



PLUMTREE JSR-168 CONTAINER

INSTALLATION GUIDE

VERSION 1.0.X UNIX

September 2004

Information in this document is subject to change without notice.

Companies, names, and data used in examples herein are fictitious unless otherwise noted.

© 2001-2004 Plumtree Software. All rights reserved.

Plumtree Software may have patents or pending patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document. The furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property rights except as expressly provided in any written license agreement from Plumtree Software.

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

Java™, Sun™ and any other Sun Microsystems products or technologies are trademarks or registered trademarks of Sun Microsystems, Inc.

Other product and company name mentioned herein may be the trademarks of their respective owners.

If you have any comments on this document, send email to:

documentation@plumtree.com

Table of Contents

I.	Overview / Requirements.....	I-1
	Requirements	I-1
	Additional Resources.....	I-1
2.	Installation and Configuration	2-3
	Install Files on Remote Server	2-3
	Configure Remote Server.....	2-3
	Import Resource Package (Web Services and Portlets)	2-4
3.	Additional Configuration Steps.....	3-5
	Modify Existing Portlet Applications.....	3-5
	Create New Portlet Applications	3-5
	Portal Configuration	3-6
	Add Tag Library Support	3-6
	Access User Information	3-6
	Build StyleSheet Templates	3-7
	Use Application Server Values for getRemoteUser(), getUserPrincipal(), and isUserInRole().	3-7
	Use SSL.....	3-7
	Support Editing Pages (Edit Mode)	3-8

I. Overview / Requirements

This implementation of the JSR 168 standard is based on Plumtree's Web Services Architecture, which allows portlets to run remotely from the application server hosting the portal. This architecture helps ensure that the portal remains open to resources hosted on a wide range of application servers, and unaffected by faults in any one portlet. The Web Services Architecture also supports a wide range of other integration components that run as Web services, for indexing content, importing security information, federating searches and profiling users.

Requirements

The following table summarizes requirements for the components deployed with this product.

Component	Specification
Remote Server (host computer)	Disk: 128 MB available Memory: 512 MB RAM Operating System: Sun Solaris 8 or 9 AIX 5.2.0.0, revision 5200-02 Application Server: JSR-168 requires an application server that follows the 2.3 Servlet specifications. The following application servers are supported: <ul style="list-style-type: none">• BEA Weblogic 8.1• Tomcat 4.1• WebSphere 5.1
Plumtree Portal	Plumtree Corporate Portal 5.0.x or 4.5WS SPI Note: Administrative access to the portal is required.

The portal can be deployed on the Remote Server machine or on a separate Portal Server.

Additional Resources

The following table describes the documentation and resources provided by Plumtree.

Resource	Description
Release Notes	Release notes include information about new features and known issues.
Plumtree Support Center	The Plumtree Support Center is a comprehensive repository for technical information on Plumtree products. From the Support Center, you can access products and documentation, search knowledge base articles, read the latest news and information, participate in a support community, get training, and find tools to meet most of your Plumtree-related needs. The Support Center encompasses the following communities: Technical Support Center Submit and track support incidents and feature requests, search the knowledge base, and download service packs and hotfixes. Developer Center Download developer tools and documentation, get help with your

	<p>development project, and interact with other developers via discussion forums.</p> <p>Product Center Download products, read Release Notes, and access recent product documentation.</p> <p>Deployment Center Find the tools you need to roll-out, drive, and maintain a successful Enterprise Web deployment. Collaborate with peers on strategic business and technical objectives, learn application best practices, download portal launch examples, and calculate your return on investment (ROI).</p> <p>Education Center Find information about available training courses, purchase training credits, and register for upcoming classes.</p> <hr/> <p>If you do not see the Support Center when you log in to http://portal.plumtree.com, contact support@plumtree.com for the appropriate access privileges.</p>
--	--

2. Installation and Configuration

This section explains how to install and configure the JSR-168 Container for use with the Plumtree Corporate Portal. It includes the following sections:

- Install Files on Remote Server
- Configure Remote Server
- Import Resource Package (Web Services and Portlets)

Install Files on Remote Server

Follow the steps below to install the JSR-168 Container on your remote server (host computer).

1. Check to see if the PT_HOME variable has been set by entering the following command:

```
echo $PT_HOME
```
2. If the PT_HOME variable exists, unzip the **jsr-168_java.tar.gz** file to the location returned in step 1. If the PT_HOME variable does not exist, create a directory called **opt/plumtree** and unzip the **jsr-168_java.tar.gz** file to that location.
3. Deploy the **PtPortletContainer.war** file in the /ptjsr168/1.0/webapp folder using the method appropriate for your application server.

After deploying the package, you must configure the remote server, explained next.

Configure Remote Server

The configuration steps for the JSR-168 Container are different depending on the results of step 1 above.

If the PT_HOME variable already exists:

1. Navigate to the directory referenced by PT_HOME and open **pthome.xml** in a text editor.
2. Add the following product section within the pthome element (between <pthome> and </pthome>). **Note:** If the PT_HOME directory is not /opt/plumtree, change the <path> and <configpath> elements to reflect the correct location.

```
<product name="ptjsr168">
  <install version="1.0">
    <path>/opt/plumtree/ptjsr168/1.0</path>
    <configpath>/opt/plumtree/ptjsr168/1.0/settings
      /config</configpath>
  </install>
</product>
```

If the PT_HOME variable does not exist:

1. Copy the **pthome.xml** file from opt/plumtree/ptjsr168/1.0/settings/config to the root **/opt/plumtree** directory.
2. Set the PT_HOME environment variable by entering the following commands:

```
PT_HOME='/opt/plumtree'
export PT_HOME
```

Import Resource Package (Web Services and Portlets)

Follow the steps below to import the JSR-168 Web Services and Portlets into the portal:

1. Launch the Migration Wizard. To launch the graphical version of the Migration Wizard, enter the following command on the Portal Server:
`<PORTAL_HOME>/ptportal/5.0j/bin/ptmigration.sh`
(Replace `<PT_HOME>` with the PT_HOME directory path, i.e., `/opt/plumtree`. If you do not know the PT_HOME path, enter the following command: `echo $PT_HOME`.)
2. Login as Administrator (blank password) and click **Next**.
3. Choose **Portal Server Object Migration** and click **Next**.
4. Choose **Import** and click **Next**.
5. Confirm that the **Import object ACLs** is the only option selected. Click the file choose button and browse to `<PT_HOME>/ptjsr168/1.0/serverpackages/jsr-168.pte`. Click **Next**.
6. The contents of the migration package will be listed. Click **Next**, then click **Migrate** to import the package.
7. When the migration successful popup appears, click **Done** to close the Migration Wizard.

After importing the Resource Package, a JSR-168 folder will appear in Administration that includes the JSR-168 Remote Server, two Web Services (GooglePortleWebService and RSSPortleWebService), and two portlets (GooglePortlet and RSSPortlet). These portlets do not require any configuration.

3. Additional Configuration Steps

The following steps are provided for your information; they are not required. This section includes the following topics:

- [Modify Existing Portlet Applications](#)
- [Create New Portlet Applications](#)
- [Add Tag Library Support](#)
- [Access User Information](#)
- [Build StyleSheet Templates](#)
- [Use Application Server Values for getRemoteUser\(\), getUserPrincipal\(\), and isUserInRole\(\).](#)
- [Use SSL](#)
- [Support Editing Pages \(Edit Mode\)](#)

Modify Existing Portlet Applications

The portlets provided with the JSR-168 Container can be customized. To customize the existing portlets, follow the steps below:

1. Create a new Web application for your portlets.
2. Extract the portlet application WAR file, if necessary.
3. Place Plumtree's JSR-168 container jar files into the WEB-INF/lib directory of your new portlet application. These include the following files:
 - commons-beanutils.jar
 - commons-collections.jar
 - commons-digester-1.5.jar
 - commons-logging.jar
 - devkit.jar
 - jsr168tags.jar
 - log4j.jar
 - openfoundation.jar
 - oreilly.jar
 - pthome.jar
 - ptportletcontainer.jar
 - xerces144.jar
4. The web.xml file must include servlets, servlet-mappings, context listener, and tag libraries. Use the web.xml in ptjsr168/1.0/devkit/WEB-INF/web.xml as a template. Elements must be added in the proper order, or the application will not start. See your application server documentation for the required ordering of elements in the web.xml document.
5. Restart the application server as needed.

Create New Portlet Applications

The default installation includes a WEB-INF directory for creating new applications in ptjsr168/1.0/devkit/. To create a portlet application from this directory, follow the instructions below:

1. Create a directory for your new Web application.
2. Add the /WEB-INF folder from ptjsr168/1.0/devkit/ to the new application. If you want to add any new portlet classes (subclassing GenericPortlet), add them to the WEB-INF/classes directory in your new application and add a portlet.xml file to the /WEB-INF directory. Add additional jsp pages and servlets if they are required for your application.
3. Deploy using the instructions for your application server.

Portal Configuration

Once the **.war** file is deployed, you must create the following objects in the portal.

- Remote Server object - The server on which you deployed the **.war** file. The URL would be in the form of `<http://server.domain.com:port/context>`. For example:
`http://aix2.plumtree.com:9080/myportlets/`
- Remote Portlet Web service object(s) - Create one of these for each portlet you have. The Portlet URL will be in the form of: `<http://server.domain.com:port/context/portlet/PortletName>`. For example:
`http://aix2.plumtree.com:9080/myportlets/portlet/MyOwnPortlet`
Note: The *portlet* in the above example will be the same in your configuration. Do not change that. The rest of the URL must match your particular settings.
- Portlet object(s) - Create one of these for each Remote Portlet Web service object you created. Each Portlet you create must correspond to the appropriate web service.

Note: Refer to the *Administrator Guide for Plumtree Corporate Portal* for detailed instructions on creating these objects.

You should now be able to add the JSR168 portlets to your pages.

Add Tag Library Support

To add Tag Library support, add the following line to the web.xml file after servlet-mappings and session-config:

```
<taglib>
  <taglib-uri>http://java.sun.com/portlet</taglib-uri>
  <taglib-location>/WEB-INF/lib/jsr168tags.jar</taglib-location>
</taglib>
```

Note: Make sure the jsr168tags.jar in the ptjsr168/1.0/devkit/WEB-INF/lib directory is added to the WEB-INF/lib directory.

Access User Information

To access User Information settings from the portal, follow the steps below.

1. Define the user attributes in the WEB-INF/**portlet.xml** file in the `<user-attribute>` element. For example:

```
<user-attribute>
  <description>User Phone</description>
  <name>user.business-
    info.telecom.telephone.number</name>
</user-attribute>
```

If a user attribute is not defined in the portlet.xml file, it will not be read.

2. Map the attribute to User Information from the portal in the file `<PT_HOME>/ptjsr168/1.0/settings/config/userattributes.properties`. For example:
`user.business-info.telecom.telephone.number=phone`

The first value is the name used by the JSR168 Container; the second value is the name of the User Information property in the portal.

3. Restart the application server to implement your changes to userattributes.properties.
4. Configure the Web Service to send the User Information to the remote server. Go to portal Administration and edit the associated Web Service object. On the User Information page of the Web Service Editor, add User Information settings that match the values mapped in the userattributes.properties file. To complete the example above, you would enter "phone" on the User Information page.

To complete the example and view the User Information in a portlet, follow the steps below:

1. Navigate to the Web application that hosts the RSS portlet. Open the `includePortlet.jsp` file and add the following to the user properties String values:

```
String phone = (String) map.get("user.business-  
info.telecom.telephone.number");
```

Add the following to display in the jsp page:

```
phone is <%=phone%>
```

2. Log in to the portal and click My Account. Enter a phone number and click Finish.
3. Add the RSS portlet to a portal page and confirm that the phone number you entered appears.

Build StyleSheet Templates

Follow the steps below to build any modified stylesheets.

1. Unzip the **ptjsr168_image.tar.gz** file to the **/ptimages** directory on the machine that hosts the Plumtree Image Server.
2. Go to `/ptimages/tools/cssmill` and execute the following batch file: **make_all.sh**. (You must have the appropriate permissions to execute the file; to modify permissions, use the `chmod` command.)

Use Application Server Values for `getRemoteUser()`, `getUserPrincipal()`, and `isUserInRole()`.

By default, the container does not use the values from the application server for the security-related calls `getRemoteUser()`, `getUserPrincipal()`, and `isUserInRole()`. Instead, it uses the logged-in portal user for `getRemoteUser()` and `getUserPrincipal()`, and activity rights for `isUserInRole()`. Only the activity rights configured on the Advanced Settings page of the Web Service object are examined for `isUserInRole`.

To use the application server values for these methods, open the file **jsr168.properties** (`<PT_HOME>/ptjsr168/1.0/settings/config`) and change the key **portalRemoteUser** to **false**. Changes will take effect when you restart your application server. Note: The application server will always return null for `getRemoteUser()` and `getUserPrincipal` unless the user has logged into the application server.

Use SSL

SSL is used in the `PortletURL` call **setSecure()**, and in the `transport-guarantee` element of the `security-constraint` element of `portlet.xml`.

To use SSL, open the file **jsr168.properties** (`<PT_HOME>/ptjsr168/1.0/settings/config`) and set the appropriate values for **httpport** and **httpsport**. (SSL must be enabled on the application server and a valid certificate must be installed.) If you use a `transport-guarantee` in `portlet.xml`, the portlet container will redirect to the configured SSL port in `jsr168.properties`.

For both `setSecure` in `PortletURL` and `transport-guarantee`, make sure to include the full SSL address up to the war file name in the gateway space (e.g., `https:my_server:7002/my_war`).

Support Editing Pages (Edit Mode)

To display the page in edit mode, add edit to the action of the form as shown below. (For a complete example, see IncludePortletEdit.jsp, shipped with PtPortletContainer.)

```
<form name="form1" method="post" action=<portlet:actionURL  
portletMode="edit"/>>
```

To close the window, set the mode back to view in **processAction** in the portlet, as shown below.

```
public final void processAction(ActionRequest req, ActionResponse  
res) throws PortletException, IOException  
{  
    //do whatever processing is needed for multiple pages  
    ...  
    //when processing is done, set the mode back to view  
    res.setPortletMode(PortletMode.VIEW);  
}
```