

JBoss Tattletale

Betraying all your project's naughty little secrets

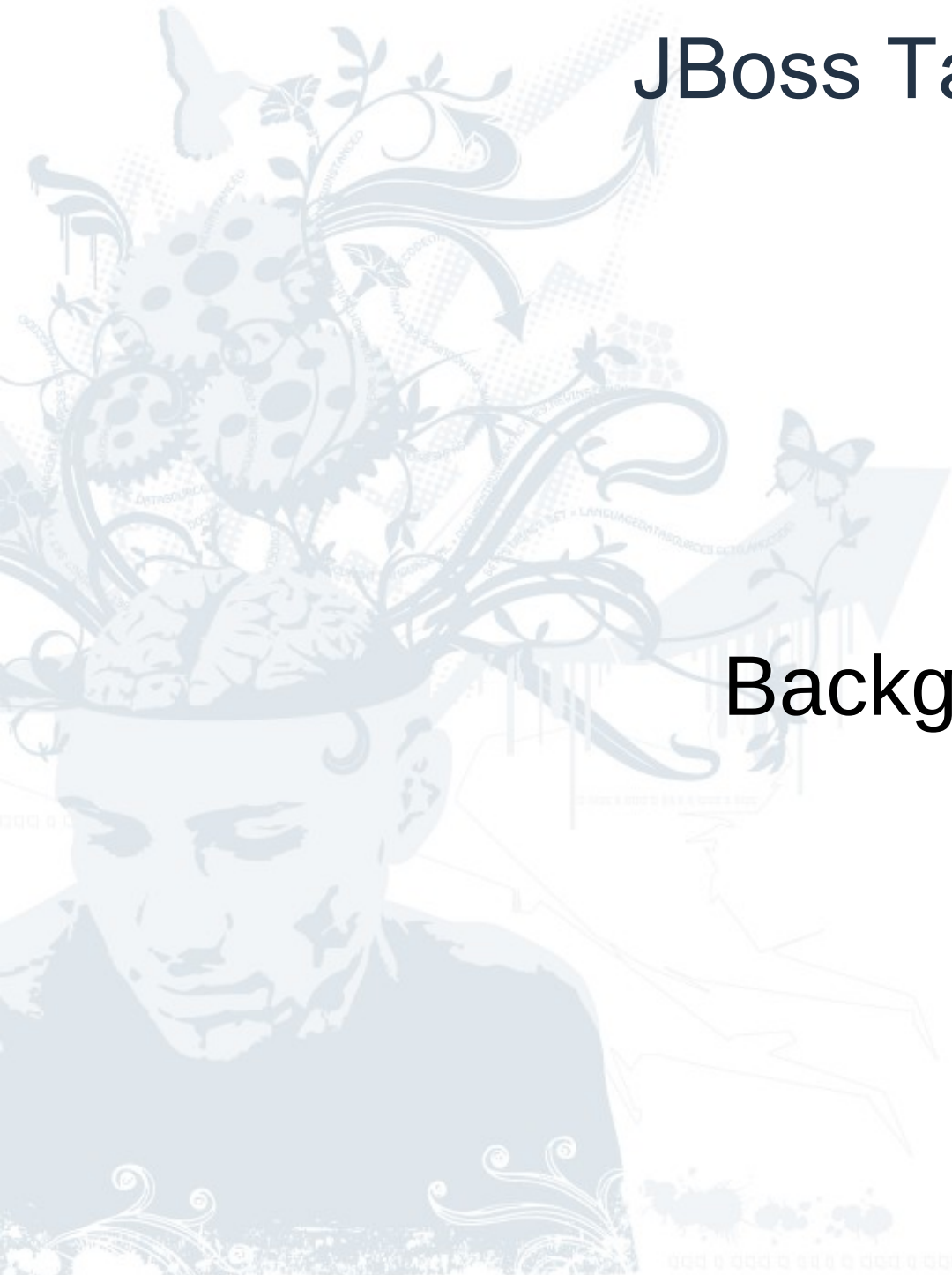
The JBoss logo is displayed in a dark blue color. The word "jboss" is in a lowercase, sans-serif font. Below it, ".org" is written in a larger, bold, lowercase, sans-serif font. The ".org" part has a textured, stippled appearance. The logo is set against a background of faint, light blue decorative elements, including a butterfly, floral patterns, and a stylized human head profile with gears and arrows inside.

JBoss Tattletale

- Background
- Goals
- Features
- Reports
- Integration
- The Future

JBoss Tattletale

Background

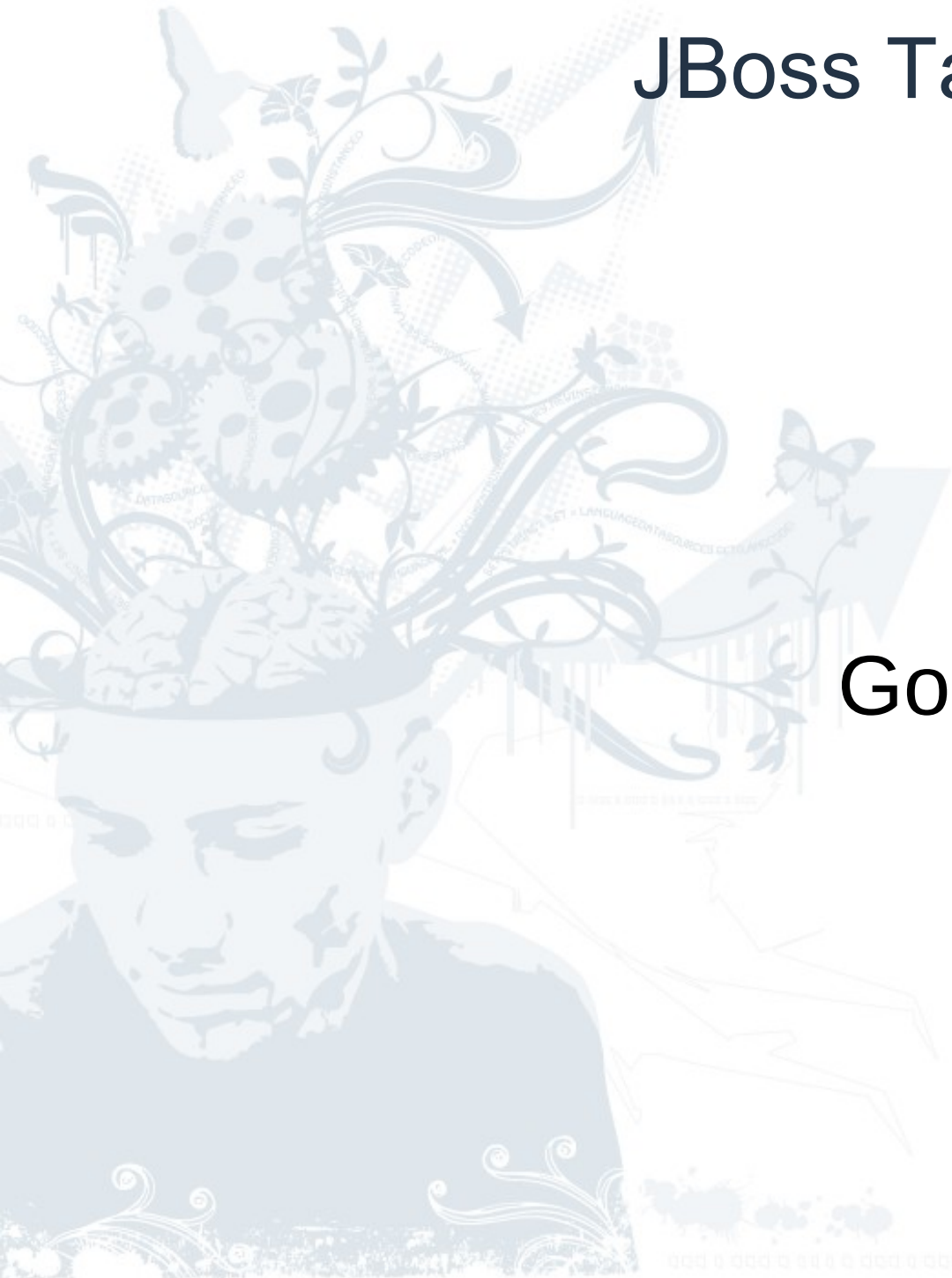


JBoss Tattletale - Background

- Problem
 - You are faced with a lot of Java archives and you don't know how they relate
 - You need to know in which archive(s) a class is located or if it is missing from the class-path
 - You need quick access to version identifiers and the OSGi status
- And all of this without having the source code !
- Enter JBoss Tattletale
 - Started in February, 2009
 - JBoss Tattletale-1.0.0.CR1 is out

JBoss Tattletale

Goals



JBoss Tattletale - Goals

- Help identify dependencies
 - within the project
 - on standard APIs
- Help getting an overview of all Java archives
- Help locate class information
- Generate reports that can help you improve the software quality of your project - f.ex.
 - splitting your project into the right number of archives
 - removing black listed API usage



JBoss Tattletale

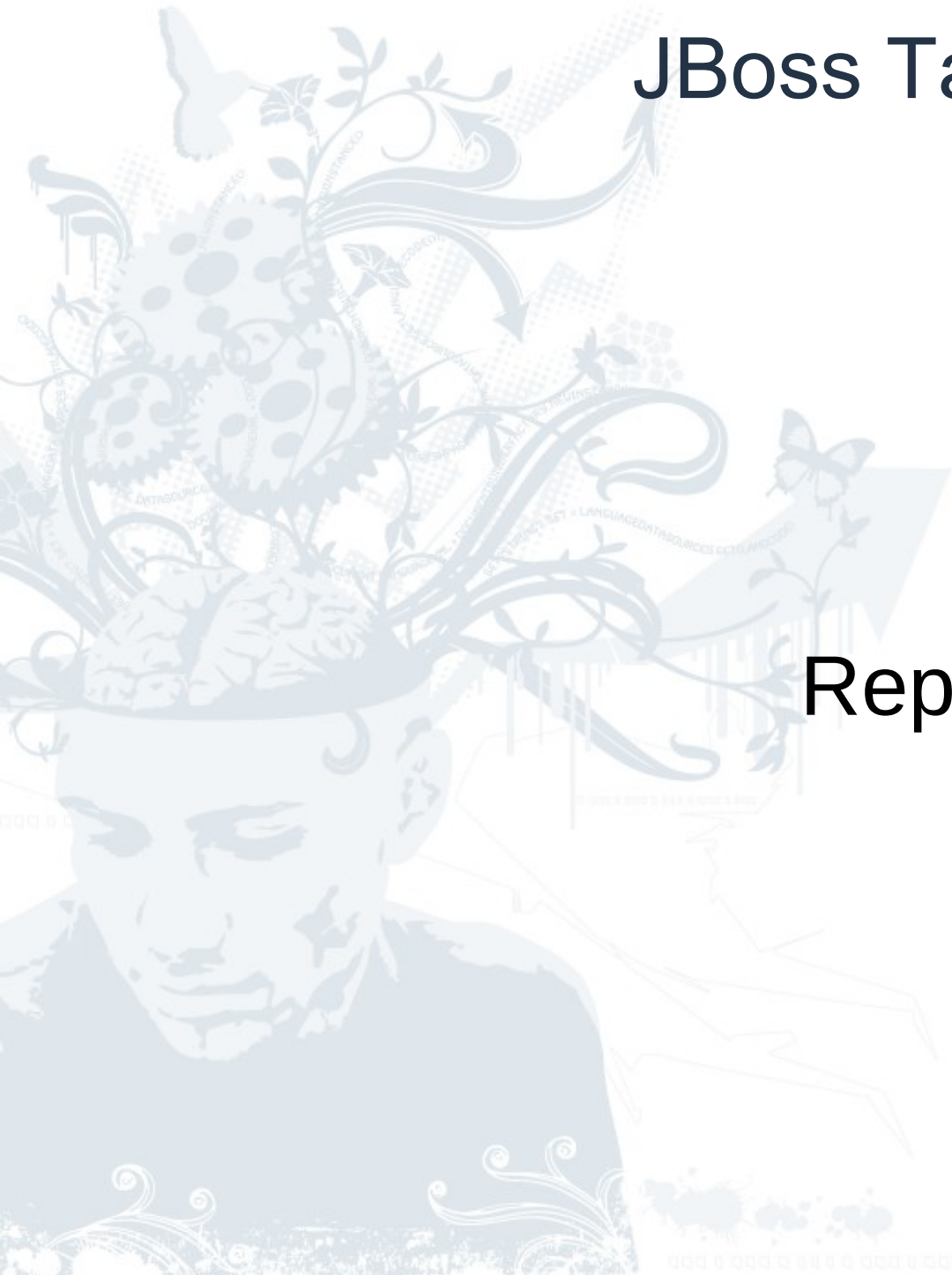
Features

JBoss Tattletale - Features

- Command line tool
 - `java -jar jboss-tattletale.jar sourcedir outputdir`
 - uses Javassist for its foundation
- Integrates with Apache Ant
- Analyzer records
 - Archive information
 - Archive level dependencies
 - Package level dependencies
- Generates reports based on this information
 - Using a `ClassLoaderStructure` plugin

JBoss Tattletale

Reports



JBoss Tattletale - Reports

- Currently three categories of reports
 - Dependency
 - General
 - Archive
- Each report focus on a specific area
 - Severity: INFO, WARNING, ERROR
 - Status: GREEN, YELLOW, RED
 - Very easy to implement new reports
- All reports are available in HTML

JBoss Tattletale – Report

- Main index.html

JBoss Tattletale 1.0.0.CR1

Dependencies

- [Dependants](#) (INFO)
- [Depends On](#) (INFO)
- [Graphical dependencies](#) (INFO)
- [Transitive Dependants](#) (INFO)
- [Transitive Depends On](#) (INFO)

Reports

- [Class Location](#) (INFO)
- [OSGi](#) (INFO)
- [Eliminate Jar files with different versions](#) (WARNING)
- [Invalid version](#) (WARNING)
- [Multiple Jar files](#) (WARNING)
- [Multiple Locations](#) (WARNING)
- [Black listed](#) (ERROR)
- [No version](#) (ERROR)

Archives

- [activation.jar](#) (INFO)
- [ajax4jsf-1.1.1.jar](#) (INFO)
- [ant-antlr-1.6.5.jar](#) (INFO)
- [ant-launcher.jar](#) (INFO)

JBoss Tattletale – Report

- Dependants report
 - Shows archives that depends on a certain archive

Dependants

[Main](#)

Archive	Dependants
FastInfoset.jar	jaxb-impl.jar , jaxws-rt.jar , jbossws-native-core.jar
activation.jar	jaxb-api.jar , jaxb-impl.jar , jaxb-xjc.jar , jaxws-rt.jar , jboss-javaee.jar , jboss-xml-binding.jar , jbossws-common.jar , jbossws-native-core.jar , jbossws-native-saaj.jar , mail.jar , scout.jar , stax-ex.jar , streambuffer.jar
antlr.jar	hibernate-core.jar , jacorb.jar , jboss-seam-ui-2.1.0.SP1.jar , org.jboss.seam-jboss-seam-2.1.0.SP1.jar , richfaces-ui-3.3.0.GA.jar
applet.jar	
autonumber-plugin.jar	
avalon-framework.jar	jacorb.jar , jboss-iiop-client.jar
bccl.jar	jboss-mbeans.jar , jboss.jar
bsf.jar	bsh.jar , jboss-monitoring.jar
bsh-deployer.jar	
bsh.jar	applet.jar , bsh-deployer.jar , console-mgr-classes.jar , jboss-aop-aspects.jar , jgroups.jar

JBoss Tattletale – Report

- Depends On report
 - Shows the dependencies for an archive

Depends On

Main

Archive	Depends On
FastInfoset.jar	stax-api.jar
activation.jar	
antlr.jar	
applet.jar	bsh.jar , concurrent.jar , jboss-aop.jar , jboss-bootstrap.jar , jboss-common-core.jar , jboss-j2se.jar , jboss-javaee.jar , jboss-management.jar , jboss-mbeans.jar , jboss-monitoring.jar , jboss-remoting.jar , jboss-security-spi.jar , jboss-serialization.jar , jboss-system-jmx.jar , jboss-system.jar , jboss.jar , jmx-adaptor-plugin.jar , jnpserver.jar , jsp-api.jar , log4j-boot.jar , org.apache.commons.httpclient.HttpException , org.apache.commons.httpclient.HTTPURL , org.apache.webdav.lib.WebdavResource , servlet-api.jar , trove.jar
autonumber-plugin.jar	jboss-javaee.jar , jboss-logging-spi.jar
avalon-framework.jar	log4j-boot.jar , logkit.jar
bccl.jar	org.apache.regexp.RE , org.apache.regexp.RESyntaxException
bsf.jar	COM.ibm.netrexx.process.NetRexxC , commons-logging.jar , netrexx.lang.BadArgumentException , netrexx.lang.Rexx , org.mozilla.javascript.Context ,

JBoss Tattletale – Report

- Transitive dependants report
 - Shows archives (and their dependants) that depends on a certain archive

Transitive Dependants

[Main](#)

Archive	Dependants
FastInfoSet.jar	applet.jar , bsf.jar , bsh-deployer.jar , bsh.jar , console-mgr-classes.jar , dom4j.jar , hibernate-annotations.jar , hibernate-core.jar , hibernate-entitymanager.jar , hibernate-jboss-cache2.jar , hibernate-jmx.jar , hibernate-validator.jar , hsqldb-plugin.jar , jaxb-impl.jar , jaxb-xjc.jar , jaxen.jar , jaxws-rt.jar , jaxws-tools.jar , jboss-aop-asintegration-jmx.jar , jboss-aop-asintegration-mc.jar , jboss-aop-aspects.jar , jboss-aop-deployers.jar , jboss-aop-mc-int.jar , jboss-appclient.jar , jboss-aspect-jdk50-client.jar , jboss-aspect-library.jar , jboss-bootstrap.jar , jboss-classloading-vfs.jar , jboss-classloading.jar , jboss-client.jar , jboss-common-jdbc-wrapper.jar , jboss-deployers-impl.jar , jboss-deployers-vfs-spi.jar , jboss-deployers-vfs.jar , jboss-ejb3-common.jar , jboss-ejb3-core-client.jar , jboss-ejb3-core.jar , jboss-ejb3-deployer.jar , jboss-ejb3-deployers.jar , jboss-ejb3-interceptors.jar , jboss-ejb3-mc-int.jar , jboss-ejb3-metadata.jar , jboss-ejb3-proxy-client.jar , jboss-ejb3-proxy-clustered-client.jar , jboss-ejb3-proxy-clustered.jar , jboss-ejb3-proxy.jar , jboss-ejb3-security-client.jar , jboss-ejb3-security.jar , jboss-ejb3-transactions.jar , jboss-faces.jar , jboss-ha-client.jar ,

JBoss Tattletale – Report

- Transitive depends on report
 - Shows dependencies and their dependencies for an archive

Transitive Depends On

Main

Archive	Depends On
FastInfoset.jar	stax-api.jar
activation.jar	
antlr.jar	
applet.jar	<i>COM.ibm.netrexx.process.NetRexxC, FastInfoset.jar, activation.jar, antlr.jar, avalon-framework.jar, bccl.jar, bsf.jar, bsh.jar, com.bea.jvm.ClassLibrary, com.bea.jvm.ClassPreProcessor, com.bea.jvm.JVM, com.bea.jvm.JVMFactory, com.sun.jdi.Bootstrap, com.sun.jdi.ReferenceType, com.sun.jdi.VirtualMachine, com.sun.jdi.VirtualMachineManager, com.sun.jdi.connect.AttachingConnector, com.sun.jdi.connect.Connector, com.sun.jdi.connect.Connector\$Argument, com.sun.jdi.connect.IllegalConnectorArgumentsException, com.sun.jdi.event.Event, com.sun.jdi.event.EventIterator, com.sun.jdi.event.EventQueue, com.sun.jdi.event.EventSet, com.sun.jdi.event.MethodEntryEvent, com.sun.jdi.request.EventRequest, com.sun.jdi.request.EventRequestManager, com.sun.jdi.request.MethodEntryRequest, com.sun.jdmk.comm.CommunicatorServer,</i>

JBoss Tattletale – Report

- Class location report
 - Shows in which archive(s) a class is located

Class Location

[Main](#)

Class	Jar files
EDU.oswego.cs.dl.util.concurrent.Barrier	concurrent.jar
EDU.oswego.cs.dl.util.concurrent.BoundedBuffer	concurrent.jar
EDU.oswego.cs.dl.util.concurrent.BoundedChannel	concurrent.jar
EDU.oswego.cs.dl.util.concurrent.BoundedLinkedQueue	concurrent.jar
EDU.oswego.cs.dl.util.concurrent.BoundedPriorityQueue	concurrent.jar
EDU.oswego.cs.dl.util.concurrent.BrokenBarrierException	concurrent.jar
EDU.oswego.cs.dl.util.concurrent.Callable	concurrent.jar
EDU.oswego.cs.dl.util.concurrent.Channel	concurrent.jar
EDU.oswego.cs.dl.util.concurrent.ClockDaemon	concurrent.jar

JBoss Tattletale – Report

- OSGi report
 - Shows the OSGi status – and provides an OSGi MANIFEST.MF template

OSGi			
Main			
Archive	OSGi	Report	Manifest
FastInfoSet.jar	No	Report	Manifest
activation.jar	No	Report	Manifest
antlr.jar	No	Report	Manifest
applet.jar	No	Report	Manifest
autonumber-plugin.jar	No	Report	Manifest
avalon-framework.jar	No	Report	Manifest
bccl.jar	No	Report	Manifest

JBoss Tattletale – Report

- Eliminate Jars with different version report
 - List duplicated JAR files with different version identifiers

Eliminate Jar files with different versions

[Main](#)

Archive	Location	
cglib.jar	/tmp/jboss-eap-4.3/jboss-as/server/all/lib/cglib.jar	4.3.
	/tmp/jboss-eap-4.3/jboss-as/server/default/lib/cglib.jar	4.3.
	/tmp/jboss-eap-4.3/jboss-as/server/production/lib/cglib.jar	4.3.
	/tmp/jboss-eap-4.3/seam/examples/hibernate2/lib/cglib.jar	4.0.
	/tmp/jboss-eap-4.3/seam/examples/jpa/lib/cglib.jar	4.0.

JBoss Tattletale – Report

- Invalid version report
 - List archives that doesn't have a valid OSGi version identifier

Invalid version

[Main](#)

Name	Location
commons-digester-1.6.jar	/tmp/jboss-eap-4.3/seam/lib/commons-digester-1.6.jar
commons-jci-core-1.0-406301.jar	/tmp/jboss-eap-4.3/seam/drools/lib/commons-jci-core-1.0-406301.jar
ejb3-persistence.jar	/tmp/jboss-eap-4.3/jboss-as/client/ejb3-persistence.jar /tmp/jboss-eap-4.3/jboss-as/server/all/lib/ejb3-persistence.jar /tmp/jboss-eap-4.3/jboss-as/server/default/lib/ejb3-persistence.jar /tmp/jboss-eap-4.3/jboss-as/server/production/lib/ejb3-persistence.jar /tmp/jboss-eap-4.3/seam/hibernate/lib/ejb3-persistence.jar

JBoss Tattletale – Report

- Multiple Jar files report
 - List classes that appear in multiple JAR archives

Multiple Jar files

[Main](#)

Class	Jar files
EDU.oswego.cs.dl.util.concurrent.Barrier	concurrent thirdparty-
EDU.oswego.cs.dl.util.concurrent.BoundedBuffer	concurrent thirdparty-
EDU.oswego.cs.dl.util.concurrent.BoundedChannel	concurrent thirdparty-

JBoss Tattletale – Report

- Multiple Locations report
 - List archives that appear in multiple locations

Multiple Locations

[Main](#)

Name	Location
activation.jar	<code>/tmp/jboss-eap-4.3/jboss-as/client/activation.jar</code> <code>/tmp/jboss-eap-4.3/jboss-as/server/all/lib/activation.jar</code> <code>/tmp/jboss-eap-4.3/jboss-as/server/default/lib/activation.jar</code> <code>/tmp/jboss-eap-4.3/jboss-as/server/production/lib/activation.jar</code> <code>/tmp/jboss-eap-4.3/seam/lib/activation.jar</code>
antlr-2.7.5H3.jar	<code>/tmp/jboss-eap-4.3/seam/examples/hibernate2/lib/mc/antlr-2.7.5H3.jar</code> <code>/tmp/jboss-eap-4.3/seam/examples/jpa/lib/mc/antlr-2.7.5H3.jar</code>
antlr-2.7.6.jar	<code>/tmp/jboss-eap-4.3/seam/drools/lib/antlr-2.7.6.jar</code> <code>/tmp/jboss-eap-4.3/seam/lib/antlr-2.7.6.jar</code>

JBoss Tattletale – Report

- Black listed report
 - List archives that uses black listed APIs

Black listed

[Main](#)

Archive	Usage	
jboss-xml-binding.jar	<code>org.jboss.xb.binding</code> <code>org.jboss.xb.binding.parser</code> <code>org.jboss.xb.binding.parser.sax</code> <code>org.jboss.xb.binding.sunday.unmarshalling</code>	<code>org.apache.xerces.xml</code> <code>org.apache.xerces.xml</code> <code>org.apache.xerces.xml</code> <code>org.apache.xerces.xml</code>
jbossws-native-core.jar	<code>org.jboss.ws.core</code> <code>org.jboss.ws.core.jaxrpc</code> <code>org.jboss.ws.core.jaxrpc.binding</code> <code>org.jboss.ws.core.jaxrpc.binding.jbossxb</code> <code>org.jboss.ws.extensions.eventing</code>	<code>org.apache.xerces.xml</code> <code>org.apache.xerces.xml</code> <code>org.apache.xerces.xml</code> <code>org.apache.xerces.xml</code> <code>org.apache.xerces.xml</code>

JBoss Tattletale – Report

- No version report
 - List archives that doesn't have a version identifier

No version

[Main](#)

Name	Location	
antlr-2.7.5H3.jar	/tmp/jboss-eap-4.3/seam/examples/hibernate2/lib/mc/antlr-2.7.5H3.jar	<i>Not listed</i>
	/tmp/jboss-eap-4.3/seam/examples/jpa/lib/mc/antlr-2.7.5H3.jar	<i>Not listed</i>
antlr-2.7.6.jar	/tmp/jboss-eap-4.3/seam/drools/lib/antlr-2.7.6.jar	<i>Not listed</i>
	/tmp/jboss-eap-4.3/seam/lib/antlr-2.7.6.jar	<i>Not listed</i>
el-api.jar	/tmp/jboss-eap-4.3/jboss-as/server/all/lib/el-api.jar	4.3.0.GA_CP03
	/tmp/jboss-eap-4.3/jboss-as/server/default/lib/el-api.jar	4.3.0.GA_CP03
	/tmp/jboss-eap-4.3/jboss-as/server/production/lib/el-api.jar	4.3.0.GA_CP03
	/tmp/jboss-eap-4.3/seam/lib/el-api.jar	<i>Not listed</i>

JBoss Tattletale – Report

- Archive: Jar report
 - Name
 - Locations
 - Manifest
 - Requires
 - Provides
 - Including serialVersionUID



JBoss Tattletale

Integration

JBoss Tattletale - Integration

- JBoss Tattletale integrates with Apache Ant
 - `xmlns:tattletale="antlib:org.jboss.tattletale.ant"`
- Report task – generates all the reports
 - Sourcedir
 - Outputdir
- Feature request for Maven integration
 - <https://jira.jboss.org/jira/browse/TTALE-76>



JBoss Tattletale

The Future

JBoss Tattletale – The Future

- Profiles
 - EE5, EE6, Seam, Spring, WebBeans, ...
- Support for enterprise / custom archives
 - WAR, EAR, RAR, ESB, SAR, ...
- Integration with continuous build platforms
 - Hudson
- And of course more reports
- + your ideas :-)

JBoss Tattletale

- Website

- <http://www.jboss.org/tattletale>

- JIRA

- <https://jira.jboss.org/jira/browse/TTALE>

- Forum

- <http://www.jboss.org/index.html?module=bb&op=viewforum&f=306>