Empirica™ Signal
Empirica™ Study
Windows 2003/2008
JDK 6 Update Instructions

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Table of Contents

1 Introduction 5

2 Update JDK 6 on Application Server 6

2.1 Required Information 6

2.2 Stop the Empirica application services 6

2.3 Download the JDK and JRE 7

2.4 Update the JDK Installation 7

2.5 Update the JRE Installation on a 64-bit Signal Instance 8

2.6 Set file permissions 9

2.7 Start instance 9

2.8 Verify the update 9

2.9 Cleanup temporary files 9

3 Add Strong Encryption Libraries to Updated JDK on Oracle BI EE Serve……..10

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1 Introduction

This guide describes tasks that are performed by a system administrator to update Java on application servers supporting Empirica™ products. The process updates JDK 6 and JRE 6 for the server and for the installed Empirica products.

You should familiarize yourself with the procedures that you will perform by reading all instructions before you begin the update.

While the instructions provided in this guide are detailed, they are generic. This guide cannot and is not intended to cover all possible variations that may occur. An experienced administrator should read all instructions and be prepared to work through site-specific differences from the provided text.

The instructions utilize the following conventions.

Convention	**Indicates**
`Courier font`	A file or directory name or Command Prompt window.
bold face font	User interface controls, including menu options, buttons, and links.
<text_in_angle_brackets>	Substitute a value appropriate to your environment for the <text_in_angle_brackets>.
32-bit server 64-bit server	Server-specific alternative instructions.

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2 Update JDK 6 on Application Server

2.1 Required Information

You will need the following information when you start the update. In the instructions, the values to be supplied are indicated by <text_in_angle_brackets>.

- Operating System version running on the application server (Windows 2003 or Windows 2008).
- Application server: 32-bit or 64-bit.
- JDK Version <jdk_version>.

  JDK Version you are upgrading to.
- Old JDK Version <old_jdk_version>.

  Older JDK Version you are upgrading from.
- Windows administrator account <win_admin_acct> and <win_admin_pass >

  Windows account and password on the Windows 2003/2008 server where the application server is installed. The account must have the Administrator role.
- Installation root <root>.

  File system root where the \Lincoln subdirectory is located, typically **C:**
- Application instance name <instance>.

  Name of the application instance that you are upgrading. For example, for WebSDM and Empirica Study this is usually **websdm.**
- Superuser account and password: <app_admin_acct> and <app_admin_pass>.

  Application Superuser account name (for example, the **admin** username is a Superuser for Empirica Signal), and the password for that account.
- Windows service user account <win_user_acct>.

  Name of the Windows account that is running the application service. Usually this is the application instance name, with the suffix '_app' appended. For example, **websdm_app** or **signal_app.**

2.2 Stop the Empirica application services

Repeat the following steps for each instance of each Empirica application installed on the server.

1. Log in to the application as <app_admin_acct>.
2. Click **Settings,** and then click **View Currently Logged in Users**. If there are any active sessions besides your own, either contact those users to have them finish their sessions, or cancel the sessions from the application interface.
3. Exit the application.

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4. Log in to the Windows administrator account using <win_admin_acct>.
5. Open **Start > Administrative Tools > Services**.
6. Right-click the **<instance>** service, and then click **Stop**.
7. Right-click the **World Wide Web Publishing** service, and then click **Stop**.

2.3 Download the JDK and JRE

1. While logged in to the application server using <win_admin_acct>, open Windows Explorer.
2. Create a temporary directory.
3. Open an internet browser and go to the following URL:

   http://www.oracle.com/technetwork/java/javase/downloads/index.html
4. Follow the instructions for downloading Java SE 6 updates. This may require logging in to My Oracle Support.
5. Download the latest update for your application server's operating system: Microsoft Windows (32-bit) or Microsoft Windows x64 (64-bit).
6. When prompted 'Do you want to run or save this file?', click **Save,** and save the file to the temporary directory created above.
7. If you are running on a 64-bit machine and are upgrading a Signal instance, also download the 32-bit update and save the file to the same temporary directory.
8. Close the browser.
9. Unzip the downloaded file or files to the temporary directory.
   - For a 32-bit machine, the directory now includes the 32-bit JDK and JRE EXE files.
   - For a 64-bit machine, the directory now includes the 64-bit and 32-bit JDK and JRE EXE files.

2.4 Update the JDK Installation

1. Open the temporary directory you created above.
2. Double-click the JDK EXE file for your machine:
   - For a 32-bit machine, double-click jdk-6u<jdk_version>windows-i586.exe.
   - For a 64-bit machine, double-click jdk-6u<jdk_version>windows-x64.exe.
3. If prompted 'Do you want to run this file?', click **Run**.
4. Click **Next**.

   It is not necessary to select any additional options to install.
5. Click **Next.**

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6. If prompted for a destination folder to install to, accept the default installation folder. Click **Next.** (This prompt appears only if both a Program Files directory and a Program Files (x86) directory are present.)
7. When a message indicating successful installation displays, click **Finish**.
8. Open Windows Explorer.
9. Rename the `<root>\Lincoln\jdk1.6` folder to `<root>\Lincoln\jdk1.6_<old_jdk_version>.`
10. Locate the folder named `jdk1.6.0_<jdk_version>` that the installation created under `C:\Program Files\Java` and copy it and its contents to `<root>\Lincoln\.`
11. Rename the `<root>\Lincoln\jdk1.6.0_<jdk_version>` folder (that was copied in the previous step) to `<root>\Lincoln\jdk1.6.`
12. Rename the two files `local_policy.jar` and `US_export_policy.jar` in the folder `<root>\Lincoln\jdk1.6\jre\lib\security` to `local_policy.bak` and `US_export_policy.bak`, respectively.
13. Copy the two jar files `local_policy.jar` and `US_export_policy.jar`

    from folder `<root>\Lincoln\jdk1.6_<old_jdk_version>\jre\lib\security`

    to folder `<root>\Lincoln\jdk1.6\jre\lib\security.`

2.5 Update the JRE Installation on a 64-bit Signal Instance

If you are upgrading a 64-bit machine and are upgrading a Signal instance, perform the following steps:

1. Open the temporary folder you created above.
2. Double-click the 32-bit JRE installation file downloaded in section 2.3.
3. If prompted 'Do you want to run this file?', click **Yes**.
4. Click **Install**.
5. Click **Close.**
6. Open Windows Explorer.
7. Rename the `<root>\Lincon\apps\<instance_name>\webapps\jre` folder to `<root>\Lincon\apps\<instance_name>\webapps\jre_<old_jre_version>.`
8. Locate the folder named `jre6` that the installation created under `C:\Program Files (x86)\Java` and copy it and its contents to `<root>\Lincon\apps\<instance_name>\webapps.`
9. Rename the folder `<root>\Lincon\apps\<instance_name>\webapps\jre6` to `<root>\Lincon\apps\<instance_name>\webapps\jre.`

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2.6 Set file permissions

1. Open Windows Explorer and navigate to `<root>\Lincoln\apps\<instance_name>\bin`.
2. Run the file `set_permissions.bat` (in Windows 2008, right-click the file and run it as Administrator).

2.7 Start instance

Repeat the following steps for each instance of each Empirica application installed on the server.

1. Open **Start > Administrative Tools > Services**.
2. Right-click the **<instance>** service and select **Start**.
3. Right-click the **World Wide Web Publishing** service, and then click **Start** or **Restart** if the service is already running.
4. In an Internet Explorer window, access the URL for the Empirica application. If the message "The server is still initializing. Please try again in a few minutes" appears, try again later.

2.8 Verify the update

Complete the Operational Qualification (OQ) testing provided on the Empirica application installation kit.

2.9 Clean up temporary files

1. Optionally, delete the temporary folder and contents.
2. Optionally, delete the folder `<root>\Lincoln\jdk1.6_<old_jdk_version>` and its contents.

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3 Add Strong Encryption Libraries to Updated JDK on Oracle BI EE Server

If the Empirica application is integrated with Oracle BI EE, after Java has been updated on the Oracle BI EE server and WebLogic configured to use the updated Java, perform these steps:

1. Copy the following strong encryption libraries from the Empirica Signal application server folder `C:\Lincoln\apps\webvdme\webapps\jre\lib\security` to the `jre/lib/security` folder for any JDK used to run WebLogic on the Oracle BI EE server:

   `local_policy.jar`

   `US_export_policy.jar`

2. Restart the WebLogic server.

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