Forte™ for Java™, Enterprise Edition
Getting Started Guide

Forte for Java, Release 3.0
Contents

Preface  1

1.  Getting Started With the Forte for Java IDE  5

Overview of Required Steps  5
System Requirements  6
Upgrading From an Early Access Release  7
Upgrading From a Previous Version  7
Creating a Shared Installation  8

Choosing and Installing a Web Server or an Application Server  9

Installing the J2EE Reference Implementation  10
Installing the iPlanet Web Server, Enterprise Edition 6.0  12
Installing the iPlanet Application Server, Enterprise Edition 6.0 SP3  13

Installing the Forte for Java IDE  14
Installation on Microsoft Windows Systems  14
Installation in the Solaris 8 Operating and Red Hat Linux 6.2
Environments  15
Integrating a Web Server or an Application Server With the IDE 17
   Integrating J2EE Reference Implementation With the IDE 17
   Integrating the iPlanet Web Server, Enterprise Edition 6.0 With the IDE 18
   Integrating the iPlanet Application Server, Enterprise Edition 6.0 SP3 With the IDE 20
Using Databases With the Forte for Java IDE 22
   Using a PointBase Database With the IDE 22
   Using Other JDBC Enabled Databases With the IDE 24
Registering With Forte for Java Developer Resources 24
Finding Installation Subdirectories 25
Updating Modules With the Update Center 26
Uninstalling the Forte for Java IDE (All Platforms) 27

2. Setting Up ForteESP With the Forte for Java IDE 29
   Using the Forte Enterprise Services Presentation Toolkit 29

3. Using Startup Command-Line Switches 31

4. Accessing Java Documentation in the IDE 33
   Making Documentation Accessible From the Javadoc Tab 33
Preface

This document provides installation instructions for the Forte™ for Java™, release 3.0, Enterprise Edition integrated development environment (IDE). Topics covered include:

- Overview of the required steps
- System requirements
- Upgrading from previous versions of the IDE
- Choosing, installing, and integrating web and application servers with the IDE
- Setting up databases with the IDE
- Registering with Forte for Java Developer Resources
- Contents of top-level directories of the IDE
- Updating modules with the Update Center
- Uninstalling the IDE
- Using Forte Enterprise Services Presentation toolkit
- Using the startup command-line switches
- Accessing Javadoc documentation

How This Book Is Organized

Chapter 1 gives information on system requirements and installation for Forte for Java, release 3.0, Enterprise Edition, including information on choosing and installing a web or application server, upgrading from a previous version, and uninstalling the product.

Chapter 2 gives information about how to use the ForteESP tools with the Forte for Java IDE.

Chapter 3 provides a list of options that can be used with startup scripts to customize installation of the IDE.
Chapter 4 describes how you can download the Java™ 2 SDK documentation and how to make it and other Javadoc™ documentation accessible from the IDE.

### Typographic Conventions

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

### Related Documentation


- Forte for Java Release Notes
- Forte for Java, Enterprise Edition, Tutorial
- Building JSP™ Pages That Use XML Data Services - Enterprise Edition
- Building Web Services - Enterprise Edition
- Building Enterprise JavaBeans™ Components
- Assembling and Executing J2EE™ Modules and Applications - Enterprise Edition
- Programming Persistence
- Building Web Components
You can also find links to the following documentation related to the Forte for Java, release 3.0, Community Edition:

- Forte for Java, Community Edition Tutorial

### Accessing Sun Documentation Online

The docs.sun.com™ web site enables you to access a select group of Sun technical documentation on the Web. You can browse the docs.sun.com archive or search for a specific book title or subject at:

http://docs.sun.com

### Ordering Sun Documentation

Fatbrain.com, an Internet professional bookstore, stocks select product documentation from Sun Microsystems, Inc.

For a list of documents and how to order them, visit the Sun Documentation Center on Fatbrain.com at:

http://www.fatbrain.com/documentation/sun

### Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions. You can email your comments to Sun at:

docfeedback@sun.com

Please include the part number (816-2051-10) of your document in the subject line of your email.
CHAPTER 1

Getting Started With the Forte for Java IDE

This chapter contains installation and startup information for Forte for Java, release 3.0, Enterprise Edition, including information on upgrading from a previous version, installing and integrating a web or application server with the IDE, setting up a database with the IDE, and information on uninstalling the product.

Overview of Required Steps

The following outlines the steps required with the installation of the Forte for Java, release 3.0, Enterprise Edition.

1. Install the Java™ 2 SDK, Standard Edition, v. 1.3.1 on your system.

2. Choose a web server or application server to which you will deploy your web or J2EE™ applications.

3. Obtain and install the web server or application server software you chose to use with the IDE.

   a. If upgrading from an early access version of the IDE, run the early access uninstaller to remove the early access version of the IDE and manually remove the Forte for Java user directory.
   b. If upgrading from a previous version of the IDE (other than the early access version), specify whether you want to uninstall the previous version or keep the previous version when prompted by the release 3.0 installer program.

5. Integrate the web server or application server with the IDE.

6. Setup databases with the IDE, if desired.
7. Register with Forte for Java Developer Resources.

8. Perform additional setup tasks for using ForteESP as needed in your environment. (See “Setting Up ForteESP With the Forte for Java IDE” on page 29 for more information.)

System Requirements

You must have the Java 2 SDK, Standard Edition, v. 1.3.1 installed on your system to install and run the Forte for Java IDE. For further information and download links, go to http://java.sun.com/j2se/1.3/.

Table 1 lists the system requirements needed to install a typical or a high-end configuration on any of the supported platforms. The memory recommendations assume you are developing and testing J2EE™ applications or web services. The recommended configurations are dependent on the application server and database used for development.

| Table 1-1 Forte for Java, release 3.0, Enterprise Edition System Requirements |
|---------------------------------|-----------------|-----------------|-----------------|
|                                 | Solaris™ 8      | Windows NT 4 SP6, Windows 2000 SP2 | Red Hat Linux 6.2 |
| Hard disk space required for installation | 110 MB  | 110 MB  | 110 MB  |
| Typical configuration          | SunBlade™ 100, 512 MB RAM | 866 MHz Pentium III with Microsoft Windows NT, 384MB RAM<sup>1</sup> | 866 MHz Pentium III, 512 MB RAM, 128 MB swap |
| High-end configuration         | SunBlade 1000 with up to two 750-MHz or 900-MHz UltraSPARC™ III CPUs, 1 GB RAM | 866 MHz Pentium III with Microsoft Windows 2000, 768 MB RAM<sup>2</sup> | No recommendation<sup>3</sup> |

1. Typical configuration is J2EE Reference Implementation 1.2.2 and PointBase Server. The typical configuration assumes the PointBase database server is co-resident with the Forte for Java software on the developer workstation.

2. The recommended high-end configuration is iPlanet™ Application Server 6.0 with Oracle 8i. The recommended high-end configuration assumes that the Oracle database is installed on a central server.

3. Sun Microsystems, Inc. does not have any recommendation for high-end configuration for the Red Hat Linux 6.2 environment.
These are general guidelines. Your requirements might vary depending on what additional software you have installed for use with the Forte for Java IDE.

## Upgrading From an Early Access Release

If your previous version is an early access release (Forte for Java, Community Edition EA), you cannot use the Update Center to update to release 3.0. Before installing release 3.0, you must:

1. **Run the Early Access uninstaller to remove the EA version of the Forte for Java IDE.**

2. **Manually remove the Forte for Java user directory created with the previous version of the Forte for Java IDE** (*user-home-dir*/ffjuser30 directory in UNIX® environments).

   The uninstaller for EA does not remove all files from this directory. By removing the previous user directory, you delete all the settings made in the early access release. You can then install release 3.0. (Differences in the settings format between the early access release and release 3.0 can cause exceptions.)

## Upgrading From a Previous Version

To upgrade to release 3.0, you can uninstall your previous version of the IDE or you can preserve your previous version of the IDE and install release 3.0 in a new installation directory.

If you are upgrading from a previous version (other than an early access release) and would like to uninstall the previous version of the IDE, do the following steps to preserve your previous IDE user settings:

1. **Run the Forte for Java, release 3.0 installer.**

2. **When prompted, uninstall the previous version.**

3. **Specify the previous version’s installation directory as the destination directory in which to install the new version of the IDE.**

4. **Launch the new IDE.**

   The Import Settings wizard automatically imports the user settings from the previous version.
If you would like to keep the previous version of the IDE and want to use the same
IDE user settings for release 3.0, do the following steps:

1. Run the Forte for Java, release 3.0 installer.
2. Click No when prompted if you want to uninstall the previous version.
3. Specify a new directory as the destination directory in which to install the new
version of the IDE.
4. Launch the new IDE.
   The Import Settings wizard appears.
5. Specify the previous version’s installation directory when prompted for the
location of the previous version of the IDE.
   The Import Settings wizard imports the user settings from the previous version.

Refer to the Forte for Java release notes at
additional information regarding importing settings from a previous version of the
IDE.

Creating a Shared Installation

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

After a UNIX® installation, there is no need to set write permissions to the shared
directory. All user settings are stored in the ffjuser30 directories 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.
Choosing and Installing a Web Server or an Application Server

To use the assembly and deployment features of Forte for Java, Enterprise Edition, you need both Enterprise Edition and the application server or web server product to which you will deploy. The kind of server you use depends on whether you are developing a web application (which requires a web server) or a J2EE application (which requires an application server). You can use the built-in Tomcat Web Server, the iPlanet™ Web Server, Enterprise Edition 6.0, the iPlanet Application Server, Enterprise Edition 6.0 SP3, or the J2EE Reference Implementation. Both iPlanet servers are available from download links found at http://www.sun.com/forte/ffj/buy.html or from the Forte for Java product CD.

Install the application servers or web servers first, especially if you are going to use the iPlanet Application Server or the iPlanet Web Server.

At this time, choose which product you intend to use:

■ iPlanet Web Server
■ Built-in Tomcat Web Server
■ iPlanet Application Server
■ J2EE Reference Implementation

If you intend to use the Forte for Java IDE to develop web applications consisting of servlets and JavaServer Pages™ (JSP™) technology, you can use the following web servers:


■ Tomcat Web Server, v. 3.2. You can use the built-in version of Tomcat bundled with the Forte for Java IDE. Additional information on Tomcat is also available at http://jakarta.apache.org/tomcat/index.html.

If you intend to use the Forte for Java IDE to develop J2EE applications that consist of Enterprise JavaBeans™ components, web modules, and other J2EE modules, you can use the following application servers:

■ iPlanet Application Server, Enterprise Edition 6.0 SP3. You can get this server from the Forte for Java product CD. If you prefer, you can download the server by clicking the Forte for Java, release 3.0, Enterprise Edition download link found at http://www.sun.com/forte/ffj/buy.html. Note that the iPlanet
Application Server, Enterprise Edition 6.0 SP3 requires iPlanet Web Server, Enterprise Edition 4.1 SP7, which is also available from the Forte for Java product CD and from the download page. You must first install the iPlanet Web Server, Enterprise Edition 4.1 SP7. After iPlanet Web Server, Enterprise Edition 4.1 SP7 is installed, proceed with the installation of iPlanet Application Server, Enterprise Edition 6.0 SP3. Read “Installing the iPlanet Application Server, Enterprise Edition 6.0 SP3” on page 13 for information on how to install the server.

**Note** – The iPlanet Application Server, Enterprise Edition 6.0 SP3 is only supported on the Solaris 8 operating environment and the Microsoft Windows system.

- **J2EE Reference Implementation, v. 1.2.2.** You can use the J2EE Reference Implementation (RI) that comes with the Java 2 SDK, Enterprise Edition, v. 1.2.2. The RI is included with the Forte for Java product CD and is downloaded with the IDE if you use the download links found at http://www.sun.com/forte/ffj/buy.html. Read “Installing the J2EE Reference Implementation” on page 10 for installation information.

  Note that you must use J2EE RI, v. 1.2.2 with the Forte for Java, release 3.0, Enterprise Edition.

### Installing the J2EE Reference Implementation

You must first install the Reference Implementation included with the Java 2 SDK, Enterprise Edition, v. 1.2.2 if you intend to install the J2EE Reference Implementation module included with the IDE. The Reference Implementation configuration is described in “Integrating J2EE Reference Implementation With the IDE” on page 17. Follow the steps below to install the Reference Implementation.

1. **Unpack the download bundle.**
   - For the Solaris operating environment, type:

   ```$ cd directory-to-put-files
   $ gunzip j2sdkee1.2.2-pb3.5-sparc-ffj-bintar.tar.gz
   $ tar -xvf j2sdkee1.2.2-pb3.5-sparc-ffj-bintar.tar
   ```

   This creates a directory called `j2sdkee1.2.2` within the current directory.
For Microsoft Windows, use an appropriate `zip` utility or type:

```
c:\>cd directory-to-put-files
c:\>jar xvf j2sdkee1.2.2-pb3.5-win32-ffj.zip
```

This step assumes that the JAR program from the Java 2 SDK, Standard Edition is in your path. A directory is created called, `j2sdkee1.2.2`, within the current directory.

For the Red Hat Linux 6.2 environment, type

```
$ cd directory-to-put-files
$ tar -xvzf j2sdkee1.2.2-pb3.5-linux-ffj.tar.gz
```

This creates a directory called `j2sdkee1.2.2` within the current directory.

2. **Set the environment variables.**

   After you have installed the J2EE SDK, ensure that the following environment variables are set:
   
   - `JAVA_HOME` - The directory where the Java 2 SDK is installed. For example, on a Microsoft Windows system, this value might be `c:\jdk1.3.1`.
   - `J2EE_HOME` - The directory where you installed the J2EE SDK. For example, on a Microsoft Windows system, this value might be `c:\j2sdkee1.2.2`.
   - `FORTE4J_HOME` - The directory where the Forte for Java IDE is installed. For example, on a Microsoft Windows system, this value might be `c:\forte4j`.
3. **Start the server.**

For example, in a Solaris operating environment, type:

```
$ J2EE_HOME/bin/j2ee -verbose
```

If startup is successful, you see a series of messages such as the following examples, from a Solaris operating environment:

```
J2EE server Listen Port: = 1049
Redirecting the output and error streams to the following
files:/j2sdkeel.2.2/logs/myhost.ejb/j2ee/system.out
   /j2sdkeel.2.2/logs/myhost.ejb/j2ee/system.err
J2EE server startup complete.
```

The `-verbose` flag redirects all the output to the screen instead of to log files. Although optional, the verbose option is useful for debugging.

4. **Stop the server.**

For example, in a Solaris operating environment, open another window and type:

```
$ J2EE_HOME/bin/j2ee -stop
```

You should stop the server before proceeding with integration. For more information on managing the Reference Implementation server, see the RI 1.2.2 documentation in the directory where you installed the RI.

After the Reference Implementation server is installed, you must integrate it with the IDE by providing the IDE the location of the server. Follow the steps outlined in “Integrating J2EE Reference Implementation With the IDE” on page 17 to integrate the Reference Implementation with the IDE and to ensure that it is working properly.

**Installing the iPlanet Web Server, Enterprise Edition 6.0**

You must first install the iPlanet Web Server 6.0 if you intend to use the iPlanet Web Server plug-in module included with the IDE.
If you did not install the iPlanet Web Server, Enterprise Edition 6.0 before installing the IDE, you must first disable the iPlanet Web Server plug-in module before proceeding with the installation of the iPlanet Web Server. Read “Disabling the iPlanet Web Server Plug-in Module” on page 19 for instructions on how to disable the module.

Install the iPlanet Web Server, Enterprise Edition 6.0 as instructed in the installation guide, which is available from http://docs.iplanet.com/docs/manuals/enterprise.html.

After the iPlanet Web Server has been installed, you must integrate it by providing the IDE the location of the server. Follow the steps outlined in “Integrating the iPlanet Web Server, Enterprise Edition 6.0 With the IDE” on page 18 to integrate the iPlanet Web Server with the IDE and to ensure that it is working properly.

### Installing the iPlanet Application Server, Enterprise Edition 6.0 SP3

You must first install the iPlanet Application Server, Enterprise Edition 6.0 SP3 if you intend to use the iPlanet Application Server plug-in module included with the IDE.

If you did not install the iPlanet Application Server, Enterprise Edition 6.0 SP3 before installing the IDE, you must first disable the iPlanet Application Server plug-in module before proceeding with the installation of the iPlanet Application Server, Enterprise Edition 6.0 SP3. Read “Disabling the iPlanet Application Server Plug-in Module” on page 22 for instructions on how to disable this module.

The iPlanet Application Server, Enterprise Edition 6.0 SP3 requires a previous installation of the iPlanet Web Server, Enterprise Edition 4.1 SP7. To install the iPlanet Web Server, Enterprise Edition 4.1 SP7, follow the instructions in the product release notes, which is available from http://docs.iplanet.com/docs/manuals/enterprise.html.

After iPlanet Web Server, Enterprise Edition 4.1 SP7 is installed, proceed with the installation of iPlanet Application Server, Enterprise Edition 6.0 SP3. The installation guide for the iPlanet Application Server is available from http://docs.iplanet.com/docs/manuals/ias.html.

After the iPlanet Application Server, Enterprise Edition 6.0 SP3 has been installed, you must integrate it by providing the IDE the location of the server. Follow the steps outlined in “Integrating the iPlanet Application Server, Enterprise Edition 6.0 SP3 With the IDE” on page 20 to integrate the iPlanet Application Server with the IDE and to ensure that it is working properly.
Installing the Forte for Java IDE

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

Installation on Microsoft Windows Systems

You can install the Forte for Java IDE on Microsoft Windows through an .exe file.

**Note** – You must have the Java 2 Platform, Standard Edition, v. 1.3.1 (Java 2 SDK, v. 1.3.1) installed on your system before installing the Forte for Java IDE.

**Note** – If you are going to use an application server or a web server with the IDE, you must install those servers first before installing the Forte for Java IDE. Read “Choosing and Installing a Web Server or an Application Server” on page 9 for instructions on installing a web server or an application server.

1. **Double-click the ffj30_ee_ml.exe file.**
   The InstallShield’s Welcome screen appears.

2. **In the Welcome screen, click Next.**

3. **Read the license agreement carefully. To agree, click Yes.**
   You must agree to the license to continue with the installation.

4. **Enter your serial number and click the Next button.**
   If you ordered the Forte for Java IDE online, then your serial number was given to you on the download page. If you purchased the software package, your serial number appears on the included card.
   For Try and Buy Users: A 60-day trial serial number is generated for you automatically if you click Next without entering a serial number. After your serial number appears, click Next a second time to continue installation.
   InstallShield attempts to locate a compatible Java virtual machine (Java 2 SDK, v. 1.3.1) on your system.

5. **Accept the selected JVM™ that InstallShield presents or click Browse to choose another. After selecting a JVM, click Next to continue.**
6. In the Select Components dialog box, select the desired components. Accept the default directory or click Browse to install the IDE in a directory of your choosing. Click Next to continue.

**Note** — The installation directory name cannot contain any spaces.

If you encounter an error about not having enough disk space to complete the installation, your system (usually drive C:") likely does not have the space needed to extract the installation files. You can temporarily move some files from drive C:", proceed with the installation, and then move files back to drive C:.

7. Associate .java and .nbm (NetBeans™ module files) with the Forte for Java IDE, if desired, by selecting their associated checkboxes. Click Next to continue.

After these files types are associated with the IDE, you may double-click them when the IDE is running and they will open from within the IDE.

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

9. Click Finish to complete installation.


10. Start the Forte for Java IDE by clicking its associated Start menu item under Forte for Java EE or by running `ffj-install-dir\bin\runidew.exe` from the command line.

**Installation in the Solaris 8 Operating and Red Hat Linux 6.2 Environments**

You can install the Forte for Java IDE in Solaris 8 and Red Hat Linux 6.2 environment with a Java class file.

**Note** — You must have Java 2 Platform, Standard Edition, v. 1.3.1 (Java 2 SDK, v. 1.3.1) installed on your system before installing the Forte for Java IDE.

**Note** — If you are going to use an application server or a web server, you must install those servers first before installing the Forte for Java IDE. Read “Choosing and Installing a Web Server or an Application Server” on page 9 for instructions on installing a web server or an application server.
1. Go to the directory where you saved the **forte** class file (for the Solaris operating environment, `ffj30_ee_solsparc_ml.class`; for the Red Hat Linux 6.2 environment, `ffj30_ee_linux_ml.class`).
   - For the Solaris 8 operating environment, type the following command (omitting the file extension):

```
$ java -cp . ffj30_ee_solsparc_ml
```

- For the Red Hat Linux 6.2 environment, type the following command (omitting the file extension):

```
$ java -cp . ffj30_ee_linux_ml
```

**Note** — This step assumes you have a compatible Java virtual machine (Java 2 SDK, v. 1.3.1) in your path. If you do not, you must specify the full path to the Java interpreter executable. For example:

```
# /usr/bin/java -cp . ffj30_ee_solsparc_ml
```

2. In the InstallShield’s Welcome screen, click Next.

3. Read the license agreement carefully and click Next.
   You must agree to the license to continue with the installation.

4. Enter your serial number and click the Next button.
   If you ordered the Forte for Java IDE online, then your serial number was given to you on the download page. If you purchased the software package, your serial number appears on the included card.

   For Try and Buy Users: A 60-day trial serial number is generated for you automatically if you click Next without entering a serial number. After your serial number appears, click Next a second time to continue installation.

   InstallShield attempts to locate a compatible Java virtual machine (Java 2 SDK, v. 1.3.1) on your system.

5. Accept the selected JVM™ or click Browse to choose another. Click Next to continue.

6. From the Destination Folder dialog box, select the directory where you want to install the Forte for Java IDE. Accept the default directory or click Browse to install the Forte for Java IDE in a directory of your choosing. Click Next to continue.
Note – The installation directory name cannot contain any spaces.

7. In the Component Selection dialog box, select the components you want to install. Click Next.

8. Confirm your installation choices in the Ready to Install dialog box by clicking Install Now.

9. Once installation is complete, review the contents of the Installation Summary window. Click Exit to complete the installation.

After installation is complete, read the Forte for Java release notes at http://www.sun.com/forte/ffj/documentation/index.html for any late-breaking information regarding the release.

10. Start the Forte for Java IDE by running the runide.sh launch script in the ffj-install/bin directory.

Integrating a Web Server or an Application Server With the IDE

Once you have installed a web server or an application server and have successfully installed the IDE, you must integrate your installed web or application server with the IDE.

For information on deploying and testing applications on iPlanet Web Server, Tomcat Web Server, iPlanet Application Server, or J2EE Reference Implementation, see “Assembling and Executing J2EE Modules and Applications” at: http://www.sun.com/forte/ffj/resources/documentation/index.html.

Integrating J2EE Reference Implementation With the IDE

You must configure the IDE for the J2EE Reference Implementation server. You must set the environment variables (see Step 2 on page 11) before you begin with the configuration.

1. In the Explorer window of the IDE, click the Runtime tab and expand the nodes for Server Registry and Installed Servers.
2. Right-click J2EE Reference Implementation 1.2 and choose Properties from the contextual menu.

3. Set the RIHome property to the same value as the J2EE_HOME variable.

4. Right-click J2EE Reference Implementation 1.2 and choose Add Server Instance from the contextual menu.

5. To start the newly added server instance, expand the J2EE Reference Implementation 1.2 node.

6. Right-click the new server instance and use the contextual menu to start the RI server instance.

   The corresponding messages appear in the Output window. For example, in a Solaris operating environment, you see the following:

   
   | J2EE server Listen Port: = 1049 |
   | Redirecting the output and error streams to the following files: |
   | /j2sdkeel.2.2/logs/myhost/eb/j2ee/system.out |
   | /j2sdkeel.2.2/logs/myhost/eb/j2ee/system.err |
   | J2EE server startup complete. |


   The default port number is 8000.

   If you have correctly integrated your server, you will see the J2EE 1.2.2 Default Home Page.

Integrating the iPlanet Web Server, Enterprise Edition 6.0 With the IDE

Follow the steps below to integrate the iPlanet Web Server, Enterprise Edition 6.0 with the IDE.

1. (For Solaris operating environment only) In the jvm12.conf files, comment out the line: jvm.options=-Xrs in each file.

   The file exists in the following directories:

   [iws-install-dir]/https-[hostname]/config
   [iws-install-dir]/https-[hostname]/conf_bk
2. Launch the IDE and specify the location of the iPlanet Web Server in the dialog box that is displayed.

The dialog box is only displayed if the iPlanet Web Server Plug-in Module is enabled. Follow the steps below to enable the module.

a. Select Tools > Options from the Main window of the IDE.

b. From the Options window, expand the Modules node and the Web node. Click iPlanet Web Server. Set its Enabled property to True.

3. From the Main window of the IDE, click the Runtime tab in the Explorer and expand the node for Server Registry. Then expand the Installed Servers node.

4. To start the newly-added server instance, expand the iPlanet Web Server node. Right-click the server instance to open the contextual menu. Choose the start option to start the server instance.

5. Type the appropriate hostname:portnumber to view the server status in a browser window.

You can obtain the hostname:portnumber from the Runtime tab of the Explorer window of the IDE. Choose Server Registry > Installed Server > iPlanet Web Server Enterprise Edition 6.0 > https-machine_name (port-number). The values for https-machine_name(port-number) correspond to the hostname:portnumber values.

If the server is successfully installed and integrated with the IDE, you will see the iPlanet Web Server, Enterprise Edition 6.0 page in the browser window.

Disabling the iPlanet Web Server Plug-in Module

If you did not install the iPlanet Web Server, Enterprise Edition 6.0 before installing the IDE, you must first disable the iPlanet Web Server plug-in module before proceeding with the integration of the iPlanet Web Server.

Follow these steps to disable the iPlanet Web Server plug-in module and to install the iPlanet Web Server.

1. From the Main window of the IDE, click Cancel when prompted for the iPlanet Web Server installation directory.

2. In the Main window, click Tools > Options.

3. From the Options window, expand the Modules node and the Web node. Click iPlanet Web Server. Set its Enabled property to False.

If you do not disable the module, you are prompted for the iPlanet Web Server installation directory every time the IDE starts.
Integrating the iPlanet Application Server, Enterprise Edition 6.0 SP3 With the IDE

Follow the steps below to integrate the iPlanet Application Server, Enterprise Edition 6.0 SP3 with the IDE.

1. Before integrating the iPlanet Application Server, Enterprise Edition 6.0 SP3 with the Forte for Java IDE, ensure that the iPlanet Administrative Server is already started. To check if it is, do the following:
   - For the Solaris operating environment, type:
     
     ```
     $ ias6-install-dir/start-admin
     ```
     
     If the iPlanet Administrative Server is already started, the message “server is already running” appears in the output window.
   - For Microsoft Windows, the iPlanet Administrative Server is installed as a service when you install the iPlanet Application Server. If the iPlanet Administrative Server is not started on your Microsoft Windows system, you must start it using the Services utility.

2. Launch the IDE and specify the location of the iPlanet Application Server in the dialog box that is displayed.
   
   The dialog box is only displayed if the iPlanet Application Server, Enterprise Edition 6.0 SP3 Plug-in Module is enabled. Follow the steps below if the module is not yet enabled:
   
   a. Select Tools > Options from the Main window of the IDE.
   
   b. From the Options window, expand the Modules node and the J2EE Support node. Select iPlanet Application Server 6 and set its Enabled property to True.
3. (For Solaris operating environment only) After you specify the location of the iPlanet Application Server, edit the `ffj-install-dir/bin/runide.sh` script as instructed in the dialog box that is displayed.

To complete the iPlanet Application Server Plug-in setup procedure, you need replace the first few lines of the `ffj-install-dir/bin/runide.sh` file with the following:

```
#!/bin/sh
script="runide.sh"
export script
. +IASDir+/env/iasenv.ksh
```

where `+IASDir+` is the location of the directory in which the iPlanet Application Server, Enterprise Edition 6.0 is installed. The `iasenv.ksh` script sets the correct environment variables for running the iPlanet Application Server with the IDE.

4. (For Solaris operating environment only) You must restart the IDE after editing the `runide.sh` file.

5. Click the Runtime tab in the Explorer window of the IDE.

6. Expand the nodes for Server Registry, Installed Servers, and iPlanet Application Server 6.0 node.

7. Right-click the Server Instances node to open the contextual menu.

8. Choose Add a Local iPlanet Application Server or Add a Remote iPlanet Application Server, depending on the iPlanet Application Server installation.

9. Select the newly added iPlanet Application Server 6.0 node and right-click to get the contextual menu.

10. Choose Properties from the contextual menu and set the Host Name property to a fully qualified domain name (for example, `yourserver.yourdomain`) and set the Admin User Password property.

11. To ensure that the iPlanet Application Server and the IDE are working properly together, right-click on the node for the newly added server instance and choose Server Status from the contextual menu.

You can view the status of the iPlanet Administrative Server from the Server Status dialog. You can also start and stop the iPlanet Application Server engines from this dialog.
Disabling the iPlanet Application Server Plug-in Module

If you did not install the iPlanet Application Server, Enterprise Edition 6.0 SP3 before installing the IDE, you must first disable the iPlanet Application Server plug-in module before proceeding with the integration of the iPlanet Application Server, Enterprise Edition 6.0 SP3.

Follow these steps to disable the iPlanet Application Server plug-in module.

1. From the Main window of the IDE, click Cancel when prompted for the iPlanet Application Server installation directory.

2. In the Main window, click Tools > Options

3. From the Options window, expand the Modules node and the J2EE Support node. Select iPlanet Application Server 6 and set its Enabled property to False.

If you do not disable the module, you are prompted for the iPlanet Application Server installation directory every time the IDE starts.

Make sure the iPlanet Application Server plug-in module is enabled before you begin integration with the IDE.

Using Databases With the Forte for Java IDE

The Forte for Java IDE includes the PointBase database. You can use other databases with the IDE by configuring the JDBC™ enabled database drivers for those databases.

Using a PointBase Database With the IDE

PointBase Network Edition 3.5 database is the default database that is provided with the Forte for Java IDE download. For information on using this database and on database tables, see the PointBase docs directory located at either

`ffj-install-dir/pointbase/network/docs` or
`ffj-install-dir/pointbase/client/docs`. Look for the PointBase Network Server topic under the section on JDBC Driver Information.

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.
Start the PointBase server by choosing Tools > PointBase Network Server > Start Server from the main window of the IDE. To stop the PointBase server, choose Tools > PointBase Network Server > Stop Server from the main window. Note that this action only stops the PointBase server that was started by Tools > PointBase Network Server > Start Server.

Alternatively, on Microsoft Windows systems, start the PointBase server by choosing Forte for Java EE > PointBase > Network Server > Server from the Start menu. To stop the server, terminate the window from which it is running.

To start the PointBase client console in the Solaris 8 operating environment and Red Hat Linux 6.2 environment, type:

```
$ sh ffj-install-dir/pointbase/client/console.sh
```

On Microsoft Windows systems, start the PointBase client console by choosing Forte for Java EE > PointBase > Client Tools > Console from the Start menu. To stop the client console, terminate the window from which it is running.

Note that these steps apply only to the locally installed version of the PointBase database.

If you also installed iPlanet Application Server, Enterprise Edition 6.0 SP3, note that it comes bundled with its own PointBase Network Server. Starting the iPlanet Application Server, Enterprise Edition 6.0 SP3 might start the PointBase Network Server. Before running a program or deploying a web module, ensure that the PointBase Network Server that you want your program to use is the one that is currently running.

If you also installed J2EE Reference Implementation, v. 1.2.2, note that it is pre-configured to use the PointBase server included with the IDE. You must define the FORTE4J_HOME environment variable with the directory in which the Forte for Java IDE is installed. Starting the J2EE RI server does not start the PointBase server. You must start the PointBase database server as previously instructed in this section.

If, however, you want to create a different PointBase database for your tables, you must open the $J2EE_HOME/config/default.properties file and modify the jdbc.resources variable, as follows:

```
jdbc.datasources jdbc/Pointbase|jdbc:pointbase://localhost/sample|jdbc/Pointbase|jdbc:pointbase://localhost/your-database
```

For more late-breaking information about the PointBase Network Server included with the Forte for Java IDE, see the Forte for Java release notes at: http://www.sun.com/forte/ffj/documentation/index.html
Using Other JDBC Enabled Databases With the IDE

The following information applies to database drivers other than PointBase databases.

You must place the database driver files in the Forte for Java lib/ext directory before you start the Forte for Java IDE. If you do not do this, the dbschema wizard does not enable you to select the proper database when you create a new schema. You cannot mount the driver file in the Explorer to do this, nor can you 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.

Registering With Forte for Java Developer Resources

Registering with Forte for Java Developer Resources 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, non-public builds of the IDE, 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 may have downloaded the Forte for Java IDE)

To register with Forte for Java Developer Resources, go to http://forte.sun.com/services/registration/new-user

If you are already registered with the Sun Download Center, mysun.sun.com, or the Sun Store, you can use the same user name and password, but you will be prompted for additional information. To update your account information, go to: http://forte.sun.com/services/registration/accountmaintenance.html
If you are already registered with Forte for Java Developer Resources, you must update your account to reflect your upgrade to release 3.0. To update your account information, go to: http://forte.sun.com/services/registration/accountmaintenance.html. Alternatively, you can choose Help > Developer Resources Registration from the main window of the IDE. Click on the Register product upgrade link. Proceed by updating your information including your release 3.0 serial number (available from the $ffj-install-dir/system/ide.sn file).

**Finding Installation Subdirectories**

Now that you have installed the Forte for Java IDE, these subdirectories can be found under your Forte for Java main directory:

- **/beans** – Contains JavaBeans™ components installed in the IDE.
- **/bin** – Includes the Forte for Java startup scripts (as well as the ide.cfg file in Microsoft Windows installations).
- **/docs** – Contains the Forte for Java help files and other miscellaneous documentation.
- **/extbin** – Contains the Forte TeamWare command-line utilities. For Windows and Linux platforms, this directory also contains the SCCS command-line utilities.
- **/iPlanet** – Contains iPlanet-specific files, such as an Enterprise JavaBeans compiler patch and the executable for the iPlanet Application Server.
- **/javadoc** – Stores Javadoc™ documentation created in the Forte for Java IDE. This directory is mounted by default in the Forte for Java repository.
- **/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** – Contains native binary support files for the TeamWare command-line utilities.
- **/pointbase** – Contains two subdirectories, client and network. The client directory contains PointBase console, command-line utilities, and examples of a PointBase application and a WebServer application. The network directory contains the PointBase server, sample databases, examples, and PointBase documentation.
- **/sources** – Contains sources for libraries that might be redistributed with user applications.
/system – Includes files and directories used by the IDE for special purposes. Go to the /system directory in your individual fff-user-dir to get the ide.log, which provides information useful when requesting technical support, and to view project.basic and project.last files, which contain information on Forte for Java projects. In Microsoft Windows, this directory is mounted as a hidden filesystem.

---

Updating Modules With the Update Center

Once you have Forte for Java, release 3.0 installed in your system, use the Update Center to add new IDE modules or update the existing IDE modules already installed in your system.

Note – You cannot use the Update Center if your previous version is an early access release (Forte for Java Community Edition EA). Read “Upgrading From an Early Access Release” on page 7 for more information on upgrading from an early access release.

Follow these steps to use the Update Center:

1. Start the IDE.
2. Select the Update Center from the IDE’s Welcome screen (or choose Tools > Update Center from the main menu of the IDE).
3. Select Forte for Java Update Center (not NetBeans Update Center).
4. Set your Proxy Configuration, if needed.
5. Click Next and type your Update Center user name and password.
   See “Registering With Forte for Java Developer Resources” on page 24, for information on registering and creating a user 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. Selecting >> gives you all the platform variants of the Forte TeamWare module. 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, then restarts itself.
8. (Optional) Enable the iPlanet Web Server 6.0 plug-in module or the iPlanet Application Server plug-in module.

- If you selected the iPlanet Web Server 6.0 plug-in module, type the iPlanet Web Server installation directory when prompted. If iPlanet Web Server is not installed, you must click Cancel. You can return later to install the module and complete this step.

  Read “Installing the iPlanet Web Server, Enterprise Edition 6.0” on page 12 for information on installing the iPlanet Web Server.

- If you selected the iPlanet Application Server plug-in module, enter the iPlanet Application Server installation directory when prompted. If iPlanet Application Server is not installed, you must click Cancel. You can return later to install the module and complete this step.

  Read “Installing the iPlanet Application Server, Enterprise Edition 6.0 SP3” on page 13 for information on installing the iPlanet Application Server.

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://www.sun.com/forte/ffj/resources/sitefaq.html.

---

Uninstalling the Forte for Java IDE (All Platforms)

In the Solaris 8 and Red Hat Linux v. 6.2 operating environments, you can uninstall the Forte for Java IDE by running the uninstall.class file in the directory \( ffj\)-install-dir. If you simply delete your \( ffj\)-install-dir directory without running the uninstaller, you will not be able to reinstall the Forte for Java IDE properly. Simply go to your \( ffj\)-install-dir directory and type the following command at the prompt:

```
$ java uninstall
```

Follow the instructions in the Uninstall wizard to complete the uninstallation process.

For Microsoft Windows systems, you can uninstall the IDE through the Add/Remove Programs utility in the Control Panel.
CHAPTER 2

Setting Up ForteESP With the Forte for Java IDE

This chapter contains information on how to set up the Forte Enterprise Services Presentation Toolkit (ForteESP) with the IDE.

Using the Forte Enterprise Services Presentation Toolkit

ForteESP tools help web page designers generate JSP pages that transform eXtended Markup Language (XML) documents into web pages. ForteESP does not include a Forte for Java module or other component used within the Forte for Java IDE. ForteESP is a separate product that can be installed and used independently of the IDE.

The Web Services feature of Forte for Java, Enterprise Edition uses ForteESP, but ForteESP does not depend on the Web Services module. To use Web Services with ForteESP, you need to configure your IDE options for the ESP servlet location to the URL where your ForteESP servlet is running. You can do this by choosing Tools > Options > ESP Servlet > ESP Servlet Location from the main window of the IDE.

ForteESP includes extensions for Macromedia Dreamweaver and Adobe GoLive, accessed as additional menu items that provide ForteESP-based functionality. It also includes the ForteESP servlet and the XML component registry, the ForteESP administration tool, the ForteESP JSP tag library, and the ForteESP patch tool. ForteESP includes tools for specific additional products. Most users do not install all the tools, just those needed for their environment.
For the complete ForteESP documentation, including installation instructions with troubleshooting tips, download the ForteESP.pdf file (Building JSP Pages That Use XML Data Services), which can be found at: http://www.sun.com/forte/ffj/resources/documentation. The document is part of the Forte for Java Programming series. Read the installation instructions before proceeding.

Before you download the ForteESP tools you want, see http://www.sun.com/forte/ffj/buy.html for downloading information and for links to various download pages.

Click the downloads link for either the Try and Buy version of Forte for Java, Enterprise Edition or the fully licensed version. The following are included with both versions:

- Forte For Java Enterprise Services Presentation Toolkit Plug-in for Dreamweaver is an extension to install in Macromedia Dreamweaver.
- Forte For Java Enterprise Services Presentation Toolkit Plug-in GoLive is an extension to install in Adobe GoLive.
- Forte For Java Enterprise Services Presentation Toolkit, which contains the following archive files:
  - ForteESP-Patchtool.zip – The patch tool corrects HTML tags within the ForteESP tag bodies in a JSP page to make the tags well-formed for XML processing. This correcting step must be done outside the web design tools after the JSP file has been saved to disk.
  - ForteESP-RI.zip – ForteESP tools to install in the J2EE RI 1.2.2.
  - ForteESP-Tomcat.zip – ForteESP tools to install in the Tomcat Web Server.
  - ForteESP-iWS.zip – ForteESP tools to install in the iPlanet Web Server.
  - ForteESP-iAS.zip – ForteESP tools to install in the iPlanet Application Server.

Extract only the files that are needed for your environment. Install them according to the instructions in the complete ForteESP documentation.
CHAPTER 3

Using Startup Command-Line Switches

The startup scripts for all platforms can be run with additional options. These options are specified with flags. In the Solaris 8 operating environment, for example, you might type:

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

In Microsoft Windows systems, you can also put 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 3-1 lists the Forte for Java startup command-line switches for all platforms.

<table>
<thead>
<tr>
<th>Switch Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>-h</code></td>
<td>Prints usage.</td>
</tr>
<tr>
<td><code>-help</code></td>
<td></td>
</tr>
<tr>
<td><code>-jdkhome jdk-home-dir</code></td>
<td>Selects a JDK other than the default JDK. On Microsoft Windows, by default, the IDE checks the registry and selects the latest JDK available.</td>
</tr>
<tr>
<td><code>-hotspot</code></td>
<td>Explicitly specifies the JVM variant to be used.</td>
</tr>
<tr>
<td><code>-server</code></td>
<td></td>
</tr>
<tr>
<td><code>-client</code></td>
<td></td>
</tr>
<tr>
<td><code>-classic</code></td>
<td></td>
</tr>
<tr>
<td><code>-cp:p additional-classpath</code></td>
<td>Prepends the specified classpath onto the IDE’s classpath.</td>
</tr>
<tr>
<td><code>-cp:a additional-classpath</code></td>
<td>Appends the specified classpath to the IDE’s classpath.</td>
</tr>
<tr>
<td><code>-ui UI_class-name</code></td>
<td>Selects a given class as Forte for Java’s look and feel.</td>
</tr>
</tbody>
</table>
### TABLE 3-1 Command-Line Switch Options (Continued)

<table>
<thead>
<tr>
<th>Switch Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-fontsize size</td>
<td>Sets the font size, expressed in points, in the IDE's user interface.</td>
</tr>
<tr>
<td>-locale language [country][variant]</td>
<td>Specifies a locale.</td>
</tr>
<tr>
<td>-single</td>
<td>Launches the IDE from $ffj$-install-dir instead of from your $ffj$-user-dir directory. Runs the Forte for Java IDE in single-user mode. The default mode is multi-user.</td>
</tr>
<tr>
<td>-userdir $ffj$-user-dir</td>
<td>Explicitly specifies the $ffj$-user-dir directory (the location where your user settings are stored). If this option is not used in Solaris or Linux operating environments, the location is $user$-home-dir/$ffj$user30. If this option is not used in Microsoft Windows NT, the user is prompted at the initial startup of the IDE for the $ffj$-user-dir directory to use. On Microsoft Windows systems, this value is stored in the registry for later use.</td>
</tr>
<tr>
<td>-Jjvm-flags</td>
<td>Passes specified flags directly to the JVM.</td>
</tr>
<tr>
<td>-J-Xverify:none</td>
<td>Tells the JVM not to verify the correctness of the bytecode for faster startup. Bytecode verification is a slow process since 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.)</td>
</tr>
<tr>
<td>-J-Xms24m</td>
<td>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.</td>
</tr>
</tbody>
</table>

Solaris and Linux users can modify startup scripts to suit their needs.
Accessing Java Documentation in the IDE

The Java 2 SDK documentation can be downloaded as either a zip file (Microsoft Windows) or a tar file (UNIX) from:
http://java.sun.com/j2se/1.3/docs.html.

Installation instructions can be found at:

If you want to access the Java 2 SDK documentation from inside the Forte for Java IDE, you must download, install, and mount this documentation as a filesystem (see the next section for instructions).

Making Documentation Accessible From the Javadoc Tab

To access documentation from the Javadoc tab in the Forte for Java IDE, you must mount the documentation JAR or zip file (without running unzip or JAR commands) as a Javadoc filesystem. Use this procedure:

1. Open the Explorer window in the IDE.
2. Click the Javadoc tab on the bottom of the Explorer window.
3. Right-click the Javadoc node and choose Add Directory.
4. Browse to the documentation JAR or zip file and click to select it.
5. Click Mount.

If the Forte for Java IDE does not find the Javadoc index files, you are asked if you want to continue. Click Yes to continue.
The documentation is now available from the Javadoc tab.

The previous procedure assumes that the documentation JAR or zip file contains the Javadoc index files at either the root of the archive file or in the api/ subdirectory located at the root of the archive file.

For JAR or zip archive files whose format is incompatible to what is expected by the IDE’s Javadoc facility, you must mount the directory containing the Javadoc files as a filesystem in the IDE. Use this procedure:

1. Extract the documentation archive file (JAR or zip) in your system.

2. Open the Explorer window in the IDE and click the Javadoc tab on the bottom of the Explorer window.

3. Right-click the Javadoc node and choose Add JAR.

4. Browse to the directory which contains the Javadoc index files you extracted from the archive file.

5. Click the directory which contains the documentation, and then click Mount.

For example, on a Microsoft Windows system, when you unzip the j2sdk-1_3_1-doc.zip file in a directory called d:\project, the Javadoc index files are extracted in the d:\projects\docs directory. You need to mount the d:\project\docs directory to be able to access the Java 2 SDK documentation from within the IDE.