Getting Started Guide

Sun Java™ Studio Mobility 6
2004Q3

Contents

Before You Begin

This *Getting Started Guide* provides instructions for installing, setting up, and starting the Sun™ Java™ Studio Mobility 6 integrated development environment (IDE). This book is designed for both system administrators and developers who install software. You should be experienced with basic installation procedures on your platform.

Screen shots and commands entered at the command line vary slightly from one platform to another. For example, a Microsoft Windows command might look like this:

```
c:>cd MyWorkDir\MyPackage
```

A UNIX® command might look like this:

```
% cd MyWorkDir/MyPackage
```

Before You Read This Book

You should be familiar with installing and uninstalling software products on the platforms you choose to use with this release of the Sun Java Studio Mobility IDE. You need familiarity with system administration commands, such as:

- `Add/Remove` Program utility on Microsoft Windows systems

If you are unsure about the system administration commands for your operating system, contact your system administrator for assistance with the instructions in this guide.

Before using this IDE, you should also be familiar with the following subjects:

- Java™ programming language
- Connected, Limited Device Configuration (CLDC) specification
- Mobile Information Device Profile (MIDP) specification
- Web Services
- Using application servers, such as the Apache Tomcat server.

Using the Sun Java Studio Mobility IDE successfully requires a knowledge of J2ME™ concepts, as described in the following resources:

- Java 2 Platform, Wireless Blueprints
  http://java.sun.com/blueprints/wireless/index.html

- Java 2 Platform, Connected Limited Device Configuration (CLDC) Specification JSR-139) and Java 2 Platform, Mobile Information Device Profile (MIDP) (JSR-37 and JSR-118) Specifications http://java.sun.com/j2me/docs/

- *The MIDP Tutorials I and II*
  http://developers.sun.com/techtopics/mobility/learn/midp/getst
  art/#tutorial

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Typographic Conventions

Typeface	Meaning	Examples
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your .cvspass file. Use DIR to list all files. Search is complete.
AaBbCc123	What you type, when contrasted with on-screen computer output	> **login** Password:

Typeface	Meaning	Examples
AaBbCc123	Book titles, new words or terms, words to be emphasized	Read Chapter 6 in the *User's Guide*. These are called *class* options. You *must* save your changes.
AaBbCc123	Command-line variable; replace with a real name or value	To delete a file, type **DEL** *filename*.

Related Documentation

Sun Java Studio documentation includes books delivered in Acrobat Reader (PDF) format, release notes, online help, and readme files for example applications.

Documentation Available Online

The documents described in this section are available from the docs.sun.com^{SM} web site and from the documentation page of the Sun Java Studio Developer Resources portal at
http://developers.sun.com/resources/documentation.html.

The docs.sun.com web site (http://docs.sun.com) enables you to read, print, and buy Sun Microsystems manuals through the Internet. If you cannot find a manual, see the documentation index that is installed with the product on your local system or network.

- *Sun Java Studio Mobility 6 2004Q3 Release Notes* - part no. 817-2345-10

    Describes last-minute release changes and technical notes.

- *Sun Java Studio Mobility 6 2004Q3 Getting Started Guide* - part no. 817-2340-10

    Describes how to install the Sun Java Studio integrated development environment (IDE) on each supported platform and include other pertinent information, such as system requirements, upgrade instructions, command-line switches, installed subdirectories, and information on how to use the Update Center.

- *Sun Java Studio Mobility 6 2004Q3 Tutorial* - part no. 816-2343-10

    Provides step-by-step instructions for building a simple application for a wireless device, such as a cellular phone or personal digital assistant (PDA). The application you build is compliant with the Java™ 2 Platform, Micro Edition (J2ME™ platform) and conforms to the Mobile Information Device Profile (MIDP)

and Connected, Limited Device Configuration (CLDC). An additional application illustrates how to create a networked mobile data application using the J2ME Connector Wizard.

You can install the completed tutorial applications using the Examples Setup wizard, and can also find the completed tutorial applications at:
http://developers.sun.com/prodtech/javatools/reference/codesampl es/index.html

Online Help

Online help is available in the Sun Java Studio IDE. You can open help by pressing the help key (F1 in Microsoft Windows and Linux environments, Help key in the Solaris environment), or by choosing Help → Contents. Either action displays a list of help topics and a search facility.

Examples

You can download examples that illustrate a particular Sun Java Studio feature, as well as completed tutorial applications, from the Sun Java Studio Developer Resources portal at:

http://developers.sun.com/prodtech/javatools/reference/codesampl es/index.html

The site includes the applications that are used in this document.

Documentation in Accessible Formats

The documentation is provided in accessible formats that are readable by assistive technologies for users with disabilities. You can find accessible versions of documentation as described in the following table.

Type of Documentation	Format and Location of Accessible Version
Books and tutorials	HTML at http://docs.sun.com

Mini-tutorials	HTML at http://developers.sun.com/prodtech/javatools/reference/codesamples/index.html
Integrated example readmes	HTML in the example subdirectories of *jstudio-install-directory*/examples
Release notes	HTML at http://docs.sun.com

Contacting Sun Technical Support

If you have technical questions about this product that are not answered in this document, go to:

http://www.sun.com/service/contacting

Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions. Submit your comments to Sun at this URL

http://www.sun.com/hwdocs/feedback

Please include the part number (817-2340-10) of your document.

Preparing for Installation

This chapter contains information that you need before you install the Sun™ Java™ Studio Mobility 6 IDE. This release of Sun Java Studio includes the J2ME Wireless Toolkit, J2ME Wireless Connector Wizard, the RetroGuard obfuscator, and support for the ProGuard obfuscator. The installation of these products with the Sun Java Studio installer results in an integrated enterprise level tool for developing and deploying applications written in the Java™ programming language using J2ME and J2EE concepts.

This chapter covers:

Overview of the Installation Process

This section describes the general process for installing and configuring the Sun Java Studio IDE on your system.

TABLE 1-1   Overview of IDE Installation and Configuration .

Task	For Instructions
Verify that your platform is supported.	"Supported Platforms" on page 14
Verify the system and disk space requirements.	"System and Disk Space Requirements" on page 15
Verify that you have access to the required version of the J2SE platform.	"Verifying Your J2SE Platform" on page 16
Determine if you have the correct permissions to install the IDE.	"Having the Correct User Privileges" on page 19
Determine if you want to keep your previous version of the IDE.	"Supporting Previous Software Releases" on page 18
Install the IDE.	• "Installing the IDE (Microsoft Windows Systems)" on page 21 • "Installing the IDE (Linux Systems)" on page 23 • "Installing the IDE (Solaris OS)" on page 27
Set up your initial IDE environment.	"Setting Up the IDE" on page 45

Supported Platforms

The Sun Java Studio Mobility IDE is supported on the following platforms:

- Microsoft Windows 2000 Professional
- Microsoft Windows XP Professional
- Red Hat Linux 8
- Sun Java™ Desktop System 1.0
- Solaris™ 9 OS (32-bit/64-bit, UltraSPARC® III)

The J2ME Wireless Toolkit has been tested with the following systems:

- Microsoft Windows NT 4.0 systems
- Microsoft Windows 2000 systems

The J2ME Wireless Toolkit has been tested on a limited basis with the following, unsupported systems:

- Microsoft Windows 98 Second Edition
- Solaris 8 operating environment
- Solaris™ 9 OS (32-bit/64-bit, UltraSPARC® III)
- Red Hat Linux 9

Note – The platforms supported by the Java Studio Mobility IDE might differ from those supported by the emulator you plan to use. You should verify that both the Java Studio Mobility IDE and the emulator you plan to use are supported on your particular platform.

System and Disk Space Requirements

TABLE 1-2 lists the system requirements needed to install a minimum configuration on any of the supported platforms.

TABLE 1-2   Sun Java Studio Mobility System Requirements

Supported Platforms	Minimum Configuration
Windows 2000, Windows XP	Pentium III, 500 MHz 256 MB RAM
Red Hat Linux 8.0 Sun Java Desktop System 1.0	Pentium III 500 MHz 256 MB RAM
Solaris 8 and Solaris 9 operating systems (32-bit/64-bit, UltraSPARC® platform)	Ultra™60, 450 MHz 384 MB RAM

These are general guidelines. Your requirements might vary depending on which additional software you have installed for use with the Sun Java Studio.

Disk Space Requirements

The following section lists the disk space requirements by platform.

Temporary Space Requirement

Running the installer requires sufficient temporary space to unpack the installation files.

- On UNIX® systems, the installer uses the /tmp or the /var/tmp directory.
- On a Microsoft Windows system, the installer uses the directory as specified by the user variable TEMP in the System Properties settings.

Space Requirements by Platform

The space requirements are described in TABLE 1-3 for Microsoft Windows and TABLE 1-4 for Linux systems.

TABLE 1-3   Disk Space Requirements for Microsoft Windows

Directory	Java Studio Mobility IDE with Wireless Connector Wizard and J2ME Wireless Toolkit 1.0.4
jstudio-install-directory	125 MB (an additional 100 MB is required for installation).

TABLE 1-4   Disk Space Requirements for Linux OS

Directory	Java Studio Mobility IDE with Wireless Connector Wizard and J2ME Wireless Toolkit 1.0.4
jstudio-install-directory	125 MB (an additional 100 MB is required for installation).

TABLE 1-5   Disk Space Requirements for Solaris OS

Directory	Java Studio Mobility IDE with Wireless Connector Wizard and J2ME Wireless Toolkit 1.0.4
jstudio-install-directory	125 MB (an additional 100 MB is required for installation).

Verifying Your J2SE Platform

To install the Sun Java Studio IDE you must have one of the following:

- The J2SE, version 1.4.1_02 platform or later 1.4.*x* version installed locally.
- Network access to the path in which the J2SE version 1.4.1_02 platform or later 1.4.*x* version is installed

> **Note –** To maximize runtime performance, the J2SE platform should be installed on and accessed from your local system.

You can find the J2SE platform versions at
http://java.sun.com/j2se/downloads.html.

At this site, you can access current versions as well as archived J2SE platform versions. Sun maintains the download site for previously released versions of the J2SE platform and related products that have completed the end-of-life process and are no longer covered by standard support contracts. These downloads are made available as a courtesy to developers to assist in problem resolution. Look for the section titled "Download Archived Releases" or the Archived Downloads link.

▼ To Determine Your Current J2SE Platform Version

- Identify which J2SE platform version is available to your system by typing the following command at a command line.

```
java -version
```

The output looks similar to the following:

```
java -version
java version "1.4.1_02"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.4.1_02-
b02)
Java HotSpot(TM) Client VM (build 1.4.1_02-b02, mixed mode)
```

If you do not have the J2SE version 1.4.1_02 platform or later 1.4.*x* version available to your system, you must install the supported platform.

Depending on how you have your PATH environment variable set, the java -version command may not return complete results. If this command does not return the correct version and you know you have a suitable J2SE version on your system, use the command line option, -is:javahome, to specify the path. See Appendix B for details.

▼ To Install the J2SE Platform

1. **Obtain the appropriate platform-specific installer file from**
   http://java.sun.com/j2se/downloads.html.

   TABLE 1-6 lists the installer file names for each supported platform.

2. **Install the J2SE version 1.4.1_02 platform or later 1.4.*x* version on your system.**

   Installation instructions can be found on the web site.

TABLE 1-6 J2SE Software Installer File Names

Platform	Companion CD Directory	Installer File Name
Microsoft Windows	j2sdk\windows	j2sdk-1_4_1_02-windows-i586.exe
Linux OS	j2sdk/linux	j2sdk-1_4_1_02-linux-i586-rpm.bin
Solaris OS 32-bit	j2sdk/solaris_sparc	j2sdk-1_4_1_02-solaris-sparc.tar.Z
Solaris OS 64-bit	j2sdk/solaris_sparc	j2sdk-1_4_1_02-solaris-sparcv9.tar.Z

Supporting Previous Software Releases

To upgrade your previous version of the Sun Java Studio Mobility IDE, you must do one of the following:

■ To keep your previous version of the IDE, identify a different directory in which to install the Sun Java Studio Mobility IDE software when prompted during installation.

   To use the same installation directory as the previous IDE version, first uninstall the previous version of the IDE prior to installing Sun Java Studio Mobility software. See the *Getting Started Guide* for your currently installed version of the IDE.

■ To keep your current IDE user settings, specify the location of your current user directory when prompted during the initial IDE setup on the Settings Import wizard. See "Setting Up the IDE" on page 46.

Having the Correct User Privileges

You must have Administrator privileges to install the Sun Java Studio Mobility on the Windows 2000 or Windows XP platforms.

Installing the IDE (Microsoft Windows Systems)

This chapter describes how to install the IDE from files downloaded from the web.

The IDE installer installs the J2ME Wireless Toolkit 2.1 as the default device emulator. Optionally, you can also install the J2ME Wireless Toolkit 1.0.4 and J2ME Wireless Connection Wizard module. You can install the IDE in two ways:

- See "To Install the IDE" on page 21
- See "Using Command-line Options During Installation" on page 22

Using the GUI Installer

You can install the IDE by downloading the `jstudio_M04q3-win-en.exe` installer launcher from `http://www.sun.com/prodtech/javatools/jsmobility/`.

Note – If you encounter errors at any point during the installation, refer to Chapter 11 for troubleshooting tips.

▼ To Install the IDE

1. **Verify that you have the J2SE, version 1.4.1_02 platform or later 1.4.*x* version installed on your system and that you have reviewed the space requirements.**

   See Chapter 1 for details.

2. **Start the Installation.**

   - To start the install from web download, follow these steps:

   a. **Log in to your system with administrator privileges.**

b. **Download the** `jstudio_M04q3-win-en.exe` **installer file from**
      http://www.sun.com/prodtech/javatools/jsmobility/ **and save it.**
      (The directory you download it to will be referred to here as
      *jstudio-download-directory***.)**

   c. **Double-click the** `jstudio_M04q3-win-en.exe` **file in the**
      jstudio-download-directory.

      The Welcome screen appears.

3. **On the Welcome page, click Next and follow the installer instructions.**

   The installer asks a series of questions, installs the product, then displays the final
   Summary page.

   When prompted for the license serial number you have two options:

   ■ Enter a permanent license serial number.
   ■ Generate a 60-day trial license serial number by using the 60 Day Trial button.

4. **Click Finish to exit the installer.**

   The default installation directory is *%Drive%*`\Sun\jstudio\Mobile04q3.`

5. **Continue to Chapter 10 for information about setting up the IDE.**

Using Command-line Options During Installation

Command-line options for installing in silent mode are supported by the IDE
installers. Some command-line options can be used with the GUI installer.

See Appendix B for details on using the command-line options and for installing in
silent mode.

Installing the IDE
(Linux Systems)

This chapter describes how to install the IDE from files downloaded from the web.

The IDE installer installs the J2ME Wireless Toolkit 2.1 as the default device emulator. Optionally, you can also install the J2ME Wireless Toolkit 1.0.4 and the J2ME Wireless Connection Wizard module. You can install the IDE in two ways:

You can install the Sun Java Studio Mobility IDE in two ways:

- See "Using the GUI Installer" on page 23
- See "Using Command-Line Options During Installation" on page 25

Using the GUI Installer

You can install the Sun Java Studio IDE by downloading the `jstudio_M04q3-linux-en.bin` installer launcher from http://www.sun.com/prodtech/javatools/jsmobility/.

If you encounter errors at any point during the installation, refer to Chapter 11 for troubleshooting tips.

▼ To Install the IDE

1. **Verify that you have the J2SE, version 1.4.1_02 platform 0r later 1.4.*x* version installed on your system and that you have reviewed the space requirements.**

   See Chapter 1 for details.

2. **Start the installation.**

   - To start the install from web download, follow these steps:

a. **Download the** `jstudio_M04q3-linux-en.bin` **installer file from**
   http://www.sun.com/prodtech/javatools/jsmobility/ **and save it.**
   (The directory you download it to will be referred to here as
   *jstudio-download-directory***.)**

b. **Set the execute permission on the** `jstudio_M04q3-linux-en.bin` **file.**

```
% chmod a+x /jstudio-download-directory/jstudio_M04q3-linux-en.bin
```

c. **Set the** `DISPLAY` **environment variable to display to your local system.**

   For example, if you use the bash shell, type:

```
# export DISPLAY=your-local-machine:0.0
```

d. **Start the installer.**

```
# /jstudio-download-directory/jstudio_M04q3-linux-en.bin
```

   The Welcome page appears.

3. **From the Welcome page, click Next and follow the instructions on the installer wizard pages.**

   The installer asks a series of questions, installs the product, and then displays the Summary page.

   When prompted for the license serial number you have two options:

   - Enter a permanent license serial number.
   - Generate a 60-day trial license serial number by using the 60 Day Trial button.

4. **Click Finish to exit the installation wizard.**

   Installing as a superuser, the default installation directory is `/opt/SUNWjstudio/Mobile04q3`. If you only installed the IDE and installed it as a standard user, then the default installation directory is `$HOME/SUNWjstudio/Mobile04q3` where `$HOME` is your home directory.

5. **If you installed as a superuser, exit from superuser privileges.**

6. **Continue to Chapter 10 for information about setting up the Sun Java Studio Mobility IDE.**

Using Command-Line Options During Installation

Command-line options for installing in silent mode are supported by the IDE installers. Some command-line options can be used with the GUI installer.

See Appendix B for details on using the command-line options and for installing in silent mode.

Installing the IDE (Solaris OS)

This chapter describes how to install your Sun Java Studio Mobility IDE from files downloaded from the web in supported Solaris operating systems.

The IDE installer installs the J2ME Wireless Toolkit 2.1 as the default device emulator. Optionally, you can also install the J2ME Wireless Toolkit 1.0.4 and the J2ME Wireless Connection Wizard module.

You can install the IDE in two ways:

- See "Using the GUI Installer" on page 27
- See "Using Command-Line Options During Installation" on page 29

Using the GUI Installer

You can install the Sun Java Studio IDE by downloading the `jstudio_M04q3-sol-sparc-en.bin` installer launcher from `http://www.sun.com/prodtech/javatools/jsmobility/`.

Note – If you encounter errors at any point during the installation, refer to Chapter 11 for troubleshooting tips.

▼ To Install the IDE

1. **Verify that you have at least the J2SE, version 1.4.1_02 platform installed on your system before installing the Sun Java Studio Mobility software.**

   See Chapter 1 for details.

2. Start the installation.

- To start the install from web download, follow these steps:

a. **Download the** `jstudio_M04q3-sol-sparc-en.bin` **installer file from** http://www.sun.com/prodtech/javatools/jsmobility/ **and save it. (The directory you download it to will be referred to here as** *jstudio-download-directory***.)**

b. **Set the execute permission on the** `jstudio_M04q3-sol-sparc-en.bin` **file.**

```
% chmod a+x /jstudio-download-directory/jstudio_M04q3-sol-sparc-en.bin
```

c. **Set the** `DISPLAY` **environment variable to display to your local system.**

```
% setenv DISPLAY your-local-machine:0.0
```

d. **Start the installer.**

```
# /jstudio-download-directory/jstudio_M04q3-sol-sparc-en.bin
```

The Welcome page displays.

3. From the Welcome page, click Next and follow the instructions on the installer wizard pages.

The installer asks a series of questions, installs the product, and then displays the Summary page.

When prompted for the license serial number you have two options:

- Enter a permanent license serial number.
- Generate a 60-day trial license serial number by using the 60 Day Trial button.

4. Click Finish to exit the installation wizard.

The default installation directory on a Solaris system is `$HOME/SUNWjstudio/Mobile04q3`.

5. If you installed the IDE as a superuser, exit from superuser privileges.

6. Continue to Chapter 10 for information about setting up the Sun Java Studio Mobility IDE.

Using Command-Line Options During Installation

Command-line options for installing in silent mode are supported by the IDE installers. Some command-line options can be used with the GUI installer.

See Appendix B for details on using the command-line options and for installing in silent mode.

Adding Mobility to the NetBeans or Sun Java Studio Enterprise IDEs

This chapter describes how to add the Sun Java Studio Mobility features to the NetBeans or Sun™ Java™ Studio Enterprise 6 IDEs using modules you can download from the Sun Java Studio Update Center.

Available Modules

NetBeans modules (NBMs) allow you to add or update the functionality of your IDE. NBMs are available for download at the Sun Java Studio Update Center, as described in "Upgrading Your Installation" on page 37.

The NetBeans modules (NBMs) that are required to add support for mobile applications include:

■ J2ME Wireless Module, which provides the basic support for MIDP/CLDC application development.

■ J2ME Wireless Toolkit Module 2.1, available in separate downloads for the Solaris, Windows and Linux platforms.

Optionally, you can also download and install the following modules:

■ J2ME Wireless Connection Wizard, which simplifies the creation of MIDP client/server applications.

■ J2SR172 Support Module, which enables you to connect MIDP applications to web services.

■ ProGuard Obfuscation Module

■ RetroGuard Obfuscation Module

■ J2ME Wireless Toolkit Module 1.0.4_01, available in separate downloads for the Solaris, Windows and Linux platforms.

■ J2ME Wireless Examples, a set of sample applications.

Installing the ProGuard Obfuscator

This chapter describes how to install the ProGuard obfuscator.

The IDE installer installs the RetroGuard obfuscator as the default obfuscator, and includes support for the ProGuard obfuscator. To use the ProGuard obfuscator, you need to download the executable and add it to the IDE.

Downloading and Installing the ProGuard Obfuscator:

These instructions assume you have either installed the Sun Java Studio Mobility 6 IDE or added the Sun Java Studio Mobility 6 ProGuard obfuscator module to your installation of Sun Java Studio Enterprise 6.

1. **Download the ProGuard obfuscator (**`proguard2.0.1.tar.gz` **or** `proguard2.0.1.zip`**) from** `http://proguard.sourceforge.net`**.**

2. **Untar or unzip the file into a directory on your system.**

3. **Choose Tools > Obfuscators.**

   The Obfuscator Registry dialog opens.

4. **In the left pane of the dialog, select the ProGuard obfuscator node.**

   The Property sheet for the obfuscator is displayed in the left pane of the dialog.

5. **Click the Expert tab, then click on the ellipsis (...) button for the Executable Path property.**

   A File Chooser window opens.

6. **Use the File Chooser window to navigate to the JAR file for the obfuscator (for example,** `proguard.jar`**) and click OK.**

   The path to the JAR file is shown in the property sheet.

7. Optionally, set ProGuard to be the default obfuscator by clicking the Set As Default button.

Configuring the Palm OS Emulator

If you want to run the Palm OS Emulator that is included with the J2ME Wireless Toolkit 1.0.4, you must install the emulator before installing the Sun Java Studio Mobility IDE. You can download the emulator from http://www.palmos.com/dev/tech/tools/emulator/.

You must first configure the emulator as follows:

1. **Redirect NetLib calls to the host's TCP/IP.**

   For certain functions like debugging and Internet connectivity to work, you must set NetLib API calls to be redirected from the Palm OS Emulator to use your computer's TCP/IP.

   a. **Run the Palm OS Emulator and right-click the emulator.**

      A menu appears.

   b. **Select Settings→ Properties…**

      The Properties dialog appears.

   c. **Check the Redirect NetLib calls to host TCP/IP box, and click OK.**

      The Properties dialog disappears.

   d. **Right-click the emulator and select Save.**

      Your changes are saved.

2. **Disable debugging.**

   The Palm OS Emulator allows various items to be debugged while the application executes. However, for the Palm OS Emulator to work with the Sun Java Studio Mobility IDE, debugging must be disabled altogether.

   a. **Run the Palm OS Emulator, and right-click the emulator.**

      A menu appears.

   b. **Select Settings → Debugging…**

      The Debug Options dialog appears.

c. Uncheck all the boxes and click OK.

   The Debug Options dialog disappears.

   d. Right-click the emulator and select Save.

   Your changes are saved.

3. Set the Palm OS Emulator location in the Sun Java Studio Mobility IDE.

The first time you run an application using the Palm OS Emulator through the Sun Java Studio Mobility IDE, a dialog appears, asking you for the Palm OS Emulator location. After you set the location, the dialog will not appear again when you run MIDP applications using the emulator.

Upgrading Your Installation

This chapter discusses the following topics:

- "Updating Modules With the Update Center" on page 37

Updating Modules With the Update Center

Once you have the IDE installed on your system, updates may be available through the Update Center that will enable you to add new IDE modules or to update the existing IDE modules.

▼ To Update your IDE Modules

1. **Click the Update Center button from the IDE's Welcome screen or choose Tools → Update Center from the main IDE window.**

   The Update Center wizard appears.

2. **Select Sun Java Studio Update Center as the Update Center, and deselect NetBeans Update Center.**

3. **If you haven't set your proxy configuration, click the Proxy Configuration button.**

   The Proxy Configuration dialog box displays. Modify the values as needed and click OK to return to the Update Center wizard.

4. **Click Next, and type your Sun Java Studio Update Center login name and password.**

   The Update Center displays the modules that are available to you.

5. **Select individual modules or select all by clicking the >> button.**

   Use the < button to remove those versions that are not appropriate to your platform.

6. **Click Next and follow the Update Center installation procedure.**

   The IDE installs the selected modules and then restarts itself.

   For more information about how the Update Center works and to review Sun's privacy policy regarding your personal information, see the Developer Resources Site FAQs at http://developers.sun.com/resources/FAQS.html.

CHAPTER **9**

Uninstalling the IDE

An uninstaller wizard is available to remove the Java Studio Mobility IDE. You must uninstall the IDE with the same user privileges required during the installation.

This chapter describes how to uninstall each of the supported platforms:

- **For Microsoft Windows systems**, see "To Uninstall the IDE (Microsoft Windows Platform)" on page 39.
- **For Linux systems,** see "To Uninstall the IDE (Linux Systems)" on page 40.
- **For Solaris OS**, see "To Uninstall the IDE (Solaris OS)" on page 42.

Using the Uninstaller

▼ To Uninstall the IDE (Microsoft Windows Platform)

Use the Microsoft Windows Add/Remove utility to uninstall in the Windows operating environment.

1. **Exit and shut down the IDE before starting this procedure.**

2. **Ensure that you have J2SE version 1.4.1_02 available on your system.**

3. **Choose Start > Settings > Control Panel.**
   The Control Panel dialog box appears.

4. **Double-click Add/Remove Programs.**

5. **Select Sun Java Studio Mobility from the list of currently installed programs.**

6. **Click Change/Remove.**

   The InstallShield Wizard prepares the uninstaller wizard and the Welcome panel appears.

7. **Click Next and follow the instructions.**

   When the uninstallation is complete, the final Summary panel appears.

8. **Click Finish.**

9. **Check the** *jstudio-install-directory***.**

   A successful uninstallation leaves the following files and folders:

   jstudio-install-directory

   ```
   install.log
   uninstall.log
   ```

   If the uninstallation was successful, uninstall.log is not created. If your *jstudio-install-directory* directory contains other files, you might have installed add-on products or the uninstallation might be incomplete. See "Identifying and Fixing an Incomplete Uninstallation" on page 59 for more information.

   Note – The *jstudio-user-directory* is not deleted during uninstallation.

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10. **Examine the** *jstudio-install-directory*\uninstall.log **file for error messages.**

11. **If the uninstallation was successful, you can delete the remaining directories and files.**

▼ To Uninstall the IDE (Linux Systems)

   Caution – You must use the Sun Java Studio uninstaller to uninstall this software from your Linux system. Do not attempt to use rpm -e commands to uninstall the IDE. Failure to use the uninstaller might result in a corrupted system.

---

1. **Exit and shut down the IDE before starting this procedure.**

2. **Ensure that you have at least J2SE version 1.4.1_02 or available on your system.**

3. **Set your display environment variable to display to your local machine.**

   For example, if you use the bash shell, type:

   ```
   % export DISPLAY=your-local-machine:0.0
   ```

4. **If you installed the IDE as a superuser, become a superuser.**

5. **Start the uninstaller wizard.**

   ```
   # java -jar /jstudio-install-directory/_uninst/uninstall.jar
   ```

   The uninstaller's Welcome screen appears.

6. **Click Next and follow the instructions.**

   The uninstaller wizard uninstalls the IDE.

7. **Click Finish.**

8. **Check the** *jstudio-install-directory***.**

   A successful uninstallation leaves the following directories and files:

   jstudio-install-directory

       uninstall.log

       install.log

   jstudio-install-directory/_uninst

   If the uninstallation was successful, uninstall.log is not created. If your *jstudio-install-directory* directory contains other files, you might have installed add-on products or the uninstallation might be incomplete.

   Note – The *jstudio-user-directory* is not deleted during uninstallation.

   ---

9. **If the installation was incomplete, examine the** *jstudio-install-directory*/uninstall.log **file for error messages.**

   If you suspect your uninstallation was incomplete, see Chapter 11 for information about fixing a failed uninstallation.

10. **If the uninstallation was successful, you can delete the remaining directories and files.**

    ```
    # rm -r jstudio-install-directory
    ```

    Use this command to remove the log files and the installation directory only. Do not attempt to uninstall the product files using this command. You must run the uninstaller successfully before removing these log files and the directory in which they reside.

    If you uninstalled as a superuser, exit from superuser privileges.

▼ To Uninstall the IDE (Solaris OS)

> **Caution –** Use the Sun Java Studio uninstaller to uninstall this software from your Solaris system. Do not attempt to use `rm -r` or `pkgrm` commands to uninstall the IDE. Failure to use the uninstaller might result in a corrupted system.

1. **Exit and shut down the IDE before starting this procedure.**

2. **Ensure that you have J2SE version 1.4.1_02 or other J2SE version 1.4.*x* available on your system.**

3. **Set your display environment variable to display to your local machine.**

   ```
   % setenv DISPLAY your-machine-name:0.0
   ```

4. **If you installed the IDE as a superuser, become a superuser (root).**

5. **Start the uninstaller wizard.**

   ```
   # java -jar /jstudio-install-directory/_uninst/uninstall.jar
   ```

   The Welcome screen appears.

6. **Click Next and follow the instructions.**

   The uninstaller wizard uninstalls the IDE.

7. **Click Finish.**

8. **Check the *jstudio-install-directory*.**

   A successful uninstallation leaves the following directories and files:

   jstudio-install-directory

   ```
   uninstall.log
   install.log
   ```

   jstudio-install-directory/_uninst

   If the uninstallation was successful, uninstall.log is not created. If your *jstudio-install-directory* directory contains other files, you might have installed add-on products or the uninstallation might be incomplete.

   > **Note –** The *jstudio-user-directory* is not deleted during uninstallation.

9. **Examine the** *jstudio-install-directory*/uninstall.log **file for error messages.**

   If you suspect your uninstallation was incomplete, see Chapter 11 for information about fixing a failed uninstallation.

10. **If the uninstallation was successful, delete the remaining directories and files. :**

    ```
    # rm -r jstudio-install-directory
    ```

    Use this command to remove the log files and the installation directory, only. Do not attempt to remove the product files using this command. You must run the uninstaller successfully before removing these log files and the directory in which they reside.

11. **If you uninstalled the IDE as a superuser, exit from superuser privileges.**

    ```
    # exit
    ```

Setting Up the IDE

After you have installed the IDE, use the information in this chapter to start, set up, and register your software.

This chapter covers the following topics:

- "Starting the IDE" on page 45
- "Setting Up the IDE" on page 46
- "Using the Startup Options" on page 48

Starting the IDE

When you first start the IDE, you are prompted to do the following tasks:

- Import your customized settings from previous versions
- Register your software
- Indicate whether you would like automatic update checking

▼ To Start the IDE (Microsoft Windows Systems)

Use one of these methods:

- Double-click the Sun Java Studio Mobility icon located on your desktop.

- Choose Start → Programs → Sun Microsystems → Java Studio Mobility 6

- Start the IDE by typing the following command at a command line:

```
C:\> runidew.exe
```

To start the IDE and display messages in the Windows Console, type:

```
C:\> runide.exe
```

The Windows console displays error messages and other console messages generated by using the IDE.

Using runidew.exe just starts the IDE. This is the default launcher used by the desktop icon.

The runide.exe command options can be specified on the command line or in the *jstudio-install-directory*\bin\ide.cfg file. See "Using the Startup Options" on page 48.

▼ To Start the IDE (Solaris or Linux Systems)

1. **Change to the** *jstudio-install-directory*/bin **directory**

   The default installation directory is /opt/SUNWjstudio/Mobile04q3.

   ```
   % cd /opt/SUNWjstudio/Mobile04q3
   ```

2. **Start the IDE.**

   ```
   % ./runide.sh
   ```

The runide.sh command options can be specified on the command line or in the *jstudio-install-directory*/bin/ide.cfg file. See "Using the Startup Options" on page 48.

Setting Up the IDE

The IDE has the following wizards that enable you to control aspects of the IDE environment:

- Settings Import Wizard
- Registration Wizard
- Setup Wizard

Settings Import Wizard

The Settings Import wizard is displayed the first time that you start the IDE. The wizard enables you to import settings from prior versions of the IDE for use with the Java Studio Mobility IDE.

Registration Wizard

The Registration wizard is displayed the first time that you start the IDE. This wizard enables you to register with the Sun Java Studio Developer Resources web site.

Registering your Java Studio Mobility IDE software through the web enables you to do the following:

- Use the Update Center to download and install new modules and updates specific to your environment
- Subscribe to the Early Access Program (`http://forte.sun.com/eap`) and receive new, nonpublic builds of the IDE, as well as preview releases of Sun Java Studio modules, patches, and bug fixes
- Receive product announcements, if desired

If you decide to register with Sun Java Studio Developer Resources at a later time, choose Help → Registration Wizard from the main window of the IDE.

Setup Wizard

You can access the Setup wizard from the IDE Welcome screen or by choosing Tools → Setup Wizard from the main IDE window.

In the Setup wizard you can do the following:

- Set the IDE display window mode
- Specify the web browser to use for internal and external web pages
- Set the web proxy settings to use if you are behind a firewall
- Use the Module Installation page to enable or disable IDE modules
- Use the Update Center page to control the following:
  - Automatic update checking
  - Frequency of automatic updates
  - Update Center URL to check

▼ To Enable or Disable IDE Modules

1. **Choose Tools →Setup Wizard from the main IDE window.**

2. **Click Next until the Module Installation page is displayed.**

3. **Expand the module category node for a list of modules.**

   Click on the module icon to see a short description of the module function.

4. **Disable or enable a module by toggling the Enabled property value to true or false.**

   By default, all the modules installed with the IDE are enabled.

Using the Startup Options

The `runide` startup scripts can be run with additional command-line options.

You can use the options in the following ways:

- Type the options on the command line
- Put the options in the *jstudio-install-directory*/bin/ide.cfg file

The IDE reads the `ide.cfg` file before parsing any command-line options. You can type options on multiple lines in the `ide.cfg` file.

TABLE 10-1 lists the `runide` command-line options.

TABLE 10-1   IDE Startup Options

Option	Description
-h -help	Prints a description of the available options and their usage.
-jdkhome *jdk-home-dir*	Specifies the location of a J2SE platform other than the default that was specified during installation.
-cp:p *additional-classpath*	Prepends the specified class path onto the IDE's class path.
-cp:a *additional-classpath*	Appends the specified class path to the IDE's class path.

TABLE 10-1 IDE Startup Options *(Continued)*

Option	Description
-userdir *jstudio-user-directory*	Specifies the *jstudio-user-directory* (the location where your user settings are stored).
	If this option is not specified, the default location is used. See the installation chapter for your platform for more information.
-J *jvm-flags*	Passes specified flags directly to the Java™ Virtual Machine (JVM™) software.
• -Xverify:none	-J -Xverify:none tells the JVM software not to verify the correctness of the bytecode, thereby providing for faster startup time. Setting this flag removes some of protection that the Java language gives you. Refer to the JVM software documentation for more information.
• -Xms24m	-J -Xms24m sets the initial heap size of the JVM software to 24 MB. This flag prevents the JVM software from extending the heap size during startup, thereby providing a faster startup time.
• -Xms96m	maximum Java heap size
• -Xss1024k	Thread stack size
(Microsoft Windows only) hotspot or -classic	Specifies the Java virtual machine (JVM) variant to be used.
	The terms "Java virtual machine" and "JVM" mean a virtual machine for the Java platform.
"-ui" *UI_class_name*	Sets the specified UI class as the IDE's look and feel.
"-fontsize" *size*	Sets the font size, expressed in points, in the IDE's user interface. The default value is 11.

CHAPTER **11**

Troubleshooting Problems

This chapter provides tips for how to troubleshoot problems that you might encounter in the following areas:

Installing the IDE

TABLE 11-1 describes problems you might encounter during the IDE installation.

TABLE 11-1 Sun Java Studio Mobility IDE Installation Problems

Problem	Solution
You get an error message while installing the Sun Java Studio Mobility IDE: `Error writing file = There may not be enough temporary disk space. Try using -is:tempdir to use a temporary directory on a partition with more disk space`	Start the installer using `-is:tempdir` command-line option to specify a directory with more space. For example, in a Linux operating environment, type the following at the command prompt: `$ jstudio_M04q3-linux-en.bin` **-is:tempdir** *temporary-directory*
You get the following error message while installing the Sun Java Studio Mobility IDE: `Error: Could not find JVM`	Start the installer with the `-is:javahome` command-line option, to specify where the J2SE platform is installed. For example, in a Linux OS, type the following at the command prompt: `jstudio_M04q3-linux-en.bin` **-is:javahome** *java-home-directory*
During installation, the installer could stop running with the following message: `The installer is unable to run in graphical mode. Try running the installer with the -console or -silent flag.`	• If your DISPLAY environment variable is not correctly set, type the following command in a C shell: **setenv DISPLAY** *your-local-host*`:0.0` • If you are running the installer remotely and the host name is not allowed access to the local server, follow these steps: 1. Run the following command on the local server where display is used: **xhost +***remote-host-name* 2. Run the installer. 3. Immediately after the installer finishes, run the following command on the local server: **xhost -***remote-host-name* This last step is particularly important since the `xhost +` command disables security and makes systems vulnerable to a variety of attacks. If you install the cobundle with the zh.UTF-8 locale, the console displays some distorted text when the installer is starting. This bug does not affect the installation. Ignore the text and continue following the installer instructions.

Problem	Solution

(Solaris OS only)
 	
`ERROR: could not initialize interface awt - exception: java.lang.NoClassDefFoundError java.lang.NoClassDefFoundError at java.lang.Class.forName0(Native Method) at java.lang.Class.forName(Class.java:130`
 	
`...`
 	
`Wizard.getExitCode(): called after WizardServices is shutdown.`
`Wizard.getExitCode(): called after WizardServices is shutdown.`
	This error indicates that your DISPLAY environment variable is not set correctly. In some cases, you need to make sure that it includes the domain as well as the host name. For example:
	
	setenv DISPLAY *your-machine-name.your-domain***:0.0**

The IDE installer exits without installing the product. No messages are displayed.	• Your installation directory might not have enough space. check the system requirements to determine the space you need, then check to ensure your directory has enough space. • The file you downloaded from the Sun Java Studio product download page is not complete. Download the file again and check that the size of the downloaded file is the same as the file size specified on the product download page. Run the IDE installer again. • You have specified an invalid command-line parameter in the *installer-name*.sp file. Check the file and correct the command-line options. Run the IDE installer again. See Appendix B. • Run the installer launcher (*installer-name*.exe file or *installer-name*.bin file) with the option -is:log log.txt, where *installer-name* is the specific installer file name for your platform. Check log.txt for possible errors. See Appendix B.
The -is:tempdir command-line option is not working.	Ensure that you are using the correct syntax for the command-line option. For example, in a Linux environment, the syntax is as follows: `jstudio_M04q3-linux-en.bin` **-is:tempdir** *temporary-directory.*
You get an error message that says that the product is not supported for the Solaris 7 OS after you inserted the product CD on a computer running in the Solaris 7 operating environment.	The Sun Java Studio Mobility IDE is only supported for the Solaris 9 OS.

TABLE 11-1 Sun Java Studio Mobility IDE Installation Problems *(Continued)*

Problem	Solution

(Solaris OS only) You get the following error message:
 	
`ERROR: cannot find product/product.xml on your computer.`
	Stop and restart the volume management process (`vold`) on your system, and run the installer again.
	
	1. Ensure that CD-ROMs or floppy disks are not being used. If you are not sure whether you have found all users of the media, run the `fuser` command.
	
	2. Become superuser.
	
	3. Stop volume management.
	  # **/etc/init.d/volmgt stop**
	
	4. Restart volume management.
	  # **/etc/init.d/volmgt start**

When setting the installation directory, you get the following error message: `Uninstall the following installed software from the specified install directory or specify another empty directory. To uninstall successfully, you have to exit this installer first!`	This message indicates that you already have an installation of Java Studio Mobility in the selected directory. You must exit the installer before you uninstall the existing version of the software. After you have fully uninstalled the previous version, restart the installer to install the latest version of the IDE.
(Microsoft Windows) After exiting the installer or uninstaller wizard, you see the `WindowsNativeToolkit` process consuming a large percentage of your CPU resources.	The `WindowsNativeToolkit` process is started during installation and uninstallation. Sometimes it does not stop properly. Use the Windows Task Manager to find any instances of the process `WindowsNativeToolkit` and end the process.

Starting the IDE

TABLE 11-2 describes problems you might receive during startup and configuration of the newly installed IDE.

TABLE 11-2   Sun Java Studio Mobility Startup and Configuration Problems

Problem	Solution

When starting the IDE, you get an error message similar to the following:
 	
`ERROR: The J2SE[tm] 1.2.1 found at /usr/java1.2/bin/java cannot be used by the IDE. J2SE[tm] 1.4.1_02 is recommended. NOTE: You can download and install the J2SE[tm] and related Solaris[tm] patches from http://access1.sun.com/forte/.`
 	
`Warning: Current runtime environment does not satisfy minimum requirements.`
	The values of the $JAVA_PATH and $JDK_HOME environment variables override the value of the J2SE platform path you specified during the IDE installation. You need to unset these environment variables or use the -jdkhome command-line option when starting the IDE. See Chapter 10.

You experience performance problems running the IDE.	Increase your virtual memory or swap space to 1.5 to 2 times the amount of your machines's installed RAM.

Using Start Menu Items (Microsoft Windows Platform)

TABLE 11-3 describes errors you might receive using the Start menu items on Microsoft Windows to access documentation, examples and tutorials, or other items that take you to a web page. These errors are due to the way Microsoft Windows is interpreting your browser settings.

TABLE 11-3 Start Menu Errors (Windows)

Problem	Solution
Error message appears when you select one of the IDE Start Menu items that take you to a web page. For example: `Error: Cannot find the file C:\ Sun\SUNWjstudio\Mobile04q3\docs\ documentation.html. Make sure the path and filename are correct and that all required libraries are available.`	This error is a Microsoft Windows error that occurs when using a Netscape browser. If you have Netscape set as the program to open HTML pages, but you don't set Netscape as your default browser, you may see this error. Click OK to dismiss the error. To solve this problem, set Netscape as your default browser, or set Internet Explorer as the program to open HTML pages.
A subsequent error message appears after dismissing the one described above. `Error: Unable to run this command.`	Click OK to dismiss this error. Set Netscape as your default browser.

Running Web Services

TABLE 11-4 describes error messages you might get when running a web service using any of the application servers supported by the IDE.

TABLE 11-4   Errors When Running a Web Service With Any Application Server

Problem	Solution
`[java.rmi.RemoteException: HTTP transport error: java.net.ConnectException: Connection refused; nested exception is: HTTP transport error: java.net.ConnectException: Connection refused`	• Changes were made to the web service, and you did not refresh the web service client that was making the call to the web service. To refresh the web service client: Right-click the web service client node and select Refresh From Web Service. from the contextual menu. This regenerates the client proxy to reflect the changes made to the web service. • After you developed and deployed your web service, you changed the target deployment server and you did not change the web service SOAP RPC URL. To fix this: 1. Change the SOAP RPC URL property found on the web service property sheet. 2. Right-click the web service node and choose Generate Web Service Files. 3. If you have a default client, right-click it and select Refresh From Web Service. 4. Redeploy the web service.

TABLE 11-4 Errors When Running a Web Service With Any Application Server *(Continued)*

Problem	Solution

`[java.rmi.RemoteException:cannot connect to server:Not found;`
 	
 `nested exception is: cannot connect to server: Not found`
	The Web Context property of the web module in the J2EE application does not match the context root specified in the SOAP RPC URL property of the web service. To view the Web Context property of the web module:
	
	 1. Expand the J2EE application to which the web service was added.
	
	 2. Right-click the web module of the web service (the file whose name ends in _War) and choose Properties.
	
	 3. The Web Context property is one of the properties displayed in the Properties window.
	
	 To view the context of the SOAP RPC URL property of the web service:
	
	 1. Right-click the web service node and choose Properties.
	
	 2. The SOAP RPC URL property displays a value that is similar to the following:
	 `http://localhost:8000/MyService/MyService`
	
	 The first instance of `MyService` in this URL is the context root or web context. You can change it to any value of your choice, but it must match the value of the Web Context property of the web module in the J2EE application.

Running Web Services Using UDDI

TABLE 11-5 describes error messages you might get when running a web service using UDDI.

TABLE 11-5   Errors When Running a Web Service Using UDDI

Problem	Solution
You get an empty web page when viewing `.wsdl` files.	Many versions of the Netscape web browser do not display the `.wsdl` file. View the page's source file to see the actual `.wsdl` file.
You get the following exception when searching for anything in a UDDI registry using the New Client wizard: `IllegalArgumentException`	If you intend to use a public UDDI registry, set the User Proxy Server name and port information in the IDE. • Choose Tools → Setup Wizard from the main window of the IDE and provide the User Proxy Server name and port. You must restart the IDE for the values to take effect.
The internal UDDI registry server fails to start and displays the following exception: `jjava.lang.RuntimeException: RegistryServerSevlet.initializeDB( ...): com.sun.xnode.XNodeException: aborting connection attempt., RegistryServerServlet.init(...): connection: 1, Database failed to connect`	A possible cause is that a previous Xindice server instance was not terminated properly. (On a Microsoft Windows system, you might have to restart the operating system to get rid of these server instances.) 1. Terminate the corresponding Java processes associated with that Xindice server instance. 2. Restart the IDE. Always terminate the internal UDDI registry server using the following steps: 1. Select the Runtime tab of the Explorer. 2. Expand the UDDI Server Registry node. 3. Right-click the Internal UDDI Registry and choose Stop Server from the contextual menu.

Identifying and Fixing an Incomplete Uninstallation

If the IDE uninstaller wizard quits before all the product files are deleted, some files, directories, and other system entries are not properly uninstalled.

You can identify a failed uninstallation in the following ways:

- Examining the directories and files remaining after you uninstall the IDE indicates that not all files were deleted properly. See Chapter 9 and refer to the section for your platform for a list of files that are not deleted during uninstallation.

- After uninstalling the product, you are unable to reinstall the same or a newer version even though you are using a different installation directory or you have deleted the old one. This problem might indicate a corrupted product registry.

- You see an error message while uninstalling the IDE, the uninstall process fails, or the log contains an indication that the uninstallation failed.

If you have a failed uninstallation you might encounter problems if you try to reinstall the same or different versions of the IDE.

If you used an uninstallation method other than the provided uninstaller wizard, you might be left with an incomplete or corrupted uninstallation. The following sections describe what to do to fix your system if you determine that you have an incomplete uninstallation. You can also visit the Knowledge Base at the Sun Java Studio Developer Resources portal at the following URL: http://developers.sun.com/prodtech/javatools/.

▼ To Fix a Failed Uninstall (Microsoft Windows Platform)

1. **Be sure you are logged in as a user with administrator privileges.**

2. **Stop the WindowsNativeToolkit processes and remove corresponding files.**

   a. **Use the Windows Task Manager to find any instances of the process** WindowsNativeToolkit **and end the process.**

   b. **Delete the WindowsNativeToolkit file found at** %TEMP%\WindowsNativeToolkit_*version-id*.exe.

3. **Remove the Start Menu Program Group named Sun Microsystems > Sun Java Studio Mobility 6 and its contents.**

4. **Remove the product files from the** *jstudio-install-directory*.

5. **Reboot the system so that the system comes up with a clean registry.**

▼ To Fix a Failed Uninstall (Solaris OS)

1. Remove the remaining files in the *jstudio-install-directory***.**

```
# rm -r jstudio-install-directory
```

Note – Remove the program files and directories as the last step in this procedure.

▼ To Cleanup a Failed Uninstall (Linux Systems)

1. Remove the *jstudio-install-directory***.**

```
$ rm -rf /jstudio-install-directory
```

APPENDIX **A**

IDE Subdirectories

This appendix describes the subdirectories that are installed in the
jstudio-install-directory. It also describes the user directory created during installation
that is used by the IDE for user-specific information.

Installation Subdirectories

TABLE A-1 describes the subdirectories that can be found in the IDE
jstudio-install-directory.

TABLE A-1   Sun Java Studio Mobility Installation Subdirectories

Subdirectory	Description
_uninst	Contains the files used to uninstall the IDE.
bin	Contains contains the IDE startup and utility executables, IDE configuration, security policy.
docs	Contains the Sun Java Studio help files and other miscellaneous documentation.
emulator	Contains the installed J2ME Wireless Toolkit emulators.
installer	Contains files and directories specific to the installer.
lib	Contains the JAR files that make up the IDE's core implementation and the open APIs.
modules	Stores the Java Studio Mobility IDE modules as JAR files.
obfuscators	Contains the installed obfuscator modules.

TABLE A-1 Sun Java Studio Mobility Installation Subdirectories *(Continued)*

Subdirectory	Description
sources	Contains sources for libraries that might be redistributed with user applications.
system	Contains files and directories used by the IDE for special purposes.
tomcat406	Contains the Tomcat server module
update_tracking	Contains information used by the Update Center.

IDE User Subdirectory

The IDE stores user-specific data in the user directory. Examples of this information are IDE settings and options and other necessary runtime data for personal development servers, such as the UDDI Registry Server and Tomcat. The user directory also contains the ide.log file, which provides useful information when requesting technical support.

- The default location for this directory on a Microsoft Windows system is C:\ Documents and Settings*user-id*\jstudio_6me_user.

- On a Solaris or Linux system, the default location is *$HOME*/jstudio_6me_user.

The minimum space requirement for this directory for initial installation is 5.5 MB. Actual usage will vary depending on your component use within the IDE.

Command-Line Options for Installing the IDE

This appendix describes the command-line options for installing the IDE. There are four main reasons for using command-line options.

- **To specify a non-standard location for the J2SE platform,** see "Specifying the Location of the J2SE Platform" on page 66

- **To specify a non-standard location for the temporary space directory**, see "Specifying the Location of the Temporary Space Directory" on page 67

- **To specify a log file for error messages to aid in debugging**, see "Specifying a Log File for Error Messages" on page 67.

- **To install in silent mode**, see "Installing the IDE in Silent Mode" on page 67.

Command-Line Options Used With the GUI Installer

Three command-line options can be used with the GUI installer files. TABLE B-1 summarizes these option.

TABLE B-1   Command-line Options Used with GUI Installers

Option	Description
`-is:tempdir` *pathname*	Specifies the directory to use for temporary space. Used when the default on your system has insufficient space for the installer to run successfully.
`-is:javahome` *pathname*	Specifies the locations of your J2SE platform. Useful when the J2SE platform is installed in a non-standard location.
`-is:log log.txt`	Directs the installer to put error messages into the log file, `log.txt`.

Specifying the Location of the J2SE Platform

- If the installer does not detect your J2SE platform (this can happen if your J2SE platform is installed in a non-standard location), you can invoke the installer from the command line using the option `-is:javahome` to specify the path to your J2SE platform.

- For example, on a Microsoft Windows system, type this command:

```
  C:\> \jstudio-download-directory\jstudio_M04q3-win-en.exe -is:javahome
C:\j2se-directory
```

Replace the variable *j2se-directory* with the location of your J2SE installation.

Specifying the Location of the Temporary Space Directory

If the default temporary space directory does not have enough space to run the installer, you can invoke the installer from the command line using the option -is:tempdir to specify another directory that has sufficient space.

```
C:\> \jstudio-download-directory\jstudio_M04q3-win-en.exe -is:tempdir
C:\temporary-directory
```

Specifying a Log File for Error Messages

If you need to do additional troubleshooting during a problem installation, you can run the installer with the -is:log log.txt option. This directs the installer to put error messages in the file log.txt.

```
C:\> \jstudio-download-directory\jstudio_M04q3-win-en.exe -is:log
log.txt
```

Note – This option is highly recommended, as you will not be able to track installation errors without it.

Installing the IDE in Silent Mode

You can run the installer in a non-interactive mode, called silent mode, by specifying the -silent option on the command line. This option suppresses GUI displays to the terminal window.

- If you downloaded the installer files from the web site, you create a file containing the command-line install options and use the installer launchers. The installer launcher and the options file must reside in the same directory. See "Installing Silently Using Web Download" on page 68.

Installing Silently Using Web Download

Create a file containing the command-line options you want to use and place the file in the *jstudio-download-directory*. Then invoke the installer from the command line using the -silent option.

▼ To Install Silently From Web Download (Solaris OS)

1. **In a text editor, create the** jstudio_M04q3-sol-sparc-en.sp **file in the** *jstudio-download-directory* **where you saved the downloaded** jstudio_M04q3-sol-sparc-en.bin **installer launcher.**

   Include at least the three mandatory options and remember to put them in quotes. For example, your .sp file might look like this:

   ```
   installDir="/opt/jstudio_m04q3"
   jdkHome="/usr/j2se"
   serialNumber="trial"
   ```

   See TABLE B-2 for other install options.

   TABLE B-2 Command-Line Options for Silent Installation

Option - Short Name	Option - Long Name	Description
id	installDir	Specifies the directory where you want the IDE installed. Mandatory for -silent mode.
jh	jdkHome	Sets the location of the valid J2SE version to use with the IDE. Mandatory for -silent mode.
sn	serialNumber	Sets the license serial number for the IDE. Mandatory for -silent mode.
ps	proxyServer	Specifies with the -DportNumber option, the registry setting for the proxy server name and port number.

TABLE B-2   Command-Line Options for Silent Installation *(Continued)*

Option - Short Name	Option - Long Name	Description
pn	portNumber	Specifies with -DproxyServer option, the registry setting for the proxy server name and the port number. These options can be set at any time using the IDE.
		Specifying these two options on the command line is optional. However, if specified, they are both required. These options can also be set at any time using the Setup wizard in the IDE . See Chapter 10.
wcw=no	installConnWizard	Prevents the J2ME Wireless Connection Wizard Module from being installed. The default is wcw= yes.

2. **Start the installer launcher from the command line.**

```
# cd jstudio-download-directory
# jstudio_M04q3-sol-sparc-en.bin -is:log log.txt -silent
```

Note – The -is.log option is not required, but is recommended for capturing error messages during installation.

The installer uses the options specified in the s1s5me-sol-sparc-en.sp file to install the IDE and displays the following in the command prompt window:

```
InstallShield Wizard
Initializing InstallShield Wizard...
Searching for Java(tm) Virtual Machine...
.........
Running InstallShield Wizard...
```

3. **When the installation completes, review the log file** install.log **found in the** *jstudio-install-directory*. **(This file is only created if the install is not successful and the debug option is not turned on.)**

4. **If you installed as a superuser, exit from superuser privileges.**

```
# exit
```

▼ To Install Silently From Web Download (Microsoft Windows)

The following example shows the steps for installing the IDE silently from the command line on a Microsoft Windows system.

1. **In a text editor, create the** `jstudio_M04q3-win-en.sp` **file in the** *jstudio-download-directory* **where you saved the downloaded** `jstudio_M04q3-win-en.exe` **installer launcher.**

   Include these mandatory options and remember to put them in quotes. For example, your `.sp` file might look like this:

   ```
   installDir="C:\Sun\jstudio_m04q3"
   jdkHome="C:\j2sdk1.4.1_02"
   serialNumber="trial"
   ```

2. **Start the installer launcher from the command line.**

   ```
   C:\> cd jstudio-download-directory
   C:\> jstudio_M04q3-win-en.exe -is:log log.txt -silent
   ```

   Note – The `-is.log` option is not required, but is recommended for capturing error messages during installation.

   The installer uses the options specified in the `s1s5me-win-en.sp` file to install the IDE and displays the following in the command prompt window:

   ```
   InstallShield Wizard
   Initializing InstallShield Wizard...
   Searching for Java(tm) Virtual Machine...
   ........
   Running InstallShield Wizard...
   ```

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