



# Portlet Deployment

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## *Deploying JSR portlet applications to GridSphere*

Albert Einstein Institute

# Two approaches

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- Use gridsphere development environment to develop portlets
  - ant “new-project” task from gridsphere directory creates new project environment
  - project is in gridsphere/projects<project-dir> and contains all necessary template files including build.xml
  - ant “update-project” copies latest build.xml template from gridsphere to project dir.
  - Template build script includes targets **compile**, **install**, **docs** for easy compilation and deployment of new application
- Use existing JSR compliant portlet application
  - Requires modifying web.xml to add GS portlet loader

# Use GS new-project tool

```
[fuzzmonkey:~/gridsphere] novotny% ant new-project
Buildfile: build.xml

check-catalina:

setenv:
  [echo] --- Build environment for GridSphere 2.0 RC 1 ---
  [echo] --- Flags (Note: If the {property name} is displayed,
  [echo]           then the component is not present)

  [echo] ANT_HOME is set to = /Users/novotny/Jakarta/apache-ant-1.6.1
  [echo] JAVA_HOME is set to = /System/Library/Frameworks/JavaVM.framework/Versions
/1.4.2/Home
```

```
new-project:

new-project:
  [echo] Creating a New Portlet Project
  [input] Please enter a Project Title e.g. Cool Portlets
Extra Special portlets
  [input] Please enter a Project Name this will be used for your portlet web applica
tion and should be lowercase e.g. coolportlets
specialportlets

check-project-exists:
  [mkdir] Created dir: /Users/novotny/gridsphere/projects/specialportlets
  [input] Do you wish to develop GridSphere/WebSphere portlets or JSR 168 portlets?
Enter gs or jsr (gs,jsr)
jsr
```

# Create sources

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- Place all portlet source code in portlets directory of new project
  - e.g. `src/org/myorg/portlets/...`
- Place all code for services in services directory
  - e.g. `src/org/myorg/services/...`
- Place JSPs, HTML, etc in webapp directory
- Modify template config files
  - `webapp/WEB-INF/portlet.xml`
  - (optional) `group.xml` and `layout.xml`
- Ready to deploy

# Configuring the webapp

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- 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 an entry for GridSphere PortletServlet

```
<listener>
  <listener-class>org.gridlab.gridsphere.provider.portlet.jsr.PortletServlet</listener-class>
</listener>

<servlet>
  <servlet-name>PortletServlet</servlet-name>
  <servlet-class>org.gridlab.gridsphere.provider.portlet.jsr.PortletServlet</servlet-class>
</servlet>

<servlet-mapping>
  <servlet-name>PortletServlet</servlet-name>

  <url-pattern>/jsr/XXX</url-pattern>
</servlet-mapping>
```

- change XXX to the web application name e.g. sampleportlets

```
<?xml version="1.0" encoding="UTF-8"?>
<portlet-app-collection>
<portlet-app-def>
<portlet-app id="org.gridlab.gridsphere.provider.portlet.jsr.PortletServlet">
  <portlet-name>JSR Portlet Servlet</portlet-name>
  <servlet-name>PortletServlet</servlet-name>
</portlet-app>
<concrete-portlet-app id="org.gridlab.gridsphere.provider.portlet.jsr.PortletServlet.1">
  <concrete-portlet>
    <portlet-name>Portlet Servlet</portlet-name>
    <default-locale>en</default-locale>
    <language locale="en">
      <title>Portlet Servlet</title>
      <title-short>Portlet Servlet</title-short>
      <description>A JSR Portlet Loader</description>
      <keywords>portlet servlet</keywords>
    </language>
  </concrete-portlet>
</concrete-portlet-app>
</portlet-app-def>
</portlet-app-collection>
```

- GridSphere requires this descriptor to load portlet loader

- A group descriptor defines a group for this portlet collection with access rights
  - group can be public (anyone can join) or private
- A layout descriptor defines placement of portlets within tabbed panes, tabs in layouts, etc.
- If no group and layout descriptor exist, they can be created via the portal from the Administration portlets
- See `gridsphere/webapps/gridsphere/WEB-INF/{group.xml, layout.xml}` for usage



- If using GridSphere template project, issue “ant deploy” in project directory
- Third-Party applications:
- Use existing tools or manually copy to servlet container
- Add blank file to `$CATALINA_HOME/webapps/gridsphere/WEB-INF/Portlets` directory
  - Used by GS to find portlet apps to load on startup

# 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: