

# Introduction to Portals

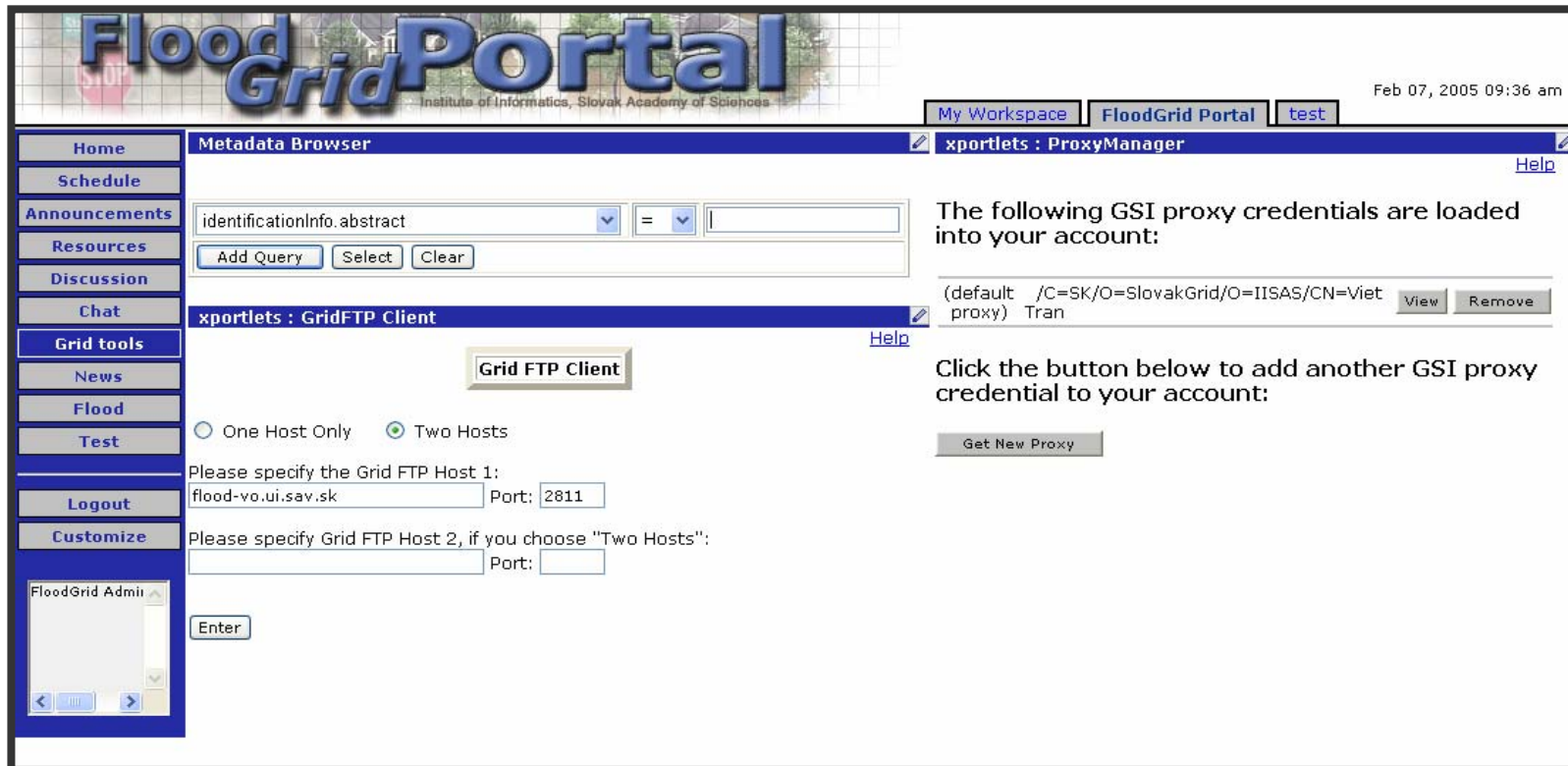
**Viet Tran**  
**Institute of Informatics,**  
**Slovakia**

- **Introduction to portals**
- **Portlets and portals**
- **Some portal frameworks**

- **Web-based User interface**
- **Act as gateway between users and services/resource**
- **Provides personalization, single sign-on, content aggregation from different sources**

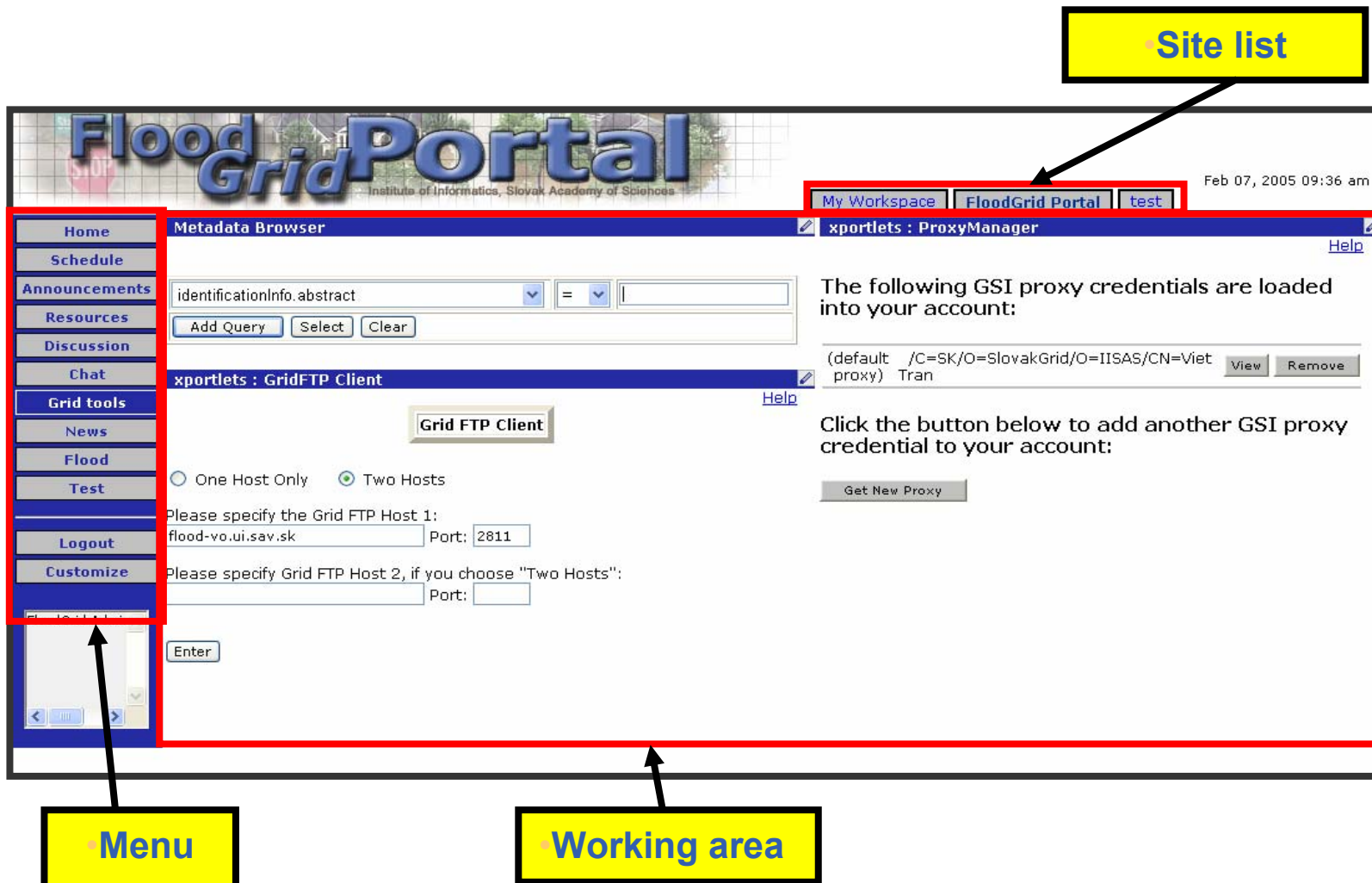
- **Uniform user interface**
  - Same interface for all systems
- **Universally accessible**
  - Everywhere with internet connection
- **Low requirements on clients**
  - Web browser and network connection
- **Additional security layer**
  - Additional authentication and authorization in portal
  - User can perform only predefined actions on portal

- **Limited interaction**
  - Typical scenario: user action -> sends request to server -> process request and generate new web page -> send new web page to browser -> refresh  
=> High latency
  - HTML technology
  - Can be solved using plug-in technologies (Java plug-ins, flash, VRML plug-in, ...) that runs locally inside browsers



The screenshot shows the FloodGrid Portal interface. The header includes the portal name and a timestamp of Feb 07, 2005 09:36 am. The left sidebar contains navigation links: Home, Schedule, Announcements, Resources, Discussion, Chat, Grid tools, News, Flood, Test, Logout, and Customize. The main content area is divided into several sections:

- Metadata Browser:** A search bar with a dropdown menu showing "identificationInfo.abstract", an equals sign, and a text input field. Below the search bar are buttons for "Add Query", "Select", and "Clear".
- xportlets : ProxyManager:** A section titled "The following GSI proxy credentials are loaded into your account:" followed by a table of credentials. The table has two columns: "proxy" and "Tran". The first row shows "(default proxy)" and "Tran". There are "View" and "Remove" buttons next to the credentials.
- xportlets : GridFTP Client:** A section titled "Click the button below to add another GSI proxy credential to your account:" followed by a "Get New Proxy" button.
- Grid FTP Client:** A section with radio buttons for "One Host Only" and "Two Hosts". Below the radio buttons are input fields for "Please specify the Grid FTP Host 1:" and "Please specify Grid FTP Host 2, if you choose 'Two Hosts':". The first host is "flood-vo.ui.sav.sk" and the port is "2811". There is an "Enter" button at the bottom.



The screenshot shows the FloodGridPortal interface. A red box highlights the main content area, which includes a metadata browser, a grid FTP client, and a proxy manager. A yellow box labeled "Site list" points to the top right corner of the portal. A yellow box labeled "Menu" points to the left sidebar containing navigation links. A yellow box labeled "Working area" points to the bottom of the main content area.

**Site list**

**Menu**

**Working area**

**FloodGridPortal**  
Institute of Informatics, Slovak Academy of Sciences

Feb 07, 2005 09:36 am

My Workspace | **FloodGrid Portal** | test

xportlets : ProxyManager

Help

The following GSI proxy credentials are loaded into your account:

(default proxy) /C=SK/O=SlovakGrid/O=IISAS/CN=Viet Tran View Remove

Click the button below to add another GSI proxy credential to your account:

Get New Proxy

**Metadata Browser**

identificationInfo.abstract =

Add Query Select Clear

**xportlets : GridFTP Client**

Help

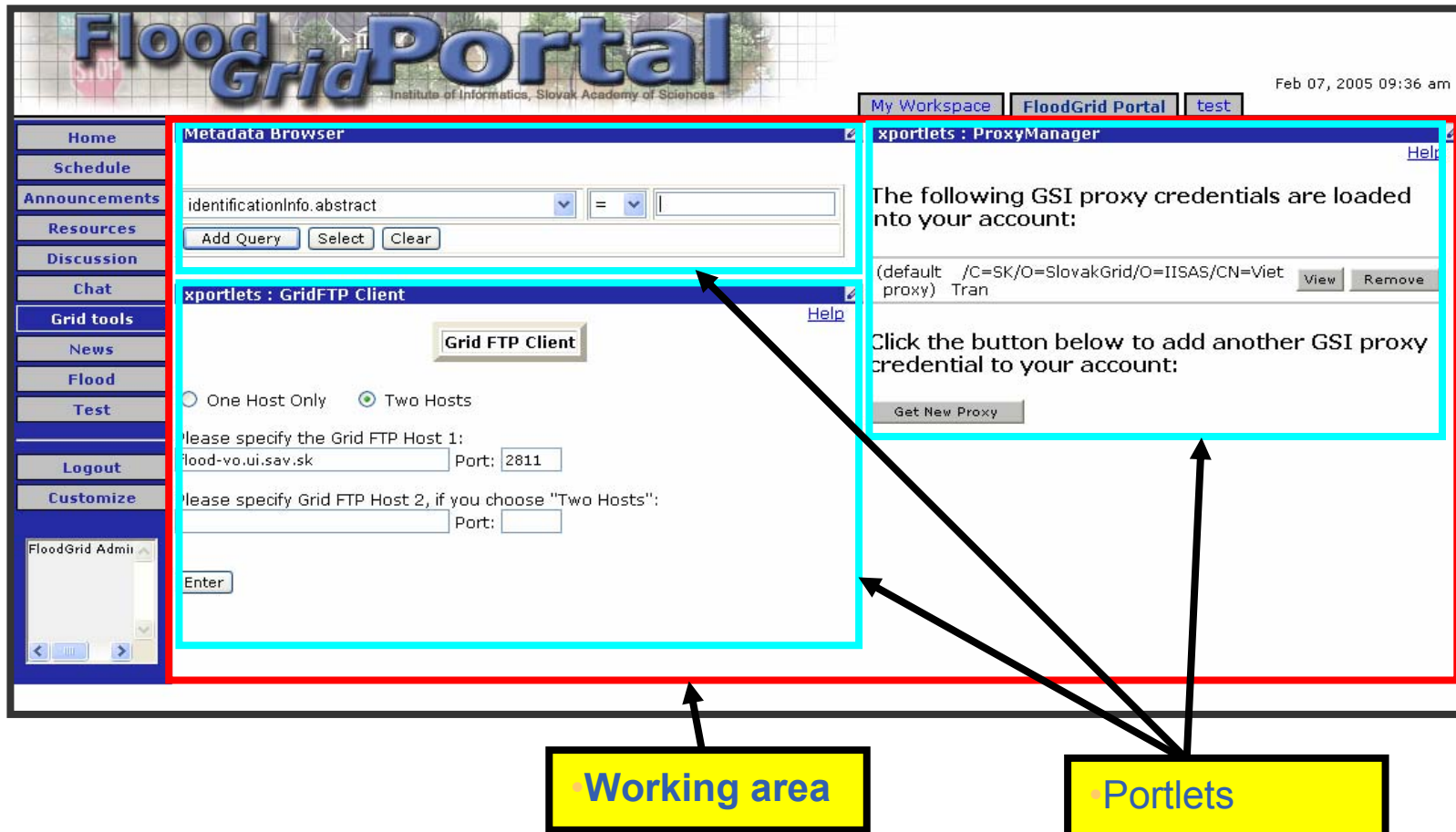
Grid FTP Client

☐ One Host Only ☒ Two Hosts

Please specify the Grid FTP Host 1:  
flood-vo.ui.sav.sk Port: 2811

Please specify Grid FTP Host 2, if you choose "Two Hosts":  
Port:

Enter



The screenshot shows the FloodGrid Portal interface. A red rectangle highlights the main content area, which includes a sidebar on the left with navigation links (Home, Schedule, Announcements, Resources, Discussion, Chat, Grid tools, News, Flood, Test, Logout, Customize) and a top navigation bar (My Workspace, FloodGrid Portal, test). The main content area contains two portlets: 'Metadata Browser' and 'GridFTP Client'. A cyan rectangle highlights the 'GridFTP Client' portlet, which includes a 'Grid FTP Client' button and options for 'One Host Only' and 'Two Hosts'. A black arrow points from the 'Working area' label to the 'GridFTP Client' portlet. Another black arrow points from the 'Portlets' label to the 'GridFTP Client' portlet. A third black arrow points from the 'Portlets' label to the 'ProxyManager' portlet, which is also highlighted by a cyan rectangle. The 'ProxyManager' portlet displays GSI proxy credentials and a 'Get New Proxy' button.

**Working area**

**Portlets**



- Introduction to portals
- Portlets and portals
- Some portal frameworks

- **An autonomous entity**
- **Has its own content (a small “window” in working area)**
- **Has its own behavior (independent from portal)**
- **Is configurable (has its own configuration and status)**
- **Is manageable (can be maximized, minimized, can be inserted or removed from portal view area)**
- **In other word, portlet is a small “application” in portal**

- **Provide container for portlet contents**
- **Manage portlets (insert, remove, arrange portlets)**
- **Provide navigation system (sites, menus, set focus to portlets, ...)**
- **Provide authentication and authorization**
- **In other word, portal is the “system” where portlets can run**

- Establishes a standard for portlets, making portlets portable between portal frameworks
- Supported by many large industrial companies and organizations (IBM, Oracle, Sun Microsystems, Apache foundation, ...)
- Supported by many portal framework (Websphere, uPortal, Gridsphere, Jetspeed 2, ...)

- The standard allows developers to write portlets independently from concrete portal framework, then deploy them into any portals supporting the standard
- In reality, there may be problem with libraries (conflicting versions)

- Introduction to portals
- Portlets and portals
- Some portal frameworks

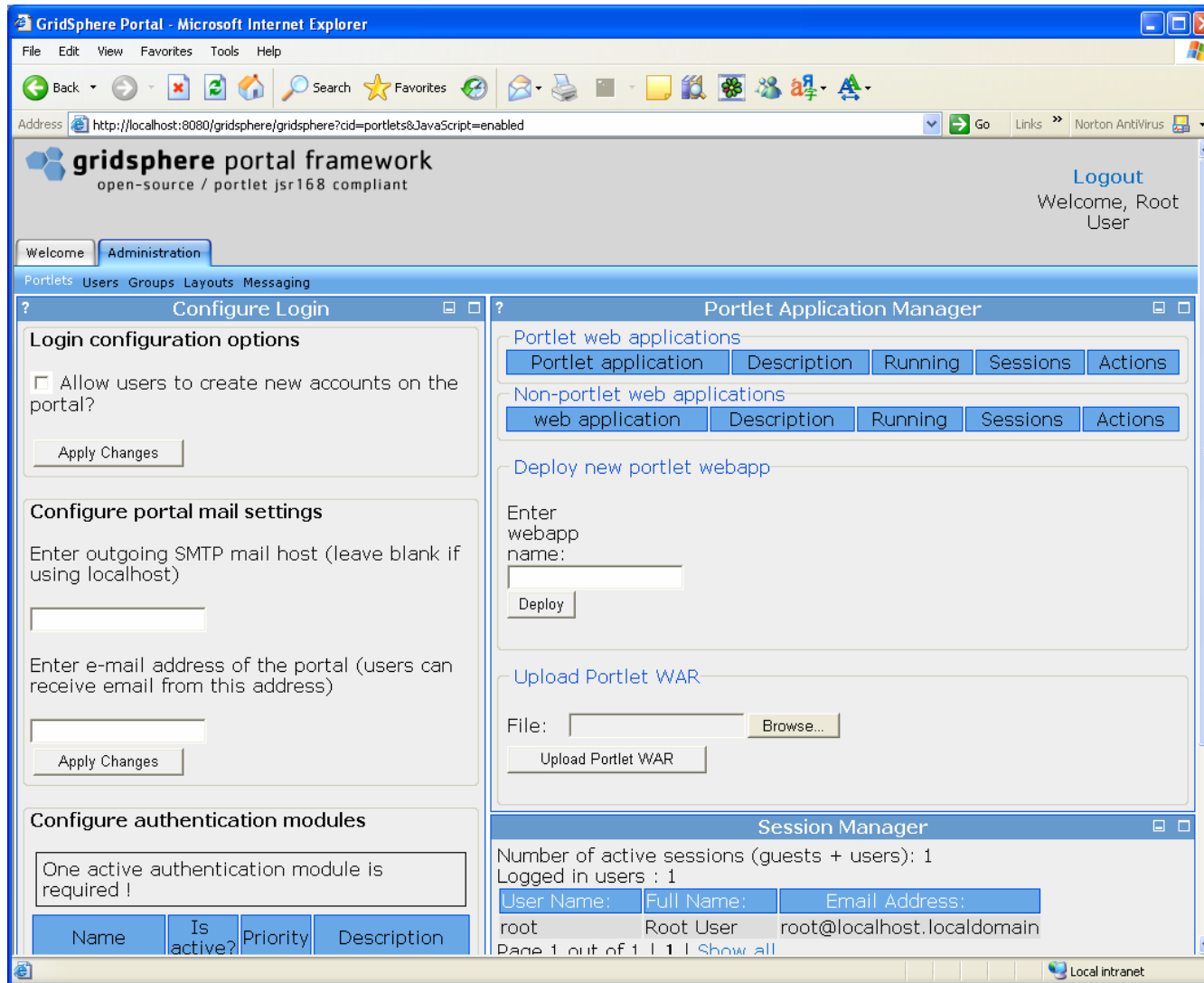
- **Developed by Apache Software Foundation**
- **Open source**
- **is the Reference Implementation of the Java Portlet Specification JSR-168**
- **Provide only container, not full portal framework**

- **Developed by JA-SIG member institutions**
- **Open source**
- **Has strong support among universities**
- **Current version 2.x supports JSR-168 standards by using Apache Pluto container as adapter**
- **Native support for portlets in next version 3.x**





- **Developed in GridLab project**
- **Open source**
- **Supporting JSR168 standard**
- **Providing API for writing portlets**



**GridSphere Portal - Microsoft Internet Explorer**

File Edit View Favorites Tools Help

Address <http://localhost:8080/gridsphere/gridsphere?cid=portlet&JavaScript=enabled> Go Links Norton AntiVirus

**gridsphere portal framework**  
open-source / portlet jsr168 compliant

Welcome Administration

Portlets Users Groups Layouts Messaging

**Configure Login**

Login configuration options

☐ Allow users to create new accounts on the portal?

Apply Changes

**Configure portal mail settings**

Enter outgoing SMTP mail host (leave blank if using localhost)

Enter e-mail address of the portal (users can receive email from this address)

Apply Changes

**Configure authentication modules**

One active authentication module is required !

Name	Is active?	Priority	Description
root			

**Portlet Application Manager**

Portlet web applications

Portlet application Description Running Sessions Actions

Non-portlet web applications

web application Description Running Sessions Actions

Deploy new portlet webapp

Enter webapp name:

Deploy

Upload Portlet WAR

File: Browse...

Upload Portlet WAR

**Session Manager**

Number of active sessions (guests + users): 1  
Logged in users : 1

User Name:	Full Name:	Email Address:
root	Root User	root@localhost.localdomain

Page 1 out of 1 | 1 | Show all

Local intranet

- **Developed by Apache Software Foundation**
- **Open source**
- **Provide API for writing portlets (Velocity)**
- **Still in development, no clear release date**
- **Current version Jetspeed 1.x does not support JSR168**

- **Developed by IBM**
- **Commercial software**

- **Portlets are small “windows” in portal, that can be developed independently, has their own contents and behaviors**
- **Portals provide containers for portlets, management, navigation, decoration, authorization,...**
- **Portlets with JSR168 standard can be deployed into any compatible portal frameworks**
- **Potential portal framework for Medigrid: uPortal and Gridsphere**

- JSR-168 portlet standard: <http://jcp.org/en/jsr/detail?id=168>
- uPortal framework: <http://www.uportal.org>
- Gridsphere framework: <http://www.gridsphere.org>