

Version 1

Quick Start Guide



Product Overview

IBM WebSphere Real Time is an extension to the IBM Java Runtime Environment and Software Development Kit with Metronome garbage collection, ahead-of-time compilation and support of the Real-Time Specification for Java (RTSJ).

The benefits of the real-time environment are that Java applications run with a greater degree of predictability than with the standard Java Virtual Machine (JVM) and provide a consistent timing behavior for your Java application. Metronome garbage collection occurs at regular intervals and removes the occurrence of any unexpected peaks of background activity during an application's execution. In addition, Just-in-Time (JIT) compilation can be replaced with Ahead-of-Time (AOT) compilation thus removing unpredictable background activity when your application is run.

If you are running the TCK with WebSphere Real Time you should include `demo/realtime/TCKibm.jar` in the classpath in order for tests to be completed successfully. `TCKibm.jar` includes the class **VibmcorProcessorLock** which is IBM's extension to the `TCK.ProcessorLock` class. This class provides uniprocessor behavior that is required in a small set of TCK tests. For more information on the `TCK.ProcessorLock` class and vendor specific extensions to this class, see the README file that is included with the TCK distribution.

If you have previously precompiled code, you need to rebuild that code for use with this version of WebSphere Real Time.

1 Step 1: Access your software



The Installation files are called `ibm-ws-rt-sdk-1.0-1.0-linux-i386.tgz` and `ibm-ws-rt-jre-1.0-1.0-linux-i386.tgz`.

Before you start open the `readmeFirst.txt` file for the latest information about IBM WebSphere Real Time.

To access the documentation click `startHere.htm` in the docs directory.

2 Step 2: Evaluate your hardware and system configuration



Operating system

- A customized version of Linux X86 on Red Hat EL4 with extensions.
- Red Hat Enterprise Linux 4 Update 2, using a modified 2.6.16 base kernel and glibc.

Hardware

- IBM Blade Server LS20 (Type 8850)
- IBM eServer 326m (Type 7969)
- IBM Intellistation A Pro (Type 6217)
- IBM Blade Server LS21 (Type 79716AU)

3 Step 3: Review the base architecture and the installation steps



1. To install the SDK, at a shell prompt, enter:

```
tar xzf ibm-ws-rt-sdk-1.0-1.0-linux-i386.tgz -C target_directory
```

where `target_directory` is your working directory.

```
ibm-ws-rt-i386-<version>/
    bin/
    COPYRIGHT
    demo/
    docs/
    include/
    jre/
    lib/
    src.jar
    realtime.src.jar
```

2. Test your installation by:

- a. At a shell prompt, enter `java -version` This command returns the following messages if it is successful:

```
java version "1.5.0"
Java(TM) 2 Runtime Environment, Standard Edition (build pxi32rt23-20060809b)
IBM J9 VM (build 2.3, J2RE 1.5.0 IBM J9 2.3 Linux x86-32 j9vmxi3223ifx-20060719 (JIT enabled)
J9VM - 20060714_07194_1HdSMR
JIT - 20060428_1800.ifix2_r8
GC - 200607_07)
JCL - 20060809
```

- b. At a shell prompt, enter `java -Xrealtime -version` This command returns the following messages if it is successful:

```
java version "1.5.0"
Java(TM) 2 Runtime Environment, Standard Edition (build pxi32rt23-20060809b)
IBM J9 VM (build 2.3, J2RE 1.5.0 IBM J9 2.3 Linux x86-32 j9vmxi32rt23-20060809a (JIT enabled)
J9VM - 20060809_07538_1HdRRr
JIT - 20060802_2345_r8.rt
GC - 200608_02-Metronome
RT - GA_2_3_RTJ--2006-07-24-AA-IMPORT)
JCL - 20060809
```

Note: The version information in both these examples is correct but the dates will be different from those shown. The format of the date string is: `yyyymmdd` followed possibly by additional information specific to the component.

4 Step 4: Access your documentation



In the docs directory, the documentation is provided in the following formats:

- `com.ibm.rt.doc.jar` for use with Eclipse Help System version 3.1.1 or later or Eclipse SDK version 3.1.2 or later.
- `com.ibm.rt.doc.zip` for use with Eclipse Help System version 3.0.1 or earlier.
- `rt_jre.pdf` is the WebSphere Real Time User Guide for use with the Adobe Acrobat Reader.

To use the information center on your local machine, you need to install the Eclipse Help system. To do this:

1. Installing the Eclipse Help System. Download the latest version of the Eclipse Help System from <http://www.alphaworks.ibm.com/tech/iehs/download>.
2. Select the installation file that is appropriate for your operating system.
3. Create a new directory where you plan to install the Eclipse Help System. This is referred to as `<INSTALL_DIR>` in the rest of this document.
4. Unpack the file into, for example, `/opt/<INSTALL_DIR>` or `C:\<INSTALL_DIR>` directory depending on your operating system. This creates a directory called `/opt/<INSTALL_DIR>/ibm_help` on Linux or `C:\<INSTALL_DIR>\IBM_Help_301_Win\ibm_help` on Windows..
5. Add the WebSphere Real Time information center to your Eclipse Help System:
 - a. For Eclipse Help System version 3.1.1 and later: Copy `com.ibm.rt.doc.jar` into the `/opt/<INSTALL_DIR>/ibm_help/eclipse/plugins` directory.
 - b. For Eclipse Help System version 3.0.1 and earlier: Extract the files from `com.ibm.rt.doc.zip` into the `/opt/<INSTALL_DIR>/ibm_help/eclipse/plugins` directory.
6. To start the Eclipse Help System, change directory to the `/opt/<INSTALL_DIR>/ibm_help` directory and enter `help_start`.