

Telelogic
Rhapsody
Installation Guide



IBM®

Rhapsody®

Installation Guide



Before using the information in this manual, be sure to read the “Notices” section of the Help or the PDF available from **Help > List of Books**.

This edition applies to Telelogic Rhapsody 7.4 and to all subsequent releases and modifications until otherwise indicated in new editions.

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Welcome to Telelogic Rhapsody

Systems engineers and software developers use Telelogic Rhapsody® to create either embedded or real-time systems. However, Rhapsody goes beyond defining requirements and designing a software solution. Rhapsody implements the solution from design diagrams and automatically generating ANSI-compliant code that is optimized for the most widely used target environments.

With Rhapsody, you have the ability to analyze the intended behavior of the application much earlier in the development cycle by generating code from UML and SysML diagrams and testing the application as you create it. Rhapsody can be used for any of the following:

- ◆ Reactivity—Statecharts and events
- ◆ Time-based behavior—Timeouts
- ◆ Multi-threaded architectures—Active classes and protected classes
- ◆ Real-time environments—Direct support for several real-time, operating systems (RTOS)

Rhapsody Installation Guide Content

The *Rhapsody Installation Guide* describes how to install the Rhapsody software. Rhapsody might have special installation requirements that depend on the unique nature of your system. This guide describes the following:

- ◆ Software prerequisites
- ◆ Step descriptions and guidance for the Rhapsody Installation Wizard
- ◆ Installation instructions for both Windows and Linux systems
- ◆ Installation information for Rhapsody's add-on products, such as DoDAF and the systems engineering features
- ◆ Special instructions relating to Rhapsody for other products, such as Eclipse and Java

Additional Resources

In addition to the *Rhapsody Installation Guide*, you may find useful information in these resources:

- ◆ *Readme* file (release notes) for your Rhapsody version are included in the Rhapsody product download in the `readme.htm` file (contains “What’s New” in this release and specific hardware and software requirements, as well as any limitations)
- ◆ *Fixed Defects List* of the corrected defects included in this product release (available at the [Telelogic Rhapsody Support Site](#))
- ◆ *Telelogic Lifecycle Solutions Licensing Guide* (available at <https://support.telelogic.com/lifecycle-solutions>)

Third-party software products that are being installed for use with Rhapsody provide separate installation instructions.

Note

It is important that you read this installation guide and all related Rhapsody information and any third-party providers before performing the Rhapsody product installation.

If you need more help with the installation, the support staff can provide troubleshooting assistance, as described in [Technical Support and Documentation](#).

Installing Rhapsody

Before installing Rhapsody, you should also become familiar with the information provided in the [Additional Resources](#).

This section describes the steps required to install a new version of Rhapsody:

- ◆ [Rhapsody Licenses](#)
- ◆ [Software Prerequisites](#)
- ◆ [Installing Rhapsody on Windows Systems](#)
- ◆ [Performing Installations on Linux Systems](#)
- ◆ [Modifying, Repairing, or Removing Rhapsody](#)

If you want to install a newer version of Rhapsody that is already installed on your system, see [Upgrading to a Newer Rhapsody Version](#).

Rhapsody Licenses

Refer to the *Telelogic Lifecycle Solutions Licensing Guide* (available at <https://support.telelogic.com/lifecycle/solutions>) for the descriptions of the types of licenses required for the Rhapsody products and add-ons and the methods to setup the licenses. This documentation is available on the IBM Support Web site.

The following special Rhapsody configurations require specific license types:

- ◆ If your company has individual C and individual C++ Rhapsody licenses, you cannot open a C model in C++ or vice versa without a *multi-language Rhapsody license*.
- ◆ Java is only available in a multi-language license, you can open a Java model in Rhapsody C or C++ when using the multi-language license.
- ◆ The Eclipse plug-in for Rhapsody is only available with Rhapsody multi-language licenses.

Software Prerequisites

Before beginning the Rhapsody installation, review the software prerequisites listed in this section and the release notes (`readme.htm`) for the hardware and any additional prerequisites specific to this release.

Installation Preparation Guidelines

As a general rule, you should install third-party software before installing Rhapsody so that Rhapsody can locate and link to those products during installation.

Note

You must install your compiler before beginning the Rhapsody installation.

The following are some additional installation preparation guidelines:

- ◆ Review [Third-Party Tools](#) to determine whether your installation of Rhapsody interacts with supported third-party software. Then follow the instructions supplied by third-party suppliers to install the software used in your development environment.
- ◆ Before running the Rhapsody installation program to install the XMI toolkit add-on, you must install the Java SDK.
- ◆ Special Rhapsody instructions for installing software packages commonly used with Rhapsody are also provided in these sections:
 - [Installing Cygwin](#)
 - [Installing Eclipse and CDT for C or C++ Application Development](#)

Installing Eclipse and CDT for C or C++ Application Development

The following are the high-level steps required for installing the Eclipse Europa plug-in to use with Rhapsody C and/or C++:

1. Install Eclipse and CDT, as described below. The CDT software is required if you are developing applications in C and/or C++.
2. Install the necessary compilers for the development language or languages you are using.
3. Install Rhapsody 7.4 Development Edition for C and/or C++.

Note: There are two implementation of Rhapsody's Eclipse plug-in. See [Eclipse Setup Instructions](#) for a description of the differences between the Workflow and the Platform integrations.

Follow these general steps to install Eclipse Europa and CDT for Windows:

1. Download the appropriate Windows version of Eclipse Europa from the site at <http://www.eclipse.org/downloads>.
2. There are two methods you may use to download and install the CDT software.
 - ◆ You may navigate directly to the <http://download.eclipse.org/tools/cdt/releases/europa> site and download the preferred CDT version 4.0. Follow the installation instructions on the site.
 - ◆ Or you may install CDT from inside Eclipse using the **Help > Software Updates** option and the Available Software tab to select the CDT version you need for application development. Follow the Eclipse installation instructions.

Note

CDT is not required for Java application development.

Preparing to Install Rhapsody 7.4 in a Windows Vista Environment

If you are going to install Rhapsody on a computer using the Windows Vista operating system, you must have administrator's rights to perform the installation. Then you need to follow the instructions in [Installing Rhapsody on Windows Systems](#).

Preparing to Use Rhapsody 7.4 in C and C++

In order for a developer to generate code from Rhapsody models, a compiler must be installed and identified during the Rhapsody installation process. Among the compilers that can be used to build code from Rhapsody 7.4 in C and C++ are Microsoft[®] Visual C++[™] V6.0, Microsoft Visual Studio 2005, and Cygwin. Refer to the release notes ([readme.htm](#)) for the complete list of compilers supported by Rhapsody 7.4 in C and C++.

Note

The System Designer edition requires a compiler for model simulation. For more information, see [Installing the System Designer Edition](#).

Preparing to Use Rhapsody 7.4 in Java

Rhapsody 7.4 in J requires the Java[™] 2 Platform, Standard Edition Software Development Kit (J2SE[™] SDK), formerly known as the Java Development Kit (JDK). The SDK is freely available from the IBM Java download site at:

<http://www.ibm.com/developerworks/java/jdk>

Refer to the release notes ([readme.htm](#)) for the supported versions of Java SDK.

Preparing to Use Rhapsody 7.4 in Ada

Before you can install Rhapsody 7.4 in Ada, you must have the following software installed on your system:

- ◆ An Ada compiler, such as GNAT. See the release notes ([readme.htm](#)) for the list of supported compilers.
- ◆ Java 2 SDK (required by the code generator). See [Preparing to Use Rhapsody 7.4 in Java](#) for more information.
- ◆ The Rhapsody 7.4 in C sources (required to recompile the Ada libraries).

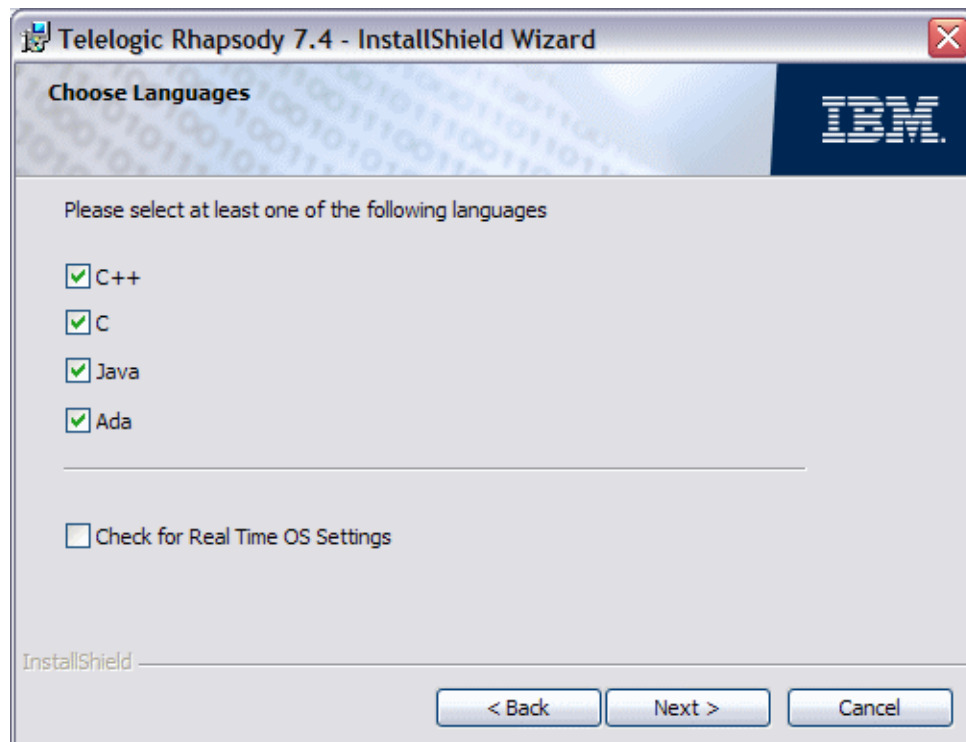
Installing Rhapsody on Windows Systems

To install Rhapsody on a Windows system using the installation wizard, follow these steps:

1. Whether you are using a CD or have downloaded a zip file, click the .msi file.
2. The installation program displays a screen welcoming you to the installation wizard. The wizard guides you through the installation process. Click **Next** to continue.

Note: If the installation wizard detects a previous Rhapsody version installed on your system, the wizard displays a **Modify, Repair, or Remove** dialog box. See [Modifying, Repairing, or Removing Rhapsody](#) for more information.

3. Select the package edition of Rhapsody you want to install. You may only select one:
 - ◆ Rhapsody Development Edition (required for Eclipse users)
 - ◆ Rhapsody Architect Edition
 - ◆ Rhapsody System Architect Edition
 - ◆ Rhapsody System Designer Edition (See [Installing the System Designer Edition.](#))
4. If you are installing an edition that requires a language, such as the Development edition, you need to select one or more of the four supported languages (C++, C, Java, and Ada) for the generated code output.



If you want to select the individual Real Time OS settings, select the check box. Otherwise, leaving the box clear selects the default environment settings and simplifies the installation process.

Click **Next** to continue.

5. If you selected the Java language, select the development environment as IBM Java SDK 6.0 SR1, JDK 1.6, 1.5, or 1.4 and click **Next**.
6. If you selected the Java language, select the path (location) to the Java Development Kit and click **Next**.
7. Select to install any of the following add-ons:

- ◆ Gateway - Requirements Traceability

Note: The Gateway version in this installation is coordinated with the Rhapsody version.

- ◆ Rhapsody - DOORS Connectivity
- ◆ XMI Toolkit - XML Metadata Interchange
- ◆ TestConductor™ - Model Driven Testing
- ◆ ATG - Automatic Test Generation
- ◆ Rules Composer - Editor for rules based model transformations

Note: If you plan to use the Customizable Code Generation feature in Rhapsody for C, you must install the Rules Composer add-on.

- ◆ DoDAF - Requires license and .NET framework 1.1 and required for the DoDAF profile
- ◆ MODAF - UK Ministry of Defence Architecture Framework
- ◆ Teamcenter Systems Engineering - Requires license and .NET framework 1.1 (For more information about installing this add-on, see [Setting Up the UGS Teamcenter.](#))
- ◆ Automotive - AUTOSAR system design (requires a license and is only available for C language development) and AutomotiveC and AUTOSAR profiles
- ◆ Systems Engineering Add-on (required for SysML and Harmony profile projects)
- ◆ System Architect Interface allows System Architect's enterprise customers to import SA DoDAF (non-ABM) into a Rhapsody project (requires a separate SA license)

You must have purchased a specific license for many of the selected products.

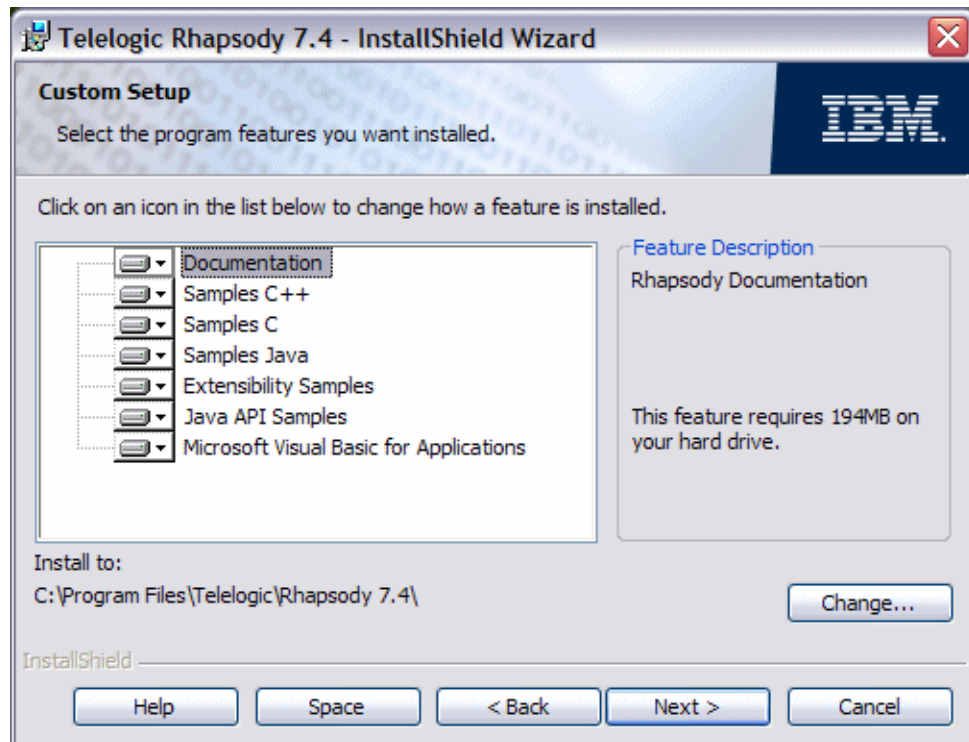


Click **Next** to continue.

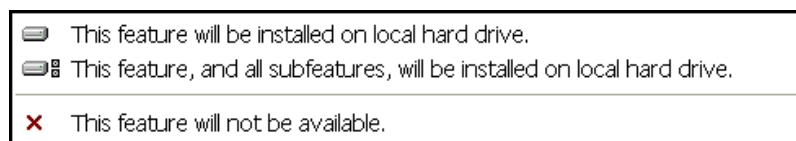
8. Select the installation type:
 - ◆ **Typical**—Recommended for most users. It includes the most common options. Click **Install** to launch the installation. To make changes, click **Back** and make your adjustments.



- ◆ **Custom**—Recommended for advanced users who want to choose their own special installation items (shown below). For detailed instructions for the selections in this window, click **Help**.



The drop-down menu for each icon provides these options:



To select a different directory for the Rhapsody software installation, click **Change** and enter the correct path.

Note: If you are a new Rhapsody user, you should select the samples for your development environment to give you useful examples of Rhapsody’s capabilities. For descriptions of all of the available samples, refer to the *Getting Started Guide*.

9. The **Space** button displays a summary of all of the available space for installation. Any highlighted volumes that cannot be used for part of the installation and listed. Click **OK** to return to the Custom Setup window.
10. Click **Next** to continue. On the next window review the installation description and click **Install**.

- 11.** Click **Finish** to complete the installation.

At this point, you may want to test your Rhapsody installation. See [Troubleshooting Installation](#) for more information.

Performing Installations on Linux Systems

Before installing Rhapsody on a Linux system, you may need to perform the following tasks:

- ◆ Copy files to the installation directory
- ◆ Apply operating system patches (if necessary)
- ◆ Mount the CD-ROM, if you are not using `automount`

Note

The Rhapsody DoDAF Pack is supported on Linux. However, some products are not automatically generated. The OV-3, SV-3, SV-5, SV-6, and SV-7 products must be generated manually.

Installing Rhapsody on Linux

To install Rhapsody on a Linux system, follow these steps:

1. Insert the distribution CD or use the downloaded file.
2. Open a new terminal window and change to the `cdrom` directory.
3. Run the installation script as shown.

```
> ./INSTALL
```

Note: Be sure to type the initial “./” before typing `INSTALL`.

The following message is displayed:

```
*****
* Welcome to the installation of Rhapsody on Linux. *
*****
```

4. The license agreement is displayed. Accept the license agreement by pressing **Enter**.

5. Enter the path of the directory in which you want to install Rhapsody.

Note: When entering the path, do not use a trailing slash. For example, use the following format: `/usr1/tools/rhapsody`

```
Enter the numbers representing your choice of languages.  
Language Selection
```

```
1: C++  
2: C  
3: Java
```

```
Please select at least one of the above languages, as in 1, or 1,2,3  
etc.
```

```
Depending on your language selections, the installation script  
displays questions to configure your development environment.
```

6. If you will be using C++, answer the questions about your compiler preferences.

```
Will you be using C++ code generation with Rhapsody? [Y/N]
```

```
The choices you make here set the default environment for generating  
code. You can choose one or more options. If you answer Yes to any of  
these compilers, you are prompted for the path of the respective binary  
files.
```

7. If you will be using C, answer the questions about your compiler preferences.

```
Will you be using C code generation with Rhapsody? [Y/N]
```

```
The choices you make here set the default environment for generating  
code. You can choose one or more options. If you answer Yes to any of  
these compilers, you are prompted for the path of the respective binary  
files.
```

8. If you will be using Java, enter the path for the Java Development Kit.

```
Please enter the Java Development Kits location.
```

9. Specify whether you will be using MontaVista 3.1.

```
Will you be using MontaVista 3.1 Generic x86 Industry Standard PC with  
Rhapsody?  
[Y/N]
```

10. Specify whether to install the Rhapsody 7.4 Help files.

```
Do you want Rhapsody's Help files installed? [Y/N]
```

11. Specify whether to install the Rhapsody 7.4 sample files.

```
Do you want Rhapsody's sample files installed? [Y/N]
```

12. Specify whether to install Adobe Acrobat Reader to view the online documentation for Rhapsody 7.4.

Do you want to install Adobe Acrobat Reader? [Y/N]

If you answered Yes, the Acrobat end-user agreement is displayed. Press **Enter** to accept the terms and conditions of this license agreement.

Enter Acrobat's installation directory.

13. The installation script begins to copy the software from the CD-ROM to the specified directory. When the installation is complete, the following message is displayed:

```
Congratulations you have finished installing Rhapsody.  
Before you use Rhapsody remember to set up the licensing.  
To run Rhapsody execute the shell:  
<root>/RhapLinux/RhapsodyInC++ for Rhapsody with C++  
<root>/RhapLinux/RhapsodyInC for Rhapsody with C  
<root>/RhapLinux/RhapsodyInJ for Rhapsody in Java
```

Installing Rhapsody on Linux as an Application Server

It is possible to install Rhapsody for Linux as an “application server.” Using this configuration, you install Rhapsody on a server that can be accessed by one or more clients over the network. Using the clients, you launch Rhapsody on the server and use the client’s screen to display Rhapsody. Although multiple users can run multiple Rhapsody sessions on a single machine, each user has his own registry and rhapsody.exe.ini file, which is created when Rhapsody is invoked for the first time. This initialization file is located in ~/.mw/rhapsody.exe.ini, where “~” is your home directory.

The server (on which Rhapsody is being executed) should be one of the supported platforms (currently Red Hat Enterprise Linux 4.0). The clients can be on any platform to which the DISPLAY can be set (either by Rhapsody or any application executer on the server). This can be another Linux machine or a Windows machine that uses software such as Exceed or XVision.

It is possible to run multiple Rhapsody sessions on a single machine, but the exact number (and therefore the number of servers that must be allocated) must be determined using a benchmark that focuses on the specific usage planned for the machine (build server versus Rhapsody server) and the usage of Rhapsody itself (modeling, build machine, animation, and so on).

To enable a user to use animation, a designated port (other than the default port) must be specified for each user, both in the rhapsody.exe.ini file and in the generated code. See the *Rhapsody User Guide* or contact Customer Support for more information.

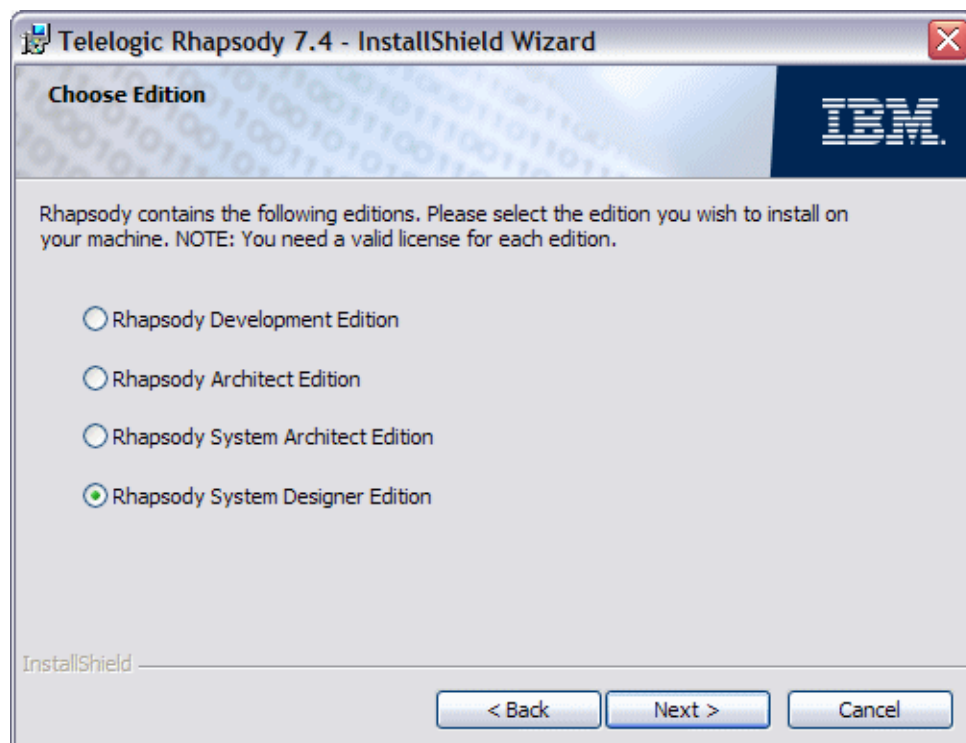
Note

Users might not be able to stop the execution of the make process from within Rhapsody (via **Code > Build**) when there are multiple simultaneous builds. In such cases, you must kill the make process from outside of Rhapsody.

Installing the System Designer Edition

To install the System Designer Edition of Rhapsody on a Windows system, follow these steps:

1. Whether you are using a CD or have downloaded a zip file, click the `.msi` file.
2. The installation program starts and displays a screen welcoming you to the installation wizard. The wizard guides you through the installation process. Click **Next** to continue the installation.
3. Select the **Rhapsody System Designer Edition** (shown below) and click **Next** to continue.



4. Select the directory for the program installation and click **Next**.

- The basic System Designer edition options for your environment are selected when the window displays (see the example below). You may change the settings that are available. Click **Next** to continue.



- Select the **Typical** installation as the Setup Type and click **Next**.
- Examine the description of your System Designer installation in Ready to Install the Program window. If the information is correct, click **Install** to launch the installation as defined.

Note: If the description in Ready to Install the Program window needs to be changed, click **Back** and select **Custom** for the Setup Type.



8. To enter a different Installation Directory, click the **Change** button. Use the **Help** information to make other changes. Click **Next**.
9. If the information in Ready to Install the Program window is now correct, click **Install** to launch the installation.
10. Click **Finish** when the installation is completed.

Modifying, Repairing, or Removing Rhapsody

If the installation wizard detects a version of Rhapsody on the system, it displays the **Modify, Repair, or Remove** dialog box.



If you want to reinstall the same version of Rhapsody, select the **Repair** option because it installs all of the files that were installed in the initial Rhapsody installation process. However, if you are installing a new version of Rhapsody, select **Remove** and follow the prompts by clicking **Next**. If you want to install add-ons or supported real-time environments after the initial install, select **Modify** and click **Next**.

1. The Add-on Installation window appears. Select or clear the check boxes of the components you want to install to your existing installation of Rhapsody. Click **Next**.
2. Review the installation description in **Ready to Install the Program** window and click **Install**.
3. Follow the instructions to complete the installation of the new add-ons or real-time environments. Click **Finish** when the installation is completed.

Note: If you want to install a different compiler, you must follow the procedure in [Upgrading to a Newer Rhapsody Version](#) and then install the Rhapsody system with the new compiler.

Troubleshooting Installation

If the installation failed, you should review the common installation problems (listed below) for help. If the problem cannot be solved easily, see [Technical Support and Documentation](#) for help from one of the Customer Support teams.

The following are common causes of Rhapsody installation problems:

- ◆ Failure to perform the prerequisite steps, as described in [Installation Preparation Guidelines](#), and particularly failing to install the compiler before installing Rhapsody is the most common problem. If you are installing the Cygwin compiler, you may want to use the instructions in [Installing Cygwin](#).
- ◆ During the installation you were unable to locate an add-on product that was purchased with Rhapsody. The Rhapsody software license provided at the time of product delivery contains licensing for all add-on Rhapsody products purchased with Rhapsody. If an add-on product is not listed in the in the Add-on products' selection screen in the installation, contact your Rhapsody representative to correct this problem.

Third-Party Tools

This section describes the required and optional third-party tools and important points to consider when using those tools with Rhapsody 7.4. For more information about using these tools, refer to the *Rhapsody User Guide*.

Using Java with Rhapsody

Rhapsody in J requires J2SE SDK to compile and run the generated Java code using the default settings. This software is freely available from the JavaSoft Web site. See the Rhapsody release notes ([readme.htm](#)) for the supported versions of J2SE SDK.

After installation, verify that your `PATH` environment variable is set to include the `bin` directory of the SDK. For example, if the SDK is installed in `D:\jdk1.5`, your `PATH` should include a reference to `D:\jdk1.5\bin`.

Setting Up the UGS Teamcenter

During the Rhapsody installation, Rhapsody installs a connector for the UGS Teamcenter Systems Engineering. (Refer to the Rhapsody [readme.htm](#) for information about the appropriate version for this Rhapsody release.) The Teamcenter software can be installed before or after the Rhapsody installation. However, in order to complete the connection of Rhapsody to the Teamcenter, the system administrator must take these additional steps:

1. Open the Teamcenter.
2. Click the **Administration** icon.
3. Create a Teamcenter Project for the developers to use for all of their Rhapsody models.
4. For this project, select **Import > Import Schema**.
5. Locate the `Rhapsody\Addon\TcSE\<server>`.
6. Select the `Rhp_Integration_Schema.xml` file to import the schema needed for Rhapsody models.

Now this project is ready to be used with Rhapsody.

Using CORBA with Rhapsody in C++

Rhapsody in C++ supports CORBA™ using the following software:

- ◆ An ORB (TAO)
- ◆ An IDL compiler
- ◆ CORBA header files
- ◆ ORB Libraries for CORBA

Note

CORBA is supported in Windows and C++ only; therefore, you must have a supported Windows C++ compiler running on the development machine. When you install Rhapsody, you must select the installed C++ compiler so that the CORBA features can be used. Refer to the *CORBA Development Guide* for more information.

Using Configuration Management with Rhapsody

You may use any of the following configuration management systems with Rhapsody:

- ◆ IBM Rational ClearCase
- ◆ Telelogic Synergy
- ◆ PVCS Dimensions in SCC mode
- ◆ Rhapsody also provides a generic SCC interface to Windows' configuration management tools and other tools that use the SCC interface

Follow the instructions supplied with the configuration management software to install the tool. To configure these systems with Rhapsody, refer to Rhapsody's *Team Collaboration Guide*.

These tools may also be used with Rhapsody's DiffMerge tool, as described in the *Team Collaboration Guide*.

As an SCC-compliant IDE, Rhapsody can communicate with any CM tool that conforms to the SCC standard. To activate the generic SCC interface in Rhapsody, follow these steps:

1. Select project in the browser.
2. Open the Rhapsody project.
3. Display the Features dialog box and select the Properties tab.
4. Locate the `ConfigurationManagement::General::UseSccTool` property and set the value to be `True`.

Setting Up Eclipse and Rhapsody

The Rhapsody plug-in for Eclipse requires some additional setup steps.

General Installation Information

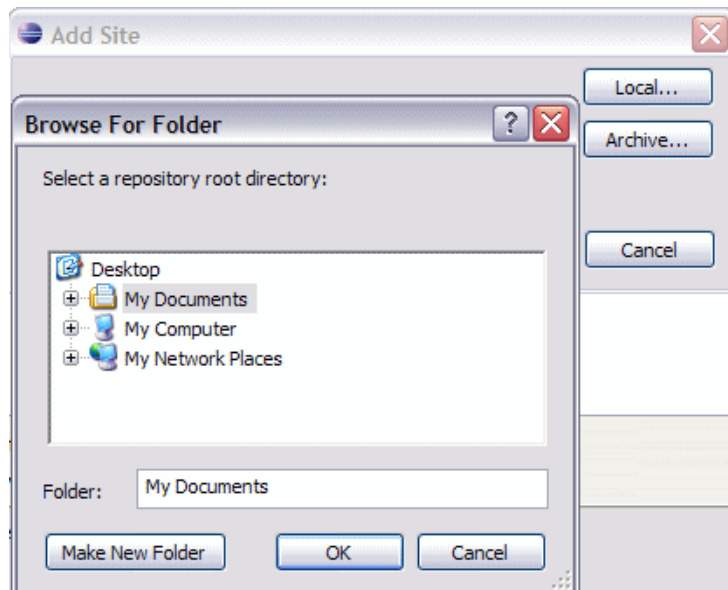
The following information should be considered when installing Eclipse and Rhapsody:

- ◆ Either Rhapsody or Eclipse can be installed first, but it is preferable to have the development environment installed before installing Rhapsody.
- ◆ The Platform Integration with Eclipse can be used for C, C++, or Java application development on Rhapsody models. See the [Installing Eclipse and CDT for C or C++ Application Development](#) instructions for the download instructions.

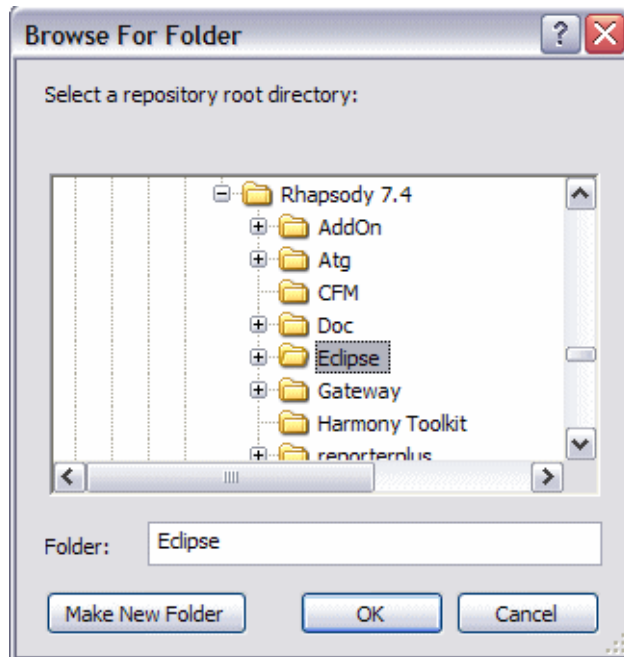
Eclipse Setup Instructions

After the software has been installed, follow these steps to set up Eclipse with Rhapsody:

1. Open Eclipse and select **Help > Software Updates**.
2. Click the **Available Software** tab and click **Add Site**.
3. In the Add Site dialog box, click **Local** to display the directories on your computer, as shown in the Browse for Folder.

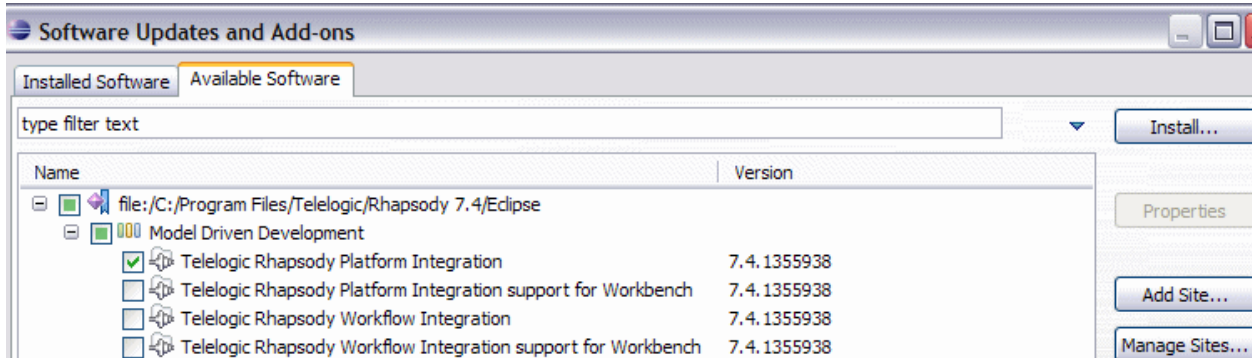


4. Navigate to the Rhapsody installation path and highlight the Eclipse folder, as shown in this example. Click **OK** in this dialog box.



5. Expand the list of Rhapsody and Eclipse selections in the **Available Software** tab. The Rhapsody plug-in for Eclipse has two implementations:
 - ◆ **Rhapsody Platform Integration** permits developers to work on a Rhapsody project completely within Eclipse. Rhapsody does not need to be open for this implementation. This integration can be used for C, C++, or Java application development in a Windows environment only.
 - ◆ **Rhapsody Workflow Integration** allows the software developer to work in Rhapsody and use some Eclipse features through Rhapsody menu options. This integration can be used for C and C++ development in either Windows or Linux environments. Both Eclipse and Rhapsody must be open when the developer is using this integration.

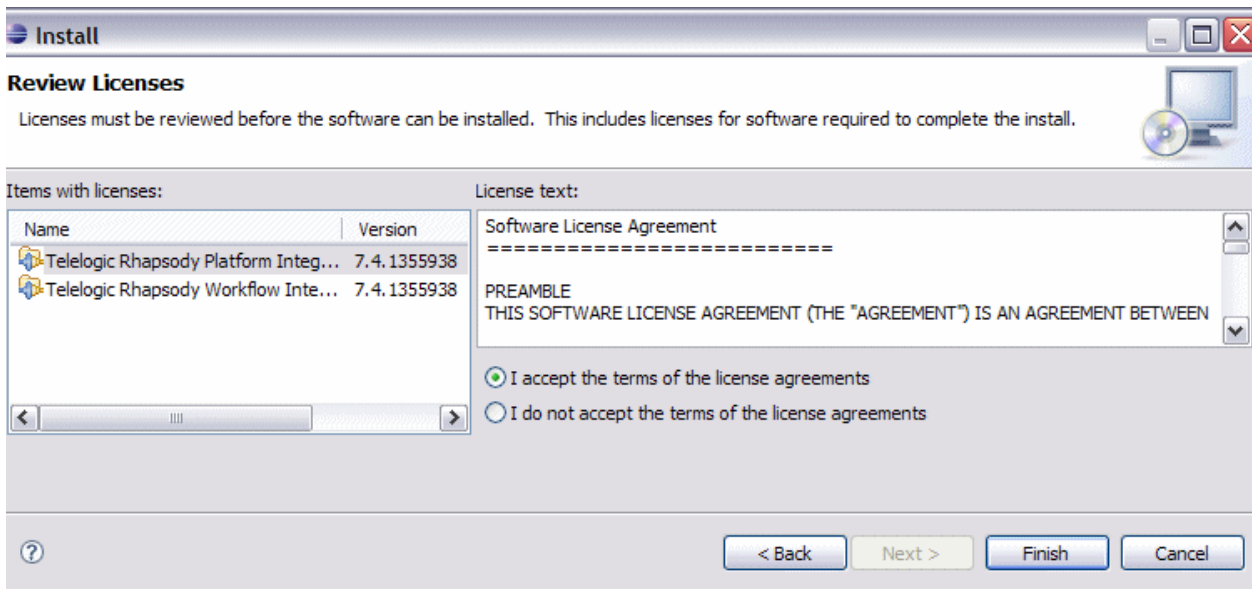
6. Select the integration type you want to use and click **Install**.



If you select an integration that includes "Workbench" in the option, you intend to use Wind River's version of Eclipse.

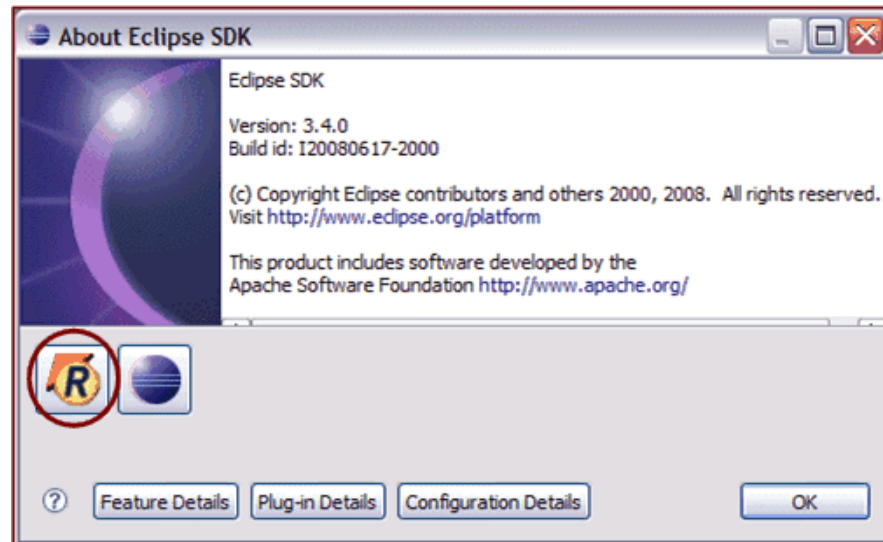
Note: Only one Eclipse release version should be installed on your computer. To install another version later, you must first remove the previously installed Eclipse version and then install the different Eclipse version.

7. The program displays a dialog box indicating that it is "resolving dependencies" and then displays the license for the selected plug-in. Examine the license, click the "I accept..." option, and click **Finish**.



8. When the installation has finished, restart your computer.

9. To be certain that Rhapsody is now connected to your installation of Eclipse, in Eclipse select **Help > About Eclipse SDK** and note that the Rhapsody icon (circled below) is displayed..



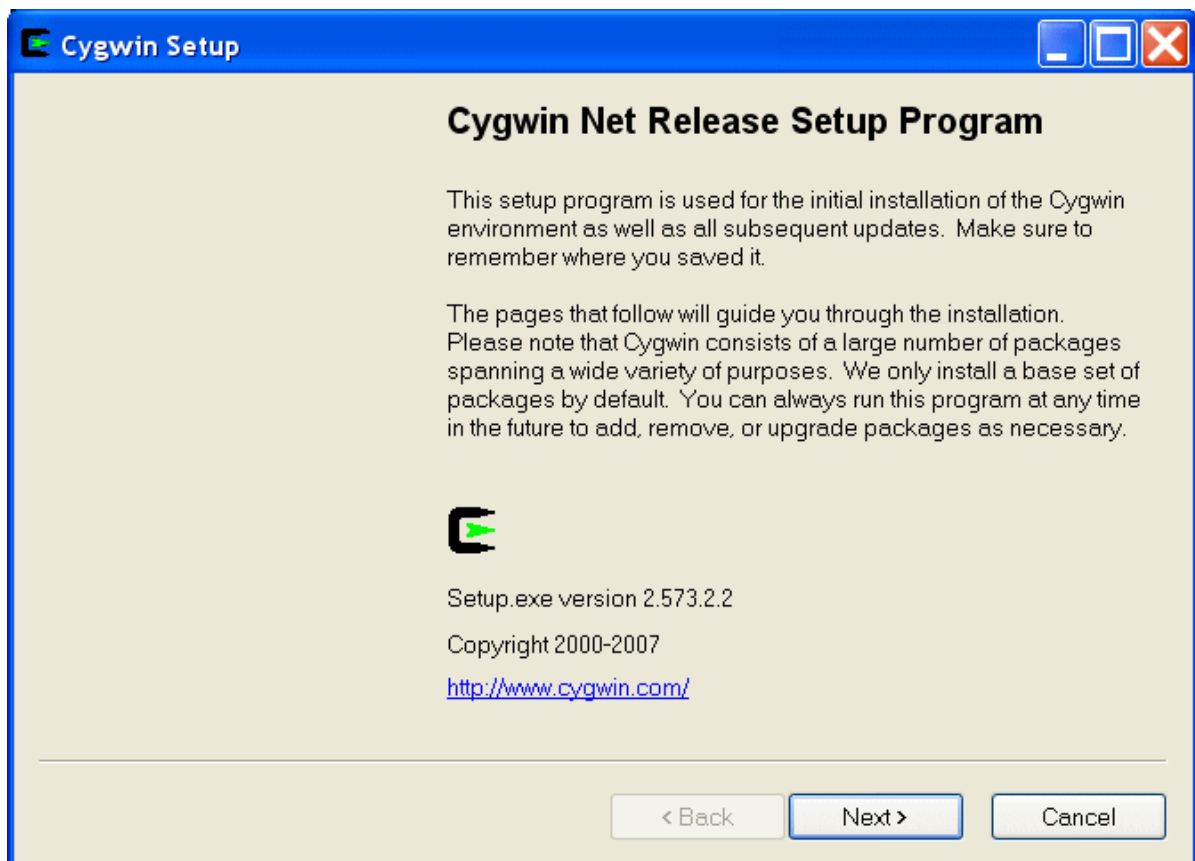
Installing Cygwin

If you are going to use the Cygwin compiler, install Cygwin version 3.81 (make-version) or greater. The following instructions describe that version of this third-party software from <http://www.cygwin.com> using the setup.exe on their site, so you may see changes in the installation that are not described in the Rhapsody instructions.

Compiler Installation Procedure

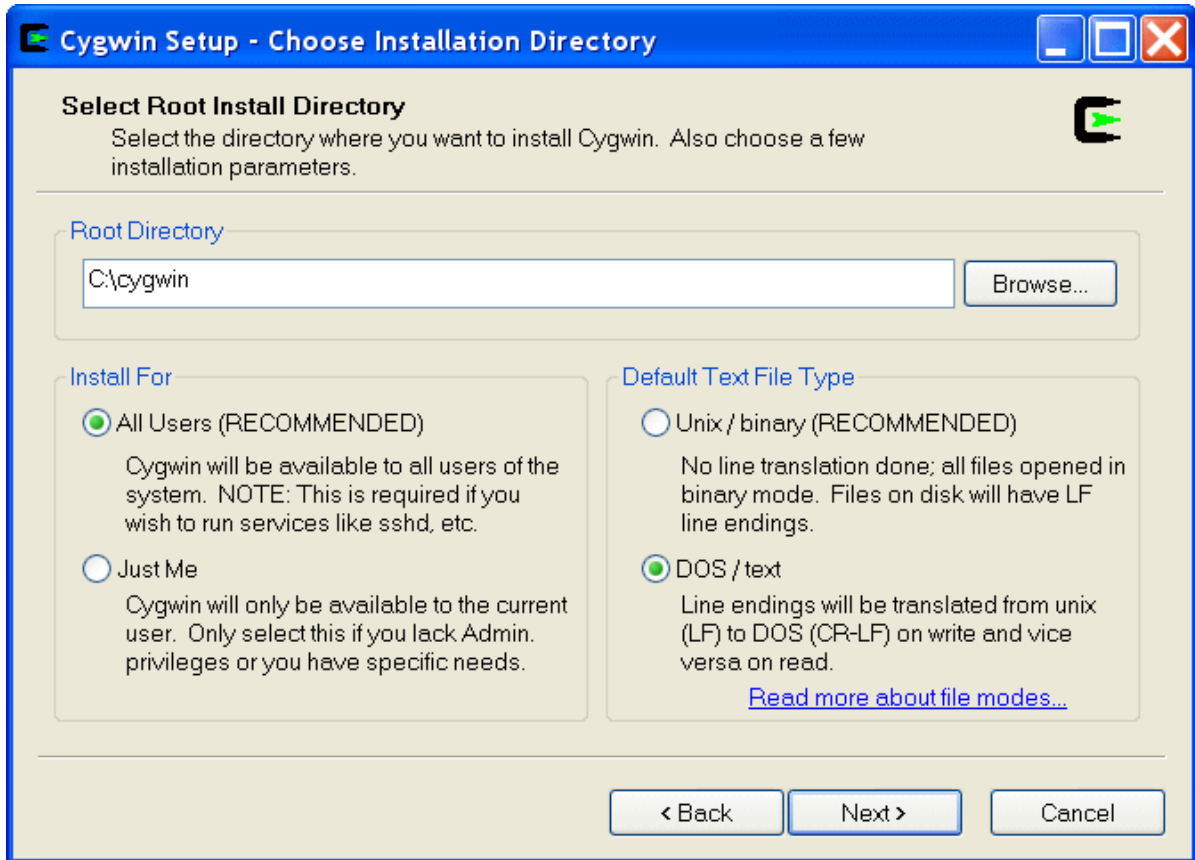
To install the Cygwin compiler, follow these steps:

1. Launch your Internet browser and navigate to Cygwin Web site.
2. Click the **Install Cygwin Now** icon, and the following dialog box appears:



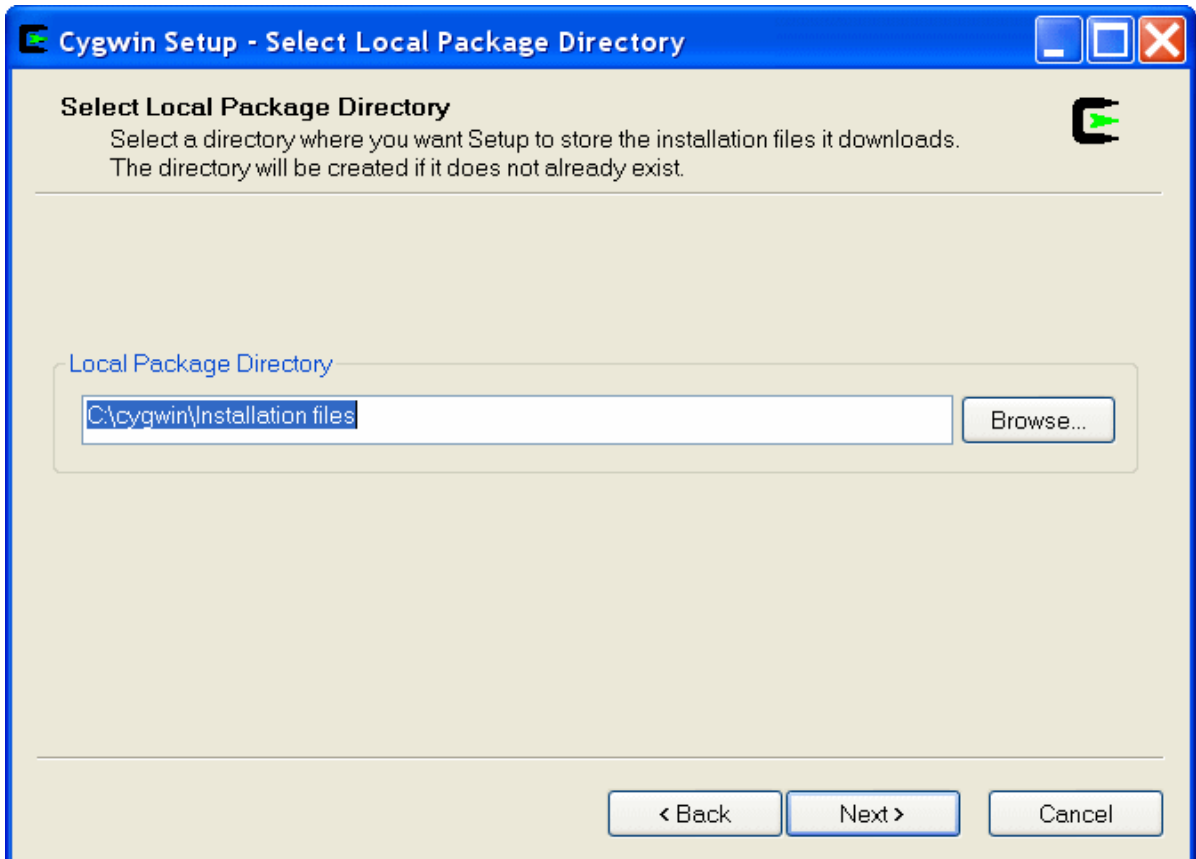
3. Click **Next**.
4. Select the option to **Install from Internet** and click **Next**.

5. In the next dialog box, type the name of the directory where the Cygwin program is to be installed, as shown in the following example.

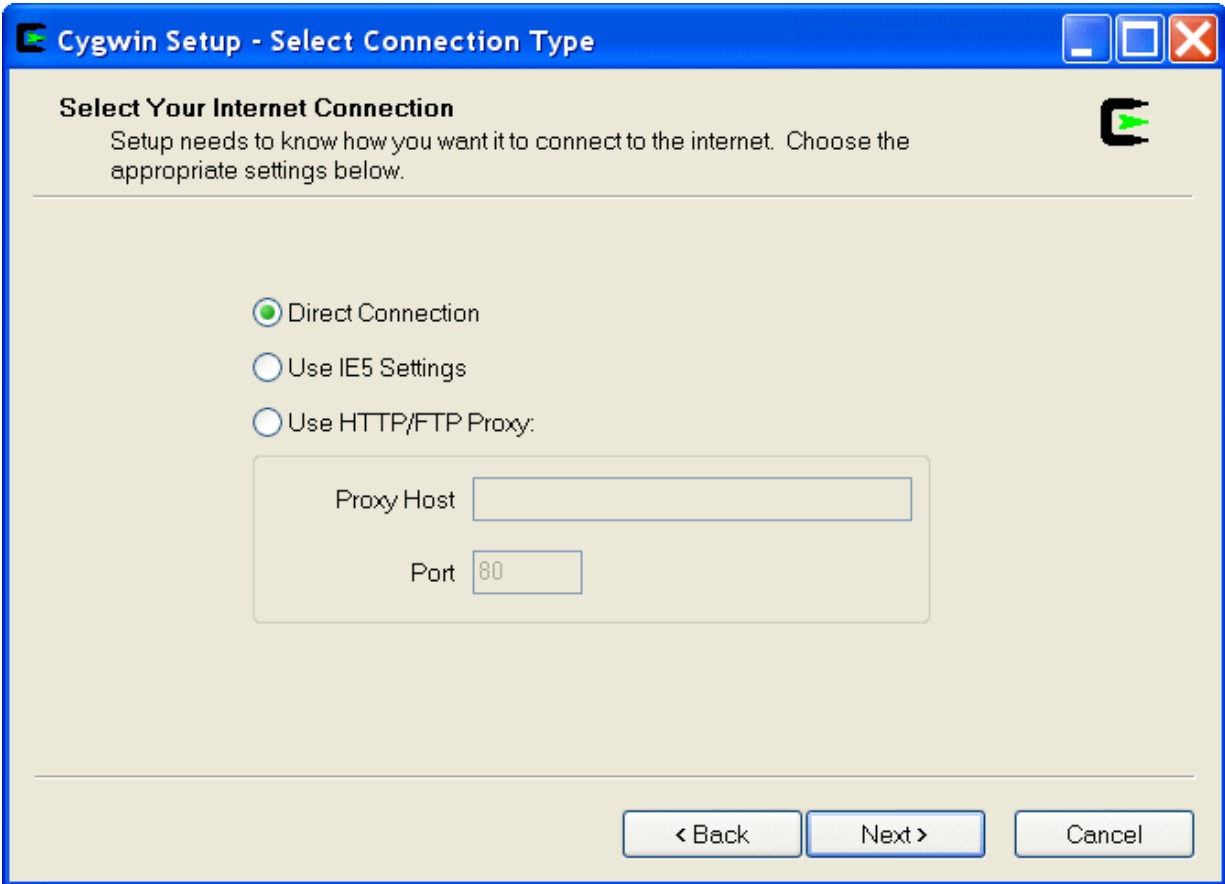


6. In the “Install For” area, select **All Users (RECOMMENDED)**.
7. In the “Default Text File Type” area, select **DOS / text** and click **Next**.

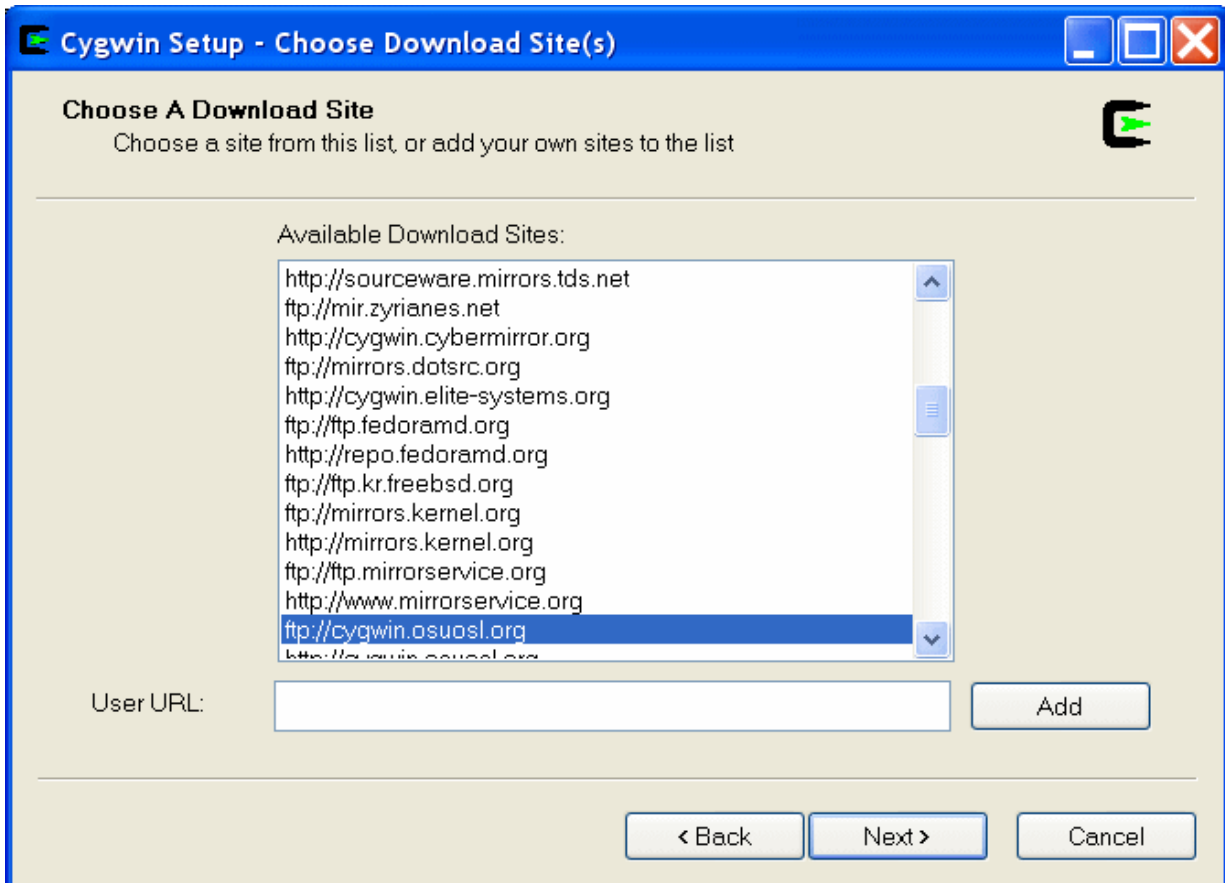
8. In the **Select Local Package Directory** dialog box, browse and select or type the name of the directory where you want to store the Cygwin installation files, as shown in the following example. Click **Next**.



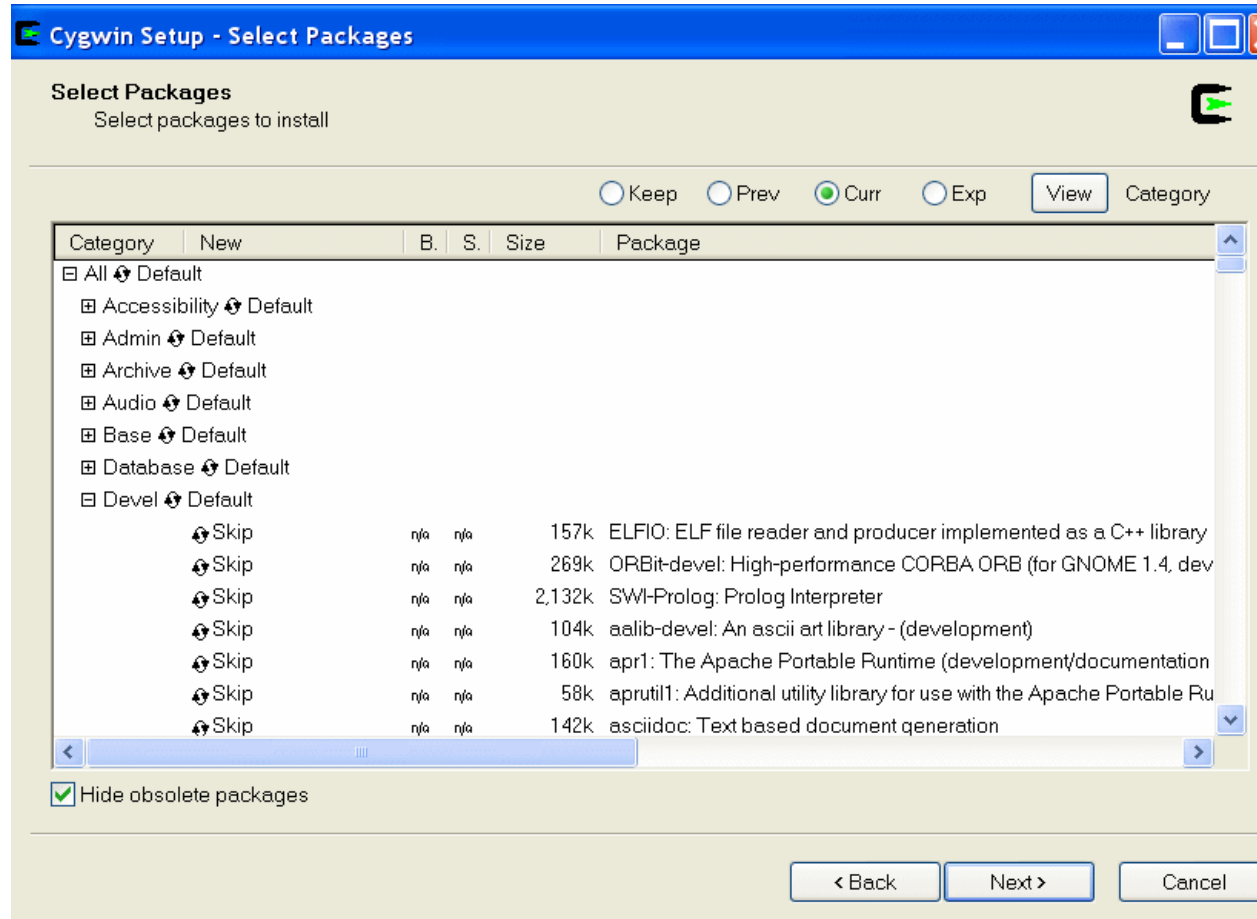
9. Select **Direct Connection** if you are on a land area network (LAN), or enter the settings appropriate to your location. Click **Next**.




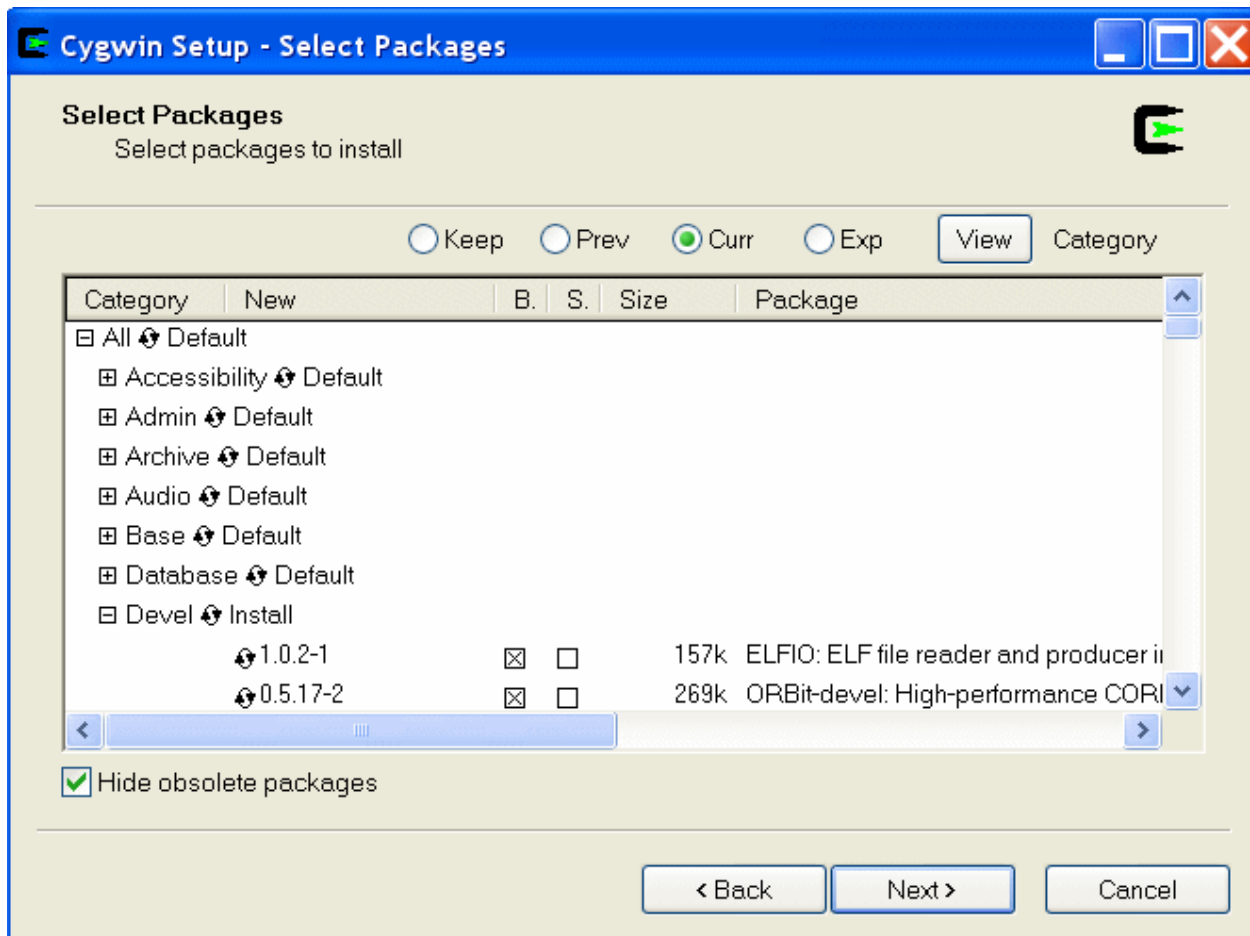
10. Select the download site closest to you geographically, or type in a URL for a site that your company has set up. Click **Next**.



11. The **Select Packages** dialog box consists of a list of categories, each containing a specific group of packages to install. Expand the category *Devel*, as shown in the example below.



12. In the Devel row, click the  icon until the word “Install” appears to the right of the icon (as shown in the example below). The specific packages that install are displayed beneath the Devel row.



13. Click **Next**. The download and installation of the packages begin. This process may take 30 minutes.

When the installation is complete, the **Create Icons** dialog box displays to allow you to place a Cygwin icon on your desktop and/or Start menu.

Checking Your Cygwin Installation

To test your Cygwin installation, open a DOS prompt and type the three command listed below. Press **Enter** after each command.

```
g++  
gcc  
path
```

The response to the first two commands should be “No Input files.” The third command should list the cygwin\bin in the system path. If you do not receive the cygwin\bin path in the PATH, specify it via the environment variables using the right-click **My Computer > Properties** option.

Rhapsody with Citrix Presentation Server

When using Citrix with Rhapsody, Rhapsody needs to run in a virtual environment on the Citrix Presentation Server. In addition to the standard Citrix installation instructions, you need to coordinate the installation of all of the software packages in the order listed in [Basic Citrix with Other Software Installation Steps](#).

Basic Citrix with Other Software Installation Steps

The following steps are the general steps required to install the Citrix Presentation Server to run Rhapsody in a virtual environment:

1. Install Microsoft Windows Server.
2. Set operating system and drive subsystems configurations.
3. Install required drivers.
4. Install Citrix Presentation Server Standard and Enterprise editions.
5. Install dedicated Data Store in a SQL data structure.
6. Install latest Service Packs and Hotfixes.
7. Configure server further.
8. Install Microsoft Visual Studio.
9. Change the terminal server to install mode.
10. Install Rhapsody according to the [Installing Rhapsody on Windows Systems](#) instructions.
11. Create a Citrix Application Set and publish Rhapsody on it.
12. Configure application security parameters.
13. Configure User policies and profiles so that users can start a Rhapsody instance via the Citrix Client. They need Read and Execute access to the folder of the Rhapsody executable file and Read and Write access to the server's folders that contain the project or their workspace.
14. Set NTFS directory permissions.
15. Install MetaFrame Presentation Server Client on a separate machine in the network and test.

Separate Rhapsody.ini Files for Each User

The first time a user runs Rhapsody via the Citrix client, the terminal server copies all of the INI files from the Terminal Server's Windows directory to the user's Windows directory. These files can be found in the server's Documents and Settings directory. After that, for any .ini files in the server's Windows directory that are changed when the terminal server is in install mode, this processing occurs:

- ◆ When a user logs in again, the file extension of the old .ini files in the user's Windows directory is changed to have the .ctx extension.
- ◆ The newer .ini files on the system's Windows directory are copied to the user's Windows directory.

For each user, Rhapsody uses the `Rhapsody.ini` file that is on the user's personal Windows directory.

In order to change the terminal server to install mode, run the command "change user /install" in a command prompt. After the installation is complete, in order to change the terminal server back to execute mode, run the command "change user /execute" in a command prompt. Being in install mode forces the installation to create the `Rhapsody.ini` file in the system's Windows directory, and it also ensures that all users that login after the installation will get the new `Rhapsody.ini` file copied to their own personal Windows directory.

Using Citrix with Multiple Rhapsody Instances

By default, Rhapsody uses one TCP/IP port for animation. If a second instance of Rhapsody is launched on the same machine, it generates a "cannot create socket" warning message. If several users want to run Rhapsody on a Citrix server, additional manual settings are needed to establish the connection between Rhapsody and the animation application through a TCP/IP port and enable this type of configuration.

Refer to the "Animation" section of the *Rhapsody User Guide* for more information.

Running Rhapsody

Rhapsody runs in Windows and Linux environments. Follow the instructions in this section to start Rhapsody in those environments.

Starting Rhapsody

Once you have installed the Rhapsody software and all the licenses, you are ready to run Rhapsody 7.4. This section describes how to start Rhapsody on Windows systems and Linux systems.

On Windows Systems

For node locked license installations on Windows systems, start Rhapsody 7.4 by selecting **Start > All Programs > Telelogic > Telelogic Rhapsody (version) > Rhapsody Development Edition > Rhapsody in <language>** (where <language> is Ada, C, C++, or Java).

On Linux Systems

To start the Rhapsody product in Linux from the Terminal, browse to the Rhapsody home directory and execute the Rhapsody script for the language you are using. Here is an example of using the script to launch Rhapsody in C++:

```
[Rhapsody installation location]# cd /home/Rhapsody  
[Rhapsody installation location]# ./RhapsodyInCpp
```

In this command, replace [Rhapsody installation location] with the installation directory for Rhapsody. Then select the launch script for one of these languages available on Linux systems:

- ◆ C++
- ◆ C
- ◆ Java

Running Different Editions of Rhapsody 7.4

This section describes how to switch between different editions of Rhapsody 7.4 on the same client Windows system. It assumes that you have purchased a license for the different editions you plan to use.

This procedure shows how to run the Development, System Designer, and System Architect editions.

Note

You must have Administration privileges to perform this procedure.

To run different editions of Rhapsody, follow these steps:

1. Install the Rhapsody Development edition.
2. Go to the All Users profile, then to Start\All Programs\Telelogic\Rhapsody <Version>. For example:

```
C:\Win\Profiles\All Users\Start Menu\Programs\Telelogic\Rhapsody 7.4
```

This directory contains links for the different languages, depending on your installation. The possible values are as follows:

- Rhapsody 7.4 in Ada
 - Rhapsody 7.4 in C
 - Rhapsody 7.4 in C++
 - Rhapsody 7.4 in J
3. Copy the Rhapsody Development Edition folder and rename the copied folder Rhapsody Designer Edition.
 4. Navigate to the Rhapsody System Designer Edition folder.
 5. Right-click the Rhapsody in C++ link and select **Properties**.
 6. Replace the `-dev_ed` switch with `-system_designer -lang=cpp`, in order for a Rhapsody System Designer to select a System Designer license. The edition types are as follows:

```
-dev_ed is Developer Edition.
```

```
-system_designer is Designer Edition.
```

```
-system_architect is Architect Edition.
```

The `-lang=` parameter can be `ada`, `c`, `cpp`, or `java`.

Upgrading to a Newer Rhapsody Version

If you have an older version of Rhapsody and want to upgrade to the most recent release, follow the instructions in this section to perform the basic upgrade setup process for your environment. For more detailed information, you should also refer to the following documents:

- ◆ *ReadMe* (release notes) for your Rhapsody version are included in the Rhapsody product download in the `readme.htm` file (contains “What’s New” in this release and specific hardware and software requirements, as well as any limitations)
- ◆ *Fixed Defects List* of the corrected customer-reported defects included in this product release
- ◆ *Upgrade Guide* for any functionality changes introduced in the most recent release and the previous releases that are currently being used

Basic Upgrade Process

No matter what platform you are using for your Rhapsody installation, you must follow these general steps to upgrade to a new release of the software:

1. Remove the old version of Rhapsody from your system environment using the appropriate procedure in this section.
2. Restart your system before installing the new version of Rhapsody.
3. Install the new version of Rhapsody by following the installation instructions in this guide.
4. If you have your own operating system adapter, rebuild your framework libraries in the new version of Rhapsody.
5. Regenerate and rebuild the code for any applications created using the previous version of Rhapsody.

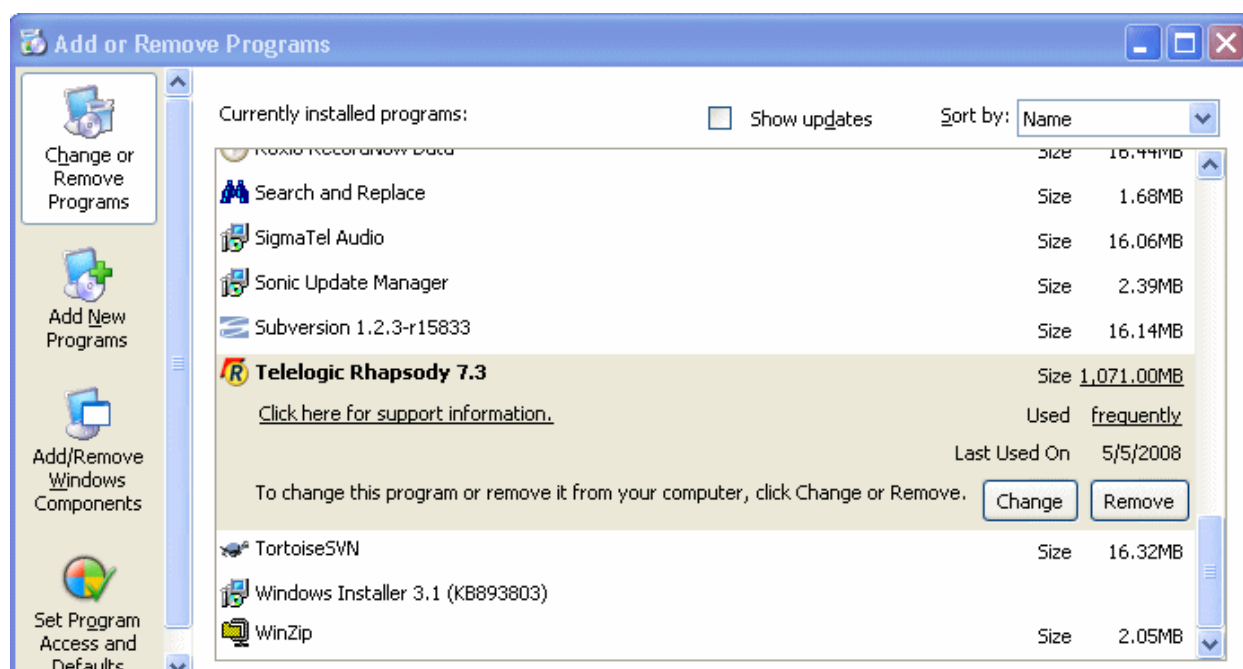
Removing Rhapsody from a Windows System

There are two methods you may use to remove an older version of Rhapsody from a Windows system:

- ◆ Launch the Rhapsody installation program and select the **Remove** option, as described in [Modifying, Repairing, or Removing Rhapsody](#).
- ◆ Use the Windows' Add and Remove feature, as described below.

To use the Windows' Control Panel to remove the Rhapsody software, follow these steps:

1. Select Windows' **Start** and **Control Panel**.
2. Select the **Add and Remove Programs** operation from the Windows' Control Panel.
3. From the list of programs displayed, select your current version of Rhapsody.
4. Click the **Remove** button that displays, as shown in this example.



A Change/Remove dialog box displays with a message indicating that it is “gathering required information.” When the process is finished, the Rhapsody item is removed from the Add or Remove Programs dialog box. You should restart the computer before installing the new version of Rhapsody.

Deleting Rhapsody from a Linux Platform

First, you must determine how you will deploy the new version of Rhapsody on your Linux platform. Will it be the same structure as the older version of Rhapsody or a different design?

There is no Rhapsody uninstall wizard for Linux systems. You must have administrator rights to follow these steps:

1. Use your operating system's tools to delete the current Rhapsody directory structure from your Linux platform.

Note: Be certain to delete the client and server directories, as well as the application server version if that was part of your previous deployment structure.

2. Reboot the system.
3. Follow the instructions in [Performing Installations on Linux Systems](#) to upgrade to the new Rhapsody release.

Upgrading the Rhapsody Plug-in for the Eclipse

If you are using the Rhapsody plug-in for Eclipse and want to upgrade your version of Rhapsody, follow these steps:

1. Remove your current version of Rhapsody, as described in [Removing Rhapsody from a Windows System](#).
2. Remove your version of Eclipse.
3. Install Rhapsody according to the [Installing Rhapsody on Windows Systems](#) instructions.
4. Reinstall Eclipse and CDT according to the [Installing Eclipse and CDT for C or C++ Application Development](#) instructions.
5. Reconnect the Rhapsody plug-in to Eclipse as described in [Eclipse Setup Instructions](#).

Upgrade Restrictions

These restrictions apply to the following upgrade conditions:

- ◆ The Gateway and Rhapsody versions are coordinated for a specific installation. Therefore, an older version of Gateway is not supported in an upgraded version of Rhapsody. Refer to the Rhapsody release notes ([readme.htm](#)) for lists of supported software versions.
- ◆ You cannot run an earlier version of a Rhapsody release with a newer version. For example, if you installed Rhapsody 7.2, you must remove this older version before installing Rhapsody 7.2.1.

Troubleshooting a Windows Upgrade

The most common cause of an upgrade problem is failure to remove the previous version of Rhapsody before starting the new installation. The Windows installation wizard checks to be certain that the previous version has been removed. Follow the instructions for your type of system:

- ◆ [Removing Rhapsody from a Windows System](#)
- ◆ [Deleting Rhapsody from a Linux Platform](#)

Technical Support and Documentation

Rhapsody software continues to be supported by the Telelogic support group for customers who licensed Rhapsody before November 1, 2008. If you are one of these “heritage” customers, you may use the familiar support procedures described in [Contacting Telelogic Rhapsody Support](#).

After November 1, 2008, all Telelogic Rhapsody customers also have access to the IBM technical support team and resources, as described in [Contacting IBM Rational Software Support](#).

Contacting Telelogic Rhapsody Support

The Telelogic Rhapsody technical support group assists heritage Rhapsody customers through the online problem report form, automatically generated problem reports, direct contact by [Calling Telelogic Rhapsody Technical Support](#) or contacting them through IBM’s Support site, as described in [Contacting IBM Rational Software Support](#).

Note

Assistance from the technical support staff for purchased products is only available to companies that have paid for ongoing maintenance.

Accessing the Automated Problem Report Form

Follow these steps to send the automated problem report to the technical support staff:

1. In Rhapsody click **Help** on the menu bar.
2. Select the **Generate Support Request** option from the menu.
3. The following form appears with some of your product information filled in.

Generate Support Request

Problem Details
Please complete below with as much detail as possible to describe your issue:

Impact: My work is not affected. I want an answer to a question.

Summary:

Problem:

Rhapsody Information

Version: 7.3
Build: 987717
Serial No: T10-293399
Language: C++
Edition: Development Edition

Rhapsody Window Snapshot...

System Information

Version: Windows XP
Service pack: Service Pack 2
Build: 2600

Screen Snapshot...

Attachment Information (Double-click Item to View)

Add Video Capture...
Add System Details
Add Product Files
Add File(s)...
Remove...
Remove All...

Item Description:

Help Just Text (No Email)...
Cancel Preview and Send

4. Check the product information to verify it is accurate.
5. From the **Impact** drop-down list box, select the severity of the problem.
6. In the **Summary** box, summarize the problem.

7. In the **Problem** box, type a detailed description of the problem.
8. If available, attach a snapshot. Click the **Rhapsody Window Snapshot** or **Screen Snapshot** button, whichever is applicable, and select the snapshot wherever you have it on your machine.
9. If possible, add the model, active component, files, and/or a video capture by using the buttons in the **Attachment Information** area.
10. Add any additional items or information to help the Technical Support staff resolve the problem.
11. Click **Preview and Send** to submit the report.

The problem report is recorded in the Rhapsody case tracking system and put into a queue to be assigned to a support representative. This representative works with you to be certain that your problem is solved.

Automatically Generated Problem Reports

If your Rhapsody system crashes, it displays a message asking if you want to send a problem report to Rhapsody technical support about this crash.

If you select to send the report, the system displays the same online form that is available from **Help > Generate Support Request**. However, this form contains information about the crash condition in addition the information that is usually filled in describing your system.

Add any more information that you can to help the support staff identify the problem and then click **Preview and Send** to submit the report.

Calling Telelogic Rhapsody Technical Support

If your company has a current Rhapsody maintenance agreement purchased before November 1, 2008, you may call the Telelogic Technical Support staff directly using the appropriate telephone number for your region listed below.

Support Location	Telephone Number	Availability
United States	(800) 577-8449	8:30 a.m. to 8:00 p.m. EST
Europe	00800 57784499	8:00 a.m. to 5:00 p.m. GMT
Europe (alternative number)	+353 1 2090154	8:00 a.m. to 5:00 p.m. GMT

Contacting IBM Rational Software Support

The IBM Rational Software Support team provides the following resources for your assistance:

- ◆ For contact information and guidelines or reference materials that you need for support, read the [IBM Software Support Handbook](#).
- ◆ For FAQs, lists of known problems and fixes, documentation, and other support information, visit the [Telelogic Rhapsody Support Site](#).
- ◆ Voice support is available to all current contract holders by dialing a telephone number in your country (where available). For specific country phone numbers, go to <http://www.ibm.com/planetwide/>.

Before you contact IBM Rational Software Support, gather the background information that you will need to describe your problem. When describing a problem to an IBM software support specialist, be as specific as possible and include all relevant background information so that the specialist can help you solve the problem efficiently. To save time, know the answers to these questions:

- ◆ What software versions were you running when the problem occurred?
- ◆ Do you have logs, traces, or messages that are related to the problem?
- ◆ Can you reproduce the problem? If so, what steps do you take to reproduce it?
- ◆ Is there a work-around for the problem? If so, be prepared to describe the work-around.

For Rational software product news, events, and other information, visit the [IBM Rational Software Web site](#).

Accessing the Rhapsody Documentation

Rhapsody documentation is accessible from three locations:

- ◆ On the [Telelogic Rhapsody Support Site](#)
- ◆ With Rhapsody installed on your computer, select Windows **Start** and the **Programs** menu
- ◆ Open Rhapsody and select the **Help** menu

The documentation is available in two formats: PDF and online. The online documentation displays in a browser from the Help Topics menu option. The PDF files display from the **List of Books** using the Adobe[®] Acrobat Reader[™].

Note

To display these files properly, you must have version 6.0 or greater of this free PDF reader. To download the most up-to-date version of the Acrobat Reader, go to <http://www.adobe.com/products/acrobat/readstep2.html>.

Appendix A: Using Rhapsody with Visual Studio 2003

Rhapsody does not officially support Microsoft Visual Studio 2003. If you must use Rhapsody with this version of Visual Studio, follow the instructions in this section.

Note

These instructions allow you to compile and run applications that do not use the Webify feature. If you need to use Webify with Visual Studio 2003, contact IBM or Telelogic's support group.

To use Visual Studio 2003 with Rhapsody, you must carry out the installation steps and then make the [Required Adjustments after Installation](#) of Rhapsody.

Rhapsody Installation Steps for Visual Studio

1. In the Setup Type dialog box, select **Custom**, as shown below.



2. In the Custom Setup, select the **Runtime Source C++** and click **Next**.
3. Select the Visual Studio 6.0 option and click **Next**.
4. In the third environment setup window, select the path to your Visual Studio installation and click **Next**.
5. Follow the instructions to complete the installation.

Required Adjustments after Installation

If you select any of Microsoft environments to be installed, the installation wizard automatically creates a `msmake.bat` file in the directory `[installation directory]\Share\etc`.

1. Copy the following text into the `msmake.bat` file after replacing *MicrosoftVisualStudio.NET2003InstallationFolder* with the path of your Visual Studio 2003 installation directory:

```
@echo off
if "%2"==" " set target=all
if "%2"=="build" set target=all
if "%2"=="rebuild" set target=clean all
if "%2"=="clean" set target=clean
call "MicrosoftVisualStudio.NET2003InstallationFolder\vc7\bin\vcvars32.bat" x86.
echo ``nmake.exe
nmake /nologo /S /F %1 %target% %3 %4 %5 %6
```

2. Start Rhapsody.
3. Create a new Rhapsody project that uses the Microsoft configuration settings (select **Microsoft** from the Environment drop-down list on the Settings tab of the Features dialog for the active configuration).
4. Select **Code > Build Framework**.

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