Code Inspection Document for GlassFish 4.1.1 Server

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Contents

Classes Assigned

Class assigned for inspection: *Class* ***ActiveJmsResourceAdapter***

Namespace: ***com.sun.enterprise.connectors.jms.system***

Details:

java.lang.Object

com.sun.enterprise.connectors.ActiveResourceAdapterImpl

com.sun.enterprise.connectors.ActiveOutboundResourceAdapter

com.sun.enterprise.connectors.inbound.ActiveInboundResourceAdapterImpl

com.sun.enterprise.connectors.jms.system.ActiveJmsResourceAdapter

Functional Role of the Classes Assigned

ActiveJmsResourceAdapter represents an active JMS resource adapter, which does additional configurations to *ManagedConnectionFactory* and *ResourceAdapter* java beans. It is part of the JMS module of GlassFish server.

The GlassFish Server support for JMS messaging, in general, and for message-driven beans, in particular, requires messaging middleware that implements the JMS specification: a JMS provider. The GlassFish Server uses the GlassFish Message Queue software as its native JMS provider. The Message Queue software is tightly integrated into theGlassFish Server, providing transparent JMS messaging support. This support is known within GlassFish Server as the JMS Service (Oracle GlassFish guide: https://docs.oracle.com/cd/E19798-01/821-1752/beaob/index.html).

GlassFish server must use a resource adapter furnished by a given JMS provider to use the functionality of that provider. Message Queue provides such a resource adapter. Using the support of a plugged in JMS provider, Java EE components, including MDBs, deployed and running in the application server environment can exchange JMS messages among themselves and with external JMS components. This provides a powerful integration capability for distributed components.

Message Queue JMS Resource Adapter (JMS RA), enables you to integrate GlassFish Message Queue with any J2EE 1.4 application server by means of the standard J2EE connector

architecture (JCA). When plugged into an application server, the Resource Adapter allows applications deployed in that application server to use Message Queue to send and receive JMS messages.

The Message Queue JMS Resource Adapter exposes its configuration properties through three JavaBean components:

The ResourceAdapter JavaBean (ResourceAdapter JavaBean) affects the behavior of the Resource Adapter as a whole.

The ManagedConnectionFactory JavaBean (ManagedConnectionFactory JavaBean) affects connections created by the Resource Adapter for use by message-driven beans (MDBs).

The ActivationSpec JavaBean (ActivationSpec JavaBean) affects message endpoints that represent MDBs in their interactions with the messaging system.

The ***ResourceAdapter*** configuration configures the default JMS Resource Adapter behavior.

A ***ManagedConnectionFactory*** defines the connections that the ResourceAdapter provides to a message-driven bean.

ActiveJmsResourceAdapter does additional configurations to *ManagedConnectionFactory* and *ResourceAdapter* java beans.

List of Issues

In this section the list of issues found with the code by applying the checklist is given in order of the checklists modules. Only the points from the checklist that were found as issues are given (if a point of the checklist is skipped that mean no issue in the code for that point was found).

NAMING CONVENTIONS			
Checklist point	**Issue**	**Line**	**Details**
1 - All class names, interface names, method names, class variables, method variables, and constants used should have meaningful	Class Variable: sm	250	This is a StringManager but it is not really easy to conclude this from the name of the variable

names and do what the name suggests			
1	Class Variable: nm	306	This is aNameManager but it is not really easy to conclude this from the name of the variable
1	Methode: handles	1161	Ambiguous, maybe a better name would be doesHandle
1	Methode: setProperty	1833	Not indicative enough, this sets the property of ManagedConnectionFactory, but can be missunderstood as setting the property of ResourceAdapter
7 - Constants are declared using all uppercase with words separated by an underscore	RECONNECTENABLED, RECONNECTINTERVAL, RECONNECTATTEMPTS, GROUPNAME, CLUSTERCONTAINER	166 - 170	Not following the convention
7	BROKERTYPE, BROKERINSTANCENAME, BROKERBINDADDRESS, BROKERPORT, BROKERARGS, BROKERHOMEDIR, BROKERLIBDIR, BROKERVARDIR, BROKERJAVADIR, BROKERSTARTTIMEOUT, ADMINUSERNAME, ADMINPASSWORD, ADMINPASSFILE	173 - 185	Not following the convention
7	JMXSERVICEURL, JMXSERVICEURLLIST, JMXCONNECTORENV, USEJNDIRMISERVICEURL, RMIREGISTRYPORT, USEEXTERNALRMIREGISTRY, DEFAULTRMIREGISTRYPORT, BROKERRMIPORTOFFSET, SSLJMXCONNECTOR	192 - 202	Not following the convention
7	PINGINTERVAL, DBTYPE, DBTYPE_HADB, BROKERENABLEHA	210 - 213	Not following the convention

7	MAXPOOLSIZE, MINPOOLSIZE, RESIZECOUNT, RESIZETIMEOUT, REDELIVERYCOUNT, LOWERCASE_REDELIVERYCOUNT	233 - 238	Not following the convention

INDENTATION			
Checklist point	**Issue**	**Line**	**Details**
8 - Three or four spaces are used for indentation and done so consistently	No indentation	454	Line not indented
8	Indentation	585-590	Only two spaces are used
8	Indentation	593	Only two spaces are used
8	Indentation	596-598	Only two spaces are used
8	Indentation	603	Only two spaces are used
8	Indentation	605	Only two spaces are used
8	Indentation	614-618	Only two spaces are used
	Indentation	625-626	More than four spaces are used

8			
8	Indentation	633-635	More than four spaces are used
8	Indentation	647-650	More than four spaces are used
8	Indentation	654-657	More than four spaces are used
8	Indentation	664	Only two spaces are used
8	Indentation	665	Only two spaces are used
8	Indentation	756	Only two spaces are used

BRACES			
Checklist point	**Issue**	**Line**	**Details**
9 - Consistent bracing style is used, either the preferred "Allman" style or the "Kernighan and Ritchie" style	Kernighan and Ritchie style is used		Allman style is prefered
9	Not consistent with K&R style	548	The brace should be on the same line as the if

			statement
11	Braces missing	599	Single statements in the if missing curly braces
11	Braces missing	605	Single statements in the if missing curly braces
11	Braces missing	611	Single statements in the if missing curly braces
11	Braces missing	756	Single statements in the if missing curly braces
11	Braces missing	760	Single statements in the if missing curly braces
11	Braces missing	664	Single statements in the if missing curly braces

FILE ORGANIZATION			
Checklist point	**Issue**	**Line**	**Details**
12 - Blank lines and optional comments are used to separate sections	Missing blank line	524	No blank line to divide comment
12	Blank line	588	Blank line used at inappropriate places

12	Blank line	609	Blank line used at inappropriate places
12	Blank line	620	Blank line used at inappropriate places
12	Blank line	651	Blank line used at inappropriate places

WRAPPING LINES			
Checklist point	**Issue**	**Line**	**Details**
12 - Blank lines and optional comments are used to separate sections	New line after brace	545	Line break does not occur after a comma or an operator but a brace
12	New line after brace	546	Line break does not occur after a comma or an operator but a brace
14	Line length	604	The length of the line exceeds 120 characters
15	Line breaks	598	Line breaks does not occur after a comma or an operator
15	Line breaks	610,	Line breaks does not occur after a comma or an operator
15	Line breaks	616	Line breaks does not occur after a comma or an operator
15	Line breaks	624	Line breaks does not occur after a comma or an operator
15	Line breaks	633	Line breaks does not occur after a comma or an operator
15	Line breaks	647	Line breaks does not occur after a comma or an operator
15	Line breaks	654	Line breaks does not occur after a comma or an operator
15	Line breaks	755	Line breaks does not occur after a comma or an operator

COMMENTS			
Checklist point	**Issue**	**Lin**	**Details**

		e	
18	Commented out code	607	Commented out codes without any reason
19 - Commented out code contains a reason for being commented out and a date it can be removed from the source file if determined it is no longer needed	Unexplained code comment	524	A reason for commenting a code is not given

JAVA SOURCE FILE			
Checklist point	**Issue**	**Line**	**Details**
23 - Check that the javadoc is complete	Method: isEjbInWar	2315	No method description in javadoc

CLASS AND INTERFACE DECLARATIONS			
Checklist point	**Issue**	**Line**	**Details**
25	static variables declarations	~156	Not defined in the correct order, there are some public variables declared before private, also there are some instance variable defined before the static ones. They are however arranged in the block of logical modules (ex. RA Javabean properties line 164 - 170. However first the public constant was defined, then a private ones which is wrong)

INITIALIZATION AND DECLARATION			
Checklist point	**Issue**	**Line**	**Details**
33 - Declarations appear at the beginning of blocks	Local Var: dummy	463	Declaration of dummy local variable not appearing at the beginning of the block
33	Local Var: name	469	Declaration of name local variable not appearing at the beginging of the block
33	Local Var: mergedProps	528	Declaration of mergedProps local variable not appearing at the beginning of the

			block
33	Local Var: brokerType	529	Declaration of brokerType local variable not appearing at the beginning of the block
33	Local Var: cluster	537	Declaration of cluster local variable not appearing at the beginning of the block

OUTPUT FORMAT			
Checklist point	**Issue**	**Line**	**Details**
42 - Check that error messages are comprehensive and provide guidance as to how to correct the problem	Error message not comprehensive	541	No error message is printed but only the stack trace

EXCEPTIONS			
Checklist point	**Issue**	**Line**	**Details**
52-Check that the relevant exceptions are caught	Catch block missing	565	No catch block found for the throw statement