalClient".

The main content area is titled "GPEPortalClient" and "GPE JSR-168 Portal Client". It includes a "Logout" link and a "Main Page" link. A yellow banner reads: "The main page of the portal client. Select the registry you wish to select the target systems from." Below this, there are several sections:

- Select a registry:** A dropdown menu showing "zam025c14.zam.kfa-juelich.de".
- Select a target system:** A dropdown menu with the text "Select the target system".
- Select a GridBean to submit a new job:** A dropdown menu with options: "Application", "POVRay", "Script", and "more GridBeans...".

On the right side of the main content area, there is a table with columns: "Job Id", "Application", "State", and "Termination Time". Below the table, there are several action links: "Refresh job list", "Refresh Job", "Start Job", "Hold Job", "Resume Job", "Abort Job", "Destroy Job", and "Extend lifetime: [input] :".



UNICORE Web Portal

the input files of your job, set the initial job lifetime and submit the job.
At this stage you may also change the target system you wish to submit the job to. **Note: you MUST select some target system before submitting a job!**

Select a registry:
zam025c14.zam.kfa-juelich.de

Select a target system:
Workflow_XNJS
XNJS

Select a GridBean to submit a new job:
Application
POVRay
Script
more GridBeans...

Name: script1
Type: Bash shell 3.1.16
Command line:
Environment:
Output files:
Run in debug mode:
Run with profiling:
Run with timing:
Verbose execution:

Resources						
Name	Enabled	Request	Units	Minimum	Maximum	Default
<input type="checkbox"/> Nodes:			Nodes	1.0	1.0	1.0
<input type="checkbox"/> Processors:			Processors per Node	1.0	1.0	1.0
<input type="checkbox"/> Memory:			Megabytes per Node	1.0	1024.0	256.0
<input type="checkbox"/> CPU Time:			CPU seconds	1.0	86400.0	3600.0

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UNICORE Web Portal

Pluto Portal Driver (pluto-driver/1.0.1) deployed in Apache Tomcat/5.5.15 [Login](#)

[Test](#)
[Admin](#)
[GPEPortalClient](#)

GPEPortalClient
GPE JSR-168 Portal Client [config](#) [edit](#) [help](#) [view](#) | [max](#) [min](#) [nor](#)

[Main Page](#) | [Preferences](#) [Logout](#)

The **main page** of the portal client. ✕

The table in the middle contains the active jobs you have submitted to the selected target systems.

► **Select any job** and perform one of the actions on the right side of the portal window.
If you want to change the list of available registries or GridBean services follow the "Preferences" link.

Select a registry:	Job Id	Application	State	Termination Time	Refresh job list
zam025c14.zam.kfa-juelich.de	script1	Bash shell-3.1.16	SUCCESSFUL	25.07.07 17:14	Refresh Job

Select a target system:
 Workflow_XNJS
 XNJS

Select a GridBean to submit a new job:
Application
POVRay
Script
more GridBeans...

[Start Job](#)
[Hold Job](#)
[Resume Job](#)
[Abort Job](#)
[Destroy Job](#)
[Extend lifetime:](#) :

Fertig | Idle | Jetzt: Bewölkt, 21° C | Do: 22° C | Fr: 21° C

