



Sun™ ONE Studio 4, Community Edition Getting Started Guide

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Before You Begin

This document provides installation instructions for the Sun™ Open Net Environment (Sun ONE) Studio 4 update 1, 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_02
- Setting up databases with the IDE
- Contents of top-level directories of the IDE
- Registering with Sun ONE Studio Developer Resources
- Updating modules with the Update Center
- Uninstalling the IDE
- Using the startup command-line switches
- Other documentation resources

See the release notes for a list of environments in which you can create the examples in this book. The release notes are available on this web page:

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

Screen shots vary slightly from one platform to another. You should have no trouble translating the slight differences to your platform. Although almost all procedures use the interface of the Sun™ ONE Studio 4 software, occasionally you might be instructed to enter a command at the command line. Here too, there are slight differences 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 Sun ONE Studio 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 Linux environment

If you are 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 Sun ONE Studio 4, Community Edition.

Chapter 2 provides instructions on installing and uninstalling the J2SE, v. 1.4.0_02 platform on your system.

Chapter 3 describes the steps to install the Sun ONE Studio 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 Sun ONE Studio 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.

Chapter 6 describes steps to update the IDE modules using the Sun ONE Studio Update Center. Information about other documentation resources is 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 Sun ONE Studio 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 .cvspass file. Use DIR to list all files. Search is complete.
AaBbCc123	What you type, when contrasted with on-screen computer output	> login 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> save your changes.
<code>AaBbCc123</code>	Command-line variable; replace with a real name or value	To delete a file, type DEL <i>filename</i> .

Related Documentation

Sun ONE Studio 4 documentation includes books delivered in Acrobat Reader (PDF) format, release notes, online help, readme files for example applications, and Javadoc™ documentation.

Documentation Available Online

The documents described in this section are available from the docs.sun.comSM web site and from the documentation page of the Sun ONE Studio Developer Resources portal (<http://forte.sun.com/ffj/documentation>).

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.

- Release notes (HTML format)

Available for each Sun ONE Studio 4 edition. Describe last-minute release changes and technical notes.

- Getting Started guides (PDF format)

Describe how to install the Sun ONE Studio 4 integrated development environment (IDE) on each supported platform and include other pertinent information, such as system requirements, upgrade instructions, application server information, command-line switches, installed subdirectories, database integration, and information on how to use the Update Center.

- *Sun ONE Studio 4, Community Edition Getting Started Guide* - part no. 816-7871-10
- *Sun ONE Studio 4, Enterprise Edition for Java Getting Started Guide* - part no. 816-7859-10
- *Sun ONE Studio 4, Mobile Edition Getting Started Guide* - part no. 816-7872-10

- Sun ONE Studio 4 Programming series (PDF format)

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

- *Building Web Components* - part no. 816-7869-10

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* - part no. 816-7863-10
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. 816-7864-10
Describes how to build EJB components (session beans, message-driven beans, and entity beans with container-managed or bean-managed persistence) using the Sun ONE Studio 4 EJB Builder wizard and other components of the IDE.
- *Building Web Services* - part no. 816-7862-10
Describes how to use the Sun ONE Studio 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.
- *Using Java DataBase Connectivity* - part no. 816-7870-10
Describes how to use the JDBC™ productivity enhancement tools of the Sun ONE Studio 4 IDE, including how to use them to create a JDBC application.
- Sun ONE Studio 4 tutorials (PDF format)
These tutorials demonstrate how to use the major features of each Sun ONE Studio 4 edition.
 - *Sun ONE Studio 4, Community Edition Tutorial* - part no. 816-7868-10
Provides step-by-step instructions for building a simple J2EE web application.
 - *Sun ONE Studio 4, Enterprise Edition for Java Tutorial* - part no. 816-7860-10
Provides step-by-step instructions for building an application using EJB components and Web Services technology.
 - *Sun ONE Studio 4, Mobile Edition Tutorial* - part no. 816-7873-10
Provides step-by-step instructions for building a simple application for a wireless device, such as a cellular phone or personal digital assistant (PDA). The application will be compliant with the Java 2 Platform, Micro Edition (J2ME™ platform) and conform to the Mobile Information Device Profile (MIDP) and Connected, Limited Device Configuration (CLDC).

You can also find the completed tutorial applications at:

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

Online Help

Online help is available inside the Sun ONE Studio 4 IDE. You can open help by pressing the help key (F1 in Microsoft Windows and Linux environments, Help key in the Solaris environment), or by choosing Help → Contents. Either action displays a list of help topics and a search facility.

Examples

You can download examples that illustrate a particular Sun ONE Studio 4 feature, as well as completed tutorial applications, from the Sun ONE Studio Developer Resources portal at:

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

Javadoc Documentation

Javadoc documentation is available within the IDE for many Sun ONE Studio 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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Please include the part number (816-7871-10) of your document in the subject line of your email.

Preparing for Installation

This chapter contains information needed to prepare for the installation of the Sun ONE Studio 4 update 1, Community Edition IDE (hereafter referred to as “Sun ONE Studio 4 IDE” or “the IDE”).

Overview of the Installation

The following steps outline the general process of installing the Sun ONE Studio 4 IDE on your system. This process includes the validation, customization, and registration of your Sun ONE Studio 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_02 (hereafter referred to as “J2SE, v. 1.4.0 platform”) from the system in which you plan to install the Sun ONE Studio 4 IDE.

Note – The recommended option is the J2SE, v. 1.4.0_02 platform with the Sun ONE Studio 4 IDE. Read Chapter 2 for detailed installation instructions.

2. Verify that the system on which you are installing the Sun ONE Studio 4 software meets the minimum system requirements. See “System Requirements” on page 3 for more information.
3. Determine which software you want the Sun ONE Studio 4 IDE installer to install. The Sun ONE Studio 4 update 1, 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 Sun ONE Studio 4 IDE. If you do, identify a different directory in which to install Sun ONE Studio 4 update 1, 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 Sun ONE Studio 4 update 1, Community Edition.

5. Determine whether you want to keep your current Sun ONE Studio 4 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 Sun ONE Studio 4 update 1, 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 Sun ONE Studio 4 IDE installation by setting up the PointBase database server. Refer to the instructions in Chapter 5.

Supported Platforms

Sun ONE Studio 4 update 1, Community Edition has been tested with the following systems:

- Microsoft Windows 2000 Professional system (with latest service packs)
- Microsoft Windows XP Professional system
- Sun Linux 5.0
- 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 Sun ONE Studio 4 update 1, Community Edition System Requirements

Supported Platforms	Free Hard Disk Space Required for Installation	Minimum Configuration
Windows 2000, Windows XP, Windows NT4 with SP6, Windows 98 (2nd edition only) ¹	125 MB	Pentium III, 500 MHz, 256 MB RAM
Red Hat Linux 7.2, Sun Linux 5.0	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 Sun ONE Studio 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_02 platform (hereafter called 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 Sun ONE Studio 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_02 of the J2SE platform is installed

If you run the IDE without v. 1.3.1 or v. 1.4.0_02 of the J2SE platform installed or available, you get error and warning messages. Version 1.4.0_02 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.

If you do have the software installed on your system, and you are using the Solaris operating environment, skip to step 3. If you do have the software installed on your system and you are using the Linux or Microsoft Windows operating environments, review the information on uninstalling the J2SE platform software near the end of this chapter and continue on to Chapter 3.

2. If you do not have v. 1.3.1 or v. 1.4.0_02 of the J2SE platform available to your system, do the following:

a. Obtain the J2SE, v. 1.4.0_02 installer from

<http://www.sun.com/software/sundev/jde/buy/index.html> **or from the Sun ONE Studio 4 update 1 companion CD.**

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

Read the following sections 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 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 IDE.

The `solaris_patch_installer` is provided with the Sun ONE Studio 4 update 1 companion CD and is also available from the Sun ONE Studio 4 update 1 product download page. The installer 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 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_02-windows-i586.exe` installer file from <http://www.sun.com/software/sundev/jde/buy/index.html> into *j2se-directory* or locate the installer on the Sun ONE Studio 4 update 1 companion CD.**

Note – Ensure that the *j2se-directory*, in which you download the software, is located on a disk that has plenty of available space. See “System Requirements” on page 3 for details.

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_02-windows-i586.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 Add/Remove Programs utility.

3. Start the installation wizard by double-clicking the `j2sdk-1_4_0_02-windows-i586.exe` file in the *j2se-directory* or from the Sun ONE Studio 4 update 1 companion 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 Sun ONE Studio 4 update 1 software.

Installing the J2SE Platform in the Linux Environment

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

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

1. If you have not already done so, download the `j2sdk-1_4_0_02-linux-i586-rpm.bin` file into *j2se-directory*, or locate the file on the Sun ONE Studio 4 update 1 companion CD.

Note – Ensure that the *j2se-directory*, in which you download the software, is located on a disk that has plenty of available space. See “System Requirements” on page 3 for more information.

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_02-linux-i586-rpm.bin` and specify the directory, *j2se-directory*, in which 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_02-linux-i586-rpm.bin` file on the Sun ONE Studio 4 update 1 companion CD, or type the following commands:**

```
$ cd j2se-directory
$ chmod a+x j2sdk-1_4_0_02-linux-i586-rpm.bin
$ j2sdk-1_4_0_02-linux-i586-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_02-linux-i586-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 location 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_02-linux-i586.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 Sun ONE Studio 4 update 1 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. To install the J2SE, v.1.4.0_02 platform, download the latest patches from <http://www.java.sun.com/j2se/1.4/download.html> and follow the directions provided for installing the J2SE, v.1.4.0_02 platform in a Solaris 8 operating environment.

Installing Patches in a Solaris 8 Operating Environment

Note – If you are unsure about installing Solaris patches in your Solaris environment, contact your 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 the Sun ONE Studio download web site at <http://www.sun.com/software/sundev/jde/buy/index.html> or from the Sun ONE Studio 4 update 1 companion 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. See “System Requirements” on page 3 for details.

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

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

Note – The `gzcac` 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 that are necessary 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`:

```
# 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 unsure about installing Solaris packages or the J2SE, v. 1.4.0 platform in your Solaris environment, contact your 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.**

Follow the instructions in the next section.

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

Note – If you are unsure about installing Solaris packages or the J2SE, v. 1.4.0 platform in your Solaris environment, contact your 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_02-solaris-sparc.tar.Z` file into the *j2se-directory*. You can also obtain the file from the Sun ONE Studio 4 update 1 companion 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 Sun ONE Studio 4 update 1 companion 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_02-solaris-sparc.tar.Z` from the product download page, or obtain the file from the Sun ONE Studio 4 update 1 companion 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 on the Sun ONE Studio 4 update 1 companion 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_02-solaris-sparc.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 location is the same place 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 `SUNWl1j3dv` and `SUNWl1j3rt` for localization support in version 1.3.0, remove them by using the following command:

```
# pkgrm SUNWl1j3dv SUNWl1j3rt
```

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 the next section for more information.

Otherwise, continue to Chapter 3 for instructions on installing the Sun ONE Studio 4 update 1 software.

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

Note – If you are unsure about installing Solaris packages or the J2SE, v. 1.4.0 platform in your Solaris environment, contact your 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_02-solaris-sparcv9.tar.z` file into the `j2se-64bit-directory`. You can also obtain the file from the Sun ONE Studio 4 update 1 companion CD.**

Note – Ensure that the *jse-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 Sun ONE Studio 4 update 1 companion 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.

a. 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.

b. 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.

c. Click Download `j2sdk-1_4_0_02-solaris-sparcv9.tar.Z` from the product download page or obtain the file from the Sun ONE Studio 4 update 1 companion CD, and specify where you want to save the file.

d. Verify that the size of the downloaded file is the same as the file size indicated on the download page or from the Sun ONE Studio 4 update 1 companion CD.

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_02-solaris-sparcv9.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 by using the 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 Sun ONE Studio 4 update 1 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 the 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 system administrator if you are unsure how to remove the Solaris J2SE, 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 Sun ONE Studio 4 IDE

This chapter provides step-by-step instructions on how to install your Sun ONE Studio 4, Community Edition software from the product CD or from files downloaded electronically from the web. It contains installation instructions for each of the supported platforms. The subdirectories installed with the IDE are described, and uninstallation instructions are also provided.

You can install Sun ONE Studio 4, Community Edition as a standalone product or as part of a suite of products. When you install using the CD-ROM, you can select the product configuration during the install process. If you acquire this software as part of an electronic download, the product selection is already set for you when you start the installer.

Supporting Previous Software Releases

To upgrade your previous version of the Forte™ for Java IDE to Sun ONE Studio 4 update 1 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 the Sun ONE Studio 4 update 1 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 Sun ONE Studio 4 update 1 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 Sun ONE Studio 4 installation between multiple users, you must install the IDE into a shared directory.

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 placement 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\Sun Microsystems, 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 the troubleshooting information in Chapter 7, if you want to use a different location for your user directory.

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

Installing Sun ONE Studio 4 Software on the Supported Platforms

These instructions describe the installation process for each of the supported platforms. You can install the Sun ONE Studio 4 IDE in two ways:

- Use the graphical user interface (GUI) installer, described in “Installing Sun ONE Studio 4 Software on the Supported Platforms” on page 24.
- Perform a command-line installation if you do not have graphical user interface capabilities or do not want to use them. See “Installing the IDE With the Command-Line Options” on page 32.

Ensuring Sufficient Free Disk Space

Running the installer requires 50 megabytes of free disk space in the `/tmp` directory on the computer that contains the product CD-ROM. Ensure that you have this space available before starting the installation process. This requirement applies to all the supported platforms.

Installation on Microsoft Windows Systems

You can install the Sun ONE Studio 4 IDE on a supported Microsoft Windows system by using the GUI installer on the product CD or by downloading an `.exe` file from the product download web page.

Note – You must have the J2SE, v. 1.3.1 platform or J2SE, v. 1.4.0_02 platform installed on your system before installing the IDE. The recommended option is the J2SE, v. 1.4.0_02 platform with the Sun ONE Studio 4 IDE. Read Chapter 2 for instructions on installing the software.

1. Start the installation.

- If you are installing the IDE from a CD, insert the Sun ONE Studio 4 update 1 product CD. The Product Selection pane appears.
If the installer does not start, the auto run feature might be disabled. Follow these steps:
 - a. Click **Start**, click **Run**, and browse to the CD directory.
 - b. Select `startup.exe` and click **OK**.
 - c. Click **Run** (or double-click `setup.exe`).
- If you are performing a web installation and have not already done these tasks, you must:
 - a. Download the `ffj_ce_win32_en.exe` installer file from the Sun ONE Studio 4 update 1 download page available at:
<http://www.sun.com/software/sundev/jde/buy/index.html>
 - b. Save the file into the `s1studiownload-directory`.
 - c. Double-click the `ffj__ce_win32_en.exe` file in the `s1studio-download-directory`. The Welcome pane appears.
 - d. Skip to Step 4.

Note – If you encounter errors at any point during the Sun ONE Studio 4 installation, refer to Chapter 7 for troubleshooting hints.

2. From the Product Selection pane, select Sun ONE Studio 4 update 1, Community Edition.

A brief description of this edition of the IDE appears under the list of products.

3. Click Install.

Note – During the installation process, the Installation wizard displays a blue Sun ONE Studio pane with text that states “Launching and Running Installer.” Other installation panes appear in the foreground. Do not close either pane. If you bring the larger blue pane to the foreground, it might hide the secondary installation pane. Keep both panes visible, with the larger blue pane behind the smaller pane.

4. When the InstallShield wizard’s welcome screen appears, click Next to continue.

The license agreement pane appears.

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

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

The installer 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.

Sun ONE Studio 4 update 1 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.

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

8. Select the Sun ONE Studio 4 update 1 components you want to install, and click Next.

The following components are available:

- Core Platform and Modules are required (indicated by a green check mark)
- PointBase Server 4.2 Restricted Edition (deselect this component by unchecking the box)

9. Determine whether you want to associate .java and .nbm files with the IDE. Click Next to continue.

If you decide to associate these file types, the IDE starts when you open these files.

10. Review the installation summary pane that displays the directory location of the IDE, the features you have selected, and the total size of the installation. Click Next.
11. When the installation is complete, click Finish to exit the installation wizard.
12. Review the release notes file for important information regarding the release. You can access the release notes from either one of these locations:
 - The product CD's `image\Documentation\relnote41.html` file
 - <http://forte.sun.com/ffj/documentation/index.html>
13. Continue to Chapter 4 for information on setting up the Sun ONE Studio 4 IDE.

Installation in the Linux Environment

You can install the IDE in a supported Linux environment by using the Sun ONE Studio 4 update 1 product CD or by electronically downloading a `.bin` file from the product download web page.

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 Sun ONE Studio 4 IDE. The recommended option is the J2SE, v. 1.4.0_02 platform with the Sun ONE Studio 4 IDE. Read Chapter 2 for instructions on installing the software.

1. Start the installation.

- If you are installing the software from the Sun ONE Studio 4 update 1 product CD, insert the CD.

a. Answer yes if you are prompted about whether you want to use Autorun to install the CD. The Product Selection pane appears.

b. Continue with Step 2.

- If you are performing a web installation and have not already done these tasks, you must:

a. Download the `ffj_ce_linux_en.bin` installer file from <http://www.sun.com/software/sundev/jde/buy/index.html>

b. Save the file into the *s1studio-download-directory*.

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

If you are installing to your local system, set the `DISPLAY` environment variable 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 a C shell, type the following in your superuser session command prompt:

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

- d. Set the execute permission on the `ffj_ce_linux_en.bin` file, and execute the file by typing the following:

```
$ cd $1studio-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 Sun ONE Studio 4 installation, refer to Chapter 7 for troubleshooting hints.

e. Skip to Step 4.

2. **When the Product Selection wizard appears, select Sun ONE Studio 4 update 1, Community Edition.**

A description of this edition of the IDE appears under the list of products.

3. **Click Install.**

Note – During the installation process, the installation wizard displays a blue Sun ONE Studio pane with text that states “Launching and Running Installer.” Other installation panes appear in the foreground. Do not close either pane. If you bring the larger blue pane to the foreground, it might hide the secondary installation pane. Keep both panes visible, with the larger blue pane behind the smaller pane.

4. **When the InstallShield wizard’s welcome screen appears, click Next to continue.**

The license agreement pane appears.

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

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

The installer 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 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.

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 Sun ONE Studio 4 update 1 components you want to install, and click Next.**

The following components are available:

- Core Platform and Modules are required (indicated by a green check mark)
- PointBase Server 4.2 Restricted Edition (deselect this component by unchecking the box)

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

The installation wizard installs the Sun ONE Studio 4 update 1 components you selected.

10. **Review the installation summary pane that displays the directory location of the IDE, the features you have selected, and the total size of the installation. Click Next.**

11. **When the installation is complete, click Finish to exit the installation wizard.**

12. **Review the release notes file for important information regarding the release. You can access the Release Notes from either one of these locations:**

- The product CD's `image\Documentation\relnote41.html` file
- <http://forte.sun.com/ffj/documentation/index.html>

13. **Continue to Chapter 4 for information on setting up the Sun ONE Studio 4 IDE.**

Installation in the Solaris Operating Environments

You can install the IDE in a supported Solaris operating environment by using the product CD or by downloading a .bin file from the product web page.

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 IDE. The recommended option is the J2SE, v. 1.4.0_02 platform with the Sun ONE Studio 4 IDE. Read Chapter 2 for instructions on installing the software.

1. **Start the installation.**

If you are installing software from the Sun ONE Studio 4 update 1 product CD, insert the CD. (If you are running the Solaris 7 operating environment and you insert the product CD, a message appears stating that the product is not supported on Solaris 7 operating environment.)

a. If you are prompted to use Auto run, answer yes. The Product Selection pane appears.

b. Continue with Step 2.

■ If you are performing a web installation:

a. Download the `ffj_ce_solsparc_en.bin` installer file from
`http://www.sun.com/software/sundev/jde/buy/index.html`.

b. Save the file into the `s1studio-download-directory`.

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

If you are installing to your local system, set the `DISPLAY` environment variable 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 a C shell, type the following in your superuser session command prompt:

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

d. Set the execute permission on the `ffj_ce_solsparc_en.bin` file and execute the file by double-clicking it or by typing the following:

```
$ cd s1studio-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 Sun ONE Studio 4 installation, refer to Chapter 7 for troubleshooting hints.

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

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

f. Skip to Step 4.

2. **From the Product Selection pane, select Sun ONE Studio 4 update 1, Community Edition.**

A description of this edition of the IDE appears under the list of products.

3. **Click Install.**

Note – During the installation process, the installation wizard displays a blue Sun ONE Studio pane with text that states “Launching and Running Installer.” Other installation panes appear in the foreground. Do not close either pane. If you bring the larger blue pane to the foreground, it might hide the secondary installation pane. Keep both panes visible, with the larger blue pane behind the smaller pane.

4. **When the InstallShield Wizard’s welcome screen appears, click Next to continue.**

The license agreement pane appears.

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

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

The installer 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.**

Sun ONE Studio 4 update 1 software 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.

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 Sun ONE Studio 4 update 1 components you want to install, and click Next.**

The following components are available:

- Core Platform and Modules are required (indicated by a green check mark)
- PointBase Server 4.2 Restricted Edition (deselect by unchecking the box)

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

The installation wizard installs the Sun ONE Studio 4 update 1 components you selected.

10. Review the installation summary pane that displays the directory location of the IDE, the features you have selected, and the total size of the installation. Click Next.
11. When the installation is complete, click Finish to exit the installation wizard.
12. Review the release notes file for important information regarding the release. You can access the release notes from either of these locations:
 - The product CD's `image\Documentation\relnote41.html` file
 - <http://forte.sun.com/ffj/documentation/index.html>
13. Continue to Chapter 4 for information on setting up the IDE.

Installing the IDE With the Command-Line Options

If you prefer to install the Sun ONE Studio 4 IDE using the command line, follow these steps. You need to create a file called *installer.sp* and add to the file the command-line options you want to use to install the IDE.

1. **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 Sun ONE Studio 4 product CD in the `image/ffj_installers_ce` directory.**

Save the installer file into the *s1studio-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 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 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. Skip to Step 4.

2. **Select which method of command-line installation you want to use.**

There are two ways to use the command-line options for this edition of the IDE. Select one of 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` file 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 not fully supported for the Sun ONE Studio 4 update 1 release, such as the Solaris 8 operating environment (Intel platform).

3. If you chose to use the *installer.sp* file for your command-line installation, create the appropriate file in the *s1studio-download-directory*.

The IDE installer reads 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 *s1studio-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 the file in the *s1studio-download-directory*.

If you chose to type the installation options directly on the command line, 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 Sun ONE Studio 4 update 1 Command-Line Installation Options

Installation Options	Description
<code>fortehome=s1studio-install-dir</code> <code>fh=s1studio-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 configures 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 4.2 Restricted Edition. The default value is <code>yes</code> .
<code>-silent</code>	This option is specified on the command line and not in the <i>installer.sp</i> file. If not specified, the installation wizard appears. If specified, any error messages are 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` file might have the following contents:

```
fh=C:\ffj
jh=C:\j2sdk1.4.0_02
pi=yes
```

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

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

6. Execute the installer from the command line.

- If you chose to use the *installer.sp* file, activate the installer from the *s1studio-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 s1studio-download-directory
C:\s1studio-download-directory> ffj_ce_win32_en.exe -silent
```

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

```
$ cd s1studio-download-directory
$ ffj_ce_solsparc_en.bin -silent
```

The installer displays the following in 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 33 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_02 -Dpi=yes -jar  
ffj_ce_en.jar
```

Similarly, in a Solaris or Linux environment, type the following in a command prompt window:

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

Any error messages are displayed in the command prompt or terminal window.

Note – If you encounter errors at any point during Sun ONE Studio 4 installation, refer to Chapter 7 for troubleshooting hints.

7. Continue to Chapter 4 for information on setting up the Sun ONE Studio 4 IDE.

Finding Installation Subdirectories

After you have installed the Sun ONE Studio 4 IDE, the subdirectories listed in TABLE 3-2 can be found under *s1studio-install-dir*, your Sun ONE Studio 4 update 1 installation directory.

TABLE 3-2 Sun ONE Studio 4 Installation Subdirectories

Subdirectory Name	Description
/_uninst	Contains the files used to uninstall the IDE.
/beans	Contains JavaBeans™ components installed in the IDE.
/bin	Includes the Sun ONE Studio 4 startup scripts (as well as the <code>ide.cfg</code> file in Microsoft Windows installations).
/docs	Contains the Sun ONE Studio 4 help files and other miscellaneous documentation.

TABLE 3-2 Sun ONE Studio 4 Installation Subdirectories (*Continued*)

Subdirectory Name	Description
/lib	Contains the JAR files that make up the IDE's core implementation and the open APIs.
/modules	Stores Sun ONE Studio 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.
/system	Includes files and directories used by the IDE for special purposes. Go to your individual <code>s1studio-user-dir/system</code> directory to get the <code>ide.log</code> , which provides information useful when requesting technical support, and to view <code>project.basic</code> and <code>project.last</code> files, which contain information on Sun ONE Studio 4 projects. On a Microsoft Windows system, this <code>s1studio-user-dir/system</code> directory contains the project-specific files under <code>project.basic_hidden</code> and <code>project.last</code> files.
/tomcat401	Contains Tomcat-specific files.
update_tracking.xml	Contains information used by the Update Center.

Uninstalling the Sun ONE Studio 4 update 1 IDE

An uninstaller wizard is available to assist you in the uninstallation of the IDE. Follow these steps to uninstall your copy of the Sun ONE Studio 4 update 1 IDE:

1. **Start the uninstaller from the *s1studio-install-dir/_uninst* directory.**
 - On a Microsoft Windows system, execute the `uninstaller.exe` file located in the *s1studio-install-dir/_uninst* directory, or use the Add/Remove Program utility in the Control Panel.
 - In a supported Solaris operating environment or Linux environment, ensure that your `DISPLAY` environment variable is defined correctly, and then type:

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

The uninstaller's Welcome screen appears.

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

A list of Sun ONE Studio 4 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 Sun ONE Studio 4 IDE

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

Setting Up Your Sun ONE Studio 4 IDE

When you first start up the Sun ONE Studio 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 Sun ONE Studio 4 IDE.

- For a Microsoft Windows system, double-click the Sun ONE Studio 4 CE icon created on your desktop, or click the Start menu and choose Programs → Sun Microsystems → Sun ONE Studio 4 CE → Sun ONE Studio. Alternatively, from a command prompt window, type:

```
C:\>cd s1studio-install-dir\bin  
C:\s1studioinstall-dir\bin>runidew.exe
```

If this is the first time you are installing this version of Sun ONE Studio 4 on a Microsoft Windows system, you are prompted for the user directory.

- For the Solaris or Linux environments, type:

```
$ cd s1studio-install-dir/bin
$ runide.sh
```

Skip to Step 3.

2. (Microsoft Windows only) 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 create 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 from 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\Sun Microsystems, 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 the IDE if the UserDir value is not explicitly deleted from the Microsoft Windows Registry. Refer to the 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.

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

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

- 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.

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

The IDE imports the settings.

b. 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 click Finish, the IDE continues with the startup and several windows appear. The registration wizard appears. Continue with Step 10.
- If you click Next, the Module Installation pane appears.

7. In the Module Installation pane, specify the module you want to enable or disable.

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

- a. Click the Enabled property value for the module.
- b. Click a second time, and select False to disable the module.

8. Click Next to continue with the setup, or click Finish to continue with the IDE startup.

- If you click Finish, the IDE continues with the startup and several windows appear. The registration wizard appears. Continue with Step 10.
- If you click Next, the Update Center pane appears.

9. From the Update Center pane, specify how often you want the IDE to automatically check the Update Center. Select the Sun ONE Studio Update Center as the 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.

10. From the registration wizard, select your preferred method of registration.

- Select “Register using the web” to register your Sun ONE Studio 4 software using the web, or to edit your existing registration information if you have changed Sun ONE Studio 4 editions.

The registration page appears on your web browser. You can register the product, create a new Sun ONE Studio 4 Developer Resources account, or update your account.

Registering your Sun ONE Studio 4 software 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 Sun ONE Studio 4 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 Sun ONE Studio 4 IDE)

If you are already registered with Sun ONE Studio 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 Sun ONE Studio 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 Sun ONE Studio 4 IDE.

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

11. 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 wizard's instructions 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.

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

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

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

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

Alternatively, you can put the options in the *s1studio-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 -help	Prints usage.
-jdkhome <i>jdk-home-dir</i>	Selects an SDK other than the default SDK. On Microsoft Windows systems, by default, the IDE checks the registry and selects the latest SDK available.
-hotspot -server -client -classic -native -green	Explicitly specifies the Java virtual machine (JVM™) variant to be used. The terms “Java virtual machine” and “JVM” mean a virtual machine for the Java platform.
-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	Starts the IDE from <i>s1studio-install-dir</i> instead of from your <i>s1studio-user-dir</i> directory. Runs the Sun ONE Studio 4 in single-user mode. The default mode is multiuser.

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

Switch Options	Description
<code>-userdir <i>s1studio-user-dir</i></code>	Explicitly specifies the <i>s1studio-user-dir</i> directory (the location where your user settings are stored). 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>s1studio-user-dir</i> directory to use. On Microsoft Windows systems, this value is stored in the registry for later use. If this option is not used in Solaris or Linux operating environments, the location is <i>user-home-dir/ffjuser40ce</i> .
<code>-Jvm-flags</code>	Passes specified flags directly to the JVM.
<code>-J-Xverify:none</code>	Tells the JVM not to verify the correctness of the byte code 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 Sun ONE Studio 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 Sun ONE Studio 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 Sun ONE Studio 4 IDE installation. For information on using this database and database tables, see the PointBase documentation at either of these locations:

- `s1studio-install-dir/pointbase/server/GettingStarted.html`
- `s1studio-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 menu of the IDE.**

Alternatively, on Microsoft Windows systems, start the PointBase server by choosing Programs→ Sun Microsystems→ Sun ONE Studio 4 CE → PointBase → 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 menu 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:

- **On Microsoft Windows systems, start the PointBase client console by choosing Programs→ Sun Microsystems → Sun ONE Studio 4 CE → PointBase → Console from the Start menu.**

A Connect to Database dialog box appears. Click OK to continue.

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

```
$ sh s1studio-install-dir/pointbase/client/Console
```

A Connect to Database dialog box appears. Click OK to continue.

Stopping the PointBase Client Console

To stop the client console, close 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 Sun ONE Studio `lib/ext` directory before you start the Sun ONE Studio 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.

Where to Go From Here

This chapter contains information about available documentation resources and how to obtain IDE updates from the Sun ONE Studio Update Center.

Updating Modules With the Update Center

Once you have Sun ONE Studio 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 menu of the IDE.

The Update Center wizard appears.

3. Select Sun ONE Studio 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 **Sun ONE Studio Update Center** login name and password.

See Step 10 in “Setting Up Your Sun ONE Studio 4 IDE” on page 39 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/feedback/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 Sun ONE Studio Developer Resources site at <http://forte.sun.com/ffj/index.html> also contains a wealth of information and support resources, including Sun ONE Studio 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 Sun ONE Studio 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 patch ID 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 installing Solaris packages, contact your 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 Sun ONE Studio 4 IDE

TABLE 7-2 describes some errors you might encounter during the IDE installation.

TABLE 7-2 Sun ONE Studio 4 IDE Installation Errors

Problem	Solution
Receipt of the following error message while installing Sun ONE Studio 4 software: 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 Sun ONE Studio 4 IDE Installation Errors (*Continued*)

Problem	Solution
The Sun ONE Studio 4 installer fails and displays a message that there is not enough available disk space to use for installation. However, the filesystem you specified to use for installing the IDE has plenty of available disk space.	<p>Determine if the filesystem you have specified is symbolically linked to another filesystem whose 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/slstudio</code> as the IDE installation directory, the Sun ONE Studio 4 installer does not recognize the symbolic link to <code>/export/home</code>, which has 2 GB of available disk space. The installer recognizes only the <code>/</code> directory, which is the target directory for <code>/opt</code> and has only 100 MB.</p> <p>To correct the problem, directly specify the filesystem with the larger available disk space. For the preceding example, specify <code>/export/home</code> as the installation directory.</p>
Receipt of the following error message while installing the Sun ONE Studio 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. 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 Sun ONE Studio 4 installer looks like it has hung, after startup. No messages are displayed.	<p>Ensure that you 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 performing 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 Sun ONE Studio 4 IDE installer exits without installing the product. No messages are displayed.	<p>Here are the possible causes and solutions:</p> <ul style="list-style-type: none"> • The file you have downloaded from the Sun ONE Studio 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 <code>installer.sp</code> file. Check the file and correct any incorrect command-line parameter setting. Run the IDE installer again. • Run the installer launcher (<code><installer>.exe</code> file or <code><installer>.bin</code> file) with the option <code><installer>.exe/bin -is:log log.txt</code>. Check <code>log.txt</code> for possible errors

TABLE 7-2 Sun ONE Studio 4 IDE Installation Errors (*Continued*)

Problem	Solution
The <code>-is:tempdir</code> command-line parameter is not working.	Ensure that you are using the correct syntax for the command-line parameter for the installer. For example, in a Solaris environment, the syntax is as follows: <code>ffj_ce_solsparc_en.bin -is:tempdir temporary-directory</code>
(Solaris environment only) Not able to eject the product CD when running the installer manually. (This problem occurs when you are installing the IDE from the merged product CD. Hence, two CD-ROMs are involved in the installation.)	When running the installer manually, do not run it from within its own directory.

Starting Up the Sun ONE Studio 4 IDE

TABLE 7-3 describes some errors you might receive during startup and configuration of the newly installed Sun ONE Studio 4 software.

TABLE 7-3 Sun ONE Studio 4 IDE Startup and Configuration Errors

Problem	Solution
Receipt of an error message similar to the following during the IDE startup in a supported Solaris environment: Error: Java 2 SDK search failed to find a suitable J2SDK!	Reinstall the SDK while logged in as superuser and ensure that the installation directory is on the root level.
Receipt of an error message similar to the following during the IDE startup in a supported 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_02 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.

TABLE 7-3 Sun ONE Studio 4 IDE Startup and Configuration Errors (*Continued*)

Problem	Solution
<p>Receipt of the following error message after starting the IDE: Error: Unable to load java.dll</p>	<p>Ensure 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_02 platform.</p>
<p>Sun ONE Studio 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: 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.</p>	<p>Check the Java environment variables already set prior to starting the IDE and unset them.</p> <p>The values of the \$JAVA_PATH and \$JDK_HOME 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 -jdkhome 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 Sun ONE Studio 4 IDE in a Microsoft Windows environment, the location of the user directory is recorded in the Microsoft Windows Registry under HKEY_CURRENT_USER/Software/Sun Microsystems, Inc./Forte for Java/CE/4.0. This value is not deleted when you uninstall the Sun ONE Studio 4 IDE. Therefore, when you install another version of the Sun ONE Studio 4 IDE, the user directory specified in a previous Sun ONE Studio 4 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 Sun ONE Studio 4 IDE 2. In a command window, type regedit to start the Microsoft Windows Registry editor. 3. From the Registry editor, expand the HKEY_CURRENT_USER registry and the keys for Software/Sun Microsystems, Inc./Forte for Java/CE/4.0 4. Right-click the UserDir value and choose Delete from the contextual menu. 5. Install the Sun ONE Studio 4 again. 6. After installation, start the Sun ONE Studio 4 IDE. When you are prompted, specify a new location for the user directory.

TABLE 7-3 Sun ONE Studio 4 IDE Startup and Configuration Errors *(Continued)*

Problem	Solution
(Solaris environment only) Receipt of the following error message: Cannot find product /product.xml on your computer.	<p>Stop and start volume management (vold) on the system, and run the installer again.</p> <p>To stop volume management:</p> <ol style="list-style-type: none">1. Ensure that media are not being used. <p>If you are not sure whether you have found all users of the media, use the <code>fuser</code> command.</p> <ol style="list-style-type: none">2. Become superuser.3. Type the <code>volmgt stop</code> command: <code># /etc/init.d/volmgt stop</code> <code>#</code> <p>To restart volume management:</p> <ol style="list-style-type: none">1. Become superuser.2. Type the <code>volmgt start</code> command: <code># /etc/init.d/volmgt start</code> volume management starting

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 *SPARC Platform Edition*

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

Port Usage in the Sun ONE Studio 4 IDE

TABLE B-1 provides a listing of the ports used in the Sun ONE Studio 4, Community Edition IDE. It includes ports used by Sun ONE Studio 4 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 Sun ONE Studio 4, Community Edition

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 options panel.

TABLE B-1 Port Usage in Sun ONE Studio 4, Community Edition (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 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 Sun ONE Studio 4, Community Edition (*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, <code>s1studioinstall-dir/tomcat401/conf/server.xml</code>. Be aware that you edit the <code>server.xml</code> file at your own risk. Be sure to create a backup version of your working <code>server.xml</code> file before beginning to edit.</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 (<code>server.xml</code>). <p>The <code>server.xml</code> file appears in the Source Editor. You can now edit <code>server.xml</code> 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 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.

