Jahia 5.0 SP3 with Websphere Application Server 6.1 Installation Guide

Jahia

9 route des Jeunes, CH-1227, Carouge Switzerland

http://www.jahia.com > The company web site
http://www.jahia.net > The community web site

VERSION

This table records the versions of this document and their last updates

Version	Author	Date	Modifications
1.0	Damien Saulnier	2007-12-07	Initial document
2.0	Damien Saulnier	2007-12-11	Portlets deployment
2.1	Khue Nguyen	2008-02-01	Clip portlet deployment
2.2	Damien Saulnier	2008-02-06	Portlet deployment: general case -> reorganisation

TODO:

- Portlets: known issues
- Cluster configuration

SUMMARY

INTRODUCTION

This document explains how to install Jahia 5.0 SP3 on Websphere Application Server version 6.1. You will find here information on how to deploy and configure your Jahia application, on how to deploy portlets on your Jahia Server, and on how to configure your Jahia Server in a cluster architecture.

JAHIA APPLICATION DEPLOYMENT

JAHIA ENTERPRISE ARCHIVE (EAR) CREATION

To create your Ear file, download your Jahia distribution from our website. Then:

- Extract the jahia directory from *tomcat/webapps/*
- Edit the *WEB-INF/web.xml* file and remove all the pre compiled jsp servlets between those two comments :

```
<!--
Automatically created by Apache Jakarta Tomcat JspC.
Place this fragment in the web.xml before all icon, display-name,
description, distributable, and context-param elements.
-->
```

and

```
<!--
All session-config, mime-mapping, welcome-file-list, error-page, taglib,
resource-ref, security-constraint, login-config, security-role,
env-entry, and ejb-ref elements should follow this fragment.
-->
```

- Create a war file containing all of your jahia directory
- After that, create a *META-INF* directory at the same level of your *jahia.war* file
- In this *META-INF* directory, we will create an *application.xml* file like this one :

```
<?xml version="1.0" encoding="UTF-8"?>
<application xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/application_5.xsd"
version="5">
<display-name>Jahia</display-name>
<module id="jahia">
<web>
<web-uri>jahia.war</web-uri>
<context-root>jahia</context-root>
</web>
</module>
</application>
```

- The last step is creation of the ear file grouping *jahia.war* and your *META-INF* directory in the same file

DATA SOURCES DEFINITION

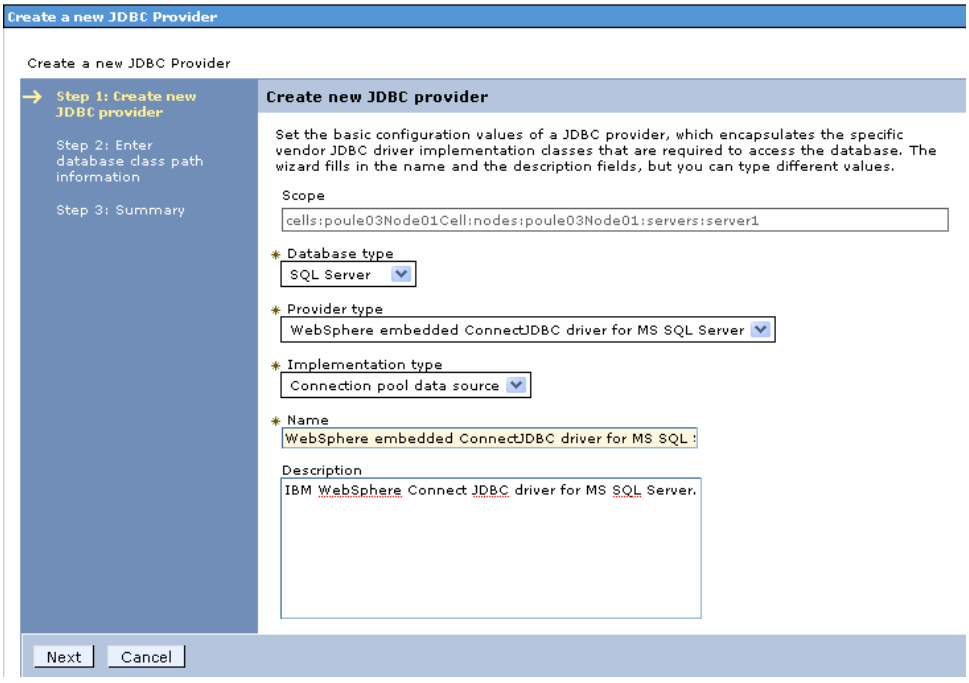
You need to define two data sources in your Application server. Those data sources will be further mapped on the resources declared in your Jahia application.

JDBC Provider creation

You need to create a JDBC provider to define connection with your database server. If you want to use a MS SQL Server database, you can use a JDBC Provider included with your WAS server, and so go directly to next paragraph.

For other database providers, you will have to create manually your JDBC Provider:

- Open **Resources / JDBC / JDBC Providers**, specify **Server scope** (Node=node_name, Server=server_name)
- Click on "**new**" button
- **Fill in** all required **fields** on screen :



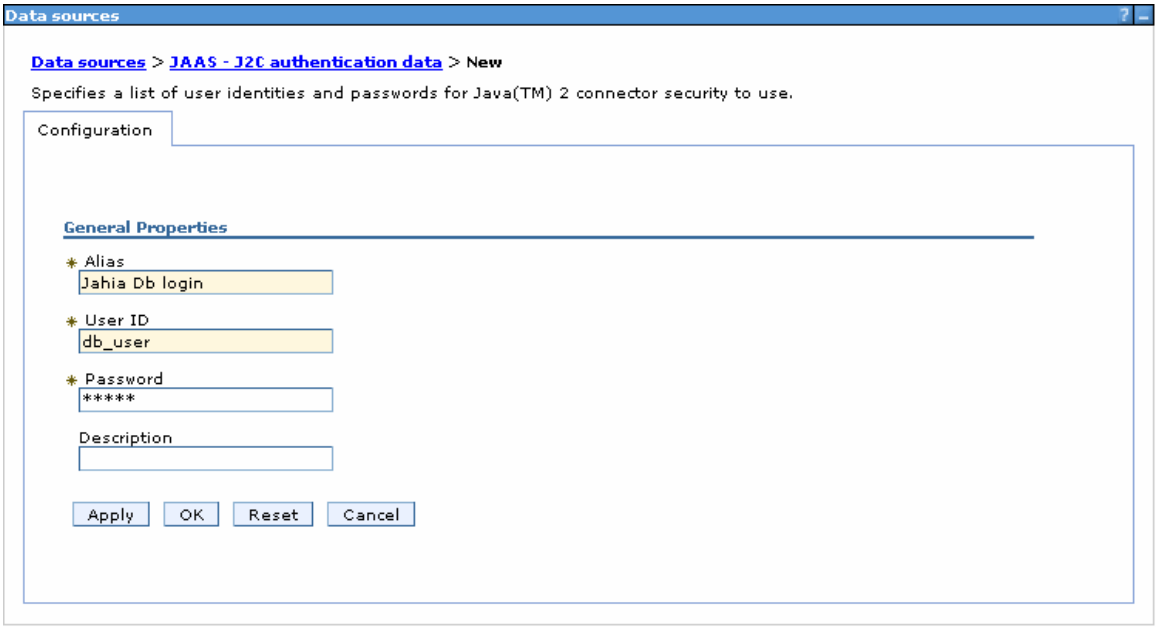
- Click on **Next / finish / save**

Data sources creation

Authentication alias creation

You need to define the login and password that will be used to connect to your database instance.

- Open **Resources / JDBC / Data sources**
- Specify **Server scope**
- Click on **New / Create an new J2C authentication alias / New**
- **Fill in** all required **fields** on screen :



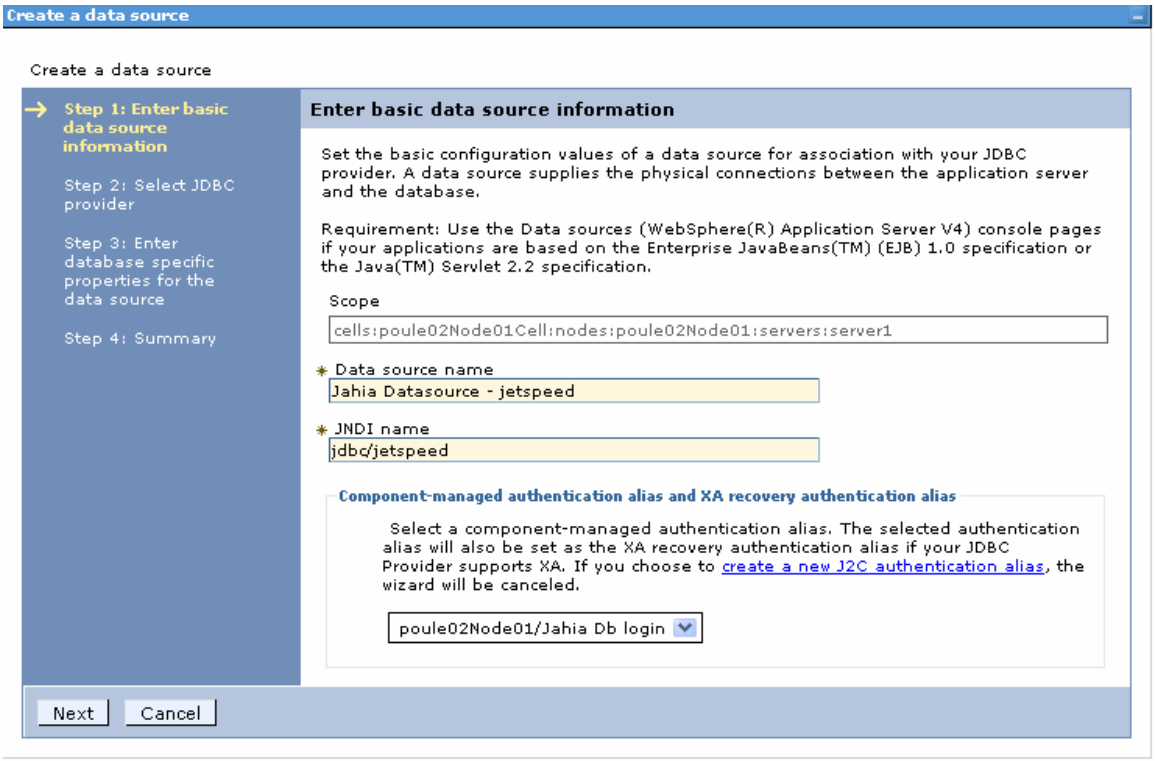
- Click on **Apply / Save**

Data sources creation

You can now create your Data sources. The Jahia application requires two Data sources: one with **JNDI name jdbc/jetspeed** and one with JNDI name **jdbc/jetspeedNonTx**.

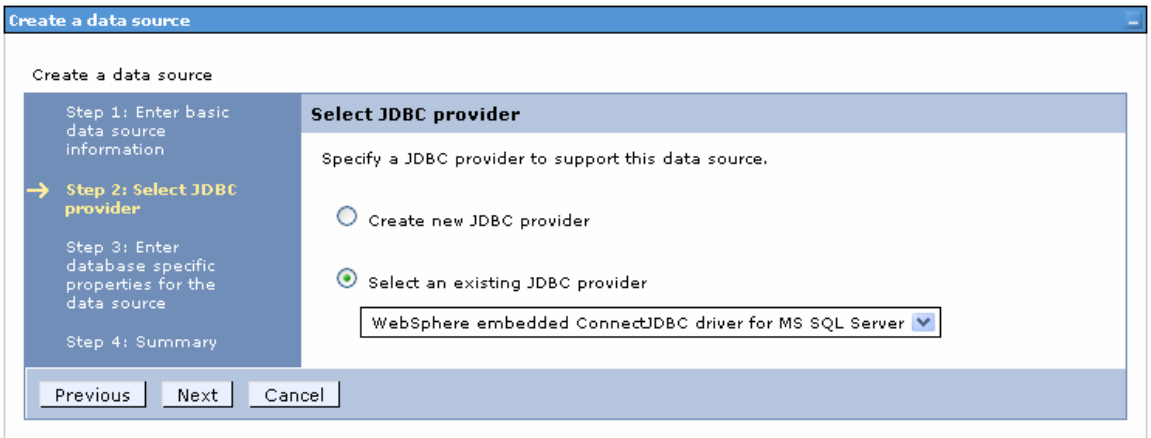
- Open **Resources / JDBC / Data sources**
- Specify **Server scope**
- Click on **New**

- Specify an explicit **name** for your Data source, specify one of the required **JNDI names**, and select your previously defined **authentication alias** :



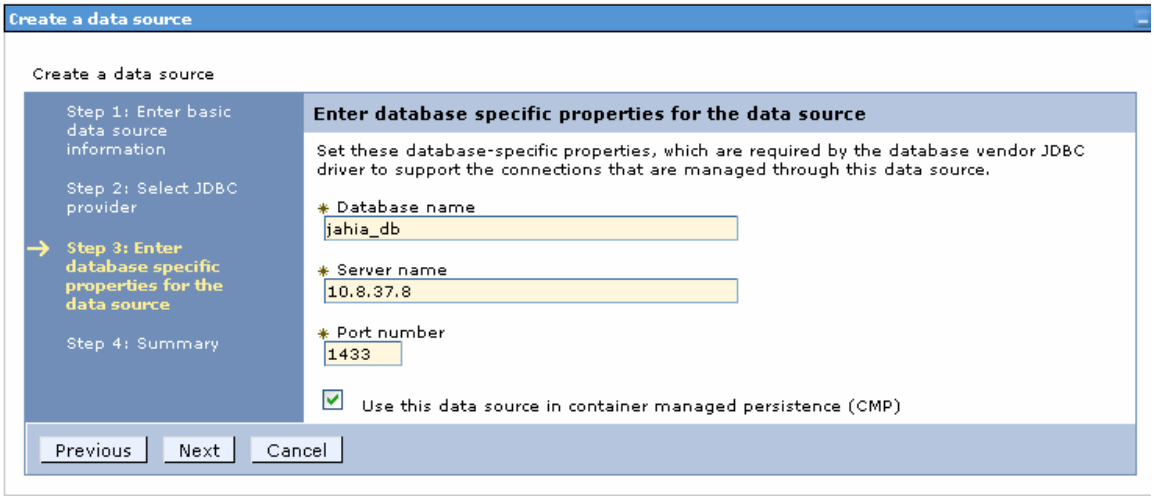
- Click on **Next**

- Select the **JDBC Provider** you want to use :



- Click on **Next**

- Enter **properties of your database instance :**

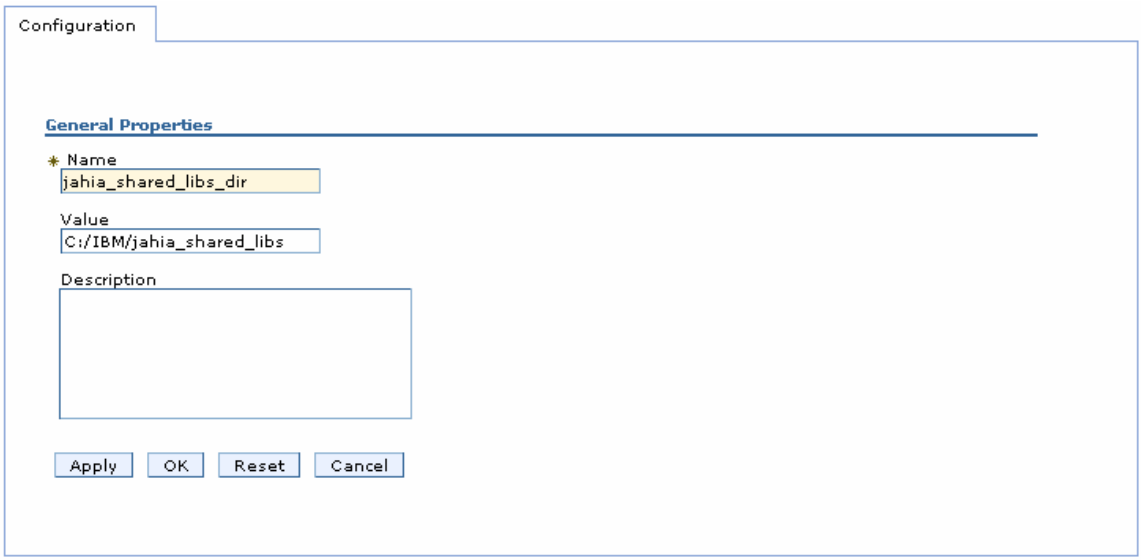


- Click on **Finish / save**
- Redo the same operation for the **second Data source**
- **Test connection** for the two created Data sources on Resources / JDBC / Data sources

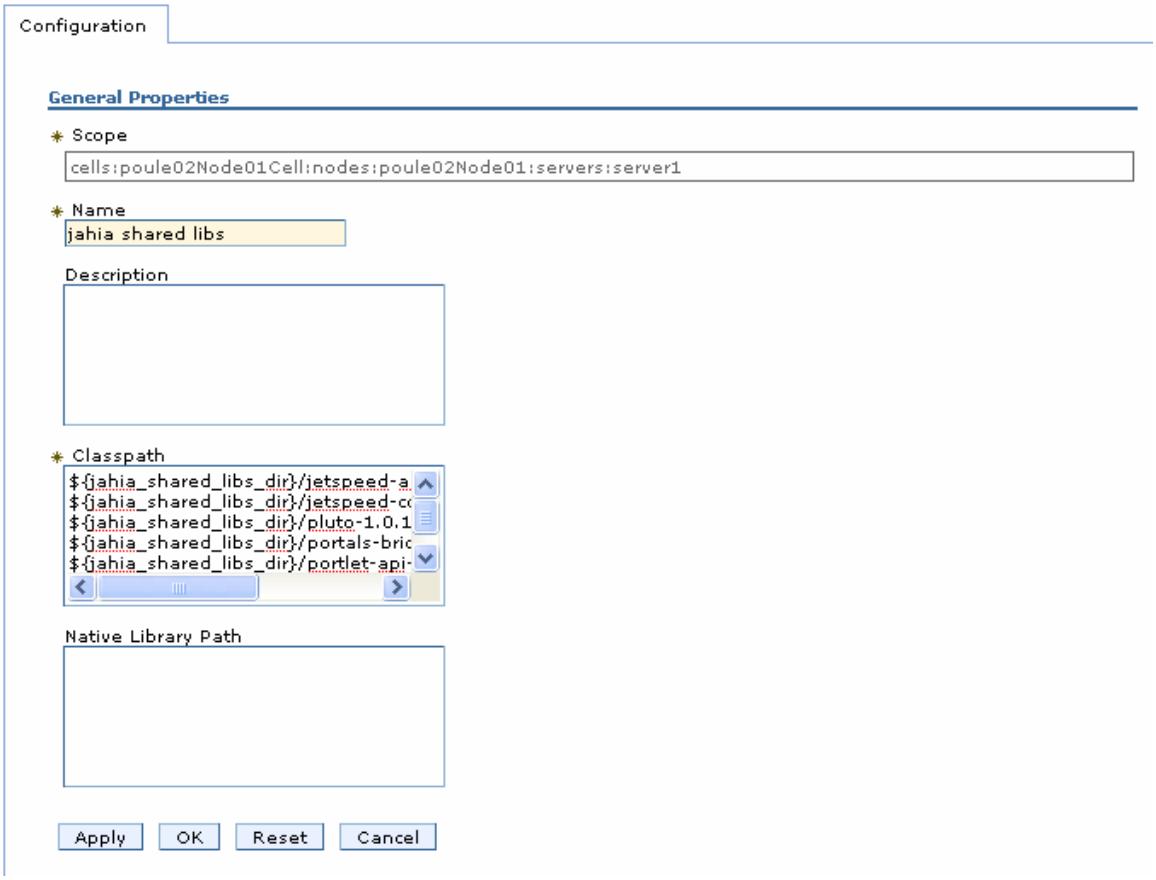
SHARED LIBRARIES DEFINITION

You have now to define some libraries that will be shared by your Jahia application and all its modules.

- **Copy** all the **libraries** found in *tomcat/shared/lib/* directory from your Jahia distribution in a local directory
- Open **Environment / Websphere variables**
- Specify **Server scope**
- Click on **new**
- **Specify a variable** that will design the directory where you have copied the shared libraries. **Enter the path** in value field :



- Click on **Apply / Save**
- Open **Environment / Shared libraries**
- Specify **Server scope**
- Click on **new**
- **Enter** an explicit **name** for your shared libraries, and **reference each jar** copied from tomcat/shared/libs in "Classpath" box. This box must contain only one jar by line, with no other separator that the end of line :

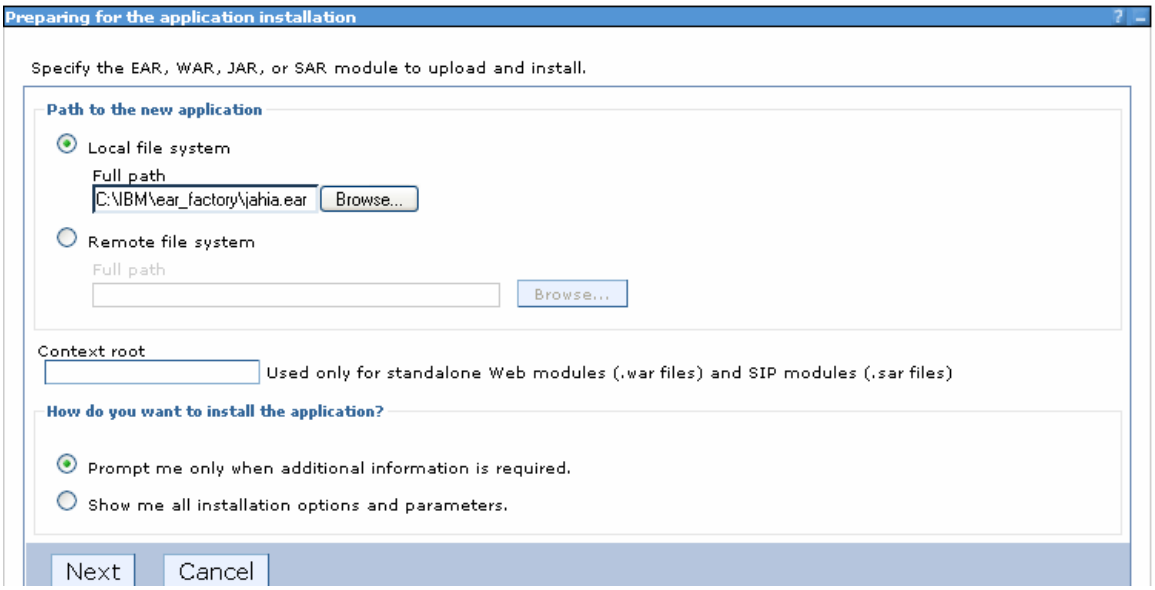


- Click on **Apply / Save**

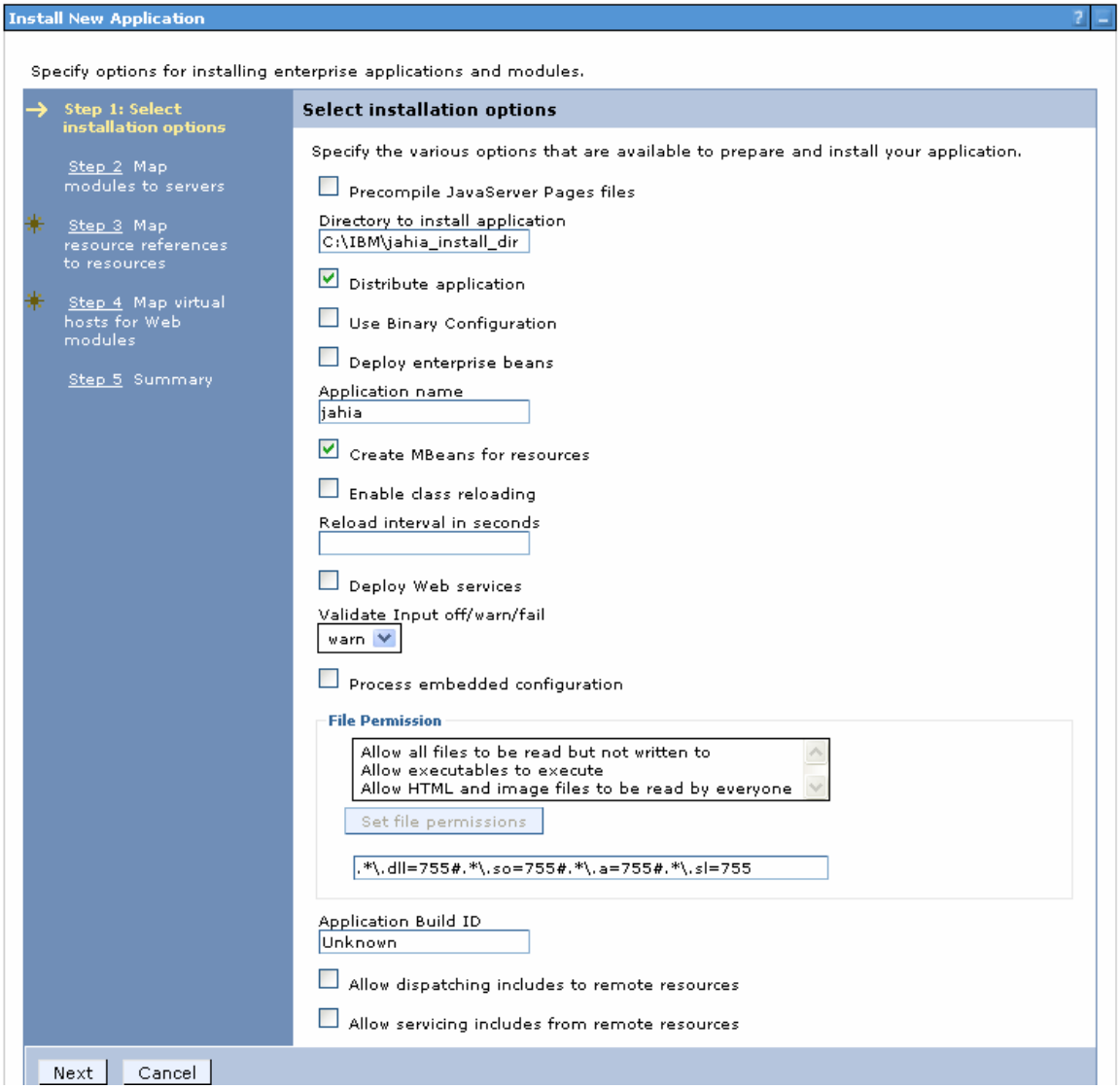
EAR DEPLOYMENT

You can now deploy the Ear you had previously packaged.

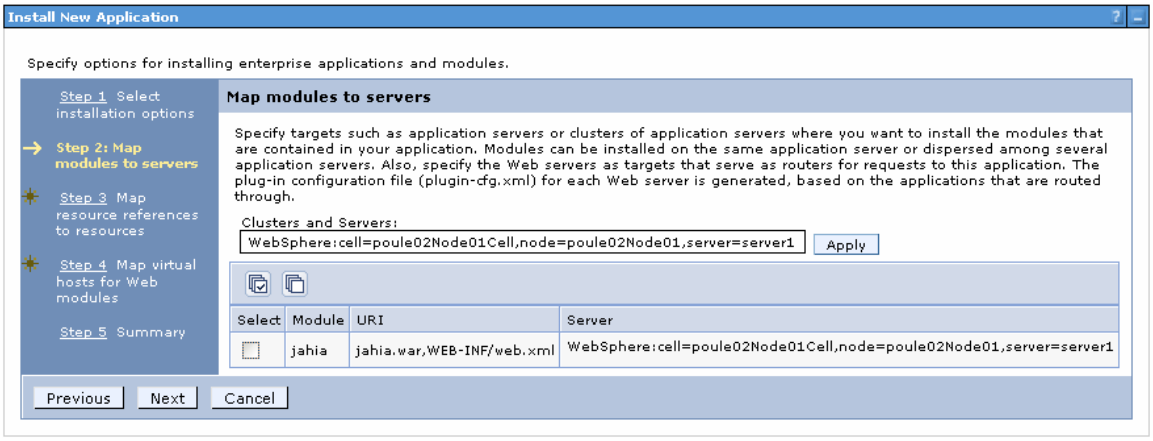
- Open **Applications / Install new application**
- Select your **ear file** :



- Specify where Jahia will be installed :

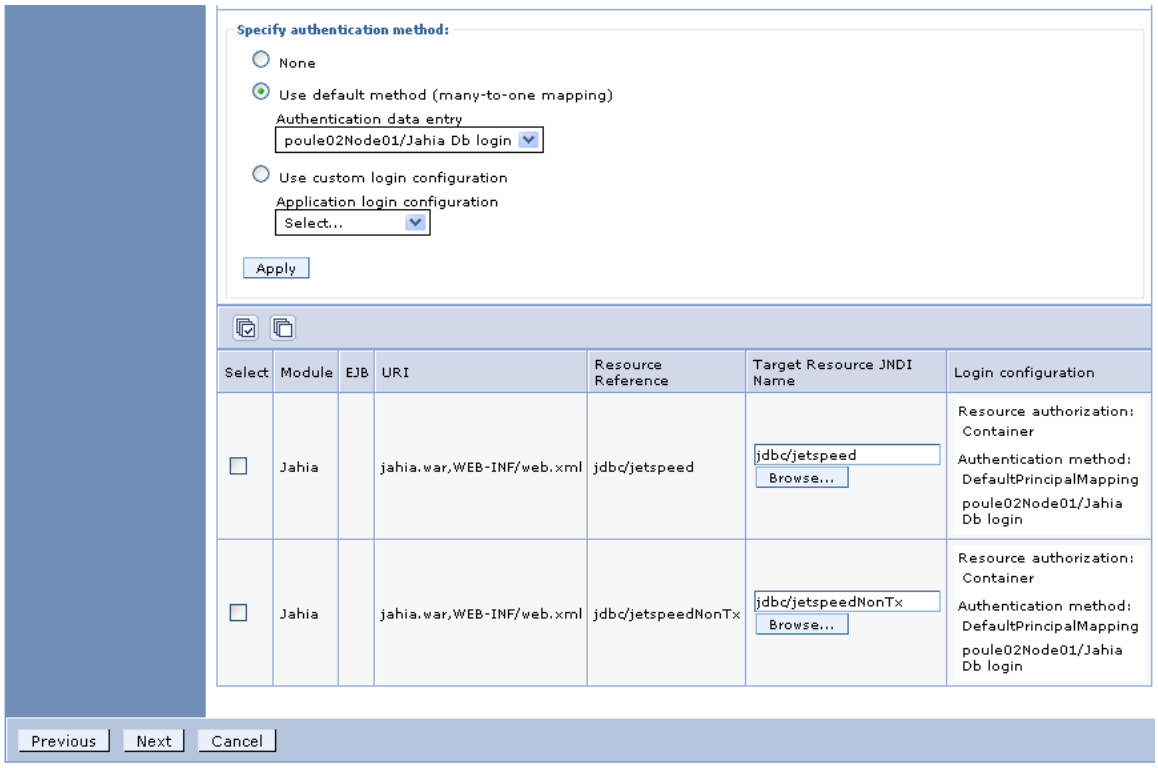


- Nothing to do :

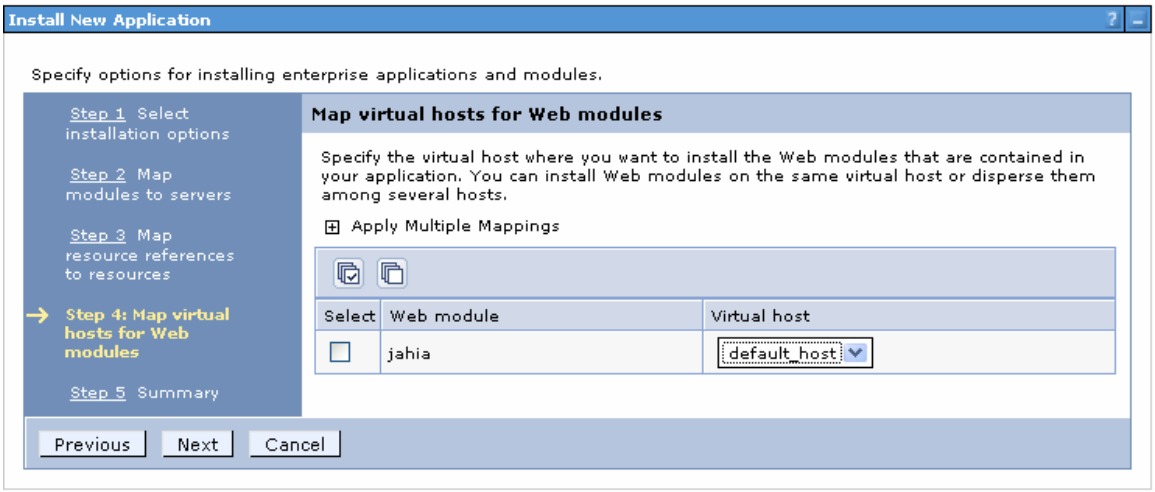


- **Map Jahia resources** declared in the web.xml file on previously defined Data sources

- Select each Jahia resources, **select the authentication method** previously defined and click on apply



- Nothing to do :



- Click on **Next / finish / save**

Now that your Jahia application is deployed on your Websphere Application Server, you have to perform some configuration operations before it is operational.

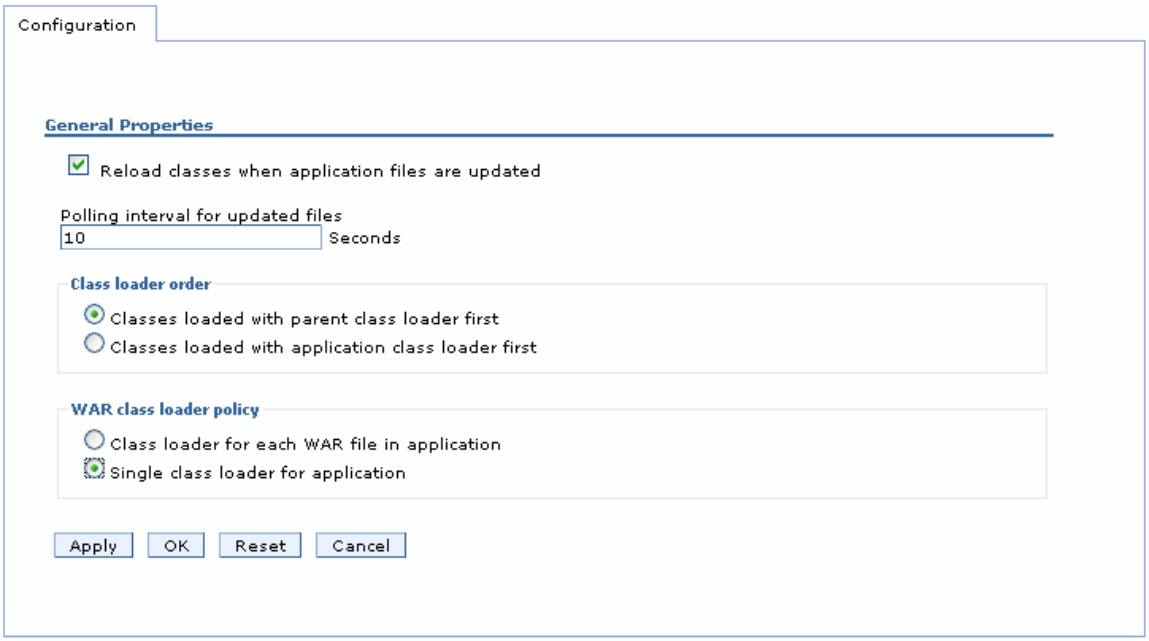
- Open **Applications / Enterprise Applications / Jahia / Shared libraries references**

- For both the application and the module, **reference** the previously defined **shared library**

- Click on **Ok / save**

- Open **Applications / Enterprise Applications / Jahia / Class loading and update detection**

- Set that you want only **one class loader for all the application** :



- Click on **Apply / Save**
- Open Servers / Application servers
- Select the server on which your Jahia application is deployed
- Ensure that classloader policy is set to multiple (at server level)
- Open Applications / Enterprise Applications
- **Start your Jahia application**
- You can now **access Jahia** on http://server_name_or_IP_:9080/jahia
- Follow the Jahia **install wizard**
- In jahia/WEB-INF/etc/config/jahia.properties , uncomment localAccessUri and set port to 9080
- In jahia/WEB-INF/etc/spring/applicationcontext-services.xml , modify the value of the syncUrl property so that the port is 9080 in url
- **Restart your Websphere Application Server** (not only the jahia application)

Your Jahia server is now ready to use!

PORTLETS DEPLOYMENT

We recommend to use Websphere Application Server 6.1.0.7 or newer, as it will let you prevent your portlets being deployed into the portlet container provided in WAS. Indeed, if you do not, you may encounter some problem as Jahia provides its own portlet container.

See http://www-1.ibm.com/support/docview.wss?uid=swg24016004 for more details.

PORTLET DEPLOYMENT : GENERAL CASE

You need to deploy your portlet as a module of your Jahia application, and not as a new Websphere application.

Configuration

- Open Applications / Enterprise Applications / Jahia /Manage Modules / jahia
- Change Starting weight to a lower value if not already done (default value is 10'000) so that the Jahia module starts before the deployed portlets
- Apply / save

Portlet Preparation

You have now to perform some modifications to your war file before deploying your portlet on WAS. First, modify its web.xml file so that it can be loaded by Jetspeed. Add the following lines in this file if missing, replacing the highlighted param-value by the "context root" you want to define for your portlet:

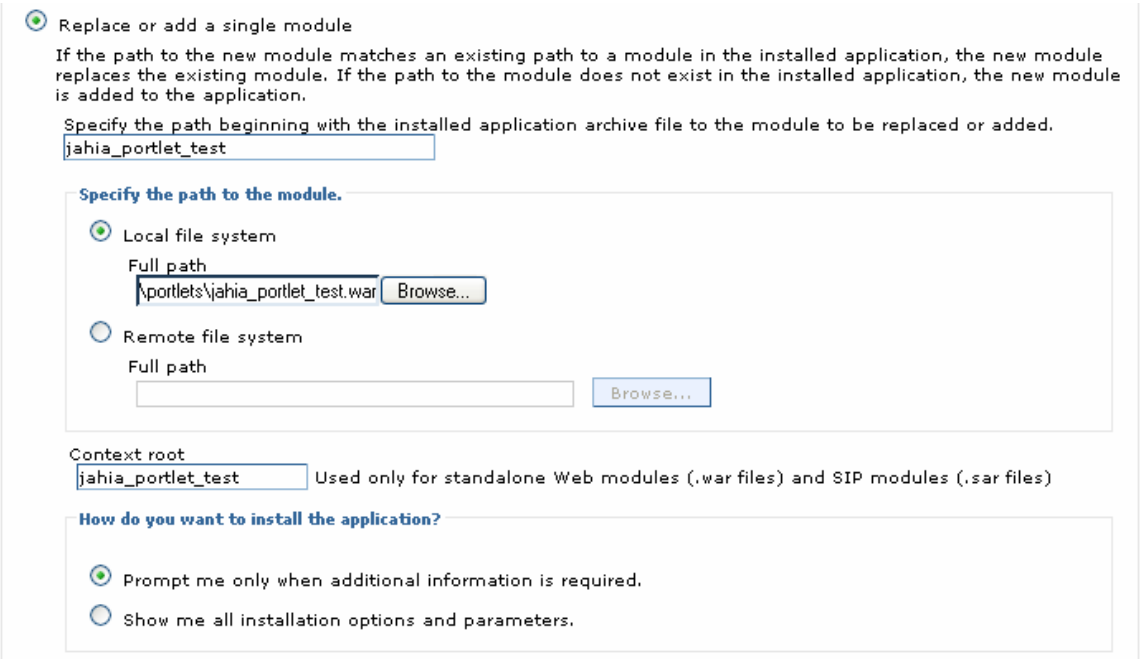
```
  <servlet>
    <servlet-name>JetspeedContainer</servlet-name>
    <display-name>Jetspeed Container</display-name>
    <description>MVC Servlet for Jetspeed Portlet Applications</description>
    <servlet-
class>org.apache.jetspeed.container.JetspeedContainerServlet</servlet-class>
    <init-param>
      <param-name>contextName</param-name>
      <param-value>iframeportlet</param-value>
    </init-param>
    <load-on-startup>0</load-on-startup>
  </servlet>

  <servlet-mapping>
    <servlet-name>JetspeedContainer</servlet-name>
    <url-pattern>/container/*</url-pattern>
  </servlet-mapping>

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

Ensure that the "portlet.tld" file that you reference in web.xml actually exists. This file has to be provided by the developer of the portlet. If missing, this file is automatically generated by jetspeed when deployed in a Jahia application running on tomcat. But as your portlet has been deployed by the portlet container provided by WAS, and not by jetspeed, this file is required on such environment. Refer to your portlet provider if this file is missing.

Portlet Deployment

You can now deploy your war file:

- Open Applications / Enterprise Applications
- Select your Jahia application, and click on "update"
- Select "replace or add a single module"
    - Specify where you want to install the module. This path is relative to Jahia install path
    - Select the war file to deploy
    - Specify the Context root (must be equal to the one you defined in the web.xml file)

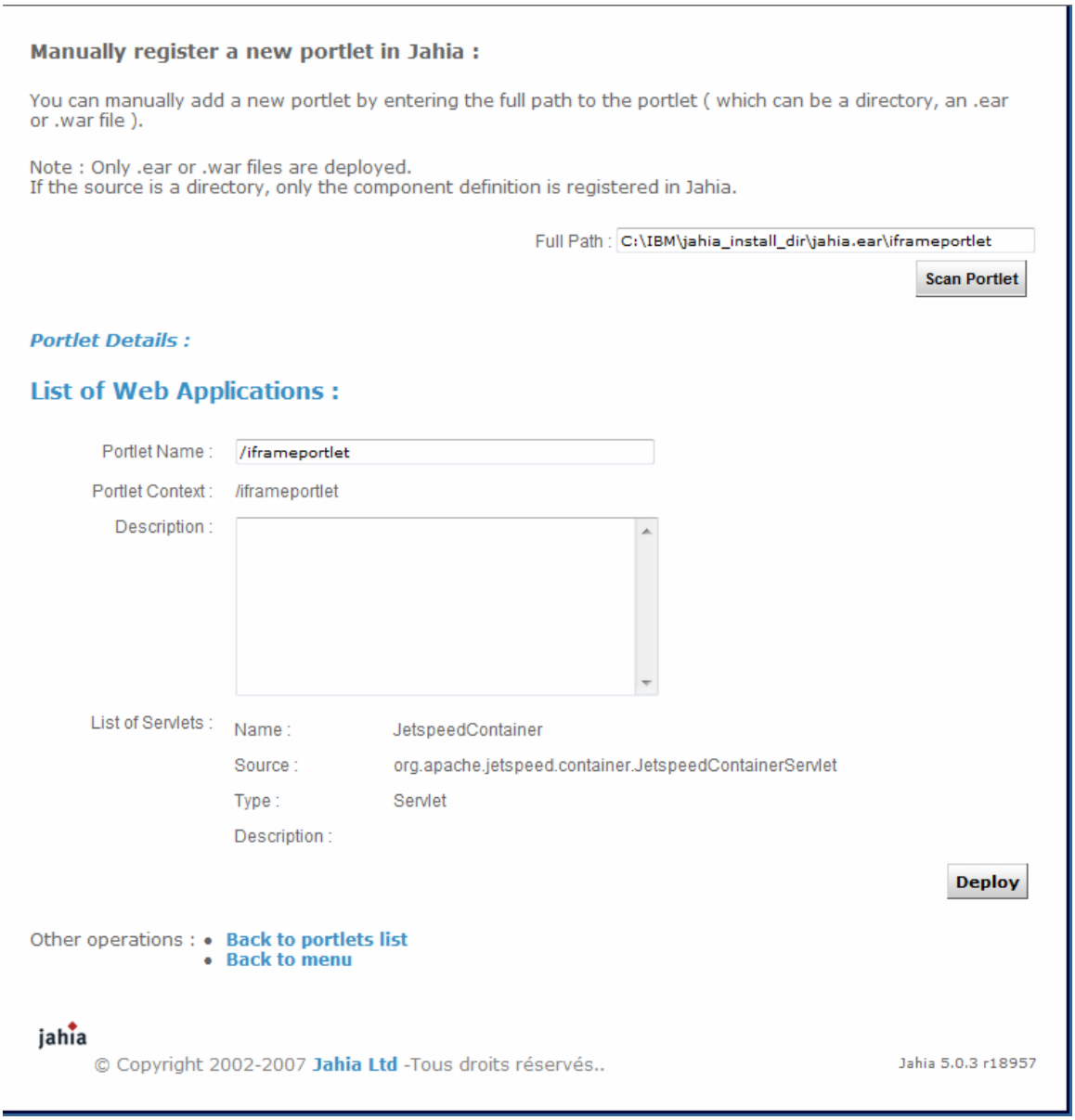


- Click on Next, and then select required installation options, depending to your portlet
- Next / Next / Next/ Finish / save
- Open **Applications / Enterprise Applications / Jahia / Shared libraries references**
- Reference your shared libraries for your just deployed portlet. Ensure that it is still referenced by Jahia and your possible other deployed portlets
- OK / Save
- Restart your Websphere Application Server

Your portlet is now deployed on WAS.

Portlet registration in Jetspeed

- Go in Jahia Administration Center, and open Manage portlets / Manually add a new portlet
- Specify the path to your deployed portlet in "Full Path" field, then click on "Scan Portlet"



- Click on Deploy

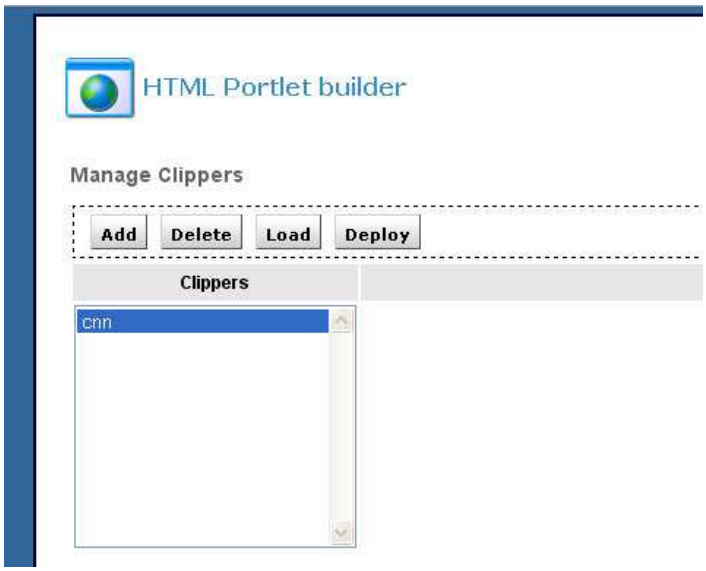
Your portlet is now registered in Jetspeed and ready to use on your Jahia sites!

Work in progress

CLIP PORTLET DEPLOYMENT

This is the procedure to deploy a clip-portlet created with the clip-portlet Builder.

- Save a clip-portlet and click on Deploy



This will produce the corresponding war portlet:

<Jahia>/WEB-INF/var/new_webapps/jahia_clip_cnn.war

- Open the generated war file and change the web.xml as documented in chapter "Portlets Deployment: General case":

```
<servlet>
    <servlet-name>JetspeedContainer</servlet-name>
    <display-name>Jetspeed Container</display-name>
    <description>MVC Servlet for Jetspeed Portlet Applications</description>
    <servlet-
class>org.apache.jetspeed.container.JetspeedContainerServlet</servlet-class>
    <init-param>
      <param-name>contextName</param-name>
      <param-value>jahia_clip_cnn</param-value>
    </init-param>
    <load-on-startup>0</load-on-startup>
</servlet>

<servlet-mapping>
    <servlet-name>JetspeedContainer</servlet-name>
    <url-pattern>/container/*</url-pattern>
</servlet-mapping>

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

You may give each portlet a distinct display Name:

```
<display-name>cnnClipperPortlet</display-name>
<description>cnnClipperPortlet</description>
```

- Deploy your portlet as documented in chapter "Portlets Deployment: General case"

CLUSTER CONFIGURATION

Work in progress