Getting Started Guide

Version: 4.0.0

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Installation Instructions

1.1. Installing JBoss Tools Plugins

The JBoss Tools plugins can be installed in Eclipse from the JBoss.org update site. JBoss Tools 4.0 requires Eclipse 4.2, which can be downloaded from the *Eclipse web site* [http:// www.eclipse.org/downloads/packages/eclipse-ide-java-ee-developers/junosr1].

To install the JBoss Tools plugins start Eclipse and select $Help \rightarrow Install New Software...$

Figure 1.1. Install New Software

Click the Add... button.

Figure 1.2. Install Dialog

This will display the **Add Repository** dialog. Enter **JBoss.org Tools** in the **Name** field, and *http://download.jboss.org/jbosstools/updates/stable/juno/* in the **Location** field. Click the **OK** button to save the changes and close the dialog.

Figure 1.3. Add Repository

The **JBoss.org Tools** site will be selected in the **Work with** drop down list, and after a moment the list of plugins that are included in the JBoss Tools package will be listed. From this list you can individually select the desired plugin, or select the **Abridged JBoss Tools 4.0** option to install all the plugins.

Figure 1.4. Available Software

Click the **Next** button to calculate the system requirements and dependencies (this may take a little while). You will then be given an opportunity to review the plugins that will be installed.

Figure 1.5. Installation review

Click the **Next** button to install the selected plugins. You will be prompted to accept the various license agreements that cover the plugins that are to be installed. Review the licenses, select the **I accept the terms of the license agreements** option, and click the **Finish** button to install the plugins.

Figure 1.6. License review

Wait while the plugins are downloaded and installed.

Figure 1.7. Installing Software

You may be prompted with a warning informing you that you are attempting to install unsigned content. Click the **OK** button to continue.

Figure 1.8. Unsigned Software Warning

You will then have to restart Eclipse to apply the new plugins. When prompted click the **Yes** button to restart Eclipse.

Figure 1.9. Restart Eclipse

The plugin is now installed and ready to use.

1.2. Usage Reporting

JBoss Tools now includes a usage plug-in that anonymously reports information back to JBoss. The plug-in is not enabled by default. To enable, click the **Yes** button.

0	JBoss Tools Usage	\mathbf{X}				
Will you allow JBoss Tools team to receive anonymous usage statistics for this Eclipse instance with JBoss Tools (info)?						
	Yes No					

Figure 1.10. Usage plug-in pop-up

Once enabled, the plug-in will remain active until turned off. To turn the active plug-in off, navigate to Window \rightarrow Preferences \rightarrow JBoss Tools \rightarrow Usage Reporting.

The gathered data allows JBoss to see how the tools are being used and where they are being used geographically. Currently we are looking into the operating systems being used, screen resolution and how often the tooling environment is started. In the future geographic information will assist in focusing translation resources to areas where the developer environment is most used.

The plug-in uses Google Analytics to track and report data by acting as if you were visiting the site http://jboss.org/tools/usage/. To view the type of information being collected, refer to Section 1.2.1, "Collected usage information guide".

To view the source code of the usage plug-in visit http://anonsvn.jboss.org/repos/jbosstools/trunk/ usage/.

1.2.1. Collected usage information guide

Below you will find an outline of the information that is reported and the Goolge Analytics fields that are used to gather this information.

Version

The **Content** field has been modified to report the installed JBoss Developer Studio version. Sample returned values include: jbdevstudio-linux-gtk-x86_64-4.0.0.v201009301221R-H20-Beta1.jar and jbdevstudio-linux-gtk-3.0.2.v201009161622R-H138-GA.jar.

Installed components

The **Keyword** field has been modified to report the installed JBoss Developer Studio components. Sample returned values include: JBoss AS, Drools, Teiid and ModeShape.

Visitor type

The Visitor type field reports if the current user is new or returning.

Language

The **Language** field reports the localized language the product is being used in. Sample returned values include: en-US, de-DE and fr-FR.

Location fields

The location fields report the geographical location where the product is being used based on the continent, country and city. Sample returned values include: Europe (continent), Germany (country) and Munich (city).

Eclipse interface and version

The **Browser** field has been modified to report the Eclipse interface and version being used. Sample returned values include: JBoss Developer Studio: 5.0.0 and JBoss Developer Studio: 5.0.1.

Operating System

The **Operating System** field reports the operating system and its version that the product is running on (with Linux distribution version reporting conducted through the **User Defined**

Value field). Sample returned values include: Linux, Macintosh 10.6, Macintosh 10.7 and Windows 7.

Linux distribution version

The **User Defined Value** field reports the distribution and version of Linux, if one is being used as the operating system. Sample returned values include: Red Hat Enterprise Linux 6 and Fedora 16

Screen colors

The **Screen colors** field reports the color depth being used. Sample returned values include: 32-bit and 24-bit.

Screen resolution

The **Screen resolution** field reports the resolution being used. Sample returned values include: 2048x1536 and 1920x1080.

Java version

The **Flash version** field has been modified to report the Java version used. Sample returned values include: 1.6.0_20.

Connection speed

The **Connection speed** field reports the type of internet connection being used. Sample returned values include: T1, Cable and DSL.

JBoss Central Enabled

The **JBoss Central Enabled** field reports whether JBoss Central is set to be seen upon startup or not. Returned value is either true or false.

JBoss Central

When viewing the workbench for the first time you will be greeted with *JBoss Central*. JBoss Central assists you in getting started and keeps you up to date with JBoss technologies.

🧯 JBoss Central 🛿		
🕻 JBoss Central		
- Create Projects		✓ News
 Dynamic Web Project Java EE Web Project HTML5 Project Spring MVC Project Project Examples JBoss Quickstarts 	t S <u>OpenShift Application</u> S <u>Java EE Project</u> S <u>RichFaces Project</u> S <u>GWT Web Project</u> ★ 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	 This week in JBoss (July 5) Sutter June 2012 has been a historievery product we produce (e This week in JBoss (28th weeks ago by Heiko Braun It been quiet this week, beca JUDCon in Boston. Neverthe
- Documentation		✓ Blogs
<u>New and Noteworthy</u> <u>Reference</u> <u>FAQ</u> <u>Screencasts</u>	<u>User Forum</u> <u>Developer Forum</u> <u>Wiki</u> <u>Issue Tracker</u>	্ৰ <u>JBoss Tools 3.3 and Devel</u> by Max Rydahl Andersen I'm extremely proud to be ab Developer Studio 5.0 final re
 ✓ Settings ✓ Show on Startup 		JBoss Tools and Develope Max Rydahl Andersen The release candidate of JBo - mainly with bugfixes but als

늘 Getting Started 🎐 Software/Update

Figure 2.1. JBoss Central

2.1. Getting Started with JBoss Central

The **Getting Started** tab of JBoss Central is the first tab you will see. It is set up as a functional starting point for developers.

At the top of the tab is a search box. By clicking the down arrow to the left you can select to perform a search on either the **Red Hat Customer Portal** or the **JBoss Community**.



Figure 2.2. Search Options

Performing a search will launch a web browser as a new tab, displaying the results page. You can interact with the browser as you would any other web browser.

,	.redhat.com జ			
🗠 🖘 🔳 🤣 https://acce	ss.redhat.com/knowledge/	/searchResults?col=a	avalon_portal&t	opSearchForm=topS
, redhat. CUST	OMER PORTAL	Red Hat Network	Try OpenShift	Search
ft Knowledge	Groups Support	Downloads	Security	Subscriptions
Search Results	5			
Developer Studio		Search	Advanced Search	
		Displaying re	esults 1 - 10 of 4,	350 results found for '
Product Family	access.redhat.com	Displaying re	esults 1 - 10 of 4,	350 results found for '
Product Family JBoss Enterprise Middleware (8)	access.redhat.com Download File, Release 11:33 AM EDT, Download.	Displaying re Date. JBoss Develope JBoss	esults 1 - 10 of 4, r Studio 4.1.0 So	350 results found for ' ource Code, 08/16/2011
Product Family JBoss Enterprise Middleware (8) Red Hat Enterprise Linux (6)	access.redhat.com Download File, Release 11:33 AM EDT, Download. https://access.redhat.com/jbo	Displaying re Date. JBoss Develope JBoss ssnetwork/restricted/listS	sults 1 - 10 of 4, r Studio 4.1.0 So oftware.html?produ	350 results found for ' ource Code, 08/16/2011 uct=jbossdeveloperstudio
Product Family JBoss Enterprise Middleware (8) Red Hat Enterprise Linux (6) Topic	access.redhat.com Download File, Release 11:33 AM EDT, Download. https://access.redhat.com/jbo downloadType=distributions	Displaying ro Date. JBoss Develope JBoss ssnetwork/restricted/listS	r Studio 4.1.0 So oftware.html?produ	350 results found for " ource Code, 08/16/2011 uct=jbossdeveloperstudio
Product Family JBoss Enterprise Middleware (8) Red Hat Enterprise Linux (6) Topic kcs (59)	access.redhat.com Download File, Release 11:33 AM EDT, Download. https://access.redhat.com/jbo downloadType=distributions	Displaying ro Date. JBoss Develope JBoss ssnetwork/restricted/listS	esults 1 - 10 of 4, r Studio 4.1.0 So oftware.html?produ	350 results found for " ource Code, 08/16/2011 uct=jbossdeveloperstudio
Product Family JBoss Enterprise Middleware (8) Red Hat Enterprise Linux (6) Topic kcs (59) jboss (49)	access.redhat.com Download File, Release 11:33 AM EDT, Download. https://access.redhat.com/jbo downloadType=distributions JBoss Reference Serie	Displaying ro Date. JBoss Develope JBoss Inssnetwork/restricted/listS	r Studio 4.1.0 So oftware.html?produ	350 results found for ' ource Code, 08/16/2011 uct=jbossdeveloperstudio
Product Family JBoss Enterprise Middleware (8) Red Hat Enterprise Linux (6) Topic kcs (59) jboss (49) kcs_verified (45) ibds (39)	access.redhat.com Download File, Release 11:33 AM EDT, Download. https://access.redhat.com/jbo downloadType=distributions JBoss Reference Series: J JBoss Reference Series: J - Expert - 980 Points - 15 E	Displaying ro Date. JBoss Develope JBoss Issnetwork/restricted/listS es: JBoss Develope Boss Developer Studi Dec 2010. soa-pworksho	r Studio 4.1.0 So oftware.html?produ r Studio 3.0 o 3.0. Red Hat's p op.pdf	350 results found for " ource Code, 08/16/2011 uct=jbossdeveloperstudio picture. Red HatAssocia
Product Family JBoss Enterprise Middleware (8) Red Hat Enterprise Linux (6) Topic kcs (59) jboss (49) kcs_verified (45) jbds (39) kcs_published (29)	access.redhat.com Download File, Release 11:33 AM EDT, Download. https://access.redhat.com/jbo downloadType=distributions JBoss Reference Series JBoss Reference Series: J - Expert - 980 Points - 15 E https://access.redhat.com/km	Displaying ro Date. JBoss Develope JBoss ssnetwork/restricted/listS es: JBoss Develope Boss Developer Studi Dec 2010. soa-pworksho pwledge/techbriefs/jboss	r Studio 4.1.0 So oftware.html?produ r Studio 3.0 o 3.0. Red Hat's p op.pdf reference-series-jt	350 results found for " ource Code, 08/16/2011 uct=jbossdeveloperstudio bicture. Red HatAssocia

Figure 2.3. Search Results

From the **Create Projects** section you can create a **Dynamic Web Project**, **OpenShift Express Application**, **Java EE Web Project**, **Java EE Project**, **HTML5 Project**, **Spring MVC Project**, **RichFaces Project**, **GWT Web Project**, or any one of many **Project Examples**. To access a complete list of projects you can create, click on the window icon at the top-right of the **Create Projects** section



Note

All wizards generate Maven based projects, except for the **Dynamic Web Project** wizard.



Figure 2.4. Creating a Project

GWT (Google Web Toolkit) Web Project creation. To create a GWT web project, the latest m2e-wtp and Google plug-ins have to be installed. If these plug-ins have not been previously installed, the first page of the GWT web project wizard will provide you with the ability to install the plug-ins.

New Project Exam	ple		
GWT Web Project An archetype that g	enerates a starter GWT application		
Description:			
An archetype that g	enerates a starter GWT application		A
Project size: 161,69K Requirements	Description	Found?	
Туре	Description	Found:	Install
server/runti	This project example requires JBoss AS 7.0/7.1 or EA		[Install required feature(s)
plugin	This project example requires m2e > = 1.0.		
plugin	This project example requires m2eclipse-wtp >= 0.15.		
plugin	This project example requires JBoss Maven Tools.		
piugin	This project example requires Google Plugin for Ecil		
?	< Back Next >	F	inish Cancel

Figure 2.5. GWT Web Project creation: plug-in page

Under the **Project Examples** section you can expand and view **JBoss Quickstarts**. Each quickstart is an example to assist first time users.

- Project Examples	1	39	S.
▼ JBoss AS 7 Quickstarts			
🐔 Helloworld			
📫 Login			
📫 <u>Numberguess</u>			
Kitchensink			
<u> HTML5</u>			

Figure 2.6. Project Examples

For an in-depth look into the installation of project examples see Section 2.3, "Project Example Installation".

You can also download other examples and install and set runtime preferences through the **Project Examples** section by using the five buttons at the top-right. The first button

launches a **New Project Examples** wizard. Here you can search and download project examples to assist you with getting started.

Project Example	imple				
□ Show experime	ntal sites				
□ Show runtime	ites				
Site:	All				\$
Targeted runtime	All				\$
Projects:					
type filter text					4
▶ JBoss Maven A	rchetypes				<u></u>
▷ Seam					_
▷ Portlet					=
▷ ESB for JBoss	Enterprise SOA Pla	atform 4.3			
▷ ESB for JBoss	Enterprise SOA Pla	atform 5.0			
Teiid Designer					~
Description:					
Project name:					
Project size:					
?		< Back	Next >	Cancel	Finish

Figure 2.7. New Project Examples wizard

Ву	clicking	on	the	second	button
38					

you will be taken directly to the **JBoss Tools Runtime Detection** dialog within **Preferences**.

0	Preferences
type filter text 🔏	JBoss Tools Runtime Detection $(\Rightarrow \Rightarrow \Rightarrow$
General	
Þ Ant	Description
Data Management	Each path on this list will be automatically scanned for runtimes when
FreeMarker Editor	Click Edit to configure rules/filters for the search.
Þ Help	Daths
HQL editor	
▷ Install/Update	Path Every start Add
▷ Java	Edit
▷ Java EE 🛛 🗉	
Java Persistence	Remove
JavaScript	Search
CDI (Context an)	Download
JBoss Central	Available runtime detectors
JBoss Portlet	Time
JBoss Tools Runt	
Project Example	JBOSS AS
Remote Debug	Seam Link
Usage Reporting	
Þ Web	
▷ Maven	
Þ Mylyn	
Plug-in Developme	
Project ∆rchives ♥	Restore Defaults Apply
?	Cancel OK

Figure 2.8. JBoss Tools Runtime Detection

The third

button takes you directly to the Server Runtime Environments preferences dialog.

Ô				Preferences		×
ty	pe filter text 🛛 🤞	1	:	Server Runtime Enviro	onments	⇔• ⇔• ▼
Þ	Help	onments.				
	HQL editor			Conversionelle anvironme	entre entre entre	
⊳	Install/Update			Server runtime environme	ents:	
⊳	Java			Name	Туре	Add
⊳	Java EE					Edit
⊳	Java Persistence					
⊳	JavaScript					Remove
⊳	JBoss Tools					
⊳	Maven					Search
⊳	Mylyn					
⊳	Plug-in Developme					
	Project Archives					
⊳	Remote Systems					
⊳	Run/Debug					
∇	Server					
	Audio	Ξ				
	Default Filesets					
	Launching					
	Profilers					
	Runtime Enviror					
⊳	Team					
	Terminal					
⊳	Usage Data Collect					
	Validation					
⊳	Web					
Þ	Web Services					
⊳	XML	~				
<	···· >					
(?				Cancel	ОК

Figure 2.9. Server Runtime Environments preferences

The	final	button
S.		
refreshes the Project Examples list.		

The **Documentation** section of JBoss Central contains links to help materials such as reference guides, user forums and documentation concerning new features.

- Documentation	
New and Noteworthy	User Forum
<u>Reference</u>	Developer Forum
FAQ	<u>Wiki</u>
<u>Screencasts</u>	Issue Tracker

Figure 2.10. Documentation links

If you do not wish to see JBoss Central at every startup, you can deselect the checkbox **Show on Startup** in the **Settings** section.

- Settings

✓ Show on Startup

Figure 2.11. Settings section

The **News** and **Blogs** sections are updated automatically, bringing you the latest information concerning JBoss technologies.



Figure 2.12. News and Blogs sections

Note

i

After using JBoss Central once, the current content will be available offline. This includes project example archives and descriptors, maven artifacts, and news and blog feeds.

2.2. Software installation and updates from within JBoss Central

The **Software/Update** tab at the bottom of JBoss Central switches to a screen where you can install and update your software.

JBoss Central 🕱	
JBoss Central	🎽 🔍 Search JBoss Communi 🥒 🧶 🛠
- Features Available	41 📑 🗇
Find:	🥒 🗆 Show Installed
Source Control Management	
Plugins for source control systems	
🗆 🗾 Subclipse + SVNKit	by tigris.org, Free, Subclipse License
Eclipse Team Provider for the Subver	rsion version control system, including SVNKit
Testing	
Plugins for testing + code quality	
🗆 旔 FindBugs	by FindBugs Project, Free, LGPL
Tool support for FindBugs	
🗆 🕐 JRebel	by zeroturnaround.org, Commercial
Tool support for JRebel	
🗆 🎢 PMD	by PMD Developers, Free, PMD License
Tool support for PMD	v
🗐 Install	
Getting Started 🎐 Software/Update	

Figure 2.13. Software/Update tab

To install or update software, select the checkbox beside one or more components.

Source Control Management

Plugins for source control systems

\checkmark	Subclipse + SVNKit	by tigris.org, Free, Subclipse License
	Eclipse Team Provider for the Subversion version	n control system, including SVNKit

Figure 2.14. Software/Update tab

Once you have selected all the components to update or install, click the

🗐 Install

button at the bottom left of the tab window. A window will then open offering you the option of deselecting a part of the component if you wish.

Install

Check the items that you wish to install.



Version	Id
1.6.18	org.tigris.subversion.subclip
1.6.15	org.tigris.subversion.clienta
	Version 1.6.18 1.6.15

	III
Select All Deselect All	
Details	
Detaits	
?	< Back Next > Cancel Finis

Figure 2.15. Component selection

You will then be asked to confirm the selection of components to install. To accept the selection press the **Next** button. You can change the components by pressing the **Back** button.

Install Details

Review the items to be installed.



Figure 2.16. Component verification

After pressing the **Next** button you will need to **accept the terms of the license agreement** for the associated software being installed. To do this select the corresponding radio button.

Click Finish to begin installation.

Review Licenses

Licenses must be reviewed and accepted before the software can be installed.



Figure 2.17. Licenses review

As the installation process takes place you can choose to have further details displayed or run the installation in the background.

	Installing Software		
Fetching org.tigris.subversion.subclipse.cotes/requirements/subclipse/1.6_1.3/plugins/			
🗆 Alwa	ys run in background		
	Cancel Details >> Run in Background		

Figure 2.18. Licenses review

After the software has been downloaded, you will be asked to verify the installation of the components if the contents are unsigned. Install unsigned third-party components with discretion.



ΟК

Details >>

Cancel

Figure 2.19. Installing unsigned content

Once installation is complete, restart JBoss Developer Studio by pressing the **Restart Now** button in the window that opens.



Figure 2.20.

2.3. Project Example Installation

To install an example from within JBoss Central, navigate to the **Project Examples** section and select an example from the list.



Figure 2.21. Project Examples

This section will guide you through the installation of the Helloworld example.

Click on the Helloworld item in the Quickstarts list.

An installation wizard for the example will open and automatically search for required components on your system. If a particular component is not found (a plug-in or a required version of the JBoss server), the component will be automatically downloaded for you during example installation.

പപ	0.00	dd
неп	owo	a

This example demonstrates the use of CDI 1.0 and Servlet 3 in JBoss AS 7. The example can be deployed...

Description:

This example demonstrates the use of CDI 1.0 and Servlet 3 in JBoss AS 7. The example can be deployed using Maven from the command line or from Eclipse using JBoss Tools.

Ξ

Project size: 8.00K

Requirements

Туре	Description	Found?	Install
server/runtime	This project example requires JBoss AS 7.	1 c 🗹	
plugin	This project example requires m2e >= 1.0.		Download and Install
plugin	This project example requires m2eclipse-w	vtp 🗹	
plugin	This project example requires JBoss Mave	n T 🗹	
			J
?	< Back Next	>	Cancel Finish

Figure 2.22. Project Examples

Click the **Next** button.

You will be asked to define the install location for the example. Your curent workspace will be selected by default.

Location Project Example Location and W	/orkspace			
Output directory				
/home/irooskov/Work/JBDS_5	0/workspace			Browse
Working sets				
Add project to working set Working sets:	S			Select
(?)	< Back	Next >	Cancel	Finish

Figure 2.23. Project Examples

Click the **Finish** button to begin installation of the example.

Once the example has been installed it will appear in the list of projects within your **Project Explorer**.

JBoss Perspective

The JBoss perspective is designed to incorporate the views most often used by developers using JBoss, while also changing standard menu items to reflect what a JBoss devleoper would want and need.

File Edit Navigate Search Project Run Window Help				
C¹▾ 🔡 🕼 🚔 🎄▾ O▾ Q⊾▾ 🖷 ଔ꾹	🚳 ४ 🚳 📲 🖡 🖗 🦓 🔿			
] 🙆 🙋 😂 🖨 🖋 -] 원 × 원 × ∜> ↔ ↔				
Project Explorer 🛛 🗖 🗖	G JBoss Central ≌			
□ 🔄 🖘 🌣	JBoss Central			
👂 🔡 jbossas [jbossas master]	▼ Create Projects			
MyProject1				
	Dynamic Web Project OpenShift Express A			
	Image: Spring MVC ProjectImage: Spring MVC Project			
	🕼 <u>RichFaces Project</u>			
	🝷 Project Examples 🗧 🚀 🦉			
	> JBoss Quickstarts			
	- Documentation			
	New and Noteworthy User Forum			
	Potoronco Doveloper Forum			
	📙 Getting Started 🎐 Software/Update			
	Properties ♣ Servers			
	Image: Started in the server [Started]			
	🕨 🏪 JBoss EAP 5.x Runtime Server [Stopped]			
	🕨 🏭 JBoss EAP 6.0 Runtime Server [Stopped]			
□◆				

Figure 3.1. JBoss Perspective

The JBoss perspective views include: **Project Explorer**, **Outline**, **Palette**, **Properties** and **Servers**.

Certain menus also see a change in available items. These menus include File \rightarrow New, Window \rightarrow Show View and the context menu for a project.

A selection of the menu items for File \rightarrow New can be seen in *Figure 3.2, "JBoss Perspective: FileNew*".

File Edit Refactor Source Navigate	e Search Project Ru	n Window Help
New	Shift+Alt+N >	🗭 CDI Web Project
Open File ^{k3}		📸 Dynamic Web Project
Close	Ctrl+W	📑 P <u>r</u> oject
Close All	Shift+Ctrl+W	🖶 Package
Save	Ctrl+S	🞯 Class
Save As		🗊 Interface
🗟 Save All	Shift+Ctrl+S	😂 Source Folder
Revert		😂 Folder
Move		File Hibernate Console Configuration
🗹 Rename	F2	🕝 Bean
& Refresh	F5	G Interceptor
Convert Line Delimiters To	>	@ Decorator
🚔 Print	Ctrl+P	📫 E <u>x</u> ample
Switch Workspace	>	Ctrl+N
Restart		

Figure 3.2. JBoss Perspective: File \rightarrow New

A selection of the menu items for **Window** \rightarrow **Show View** can be seen in *Figure 3.3, "JBoss Perspective: WindowShow View*".

Run	Window Help			
	New Window		ତ · ₿ · § ·	🛛 🕲 😕 🖌
	Open Perspective	>		
🕗 Fo	Show <mark>K</mark> iew	>	💷 Bookmarks	
1	Customize Perspective		🖳 Console	Shift+Alt+Q C
2	Save Perspective As		🗟 Declaration	Shift+Alt+Q D
30	Reset Perspective		🖏 Navigator	
6	Close Perspective		🗄 Outline	Shift+Alt+Q O
7 Close All Pers 9 Navigation	Close All Perspectives		Package Explorer	Shift+Alt+Q P
	Navigation	>	Problems Project Explorer	Shift+Alt+Q X
11	Web Browser	>	Properties	
	Preferences		🔗 Search	Shift+Alt+Q S
			🖧 Servers	
			🕆 Type Hierarchy	Shift+Alt+Q T
			<u>O</u> ther	Shift+Alt+Q Q

Figure 3.3. JBoss Perspective: Window \rightarrow Show View

A selection of the menu items for the context menu of a project can be seen in *Figure 3.4, "JBoss Perspective: Context MenuNew*".

Project Explorer 🛿 増 Package Explorer		
E \$	50 V	
Image: Second		
▷ 💼 booking22		
👂 🗁 booking22-ear		
booking22-eih		Et Destad
		Project
		File
▷ 💼 CDI Sho <u>w</u> In	Shift+Alt+W	> 😂 Folder
▷ 💼 CDI 📄 <u>C</u> opy	Ctrl+(C SQL File
👂 💼 CDI 朣 Copy Qualified Name		@ Annotation
👂 💼 CDI 💼 <u>P</u> aste	Ctrl+\	/ 🞯 Class
Dyr X Delete	Delet	e 🕼 Enum
Image: Second	Shift+Ctrl+Alt+Dow	🗊 🗊 Interface
gwt Build Path		> 🖶 Package
▷ 💼 jbo Refac <u>t</u> or	Shift+Alt+T	> 😂 Source Folder
▷ 💼 jbo Import		> 📽 Message-Driven Bean (EJB 3.x)
▷ i jp Export		Session Bean (EJB 3.x)
P T JSF Refresh	F	5 🗊 EJB Project
Close Project		Renterprise Application Project
Close Unrelated Projects		
Pro Validate		
▷ □ Pro Show in Permote Systems view		
		Seam Cenerate Entities
▷ i sea Debug As		
▷ a sea Profile As		Example
▷		Ctrl+
Destore from Local History		

Figure 3.4. JBoss Perspective: Context Menu \rightarrow New

Setting up a JBoss runtime and managing the server

Although JBoss Developer Studio works closely with JBoss Enterprise Application Platform 6 we do not ultimately tie you to any particular server for deployment. There are some servers that Studio supports directly (via the bundled Eclipse WTP plug-ins). In this chapter we discuss how to manage a JBoss server.



Note

This chapter assumes you have a JBoss application server installed on your system. If you do not, consult the installation instructions that accompanied your server.

4.1. Adding and configuring a JBoss server runtime

- Select the Servers view by navigating to Window \rightarrow Show View \rightarrow Other \rightarrow Server \rightarrow Servers.
- Click the **new server wizard** text in the **Servers** view or if this is not your first server, right-click anywhere in the view and select **New** → **Server**.
- Select the server option that matches your installed server.

Define a New Server

Choose the type of server to create

		De	ownload additiona	l server ad	ар
Select the server type:					
type filter text					
S OpenShift Server					
🗢 🗁 JBoss Enterprise Middle	eware				
🧸 JBoss Enterprise App	olication Platform 4.3				
🧸 JBoss Enterprise App	olication Platform 5.x				
🧯 JBoss Enterprise App	olication Platform 6.x				
👂 🗁 ObjectWeb					
JBoss Enterprise Application F	Platform (EAP) 6.x				
♀ Server's host name:	localhost				
Server name:	JBoss EAP 6.0 Runtime S	erver			
Server runtime environment:	JBoss EAP 6.0 Runtime			\$	<u>A</u>
			Configure runtim	e environm	er
?	< Back	Next >	Cancel	Finist	٦

Figure 4.1. Selecting Server Name and Server Type

- To setup the new runtime, click the **Next** button.
- In the next dialog verify the specified information and set local or remote server information.

Create a new JBoss Server

JBoss Enterprise Application Platform 6.0



A JBoss Server manager It manages command lin	s starting and stop e arguments and ke	ping instan eeps track	ces of JBoss. of which modules	have been deployed	d.
Runtime Information				llad Durationan	
and then Add to create	e a new runtime fro	ect, please m a differe	press back, insta nt location.	lled Runtimes,	
Home Directory	/home/irooskov/W	/ork/JBT_3	/Installed/Server	s/jboss-eap-6.0-ER	б
Execution Environment	Java Platform, Sta	andard Editi	on 6.0		
JRE	Default JRE for Ja	avaSE-1.6			
Server Behaviour					
Server is externally	managed. Assume	server is s	tarted.		
🗆 Listen on all interfa	ces to allow remot	e web con	nections		
🗆 Expose your manag	ement port as the	server's ho	stname		
Local		\$			
?		< Back	Next >	Cancel	Finish

Figure 4.2. JBoss Runtime Summary

• Lastly, a window will open that will allow you to modify projects that are to be configured for the server. Click the **Finish** button.

?

Figure 4.3. Configuring Projects

A new JBoss Server should now be visible in the Servers view.

Add and Remove

Chapter 4. Setting up a JBoss...

Modify the resources that are configured on the server

Move resources to the right to configure them on the server





Next >

Cancel

Finish

< Back

_	
_	


Figure 4.4. New JBoss Server

4.2. Starting JBoss Server

Starting JBoss Server is quite simple. JBoss Developer Studio allows you to control its behavior with the help of a special toolbar, where you could start it in a regular or debug mode, stop it or restart it.

To launch the server click the green-with-white-arrow icon in the Servers view or right-click the server name in this view and click the Start button. If this view is not open, select Window →
 Show View → Other → Server → Servers

🖹 Problems 🖉 Tasks 📨 Seam Components 🤻 Servers 😫							
JBoss EAP 6.0 Runtime Server [Stopped]							

Figure 4.5. Starting from Icon

While launching, server output is written to the Console view:

🖹 Problems ⁄ Tasks	🧐 Seam Components	붜 Servers	🗉 Console 🛿	
JBoss EAP 6.0 Runtime	Server [JBoss Applicat	tion Server S	Startup Configurat	ion] /usr/java/jdk1.7.0_01/b
09:38:31,986 INF0 09:38:31,993 INF0 09:38:32,257 INF0 09:38:32,293 INF0 09:38:32,871 INF0	[org.jboss.as.clus [org.jboss.as.osgi [org.jboss.as.secu [org.jboss.as.conn [org.jboss.as.conn	tering.inf:] (ServerS rity] (MSC ector] (MS ector.subs	inispan] (Serve ervice Thread P service thread C service threa ystems.datasour	rService Thread Pool - ool 39) JBAS011940: l-4) JBAS013100: Curr d 1-1) JBAS010408: Sta ces] (ServerService Th
<	Ш			

Figure 4.6. Console Output

When the server is started you should see *Started* in the square brackets right next to its name in the Servers view.

🖹 Problems 🖉 Tasks 🖗 Seam Components 👭 Servers 🛱 📮 Consol	e
🗢 🖏 JBoss EAP 6.0 Runtime Server [Started, Synchronized]	
XML Configuration	
🗟 Filesets	
👂 🗁 Server Details	

Figure 4.7. Server is Started

4.3. Stopping the JBoss Server

To stop the server, click the **Stop** button icon in Servers or right-click the server name and select **Stop**.



Figure 4.8. Stopping Server

When the server is stopped you will see Stopped in the square brackets next to its name.

4.4. Server Container Preferences

You can control how JBoss Developer Studio interacts with server containers in the Server editor. Double-click the server to open it in the editor.

🕻 JBoss Central 🛛 🛱 JBo	oss EAP 6.0 Runtime Server 🕱	
🗄 Overview		
General Information		Publishing
Specify the host name an	d other common settings.) Timesute
Server name:	JBoss EAP 6.0 Runtime Server	* Timeouts
Host name:	localhost	- Application
Runtime Environment:	JBoss EAP 6.0 Runtime	🗌 Customiz
Open launch configurat	ion	Force module
		\.jar\$
 Management Login C 	redentials	- Server Sta
This is used by all manag	in and password for your server. ement commands, and during server shutdown.	Startup Polle
User Name admin		Shutdown Po
Password ••••		
		- Server Por
 Server Behaviour 		The ports en
🗌 Server is externally n	nanaged. Assume server is started.	will poll the s
Listen on all interface	es to allow remote web connections	will not chang
🗆 Expose your manager	nent port as the server's hostname	Web
Local		Management
Overview Deployment		

Figure 4.9. Server Overview

Here you can specify some common settings: host name, server name, runtime as well as settings related to publishing, timeouts and server ports.

Developing a simple JSP web application

In this chapter you will find out how to create a simple JSP application using JBoss Developer Studio. The application will show a classic "Hello World!" on the page.

It will be assumed that you have already launched JBoss Developer Studio and also that the Web Development perspective is the current perspective. If not, make it active by selecting **Window** \rightarrow **Open Perspective** \rightarrow **Web Development** from the menu bar or by selecting **Window** \rightarrow **Open Perspective** \rightarrow **Other...** from the menu bar and then selecting Web Development from the Select Perspective dialog box.

5.1. Setting Up the Project

We are going to start by creating a Dynamic Web Project with a minimal structure, that is with just required facets.

- * Go to the menu bar and select $\textbf{File} \rightarrow \textbf{New} \rightarrow \textbf{Other...}$
- * Select $\textbf{Web} \rightarrow \textbf{Dynamic Web Project}$ in the New Project dialog box
- Click the Next button
- Enter "jspHello" as a project name
- Select Minimal Configuration from the list of possible configurations
- Click the Next button twice to move through the Java window to the Web Module window
- Select the Generate web.xml check box and click the Finish button.

•	New D	ynamic Web P	roject		
Dynamic Web Proj	ect				
Create a standalone Enterprise Applicati	Dynamic Web pr on.	roject or add it	to a new or e	existin	g
Project name: lispH	ello				
Project la <u>m</u> e. Japri	eno				
Project location	tion				
Location: [/redhat/	workspaces/wo	rkspace-jbds4/	jspHello		
Target r <u>u</u> ntime					
jboss-eap Runtime				\$	Nev
Dynamic web modu	e version				
2.5	_				
Configuration					
				·	
The most conservat Additional facets ca	ive starting poin In later be instal	t. Only the req led to add new	uired facets a functionality	to the	talle e pro
EAR membership					
Add project to a	n EAR				
EAR project name:	EAR			$\overline{}$	Ne
Add projec <u>t</u> to	working sets				
Working sets:				0	-
ure 5.1. Create New We	b Project				
0	(Dardy	Neutr		-	
	SBACK	Nexr>	Cance	-	

The *jspHello* node should be visible in the upper-left Package Explorer view.



Figure 5.2. New Web Project

5.2. Creating JSP Page

This section outlines how to create, edit and then preview a JSP page.

In our simple application we need to create only one JSP page which displays a "Hello World!" message.

- Right-click the <code>WebContent</code> folder and select New \rightarrow JSP.
- Type hello.jsp for a file name and click the Next button.

In the next window you can choose a template for your JSP page and see its preview.

• Select New JSP File (xhtml) template and click the Finish button.

Select JSP Template Select a template as initial content in the JSP page. Use JSP Template Templates: Name Description JSP with html markup and default view se New JavaServer Faces (JSF) Page (html) New JavaServer Faces (JSF) Page (xhtml) JSP with xhtml markup and default view s New JavaServer Faces (JSF) Page (xhtml, xml syntax) JSP with xhtml markup, xml style syntax a New JSP File (html) JSP with html markup JSP with html markup and BIRT Chart tag New JSP File (html, BIRT Chart tag) New JSP File (html, BIRT tag) JSP with html markup and BIRT tag New JSP File (xhtml) JSP with xhtml markup New JSP File (xhtml, xml syntax) JSP with xhtml markup and xml style synt New JSP File (xhtml, xml syntax, JSP 2.0) JSP with JSP 2.0 specific tags, xhtml mark Preview: <%@ page language="java" contentType="text/html; charset=\${encoding}"</pre> pageEncoding="\${encoding}"%> <!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/T <html> <head> <meta http-equiv="Content-Type" content="text/html; charset=\${encoding}"> <title>Insert title here</title> </head> <body> \${cursor} </body> </html> Templates are 'New JSP' templates found in the <u>JSP Templates</u> p ? < Back Next > Cancel

Figure 5.3. Create JSP Page

Our hello.jsp page will now appear in the Project Explorer view.

5.2.1. Editing a JSP Page

To edit the JSP page so that it displays the "Hello World!" message, insert the following line inside the <body> </body> tags:

<% System.out.println("Hello World!"); %>

Notice that content assist functionality is always available when you are typing:



Figure 5.4. Content Assist in JSP Page

After this line has been added, your hello.jsp page should look like this:



Figure 5.5. Hello.jsp Page Source

This line will actually output "Hello World!" message in the Console. To make the message displayed in the Browser, just replace this line with the simple Hello World!.

5.2.2. web.xml file

When you are creating web project the wizard creates the web.xml file for you automatically. The web.xml file editor provided by JBoss Developer Studio is available in two modes: Tree and Source.

🗟 hello.jsp 🛛 📟 web	o.xml ⊠					
Web XML Editor	r					
▼ web		- Web Descrip	tor 2.5		A	
🔻 🗟 web.xml	A	Name:	web		1	
😂 Context Par	rams	Display-Name:	DynamProject		i II	
Rilters		(Downstrumst M			1	
Listeners	inelio.jsp	X web.xmi 23				
Servlets	<pre></pre>	sion="1.0" encodin kmlns:xsi="http://	g="01F-8"?> www.w3.org/2001/XM	LSchema-instance	e*	
🛒 session-c	xmlns="ht	tp://java.sun.com/	xml/ns/javaee"			
kan Mime Maj	xmlns:web= xsi:schema	="http://java.sun. aLocation="http://	com/xml/ns/javaee/ java.sun.com/xml/n	web-app_2_5.xsd" s/iavaee http://	/iava.sun.com/x	ml/
V a welcome	<display< th=""><th>/-name>jspHello<th>lisplay-name></th><th></th><th></th><th></th></th></display<>	/-name>jspHello <th>lisplay-name></th> <th></th> <th></th> <th></th>	lisplay-name>			
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😂 EJB						
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	Pesian Source					
	Jesign Source					

Figure 5.6. Web.xml in Design and Source Mode

Both modes are fully synchronized. To add a mapping to the hello.jsp page in the web.xml file:

- Switch to the Source tab.
- Add the next code into <welcome-file-list> :

<welcome-file>hello.jsp</welcome-file>

If you go back to Tree tab you will see that the changes made in the Source tab are automatically reflected.

Actually you do not really need to do any configurations right now.

5.2.3. Deploying the project

Writing any scripts and managing the packaging process can be quite a complicated and time consuming task for even the most trivial web applications. However, JBoss Developer Studio relieves you of this burden. All you need is to start your JBoss Server and launch your application in your favorite browser.

You can also create a JAR archive with JBoss Developer Studio's Archive Tools and export it to any web server.

5.2.3.1. JAR Config

Project archives managing is available through the Project Archives view.

- * Select $\textbf{Window} \rightarrow \textbf{Show view} \rightarrow \textbf{Other} \rightarrow \textbf{JBoss Tools} \rightarrow \textbf{Project archives}$ from the menu bar
- Select a project in Package Explorer you want to be archived

In the Project Archives view you will see the that the project is now listed:

🗇 Project archives 😫	🖻 🗣 🐻 🔻 🗖
🔁 jspHello	

Figure 5.7. Project Archives

Right-click on the project and select New Archive \rightarrow JAR.

🛱 Package Explore 🔂 Project archives 🕱 🔤 🗖								
		E 🕏	a	▽				
🕨 😑 jsfHe	New Archive >	JAR						
	Build Project (Full)	×						

Figure 5.8. Project Archives

In the New JAR dialog you can see automatically selected default values.

	Ö	New JAR	
	Create a new arc	chive	
	Archive informatio	าก	
	Archive name: 📋	jsfHello.jar	
	Destination: 😕	/jsfHello	
	Relative to:	○ Filesystem Relative	Work
	Archive type		
	 Standard archiv 	ve using zip compression	
	 Exploded archiveling 	ive resulting in a folder (no compression)	
-			
	?	Cancel	F

Figure 5.9. New JAR Archive

• Click the **Finish** button. The *.JAR* file will appear in Package Explorer and also in Project Archives view as structure tree:



Figure 5.10. Archive is Created



Figure 5.11. Archive in Package Explorer

Using the Project Archives view you can rebuild the archive:



Figure 5.12. Configure Archive

5.2.3.2. Auto redeploy

When you create a web application and register it on the JBoss Server it is automatically deployed into the /deploy directory of the server. JBoss Developer Studio's auto-redeploy feature ensures

you do not need to restart the server. Any changes made in the application in exploded format will trigger a redeployment on the server.

You can also use the "Finger touch" button for a quick restart of the project without restarting the server:



Figure 5.13. Finger Touch button

The "Finger" touches descriptors dependent on project (that is web.xml for WAR, application.xml for EAR, jboss-esb.xml in ESB projects).

5.2.4. JSP Page Preview

JBoss Developer Studio comes with JSP design-time preview features. When designing JSP pages you can easily preview how they will look during runtime. You can even attach your stylesheet to the Preview.

• Make a little change to hello.jsp page. For example, insert this piece of code:

```
<%= new java.util.Date() %>
```

- Click the Save button.
- Switch to Preview page by clicking the Preview tab at the bottom of the page. You will see how the page will look at runtime.

5.2.5. Launch JSP Project

Now launch the project onto a JBoss server:

- Start a JBoss Server from the Servers view by clicking the Start the server icon (
 -).
- Click the Run icon or right-click your project folder and select Run As → Run on Server. If you have not made any changes in the web.xml file or cleared it out you can launch the application by right clicking the hello.jsp page and selecting Run on the Server(



You should see the next page in a Browser :



Figure 5.14. Running Project

You have learnt how to organize a Dynamic Web Project with a minimal configuration, add new elements to it (in our case it is a JSP page), deploy, and run it on a JBoss Server from within JBoss Developer Studio.

Rapid Application Development of a JSF application

In this chapter you will learn how to create a JSF application being based on the Rapid Application Development (RAD) philosophy. We will create the familiar Guess Number application. The game is played according to the following rules. You are asked to guess a number between 0 and 100. If the guess is correct, a success page is displayed with a link to play again. If the guess is incorrect, a message is printed notifying that a smaller or a larger number should be entered and the game continues.

You will now learn how to create such an application from scratch, along the way demonstrating the powerful features included in JBoss Developer Studio such as project templating, Visual Page Editor, code completion and others. You will design the JSF application and then run the application from inside JBoss Developer Studio using a JBoss server.

6.1. Setting up the project

First, you should create a JSF 1.2 project using an integrated JBoss Developer Studio's new project wizard and predefined templates. Follow the next steps:

 In the Web Projects view (if it is not open select Window → Show View → Others → JBoss Tools Web → Web Projects) click Create New JSF Project button.

📕 Package Explorer 🔝 Web Projects 🛿	- 8
🖹 🖻 🖄	□ 🕏
Create New JSF	Project

Figure 6.1. Create New JSF Project

- Enter GuessNumber as a project name, in JSF Environment drop down list choose JSF 1.2
- Leave everything else as it is and click the Finish button

Our project will appear in the Project Explorer and Web Projects views. As you can see JBoss Developer Studio has created the entire skeleton for the project with all required libraries, faces-config.xml file and web.xml file.



As the project has been set up, new JSP pages should now be created.

6.2. Creating JSP Pages

Here, we are going to add two pages to our application. The first page is called inputnumber.jsp. It prompts you to enter a number. If the guess is incorrect, the same page will be redisplayed with a message indicating whether a smaller or a larger number should be tried. The second page is called success.jsp. This page will be shown after you guess the number correctly. From this page you also have the option to play the game again.

Steps for adding two pages to your application:

 First a folder called pages needs to be created under the WebContent folder. To do this right click on the WebContent folder in the Package Explorer view and select New → Folder. Set the Folder Name to pages and click the Finish button.



Figure 6.3. Create pages folder

- Open the faces-config.xml file.
- Right click anywhere on the diagram mode
- From the context menu select New View

🔝 f	aces-cor	nfig.xml ස				
⊳ []						
٦,		New View				
		Auto Layout Select Element				
		Verify				
		Paste	Ctrl + V			
		Input Methods	>			

Figure 6.4. Create New View

- Type pages/inputnumber as the value for the From View ID field
- Leave everything else as is and click the **Finish** button
- In the same way create another JSF view. Type pages/success as the value for From View ID
- * Select File \rightarrow Save

On the diagram you will see two created views.

🔝 fa	ces-config.>	(ml 🕱		
		/pages/inputn	umber.jsp	
			/pag	es/success.jsp

Figure 6.5. New Views

6.3. Creating Transition between two views

Then, we should create connection between JSP pages.

• In the diagram, select the **Create New Connection** icon third from the top along the upper left side of the diagram to get an arrow cursor with a two-pronged plug at the arrow's bottom



Figure 6.6. Create Connection

• Click on the pages/inputnumber page icon and then click on the pages/success page icon

A transition should appear between the two icons of views.

🔊 *faces-config.xml 🛿										
k										
<u>1.</u>	/pages/inputnumber.jsp									
Ъ										
		/pages/success.jsp								

Figure 6.7. Created Connection

* Select $\textbf{File} \rightarrow \textbf{Save}$ from the menu bar

6.4. Creating Resource File

A resource file is a file with a *.properties* extension for collecting text messages in one central place. JBoss Developer Studio allows you to create quickly a resource file. The messages stored in a resource file can be displayed to you on a Web page during application execution.

With resource file you don't hard code anything into the JSP pages. It also makes it easier to translate your application to other languages. All you have to do is to translate all your messages to the other language and save them in a new properties file with a name that ends with the appropriate ISO-639 language code.

It is a good idea to keep your resources inside the JavaSource folder, where you keep your .java files. Every time you build the project, all *.properties* files will then be copied to the classes folder by default.

* Right click the <code>JavaSource</code> folder and select $New \to Folder$

• Enter game as the Folder name and click the **Finish** button

Your resource file and java bean will be stored in this folder.

- Right click on the game folder and select New \rightarrow Properties File
- Type messages as the value for "name" attribute and click the Finish button

JBoss Developer Studio will automatically open messages.properties file for editing.

🔊 faces-config.xml	📼 messages.properties 🛿	
 Filter 		
name	value	<u>A</u> dd
		Edit
		Delete
		<u>U</u> p
		Do <u>w</u> n
Properties Source		

Figure 6.8. Messages.properties File

- Click the Add button for adding new attribute to your resource file
- Enter how_to_play for the "name" and Please pick a number between 0 and 100. for the value

- Click the Finish button
- Add the following properties using the same process:

```
makeguess_button=Make Guess
trayagain_button=Play Again?
success_text=How cool.. You have guessed the number, {0} is correct!
tryagain_smaller=Oops..incorrect guess. Please try a smaller number.
tryagain_bigger=Oops..incorrect guess. Please try a bigger number.
```

* Select $\textbf{File} \rightarrow \textbf{Save}$ from the menu bar

Your .properties file should now look like follows:

▲ faces-config.xml ■ *messages.properties 🛛						
▶ Filter						
name	value					
makeguess_button	Make Guess					
trayagain_button	Play Again?					
success_text	How cool You have guessed the number, {0} i					
tryagain_smaller	Oopsincorrect guess. Please try a smaller nu					
tryagain_bigger	Oopsincorrect guess. Please try a bigger nur					
how_to_play	Please pick a number between 0 and 100.					
Properties Source						

Figure 6.9. Properties are Added

The **Up** and **Down** buttons allow you to move the attributes in the list. To delete the attribute, select it and press the **Delete** button.

If you want to change a value or a name of your attribute, select it and then click the **Edit** button.

If the .properties file is rather big and there are a lot of entries in it, you can use filtering and regular expressions narrow down the list. The Filter and Regular Expressions Search is implemented by an expandable panel, closed by default:

When "Expression" is not selected (as by default), filter is case insensitive. When "Expression" is selected, filter uses regular expressions which are case sensitive

is faces-config.xml Is messages.properties ₩							
▼ Filter							
Name: (*	Value:						
(* = any string, ? = any character, \ = escape for literals * ? \)							
name	value						
makeguess_button	Make Guess						
trayagain_button	Play Again?						
success_text	How cool You have guessed the number, {0} i						
tryagain_smaller	Oopsincorrect guess. Please try a smaller nu						
tryagain_bigger	Oopsincorrect guess. Please try a bigger nur						
how_to_play	Please pick a number between 0 and 100.						
Properties Source							

Figure 6.10. Filter and Regular Expressions Search Panel

Enter the characters that should be searched for in the entries to the 'name' or 'value' input fields accordingly. The filtered results will be displayed in the table below:

📧 faces-config.xml 🛛 🔳 *r	messages.properties 😫							
- Filter (matches 1 out of 6 items)								
Name: play	Value:							
(* = any string, ? = any character, \ = escape for literals * ? \)								
name	value							
how_to_play	Please pick a number between 0 and 100.							
Properties Source								
Flopercies source								

Figure 6.11. Filter results

When using regular expressions please note, that regular expression syntax does not use "*" for any characters and "?" for any one character. It's necessary to use "." for any one character and ".*" for any characters. Symbols "*" and "?" are used to show that the preceding token is not required, for example, "a.a" matches "aba" but not "aa", while "a.?a" or a.*a" matches both; besides "a.*a" matches "abcda".

To find the exact match, use sequences \A and \z in expression. For example, expression "\Adate \z" matches only string "date"; expression "\Adate" matches "date" and "dateline", expression "date\z" matches "date" and "Begin date", and expression "date" matches all of them.

6.5. Creating a Java Bean

In this section you'll learn how to create a Java bean that will hold business logic of our application.

• Right click the game folder

- * Select $\textbf{New} \rightarrow \textbf{Class}$
- Type NumberBean for bean name

A java bean is created.

• Declare the variable of your entered number:

Integer userNumber;

JBoss Developer Studio allows for quick generation of getters and setters for java bean.

- Right click the NumberBean. java file in the Package Explorer view
- * Select Source \rightarrow Generate Getters and Setters...
- Check userNumber box and click the **OK** button

۲	Gen	erate Getters a	nd Setters				
Select getters and setters to create:							
🗢 🗹 🔺 userN	▼ 🗹 🔺 userNumber						
✓ o get	:UserNumber()						
✓ • set	UserNumber(Integ	er)					
Allow setters for final fields (remove 'final' modifier from fields if new							
Insertion point:							
Insertion point.							
Last member							
S <u>o</u> rt by:							
Fields in gette	r/setter pairs						
Access modifie	۲ 						
o public	O protected	⊖ d <u>e</u> fault	○ pri <u>v</u> ate				
🗆 <u>fi</u> nal	synchronized						
Generate method comments							
The formula of the earthers (asthers much a seeficing displayed as the forder Terrals							
The format of the getters/setters may be configured on the <u>Code Templa</u>							
i 2 of 2 select	ed.						
(?)			Cancel				
J			Concer				

Figure 6.12. Generate Getters and Setters

· Add the declaration of the second variable

int randomNumber;

• .. other bean methods:

```
public NumberBean ()
{
   randomNumber = (int)(Math.random()*100);
   System.out.println ( "Random number: "+randomNumber);
  }
 public String playagain ()
  {
   FacesContext context = FacesContext.getCurrentInstance();
   HttpSession session =
        (HttpSession) context.getExternalContext().getSession(false);
   session.invalidate();
   return "playagain";
 }
 public String checkGuess ()
  {
    // if guessed, return 'success' for navigation
   if ( userNumber.intValue() == randomNumber )
    {
     return "success";
    }
else
   {
     FacesContext context = FacesContext.getCurrentInstance();
     ResourceBundle bundle = ResourceBundle.getBundle("game.messages",
      context.getViewRoot().getLocale());
      String msg = "";
      // if number bigger, get appropriate message
      if ( userNumber.intValue() > randomNumber )
         msg = bundle.getString("tryagain_smaller");
      else // if number smaller, get appropriate message
         msg = bundle.getString("tryagain_bigger");
      // add message to be displayed on the page via <h:messages> tag
      context.addMessage (null, new FacesMessage(msg));
      // return 'tryagain' for navigation
     return "tryagain";
    }
  }
```

• And the import declarations:

```
import javax.faces.context.FacesContext;
import javax.servlet.http.HttpSession;
import javax.faces.application.FacesMessage;
import java.util.ResourceBundle;
```

The Java Bean contains the following code:

```
package game;
import javax.faces.context.FacesContext;
import javax.servlet.http.HttpSession;
import javax.faces.application.FacesMessage;
import java.util.ResourceBundle;
public class NumberBean
{
  Integer userNumber;
  int randomNumber; // random number generated by application
  public Integer getUserNumber ()
  {
   return userNumber;
  }
  public void setUserNumber (Integer value)
  {
     this.userNumber = value;
  }
  // constructor, generates random number
  public NumberBean ()
  {
   randomNumber = (int)(Math.random()*100);
   System.out.println (
   "Random number: " + randomNumber);
  }
  public String playagain ()
  {
   FacesContext context = FacesContext.getCurrentInstance();
   HttpSession session =
        (HttpSession) context.getExternalContext().getSession(false);
   session.invalidate();
   return "playagain";
  }
  // check if user guessed the number
  public String checkGuess ()
```

```
// if guessed, return 'success' for navigation
   if ( userNumber.intValue() == randomNumber )
   {
     return "success";
   }
   // incorrect guess
   else
  {
     // get a reference to properties file to retrieve messages
     FacesContext context = FacesContext.getCurrentInstance();
     ResourceBundle bundle =
         ResourceBundle.getBundle("game.messages",
         context.getViewRoot().getLocale());
     String msg = "";
     // if number is bigger, get appropriate message
     if ( userNumber.intValue() > randomNumber )
        msg = bundle.getString("tryagain_smaller");
     else // if number smaller, get appropriate message
        msg = bundle.getString("tryagain_bigger");
     // add message to be displayed on the page via <h:messages> tag
     context.addMessage (null, new FacesMessage(msg));
     // return 'tryagain' for navigation
     return "tryagain";
   }
 }
}
```

6.6. Editing faces-config.xml File

In this section you will learn about the faces-config.xml file.

This file holds two navigation rules and defines the backing bean used.

- Open the faces-config.xml file in a source mode
- Here we will add one more navigation rule and a managed bean declaration, so that the content of the file looks like this:

```
<?xml version="1.0" encoding="UTF-8"?>
<faces-config
version="1.2"
xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xi="http://www.w3.org/2001/XInclude"</pre>
```

```
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/web-facesconfig_1_2_.xsd">
 <navigation-rule>
   <from-view-id>*</from-view-id>
   <navigation-case>
     <from-outcome>playagain</from-outcome>
     <to-view-id>/pages/inputnumber.jsp</to-view-id>
    </navigation-case>
 </navigation-rule>
 <navigation-rule>
   <from-view-id>/pages/inputnumber.jsp</from-view-id>
   <navigation-case>
     <from-outcome>success</from-outcome>
     <to-view-id>/pages/success.jsp</to-view-id>
   </navigation-case>
 </navigation-rule>
 <managed-bean>
   <managed-bean-name>NumberBean</managed-bean-name>
   <managed-bean-class>game.NumberBean</managed-bean-class>
   <managed-bean-scope>session</managed-bean-scope>
 </managed-bean>
</faces-config>
```

The first navigation rule states that from any page (* stands for any page) an outcome of playagain will take you to the /pages/inputnumber.jsp file. Outcome values are returned from backing bean methods in this example. The second navigation rule states that if you are at the page /pages/inputnumber.jsp, and the outcome is success, then navigate to the /pages/ success.jsp page.

6.7. Editing the JSP View Files

Now, we will continue editing the JSP files for our two "views" using the Visual Page Editor.

6.7.1. Editing inputnumber.jsp page

First, edit the inputnumber.jsp file.

On this page we will have an output text component displaying a message, a text field for user's number entering and a button for input submission.

• Open the inputnumber.jsp file by double-clicking on the /pages/inputnumber.jsp icon

The Visual Page Editor will open in a screen split between source code along the top and a WYSIWIG view along the bottom. You can see that some JSF code will have already been generated since we chose a template when creating the page.

At the beginning it's necessary to create a <h:form> component that will hold the other components.

- Place the mouse cursor inside the <f:view></f:view> tag
- Go to JBoss Tools Palette and expand JSF HTML folder by selecting it
- Click on the <h:form> tag


• In the Insert Tag dialog select the *id* field and click on the second column. A blinking cursor will appear in a input text field inviting to enter a value of id

Insert Tag			
<h:form> attribu</h:form>	tes		
Attribute name	Value		
accept			
acceptcharset			
binding			
dir			
enctype			
id	inputNumbers		(
lang			
onclick			
ondblclick			
onkeydown			
onkeypress			
onkeyup			
?		Cancel	<u> </u>

Figure 6.14. Define Id of Form

• Enter *inputNumbers* and click the **Finish** button

In source view you can see the declaration of a form.

```
🖹 inputnumber.jsp 🛛
    <%@ page language="java" contentType="text/html; charset=UT</pre>
        pageEncoding="UTF-8"%>
    <%@ taglib prefix="f" uri="http://java.sun.com/jsf/core"%>
    <%@ taglib prefix="h" uri="http://java.sun.com/jsf/html"%>
    <!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//
  ⊖<html>
  e <head>
    <meta http-equiv="Content-Type" content="text/html; charset
    <title>Insert title here</title>
    </head>
  ⊖ <body>
  ⊖<f:view>
        <h:form id="inputNumbers">
   \Theta
        </h:form>
    </f:view>
    </body>
    </html>
                                                             ш
Figure 6.15. Created Form
```

First let's declare the properties file in the inputnumber.jsp page using the loadBundle JSF tag.

• Add this declaration on the top of a page, right after the first two lines:

<f:loadBundle basename="game.messages" var="msg"/>

As always JBoss Developer Studio provides code assist:

🔊 faces-config.xml 🛛 🕼 🕯 inputnumber.jsp 🕴 📑 messages.properties		° 0	🚿 JBoss Tools Palette 🕱 🛛 🗖 🗖
<pre></pre>	-111 \$>	<u>_</u>	🛠 🗟 🤗 🗁 jBoss Ajax4jsf
S C f:loadBundle	Load a res view, and of the cum the "var" a a get() cal literal strin the key be MissingRes does not e	ource bundle localized for the L expose it as a java.util.Map in t rent request under the key spec thribute of this tag. The Map mu I is made for a key that does nu g ???KEY??? is returned from the ing looked up in the Map, instea sourceException being thrown. exist, a JspException must be th	ocale of the current he request attributes ified by the value of ist behave such that if ot exist in the Map, the e Map, where KEY is d of a if the ResourceBundle rown.
f:1 Visual/Source Source Preview			 ✓ outputLabel ✓ outputLink ✓ outputText ✓ panelGrid ◇ panelGroup ✓ selectBooleanCheckbox ✓ selectManyCheckbox ✓ selectManyListbox ✓ selectManyMenu ✓ selectOneListbox ✓ selectOneRadio

Figure 6.16. Code Assist

- Switch to Visual tab, where it is possible to work with the editor through a WYSIWYG interface
- Click the *outputText* item from the **JSF HTML** group in the **JBoss Tools Palette** view, drag the cursor over to the editor, and drop it inside the blue box in the editor
- Select the second column in the value row.
- Click the ... button next to the value field

JBoss Developer Studio will display a list of possible values:



Figure 6.17. Choose Value

- Expand Resource Bundles \rightarrow msg
- Select the *how_to_play* value and click the **OK** button. Then click the **Finish** button.



Figure 6.18. Selecting Value

The text will appear on the page:



Figure 6.19. Created OutputText Component

- Switch to Source mode and insert a
 tag after the <h:outputText> component to make a new line
- Click the Save button
- On the Palette click on *inputText,* drag the cursor over to the editor, and drop it inside the editor after the text
- Select the value row and click in the second column
- Click the ... button next to the value field
- Expand Managed Beans \rightarrow NumberBean
- Select userNumber value and click the **OK** button
- Select the Advanced tab

- Select the *id* row and click in the second column
- Type userNumber in the text field
- Select the required row and click in the second column
- Click ... button next to the value field
- Expand Enumeration and select true as a value

@	Edit Required
<h:inputtext></h:inputtext>	
– true	
 Managed Beans Resource Bundles SF Variables 	
	Cancel

Figure 6.20. Add "required" Attribute

- Click the OK button, then click the Finish button
- Go to Source mode
- Add the validation attribute to <f:validateLongRange> for user input validation

<h:inputText id="userNumber" value="#{NumberBean.userNumber}" required="true">

```
<f:validateLongRange minimum="0" maximum="100"/> </h:inputText>
```

- Click the Save button
- Again select Visual mode
- On the Palette, click on *commandButton*, drag the cursor over to the editor, and drop it inside the editor after the inputText component.
- In the editing dialog select the value row and click on the second column
- · Click the ... button next to the value field
- Expand Resource Bundles → msg and select makeguess_button as a value
- Click the OK button
- Select the action row and click in the second column
- Type #{NumberBean.checkGuess} in the text field
- Click the Finish button
- In Source mode add
 tags between the <outputText>, <inputText> and <commandButton> components to place them on different lines

inputnumber.jsp page should look like this:

```
<%@
                language="java" contentType="text/html;
                                                              charset=UTF-8"
       page
pageEncoding="UTF-8"%>
<%@ taglib prefix="f" uri="http://java.sun.com/jsf/core"%>
<%@ taglib prefix="h" uri="http://java.sun.com/jsf/html"%>
<f:loadBundle basename="game.messages" var="msg"/>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://
www.w3.org/TR/html4/loose.dtd">
<html>
 <head>
 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
 <title>Insert title here</title>
 </head>
 <body>
  <f:view>
   <h:form id="inputNumbers">
   <h:outputText value="#{msg.how_to_play}"/>
    <br/>
   <h:messages style="color: blue" />
```

```
<br/>
                        <h:inputText
                                           id="userNumber"
                                                                required="true"
value="#{NumberBean.userNumber}">
    <f:validateLongRange minimum="0" maximum="100" />
    </h:inputText>
   <br/>
   <br/>
                        <h:commandButton
                                              action="#{NumberBean.checkGuess}"
value="#{msg.makeguess_button}"/>
   </h:form>
</f:view>
</body>
</html>
```

6.7.2. Editing success.jsp page

We now edit the success.jsp page in the same way as we just edited the inputnumber.jsp file. The code for the success.jsp page should look like the following:

```
<%@ taglib uri="http://java.sun.com/jsf/html" prefix="h" %>
<%@ taglib uri="http://java.sun.com/jsf/core" prefix="f" %>
<f:loadBundle basename="game.messages" var="msg"/>
<html>
<head>
 <title></title>
</head>
<body>
 <f:view>
  <h:form id="result">
   <h:outputFormat value="#{msg.success_text}">
   <f:param value="#{NumberBean.userNumber}" />
   </h:outputFormat>
   <br />
   <br />
   <h:commandButton value="#{msg.trayagain_button}"
    action="#{NumberBean.playagain}" />
  </h:form>
 </f:view>
</body>
</html>
```

Again you can use code assist provided by JBoss Developer Studio when editing jsp page:

🖻 *s	success.jsp 23	- 8
% *	<f:view></f:view>	^
8 <u>8</u>	<h:form id="result"></h:form>	
1	<h:outputformat value="#{msg.success_text}"></h:outputformat>	=
2	<f:param value=""></f:param>	
II	<th></th>	
	🖾 msg	
	 	vith #
Asi 3	↓ JSP expression - JSP expression <%=%>	
0.00	A New JSF EL Expression - Create a new attribute value	with #
	C - Font Name -	
	How cool You have guessed t	
	Play Again?	
		-
		>
	html body f:view h:form h:outputFormat f:param	x
Visu	al/Source Source Preview	

Figure 6.21. Code Assist for <f:param>

The success.jsp page is shown if you correctly guessed the number. The <h:outputFormat> tag will get the value of success_text from the properties file. The {0} in success_text will be substituted for by the value of the value attribute within the <f:param> tag during runtime.

In the final result you have a button which allows you to replay the game. The action value references a backing bean method. In this case, the method only terminates the current session so that when you are shown the first page, the input text box is clear and a new random number is generated.

• Switch to Preview mode to see how this page will look in a browser:

inputnumber.jsp 🛿
Please pick a number between 0 and 100. #{NumberBean.userNumb
Make Guess
Visual/Source Source Preview

Figure 6.22. Success.jsp in Preview Mode

6.8. Creating index.jsp page

Now we need to create the index.jsp page.

The index.jsp page is the entry point of our application. It's just forwarding to the inputnumber.jsp page.

- * Right click the <code>WebContent</code> folder and select $New \to JSP$ File
- Enter index for name field and click the **Next** button.
- Untick the Use JSP Template check box and click the Finish button.
- Edit the source of the file so it looks like the following:

```
<!doctype html public "-//w3c//dtd html 4.0 transitional//en">
<html>
<body>
<jsp:forward page="/pages/inputnumber.jsf" />
</body>
</html>
```

Note the *.jsf* extension of a page. It means that we trigger the JSF controller servlet to handle the page according the servlet mapping in the faces-config.xml file.

6.9. Running the Application

Finally, we have all the pieces needed to run the application.

- Start up JBoss server by clicking on the **Start** icon in the Servers view. (If the JBoss Server is already running, stop it by clicking on the red icon and then start it again. After the messages in the Console tabbed view stop scrolling, JBoss is available)
- * Right-click on the project and select $\textbf{Run}~\textbf{As}\rightarrow\textbf{Run}~\textbf{on}~\textbf{Server}$
- · Play with the application by entering correct as well as incorrect values

2			Inse	ert title here -	Mozilla F
<u>F</u> ile <u>E</u> dit	<u>V</u> iew Hi <u>s</u> tory	<u>B</u> ookmarks	<u>T</u> ools <u>I</u>	<u>H</u> elp	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	• G 🔍 🕯	🎧 〔 http:/	//localhos	st:8080/GuessNu	mber/
🕻 Insert t	itle here	+			
Please p	oick a number	between 0	and 10	0.	
Make Gu	Jess				
Done					
Done					

### Figure 6.23. You are Asked to Enter a Number Between 0 and 100

2		Insert title here - Mozilla Firefox
<u>F</u> ile <u>E</u> dit <u>V</u> iev	w Hi <u>s</u> tory <u>B</u> ookmar	ks <u>T</u> ools <u>H</u> elp
<b>⊘</b> • ∞ <b>∨</b> (	C 🔍 🎧 🏹	ttp://localhost:8080/GuessNumber/pages/inputnu
🕻 Insert title h	ere	+
Please pick a	a number betweer	n 0 and 100.
<ul> <li>inputNu</li> <li>0 and 1</li> </ul>	umbers:userNumb 00.	per: Validation Error: Specified attribut
-6		
Make Guess	]	
Done		

### Figure 6.24. Your Input is Validated and an Error Message is Displayed if Invalid Input was Entered

Nozilia Firefox	
<u>Elle Edit View Go Bookmarks Tools H</u> elp	
🖕 🛛 🍦 🖉 区 😭 🏹 tttp://localhost:8080/GuessNumber/pages/inputnumber.jsf 💌 🛛 Go	
Please pick a number between a 0 and 100.	
• Oops., incorrect guess. Please try a smaller number.	
45	
Make Guess	
Done	

Figure 6.25. After You Enter a Guess, the Application Tells You Whether a Smaller or a Larger Number Should be Tried

1		Mozilla Firefox
<u>F</u> ile <u>E</u> dit <u>V</u>	iew Hi <u>s</u> tory <u>B</u> ookmarks	<u>T</u> ools <u>H</u> elp
<u></u> ∞ ∾	😋 🔍 🎧 🏹 http:/	//localhost:8080/GuessNumber/pages/inputnu
🕻 http://loca	lhost/inputnumber.jsf 🛛 💠	
How cool	. You have guessed the	number, 16 is correct!
How cool You have guessed the number, 16 is correct! Play Again?		
Done		

Figure 6.26. Your Guess is Correct

## Uninstalling the JBoss Developer Studio

- Ensure JBoss Developer Studio is not running
- Run the Uninstaller

## FAQ

Refer to the following FAQ to get the answers on the most "popular" questions concerning JBoss Developer Studio.

## 8.1. What should I do if the Visual Page Editor does not start under Linux

Linux users may need to do the following to get the Visual Page Editor to work correctly on their machines.

1. On Red Hat based Linux distributions install the libXp.i386 package

#### 2. Type

ln -s libstdc++.so.5.0.7 libstdc++.so.5

3. and/or use

yum install libXp

- 4. Open the JBoss Developer Studio perspective. If you see the Help view open, close it and restart JBoss Developer Studio
- 5. lf it doesn't help and you use Fedora with Eclipse Version: 3.4.1, the issue can be produced because the libswt-xulrunner-gtk-3449.so file doesn't present in eclipse-swt-3.4.1-5.fc10.x86_64.rpm/eclipse/plugins/ org.eclipse.swt.gtk.linux.x86_64_3.4.1.v3449c.jar. To add this file to eclipse you should:
  - Decompress eclipse/plugins/org.eclipse.swt.gtk.linux.x86_3.4.1.v3449c.jar form eclipse-SDK-3.4.1-linux-gtk-x86_64.tar.gz
  - Copy libswt-xulrunner-gtk-3449.so file to your Fedora Eclipse location.
  - Open the file jbdevstudio.ini, which can be found in your Fedora Eclipse location and add the following line:

-Dswt.library.path=/usr/lib/eclipse

,where /usr/lib/eclipse is the path to your eclipse folder.

- 6. If none of these work, do the following:
  - Clear the JBoss Developer Studio log file,<workspace>\.metadata\.log
  - Start JBoss Developer Studio with the -debug option:

jbdevstudio -debug		

• Post the JBoss Developer Studio log file(<workspace>\.metadata\.log) on the forums.

# 8.2. Visual Editor starts OK, but the Missing Natures dialog appears

6	Missing Na	tures 🗙	
e	JBoss Tools Visual Editor might not fully work in project "WebProject" because it does not have JSF and code completion enabled completely.		
	Please use the Configure menu on the project to enable JSF if you want all features of the editor working.		
🗆 Do n	ot show this dialog again!	See JBoss Tools Visual Editor FAQ	
		ОК	

### Figure 8.1. Missing Nature

Some functionality of Visual Editor may not work if a project doesn't have org.jboss.tools.jsf.jsfnature or org.jboss.tools.jst.web.kb.kbnature in .project configuration. To fix this problem and turn off the message box execute next steps:

- 1. Right mouse button click on a project in Package Explorer.
- ^{2.} Select **Configure**  $\rightarrow$  **Add JSF Capabilities** from the context menu.
- 3. Configure your project using Add JSF Capabilities wizard and press Finish.

If you are sure that your project does not need JSF capabilities, just disable this message box by checking Do not show this dialog again! checkbox.

## 8.3. I have an existing Seam 1.2.1 project. Can I migrate or import the project into a JBoss Developer Studio Seam project?

Use the following steps to manually transfer an existing Seam 1.2.1 project into a new JBoss Developer Studio Seam project:

· Create a Seam Web project to get the JBoss tools structure

Then from your Seam 1.2.1 seam-gen project start doing the following:

- Copy src to src
- Copy view to Web content
- Copy resources individual files to where they are in the seam web project etc.

## 8.4. I have an existing Struts or JSF project. Can I open the project in JBoss Developer Studio?

Yes. From main menu select File  $\rightarrow$  File  $\rightarrow$  Import  $\rightarrow$  Other  $\rightarrow$  JSF Project (or Struts Project) and follow wizards steps.

### 8.5. Can I import a WAR file?

Yes. Select  $\textbf{File} \rightarrow \textbf{Import} \rightarrow \textbf{Web} \rightarrow \textbf{WAR}$  file then follow importing steps.

# 8.6. Is it possible to increase the performance of Eclipse after installing your product?

JBoss Developer Studio configures eclipse via the jbdevstudio.ini file to allocate extra memory, but if you for some reason need more memory then by default, you can manually make adjustments in this file. For example:

-vmargs -Xms128m -Xmx512m -XX:MaxPermSize=128m

## 8.7. How can I add my own tag library to the JBoss Tools Palette?

See the section on Adding Tag Libraries in the Visual Web Tools Guide.

# 8.8. How to get Code Assist for Seam specific resources in an externally generated project?

To get Code Assist for Seam specific resources in an externally generated project, you should enable Seam features in Project Preferences. Right click an imported project and navigate **Properties**  $\rightarrow$  **Seam Settings**. Check *Seam support* box to enable all available Seam Settings.

# 8.9. How to import an example Seam project from jboss-eap directory?

To import an example Seam project from *jboss-eap* into your working directory, you should perform the following steps:

- * Select New  $\rightarrow$  Other  $\rightarrow$  Java Project from Existing Buildfile
- Point to the build.xml file of any chosen project by clicking the Browse button
- Click the Finish button to open the project

As these seam examples are non WTP projects, next you should enable Seam support for them. To do that, right click the project and select **Properties**  $\rightarrow$  **Seam Settings**.

# 8.10. Is a cross-platform project import possible for JBoss Developer Studio?

Yes. You can easily import created in Linux JSF, Struts or Seam project to Windows and vice versa.

To do the transferring JSF, Struts or Seam project, select Menu  $\rightarrow$  Import  $\rightarrow$  General  $\rightarrow$  Existing Projects into Workspace.

## **Further Reading**

### • Seam Dev Tools Reference Guide

This guide helps you to understand what Seam is and how to install Seam plug-in into Eclipse. It tells you the necessary steps to start working with Seam Framework and assists in a simple Seam Project creation. Also you will learn how to create and run the CRUD Database Application with Seam as well as find out what Seam Editors Features and Seam Components are.

### • Visual Web Tools Reference Guide

provides general orientation and an overview of visual web tools functionality. This guide discusses the following topics: editors, palette, web properties view, openOn, content assist, RichFaces support.

### • JBoss Server Manager Reference Guide

This guide covers the basics of working with the JBoss server manager. You will read how to install runtimes and servers and quickly learn how to configure, start, stop the server and know how deployment and archiving process. You will find out how to manage installed JBoss Servers via JBoss AS Perspective. You will also read how to deploy modules onto the server.

### • jBPM Tools Reference Guide

With jBPM Tools Reference Guide we'll help you to facilitate a cross-product learning and know how you can speed your development using special editors and visual designers. We'll also guide you through the steps on how to create a simple process and test it within jBPM jPDL perspective.

### Hibernate Tools Reference Guide

Throughout this guide you will learn how to install and use Hibernate Tools bath via Ant and through Eclipse. We'll supply you with the information on how to create mapping files, configuration file as well as a file for controlling reverse engineering by using specific wizards that Hibernate tooling provides. Also you will know about Code Generation and peculiarities of work within Hibernate Console Perspective.

### • ESB Editor Reference Guide

This guide provides you with the information on ESB Editor and all necessary wizards for ESB files development.

### • JBoss Portal Tools Reference Guide

The guide gives a detail look at how you can easily build a Portlet Web Application with JBoss Tools and deploy it onto JBoss Portal.

### • JBoss WS User Guide

This guide gives you practical help on JBossWS usage. You will learn how to create a web service using JBossWS runtime, find out how to create a web service client from a WSDL document using JBoss WS and also see how to set your development environment.

#### • Smooks Tools Reference Guide

This guide is packed with useful and easy-to-understand information about graphical, configuration and source editor pages.

#### • Drools Tools Reference Guide

The guide help you to discover how to create a new Drools project, use debugging rules and work with different editors.

#### • JMX Tools Reference Guide

With the help of this guide you'll explore the best practices to follow when working with MBean Explorer, MBean Editor, Connections and etc.

#### • Eclipse Guvnor Tools Reference Guide

The purpose of this guide is to describe briefly the functionality present in the Eclipse Guvnor Tools (EGT) for Drools 5.

#### • JSF Tools Tutorial

This tutorial will describe how to deal with classic/old style of JSF development and how to create a simple JSF application.

### • JSF Tools Reference Guide

From this guide you'll discover all peculiarities of work at a JSF project. You'll learn all shades that cover the process of project creation and take a closer look at the JSF configuration file. Also you'll get to know managed beans and how to work with them and find out, how to create and register a custom converter, custom validator and referenced beans in a JSF project.

### Struts Tools Reference Guide

In Struts Tools Reference Guide you will learn how to create and work with a new struts project. This guide also provides information about graphical editor for struts configuration files, tiles files, and struts validation files.

### • Struts Tools Tutorial

This tutorial will describe the classical style of Struts development, and will step-by-step show you how to create a simple Struts application.