



# Starting with Gridsphere

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## *Gridsphere Installation*

Albert Einstein Institute

# What do you need?

- Following software is needed to install GridSphere:
  - Java 1.4.2 (from <http://java.sun.com>)
  - Jakarta Tomcat 4 or 5 (from <http://www.apache.org/dist/jakarta/tomcat>)
  - Jakarta Ant  $\geq 1.6+$  (from <http://www.apache.org/dist/ant/binaries>)
- Gridsphere either as download from <http://www.gridisphere.org> or CVS Version

```
> cvs -d :pserver:anonymous@cvs.gridisphere.org:/home/repository login
> cvs -d :pserver:anonymous@cvs.gridisphere.org:/home/repository co gridisphere
> cd gridisphere
> cvs update -dP
```

# Install GridSphere

```
~/gridsphere > ls -l
total 128
drwxr-xr-x  7 wehrens  staff    238  8 Jun 08:21 CVS
-rw-r--r--  1 wehrens  staff   2710  5 Apr 15:02 ChangeLog
-rw-r--r--  1 wehrens  staff   3850 20 Jan 11:12 INSTALL
-rw-r--r--  1 wehrens  staff   5484  3 Jun 06:42 LICENSE
-rw-r--r--  1 wehrens  staff    923  7 Jun 10:15 README
-rw-r--r--  1 wehrens  staff    623 28 Jan 13:27 build.properties
-rw-r--r--  1 wehrens  staff  40530  3 Jun 04:58 build.xml
drwxr-xr-x  4 wehrens  staff    136  8 Jun 08:21 conf
drwxr-xr-x 11 wehrens  staff    374  8 Jun 08:21 config
drwxr-xr-x  7 wehrens  staff    238  8 Jun 08:21 docs
drwxr-xr-x 50 wehrens  staff   1700  8 Jun 08:21 lib
drwxr-xr-x  4 wehrens  staff    136  8 Jun 08:21 perf
drwxr-xr-x  5 wehrens  staff    170  8 Jun 08:21 src
drwxr-xr-x  5 wehrens  staff    170  8 Jun 08:22 tests
drwxr-xr-x  3 wehrens  staff    102  8 Jun 08:22 trash
drwxr-xr-x 13 wehrens  staff    442  8 Jun 08:22 webapps
~/gridsphere > ant install
```

# License Agreement

```
[echo]
[echo]     c) Slight Negligence. The GridSphere Project's liability for slight
[echo]     negligence is limited to cases of material breach and cases of
[echo]     default ("Verzug") or impossibility of performance
[echo]     ("Unmoeglichkeit"). In such cases, The GridSphere Project's
[echo]     liability is limited to reasonably foreseeable damages.
[echo]
[echo]     d) Loss of Data. The GridSphere Project is not liable for any loss
[echo]     of data.
[echo]
[echo]     e) The GridSphere Project is not liable for any consequential damages.
[echo]
[echo] 9) This Agreement shall be governed by the laws of the Federal Republic of
[echo] Germany. The application of the UN Convention on Contracts for the
[echo] International Sale of Goods is excluded. The exclusive place of
[echo] jurisdiction for any legal disputes arising from or in connection with
[echo] this License Agreement shall be Berlin/Germany.
[echo]
[echo]                                     END OF LICENSE
[input] Do you agree to these terms? Hit y or n(y,n)
```

- read and accept the license agreement

```
[echo] Compiling core framework
[javac] Compiling 1 source file to /Users/wehrens/gridsphere/build/classes

gridsphere-ui-tags-jar:

gridsphere-provider-jar:

portlet-api-jar:
    [echo] Creating JSR portlet API JAR for Tomcat

portlet-jar:

coreportlets-jar:

jar:

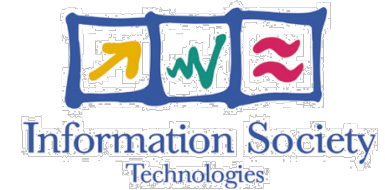
create-database:

BUILD SUCCESSFUL
Total time: 7 minutes 4 seconds
~/gridsphere > $CATALINA_HOME/bin/startup.sh
```

- Gridsphere is installed including HTML and PDF documentation



# Login to GridSphere 'root'



GridLab **GridSphere Portal** English

GridSphere  
Home

## Welcome to GridSphere 2.0

Thank you for downloading and installing the GridSphere portal.

Below you will find links to documents relating to GridSphere installation, administration and portlet development.

- [GridSphere User's Guide \(HTML\) \(PDF\)](#)
- [GridSphere Portal Administrator's Guide \(HTML\) \(PDF\)](#)
- [GridSphere Portlet Reference Guide \(HTML\) \(PDF\)](#)
- [GridSphere Portlet Tutorial Guide \(HTML\) \(PDF\)](#)
- [GridSphere Tag Library User's Guide \(HTML\) \(PDF\)](#)
- [GridSphere Frequently Asked Questions \(HTML\) \(PDF\)](#)
- [GridSphere JavaDoc API \(HTML\)](#)

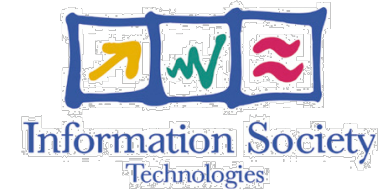
Please join the mailing lists for more involvement:

- [Developers List](#) Discussions relating to overall GridSphere and portlet development.
- [Users List](#) Discussions on installing and configuring GridSphere.
- [CVS List](#) CVS commit information. Very useful if you're a developer.

Login	
User Name	<input type="text" value="root"/>
Password	<input type="password"/>
<input type="button" value="Login"/>	



# Logged In!



Welcome Administration

Settings Layout

### Profile Manager

#### Edit Settings for root

Last Login Time: **Thursday, July 8, 2004 10:31:47 AM CEST**

User Name: root      Locale: English

Full Name:

Email Address:

Organization:

Timezone: 

- Europe/Amsterdam
- Europe/Andorra
- Europe/Athens
- Europe/Belfast
- Europe/Belgrade
- Europe/Berlin

#### Configure messaging service

No Messaging service configured.

#### Configure group membership

Groups:	Group Description:	Role in Group
<input checked="" type="checkbox"/>	gridsphere	Core GridSphere Group SUPER

#### Update password

Enter original password:

Password:

Confirm Password:

# Edit profile



Welcome Administration JSR Tutorial

Settings Layout

? Profile M

## Edit Settings for root

Last Login Time: **Sunday, July 11, 2004 9:35:52 PM CEST**

User Name:  Locale:   English ▾

Full Name:

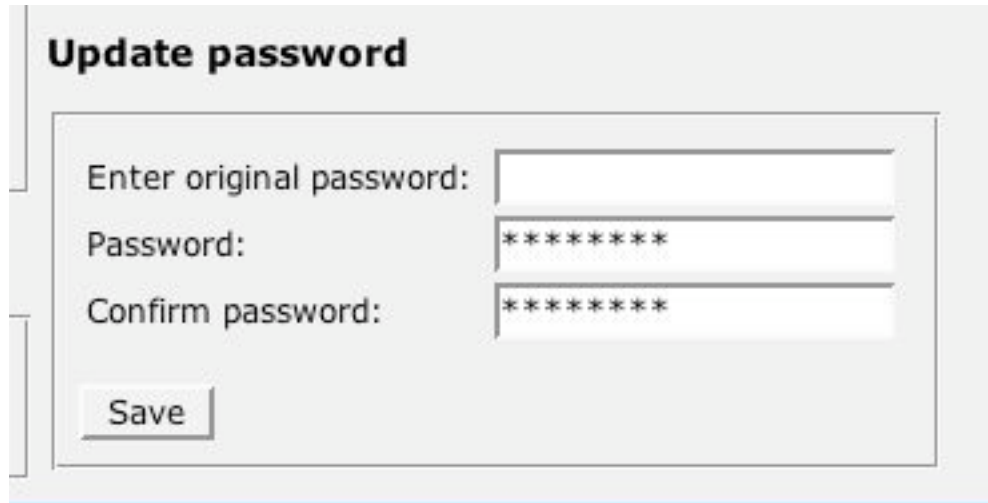
Email Address:  Timezone:

Organization:

- Africa/Abidjan
- Africa/Accra
- Africa/Addis\_Ababa
- Africa/Algiers
- Africa/Asmera
- Africa/Bamako



# Update password

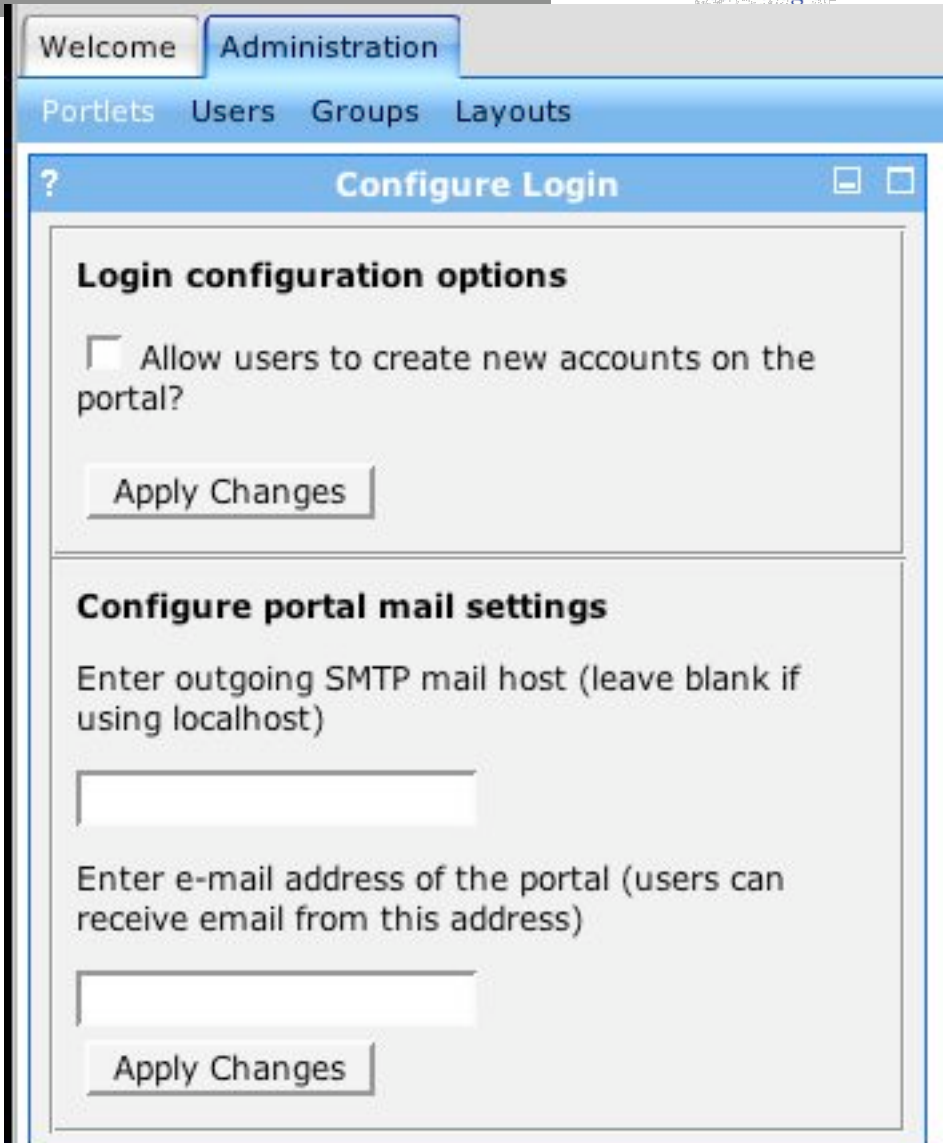


The screenshot shows a web form titled "Update password". It contains three input fields: "Enter original password:", "Password:", and "Confirm password:". The "Password:" and "Confirm password:" fields are filled with asterisks. A "Save" button is located at the bottom left of the form.

- Should be  $> 5$  characters
- GridSphere only stores hashes of passwords in database

# Configure portal settings

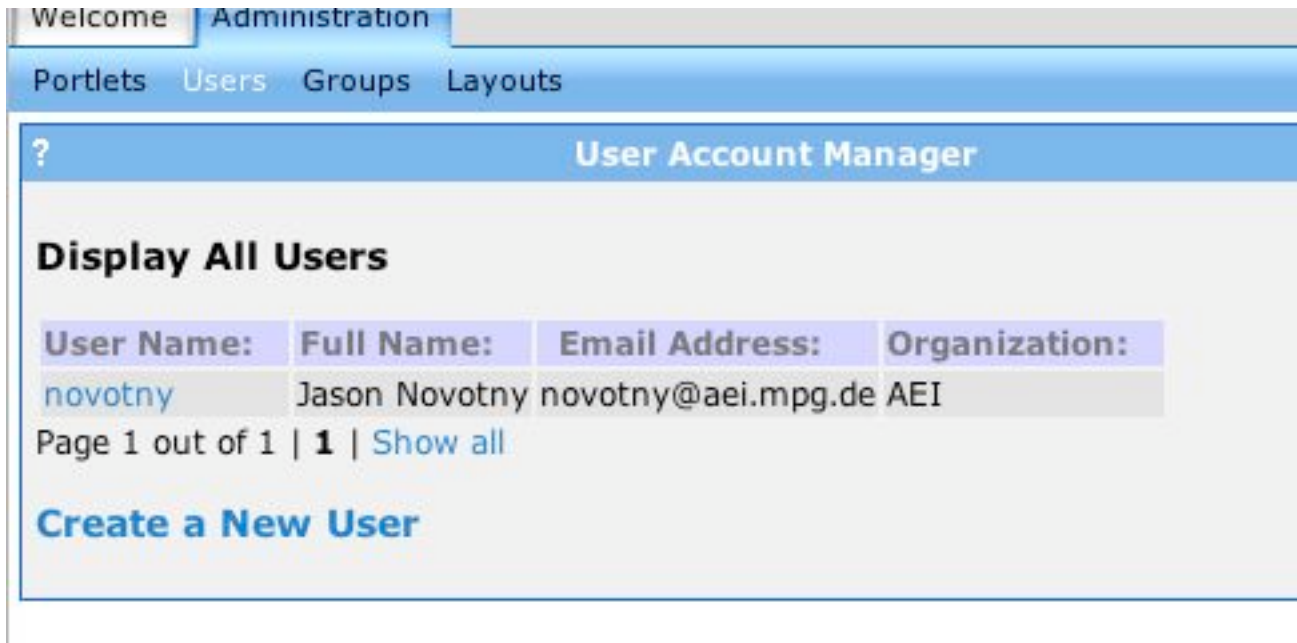
- Allow users to create accounts?
- Configure mail settings for sending mail to users that have forgotten their password



The screenshot shows the 'Administration' section of the GridLab portal. The 'Configure Login' window is open, displaying two main configuration areas:

- Login configuration options:** A checkbox labeled 'Allow users to create new accounts on the portal?' is currently unchecked. Below this is an 'Apply Changes' button.
- Configure portal mail settings:** This section includes two text input fields. The first is labeled 'Enter outgoing SMTP mail host (leave blank if using localhost)'. The second is labeled 'Enter e-mail address of the portal (users can receive email from this address)'. Below these fields is another 'Apply Changes' button.

# Manage users



The screenshot shows a web application interface for user management. At the top, there are tabs for 'Welcome' and 'Administration', with 'Administration' selected. Below this is a navigation bar with 'Portlets', 'Users', 'Groups', and 'Layouts'. The main content area is titled 'User Account Manager' and contains a section 'Display All Users'. This section features a table with the following data:

User Name:	Full Name:	Email Address:	Organization:
novotny	Jason Novotny	novotny@aei.mpg.de	AEI

Below the table, it indicates 'Page 1 out of 1 | 1 | Show all'. At the bottom of the section, there is a link 'Create a New User'.

- Existing users can be modified / roles changed
- New users can be created

# Create new user

Welcome Administration

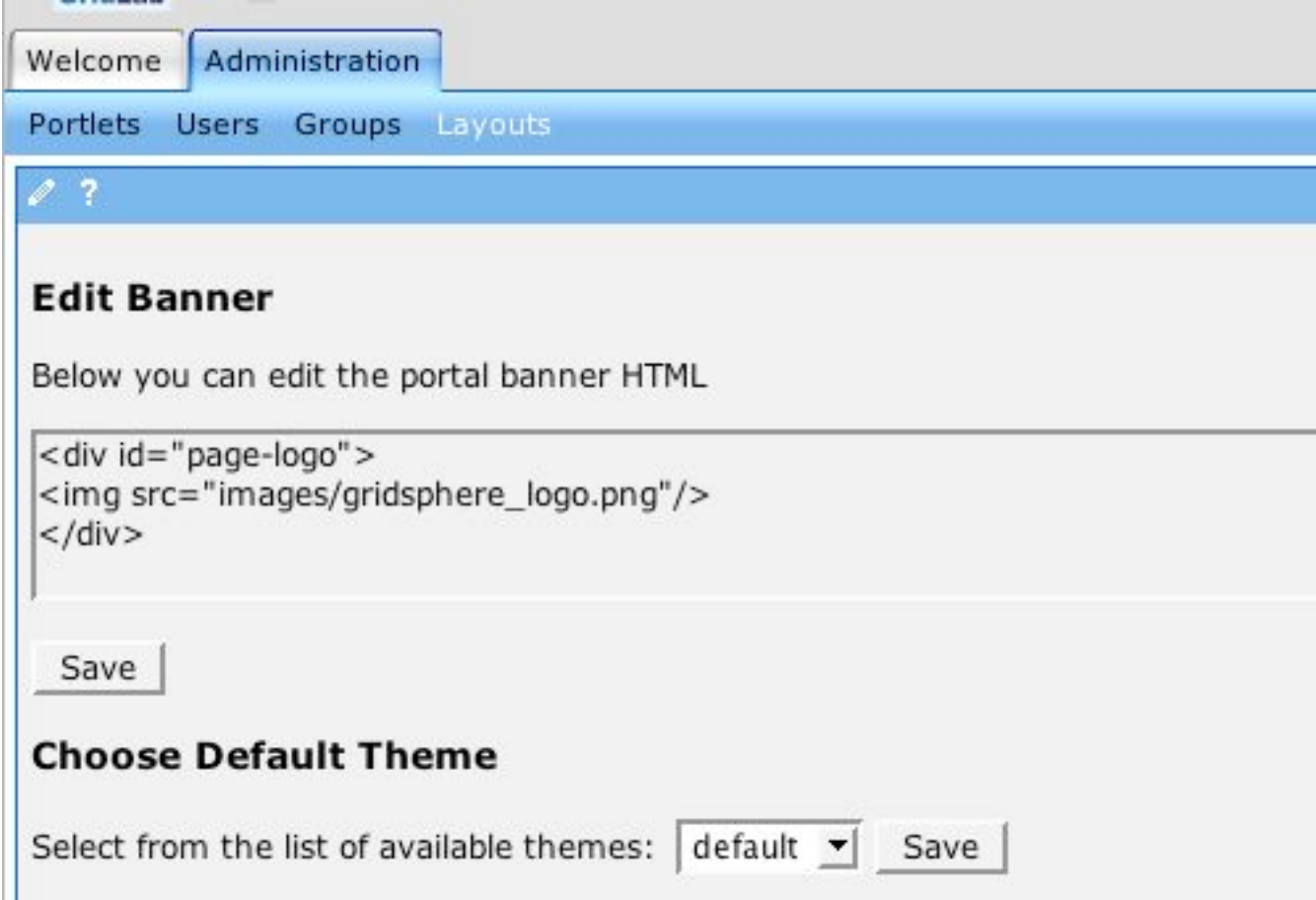
Portlets Users Groups Layouts

? User Account Manager

### Edit User Information


*LEAVE PASSWORD FIELD BLANK TO KEEP EXISTING PASSWORD IF EDITING AN EX.*

User Name:	<input type="text" value="jsmith"/>
Full Name:	<input type="text" value="Joe Smith"/>
Email Address:	<input type="text" value="joe@smith.com"/>
Organization:	<input type="text"/>
Role In GridSphere:	<input type="text" value="USER"/>
Password:	<input type="password" value="*****"/>
Confirm password:	<input type="password" value="*****"/>



Welcome Administration

Portlets Users Groups Layouts

 ?

### Edit Banner

Below you can edit the portal banner HTML

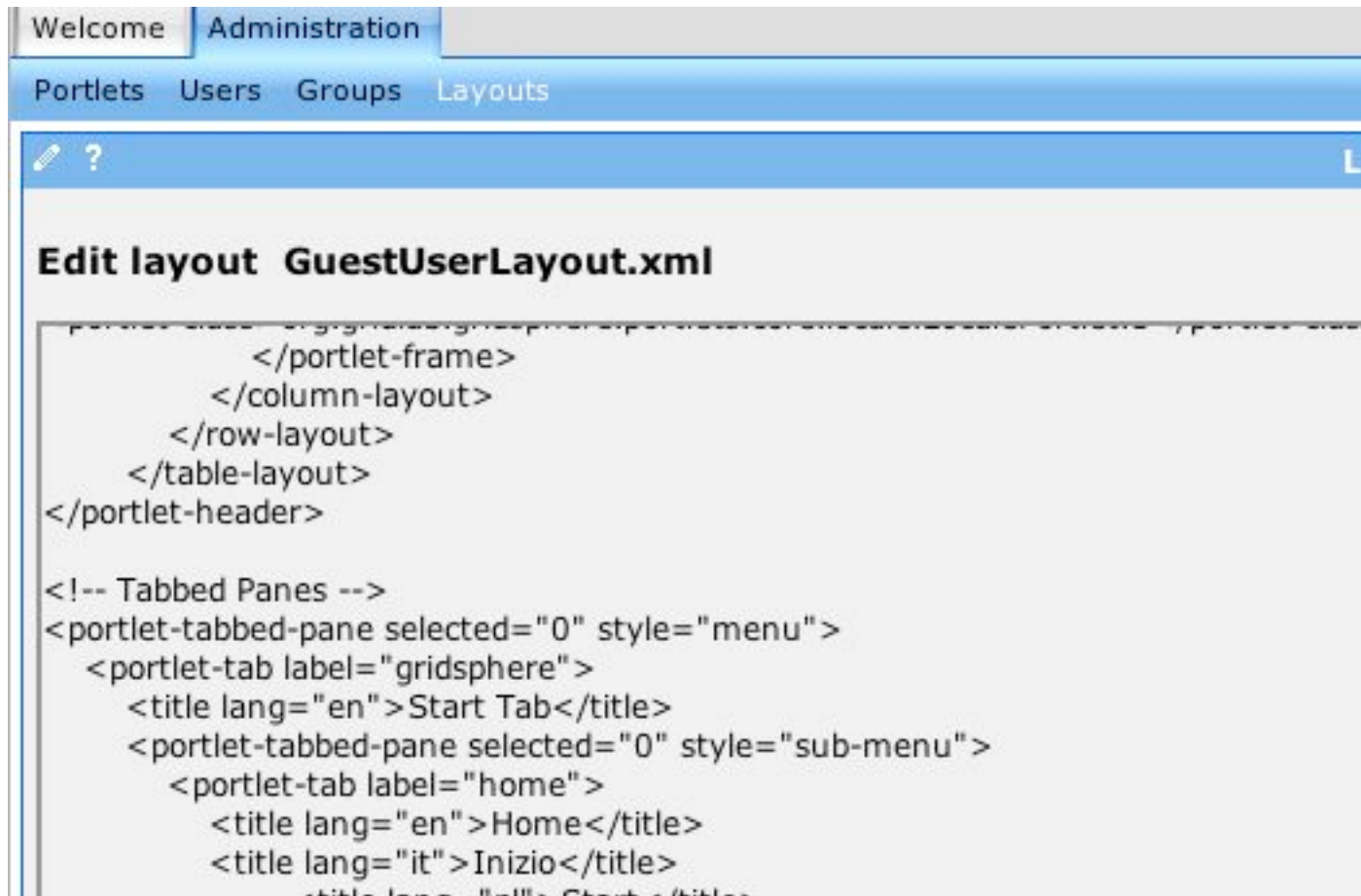
```
<div id="page-logo" >  
  
</div >
```

Save

### Choose Default Theme

Select from the list of available themes:  Save

# Edit guest or group layout



```

Welcome Administration
Portlets Users Groups Layouts
?
Edit layout GuestUserLayout.xml

    </portlet-frame>
  </column-layout>
</row-layout>
</table-layout>
</portlet-header>

<!-- Tabbed Panes -->
<portlet-tabbed-pane selected="0" style="menu">
  <portlet-tab label="gridsphere">
    <title lang="en">Start Tab</title>
    <portlet-tabbed-pane selected="0" style="sub-menu">
      <portlet-tab label="home">
        <title lang="en">Home</title>
        <title lang="it">Inizio</title>
        <title lang="en">Start</title>

```

# User layout customization

cool stuff start Welcome Administration

Settings Layout

? Layout Manager

### Theme configuration

Select a theme:

### Create new tab

Enter new tab title:

One column
  Two columns
  Three columns

### Display existing tabs

Tab name	Edit tab name	Delete tab	
cool stuff	<input type="text" value="cool stuff"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>
start	<input type="text" value="start"/>	<input type="button" value="Save"/>	<input type="button" value="Delete"/>

# User controlled tabs



- Core gridsphere portlets cannot be added to “user tabs”
- Additional portlets can be deployed and placed into groups



# Deploying a webapp

- A third-party JSR webapp may have vendor dependent configuration files
- GridSphere requires the following files to be modified or added to existing portlet apps:
  - web.xml - specifies GS portlet loader servlet
  - gridsphere-portlet.xml - specifies GS portlet loader portlet
  - portlet.xml - a portlet descriptor
  - (optional) group.xml - a group descriptor
  - (optional) layout.xml - a layout associated with the group
- Add blank file to `$CATALINA_HOME/webapps/gridsphere/WEB-INF/Portlets` directory
  - acts as portlet registry so gridsphere will load it on startup

# Deploying GS portlets

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- GS provides a couple tools to ease development
- `ant new-project` creates a new portlet project containing:
  - Necessary configuration/descriptor files
  - Manufactured build script to compile, and deploy portlets into GS
  - hibernate database configuration ready to use for persistence
- `ant update-project`
  - updates existing project with an updated build script
- Using portlet manager, portlet apps can be deployed to running GridSphere

# Deploy Extras webapp

- we provide addtl. Portlets in the package 'extras'
- either get it from CVS (module 'extras') or download from website
- needs to be placed in the projects directory of gridsphere
- change to the extras directory and install the portlets by using 'ant install'

```
~/gridsphere/projects >ls -l
total 0
drwxr-xr-x 11 wehrens staff 374 10 Jun 11:56 extras
~/gridsphere/projects >cd extras/
~/gridsphere/projects/extras >ant install
```

# Deploy via portal

- Now you can restart Tomcat OR
- Deploy via the running portal:

Portlet Application Manager

**SUCCESSFULLY DEPLOYED WEBAPP: EXTRAS**

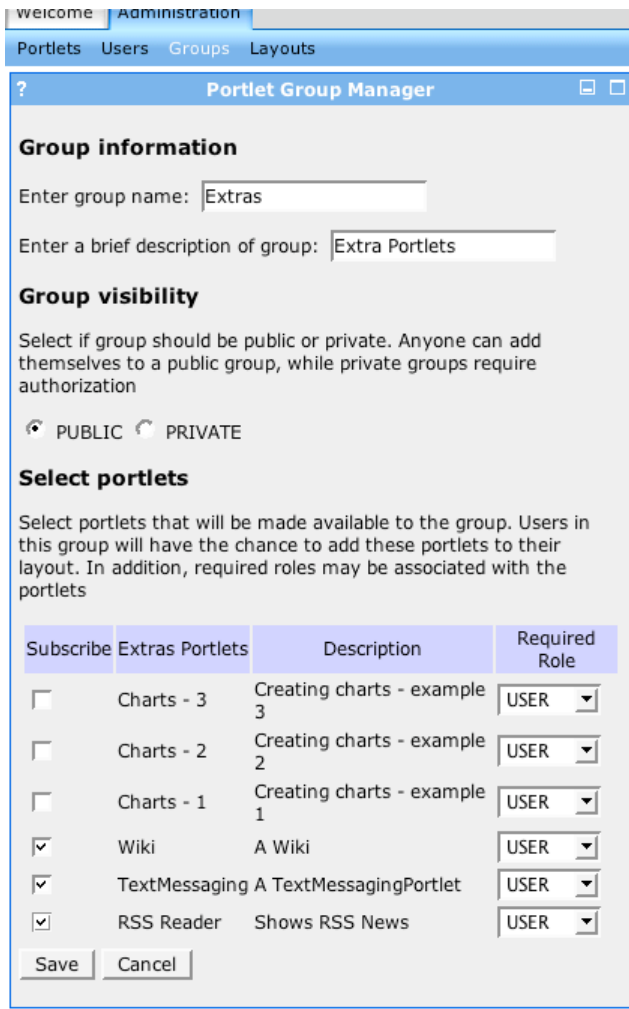
Portlet application	Description	Running	Sessions	Actions
gridsphere	GridSphere Portlet Container	running	1	GridSphere core portlets cannot be redeployed
extras	Extras Portlets	running	0	start stop reload remove
jsrtutorial	JSR tutorial portlets	running	0	start stop reload remove

Deploy new portlet webapp

Enter webapp name:

# Making 'extras' available

● Go to Administration -> Groups -> Create new group



**Group information**

Enter group name:

Enter a brief description of group:

**Group visibility**

Select if group should be public or private. Anyone can add themselves to a public group, while private groups require authorization

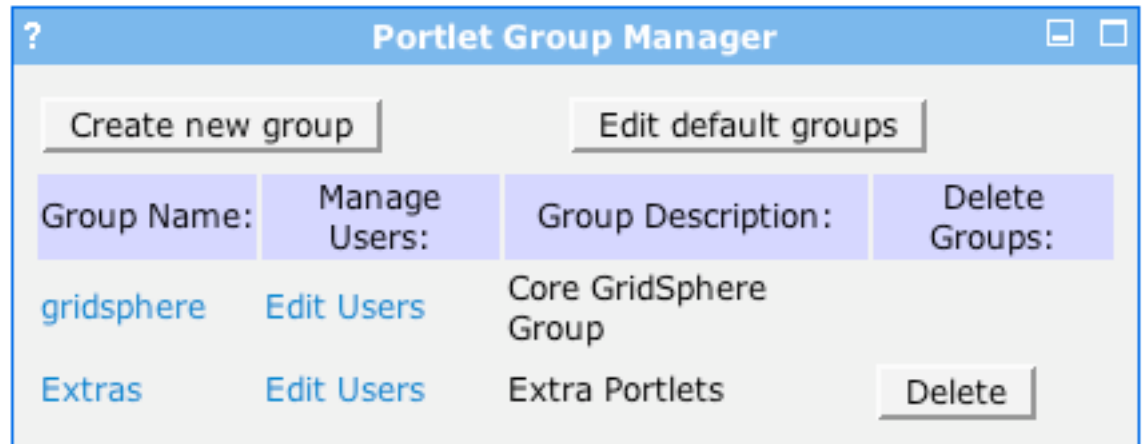
PUBLIC  PRIVATE

**Select portlets**

Select portlets that will be made available to the group. Users in this group will have the chance to add these portlets to their layout. In addition, required roles may be associated with the portlets

Subscribe	Extras Portlets	Description	Required Role
<input type="checkbox"/>	Charts - 3	Creating charts - example 3	USER
<input type="checkbox"/>	Charts - 2	Creating charts - example 2	USER
<input type="checkbox"/>	Charts - 1	Creating charts - example 1	USER
<input checked="" type="checkbox"/>	Wiki	A Wiki	USER
<input checked="" type="checkbox"/>	TextMessaging	A TextMessagingPortlet	USER
<input checked="" type="checkbox"/>	RSS Reader	Shows RSS News	USER

Portlets are grouped and need a name and a description. Choose 'PUBLIC' as visibility to allow anybody to add themselves to the group. At the end choose the portlets which the members of this group should get. Save the group.

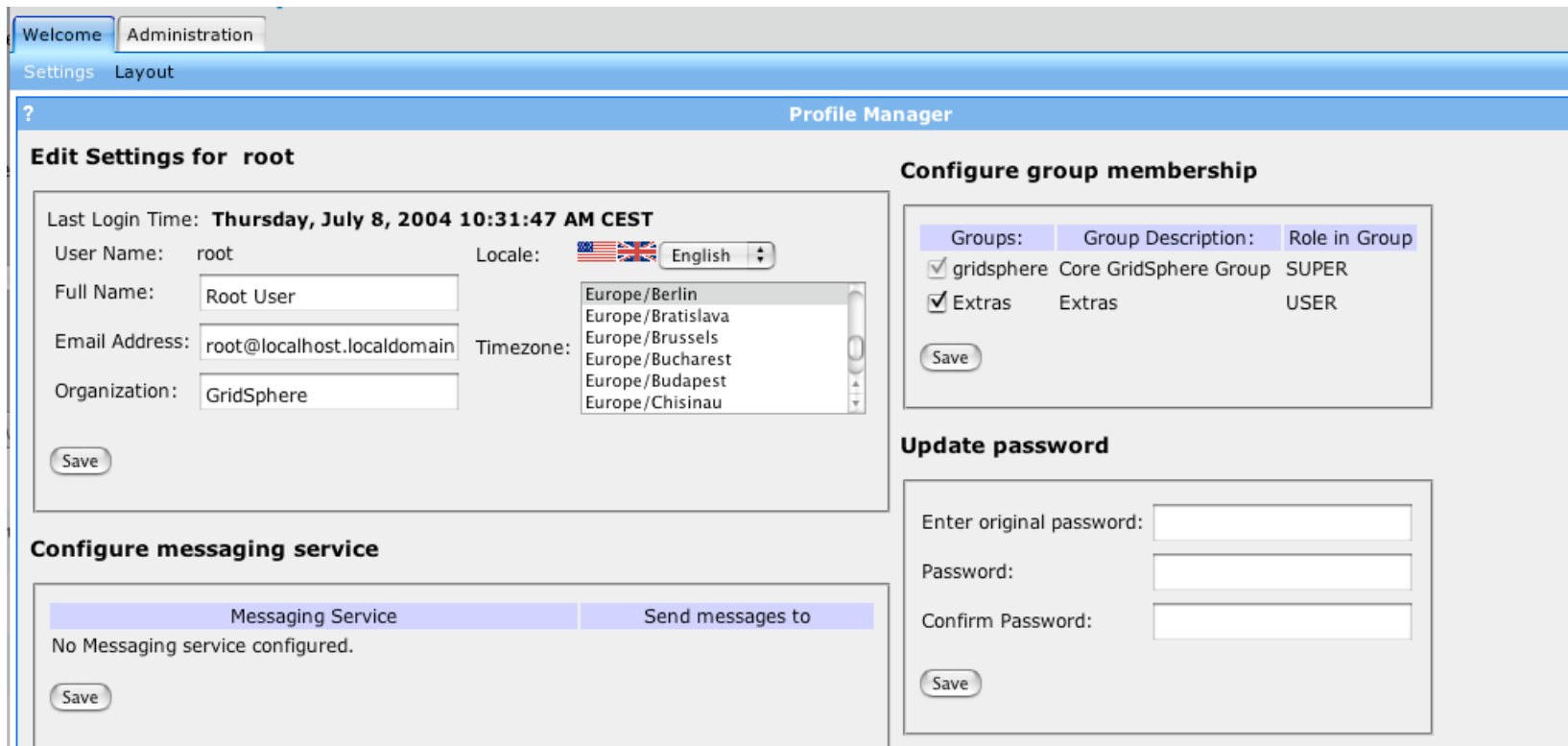


**Portlet Group Manager**

Group Name:	Manage Users:	Group Description:	Delete Groups:
gridsphere	<a href="#">Edit Users</a>	Core GridSphere Group	
Extras	<a href="#">Edit Users</a>	Extra Portlets	<input type="button" value="Delete"/>

# Subscribing to Extras

Goto Welcome -> Settings. If you go to Edit Mode you can now subscribe to the group 'Extras'. Mark the checkbox and save the selection.

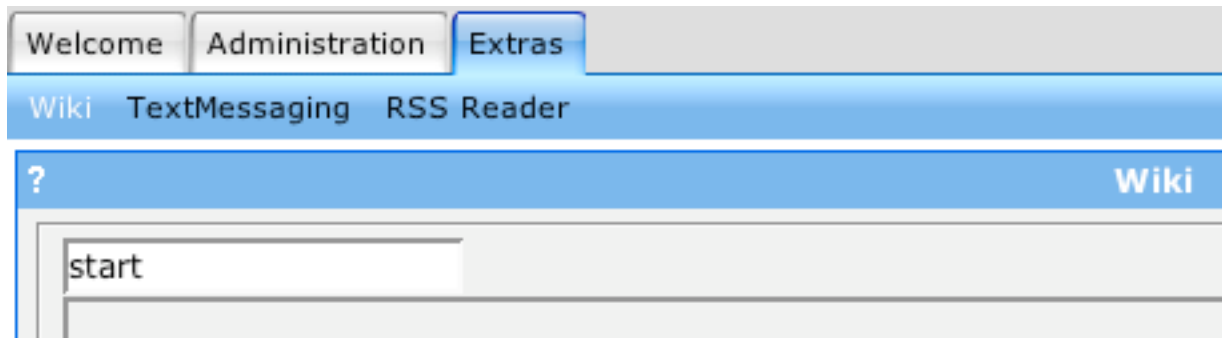


The screenshot shows the 'Profile Manager' web interface. The top navigation bar includes 'Welcome' and 'Administration'. Below it, 'Settings' and 'Layout' are visible. The main content area is titled 'Profile Manager' and contains several sections:

- Edit Settings for root**: Includes fields for 'Last Login Time' (Thursday, July 8, 2004 10:31:47 AM CEST), 'User Name' (root), 'Full Name' (Root User), 'Email Address' (root@localhost.localdomain), and 'Organization' (GridSphere). There is a 'Locale' dropdown set to 'English' and a 'Timezone' dropdown with options like 'Europe/Berlin', 'Europe/Bratislava', etc. A 'Save' button is at the bottom.
- Configure group membership**: A table with columns 'Groups', 'Group Description', and 'Role in Group'. It shows two groups: 'gridsphere' (Core GridSphere Group, SUPER) and 'Extras' (Extras, USER). Both have checked checkboxes. A 'Save' button is below the table.
- Configure messaging service**: A section with a 'Messaging Service' dropdown and a 'Send messages to' field. It states 'No Messaging service configured.' and has a 'Save' button.
- Update password**: A section with three password input fields: 'Enter original password:', 'Password:', and 'Confirm Password:'. A 'Save' button is at the bottom.

# Welcome to Extras

- A new tab in the menubar appeared
- All the Portlets from the group are now available on this tab



- All GridSphere config files in WEB-INF dir. of gridsphere webapp and can be hand-edited
- portlet.xml - defines core portlets
- layout.xml -- defines gridsphere group layout
- group.xml -- defines gridsphere group
- layouts/
  - groups/ -- group layout descriptors
  - users/ -- user's personalized tabs
- Portlets/
  - gridsphere.1 -- core gs portlets ".1" indicates priority
  - <additional deployed webapps>



- GridSphereServices.xml -- defines services used by core portlets and portal
- persistence/ -- defines mapping files used by Hibernate
- database/
  - gridsphere.script -- default database when hsqldb (default) is used, configured in hibernate.properties
- classes/
  - log4j logging file, localization properties
- tlds/
  - GridSphere UI tag library