

Macromedia® JRun™ Release Notes

JRun™ 4 Updater 7

For Windows®, UNIX™, Linux™, and MacOSX™

Last Updated October 24, 2007

These Release Notes describes the enhancements and issues that have been resolved in Macromedia JRun 4 Updater 7 and contains the following information:

Installation

Enhancements

Complete supported list

Resolved Issues - JRun 4 Updater 2 (build 61650)

Resolved Issues - JRun 4 Updater 3 (build 75991)

Resolved Issues - JRun 4 Updater 4 (build 84683)

Resolved Issues - JRun 4 Updater 5 (build 92909)

Resolved Issues - JRun 4 Updater 6 (build 106363)

Resolved Issues in this release - JRun 4 Updater 7 (build 108621)

Known issues

Installation

JRun 4 Updater 7 upgrades any existing JRun 4 installation (with or without Service Packs or prior Updaters).

Before running the Macromedia JRun 4 Updater 7 release, perform the following steps:

1. Ensure that the default JDK installed on the system is version 1.3.1 or later (required by the installer).
2. Stop all JRun 4 services. If all JRun processes are not stopped, the installation may fail. To determine if JRun services are still running:
 - o On UNIX and Linux, view processes by entering the `ps -ef` or similar command. Stop any remaining JRun processes.
 - o In Windows, go to Task Manager -> Processes tab. In the processes list, search and stop any remaining JRun processes. If JRun servers are installed as Windows services, stop them using the Services Control Panel.
3. Stop all web servers connected to JRun. For example if IIS is your web server for JRun, stop the World Wide Web Publishing Service in the Services Control Panel.
4. Make a note of your JRun 4 installation root directory location (for example, `c:\jrun4`).
5. On Solaris-SPARC, make note whether you need a 32-bit or a 64-bit installation.
6. In Windows 2000, Window XP and Windows 2003, stop the Windows Management Instrumentation Service to avoid locking some DLLs that the Updater will replace in `{jrun.home}/bin`.
7. In Windows XP and Windows 2003, if JRun is uninstalled prior to running the Updater, the following registry key must be manually deleted or any full product or updater installation will fail:

```
[HKEY_LOCAL_MACHINE\SOFTWARE\Classes\Installer\Products\955648EA1E7DC4D4FA99677EE7413103]
"ProductName"="Macromedia JRun 4"
```

For more information on editing the Windows registry, see your system documentation.

To upgrade your JRun 4 installation with Updater 7:

1. Download and run the EXE or BIN file for your operating system.
2. Follow the instructions in the installation wizard, and let it run to completion.
3. Delete the contents of the SERVER-INF/temp directory for each JRun server.
4. After the installation is complete, restart JRun services and, if necessary, your web server.
5. Some versions of Linux might require manual installation of the web server connector. For more information, see issue 50586 in [JRun Updater 2 Known Issues](#).

Notes

- JRun 4 Updater 7 creates a directory, {jrunroot}/updater7-backup, that contains a copy of all the files that the Updater overwrites.
- For Mac OS X users, run the .bin from a shell. Stuffit cannot unpack this .bin and generates the following message: "Archive was compressed with an unknown compression method"
- For RedHat AS 3.0 users, please be sure to apply the latest updates to your RedHat AS 3.0 operating system prior to updating to Updater 7 to avoid potential problems with the Jikes compiler. See bug 59348 in the [known issues of Updater 5](#).
- For RedHat AS 3.0 users, make sure the compatibility libraries (Legacy Applications) are installed to avoid Apache issues. See bug 59367 in [known issues of Updater 5](#).
- The JRun 4 Updater 4 workaround (in the jvm.config file) for JDK 1.5 compatibility must be removed before installing Updater 7:
-Djmx.invoke.getters=true
- For AIX users, before running the Updater 7, be sure to run the 'slibclean' command to remove any currently unused modules in kernel and library memory.

Enhancements

The JRun 4 Updater 7 includes the following enhancements:

- **Sun JDK Support** – JRun 4 Updater 7 supports JDK 1.6.0_01 and JDK 1.6.0_02.
- **Updated JDBC drivers** - JRun 4 Updater 7 kit includes version 3.6 build 0017 of the JRun JDBC drivers.
- **Windows Support** – JRun 4 Updater 7 supports Windows Vista.
- **Mac OS X on Intel support** – JRun4 Updater 7 supports Mac OS X 10.4 on Intel.
- **64-bit Support** – JRun4 Updater 7 provides 64-bit support on Solaris-SPARC. Other 64-bit operating systems including Windows 64-bit and Solaris-x86 64-bit are not supported.
- **IIS Support** – JRun4 Updater 7 supports IIS7.
- **Apache support** – JRun4 Updater 7 supports Apache versions 2.2.x.
- **SunOne Webserver Support** – JRun4 Updater 7 supports SunOne Webserver 7.
- **IBM JDK 1.5 Support:** JRun 4 Updater 7 supports IBM JDK 1.5

Performance gains in Web Clustering

Significant gains have been achieved in Web Cluster performance by fine tuning two specific areas – RMI calls and Data replication. A session replication now makes a single RMI call as against four to five earlier. Data replication has been optimized to backup data only on need basis instead of replicating on all calls. It has been further tuned to send only changes to the backup node instead of replicating the entire session object.

Test results: Our performance test results indicate that performance gains become more prominent with load. On higher web loads the gain increases exponentially. With an average load of 50 threads performance improved about 6 times while at higher load of 500-600 threads performance gains of 18 - 20 times were observed.

Test setup: 3 servers configured as backup nodes with the following Operating Systems 1) Windows Vista 2) Mac OS X 10.4 3) Solaris-SPARC 10; JDK version 1.6.02 ; IIS 7 server as web connector.

Test duration: 60 minutes

Complete Supported List

OS	JDK	Web Server
Windows 2000 SP 4	Sun JDK 1.3/1.4/1.5/1.6 IBM JDK 1.3/1.4	IIS 5 , Apache 1.3/2.0/2.2 , iPlanet 4.1/6.0, SunONE Web Server 6.1/7
Windows XP Professional SP2	Sun JDK 1.3/1.4/1.5/1.6 IBM JDK 1.3/1.4	IIS 5.1 , Apache 1.3/2.0/2.2, iPlanet 4.1/6.0, SunONE Web Server 6.1/7
Windows 2003 Enterprise	Sun JDK 1.3/1.4/1.5/1.6 IBM JDK 1.3/1.4	IIS 6 , Apache 1.3/2.0/2.2, iPlanet 4.1/6.0, SunONE Web Server 6.1/7
Windows Vista	Sun JDK 1.3/1.4/1.5/1.6	IIS 7, Apache 1.3/2.0/2.2, SunONE Web Server 6.1/7
RedHat Linux 7/8/9	Sun JDK 1.3/1.4/1.5/1.6 IBM JDK 1.3/1.4	Apache 1.3/2.0/2.2 (Bundled as well as latest), iPlanet 4.1/6.0, SunONE Web Server 6.1
RedHat AS 2.1/3.0/4.0	Sun JDK 1.3/1.4/1.5/1.6 IBM JDK 1.3/1.4	Apache 1.3/2.0/2.2 (Bundled as well as latest), iPlanet 4.1/6.0, SunONE Web Server 6.1
Suse Linux 8.0	Sun JDK 1.3/1.4/1.5/1.6	Apache 1.3/2.0/2.2
Turbo Linux	Sun JDK 1.3/1.4/1.5/1.6	Apache 1.3/2.0/2.2 (Bundled as well as latest)
Solaris-SPARC 7/8/9/10 (32-bit)	Sun JDK 1.3/1.4/1.5/1.6	Apache 1.3/2.0/2.2, iPlanet 4.1/6.0, SunONE Web Server 6.1/7
Solaris-SPARC 8/9/10 (64-bit)	Sun JDK 1.4/1.5/1.6	Apache 2.0/2.2, SunONE Web Server 7
IBM AIX 4.3/5.0/5.1/5.2/5.3	Sun JDK 1.3/1.4/1.5 IBM JDK 1.3/1.4	Apache 1.3/2.0, iPlanet 4.1/6.0, SunONE Web Server 6.1
Mac OS X 10.2/10.3/10.4 on PPC	Java for Mac OS X 1.3/1.4/1.5	Apache 1.3/2.0/2.2
Mac OS X 10.4 on Intel	Java for Mac OS X 1.3/1.4/1.5	Apache 1.3/2.0/2.2
HP-UX 11i (11.11) (PA-RISC 1.1/2.0) HP-UX 11i v2 (11.23) (PA-RISC 2.0)	HP JDK 1.3/1.4/1.5 (1.5 is on PA-RISC 2.0 only)	Apache 1.3/2.0, iPlanet 4.1/6.0, SunONE Web Server 6.1

Note about 64-bit OS Support

JRun4 Updater 7 provides 64-bit support on Solaris-SPARC. Other 64-bit operating systems including Windows 64-bit and Solaris-x86 64-bit are not supported. During installation on Solaris-SPARC, the installer asks the user to choose between 32-bit or 64-bit installation. This option will not be available for other OS.

To configure 64-bit connector, a new switch “–ws64” should be supplied to wsconfig.

Note about Mac OS X and JDK version

JRun now supports the latest Mac OS X 10.4 (Tiger). JRun also supports use of JDK 1.5 on this OS. JDK 1.5 doesn't come as standard installation on Mac OS X and it can be downloaded and installed on Mac. While choosing JVM on Mac, JRun will pick the VM that is pointed by **/System/Library/Frameworks/JavaVM.framework/Versions/CurrentJDK** symbolic link. On OS X, this link points to JDK 1.4.2 by default. To run JRun

with JDK 1.5, use either of the following techniques:

- Point the 'CurrentJDK' link to JDK1.5 directory by issuing the following commands:
 - % rm CurrentJDK
 - % sudo ln -sfh 1.5.0 CurrentJDK
- Set the JAVA_JVM_VERSION to the desired version, as follows:
 - % export JAVA_JVM_VERSION 1.5

Note that 'java.home' in jvm.config is not used for detecting the JVM on OS X.

Resolved Issues in Updater 7

The JRun 4 Updater 7 includes the following fixed bugs.

Connector

- 61210 – On Windows 2003/IIS 6 and XP/IIS 5.1 with IE 6.0 SP2, the response was truncated if the page redirects to another page.
- 61437 - In Apache, when Hostname Lookups are turned off, the REMOTE_HOST header would not get set properly and it will return null.
- 61742 – The wsconfig tool now uses apachectl -v, in place of httpd -v, to determine the Apache version. This change was made to support the IBM version of Apache.
- 64255 – The connector was causing an Access violation error when the number of mappings grew to be larger than the limitation of the 2048. This limitation has been increased to 8192
- 66177/66039 – The connector installer didn't work with the latest version of Apache 2.2 (2.2.4).
- 65318 – If the logging URL includes some malicious script, and the server returns with a Page Not Found error with logging message containing the malicious code, the browser would execute it. Now the logging message comes in encoded format so browser will simply display the message rather executing it.
- 67194 - When wsconfig added the JRun information to the Apache configuration file (httpd.conf) and a DirectoryIndex entry for index.cfm already exists, the DirectoryIndex entry was removed.

JSP, Servlet and Web Engine

- 61237 - JRun hung if a Servlet called another Servlet in the init() method.
- 60495 - JRun deadlocked when running a load test application that had around 100k session data per user.
- 61205 - While forwarding a request to another web page, JRun was stripping the response wrapper, which caused the client to get a blank response.
- 61598 - The lastAccessTime for a session for the first request should return the current time rather than returning 0.
- 61599 - RequestDispatcher for a non-existent resource was not returning null, causing include/forward to fail at later stage.
- 61600 - While forwarding or including a page, JRun was wrapping the original request with ForwardRequest. The application might be using and relying on a custom RequestWrapper. This behavior was also responsible for SiteMesh not working on JRun.
- 59396 – A Servlet or other web page which was not present in the beginning of some request, but made available at later stage, was not getting picked up dynamically.
- 64565 - JRun lost query string parameters from the same URL under heavy load if request.setCharacterEncoding() was used before request.getParameter().
- 66413 – While encoding URL at client side in JavaScript, care has been taken to avoid displaying jsessionid.
- 66372 – The getAuthenticatedUser() method was changed to get a session only if it exists and not to create a new session.
- 1498(Escalation) – JRun now supports 'example' as a tag-name in tld.

ClassLoader

- 61162 - JSP was picking up classes from across the ears. As per j2ee specification, each ear should have its own classloader and all the subapplications (wars and ears that are part of the enterprise application) should be limited to ear classloader.
- 61163 – JRun did not recognize the Class-path entry in the Manifest file when the ear was deployed in the cluster directory
- 47692 - Classes in a package in the WEB-INF/classes or WEB-INF/lib directory were not accessible to the classloader if they were stored in an open directory and not a jar.
- 59890 - The findLoadedClass() method is now called before calling findClass(), as per the protocol.

Transaction

- 62070 - Remote concurrent UserTransaction was not handled properly in JRun and threw “Nested transactions are not supported” Errors.
- 65533 – JRun did not rollback transactions when a custom transaction domain was used with session beans.
- The behavior when entity bean with mandatory transaction attribute is in a remote user transaction was corrected.

Cluster

- 61987 - A node server gets added by its peers in their peerNode list before it completes applications deployment which is part of start-up process. As a result, request for undeployed(or under deployment) application fails.
- 62774 – Support was added for session replication using HTTP protocol in addition of RMI.
- High performance clustering – Http Session replication method has been improved four times by minimizing RMI calls and the data that needs to be replicated to peer nodes.

Security

- 63555 - Removed replication of the security cache when basic authentication is used as it is not required for basic authentication

Miscellaneous

- 61267 - Keep-Alive does not work in JRun4 U6 with IIS 6.0. Now a “HSE_IO_FINAL_SEND” flag is being set in server function for writing data.
- 55816 - The HTTP header size limit was increased to 8k from 4k. For some applications 4k was too small.
- 61591 – Support was missing for blob and clob when accessing a Data Source remotely.
- 62017 - When repeatedly calling an EJB via a JMX service, a memory leak occurred due to the creation of new threads without destroying old ones.
- 62198 - JRun did not allow you to disable JNDI load balancing when clustering was enabled. You could experience performance degradation when doing many lookups for EJBs and data sources.
- 65427 – Support was added for a different compiler per web-application. The configuration was moved to jrun-web.xml.
- 70554 - IBM JDK 1.5 is supported on JRun 4.0 Updater 7.0.

Known Issues

The following are the known issues in JRun 4 Updater 7.

70263 - If `<jsp:include>` includes a JSP or Servlet, and the JSP or Servlet calls `RequestDispatcher.forward()`, the forward is broken and nothing returns. No error was returned on the JRun side either.

70342 - Ending the jsp tag is compulsory on Jrun4.0. For example `<jsp:include page="xyz" >` will not work as an end tag is missing. Working Scenario is `<jsp:include page="xyz" />`

70349 - When Sun ONE does not forward jsp requests to JRun, take the following steps:

1. Uncheck the "Enable java" option under the Java settings.
2. In the obj.conf and magnus.conf files in the config directory of the particular configuration, comment out all lines containing j2ee
3. With the command line at the bin directory under the webserver7 folder, type
./wadm pull-config --user=admin --port=(admin_port) --config=(server_instance) admin_instance
4. Deploy and restart the particular instance. For deploying, go to the admin page <http://<ipaddress>:<adminport>> and select the particular configuration, and in the drop down list select "deploy configuration".

70414 - On Mac OS X on PPC and Mac OS X on INTEL the wsconfig GUI does not work. You must use the wsconfig command line to configure the web server connector.

70429: When JRun is configured to use connector, the HTTP Error codes get wrapped by the webserver and different error codes would be sent to the client.

70431 - The wsconfig tool sometimes throws a "Error deleting IIS application extensions .jsp,.jws,.cfm,.cfml,.cfc,.cfr,.cfsfw from website All(0)" error when deleting IIS 7 connector. The work-around is to re-do the delete operation after restarting wsconfig.

70437 - If updater 7 is re-installed on an existing installation of JRun 4 with Updater 7, the installation will proceed but all the back-up data in the updater7-backup directory gets over-written by the new files and thus the back-up data is turned invalid. The work-around is to manually back-up the updater7-backup directory before starting the re-installation.

70438 – JSP Compilation fails if JRE1.5/1.6 is set for java.home in jvm.config. It should be set to JDK 1.5 OR 1.6 instead.

70450- On Unix-based platforms using JDK 1.6.0_02, some of the jsp templates do not compile and give an error - javax.servlet.ServletException: JSPTranslator.CouldNotLoadClass.

70543 - On HP-UX 11i, when JRun starts up, "java.lang.OutOfMemoryError: unable to create new native thread" exception is thrown. This is not a jrun issue. It is due to misconfiguration of HP-UX parameters. The following needs to be done:

1. Install required patches for the HP-UX version. HPJconfig tool could be used to find out the missing patches. Patch named PHKL_28428 (or its superseded patch) is a must-install.
2. Adjust the kernel parameters:
 - o 'kmtune' could be used to adjust the kernel parameters.
 - o The main parameters which ought to be set correctly are nkthread, max_thread_proc and maxdiz. Set nkthread=8416,max_thread_proc=256,maxdiz=1073741824. kmtune -s <parameter name>=<value> can be used to set the value of the parameter.
 - o After setting the kernel parameters rebuild the kernel and restart the machine. mk_kernel rebuilds the kernel.Then restart the machine to apply the new kernel parameter value

70688 - On Solaris-SPARC 10 when configuring Sun ONE webserver the following error is encountered. "Error running Init function load-modules: dlopen of /opt/jrun4/lib/wsconfig/1/libjrun_nsapi.so failed (ld.so.1: webservd: fatal: libgcc_s.so.1: open failed: No such file or directory) failure: server initialization failed".

To workaroud this issue, perform the following

1. Install gcc under /usr/local
2. Go to startserv script in {sunwebserver}/{server_instance}/bin
3. Edit startserv
4. Append LD_LIBRARY_PATH_64 with the /usr/local/lib/sparcv9 which contains libgcc_s.so.1

