



Forte™ for Java™ 4, Community Edition Getting Started Guide

Forte for Java 4

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Before You Begin

This document provides installation instructions for the Forte™ for Java™ 4, Community Edition integrated development environment (IDE). Topics covered include:

- Overview of the installation steps
- System requirements
- Supported platforms
- Installation of Java 2 Platform, Standard Edition (J2SE™), v. 1.4.0
- Setting up databases with the IDE
- Contents of top-level directories of the IDE
- Registering with Forte for Java Developer Resources
- Updating modules with the Update Center
- Uninstalling the IDE
- Using the startup command-line switches
- Other documentation resources

This document instructs you to enter several commands at the command line. Command lines vary slightly from one platform to another. For example, a Microsoft Windows command might look like this:

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

To translate for UNIX® or Linux environments, simply change the prompt and use forward slashes:

```
% cd MyWorkDir/MyPackage
```

Before You Read This Book

Before you continue with the rest of this guide, you should be familiar with the process of installing and uninstalling software products on the platforms you choose to use with this release of the Forte for Java 4 product. You need familiarity with some system administrative commands, such as:

- `patchadd`, `pkgadd`, `patchrm`, and `pkgrm` utilities in the Solaris™ operating environment
- Add/Remove Program utility on Microsoft Windows systems
- `rpm` command in the Red Hat Linux environment

If you are unfamiliar with or unsure about the system administrative commands for your environment or system, contact your system administrator for assistance with the instructions contained in this guide.

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How This Book Is Organized

Chapter 1 gives an overview of the general installation process and information on system requirements for Forte for Java 4, Community Edition.

Chapter 2 provides instructions on installing and uninstalling the J2SE, v. 1.4.0 platform on your system.

Chapter 3 describes the steps to install the Forte for Java 4 IDE on the supported platforms. The subdirectories installed with the IDE are described and uninstallation instructions are also provided.

Chapter 4 gives instructions on how to start and set up the newly installed Forte for Java 4 IDE. The command-line options are provided and information about product registration is also included.

Chapter 5 provides some information for customizing your IDE installation using the embedded PointBase Restricted Edition 4.2 database and the internal UDDI registry server.

Chapter 6 describes steps to update the IDE modules using the Forte for Java Update Center. Information about other documentation resources are also included in this chapter.

Chapter 7 provides you with some troubleshooting hints to assist you with problems you might encounter during the installation and setup process.

Appendix A lists the patches for the Solaris 8 operating environment that are included with the Solaris patch installer for the Solaris operating environment (SPARC™ platform).

Appendix B lists the default port assignments used by the Forte for Java 4 modules and third-party components available for use with the IDE.

Typographic Conventions

Typeface	Meaning	Examples
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. % You have mail.
AaBbCc123	What you type, when contrasted with on-screen computer output	% su Password:
<i>AaBbCc123</i>	Book titles, new words or terms, words to be emphasized	Read Chapter 6 in the <i>User's Guide</i> . These are called <i>class</i> options. You <i>must</i> be superuser to do this.
<code>AaBbCc123</code>	Command-line variable; replace with a real name or value	To delete a file, type <code>rm filename</code> .

Related Documentation

Forte for Java 4 documentation includes books delivered in Acrobat Reader (PDF) format, online help, readme files of example applications, and Javadoc™ documentation.

Documentation Available Online

The documents in this section are available from the Forte for Java Developer Resources (or Sun™ ONE Studio Developer Resources) portal and the docs.sun.comSM web site.

The documentation link of the Forte for Java Developer Resources portal is at <http://forte.sun.com/ffj/documentation/>, or can be accessed by selecting Documentation in the Help menu of the IDE. The docs.sun.com web site is at <http://docs.sun.com>.

- Release notes (HTML format)

Available for each Forte for Java 4 edition. Describe last-minute release changes and technical notes.

- *Forte for Java 4, Community Edition Getting Started Guide* (PDF format) - part no. 816-4062-10
Forte for Java 4, Enterprise Edition Getting Started Guide (PDF format) - part no. 816-4063-10

Available for each Forte for Java 4 edition. Describes how to install the Forte for Java 4 product on each supported platform and includes other pertinent information, such as system requirements, upgrade instructions, web server and application server installation instructions, command-line switches, installed subdirectories, Javadoc setup, database integration, and information on how to use the Update Center.

- The Forte for Java Programming series (PDF format)

This series provides in-depth information on how to use various Forte for Java 4 features to develop well-formed applications for the Java 2 Platform, Enterprise Edition (J2EE™).

- *Building Web Components* - part no. 816-4337-10

Describes how to build a web application as a J2EE web module using JavaServer Pages™ (JSP™) technology, servlets, tag libraries, and supporting classes and files.

- *Building J2EE Applications With Forte for Java* - part no. 816-4061-10

Describes how to assemble Enterprise JavaBeans™ (EJB™) modules and web modules into a J2EE application, and how to deploy and run a J2EE application.

- *Building Enterprise JavaBeans Components* - part no. 816-4060-10

Describes how to build EJB components—session beans and entity beans with container-managed or bean-managed persistence—using the Forte for Java 4 EJB Builder wizard and other components of the IDE.

- *Building Web Services* - part no. 816-4059-10

Describes how to use the Forte for Java 4 IDE to build web services, to make web services available to others through a UDDI registry, and to generate web service clients from a local web service or a UDDI registry.

- Forte for Java 4 tutorials (PDF format)

You can also find the completed tutorial applications at
<http://forte.sun.com/ffj/documentation/tutorialsandexamples.html>

- *Forte for Java 4, Community Edition Tutorial* - part no. 816-4058-10

Provides step-by-step instructions for building a simple J2EE web application using Forte for Java 4, Community Edition tools.

- *Forte for Java 4, Enterprise Edition Tutorial* - part no. 816-4057-10

Provides step-by-step instructions for building an application using EJB components and Web Services technology.

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 installed with the product on your local system or network.

Online Help

Online help is available inside the Forte for Java 4 development environment. You can access help by pressing the help key (Help in a Solaris environment, F1 on Microsoft Windows and Linux), or by choosing Help → Contents. Either action displays a list of help topics and a search facility.

Examples

You can download several examples that illustrate a particular Forte for Java 4 feature, as well as completed tutorial applications from the Developer Resources portal, at

<http://forte.sun.com/ffj/documentation/tutorialsandexamples.html>

Javadoc Documentation

Javadoc documentation is available within the IDE for many Forte for Java 4 modules. Refer to the release notes for instructions on installing this documentation. When you start the IDE, you can access this Javadoc documentation within the Javadoc pane of the Explorer.

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Preparing for Installation

This chapter contains information needed to prepare for the installation of the Forte for Java 4, Community Edition IDE (hereafter referred to as “Forte for Java 4 IDE”).

Overview of the Installation

The following steps outline the general process of installing the Forte for Java 4 IDE on your system. This process includes the validation, customization, and registration of your Forte for Java 4 IDE installation:

1. Verify that you have local or network access to either the Java 2 Platform, Standard Edition, v. 1.3.1 (hereafter referred to as “J2SE, v. 1.3.1 platform”) or the Java 2 Platform, Standard Edition, v. 1.4.0 (hereafter referred to as “J2SE, v. 1.4.0 platform”) from the system in which you plan to install the Forte for Java 4 IDE.

Note – The recommended option is the J2SE, v. 1.4.0 platform with the Forte for Java 4 IDE. Read Chapter 2 for detailed installation instructions.

2. Verify that the system on which you are installing the Forte for Java 4 software meets the minimum system requirements. See “System Requirements” on page 3 for more information.
3. Determine which software you want the Forte for Java 4 IDE installer to install. The Forte for Java 4, Community Edition installer includes the following software:
 - Core Platform and Modules (required)
 - PointBase Server 4.2 Restricted Edition

4. Determine if you want to keep your previous version of the Forte for Java IDE. If you do, identify a different directory in which to install Forte for Java 4, Community Edition.

If you want to use the same installation directory as the previous IDE version, you must first uninstall the previous version of the IDE prior to installing Forte for Java 4, Community Edition.

5. Determine whether you want to keep your current Forte for Java IDE user settings. If you decide to use your current user settings with the new IDE version, you need to specify the location of your current user directory when prompted during the initial IDE setup. Read Chapter 4 for more information.
6. Install Forte for Java 4, Community Edition. Read Chapter 3 for detailed installation instructions for each of the supported platforms.
7. Set up your initial IDE environment and register the product. Read Chapter 4 for instructions on setting up your user directory and registering the product.
8. Once you have completed the installation of the IDE, customize your Forte for Java 4 IDE installation by setting up the PointBase database server. Refer to the instructions in Chapter 5.

Supported Platforms

Forte for Java 4, Community Edition has been tested with the following systems:

- Microsoft Windows 2000 Professional system (with latest service packs)
- Microsoft Windows XP
- Red Hat Linux 7.2
- Solaris 8 operating environment (64-bit, SPARC platform)
- Solaris 9 operating environment (64-bit, SPARC platform)

This release has been tested on a limited basis on the following systems:

- Microsoft Windows NT SP6 systems
- Microsoft Windows 98, 2nd edition only
- Solaris 8 operating environment (32-bit, SPARC platform)
- Solaris 9 operating environment (32-bit, SPARC platform)

System Requirements

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

TABLE 1-1 Forte for Java 4, Community Edition System Requirements

Supported Platforms	Free Hard Disk Space Required for Installation	Minimum Configuration
Windows 2000, Windows XP, Windows NT4, SP6, Windows 98 (2nd edition only) ¹	125 MB	Pentium III, 500 MHz, 256 MB RAM
Red Hat Linux 7.2	125 MB	Pentium III 500 MHz, 256 MB RAM
Solaris 8, Solaris 9 operating environments (64-bit, SPARC platform)	125 MB	Ultra 10, 333 MHz, 256 MB RAM
Solaris 8, Solaris 9 operating environments (32-bit, SPARC platform) ¹	125 MB	Ultra 10, 333 MHz, 256 MB RAM

1. This release has been tested on a limited basis on the Microsoft Windows NT4 SP6 systems, Microsoft Windows 98 (2nd edition only), and the Solaris 8 and Solaris 9 (32-bit, SPARC platform) environments.

These are general guidelines. Your requirements might vary depending on which additional software you have installed for use with the Forte for Java 4 IDE.

Installing the J2SE, v. 1.4.0 Platform

This chapter gives instructions for verifying the version of the J2SE platform to which you currently have access. If you need to install the J2SE, v. 1.4.0 platform on your system, this chapter also gives step-by-step instructions for installing the software on all the supported platforms. The J2SE, v. 1.4.0 platform includes the Java 2 Software Development Kit, Standard Edition (Java 2 SDK) and the Java 2 Runtime Environment, Standard Edition (JRE).

Verifying Your J2SE Platform Version

To use the Forte for Java 4 IDE, you must have one of the following:

- J2SE, v. 1.3.1 or J2SE, v. 1.4.0 platform installed on your system
- Network access to the path in which v. 1.3.1 or v. 1.4.0 of the J2SE platform is installed

If you run the Forte for Java 4 IDE without v. 1.3.1 or v. 1.4.0 of the J2SE platform installed or available, you get error and warning messages. Version 1.4.0 is preferred.

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

Use the following steps to help you determine what you need to do next:

1. Identify which Java software is available to your system.

- On a Microsoft Windows system, type the following in a command prompt window:

```
C:\>java -version
```

The output looks similar to the following:

```
C:\>java -version
java version "1.4.0"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.4.0-b92)
Java HotSpot(TM) Client VM (build 1.4.0-b92, mixed mode)
```

- In a Solaris or Linux environment, type the following:

```
% java -version
```

The output looks similar to the following:

```
% java -version
java version "1.4.0"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.4.0-b92)
Java HotSpot(TM) Client VM (build 1.4.0-b92, mixed mode)
```

If you do not have v. 1.3.1 or v. 1.4.0 of the J2SE platform available to your system, you must install the supported J2SE, v. 1.4.0 platform.

2. **If you do not have v. 1.3.1 or v. 1.4.0 of the J2SE platform available to your system, do the following:**

- a. **Obtain the J2SE, v. 1.4.0 installer from**

<http://www.sun.com/software/sundev/jde/buy/index.html> **or from the Forte for Java 4 product CD.**

- b. **Install the J2SE, v. 1.4.0 platform on your system.**

Read the section following for additional instructions for your specific system.

3. **(Solaris only) If the J2SE, v. 1.4.0 platform is already installed on your system, install any Solaris patches that are applicable to your Solaris 8 operating environment.**

If you do not have the required Solaris patches when you start the Forte for Java 4 IDE, you receive a message that includes the Solaris patches you need to install on your system. Install the patches on your system or contact your system administrator before proceeding to use the Forte for Java 4 IDE.

The `solaris_patch_installer`, provided with the Forte for Java 4 CD and also available from the Forte for Java 4 product download page, includes the Solaris patch packages you need to install in your Solaris 8 operating environment.

If you have previously installed the J2SE, v. 1.4.0 platform, you can use the `solaris_patch_installer` to determine if all the necessary Solaris patches are already installed in your system.

“Installing Patches in a Solaris 8 Operating Environment” on page 12 provides you with instructions on how to use the `solaris_patch_installer` script.

Note – For a complete list of the Solaris patches included with the `solaris_patch_installer` script, see Appendix A.

Installing the J2SE Platform on Microsoft Windows Systems

Note – If you are unfamiliar with or unsure about installing the J2SE, v. 1.4.0 platform on your Microsoft Windows system, contact your system administrator for assistance.

To install the J2SE, v. 1.4.0 platform on your supported Microsoft Windows system, follow these steps:

1. **If you have not already done so, download the `j2sdk-1_4_0-win.exe` installer file from <http://www.sun.com/software/sundev/jde/buy/index.html> into *j2se-directory* or locate the installer on the Forte for Java 4 CD.**

Note – Ensure that the *j2se-directory*, in which you download the software, is located on a disk that has plenty of available space.

Use the following information if you are accessing the installer file from the download page for the J2SE, v. 1.4.0 platform. Otherwise, proceed to Step 2.

- a. **In the “Before You Download” section of the <http://www.sun.com/software/sundev/jde/buy/index.html> download page, click “Java 2 Platform, Standard Edition, v. 1.4.0” to download the installer file for the J2SE, v. 1.4.0 platform.**

The Java 2 Platform, Standard Edition, v. 1.4.0 Overview page is displayed.

- b. **Click “Download J2SE v. 1.4 Now!”**

The Java 2 Platform, Standard Edition download page is displayed.

- c. From the SDK column of the Download J2SE, v. 1.4.0 table, click **DOWNLOAD for Windows (all languages, including English)**.

The binary code license agreement is displayed.

- d. **Read the binary code license agreement carefully. To proceed, accept the terms of the license agreement.**

You must agree to the license to continue with the download. Once you have agreed to the license agreement, the download page is displayed.

- e. **Click Download `j2sdk-1_4_0-win.exe` to proceed with the download of the file and specify where you want to save the file.**

- f. **Verify that the size of the downloaded file is the same as the file size indicated on the download page.**

This step ensures that you have downloaded the full and uncorrupted software bundle.

2. **Uninstall any prerelease versions of the J2SE, v. 1.4.0 platform currently installed on your system.**

If you have previously installed a Beta release or the Release Candidate version of the J2SE, v. 1.4.0 platform, uninstall it. Use the Microsoft Windows Add/Remove Programs utility to uninstall the previous release of the J2SE, v. 1.4.0 platform. Choose Start → Settings → Control Panel to access the utility.

3. **Start the installation wizard by double-clicking the `j2sdk-1_4_0-win.exe` file in the *j2se-directory* or from the Forte for Java 4 product CD.**

Note – You must have administrative permissions to install the J2SE, v. 1.4.0 platform in a Windows XP or Windows 2000 system.

4. **Follow the instructions on the wizard panes to complete the J2SE, v. 1.4.0 platform installation on your Microsoft Windows system.**
5. **(Optional) Delete the downloaded file from the *j2se-directory* to recover disk space.**

Continue to Chapter 3 for instructions on installing the Forte for Java 4 software.

Installing the J2SE Platform in the Red Hat Linux Environment

Note – If you are unfamiliar with or unsure about installing the J2SE, v. 1.4.0 platform in your Red Hat Linux environment, contact your system administrator for assistance.

To install the J2SE, v. 1.4.0 platform in your supported Red Hat Linux environment, follow these steps:

1. **If you have not already done so, download the `j2sdk-1_4_0-linux-i386-rpm.bin` file into *j2se-directory* or locate the file on the Forte for Java 4 product CD.**

Note – Ensure that the *j2se-directory*, in which you download the software, is located on a disk that has plenty of available space.

Use the following information if you are accessing the installer file from the download page for the J2SE, v. 1.4.0 platform. Otherwise, proceed to Step 2.

- a. **In the “Before You Download” section of the <http://www.sun.com/software/sundev/jde/buy/index.html> download page, click Java 2 Platform, Standard Edition, v. 1.4.0 to download the installer file for the J2SE, v. 1.4.0 platform.**

The Java 2 Platform, Standard Edition, v. 1.4.0 Overview page is displayed.

- b. **Click “Download J2SE v. 1.4 Now!”**

The Java 2 Platform, Standard Edition download page is displayed.

- c. **From the SDK column of the Download J2SE, v. 1.4.0 table, click DOWNLOAD for Linux Red Hat.**

The binary code license agreement is displayed.

- d. **Read the binary code license agreement carefully. To proceed, accept the terms of the license agreement.**

You must agree to the license to continue with the download. Once you have agreed to the license agreement, the download page is displayed.

- e. **Click Download `j2sdk-1_4_0-linux-i386-rpm.bin` and specify the directory, *j2se-directory*, where you want to save the file.**

- f. Verify that the size of the downloaded file is the same as the file size indicated on the download page.

This step ensures that you have downloaded the full and uncorrupted software bundle.

2. Double-click the `j2sdk-1_4_0-linux-i386-rpm.bin` file on the Forte for Java 4 product CD or type the following commands:

```
$ cd j2se-directory
$ chmod a+x j2sdk-1_4_0-linux-i386-rpm.bin
$ j2sdk-1_4_0-linux-i386-rpm.bin
```

The script displays the binary license agreement.

3. Read the binary license agreement carefully. To proceed, accept the terms of the license agreement.

You must agree to the license to continue with the installation.

Once you have agreed to the license agreement, the install script creates the `j2sdk-1_4_0-linux-i386-rpm` file in the current directory.

4. Become a superuser (root) by typing the following in a terminal window:

```
$ su
Password: root-password
```

5. Uninstall any prerelease versions of the J2SE, v. 1.4.0 platform currently installed on your system.

If you have previously installed a Beta release or the Release Candidate version of the J2SE, v. 1.4.0 platform, uninstall it.

Note – The default installation location for the prerelease versions of the J2SE platform is `/usr/java/j2sdk1.4.0`. That is the same location in which the RPM package of the final version of the J2SE, v. 1.4.0 platform is installed. To clear the way for installation of the final version of the J2SE, v. 1.4.0 platform, you must first uninstall any of these previous releases that you have installed. Skip this step if you have not installed any of these previous releases.

If you are not sure if you have a prerelease version installed in your system, run the following command:

```
# rpm -query -a | grep j2sdk-1.4.0
```

The output displays the RPM package name of the prerelease version of the J2SE, v. 1.4.0 platform. For example, if the J2SE 1.4.0 Beta 3 version is installed, the command returns the RPM package name for Beta 3, which is `j2sdk-1.4.0-beta3`.

If you determine that a Beta package is installed, uninstall it using the `rpm` command. For example, to remove the Beta 3 version of the J2SE, v. 1.4.0 platform, type the following:

```
# rpm -e j2sdk-1.4.0-beta3
```

6. Run the `rpm` command to install the package for the J2SE, v. 1.4.0 platform by typing the following:

```
# cd j2se-directory  
# rpm -iv j2sdk-1.4.0-linux-i386.rpm
```

The packages for the J2SE, v. 1.4.0 platform are installed in `/usr/java/j2sdk1.4.0`.

7. Exit from your superuser privileges by typing:

```
# exit
```

Continue to Chapter 3 for instructions on installing the Forte for Java 4 software.

Installing the J2SE Platform in the Solaris Operating Environment

You must first install any Solaris patches required in your Solaris 8 operating environment (SPARC platform) before proceeding with the installation of the J2SE, v. 1.4.0 platform. Use the steps in the next section to guide you in the installation of the Solaris patches and the J2SE, v. 1.4.0 platform.

Note – The Solaris 9 environment is preconfigured with the J2SE, v. 1.4.0 platform. It is not necessary to add the J2SE, v. 1.4.0 platform unless it was explicitly removed from your Solaris 9 environment.

Installing Patches in a Solaris 8 Operating Environment

Note – If you are unfamiliar with or unsure about installing Solaris patches in your Solaris environment, contact your Solaris system administrator for assistance.

These instructions describe how to install the necessary Solaris patches prior to the installation of the J2SE, v. 1.4.0 platform. These instructions are applicable only in a Solaris 8 operating environment. Refer to Appendix A for a list of the Solaris patches included with the `solaris_patch_installer`.

1. **If you have not already done so, download the `solaris_patch_installer.tar.gz` file into the *solaris-patches-directory* from <http://www.sun.com/software/sundev/jde/buy/index.html> or from the Forte for Java 4 CD.**

Note – Ensure that the *solaris-patches-directory*, in which you download the software, is located on a disk that has plenty of available space.

2. From the *solaris-patches-directory*, uncompress and extract the contents of the downloaded file by typing:

```
% cd solaris-patches-directory  
% gzcat solaris_patch_installer.tar.gz | tar xvf -
```

Note – The `gzc` utility can be found in the `/usr/bin` directory in the Solaris 8 operating environment.

The `solaris_patch_installer` file and the `patches` directory are extracted in the *solaris-patches-directory*. The `patches` directory contains several subdirectories for each of the required Solaris patches.

3. (Optional) To recover disk space, remove the downloaded file by typing:

```
% rm -rf solaris_patch_installer.tar.gz
```

4. Become a superuser (root) by typing the following in a terminal window:

```
% su  
Password: root-password
```

5. Go to the *solaris-patches-directory* and run the `solaris_patch_installer` script:

```
# cd solaris-patches-directory  
# ./solaris_patch_installer
```

The `solaris_patch_installer` determines which patches needed for the installation of the J2SE, v. 1.4.0 platform have already been applied and which patches still need to be installed.

You see output similar to the following:

```
# ./solaris_patch_installer
Solaris Patch Installer for J2SE, v.1.4.0
Installing 109147-14...already applied

Installing 108434-06...successfully installed

Installing 108435-06...successfully installed

Installing 111293-04...attempting to patch a package that is not
installed

Installing 112334-01...already applied
```

6. (Optional) After the patch installation is complete, look at the `/var/tmp/solaris_patch_installer.log` file for more details about the installation.

Note – Some Solaris patches require that you reboot your system after installation has completed. The installer prompts you to reboot, if necessary.

7. When prompted, reboot your system by typing `y`:

```
# Certain patches installed on your system require that you reboot
your machine.
Do you want to REBOOT your machine now? (y/n)
```

8. If you are not prompted to reboot, exit from your superuser privileges by typing:

```
# exit
```

9. (Optional) After you log back on to your system, remove the *solaris-patches-directory* and its contents to recover disk space. Type the following:

```
% rm -rf solaris-patches-directory
```

Installing the J2SE, v. 1.4.0 Platform in a Solaris 8 Environment

Note – If you are unfamiliar with or unsure about installing Solaris packages or the J2SE, v. 1.4.0 platform in your Solaris environment, contact your Solaris system administrator for assistance.

Prior to installing the J2SE, v. 1.4.0 platform, you must ensure that you have installed the full set of required patches needed to support v. 1.4.0 of the J2SE platform in your Solaris 8 environment. See “Installing Patches in a Solaris 8 Operating Environment” on page 12 for more information.

To install the 64-bit J2SE, v. 1.4.0 platform in your 64-bit Solaris 8 environment, you must follow a two-step procedure:

- 1. Install the 32-bit J2SE, v. 1.4.0 platform in your 64-bit Solaris 8 environment.**

Use the instructions in “Installing the J2SE, v. 1.4.0 Platform in a 32-bit Solaris 8 Environment” on page 15 for more information.

- 2. Install the J2SE, v. 1.4.0 supplemental release for 64-bit operation in your 64-bit Solaris 8 environment.**

Use the instructions in “Installing the J2SE, v. 1.4.0 Supplemental Release for 64-bit Operation in a Solaris 8 Environment” on page 18 for more information.

Installing the J2SE, v. 1.4.0 Platform in a 32-bit Solaris 8 Environment

Note – If you are unfamiliar with or unsure about installing Solaris packages or the J2SE, v. 1.4.0 platform in your Solaris environment, contact your Solaris system administrator for assistance.

Follow these steps to install the J2SE, v. 1.4.0 platform in your supported Solaris operating environment using the `pkgadd` command:

- 1. If you have not already done so, download the `j2sdk-1_4_0-solsparc.tar.Z` file into the *j2se-directory*. You can also obtain the file from the Forte for Java 4 product CD.**

Note – Ensure that the *j2se-directory*, in which you download the software, is located on a disk that has plenty of available space.

If you are accessing the installer file from the Forte for Java 4 product CD, skip to Step e.

a. In the “Before You Download” section of the

<http://www.sun.com/software/sundev/jde/buy/index.html> **download page, click Java 2 Platform, Standard Edition, v. 1.4.0 to download the installer file for the J2SE, v. 1.4.0 platform.**

The Java 2 Platform, Standard Edition, v. 1.4.0 Overview page is displayed.

b. Click “Download J2SE v. 1.4 Now!”

The Java 2 Platform, Standard Edition download page is displayed.

c. From the SDK column of the Download J2SE, v. 1.4.0 table, click DOWNLOAD for Solaris SPARC 32-bit tar.Z.

The binary code license agreement is displayed.

d. Read the binary code license agreement carefully. To proceed, accept the terms of the license agreement.

You must agree to the license to continue with the download. Once you have agreed to the license agreement, the download page is displayed.

e. Click Download `j2sdk-1_4_0-solsparc.tar.Z` from the product download page or obtain the file from the Forte for Java 4 product CD, and save the file to the *j2se-directory*.

f. Verify that the size of the downloaded file is the same as the file size indicated on the download page or from the Forte for Java 4 product CD.

This ensures that you have downloaded the full and uncorrupted software bundle.

2. From the *j2se-directory*, uncompress and extract the contents of the downloaded installer file by typing the following at the command line:

```
% cd j2se-directory
% zcat j2sdk-1_4_0-solsparc.tar.Z | tar xvf -
```

This action creates several packages (`SUNWj3dmo`, `SUNWj3dev`, `SUNWj3man`, `SUNWj3rt`, plus `SUNWj3jmp` for Japanese man pages) along with the product license, readme file, and other release documentation.

3. Become a superuser (root) by typing the following in a terminal window:

```
% su
Password: root-password
```

4. Uninstall your previous installation of the J2SE platform, if needed.

Note – The default installation location for versions 1.3.0, 1.3.1, and the previous 1.4.0 Beta release of the J2SE platform is `/usr/j2se`. That is the same location in which J2SE, v. 1.4.0 is installed. To clear the way for installation of the J2SE, v. 1.4.0 platform, you must first uninstall any of these previous releases that you have installed. Skip this step if you have not installed any of these previous releases or if you intend to install J2SE, v. 1.4.0 in a nondefault location.

If you have previously installed the packages for J2SE versions 1.3.0, 1.3.1, or 1.4.0 prereleases, remove them by using the `pkgrm` command:

```
# pkgrm SUNWj3dmo SUNWj3man SUNWj3dev SUNWj3rt
```

If you have previously installed packages `SUNWlj3dv` and `SUNWlj3rt` for localization support in version 1.3.0, remove them by using the following command:

```
# pkgrm SUNWlj3dv SUNWlj3rt
```

If you have previously installed the Japanese man page packages for the Java 2 SDK v. 1.3.0 or v. 1.3.1, remove them by using the following command:

```
# pkgrm SUNWjej3m SUNWjpj3m SUNWjuj3m
```

If your `/usr/java` symbolic link was pointing to the Java 2 SDK v. 1.2.2 installation at `/usr/java1.2`, you might want to update it to point to `/usr/j2se`, which is the location where the Java 2 SDK v. 1.4.0 will be installed.

5. Run the `pkgadd` command to install the packages:

```
# cd j2se-directory
# pkgadd -d . SUNWj3rt SUNWj3dev SUNWj3man SUNWj3dmo
```

The J2SE v. 1.4.0 packages are installed into `/usr/j2se`. Refer to the `pkgadd(1)` and `admin(4)` man pages for information on installing the J2SE, v. 1.4.0 in a nondefault location.

6. (Optional) Remove the `j2se-directory` to recover disk space:

```
# rm -rf j2se-directory
```

7. Exit from your superuser privileges by typing:

```
# exit
```

If you need to install the J2SE, v. 1.4.0 supplemental release platform, continue to “Installing the J2SE, v. 1.4.0 Supplemental Release for 64-bit Operation in a Solaris 8 Environment” on page 18 for more information.

Otherwise, continue to Chapter 3 for instructions on installing the Forte for Java 4 software.

Installing the J2SE, v. 1.4.0 Supplemental Release for 64-bit Operation in a Solaris 8 Environment

Note – If you are unfamiliar with or unsure about installing Solaris packages or the J2SE, v. 1.4.0 platform in your Solaris environment, contact your Solaris system administrator for assistance.

Follow these steps to install the 64-bit supplemental release of the J2SE, v. 1.4.0 platform in your Solaris 8 environment:

1. **If you have not already done so, download the `j2sdk-1_4_0-solsparcv9.tar.Z` file into the *j2se-64bit-directory*. You can also obtain the file from the Forte for Java 4 product CD.**

Note – Ensure that the *j2se-64bit-directory*, in which you download the software, is located on a disk that has plenty of available space.

If you are accessing the installer file from the Forte for Java 4 product CD, skip to Step e.

a. In the “Before You Download” section of the

<http://www.sun.com/software/sundev/jde/buy/index.html> **download page, click Java 2 Platform, Standard Edition, v. 1.4.0 to download the installer file for the J2SE, v. 1.4.0 platform.**

The Java 2 Platform, Standard Edition, v. 1.4.0 Overview page is displayed.

b. Click “Download J2SE v. 1.4 Now!”

The Java 2 Platform, Standard Edition download page is displayed.

- c. From the SDK column of the Download J2SE, v. 1.4.0 table, click **DOWNLOAD** for Solaris SPARC 64-bit tar.Z.

The binary code license agreement is displayed.

- d. Read the binary code license agreement carefully. To proceed, accept the terms of the license agreement.

You must agree to the license to continue with the download. Once you have agreed to the license agreement, the download page is displayed.

- e. Click **Download j2sdk-1_4_0-solsparcv9.tar.Z** from the **product download page** or obtain the file from the Forte for Java 4 product CD, and specify where you want to save the file.
- f. Verify that the size of the downloaded file is the same as the file size indicated on the download page.

This step ensures that you have downloaded the full and uncorrupted software bundle.

2. From the *j2se-64bit-directory*, uncompress and extract the contents of the downloaded installer file by typing the following at the command line:

```
% cd j2se-64bit-directory
% zcat j2sdk-1_4_0-solsparcv9.tar.Z | tar xvf -
```

This action creates several packages (SUNWj3dvx, SUNWj3rtx, and SUNWj3dmx) that contain 64-bit support for the J2SE, v. 1.4.0 platform.

3. Become a superuser (root) by typing the following in a terminal window:

```
% su
Password: root-password
```

4. Uninstall your Beta installation of the 64-bit packages for the J2SE, v.1.4.0, if needed.

If you have previously installed the Beta release of packages SUNWj3dvx, SUNWj3rtx, and SUNWj3dmx for 64-bit support, remove them using the `pkgrm` command:

```
# pkgrm SUNWj3rtx SUNWj3dvx SUNWj3dbx
```

5. Run the `pkgadd` command to install the packages:

```
# cd j2se-64bit-directory
# pkgadd -d . SUNWj3rtx SUNWj3dvx SUNWj3dmx
```

This action installs the files for 64-bit support into the J2SE v. 1.4.0 installation at `/usr/j2se`.

6. (Optional) Remove the `j2se-64bit-directory` to recover disk space:

```
# rm -rf j2se-64bit-directory
```

7. Exit from your superuser privileges by typing:

```
# exit
```

Continue to Chapter 3 for instructions on installing the Forte for Java 4 software.

Uninstalling the J2SE, v. 1.4.0 Platform

Use the following information to uninstall the J2SE, v. 1.4.0 platform:

- In a Microsoft Windows system, use the Add/Remove Programs utility in the Control Panel to uninstall the J2SE, v. 1.4.0 platform from your system.
- For a Red Hat Linux environment, use the `rpm` command to uninstall the J2SE, v. 1.4.0 platform from your system.
- For Solaris operating environments, use the `pkgrm` and `patchrm` commands to uninstall the J2SE, v. 1.4.0 platform and associated Solaris patches from your system.



Caution – Removing the J2SE, v. 1.4.0 software and related Solaris patches can cause regressive behavior on your system. Contact your Solaris system administrator if you are unfamiliar with or unsure of how to remove the Solaris, v. 1.4.0 platform and associated Solaris patches from your system.

Refer to the `pkgrm` and `patchrm` man pages for additional information on these commands.

Installing the Forte for Java 4 IDE

This chapter contains information on how to install Forte for Java 4, Community Edition on each of the supported platforms. The subdirectories installed with the IDE are described and uninstallation instructions are also provided.

Supporting Previous Forte for Java Software Releases

To upgrade your previous version of the IDE to Forte for Java 4 software, you must do one of the following:

- Determine if you want to keep your previous version of the IDE. If you do, identify a different directory in which to install Forte for Java 4 software.
If you want to use the same installation directory as the previous IDE version, you must first uninstall the previous version of the IDE prior to installing Forte for Java 4 software.
- Determine whether you want to keep your current IDE user settings. If you decide to use your current user settings with the new IDE version, you need to specify the location of your current user directory when prompted during the initial IDE setup. Read Chapter 4 for more information.

Creating a Shared Installation

If you want to share a Forte for Java installation between multiple users, you must install the Forte for Java 4 IDE into a shared directory.

After installation of the IDE in the supported Solaris environment or Red Hat Linux environment, all user settings are stored in the `ffjuser40ce` directory created under each user's home directory. This occurs for both shared and unshared installations.

After installation of the IDE in a Microsoft Windows system, you must set your own user directory using a dialog box that appears immediately upon initial startup of the IDE from your machine. This occurs for both shared and unshared installations.

The recommended name for the user directory in a Microsoft Windows system is *drive:fully-qualified-path\ffjuser40ce*. This name is entered as the `UserDir` value of the `Software\SunMicrosystems, Inc.\Forte for Java` key in the `HKEY_CURRENT_USER` registry. This value is not deleted when the IDE is uninstalled. If the `UserDir` value is not explicitly deleted from the Microsoft Windows Registry, it will be reused by future installations of this version of the IDE. Refer to some troubleshooting information in Chapter 7, if you want to use a different location for your user directory.

Installing the Forte for Java 4 IDE on the Supported Platforms

These instructions describe the installation process for each of the supported platforms.

Installation on Microsoft Windows Systems

You can install the Forte for Java 4 IDE on a supported Microsoft Windows system through an `.exe` file.

Note – You must have the J2SE, v. 1.3.1 platform or J2SE, v. 1.4.0 platform installed on your system before installing the Forte for Java 4 IDE. The recommended option is the J2SE, v. 1.4.0 platform with the Forte for Java 4 IDE. Read Chapter 2 for instructions on installing the software.

1. **If you have not already done so, download the `ffj_ce_win32_en.exe` installer file from <http://www.sun.com/software/sundev/jde/buy/index.html> or locate the file on the Forte for Java 4 product CD.**

If you are downloading the file from the product download page, save it into the *ffj-download-directory*.

2. **Double-click the `ffj_ce_win32_en.exe` file in the *ffj-download-directory* or on the Forte for Java 4 product CD.**

The InstallShield's Welcome screen appears.

Note – If you encounter errors at any point during the Forte for Java 4 IDE installation, refer to Chapter 7 for some troubleshooting hints.

3. **In the Welcome screen, click Next.**
4. **Read the license agreement carefully. To proceed, accept the terms of the license agreement, and click Next.**

You must agree to the license to continue with the installation.

InstallShield attempts to locate a compatible Java 2 SDK v. 1.3.1 or v. 1.4.0 on your system.

5. **Set the location of compatible Java 2 SDK software and click Next.**

The Forte for Java 4 IDE requires local or network access to either v. 1.3.1 or v. 1.4.0 of the Java 2 SDK software. Specify which installed software to use by doing one of the following:

- Accept the default location.
- Select another location from the list of found Java 2 SDK software.
- Click Browse to specify a different location.

Click Next after you have set the Java 2 SDK location.

6. **Accept the default installation folder or click Browse to install the IDE in a different folder. Click Next to continue.**

Note – The installation directory name cannot contain any spaces and it must be an empty or new directory.

7. Select the Forte for Java 4 components you want to install.

The following components are available:

- Core Platform and Modules (required)
- PointBase Server 4.2 Restricted Edition

8. Confirm your installation choices in the installation summary dialog box and click Next.

InstallShield installs the Forte for Java 4 components you have selected.

9. Decide whether you want to associate .java and .nbm files with the Forte for Java 4 IDE. Click Next to continue.

If you decide to associate these file types, the Forte for Java 4 IDE will automatically launch when you open these files.

10. Click Finish to complete the installation.

11. Review the Release Notes file for important information regarding the release.

You can access the Release Notes from the product CD or from
<http://forte.sun.com/ffj/documentation/index.html>.

12. Continue to Chapter 4 for information on setting up the Forte for Java 4 IDE.

Installation in the Red Hat Linux Environment

You can install the Forte for Java 4 IDE in a supported Red Hat Linux environment with a .bin file.

Note – You must have the J2SE, v. 1.3.1 platform or J2SE, v. 1.4.0 platform installed on your system before installing the Forte for Java 4 IDE. The recommended option is the J2SE, v. 1.4.0 platform with the Forte for Java 4 IDE. Read Chapter 2 for instructions on installing the software.

1. If you have not already done so, download the ffj_ce_linux_en.bin installer file from <http://www.sun.com/software/sundev/jde/buy/index.html> or locate the file on the Forte for Java 4 product CD.

If you are downloading the file from the product download page, save it into the *ffj-download-directory*.

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

If you are installing to your local system, the `DISPLAY` environment variable should be set to `:0.0`. If you are using a superuser (root) account or are doing a remote installation, set your superuser session's `DISPLAY` environment variable to display to your local system.

For example, to set the variable from a root account running C-shell, type the following in your superuser session command prompt:

```
# setenv DISPLAY your-local-system:0.0
```

3. Set the execute permission on the `ffj_ce_linux_en.bin` file and execute it by double-clicking the file from the Forte for Java 4 product CD or by typing the following:

```
$ cd fff-download-directory
$ chmod a+x ffj_ce_linux_en.bin
$ ffj_ce_linux_en.bin
```

Note – If you encounter errors at any point during the Forte for Java 4 IDE installation, refer to Chapter 7 for some troubleshooting hints.

4. In the Welcome screen, click Next.

5. Read the license agreement carefully. To proceed, accept the terms of the license agreement, and click Next.

You must agree to the license to continue with the installation.

InstallShield attempts to locate a compatible Java 2 SDK v. 1.3.1 or v. 1.4.0 on your system.

6. Set the location of compatible Java 2 SDK software and click Next.

The Forte for Java 4 IDE requires local or network access to either v. 1.3.1 software or v. 1.4.0 of the Java 2 SDK software. Specify which installed software to use by doing one of the following:

- Accept the default location.
- Select another location from the list of found Java 2 SDK software.
- Click Browse to specify a different location.

Click Next after you have set the Java 2 SDK location.

7. **Accept the default installation directory or click Browse to install the IDE in a different directory. Click Next to continue.**

Note – The installation directory name cannot contain any spaces and it must be an empty or new directory.

8. **Select the Forte for Java 4 components you want to install.**

The following components are available:

- Core Platform and Modules (required)
- PointBase Server 4.2 Restricted Edition

9. **Confirm your installation choices in the installation summary dialog box and click Next.**

InstallShield installs the Forte for Java 4 components you have selected.

10. **Click Finish to complete the installation.**

11. **Review the Release Notes file for important information regarding the release. You can access the Release Notes from the product CD or from <http://forte.sun.com/ffj/documentation/index.html>.**

12. **Continue to Chapter 4 for information on setting up the Forte for Java 4 IDE.**

Installation in the Solaris Operating Environments

You can install the Forte for Java 4 IDE in a supported Solaris operating environment with a .bin file.

Note – You must have the J2SE, v. 1.3.1 platform or J2SE, v. 1.4.0 platform installed on your system before installing the Forte for Java 4 IDE. The recommended option is the J2SE, v. 1.4.0 platform with the Forte for Java 4 IDE. Read Chapter 2 for instructions on installing the software.

1. **If you have not already done so, download the `ffj_ce_solsparc_en.bin` installer file from <http://www.sun.com/software/sundev/jde/buy/index.html> or locate it on the Forte for Java 4 product CD.**

If you are downloading the file from the product download page, save it into the *ffj-download-directory*.

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

If you are installing to your local system, the `DISPLAY` environment variable should be set to `:0.0`. If you are using a superuser (root) account or are doing a remote installation, set your superuser session's `DISPLAY` environment variable to display to your local system.

For example, to set the variable from a root account running C-shell, type the following in your superuser session command prompt:

```
# setenv DISPLAY your-local-system:0.0
```

3. Set the execute permission on the `ffj_ce_solsparc_en.bin` file and execute it by double-clicking the file from the Forte for Java 4 product CD or by typing the following:

```
$ cd fff-download-directory
$ chmod a+x ffj_ce_solsparc_en.bin
$ ffj_ce_solsparc_en.bin
```

Note – If you encounter errors at any point during the Forte for Java 4 IDE installation, refer to Chapter 7 for some troubleshooting hints.

4. In the InstallShield's Welcome screen, click Next.

5. Read the license agreement carefully. To proceed, accept the terms of the license agreement, and click Next.

You must agree to the license to continue with the installation.

InstallShield attempts to locate a compatible Java 2 SDK v. 1.3.1 or v. 1.4.0 on your system.

6. Set the location of compatible Java 2 SDK software and click Next.

The Forte for Java 4 IDE requires local or network access to either v. 1.3.1 or v. 1.4.0 of the Java 2 SDK software. Specify which installed Java 2 SDK software to use by doing one of the following:

- Accept the default location.
- Select another location from the list of found Java 2 SDK software.
- Click Browse to specify a different location.

Click Next after you have set the Java 2 SDK location.

7. **Accept the default installation folder or click Browse to install the IDE in a different directory. Click Next to continue.**

Note – The installation directory name cannot contain any spaces and it must be an empty or new directory.

8. **Select the Forte for Java 4 components you want to install.**

The following components are available:

- Core Platform and Modules (required)
- PointBase Server 4.2 Restricted Edition

9. **Confirm your installation choices in the installation summary pane and click Next.**

InstallShield installs the Forte for Java 4 components you selected.

10. **Click Finish to complete the installation.**

11. **Review the Release Notes file for important information regarding the release. You can access the Release Notes from the product CD or from**
<http://forte.sun.com/ffj/documentation/index.html>.

12. **Continue to Chapter 4 for information on setting up the Forte for Java 4 IDE.**

Installing the IDE Using the Command-line Options

If you prefer to install the Forte for Java 4 IDE using the command line, use the following steps to guide you.

1. **Choose which method of command-line installation you want to use.**

There are two methods of using the command-line options for this edition of the IDE. Choose from the following methods:

- Create an *installer.sp* file, add to the file the installation options you want to use, and use the installer file specific to your platform. For example, on Microsoft Windows systems, use the *ffj_ce_win32_en.exe* with the *ffj_ce_win32_en.sp* file.
- Use the *ffj_ce_en.jar* file and type the installation options directly on the command line.

Note – Use the `ffj_ce_en.jar` file to install the IDE on platforms that are not fully supported for the Forte for Java 4 release, such as the Solaris 8 operating environment (Intel platform).

2. If you have not already done so, download the installer file for your supported platform from

<http://www.sun.com/software/sundev/jde/buy/index.html> or locate the file on the Forte for Java 4 product CD.

Save the installer file into the *ffj-download-directory*.

- If you chose to use the *installer.sp* file for your command-line installation, download the installer file specific to your platform.

On a Microsoft Windows systems, download the `ffj_ce_win32_en.exe` file. In a Solaris environment, download the `ffj_ce_solsparc_en.bin` file. In a Red Hat Linux environment, download the `ffj_ce_linux_en.bin` file.

- If you chose to type the installation options directly on the command line, download the `ffj_ce_en.jar` file.

3. If you chose to use the *installer.sp* file for your command-line installation, create it in the *ffj-download-directory*.

The IDE installer will read the command-line options you include in the *installer.sp* file.

On a Microsoft Windows system, create a file called `ffj_ce_win32_en.sp` and place the file in the *ffj-download-directory*. In the Solaris and Linux environments, name the file `ffj_ce_solsparc_en.sp` and `ffj_ce_linux_en.sp`, respectively, and place it in the *ffj-download-directory*.

If you chose to type the installation options directly on the commandline, you do not need the *installer.sp* file.

4. Determine the command-line options and corresponding values you want to use.

TABLE 3-1 lists the different command-line options and their default values, if any. You can use either the long or short name for each option.

TABLE 3-1 Forte for Java 4 Command-line Installation Options

Installation Options	Description
<code>fortehome=ffj-install-dir</code> <code>fh=ffj-install-dir</code>	Specifies the directory into which you want the IDE installed. This is a mandatory command-line parameter for the <code>-silent</code> mode.
<code>jdkhome=jdkhome-dir</code> <code>jh=jdkhome-dir</code>	Sets the location of the valid Java 2 SDK version to use with the IDE. The installer will configure the IDE to use this Java 2 SDK software. This is a mandatory command-line parameter for the <code>-silent</code> mode.
<code>pointbaseinstall=yes</code> <code>pointbaseinstall=no</code> <code>pi=yes</code> <code>pi=no</code>	Specifies whether to install the PointBase Server 4.1 Network Edition. The default value is <code>yes</code> .
<code>-silent</code>	Specify this option on the command line and not in the <code>installer.sp</code> file. If not specified, the Installshield wizard will appear. If specified, any error messages will be displayed on the command window from which the installer was invoked.

5. If you chose to use the `installer.sp` file, add the command-line options in that file.

For example, on a Microsoft Windows system, the `ffj_ce_win32_en.sp` might have the following contents:

```
fh=C:\forte4j
jh=C:\j2sdk1.4.0
pi=yes
```

On a Solaris environment, the `ffj_ce_solsparc_en.sp` might have the following contents:

```
fh=/yourserver/forte4j
jh=/usr/j2se
pi=yes
```

6. Execute the installer from the command line.

- If you chose to use the *installer.sp* file, invoke the installer from the *ffj-download-directory*. The installer uses the options you have specified in the *installer.sp* file for your system.

For example, on a Microsoft Windows system, type the following in a command prompt window:

```
C:\>cd ffj-download-directory
C:\ffj-download-directory> ffj_ce_win32_en.exe -silent
```

In a Solaris environment, type the following in a terminal window, for example:

```
$ cd ffj-download-directory
$ ffj_ce_solsparc_en.bin -silent
```

The installer displays the following on the command prompt or terminal window:

```
InstallShield Wizard

Initializing InstallShield Wizard...

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

- If you chose to use the *ffj_ce_en.jar* file, type the installation options you chose in Step 4 on page 30 when you execute the *ffj_ce_en.jar* file.
- For example, on a Microsoft Windows system, type the following in a command prompt window:

```
C:\> java -Dfh=C:\forte4j -Djh=C:\j2sdk1.4.0 -Dpi=yes -jar
ffj_ce_en.jar
```

Similarly, in a Solaris or Linux environments, type the following in a command prompt window, for example:

```
$ java -Dfh=/yourserver/forte4j -Djh=/usr/j2se -Dpi=yes -jar
ffj_ce_en.jar
```

If there are any errors encountered, messages are displayed on the command prompt or terminal window.

Note – If you encounter errors at any point during the Forte for Java 4 IDE installation, refer to Chapter 7 for some troubleshooting hints.

7. Continue to Chapter 4 for information on setting up the Forte for Java 4 IDE.

Finding Installation Subdirectories

After you have installed the Forte for Java 4 IDE, the subdirectories listed in TABLE 3-2 can be found under *ffj-install-dir*, your Forte for Java 4 installation directory.

TABLE 3-2 Forte for Java Installation Subdirectories

Subdirectory Name	Description
/_uninst	Contains the files used to uninstall in the IDE.
/beans	Contains JavaBeans components installed in the IDE.
/bin	Includes the Forte for Java startup scripts (as well as the <code>ide.cfg</code> file in Microsoft Windows installations).
/docs	Contains the Forte for Java help files and other miscellaneous documentation.
/lib	Contains the JAR files that make up the IDE's core implementation and the open APIs.
/modules	Stores Forte for Java modules as JAR files.
/platform	(Solaris only) Contains platform-specific files.
/pointbase	Contains four subdirectories, <code>client</code> , <code>databases</code> , <code>docs</code> , and <code>server</code> . The <code>client</code> directory contains the PointBase console, command-line utilities, and examples of a PointBase application. The <code>databases</code> directory contains a sample database. The <code>docs</code> directory contains PointBase documentation. The <code>server</code> directory contains the PointBase server.
/sources	Contains sources for libraries that might be redistributed with user applications.

TABLE 3-2 Forte for Java Installation Subdirectories (*Continued*)

Subdirectory Name	Description
/system	Includes files and directories used by the IDE for special purposes. Go to your individual <i>ffj-user-dir/system</i> directory to get the <i>ide.log</i> , which provides information useful when requesting technical support, and to view <i>project.basic</i> and <i>project.last</i> files, which contain information on Forte for Java projects. On a Microsoft Windows system, this <i>ffj-user-dir/system</i> directory contains the project-specific files under <i>project.basic_hidden</i> and <i>project.last</i> files.
/tomcat401	Contains Tomcat-specific files.
update_tracking.xml	Contains information used by the AutoUpdate Center.

Uninstalling the Forte for Java 4 IDE

An uninstaller wizard is available to assist you in the uninstallation of the Forte for Java 4 IDE. Follow these steps to uninstall your copy of the Forte for Java 4 IDE:

1. **Start the uninstaller from the *ffj-install-dir/_uninst* directory.**

- In a supported Solaris operating environment or Red Hat Linux environment, ensure that your `DISPLAY` environment variable is defined correctly, and then type:

```
$ java -jar uninstall.jar
```

- On a Microsoft Windows system, execute the *uninstaller.exe* file located in the *ffj-install-dir/_uninst* directory or use the Add/Remove Program utility in the Control Panel.

The uninstaller's Welcome screen appears.

2. **Click Next from the Welcome screen.**

A list of Forte for Java components is displayed.

3. **Select the components you want to uninstall and click Next.**

4. **Click Next to confirm the components to be uninstalled.**

The uninstaller wizard proceeds with the uninstallation of the IDE.

5. **Click Finish to close the uninstaller wizard.**

Using Your Newly Installed Forte for Java 4 IDE

After you have successfully installed the Forte for Java 4 IDE, use the information in this chapter to launch, set up, and register your Forte for Java 4 IDE. Details about the available command-line switch options are also included.

Setting Up Your Forte for Java 4 IDE

When you first start up the Forte for Java 4 IDE, you are prompted to:

- Register your software
- Specify the user directory to use with the IDE
- Indicate whether you would like automatic update checking

Use the following steps to guide you through setup of your initial IDE environment:

1. Start the Forte for Java 4 IDE.

- For the supported Solaris operating environments or a Red Hat Linux environment, type:

```
$ cd fff-install-dir/bin
$ runide.sh
```

- For a Microsoft Windows system, double-click the Forte for Java 4.0 CE icon created on your desktop or click the Start menu and choose Forte for Java 4.0 CE → Forte for Java. Alternatively, from a command prompt window, type:

```
C:\>cd fff-install-dir\bin
C:\fff-install-dir\bin>runidew.exe
```

If this is the first time you are installing this version of the Forte for Java 4 IDE on a Microsoft Windows system, you are prompted for the user directory.

2. On a Microsoft Windows system, type the name of the directory where you want the IDE to store your settings and project information, and click OK.

Ensure that the directory you choose is in a place that is always accessible to your system. If you have different versions of the IDE, use a different user directory for each IDE version. This directory should be different than the directory where the IDE is installed.

The recommended name for the user directory in a Microsoft Windows system is *drive:fully-qualified-path\ffjuser40ce*. This name is entered as the `UserDir` value of the `Software\SunMicrosystems, Inc.\Forte for Java` key in the `HKEY_CURRENT_USER` registry. This value is not deleted when the IDE is uninstalled. The name will be reused by future installations of this version of the IDE if the `UserDir` value is not explicitly deleted from the Microsoft Windows Registry. Refer to some troubleshooting information in TABLE 7-3, if you want to use a different location for your user directory.

The Settings Import wizard appears.

3. In the Settings Import wizard, specify whether you want to import your settings from a previous version of the IDE.

- If you do not want to import your previous user settings, select No and click Finish to exit the wizard.

For supported Solaris or Red Hat Linux environments, the default user directory is created and named `$HOME/ffjuser40ce`.

On a Microsoft Windows system, the user directory is created in the previous step or set to the same user directory you specified in a previous installation of this version of the IDE if you did not remove the previous `UserDir` value in the registry.

- If you want to import your previous user settings, select Yes and click Next.

You are prompted for the location of the user directory for the previously installed IDE.

i. Specify the path or click Browse to locate the directory. Click Next.

The IDE imports the settings.

ii. Click Finish to exit the wizard.

The IDE continues with the startup and the Setup wizard appears.

4. If you are behind a firewall, specify the proxy server information.

5. Select the window mode, and click Next to continue with the setup.

6. Click Finish to continue with IDE startup, or click Next for additional setup options.

If you clicked Finish, the IDE continues with the startup and several windows appear. The registration wizard appears. Continue with Step 9 below.

Otherwise, if you clicked Next, the Module Installation pane appears.

7. In the Module Installation pane, specify which module you want enabled or disabled. Then, click Next to continue with the setup, or Finish to continue with the IDE startup.

By default, all the modules installed with the IDE are enabled. Disable a module by doing the following:

a. Click on the Enabled property value for the module.

b. Click a second time and select False to disable the module.

If you clicked Finish, the IDE continues with the startup and several windows appear. The registration wizard appears. Continue with Step 9 below.

If you clicked Next, the Update Center pane appears.

8. From the Update Center pane, specify how often you want the IDE to automatically check the Update Center. Select the Forte for Java Update Center as the update center from which you want to obtain the updates for modules of your choice.

Click Finish to continue with the IDE startup. Several windows appear and the registration wizard appears.

9. From the Registration wizard, select your preferred method of registration.

- Choose “Register using the web” to register your Forte for Java 4 IDE software using the web, or to edit your existing registration information if you have changed Forte for Java 4 IDE editions.

The registration page appears on your web browser and you can proceed to register the product, create a new Forte for Java Developer Resources account, or update your account.

Registering your Forte for Java 4 IDE through the web enables you to:

- 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 Forte for Java modules, patches, and bug fixes
- Receive product announcements, if desired

- Use the same user name and password to access the Update Center, the Early Access Program, and the Sun Download Center (from which you might have downloaded the Forte for Java 4 IDE)

If you are already registered with the Forte for Java Developer Resources, Sun Download Center, or `mysun.sun.com`, you can use the same user name and password, but you are prompted for additional information.

Note – To maintain your Forte for Java Developer Resources account using the web, choose Help → Registration Wizard from the main window of the IDE. Or, go to `http://forte.sun.com/services/registration/accountmaintenance.html`.

- Register by FAX or mail.

This method of registration registers only your Forte for Java 4 IDE.

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

10. From the Automatic Update Check dialog box, specify whether you want to check for new IDE updates.

- If you reply Yes, the Update Center wizard appears. Follow the instructions on the wizard to complete the setup for automatic update checking.
- If you reply No, you can start the Update Center wizard at a later time by choosing Tools → Update Center from the main window of the IDE.

Using the Startup Command-Line Options

The IDE startup scripts for all supported platforms can be run with additional options. These command-line options are specified with flags.

In a supported Linux or Solaris environments, for example, you might type:

```
# runide.sh -help
```

On a supported Microsoft Windows system, for example, you might type:

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

Alternatively, you can put the options in the *ffj-install-dir/bin/ide.cfg* file. The IDE reads this file before parsing any command-line options. You can break options into multiple lines in *ide.cfg*.

TABLE 4-1 lists the startup command-line options for all supported platforms.

TABLE 4-1 Command-Line Switch Options

Switch Options	Description
-h	Prints usage.
-help	
-jdkhome <i>jdk-home-dir</i>	Selects an SDK other than the default SDK. On Microsoft Windows, by default, the IDE checks the registry and selects the latest SDK available.
-hotspot	Explicitly specifies the Java virtual machine (JVM™) variant to be used.
-server	
-client	The terms “Java virtual machine” and “JVM” mean a virtual machine for the Java platform.
-classic	
-native	
-green	
-cp:p <i>additional-classpath</i>	Prepends the specified class path onto the IDE’s class path.
-cp:a <i>additional-classpath</i>	Appends the specified class path to the IDE’s class path.
-ui <i>UI_class-name</i>	Selects a given class as the IDE’s look and feel.
-fontsize <i>size</i>	Sets the font size, expressed in points, in the IDE’s user interface.
-single	Launches the IDE from <i>ffj-install-dir</i> instead of from your <i>ffj-user-dir</i> directory. Runs the Forte for Java 4 IDE in single-user mode. The default mode is multiuser.
-userdir <i>ffj-user-dir</i>	Explicitly specifies the <i>ffj-user-dir</i> directory (the location where your user settings are stored). If this option is not used in Solaris or Linux operating environments, the location is <i>user-home-dir/.ffjuser40ce</i> . If this option is not used on a Microsoft Windows system, the user is prompted at the initial startup of the IDE for the <i>ffj-user-dir</i> directory to use. On Microsoft Windows systems, this value is stored in the registry for later use.
-Jjvm-flags	Passes specified flags directly to the JVM.

TABLE 4-1 Command-Line Switch Options (*Continued*)

Switch Options	Description
<code>-J-Xverify:none</code>	Tells the JVM not to verify the correctness of the bytecode for faster startup. Bytecode verification is a slow process. Whenever a class is loaded, the JVM scans all bytecode and detects an invalid byte sequence even if a method is never called. Also, the JVM loads certain classes referred to in method signatures and in the method body, even though they are not called during startup. However, setting this flag removes some of the protection that the Java language gives you. (Refer to the JVM documentation for more information.)
<code>-J-Xms24m</code>	Sets up the initial heap size of the JVM to 24 MB. This switch prevents the JVM from extending the heap size during startup, which enables faster startup time for the IDE.

In the Solaris and Linux environments, users can modify startup scripts to suit their needs.

Customizing Your Installation

This chapter contains information to assist you in customizing your installation of the Forte for Java 4, Community Edition. It includes information about the PointBase Server 4.2 Restricted edition.

The PointBase Server 4.2 Restricted Edition is available for installation with the Forte for Java 4 IDE. You can use other databases with the IDE by configuring the JDBC™ enabled database drivers for those databases.

Note – The following instructions assume you have already installed the PointBase Server 4.2 Restricted Edition during the IDE installation.

Using a PointBase Database

PointBase Server 4.2 Restricted Edition is the default database that is provided with the Forte for Java 4 IDE installation. For information on using this database and database tables, see the PointBase documentation at either *ffj-install-dir/pointbase/server/GettingStarted.html* or *ffj-install-dir/pointbase/client/GettingStarted.html*.

Starting the PointBase Database Server

You have to start the PointBase database server before you can use it, whether you want to access a PointBase database from an application you developed using the IDE or you want to create your own tables or database with PointBase software.

To start the PointBase database server:

- **Choose Tools → PointBase Network Server → Start Server from the main window of the IDE.**

Alternatively, on Microsoft Windows systems, start the PointBase server by choosing Forte for Java 4.0 CE → PointBase → Network Server → Server from the Start menu.

The PointBase 4.2 window appears.

Stopping the PointBase Database Server

Note – The following action stops only the PointBase database server that was started by choosing Tools → PointBase Network Server → Start Server.

To stop the PointBase database server:

- **Choose Tools → PointBase Network Server → Stop Server from the main window of the IDE or choose Server → Shutdown! from the PointBase 4.2 window.**

Starting the PointBase Client Console

To start a PointBase console, do the following:

- **In a supported Solaris or Red Hat Linux environment, type:**

```
$ sh fff-install-dir/pointbase/client/Console
```

- **On Microsoft Windows systems, start the PointBase client console by choosing Forte for Java 4.0 CE → PointBase → Console from the Start menu.**

A dialog named “Connect to Database” appears. Click OK to continue.

Stopping the PointBase Client Console

To stop the client console, terminate the window from which it is running.

Using Other JDBC Enabled Databases

The following information applies to database drivers other than the driver for the PointBase Server 4.2 Restricted Edition database.

You must place database driver files in the Forte for Java `lib/ext` directory before you start the Forte for Java 4 IDE. If you do not do this, the `dbschema` wizard does not enable you to select the proper database driver when you create a new schema. You cannot mount the driver file in the IDE's Explorer, nor can you simply place the driver file in the `CLASSPATH` environment variable. You must copy the driver file into the `lib/ext` folder.

For more information on database configuration and adding new database drivers, see <http://www.sun.com/forte/ffj/resources/articles/configdb.html>.

Where to Go From Here

This chapter contains information about available documentation resources and how to obtain IDE updates from the Forte for Java Update Center.

Updating Modules With the Update Center

Once you have Forte for Java 4, Community Edition installed in your system, use the Update Center to add new IDE modules or update the existing IDE modules already installed in your system. Use the following steps to update your IDE:

1. Start the IDE.

See Chapter 4 for instructions on how to start the IDE.

2. Select the Update Center from the IDE's Welcome screen or choose Tools → Update Center from the main window of the IDE.

The Update Center wizard appears.

3. Select Forte for Java Update Center as the Update Center and deselect NetBeans Update Center.

4. Click the Proxy Configuration to set your proxy configuration, if needed.

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

5. Click Next and type your Forte for Java Update Center login name and password.

See Step 9 in “Setting Up Your Forte for Java 4 IDE” on page 35 for information on registering and creating a login name and password.

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

6. **Select individual modules or select all by clicking the >> button. Use the < button to remove those versions that are not appropriate to your platform.**
7. **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 Sun's privacy policy regarding your personal information, see the Developer Resources Site FAQs at <http://forte.sun.com/ffj/resources/sitefaq.html>.

Other Documentation Resources

You can access the following resources to learn more about the different features of the IDE and how to use them:

- The online help is available by accessing the Help menu from the main window of the IDE. You can view the available help sets by choosing Help Sets from the Help menu.
- A set of programming books, tutorials, and code examples are available at <http://forte.sun.com/ffj/documentation/index.html>.
- The Forte for Java Developer Resources site at <http://forte.sun.com/ffj/index.html> also contains a wealth of information and support resources, including Forte for Java news, technical articles, a support knowledge base, forums, and more.

You can also access this site from the IDE by choosing Help → Web Resources from the main window of the IDE.

Troubleshooting

This chapter provides some troubleshooting hints to help you during the installation, startup, configuration, and use of the Forte for Java 4 IDE.

Using the `solaris_patch_installer`

TABLE 7-1 describes some errors you might encounter during installation of Solaris patches using the `solaris_patch_installer` script.

TABLE 7-1 `solaris_patch_installer` Errors

Problem	Solution
The <code>solaris_patch_installer</code> aborted while attempting to apply one of the required Solaris patches on your system.	<ol style="list-style-type: none">1. Write down the patchID of the last patch that the <code>solaris_patch_installer</code> tried to install.2. Obtain a newer revision of that patch from http://sunsolve.sun.com, if one is available.3. Install the new revision on your system using the <code>patchadd</code> utility. (If you are unfamiliar with or unsure about installing Solaris packages or the J2SE, v. 1.4.0 platform on your Solaris environment, contact your Solaris system administrator for assistance.)4. Run the <code>solaris_patch_installer</code> again to ensure you have all the required Solaris 8 patches on your system.

TABLE 7-1 solaris_patch_installer Errors (*Continued*)

Problem	Solution
Receipt of an error message similar to the following, after running the solaris_patch_installer on a newly installed Solaris 8 (update 7) environment: # ./solaris_patch_installer Solaris Patch Installer for J2SE, v.1.4.0 Installing 109147-14... successfully installed Installing 108434-06... ... Installing 108528-13... attempting to patch a package that is not installed Installing 108652-51... successfully installed Installing 108921-13... already applied Installing 108940-40... successfully installed Installing 108773-12... pkgadd failed Cannot continue patch installation. For more details, please look at /var/tmp/solaris_patch_installer.log	Run the solaris_patch_installer script a second time. If you continue to have problems, contact your Solaris system administrator.

Installing the Forte for Java 4 IDE

TABLE 7-2 describes some errors you might encounter during the Forte for Java 4 IDE installation.

TABLE 7-2 Forte for Java 4 IDE Installation Errors

Problem	Solution
Receipt of the following error message while installing the Forte for Java 4 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 with the -is:tempdir command-line option, in order to specify a directory on a disk with more free space. For example, in a Solaris operating environment, you might type the following at the command prompt: \$ ffj_ce_solsparc_en.bin -is:tempdir temporary-directory

TABLE 7-2 Forte for Java 4 IDE Installation Errors (*Continued*)

Problem	Solution
The Forte for Java 4 installer fails and displays a message that there is not enough available disk space to use for installation. But, the filesystem you specified to use for installing the IDE has plenty of available disk space.	<p>The filesystem you have specified may be symbolically linked to another filesystem whose large amount of disk space is not recognized. For example, in a Solaris environment, <code>/export/home</code> has 2 GB of space and <code>/</code> has 100 MB. The <code>/opt</code> directory is symbolically linked to <code>/export/home</code>. If you specified <code>/opt/forte4j</code> as the IDE installation directory, the Forte for Java 4 installer does not recognize the symbolic link to <code>/export/home</code>, which has 2 GB of available disk space. The installer only recognizes the <code>/</code> directory, which is the target directory for <code>/opt</code> and only has 100 MB.</p> <p>To correct the problem, specify the IDE's installer to directly use the filesystem with the larger available disk space. For the above example, specify the <code>/export/home</code> as the installation directory.</p>
Receipt of the following error message while installing the Forte for Java 4 IDE: Error: Could not find JVM	<p>Start the installer with the <code>-is:javahome</code> command-line option, in order to specify a directory on a disk with more free space.</p> <p>For example, in a Solaris operating environment, type the following at the command prompt:</p> <pre>\$ ffj_ce_solsparc_en.bin -is:javahome javahome</pre>
(Solaris or Linux environments only) The Forte for Java 4 installer looks like it is hung, after it was started. No messages are displayed.	<p>You may not have set the <code>DISPLAY</code> environment variable correctly. If you are installing on your local system, the <code>DISPLAY</code> environment variable should be set to <code>:0.0</code>. If you are using a superuser (root) account or doing a remote installation, set your <code>DISPLAY</code> environment variable to your local system.</p> <p>For example, to set the <code>DISPLAY</code> variable from a root account that is using a C-shell, type the following in the command window you used to log into the root account:</p> <pre>setenv DISPLAY your-local-host:0.0.</pre> <p>Run the installer again from the same command window.</p>
The Forte for Java 4 IDE installer exits without installing the product. No messages are displayed.	<p>These are the possible causes and solutions:</p> <ul style="list-style-type: none"> • The file you have downloaded from the Forte for Java 4 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 <i>installer.sp</i> file. Check the file and correct any incorrect command-line parameter setting. Run the IDE installer again.
The <code>-is:tempdir</code> command-line parameter is not working.	<p>Make sure that you are using the correct syntax for the command-line parameter for the installer. For example, on a Solaris environment, the syntax is as follows:</p> <pre>ffj_ce_solsparc_en.bin -is:tempdir temporary-directory</pre>

Starting Up the Forte for Java 4 IDE

TABLE 7-3 describes some errors you might receive during startup and configuration of the newly installed Forte for Java 4 IDE software.

TABLE 7-3 Forte for Java 4 IDE Startup and Configuration Errors

Problem	Solution
Receipt of an error message similar to the following during the IDE startup in asupported Solaris environment: Error: No J2SE was found at /usr/j2se/bin/java ERROR: The following required 5.8 patches have not been installed on system "myserver": 106950-16 106327-11 106541-17 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.	Install the J2SE, v. 1.4.0 platform on your system. For a Solaris 8 operating environment, include any necessary patches. Refer to Chapter 2 for more information on installing this software on your system.
Receipt of the following error message after starting the IDE: Error: Unable to load java.dll	Make sure there is no space in the name of the directory in which you have installed the J2SE, v. 1.3.1 or v. 1.4.0 platform.

TABLE 7-3 Forte for Java 4 IDE Startup and Configuration Errors (*Continued*)

Problem	Solution
<p>Forte for Java 4 IDE is not pointing to the J2SE, v. 1.4.0 platform you had specified during the IDE installation and you receive an error message similar to the following:</p> <pre>ERROR: The J2SE[tm] 1.2.1 found at /usr/java1.2/bin/java cannot be used by the IDE. J2SE[tm] 1.4 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.</pre>	<p>Check the Java environment variables already set prior to starting the IDE and unset them.</p> <p>The values of the <code>\$JAVA_PATH</code> and <code>\$JDK_HOME</code> environment variables override the value of the J2SE SDK path you specified during the IDE installation. You need to unset these environment variables or use the <code>-jdkhome</code> command-line option when starting the IDE.</p>
<p>The user directory is created in the wrong location in a Microsoft Windows system.</p>	<p>If you have previously installed any edition of the Forte for Java 4 IDE in a Windows environment, the location of the user directory is recorded in the Microsoft Windows Registry under <code>HKEY_CURRENT_USER/Software/Sun Microsystems, Inc./Forte for Java/CE/4.0</code>. This value is not deleted when you uninstall the Forte for Java 4 IDE. Therefore, when you install another version of the Forte for Java 4 IDE, the user directory specified in a previous Forte for Java 4 IDE installation is reused.</p> <p>If you want to use a different location for the user directory, do the following:</p> <ol style="list-style-type: none">1. Uninstall the Forte for Java 4 IDE.2. In a command window, type <code>regedit</code> to start the Microsoft Windows Registry editor.3. From the Registry editor, expand the <code>HKEY_CURRENT_USER</code> registry and the keys for <code>Software/Sun Microsystems, Inc./Forte for Java/CE/4.0</code>4. Right-click the <code>UserDir</code> value and choose <code>Delete</code> from the contextual menu.5. Install the Forte for Java 4 IDE again.6. After installation, start the Forte for Java 4 IDE and when you are prompted, specify a new location for the user directory.

Solaris Patch Identifications and Descriptions

TABLE A-1 provides the patch identification numbers and patch descriptions included with the `solaris_patch_installer` for the Solaris 8 *SPARC Platform Edition*.

TABLE A-1 Patch Identifications and Descriptions for Solaris 8 <i>SPARC Platform Edition</i>	
Patch Identification Number	Patch Description
109147-14	Solaris 8 interprocedural optimizer
108434-06	Solaris 8 libC sparc
108435-06	V9 libC
111293-04	/usr/lib/libdevinfo.so.1
112334-01	/usr/include/sys/archsystem.h
111310-01	/usr/lib/libdhcagent.so.1
108528-13	SIGEMT
108652-51	Xserver
108921-13	CDE 1.4 dtwm
108940-40	Motif 2.1
108773-12	X input methods
109607-01	/usr/include/iso/stdlib_iso.h
112003-03	Fontset
108989-02	Accounting
108827-17	Threads

Port Usage in the Forte for Java 4 IDE

TABLE B-1 provides a listing of the ports used in the Forte for Java 4, Community Edition IDE. It includes ports used by Forte for Java modules, third-party components and application servers available for use with the IDE. Also included is information on whether the default port assignment can be modified and how to make the modification.

TABLE B-1 Port Usage in Forte for Java 4, Community Edition IDE

Names of Module, Application Server, or Third-Party Components	Default Port Number Assigned	Description	Information on Modifying Default Port Assignment
NetBeans Open File Module	7318	Open file server	The default port assignment can be modified using the properties editor for the Open File Server: <ol style="list-style-type: none">1. Choose Tools → Options menu from the main window of the IDE.2. From the Options window, expand the IDE Configuration node.3. Expand the Server and External Tool Settings node, right-click Open File Server, and choose Properties from the contextual menu.4. Click the current value for Port property and type a different port number.
NetBeans Internal HTTP Server Module	8082	Embedded server HTTP	The default port assignment is automatically changed if a conflict is detected.
External Editor	3219		The default port assignment can be modified through the external editor's options pane.

TABLE B-1 Port Usage in Forte for Java 4, Community Edition IDE (*Continued*)

Names of Module, Application Server, or Third-Party Components	Default Port Number Assigned	Description	Information on Modifying Default Port Assignment
PointBase Restricted Edition	9092		<p>On Microsoft Windows systems, the default port assignment can be modified in the PointBase startup script, <code>server.bat</code>, under the <code>\$FORTE4J_HOME/pointbase/server</code> directory. Use the following steps to modify the script:</p> <ol style="list-style-type: none">1. Go to the <code>\$FORTE4J_HOME/pointbase/server</code> directory and create a copy of the <code>server.bat</code> file.2. Name the new file <code>server_newportnum.bat</code>.3. Change the port number information in the new file to <code>newportnum</code>.4. Run the <code>server_newportnum.bat</code> script in a command window. <p>In Solaris and Red Hat Linux environments, start the PointBase server from the <code>\$FORTE4J_HOME/pointbase/server</code> directory by typing the following at the command line:</p> <pre>Server /port:newportnum /win &</pre>

TABLE B-1 Port Usage in Forte for Java 4, Community Edition IDE (*Continued*)

Names of Module, Application Server, or Third-Party Components	Default Port Number Assigned	Description	Information on Modifying Default Port Assignment
Tomcat 4.0.1	8015	Server administration	<p>The default port number can be modified using the properties editor for the internal Tomcat 4.0.1 server:</p> <ol style="list-style-type: none"> 1. On the Runtime tab of the Explorer, expand the Server Registry node and the Installed Servers node. 2. Expand the Tomcat 4.0 node, right-click the Internal node, and choose Properties from the contextual menu. 3. Click the current value for the Server Port property and type the desired port number.
	8081	Server HTTP	<p>The default port number can be modified using the properties editor for the Host to be edited:</p> <ol style="list-style-type: none"> 1. On the Runtime tab of the Explorer, expand the Server Registry node and the Installed Servers node. 2. Expand the Tomcat 4.0 node and expand the relevant installation node. 3. Right-click the node representing the Host to be edited, and choose Properties from the contextual menu. 4. Click the value for the HTTP Connector property field and type the desired port number.
	8443	Redirecting	<p>You can modify the Tomcat configuration file, <i>ffj-install-dir/tomcat401/conf/server.xml</i>. Be aware that you edit the <i>server.xml</i> file at your own risk. Be sure to create a backup version of your working <i>server.xml</i> file before beginning to edit by hand.</p> <ol style="list-style-type: none"> 1. On the Runtime tab of the Explorer, expand the Tomcat 4.0 node under the Installed Servers node. 2. Right-click the node for the installation of Tomcat that you want to edit. From the contextual menu, choose Configure (<i>server.xml</i>). <p>The <i>server.xml</i> file appears in the Source Editor. You can now edit <i>server.xml</i> to modify the default port number.</p>
	11555	IDE debugger connection	<p>The default port number can be modified using the properties editor for the internal Tomcat 4.0.1 server:</p> <ol style="list-style-type: none"> 1. On the Runtime tab of the Explorer, expand the Server Registry node, and then expand the Installed Servers node. 2. Expand the Tomcat 4.0 node, right-click the Internal node and choose Properties from the contextual menu. 3. Select the Debugger tab. 4. Click the current value for the Debugger Port property and type the desired port number.

