



Installation Guide



Installation Guide

Note

Before using this information and the product it supports, read the information in "Notices" on page 93.

Fifth Edition (June 2007)

This edition applies to Version 7.0 of IBM Rational Software Architect (part number 5724-I70) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Overview

This installation guide provides instructions for installing and uninstalling IBM® Rational® Software Architect.

You can find the most recent version of this *Installation Guide* online at http://download.boulder.ibm.com/ibmdl/pub/software/rationalsdp/v7/rsa/70/docs/install_instruction/install.html.

Before installing, you should consult the release notes for late-breaking installation issues. The release notes file is available online at: <http://download.boulder.ibm.com/ibmdl/pub/software/rationalsdp/v7/ram/70/docs/readme/readme.html>,

Note: Refer to <http://www.ibm.com/software/rational/support/documentation/> for updated documentation and troubleshooting information.

IBM Installation Manager

IBM Installation Manager is a program that helps you install the Rational Software Architect product packages on your workstation. It also helps you update, modify, and uninstall this and other packages that you install. A package can be a product, a group of components, or a single component that is designed to be installed by Installation Manager.

The installation scenario you follow to install Rational Software Architect client or , use Installation Manager to install your Rational package.

IBM Installation Manager offers a number of time-saving features. It keeps track of what you are about to install, software components that you have already installed, and components that are available for you to install. It searches for updates so you know that you are installing the latest version of a Rational product package. Installation Manager also provides tools for managing licenses for the product packages that it installs. It provides tools for updating and modifying packages. You can also use Installation Manager to uninstall product packages.

IBM Installation Manager comprises six wizards that make it easy to maintain your product packages through their lifecycles:

- The Install Packages wizard walks you through the installation process. You can install a product package by simply accepting the defaults, or you can modify the default settings to create a custom installation. Before you install a product package, you are provided with a complete summary of the selections that you have made throughout the wizard. With the wizard you can install one or more product packages at the same time.
- The Update Packages wizard searches for available updates to product packages that you have installed. An update might be a released fix, a new feature, or a new version of the Rational product. Details of the contents of the update are provided in the wizard. You can choose whether to apply an update.
- With the Modify Packages wizard, you can modify specific elements of a package that you have already installed. During your initial installation of the product package, you select the features you want to install. If you find later

that you require other features, you can use the Modify Packages wizard to add them to your product package installation. You can also remove features, and add or remove languages.

- The Manage Licenses wizard helps you to set up the licenses for your packages. Use this wizard to change your trial license to a full license, to set up your servers for floating licenses, and to select which type of license to use for each package.
- With the Rollback Packages wizard you can revert to a previously installed version of an eligible package.
- The Uninstall Packages wizard helps you to remove a product package from your computer. You can uninstall more than one package at a time.

IBM Rational Software Development Platform

The IBM Rational Software Development Platform is a common development environment that contains the development workbench and other software components that share multiple products.

The development platform includes the following offerings:

- Rational Application Developer
- Rational Functional Tester
- Rational Performance Tester
- Rational Software Architect
- Rational Software Modeler
- Rational Systems Developer
- Rational Tester for SOA Quality

Also available but not part of the platform is Rational Manual Tester. Manual Tester is included with Rational Functional Tester, or it can be purchased separately.

About Rational Software Architect

IBM Rational Software Architect is an integrated analysis, design, and development toolset that supports the comprehension, design, management, and evolution of enterprise solutions and services. It includes design, analysis, and development capabilities for software architects and developers to create model-driven, service-oriented architecture (SOA), J2EE, and portal applications.

The IBM Support Assistant (ISA) is a free local software serviceability workbench for Linux[®] operating systems that helps you resolve questions and problems with IBM software products. It provides quick access to support-related information along with serviceability tools for problem determination. For more information refer to <http://www.ibm.com/software/support/isa/>.

Installation requirements

This section details hardware, software, and user privilege requirements that must be met in order to successfully install and run your software.

Hardware requirements

Before you can install the product, verify that your system meets the minimum hardware requirements.

Hardware	Requirements
Processor	Minimum: 800 MHz Pentium® III (or higher for best results)
Memory	Minimum: 1 GB RAM
Disk space	Minimum: 2 GB of disk space is required for product package installation. Additional disk space is required for the resources that you develop. Note: <ul style="list-style-type: none">• Disk space requirements can be reduced or increased depending on the features that you install.• Additional disk space is required if you download the product package to install this product.• For Windows®: Additional disk space is required if you use FAT32 instead of NTFS.• For Windows: An additional 500 MB of disk space is required in the directory pointed to by your environment variable TEMP.• For Linux: An additional 500 MB of disk space is required in the /tmp directory.
Display	1024 x 768 display minimum using 256 Colors (or higher for best results)
Other hardware	Microsoft® mouse or compatible pointing device

Software requirements

Before you can install the product, verify that your system meets the software requirements.

Operating system

The following operating systems are supported for this product:

- Microsoft Windows XP Professional with Service Pack 1 or 2
- Windows XP Professional x64 Edition (running on an AMD processor)
- Microsoft Windows 2000 Professional with Service Pack 4

- Microsoft Windows 2000 Server with Service Pack 4
- Microsoft Windows 2000 Advanced Server with Service Pack 4
- Microsoft Windows Server 2003 Standard Edition with Service Pack 1
- Microsoft Windows Server 2003 Enterprise Edition with Service Pack 1
- **(For Rational Software Architect Version 7.0.0.2 or later)** Microsoft Windows Vista Business, Windows Vista Enterprise, and Windows Vista Ultimate.
- Red Hat Enterprise Linux Workstation Version 4.0
- Red Hat Desktop Version 4.0 (running in 32-bit mode)
- SUSE Linux Enterprise Server (SLES) Version 9 (all service packs; running in 32-bit mode)

The listed operating systems support all of the languages that are supported by Rational Software Architect.

Requirements for extending an existing Eclipse IDE

The products in this version of the IBM Rational Software Development Platform were developed for use with version 3.2.1 or later of the Eclipse IDE. You can only extend an existing Eclipse IDE of version 3.2.1 with latest updates from eclipse.org.

To extend an existing Eclipse IDE, you also require a JRE from one of the following Java™ development kits:

- For Windows: IBM 32-bit SDK for Windows, Java 2 Technology Edition, Version 5.0 service release 3; Sun Java 2 Standard Edition 5.0 Update 9 for Microsoft Windows; *For Microsoft Windows Vista* (requires Rational Software Architect Version 7.0.0.2 or later): IBM 32-bit SDK for Windows, Java 2 Technology Edition, Version 5.0 service release 4; Sun Java 2 Standard Edition 5.0 Update 11 for Microsoft Windows
- For Linux: IBM 32-bit SDK for Linux on Intel® architecture, Java 2 Technology Edition, Version 5.0 service release 3; Sun Java 2 Standard Edition 5.0 Update 9 for Linux x86 (not supported for SUSE Linux Enterprise Server [SLES] Version 9)

Note:

- The following features are not supported with a Sun JRE:
 - Web development tools
 - Domain modeling tools
 - J2EE Connector (J2C) tools
 - Portal and portlet tools
 - WebSphere® Application Server development and servers
- You might need to update your Eclipse version in order to install updates to Rational Software Architect. Refer to the update's release documentation for information on changes to the prerequisite Eclipse version.

Important: *(For Rational Software Architect Version 7..0.0.2 and later only)* To enable users who do not have Administrator privileges to work with Rational Software Architect on a Windows Vista system, do not install Eclipse inside the Program Files directory (C:\Program Files\).

Additional software requirements

- For Linux: The GNU Image Manipulation Program Toolkit (GTK+), Version 2.2.1 or later and associated libraries (GLib, Pango).

- One of the following Web browsers to view the readme files and the installation guide, and to support the Standard Widget Toolkit (SWT) browser widget:
 - For Windows: Microsoft Internet Explorer 6.0 with Service Pack 1.
 - Mozilla 1.6 or 1.7.
 - Firefox 1.0.x or 1.5.

Note: On Red Hat Enterprise Linux Workstation Version 4.0, you must set the environment variable `MOZILLA_FIVE_HOME` to the folder containing your Firefox or Mozilla installation. For example, setenv `MOZILLA_FIVE_HOME /usr/lib/firefox-1.5`.

Note: The Launchpad does not support Mozilla 1.6; if your browser is Mozilla, you need version 1.7 or higher to run the launchpad.

- To properly view multimedia user assistance, such as tours, tutorials, and demonstration viewlets, you must install Adobe® Flash Player.
 - For Windows: Version 6.0 release 65 or later
 - For Linux: Version 6.0 release 69 or later
- For information about supported database servers, Web application servers, and other software products, refer to the online help.

User privileges requirements

You must have a user ID that meets the following requirements before you can install Rational Software Architect.

- Your user ID must not contain double-byte characters.
- For Windows: the user privileges required for installing depend on the version of Windows on your computer:
 - **(For Rational Software Architect Version 7.0.0.2 and later only) For Windows Vista**, you must log in to the Administrator account (or run as Administrator; right-click the program file or shortcut and select **Run as Administrator**) to perform the following tasks:
 - Install or update IBM Installation Manager (the application that installs and updates Rational Software Architect)
 - Install or update a product offering
 - Install an Authorized-User license key for your product. You use IBM Installation Manager to install license keys.

Note: To enable users who are not the Administrator to work with Rational Software Architect on a Windows Vista system:

- Do not install Rational Software Architect into a package group (installation location) in the Program Files directory (C:\Program Files\), and do not choose a shared resources directory in the Program Files directory.
- If you are *extending* an existing Eclipse installation, then do not install Eclipse in the Program Files directory (C:\Program Files\).
- **For other supported Windows versions**, you must have a user ID that belongs to the Administrators group.
- For Linux: You must be able to log in as root.

Planning to install

Read all the topics in this section before you begin to install any of the product features. Effective planning and an understanding of the key aspects of the installation process can help ensure a successful installation.

Installation scenarios

There are a number of scenarios that you can follow when installing Rational Software Architect.

The following are some of the factors that might determine your installation scenario:

- The format and method by which you access your installation files (for example, from CDs or files downloaded from IBM Passport Advantage®).
- The location for your installation (for example, you can install the product onto your own workstation, or make the installation files available to your enterprise).
- The type of installation (for example, you can use the Installation Manager GUI, or install silently).

These are the typical installation scenarios you might follow:

- Installing from the CDs.
- Installing from a downloaded electronic image on your workstation.
- Installing from an electronic image on a shared drive.
- Install from a repository on an HTTP or HTTPS server.

Note that in the latter three scenarios you can choose to run the Installation Manager program in silent mode to install Rational Software Architect. For details on running Installation Manager in silent mode, see “Installing silently” on page 37.

Note also that you can install updates at the same time that you install the base product package.

Installing from CDs

In this installation scenario, you have the CDs that contain the product package files, and typically you are installing Rational Software Architect on your own workstation. Refer to “Installing Rational Software Architect from CDs: task overview” on page 23 for an overview of the steps.

Installing from a downloaded electronic image on your workstation

In this scenario, you have downloaded the installation files from IBM Passport Advantage and you will install Rational Software Architect on your own workstation. Refer to “Installing Rational Software Architect from an electronic image on your workstation: task overview” on page 23 for an overview of the steps.

Installing from an electronic image on a shared drive

In this scenario, you will place the electronic image on a shared drive so that users in your enterprise can access the installation files for Rational Software Architect from a single location. Refer to “Installing Rational Software Architect from an electronic image on a shared drive: task overview” on page 24 for an overview of the steps.

Installing from a repository on an HTTP server

This scenario represents the fastest method for installing the product across a network. This scenario differs from the shared-drive installation, In order to place product package files for Rational Software Architect on an HTTP Web server, you must use this utility application – IBM Packaging Utility. This utility is provided with Rational Software Architect to copy the installation files in a format - a *package* - that can be used for installing Rational Software Architect directly from a HTTP Web server. The directory on the HTTP Web server that contain the package is called a *repository*. Note that, in this scenario, the installation files for only Rational Software Architect are placed in the package. Refer to “Installing Rational Software Architect from a repository on an HTTP Web server: task overview” on page 25 and “Placing Rational Software Architect on an HTTP Web server: task overview” on page 26 for an overview of the steps.

Deciding which features to install

With version 7.0, you can customize your software product by selecting which features of Rational Software Architect to install.

When you install the Rational Software Architect product package using IBM Installation Manager, the installation wizard displays the features in the available product package. From the features list, you can select which to install. A default set of features is selected for you (including any required features). Installation Manager automatically enforces any dependencies between features and prevents you from clearing any required features.

Note: After you finish installing the package, you can still add or remove features from your software product by running the Modify Packages wizard in Installation Manager. See “Modifying installations” on page 61 for more information.

Features

The following table shows the features of Rational Software Architect that you can choose to install. Default selections of features to install may vary. If a feature already exists in your shared resources directory, it will not be selected by default and will not be installed again.

Feature	Description	Selected for installation by default
Unified Modeling Language (UML) modeling	Enables users to create UML 2.0 models that can be transformed to code or other models using separately installed transformations.	Yes

Feature	Description	Selected for installation by default
UML-to-UML transformations and patterns	Automates the generation of new model content based on existing model content.	Yes
C++ modeling and transformations	Automates the generation of C++ code based on UML design models.	No
Java modeling and transformations	Automates the generation of Java code based on UML design models.	Yes
EJB modeling and transformations	Automates the generation of EJB code based on UML design models.	No
WSDL and XSD modeling and transformations	Automates the generation of Web service contracts, expressed with the Web Services Description Language (WSDL) and XML Schema Definition (XSD) Language, based on UML models.	No
Department of Defense Architecture Framework (DoDAF) support	Lets you describe the architecture of a complex system in accordance with the DoDAF. This feature uses the UML as a base to represent a system structure in visual, textual, and tabular formats.	No
UML-to-CORBA transformations	Automates the generation of component interface specifications (expressed as CORBA IDL) based on UML models.	No
WebSphere Business Modeler	Renders a business process model from IBM WebSphere Business Modeler as a UML 2.0 Activity model.	No
Rational Rose® model import	Migrates IBM Rational Rose models, including any custom properties you might have defined in those models.	Yes
Rational XDE™ model import (for Windows only)	Migrates IBM Rational XDE models, including any custom UML profiles you might have applied to those models.	Yes

Feature	Description	Selected for installation by default
Rational SoDA [®] integration (for Windows only)	Integrated with the IBM Rational SoDA product. Use information from the modeling products to generate reports and documents, including Microsoft Word documents.	No
C and C++ Development Tools (CDT)	Provides tools for building and running optimized C or C++ programs. You can use the CDT in a C or C++ integrated development environment (IDE) to edit code, generate makefiles, and debug and launch applications.	No
J2EE and Web services development tools	Provides tools for developing J2EE applications and Web services.	Yes
Java client application editor	Provides tools for building and testing graphical user interface Java client applications using the SWT, AWT, or Swing UI libraries.	No
Web development tools	Provides tools for building J2EE Web applications using JavaServer Faces, JavaServer Pages, servlets, and HTML.	Yes
Struts tools	Provides tools for developing J2EE Web applications using the Apache Struts framework.	No
Crystal Reports tools	Provides visual tools for developing applications that require reporting capabilities that Crystal Reports provides.	Yes
Portal tools	Provides tools to create, customize, test, debug, and deploy portal applications. The Portal development tools support IBM WebSphere Portal versions 5.1 and 6.0.	No
J2EE Connector (J2C) tools	Provides a robust set of tools to help you create J2C client applications for CICS [®] and IMS [™] systems. Use the data binding wizards to create Java marshalling code for COBOL, PL/I, and C languages.	No

Feature	Description	Selected for installation by default
Code review	Inspects your code for rule compliance and best practices. Code review highlights potential problems and suggests code changes for improved quality. In some cases, it can automatically apply fixes for compliance.	Yes
Test and Performance Tools Platform (TPTP)	Provides Eclipse tools for testing applications. Tool capabilities include profiling, monitoring, logging, component testing (JUnit), and static analysis or code review.	Yes
Architectural rules	Provides tools for automatically detecting structural patterns and antipatterns and creating graphical visualizations of dependencies to ensure the architectural integrity of your Java applications.	Yes
Rational ClearCase® SCM Adapter	Provides the IBM Rational ClearCase SCM and ClearCase MVFS plug-ins, which enable creating managed versions of software artifacts in ClearCase versioned object bases (VOBs). These plug-ins use snapshot views and dynamic views when ClearCase VOB and view servers are also installed.	Yes
Rational RequisitePro® integration (for Windows only)	Provides a tightly integrated requirements management tool with traceability between requirements and software artifacts when IBM Rational RequisitePro is installed.	Yes
Rational Unified Process® (RUP®) Process Advisor and Process Browser	Provides the Process Advisor, for context-sensitive guidance on developing software and using the IBM Rational Software Development Platform, and the Process Browser, for help related to your current tasks, artifacts, and tools.	Yes

Feature	Description	Selected for installation by default
Reusable Asset Specification (RAS) support	Provides a standard way to package and extract a set of related files for efficient sharing among team members.	No
Transformation authoring	Provides tools to create custom transformations and customize existing transformations. Transformations automate the task of generating model content and implementation code.	No
API migration	Provides assistance for the migration of user-written plug-ins and pluglets from the extensibility APIs available in version 6 of the Rational UML modeling products to the APIs available in version 7.0.	No
Pluglets	Provides an environment for creating small Java applications that can be used to extend the workbench. Pluglets are easier to develop and test than full Eclipse plug-ins. They offer a good way to learn some of the extensibility APIs.	No
Plug-in development environment (PDE)	Provides tools for creating, developing, testing, debugging, and deploying Eclipse plug-ins, which can be used to extend the Eclipse environment.	No
Eclipse Technology Extensibility	Enables you to extend the functionality of the Eclipse workbench-based environment. Extensibility is achieved through a combination of application programming interfaces (APIs), extension points, and utilities.	No
Modeling extensibility	Enables you to extend the modeling and development functionality of the Eclipse workbench-based environment through a combination of application programming interfaces (APIs), extension points, and utilities.	No

Feature	Description	Selected for installation by default
Data tools	Provides relational database tools for defining and working with databases. You can define and work with tables, views, and filters; create and work with SQL statements; create and work with DB2 [®] routines, and create and work with SQLJ files. You can also use the tools to generate SQL DDL, DADX, and XML files.	No
WebSphere Application Server development tools	Provides tools for WebSphere Application Server development.	Yes
WebSphere Application Server compile-time dependencies	Provides required components for building, compiling, debugging, and deploying applications for IBM WebSphere Application Server.	Yes
IBM WebSphere Application Server Express, version 5.1	Provides IBM WebSphere Application Server Express, version 5.1, as your targeted runtime environment.	No
IBM WebSphere Application Server, version 5.1	Provides IBM WebSphere Application Server, version 5.1, as your targeted runtime environment.	No
IBM WebSphere Application Server, version 6.0	Provides IBM WebSphere Application Server, version 6.0, as your targeted runtime environment.	No
IBM WebSphere Application Server, version 6.1	Provides IBM WebSphere Application Server, version 6.1, as your targeted runtime environment.	Yes

Upgrade and coexistence considerations

If you have a previous version of the product, or if you plan to install multiple Rational Software Development Platform products on the same workstation, review the information in this section.

Offering coexistence considerations

Some products are designed to coexist and share function when they are installed in the same package group. A package group is a location where you can install one or more software products or packages. When you install each package, you select whether you want to install the package to an existing package group, or whether you want to create a new one. IBM Installation Manager will block

products that are not designed to share or do not meet version tolerance and other requirements. If you want to install more than one product at a time, the products must be able to share a package group.

At the time of release, the following products will share function when installed to a package group:

- Rational Application Developer
- Rational Software Architect
- Rational Functional Tester
- Rational Performance Tester
- Rational Software Modeler
- Rational Systems Developer
- Rational Tester for SOA Quality

Any number of eligible products can be installed to a package group. When a product is installed, its function is shared with all of the other products in the package group. If you install a development product and a testing product into one package group, when you start either of the products, you have both the development and testing functionality available to you in your user interface. If you add a product with modeling tools, all of the products in the package group will have the development, testing, and modeling functionality available.

If you install a development product and later purchase a development product with increased functionality and add that product to the same package group, the additional function will be available in both products. If you uninstall the product with the greater functionality, the original product remains. Note that this is a change from the "upgrade" behavior of version 6 products in the Rational Software Development Platform group.

Note: Each product installed into a unique location may be associated with only one package group. A product must be installed into multiple locations in order to be associated with multiple package groups. Rational Functional Tester and Rational Performance Tester can be installed into only one location on a computer.

Upgrade considerations

You cannot change a previous version of Rational Software Architect that is already installed on your workstation to version 7.0. However, Rational Software Architect version 7.0 can coexist with earlier versions.

If you have a previous version of Agent Controller, you should stop it, uninstall it, and clean up any leftover files before installing this version of Agent Controller. For more information, refer to Chapter 6, "Installing Agent Controller".

Installation repositories

IBM Installation Manager retrieves product packages from specified repository locations.

If the launchpad is used to start Installation Manager, the repository information is passed to Installation Manager. If the Installation Manager is started directly, you must specify an installation repository that contains the product packages that you want to install. See "Setting repository preferences in Installation Manager" on page 15.

Some organizations bundle and host their own product packages on their intranet. For information about this type of installation scenario, see “Installing from a repository on an HTTP server” on page 8. Your system administrators will need to provide you with the correct URL.

By default, IBM Installation Manager uses an embedded URL in each Rational software development product to connect to a repository server over the Internet. Installation Manager then searches for the product packages as well as new features.

Setting repository preferences in Installation Manager

When you start the installation of Rational Software Architect from the launchpad program, the location of the repository that contains the product package you are installing is automatically defined in IBM Installation Manager when it starts. However, if you start Installation Manager directly (for example, installing Rational Software Architect from a repository located on a Web server) then you must specify the repository preference (the URL for the directory that contains the product package) in Installation Manager before you can install the product package. Specify these repository locations on the Repositories page of the Preferences window. By default, Installation Manager uses an embedded URL in each Rational software development product to connect to a repository server through the Internet and search for installable packages and new features. Your organization may require you to redirect the repository to use intranet sites.

Note: Before starting the installation process, be sure to obtain the installation package repository URL from your administrator.

To add, edit, or remove a repository location in Installation Manager:

1. Start Installation Manager.
2. On the Start page of Installation Manager, click **File** → **Preferences**, and then click **Repositories**. The Repositories page opens, showing any available repositories, their locations, and whether they are accessible.
3. On the Repositories page, click **Add Repository**.
4. In the Add repository window, type the URL of the repository location or browse to it and set a file path.
5. Click **OK**. If you provided a HTTPS repository location, then you will be prompted to enter a user ID and password. The new or changed repository location is listed. If the repository is not accessible, a red x is displayed in the **Accessible** column.
6. Click **OK** to exit.

Note: For Installation Manager to search the default repository locations for the installed packages, ensure the preference **Search service repositories during installation and updates** on the Repositories preference page is selected. This preference is selected by default.

Package groups and the shared resource directory

When you install the Rational Software Architect package using IBM Installation Manager, you must choose a package group and a shared resource directory.

Package groups

During the installation process, you must specify a *package group* for the Rational Software Architect package. A package group represents a directory in which packages share resources with other packages in the same group. When you install the Rational Software Architect package using Installation Manager, you can create a new package group or install the packages into an existing package group. (Some packages might not be able to share a package group, in which case the option to use an existing package group will be disabled.)

Note that when you install multiple packages at the same time, all the packages are installed into the same package group.

A package group is assigned a name automatically; however, you choose the installation directory for the package group.

After you create the package group by successfully installing a product package, you cannot change the installation directory. The installation directory contains files and resources specific to the Rational Software Architect product package installed into that package group. Resources in the product package that can potentially be used by other package groups are placed in the shared resources directory.

Important: *(For Rational Software Architect Version 7.0.0.2 and later only)* To enable users who do not have Administrator privileges to work with Rational Software Architect in the Windows Vista operating system, do not choose a directory inside the Program Files directory (C:\Program Files\).

Shared resources directory

The *shared resources directory* is the directory where installation artifacts are located so that they can be used by one or more product package groups.

Important:

- You can specify the shared resources directory once: the first time that you install a package. For best results, use your largest drive for this. You cannot change the directory location unless you uninstall all packages.
- *(For Rational Software Architect Version 7.0.0.2 and later only)* To enable users who do not have Administrator privileges to work with Rational Software Architect on a Windows Vista system, do not choose a directory inside the Program Files directory (C:\Program Files\).

Extending an existing Eclipse IDE

When you install the Rational Software Architect product package, you can choose to extend an Eclipse integrated development environment (IDE) already installed on your computer by adding the functions that the Rational Software Architect package contains.

The Rational Software Architect package that you install using IBM Installation Manager is bundled with a version of the Eclipse IDE or workbench; this bundled workbench is the base platform for providing the functionality in the Installation Manager package. However, if you have an existing Eclipse IDE on your

workstation, then you have the option to *extend* it, that is, add to the IDE the additional functionality provided in the Rational Software Architect package.

To extend an existing Eclipse IDE: in the Location page of the Install Packages wizard, select the **Extend an existing Eclipse IDE** option.

Important: *(For Rational Software Architect Version 7.0.0.2 and later only)* To enable users who do not have Administrator privileges to work with Rational Software Architect in the Windows Vista operating system, do not install Eclipse inside the Program Files directory (C:\Program Files\).

You might extend your existing Eclipse IDE, for example, because you want to gain the functionality provided in the Rational Software Architect package, but you also want to have the preferences and settings in your current IDE when you work with the functionality from the Rational Software Architect package. You also might want to work with plug-ins that you have installed that already extend the Eclipse IDE.

Your existing Eclipse IDE must be version 3.2.1 or the latest updates from eclipse.org to be extended. Installation Manager checks that the Eclipse instance you specify meets the requirements for the installation package.

Note: You might need to update your Eclipse version in order to install updates to Rational Software Architect. Refer to the update release documentation for information on changes to the prerequisite Eclipse version.

Verifying and extracting electronic images

If you download the installation files from IBM Passport Advantage, you must extract the electronic image from the compressed files before you can install Rational Software Architect.

If you select the Download Director option for downloading the installation files, the Download Director applet automatically verifies the completeness of each file that it processes.

Extracting the downloaded files

Extract each compressed file to the same directory. For Linux: Do not include spaces in the directory names, or you won't be able to run the `launchpad.sh` command to start the launchpad from a command line.

Preinstallation tasks

Before you install the product, complete these steps:

1. Confirm that your system meets the requirements described in the section “Installation requirements” on page 3.
2. Confirm that your user ID meets the required access privileges for installing the product. See “User privileges requirements” on page 5.
3. Read the section “Planning to install” on page 7 and give particular attention to the topic “Upgrade and coexistence considerations” on page 13.
- 4.
5. For Linux: If you want to enable the product to be used by users other than root, then you must set to 0022, the umask variable **before you install the product**. To set this variable, log in as root user, start a terminal session, and type `umask 0022`.

Installation tasks

The following sections provide an overview of the installation scenarios that are described in the section “Installation scenarios” on page 7. You can access detailed instructions from links in the main steps.

Installing Rational Software Architect from CDs: task overview

In this installation scenario, you have the CDs that contain the installation files, and typically you are installing Rational Software Architect on your own workstation.

The following are the general steps for installing from CDs:

1. Complete the preinstallation steps listed in “Preinstallation tasks” on page 21.
2. Insert the first installation CD into your CD drive.
3. For Linux: Mount the CD drive.
4. If autorun is enabled on your system, the Rational Software Architect launchpad program automatically opens. If autorun is not enabled, start the launchpad program. Refer to “Starting the launchpad program” on page 31 for details.
5. Start the installation of Rational Software Architect from the launchpad. For details, see “Starting an installation from the launchpad program” on page 32.

If IBM Installation Manager is not detected on your workstation, you are prompted to install it and then the installation wizard starts. Follow the on-screen instructions in the wizard to complete the installation of Installation Manager. See “Installing Installation Manager on Windows” on page 27 for details.

When the installation of Installation Manager completes, or if it is already on your computer, Installation Manager starts and automatically begins the Install Packages wizard.

6. Follow the on-screen instructions in the Install Packages wizard to complete the installation. For details, see “Installing IBM Rational Software Architect Eclipse client using the IBM Installation Manager graphical interface” on page 33.
7. Configure your license. By default, a trial license for Rational Software Architect is included. You must configure the license to ensure that you have continued access to the product. Refer to “Managing licenses” on page 51 for details.
8. For Linux: Increase the number of file handles on your workstation. For details, see “Increasing the number of file handles on Linux workstations” on page 57.
9. Install optional software that is included with Rational Software Architect. For more information, see “Installing optional software” on page 67.

Installing Rational Software Architect from an electronic image on your workstation: task overview

The following are the general steps for installing Rational Software Architect from an electronic installation image:

1. Ensure that your workstation has sufficient space to store both the files you must download from IBM Passport Advantage and the extracted installation image. Refer to “Hardware requirements” on page 3.
2. Download all required parts for the product image from IBM Passport Advantage to a temporary directory.
3. Extract the installation image from the downloaded file and verify that the installation image is complete. See “Verifying and extracting electronic images” on page 19 for details.
4. Continue with the steps in “Installing from an electronic image” below.

Installing from an electronic image

1. Complete the preinstallation steps listed in “Preinstallation tasks” on page 21.
2. Start the launchpad program. Refer to “Starting the launchpad program” on page 31 for details.
3. Start the installation of Rational Software Architect from the Launchpad. For details, see “Starting an installation from the launchpad program” on page 32. If IBM Installation Manager is not detected on your workstation, you are prompted to install it and then the installation wizard starts. Follow the on-screen instructions in the wizard to complete the installation of Installation Manager. See “Installing Installation Manager on Windows” on page 27 for details.

When the installation of Installation Manager completes, or if it is already on your system, Installation Manager starts and automatically begins the Install Packages wizard.

Note: If you exit Installation Manager before completing the product installation, you must restart Installation Manager from the launchpad. If you start the Installation Manager directly, it is not preconfigured with the necessary installation repositories.

4. Follow the on-screen instructions in the Install Packages wizard to complete the installation. For complete details, see “Installing IBM Rational Software Architect Eclipse client using the IBM Installation Manager graphical interface” on page 33.
5. Configure your license. By default, a trial license for Rational Software Architect is included. You must configure the license to ensure you have continued access to the product. Refer to “Managing licenses” on page 51 for details.
6. For Linux: Increase the number of file handles on your workstation. For details, see “Increasing the number of file handles on Linux workstations” on page 57.
7. Install optional software that is included with Rational Software Architect. For more information, see “Installing optional software” on page 67.

Installing Rational Software Architect from an electronic image on a shared drive: task overview

In this scenario, you will place the electronic image on a shared drive so that users in your enterprise can access the installation files for Rational Software Architect from a single location.

The following steps are performed by the person who places the installation image on a shared drive.

1. Ensure that your shared drive has sufficient disk space to store both the files you must download from IBM Passport Advantage and the extracted installation image. Refer to “Hardware requirements” on page 3 for details.
2. Download all required parts for the product image from IBM Passport Advantage to a temporary directory on the shared drive.
3. Extract the installation image from the downloaded files into an accessible directory on the shared drive and verify the installation image is complete. See “Verifying and extracting electronic images” on page 19 for details.

To install Rational Software Architect from the installation files on the shared drive:

1. Change to the disk1 directory on the shared drive containing the installation image.
2. Follow the steps in “Installing from an electronic image” on page 24.

Installing Rational Software Architect from a repository on an HTTP Web server: task overview

In this scenario, the product packages are retrieved by IBM Installation Manager from an HTTP Web server.

These steps assume the repository containing the package for Rational Software Architect has been created on the HTTP Web server.

To install the Rational Software Architect package from a repository on an HTTP server:

1. Complete the preinstallation steps listed in “Preinstallation tasks” on page 21.
2. Install IBM Installation Manager. Refer to “Managing IBM Installation Manager” on page 27. In this scenario, for example, the Installation Manager installation files are available from a shared drive.
3. Start Installation Manager. Refer to “Starting Installation Manager on Windows” on page 28 for details.
4. Set the URL of the repository containing the package of Rational Software Architect as a repository preference in Installation Manager. See “Setting repository preferences in Installation Manager” on page 15.
5. Start the Install Packages wizard in Installation Manager and follow the on-screen instructions in the Install Packages wizard to complete the installation. For complete details, see “Installing IBM Rational Software Architect Eclipse client using the IBM Installation Manager graphical interface” on page 33.
6. Configure your license. By default, a trial license for Rational Software Architect is included. You must set the license to ensure you have continued access to work with the product. Refer to “Managing licenses” on page 51 for details.
7. For Linux: Increase the number of file handles on your workstation. For details, see “Increasing the number of file handles on Linux workstations” on page 57.
8. Install optional software included with Rational Software Architect. For more information, see “Installing optional software” on page 67.

Placing Rational Software Architect on an HTTP Web server: task overview

To prepare Rational Software Architect for installation from a repository located on an HTTP Web server:

1. Ensure that your HTTP or HTTPS Web server has sufficient disk space to store the product package. Refer to “Hardware requirements” on page 3.
2. Ensure that your workstation has sufficient disk space to store both the files you must download from IBM Passport Advantage and the extracted installation image. Refer to “Hardware requirements” on page 3
3. Download all required parts for the product image from IBM Passport Advantage to a temporary directory on your workstation.
4. Extract the installation image from the downloaded files into another temporary directory on your workstation and verify that the installation image is complete. See “Verifying and extracting electronic images” on page 19 for details.
5. Install on your workstation the IBM Packaging Utility from the Auxiliary CD (or electronic disk) appropriate for your platform.
6. Using the Packaging Utility, copy the Rational Software Architect product package.
7. Copy the output of the Packaging Utility to an HTTP or HTTPS Web Server.
8. Copy the installation files for IBM Installation Manager from the Auxiliary CD’s to a shared drive.
9. Instruct users in your organization to install Installation Manager.
10. Provide users the URL for the repository that contains the Rational Software Architect product package you created earlier.

Managing IBM Installation Manager

This section deals with some common tasks relating to IBM Installation Manager. For more information, see the Installation Manager online help.

Installing Installation Manager on Windows

If you start the installation of your product from the launchpad program, then the installation of IBM Installation Manager is started automatically if it is not already installed on your workstation. (For more information on this process, refer to “Installing from the launchpad program” on page 31.) In other cases, you must manually start the installation of Installation Manager.

To start the installation of Installation Manager manually:

1. Run `setup.exe` from the `InstallerImager_win32` folder on the first installation disk.
2. Click **Next** on the Welcome screen.
3. Review the license agreement on the License Agreement page and select **I accept the terms in the license agreement** to accept. Click **Next**.
4. Click the **Change** button on the Destination Folder page to change the installation location if required. Click **Next**.
5. Click **Next** on the Setup Type page.
6. Click **Install** on the Ready to Install Program page. The Completed page opens after the installation is complete.
7. Click **Finish**.

Installing IBM Installation Manager

When you installed your prerequisite host software application, you first installed IBM Installation Manager. For instructions on installing Installation Manager, refer to the *Installation Guide* for your host software application. (For example, see the *Installation Guide* for Rational Application Developer.

Installing Installation Manager on Linux

IBM Installation Manager is installed by the launchpad. For more information on this process, refer to “Installing from the launchpad program” on page 31.

To install Installation Manager manually:

1. Open a terminal window with root user privileges.
2. Run `setupLinux.bin` from the `InstallerImager_linux` folder on the first installation disk.
3. Click **Next** on the Welcome screen.
4. Review the license agreement on the License Agreement page and select **I accept the terms in the license agreement** to accept. Click **Next**.
5. If necessary, edit the installation directory location. Click **Next**.
6. Click **Install** on the information summary page.
7. Click **Finish** on the InstallShield Wizard Completed page.

Starting Installation Manager on Windows

IBM Installation Manager should be started from the launchpad program. Doing so starts Installation Manager with a configured repository preference and selected Rational Software Architect packages. If you start Installation Manager directly, then you must set a repository preference and choose product packages manually.

To start Installation Manager manually:

1. Open the **Start** menu from the **Taskbar**.
2. Select **All Programs** → **IBM Installation Manager** → **IBM Installation Manager**.

Starting Installation Manager on Linux

IBM Installation Manager should be started from the launchpad program. Doing so starts the Installation Manager with a configured repository preference and selected Rational Software Architect packages. If you start Installation Manager directly, then you must set repository preference and choose product packages manually.

To start Installation Manager manually:

1. Open a terminal window with root user privileges.
2. Run `/opt/IBM/InstallationManager/launcher_shortcut`.

Uninstalling Installation Manager on Windows

To uninstall Installation Manager manually:

1. Run `setup.exe` from the `InstallerImager_win32` folder on the first installation disk.
2. Click **Next** on the Welcome screen.
3. Select the **Remove** button on the Program Maintenance page. Click **Next**.
4. Click **Next** on the Setup Type page.
5. Click **Remove** on the Remove the Program page.
6. Click **Finish** on the InstallShield Wizard Completed page.

Note: You can also uninstall Installation Manager by using the Control Panel. Click **Start** → **Settings** → **Control Panel**, and then double-click **Add or Remove Programs**. Select the entry for IBM Installation Manager and click **Remove**.

Uninstalling Installation Manager on Linux

IBM Installation Manager must be uninstalled using the package management tool that is included with your Linux version.

To uninstall Installation Manager manually on Linux:

1. Open a terminal window with root user privileges.
2. Change directory to the installation directory of Installation Manager (by default, `/opt/IBM/InstallationManager`) and then change to `_uninst`.
3. Run `.uninstaller.bin`.

Silently installing and uninstalling Installation Manager

IBM Installation Manager can be silently installed and uninstalled.

Silently installing Installation Manager on Windows

To silently install Installation Manager onto a default install location on Windows:

1. Change directory to InstallerImage_win32 folder on the first installation disk.
2. Run `setup.exe /S /v"/qn"`

If you want to change the install location, you can add the `INSTALLDIR` property inside the `/v` option. For example: `setup.exe /S /v"/qn INSTALLDIR=\"C:\InstallationManager\""`

Silently installing Installation Manager on Linux

To silently install Installation Manager onto a default install location on Linux:

1. Change directory to InstallerImage_linux folder on the first installation disk.
2. Run `setupLinux.bin -silent -V licenseAccepted=true`.

Use the option `-V licenseAccepted=true` to indicate that you accept the license agreement on the use of Installation Manager.

If you want to change the install location, you can add the `-P installLocation=<new dir>` flag. For example: `-PsetupLinux.bin -silent -P installLocation="/opt/myIM" -V licenseAccepted=true`.

Silently uninstalling Installation Manager from Windows

To silently uninstall Installation Manager on Windows:

Run the following command in the command prompt: `msiexec /x {DBD90D51-BD46-41AF-A1F5-B74CEA24365B}`

Silently uninstalling Installation Manager from Linux

To silently uninstall Installation Manager on Linux:

1. Open a terminal window with root user privileges.
2. Change directory to the installation directory of Installation Manager, and then change to the `_uninst` directory.
3. Run the following command: `./uninstaller.bin -silent`.

Installing from the launchpad program

The launchpad program provides you with a single location to view release information and start the installation process.

Use the launchpad program to start the installation of Rational Software Architect in the following cases:

- Installing from the product CDs
- Installing from an electronic image on your local file system
- Installing from an electronic image on a shared drive

By starting the installation process from the launchpad program, IBM Installation Manager is automatically installed if it is not already on your computer, and it starts preconfigured with the location of the repository that contains the Rational Software Architect package. If you install and start Installation Manager directly, then you must set repository preferences manually.

To install from the launchpad:

1. Complete the preinstallation tasks described in “Preinstallation tasks” on page 21, if you have not done so already.
2. Start the launchpad program. See “Starting the launchpad program.”
3. Start the installation of Rational Software Architect. See “Starting an installation from the launchpad program” on page 32.

Follow the on-screen instructions in the Install Packages wizard to complete the installation. For complete details, see “Installing IBM Rational Software Architect Eclipse client using the IBM Installation Manager graphical interface” on page 33.

Starting the launchpad program

Complete the preinstallation tasks described in “Preinstallation tasks” on page 21, if you have not done so already.

If you are installing from a CD and autorun is enabled on your workstation, then the Rational Software Architect launchpad starts automatically when you insert the first installation disc into your CD drive. If you are installing from an electronic image, or if autorun is not configured on your workstation, then you must start the launchpad program manually.

To start the launchpad program:

1. Insert the IBM Rational Software Architect CD into your CD drive. For Linux: Ensure that you have mounted the CD drive.
2. If autorun is enabled on your system, the IBM Rational Software Architect launchpad program automatically opens. If autorun is not enabled on your system:
 - For Windows: Run launchpad.exe located in the root directory of the CD.
 - For Linux: Run launchpad.sh located in the root directory of the CD.

Starting an installation from the launchpad program

1. Start the launchpad program.
2. If you have not done so already, read the release information by clicking **Release notes**.
3. When you are ready to begin the installation, click **Install IBM Rational Software Architect**.
4. A message window opens to inform you whether the program IBM Installation Manager is detected on your workstation.
 - If IBM Installation Manager is not detected on your system, then you are informed that you must install it before you can continue.
 - a. Click **OK** to install IBM Installation Manager. The IBM Installation Manager installation wizard starts.
 - b. Follow the on-screen instructions in the wizard to complete the installation of IBM Installation Manager. Refer to “Installing Installation Manager on Windows” on page 27 for more information.
 - c. When the installation of IBM Installation Manager completes successfully, click **Finish** to close the wizard.
 - d. Read the message that opens and click **OK**. Installation Manager starts and automatically opens the Install Packages wizard.
 - If IBM Installation Manager is detected on your system, click **OK**. Installation Manager starts and automatically opens the Install Packages wizard.
5. Follow the on-screen instructions in the Install Packages wizard to complete the installation. For complete details, see “Installing IBM Rational Software Architect Eclipse client using the IBM Installation Manager graphical interface” on page 33.

Installing IBM Rational Software Architect Eclipse client using the IBM Installation Manager graphical interface

The following steps describe installing the IBM Rational Software Architect package with the Installation Manager GUI.

Depending on the installation scenario that you are following, the Installation Manager Install Packages wizard might start automatically. (For example, if you are installing from CDs). In other scenarios, you will need to start the wizard.

1. If the Installation Manager Install Packages wizard did not start automatically, then start it:
 - a. Start Installation Manager.
 - b. From the Start page, click **Install Packages**.

Note: If a new version of Installation Manager is found, you are prompted to confirm that you want to install it before you can continue. Click **OK** to proceed. Installation Manager automatically installs the new version, stops, restarts, and resumes.

When Installation Manager starts, it searches its defined repositories for available packages.

2. The Install page of Install Packages wizard lists all the packages found in the repositories that Installation Manager searched. If two versions of a package are discovered, only the most recent, or recommended, version of the package is displayed.
 - To display all versions of any package found by Installation Manager, click **Show all versions**.
 - To return to the display of only the recommended packages, click **Show only recommended**.
3. Click the IBM Rational Software Architect package to display its description in the **Details** pane.
4. To search for updates to the IBM Rational Software Architect package, click **Check for updates**.

Note: For Installation Manager to search the predefined IBM update repository locations for the installed packages, the preference **Search the linked repositories during installation and updates** on the Repositories preference page must be selected. This preference is selected by default. Internet access is also required.

Installation Manager searches for updates at the predefined IBM update repository for the product package. It also searches any repository locations that you have set. A progress indicator shows the search is taking place. You can install updates at the same time that you install the base product package.

5. If updates for the IBM Rational Software Architect package are found, then they will be displayed in the **Installation Packages** list on the Install Packages page below their corresponding product. Only recommended updates are displayed by default.
 - To view all updates found for the available packages, click **Show all versions**.
 - To display a package description under **Details**, click on the package name. If additional information about the package is available, such as a readme

file or release notes, a **More info** link is included at the end of the description text. Click the link to display the additional information in a browser. To fully understand the package you are installing, review all information beforehand

6. Select the IBM Rational Software Architect package and any updates to the package that you want to install. Updates that have dependencies are automatically selected and cleared together. Click **Next** to continue.

Note: If you install multiple packages at the same time, then all the packages will be installed into the same package group.

7. On the Licenses page, read the license agreement for the selected package. If you selected more than one package to install, there might be a license agreement for each package. On the left side of the **License** page, click each package version to display its license agreement. The package versions that you selected to install (for example, the base package and an update) are listed under the package name.
 - a. If you agree to the terms of all of the license agreements, click **I accept the terms of the license agreements**.
 - b. Click **Next** to continue.
8. On the Location page, type the path for the *shared resources directory* in the **Shared Resources Directory** field; or accept the default path. (If you are installing on Linux, ensure that you do not include any spaces in the directory path.) The shared resources directory contains resources that can be shared by one or more package groups. Click **Next** to continue.

Important: (For Rational Software Architect Version 7.0.0.2 and later only) If you are performing an initial installation and updating to version 7.0.0.2 at the same time on Windows Vista, then to enable users who do not have Administrator privileges to work with Rational Software Architect, do not choose a directory inside the Program Files directory (C:\Program Files\).

The default path is:

- For Windows: C:\Program Files\IBM\SDP70Shared
- For Linux: /opt/IBM/SDP70Shared

Important: You can specify the shared resources directory only the first time that you install a package. Use your largest disk for this to help ensure adequate space for the shared resources of future packages. You cannot change the directory location unless you uninstall all packages.

9. On the Location page, either choose an existing *package group* to install the IBM Rational Software Architect Eclipse client package into, or create a new one. A package group represents a directory in which packages share resources with other packages in the same group. To create a new package group:
 - a. Click **Create a new package group**.
 - b. Type the path for the installation directory for the package group. (If you are installing on Linux, ensure that you do not include any spaces in the directory path.) The name for the package group is created automatically.

Important: (For Rational Software Architect Version 7.0.0.2 and later only) If you are performing an initial installation and updating to version 7.0.0.2 at the same time on Windows Vista, then to

enable users who do not have Administrator privileges to work with Rational Software Architect, do not choose a directory inside the Program Files directory (C:\Program Files\).

The default path is:

- For Windows: C:\Program Files\IBM\SDP70
- For Linux: /opt/IBM/SDP70

- c. Click **Next** to continue.
10. On the next Location page, you can choose to extend an existing Eclipse IDE already installed on your system, adding the functionality in the packages that you are installing. You must have Eclipse Version 3.2.1 with the latest updates from eclipse.org to select this option.
 - If you do not want to extend an existing Eclipse IDE, click **Next** to continue.
 - To extend an existing Eclipse IDE:
 - a. Select **Extend an existing Eclipse**.
 - b. In the **Eclipse IDE** field, type or navigate to the location of the folder containing the eclipse executable file (eclipse.exe or eclipse.bin). Installation Manager will check if the Eclipse IDE version is valid for the package that you are installing. The **Eclipse IDE JVM** field displays the Java Virtual Machine (JVM) for the IDE that you specified.
 - c. Click **Next** to continue.
11. On the Features page under **Languages**, select the languages for the package group. The corresponding national language translations for the user interface and documentation for the IBM Rational Software Architect package will be installed. Note that your choices apply to all packages installed under this package group.
12. On the next Features page, select the package features that you want to install.
 - a. Optional: To see the dependency relationships between features, select **Show Dependencies**.
 - b. Optional: Click a feature to view its brief description under **Details**.
 - c. Select or clear features in the packages. Installation Manager will automatically enforce any dependencies with other features and display updated download size and disk space requirements for the installation.
 - d. When you are finished selecting features, click **Next** to continue.
13. On the Summary page, review your choices before installing the IBM Rational Software Architect package. If you want to change the choices that you made on previous pages, click **Back** and make your changes. When you are satisfied with your installation choices, click **Install** to install the package. A progress indicator shows the percentage of the installation completed.
14. When the installation process is complete, a message confirms the success of the process.
 - a. Click **View log file** to open the installation log file for the current session in a new window. You must close the Installation Log window to continue.
 - b. In the Install Package wizard, select whether you want IBM Rational Software Architect to start when you exit.
 - c. Click **Finish** to launch the selected package. The Install Package wizard closes and you are returned to the Start page of Installation Manager.

Installing silently

You can install the Rational Software Architect product package by running Installation Manager in silent installation mode. When you run Installation Manager in silent mode, the user interface is not available; instead, Installation Manager uses a response file to input the commands that are required to install the product package.

Running Installation Manager in silent mode is helpful because it enables you to use a batch process to install, update, modify and uninstall product packages through scripts.

Note: For Rational Asset Manager, only the Eclipse client can be installed silently.

Note that you must install Installation Manager before you can silently install the Rational Software Architect package. Refer to “Managing IBM Installation Manager” on page 27 for details on installing Installation Manager.

There are two main tasks required for silent installation:

1. Create the response file.
2. Run Installation Manager in silent installation mode.

Creating a response file

You can create a response file by recording your actions as you install a Rational Software Architect product package using Installation Manager. When you record a response file, all of the selections that you make in the Installation Manager GUI are stored in an XML file. When you run Installation Manager in silent mode, Installation Manager uses the XML response file to locate the repository that contains the package, select the features to install, and so on.

To record a response file for installation (or uninstallation):

1. On a command line, change to the eclipse subdirectory in the directory where you installed Installation Manager. For example:
 - For Windows: `cd C:\Program Files\IBM\Installation Manager\eclipse`
 - For Linux: `cd opt/IBM/InstallationManager/eclipse`
2. On a command line, type the following command to start the installation manager, substituting your own file name and location for the response file and (optionally) the log file:
 - For Windows: `launcher.bat -record <response file path and name>.xml -log <log file path and name>.xml`. For example, `launcher.bat -record c:\mylog\responsefile.xml -log c:\mylog\record_log.xml`
 - For Linux: `launcher.sh -record <response file name>.xml -log <log file path and name>.xml`. For example, `launcher.sh -record /root/mylog/responsefile.xml -log /root/mylog/record_log.xml`

Note: Ensure the file paths you enter exist; Installation Manager will not create directories for the response file and the log file.

3. Follow the on-screen instructions in the Install Packages wizard to make your installation choices, stopping when you reach the Summary page. For details,

see “Installing IBM Rational Software Architect Eclipse client using the IBM Installation Manager graphical interface” on page 33.

4. Click **Install**, and then when the installation process begins click **Cancel**.
5. Click **Finish**, then close Installation Manager.

An XML response file is created and resides in the location specified in the command.

Running Installation Manager in silent installation mode

You can run Installation Manager in silent installation mode from a command line.

Refer to the Installation Manager online help for additional documentation on how to run it in silent mode. (For example, silently installing from a repository that requires authentication (user ID and password).

You run Installation Manager in silent mode appending the `-silent` argument to the Installation Manager start command `launcher.bat` (Windows) or `launcher.sh` (Linux).

- For Windows: `launcher.bat -silent [arguments]`
- For Linux: `launcher.sh -nosplash -silent [arguments]`

The following table describes the arguments used with the silent installation command:

Argument	Description
<code>-input</code>	Specifies an XML response file as the input to Installation Manager. A response file contains commands that Installation Manager runs.
<code>-log</code>	(Optional) Specifies a log file that records the result of the silent installation. The log file is an XML file.

To run Installation Manager in silent installation mode:

1. On a command line, change to the `eclipse` subdirectory in the directory where you installed Installation Manager. For example:
 - For Windows: `cd C:\Program Files\IBM\Installation Manager\eclipse`
 - For Linux: `cd opt/IBM/InstallationManager/eclipse`
2. Enter and run the following command, substituting your own locations for the response file and, optionally, the log file:
 - For Windows: `launcher.bat -silent -input <response file path and name> -log <log file path and name>`. For example, `launcher.bat -silent -input c:\mylog\responsefile.xml -log c:\mylog\silent_install_log.xml`
 - For Linux: `launcher.sh -nosplash -silent<response file name> -log <log file path and name>`. For example, `launcher.sh -nosplash -silent -input /root/mylog/responsefile.xml -log /root/mylog/silent_install_log.xml`

Installation Manager runs in silent installation mode; it reads the response file and writes a log file to the directory you specified. While you must have a response file when running in silent installation mode, log files are optional. The result of this execution should be a status of 0 on success and non-zero number on failure.

Searching for and silently installing all available products

You can silently search for and install updates for all available products.

To search for and silently install all available products:

1. On a command line, change to the eclipse subdirectory in the directory where you installed Installation Manager.
2. Enter and run the following command, substituting your own locations for the response file and, optionally, the log file:
 - For Windows: `launcher.bat -silent -installAll`
 - For Linux: `launcher.sh -silent -installAll`

All available products known to Installation Manager are installed.

Silently installing updates to all currently installed products

You can silently search for and install updates for all currently installed products.

To search for and silently install updates for all available products:

1. On a command line, change to the eclipse subdirectory in the directory where you installed Installation Manager.
2. Enter and run the following command, substituting your own locations for the response file and, optionally, the log file:
 - For Windows: `launcher.bat -silent -updateAll`
 - For Linux: `launcher.sh -silent -updateAll`

All available product updates known to Installation Manager are installed.

Response file commands

If you want to use the silent installation capabilities of Installation Manager, you need to create a response file that contains all of the commands that Installation Manager must run. The recommended way to do this is to create a response file by recording your actions as you install the IBM Rational Software Architect package. However, you can create or edit a response file manually.

There are two categories of commands for the response file:

- **Preference commands** are used to set preferences that are found in Installation Manager under **File** → **Preferences**, such as repository location information.
- **Silent installation commands** are used to emulate the Install Packages wizard in Installation Manager.

Silent installation preference commands

While you typically specify preferences using the Preferences window, you can also specify preferences (identified as keys) in a response file for use during a silent installation.

Note: You can specify more than one preference in a response file.

When you define preferences in a response file, your XML code will look similar to the following example:

```

<preference>
  name = "the key of the preference"
  value = "the value of the preference to be set"
</preference>

```

Use the following table to identify keys and their associated values for silent installation preferences:

Key	Value	Notes
com.ibm.cic.common.core.preferences.logLocation	Specifies the location of Installation Manager log file.	Important: This key is optional and is designed for testing and debugging. If you do not specify a location for the log file, both silent installation and the UI version of Installation Manager will use the same location.
com.ibm.cic.license.policy.location	Specifies a URL that defines where the remote license policy file resides.	
com.ibm.cic.common.core.preferences.http.proxyEnabled	True or False	False is the default value.
com.ibm.cic.common.core.preferences.http.proxyHost	Host name or IP address	
com.ibm.cic.common.core.preferences.http.proxyPort	Port number	
com.ibm.cic.common.core.preferences.http.proxyUseSocks	True or False	False is the default value.
com.ibm.cic.common.core.preferences.SOCKS.proxyHost	Host name or IP address	
com.ibm.cic.common.core.preferences.SOCKS.proxyPort	Port number	
com.ibm.cic.common.core.preferences.ftp.proxyEnabled	True or False	False is the default value.
com.ibm.cic.common.core.preferences.ftp.proxyHost	Host name or IP address	
com.ibm.cic.common.core.preferences.ftp.proxyPort	Port number	

Key	Value	Notes
com.ibm.cic.common.core.preferences.eclipseCache	c:\IBM\ common (Windows) /opt/IBM/ common (Linux) Note: The paths above are default values for this preference; typically, install packages provide their own values for this preference.	You cannot change this location if you have already installed a package.
com.ibm.cic.agent.core.pref.offering.service.repositories.areUsed	True or False	Change this preference to 'False' to disable it. When 'True', all linked repositories will be searched when products are installed or updated.
com.ibm.cic.common.core.preferences.preserveDownloadedArtifacts	True or False	Change this preference to 'False' to disable it. When true, the files required to roll the package back to a previous version are stored on your system. When false, these files are not stored. If you do not store these files, you must connect to your original repository or media to roll back.

Silent installation commands

You can use this reference table to learn more about response file commands for use during a silent installation.

Response file commands	Description
<p>Profile</p> <pre> <profile id="the profile (package group) id" installLocation="the install location of the profile"> <data key="key1" value="value1"/> <data key="key2" value="value2"/> </profile> </pre>	<p>Use this command to create a package group (or installation location). If the specified package group already exists, then the command has no effect. Currently, when creating the profile, the silent installation will also create two installation contexts; one for Eclipse and one for native. A profile is an installation location.</p> <p>You can use the <data> element for setting profile properties.</p> <p>The following list contains the keys currently supported keys and related values:</p> <ul style="list-style-type: none"> • The eclipseLocation key specifies an existing Eclipse location value, such as c:\myeclipse\eclipse. • The cic.selector.nl key specifies the Natural Language (NL) locale selections, such as zh, ja, and en. <p>Note: Separate multiple NL values with commas.</p> <p>The following list contains the currently supported language codes:</p> <ul style="list-style-type: none"> • English (en) • French (fr) • Italian (it) • Simplified Chinese (zh) • Russian (ru) • Traditional Chinese (Taiwan) (zh_TW) • Traditional Chinese (Hong Kong) (zh_HK) • German (de) • Japanese (ja) • Polish (pl) • Spanish (es) • Czech (cs) • Hungarian (hu) • Korean (ko) • Portuguese (pt_BR)
<p>Repositories</p> <pre> <server> <repository location="http://example/ repository/"> <repository location="file:/C:/ repository/"> <!--add more repositories below--> <...> </server> </pre>	<p>Use this command to specify the repositories used during a silent installation. Use a URL or UNC path to specify remote repositories; use directory paths to specify local repositories.</p>

Response file commands	Description
<p>Install</p> <pre><install> <offering profile= "profile id" features= "feature ids" id= "offering id" version= "offering version"></offering> <!--add more offerings below> <...> </install></pre>	<p>Use this command to specify the installation packages that will be installed.</p> <p>The profile ID must match an existing profile or a profile created by the set profile command.</p> <p>Feature IDs can be optionally specified by a comma-delimited list, such as "feature1, feature2" and so on. If no feature IDs are specified, all the default features in the specified offering will be installed.</p> <p>Note: Required features will be included for installation, even if they are not explicitly specified in the comma-delimited list.</p>
<pre><install modify="true"> or <uninstall modify="true"> (optional attribute) <uninstall modify="true"> <offering profile="profileID" id="Id" version="Version" features="-"/> </uninstall></pre>	<p>Use the <install modify="true"> attribute on install and uninstall commands to indicate that you want to modify an existing install. If the attribute is not set to true, the value defaults to false. If the intent of the modify operation is only to install additional language packs, then a hyphen "-" should be used in the offering feature id list to indicate no new features are being added.</p> <p>Important: You must specify "modify=true" and a hyphen "-" feature list as specified in the example; otherwise, the install command will install the offering's default features and the uninstall command will remove all the features.</p>
<p>Uninstall</p> <pre><uninstall> <offering profile= "profile id" features= "feature ids" id= "offering id" version= "offering version"></offering> <!--add more offerings below> <...> </uninstall></pre>	<p>Use this command to specify the packages that will be uninstalled.</p> <p>The profile ID must match an existing profile or a profile specified in a profile command. Further, if there are no feature IDs specified, all the features in the specified offering will be uninstalled; if there are no offering IDs specified, all the installed offerings in the specified profile will be uninstalled.</p>
<p>Rollback</p> <pre><rollback> <offering profile= "profile id" id= "offering id" version= "offering version"> </offering> <!--add more offerings below <...> </rollback></pre>	<p>Use this command to roll back to the specified offerings from the version currently installed on the specified profile. You cannot specify features in a roll back command.</p>

Response file commands	Description
<p>InstallAll <code><installAll/></code></p> <p>Note: This command is equivalent to using <code>-silent -installAll</code>.</p>	<p>Use this command to silently search for and install all available packages.</p>
<p>UpdateAll <code><updateAll/></code></p> <p>Note: This command is equivalent to using <code>-silent -updateAll</code>.</p>	<p>Use this command to silently search for and update all available packages.</p>
<p>License <code><license policyFile="policy file location"/></code></p> <p>For example: <code><license policyFile="c:\mylicense.opt"/></code></p>	<p>Use this command to generate a response file containing a license command by starting the license wizard after starting Installation Manager in record mode.</p> <p>During record mode, if you set flex options through the license management wizard, the options you set will be recorded in a license policy file named "license.opt" in the same directory as the generated response file; the response file will contain a license command that references the policy file.</p>
<p>Wizard <code><launcher -mode wizard -input < response file ></code></p>	<p>Use this command to start Installation Manager in UI mode. The UI mode starts Installation Manager in either the install wizard or the uninstall wizard. However, in this case, the response file can only contain preference commands and install commands or preference command and uninstall commands; you can not mix install and uninstall commands in the same response file when you run Installation Manager in UI mode.</p>

Reference: Sample response file

You can use an XML-based response file to specify predefined information such as silent installation preferences, repository locations, installation profiles, and so on. Response files are beneficial for teams and companies that want to install installation packages silently and to standardize the locations and preferences for installation packages.

Sample response file

```
<agent-input >

<!-- add preferences -->
<preference name="com.ibm.cic.common.core.preferences. http.proxyEnabled"
value="c:/temp"/>

<!-- create the profile if it doesn't exist yet -->
<profile id="my_profile" installLocation="c:/temp/my_profile"></profile>

<server>
<repository location=
"http://a.site.com/local/products/sample/20060615_1542/repository/"></repository>
</server>

<install>
  <offering profile= "my_profile" features= "core" id= "ies"
version= "3.2.0.20060615">
  </offering>
</install>

</agent-input>
```

Silent install log files

You can use silent install log files to examine the results of a silent installation session.

The silent installation functionality creates an XML-based log file that records the result of the silent install execution (as long as a log file path is specified using `-log <your log file path>.xml`). If your silent installation session is successful, the log file will contain just the root element of `<result> </result>`. However, if errors occur during the installation, the silent install log file will contain error elements with messages such as:

```
<result>
  <error> Cannot find profile: profile id</error>
  <error> some other errors</error>
</result>
```

For detailed analysis, you can look at the logs generated in the Installation Manager data area. By using a preference command, you can optionally set the data area to your preferred location, as shown in the response file topic.

IBM Packaging Utility

Use IBM Packaging Utility software to copy product packages to a repository that can be placed on a Web server available over HTTP or HTTPS.

Packaging Utility software is located on the Auxiliary CD for each platform (Windows and Linux) that is included with Rational Software Architect. If you want to place a repository that contains a Rational Software Architect package on a Web server that will be available over HTTP or HTTPS, you must use Packaging Utility to copy the product package of Rational Software Architect into the repository.

Use this utility to perform the following tasks:

- Generate a new repository for product packages.
- Copy product packages to a new repository. You can copy multiple product packages into a single repository, thereby creating a common location for your organization from which product packages can be installed using IBM Installation Manager.
- Delete product packages from a repository.

Refer to the online help for Packaging Utility for full instructions using the tool.

Installing Packaging Utility

IBM Packaging Utility must be installed from the Auxiliary CD before it can be used to copy the Rational Software Architect product package.

Use the following steps to install IBM Packaging Utility software from the Auxiliary CD:

1. Navigate to the Auxiliary CD for the appropriate platform.
2. Extract the Packaging utility installation files from the compressed file (`pu.disk_platform.zip`) in the `PackagingUtility` directory.
3. Locate the Packaging Utility installation files.
 - For Windows: Change to the `PackagingUtility` directory on the Auxiliary CD for Windows. (If you downloaded an electronic image, change to the `AuxCD-Windows\PackagingUtility` directory.)
 - For Linux: Change to the `PackagingUtility` directory on the Auxiliary CD for Linux. (If you downloaded an electronic image, change to the `AuxCD-Linux/PackagingUtility` directory.)
4. Extract the Packaging Utility installation files into a single directory. Ensure that you preserve the directory structure of the compressed files.
 - For Windows: Extract the contents of the `pu.disk_win32.zip` file.
 - For Linux: Extract the contents of the `pu.disk_linux.zip` file.
5. Change to the directory where you extracted the Packaging Utility installation files and start the installation program.
 - For Windows: Run `install_win32.exe`.
 - For Linux: Run `install_linux.bin`.
6. If IBM Installation Manager is not detected on your workstation, you are prompted to install it and then the installation wizard starts. Follow the

on-screen instructions in the wizard to complete the installation of Installation Manager. See “Installing Installation Manager on Windows” on page 27 for details.

7. When the installation of Installation Manager completes, or if it is already on your computer, Installation Manager starts and automatically begins the Install Packages wizard.
8. Follow the on-screen instructions in the Install Packages wizard to complete the installation.

Copying product packages to an HTTP server using Packaging Utility

To create a repository on a HTTP or HTTPS server, you must use Packaging Utility to copy the product package for Rational Software Architect.

Note that this method does not copy the optional software that is included with the Rational Software Architect installation image. Only the Rational Software Architect files that are installed using IBM Installation Manager are copied.

Note also that Packaging Utility can be used to combine multiple product packages into a single repository location. Refer to the Packaging Utility online help for more information.

To copy product packages with Packaging Utility:

1. If you are copying from a CD image, perform these tasks:
 - a. Insert the first installation CD into your CD drive.
 - b. For Linux: Mount the CD drive.
 - c. If autorun is enabled on your system, the Rational Software Architect launchpad program automatically opens. Close the launchpad program.
2. Start Packaging Utility.
3. On the main page of the utility, click **Copy product package**. The Prerequisite page opens, and presents two options:
 - **I will be downloading product packages from IBM Web**
 - **I will be obtaining the product packages from other sources**
4. Click **I will be downloading product packages from IBM Web**.

Note: You can use the **I will be obtaining the product packages from other sources** option if you have already defined an accessible repository.

5. Click **Next** to advance to the Source page. If there are no product packages to select, you must open a repository that contains product packages.
6. To open a repository, click the **Open repository** button. The Open Repository window opens.

Note: A repository can be a path to a directory in the file system, a disk drive containing the first CD of the product, or a URL to a directory on a server.

7. To define a repository location, click the Repository Location **Browse** button, and then navigate to and select the Repository location - either the common root directory that contains the electronic disk images or the drive containing the first product installation CD. For example, if the Rational Software Architect files (disk1, disk2, and so on) reside in C:\My product\unzip, you should define this location as a repository.

8. Click **OK** to define the repository location and to close the Browse to a repository directory window.
9. On the Destination page, click the **Browse** button and select an existing repository directory, or create a new folder to store the products.
10. After you specify a repository for the selected product packages and any fixes, click **OK** to close the Browse to a directory window. The file path that you just defined is listed in the **Directory** field on the Destination page.
11. Click **Next** to advance to the Summary page. The Summary page displays the selected product packages that will be copied into the destination repository. This page also lists the amount of storage space that the copy requires, as well as the amount of available space on the drive.
12. Click **Copy** to copy the selected product packages to the destination repository. A status bar opens at the bottom of the wizard indicating how much time is remaining in the copy process. After the copy process is finished, a Complete page opens and displays all of the product packages that were copied successfully.
13. Click **Done** to return to the Packaging Utility main page.

Now that you have used Packaging Utility to copy the Rational Software Architect installation files into a repository, you can place the repository on a Web server and make the directories and files available over HTTP. (The repository can also be placed on a UNC drive.)

Managing licenses

Licensing for your installed IBM software and customized packages is administered using the Manage Licenses wizard. The Manage Licenses wizard displays license information for each of your installed packages.

Trial licenses that came with the 7.0 and later versions of some Rational products expire 30 or 60 days after installation. You need to activate your product in order to use it after the expiration date.

Using the Manage Licenses wizard, you can upgrade trial versions of an offering to a licensed version by importing a product activation kit. You can also enable Floating license enforcement for offerings with trial or permanent licenses to use floating license keys from a license server.

For more information on managing licenses for your Rational product, see:

- The technote at <http://www-1.ibm.com/support/docview.wss?uid=swg21250404> dealing with Rational product activation.
- The Rational licensing support page at <http://www-306.ibm.com/software/rational/support/licensing/>.

Licenses

As a purchaser of IBM Rational software products, you can choose from three types of product licenses: an Authorized User license, an Authorized User Fixed Term License (FTL) and a Floating license. The best choice for your organization depends upon how many people use the product, how often they require access, and how you prefer to purchase your software.

Authorized User License

An IBM Rational Authorized User license permits a single, specific individual to use a Rational software product. Purchasers must obtain an Authorized User license for each individual user who accesses the product in any manner. An Authorized User license cannot be reassigned unless the purchaser replaces the original assignee on a long-term or permanent basis.

For example, if you purchase one Authorized User license, you can assign that license to one specific individual, who can then use the Rational software product. The Authorized User license does not entitle a second person to use that product at any time, even if the licensed individual is not actively using it.

Authorized User Fixed Term License

An IBM Rational Authorized User Fixed Term License (FTL) permits a single, specific individual to use a Rational software product for a specific length of time (the term). Purchasers must obtain an Authorized User FTL for each individual user who accesses the product in any manner. An Authorized User FTL cannot be reassigned unless the purchaser replaces the original assignee on a long-term or permanent basis.

Note: When you purchase an Authorized User FTL under the Passport Advantage Express program, IBM will automatically extend the license term for an additional year at the prevailing price unless you notify IBM before the license expires that you do not want an extension. The subsequent FTL term starts when the initial FTL term expires. The price for this subsequent term is currently 80% of the initial FTL price but is subject to change.

If you notify IBM that you do not want to extend the license term, then you must stop using the product when the license expires.

Floating license

An IBM Rational Floating license is a license for a single software product that can be shared among multiple team members; however, the total number of concurrent users cannot exceed the number of floating licenses you purchase. For example, if you purchase one floating license for a Rational software product, then any user in your organization may use the product at any given time. Another person who wants to access the product must wait until the current user logs off.

To use floating licenses, you must obtain floating license keys and install them on a Rational License Server. The server responds to end-user requests for access to the license keys; it will grant access to the number of concurrent users that matches the number of licenses the organization purchased.

License enablement

If you are installing a Rational software product for the first time or want to extend a license to continue using the product, you have options on how to enable licensing for your product.

Licenses for Rational Software Development Platform offerings are enabled in two ways:

- Importing a product activation kit
- Enabling Rational Common Licensing to obtain access to floating license keys

Note: Trial licenses that came with the 7.0 and later versions of some Rational products expire 30 or 60 days after installation. You need to activate your product in order to use it after the expiration date. See this support article on product activation for a flow chart of the activation process.

Activation kits

Product activation kits contain the permanent license key for your trial Rational product. You purchase the activation kit, download the activation kit .zip file to your local machine, and then import the activation kit .jar file to enable the license for your product. You use IBM Installation Manager to import the activation kit to your product.

Floating license enforcement

Optionally, you can obtain floating license keys, install IBM Rational License Server, and enable Floating license enforcement for your product. Floating license enforcement provides the following benefits:

- License compliance enforcement across the organization
- Fewer license purchases

- Serve license keys for IBM Rational Team Unifying and Software Development Platform desktop products from the same license server

Note: Some 7.0 and later versions of Rational products require an upgraded version of the Rational License Server. See this support article for license upgrade information.

For more information on obtaining activation kits and Floating licenses, see Purchasing licenses.

Viewing license information for installed packages

You can review license information for your installed packages, including license types and expiration dates, from IBM Installation Manager.

To view license information:

1. Start IBM Installation Manager.
2. On the main page, click **Manage Licenses**.

The package vendor, current license types, and expiration dates are displayed for each installed package.

Importing a product activation kit

To install your permanent license key, you must import the activation kit from the download location or the product media by using IBM Installation Manager.

If you have not purchased an activation kit, you must do this first. If you have purchased a product or a product activation kit, insert the appropriate CD or download the activation kit from IBM Passport Advantage to an accessible workstation. The activation kit is packaged as a .zip file containing a Java archive (.jar) file. The .jar file contains the permanent license key and must be imported to activate your product.

To import an activation kit .jar file and enable the new license key:

1. Start IBM Installation Manager.
2. On the main page, click **Manage Licenses**.
3. Select a package and click the **Import Activation Kit** button.
4. Click **Next**. Details for the selected package are shown, including the current license kind and the product version range of the license.
5. Browse to the path on the media CD or download location for the activation kit; then select the appropriate Java archive (JAR) file and click **Open**.
6. Click **Next**. The Summary page displays the target install directory for the activation kit, the product the new license applies to, and version information.
7. Click **Finish**.

The product activation kit with its permanent license key is imported to the product. The Manage Licenses wizard indicates whether the import is successful.

Enabling floating licenses

If your team environment supports Floating license enforcement, you can enable Floating licenses for your product and configure a connection to obtain access to floating license keys.

Before enabling Floating license enforcement, you must obtain the license server connection information from your administrator. For details on license server, license key, and Rational Common Licensing administration, see the *IBM Rational License Management Guide*.

You can find the most recent version of the *License Management Guide* online at http://download.boulder.ibm.com/ibmdl/pub/software/rationalsdp/v7/rcl/7001/docs/install_instruction/license_admin.pdf.

To enable floating licenses as the license type for specified packages and configure license server connections:

1. In the IBM Installation Manager for the Rational Software Development Platform, click **File** → **Open** → **Manage Licenses**.
2. Select a version of a package and then select the **Configure Floating license support** button.
3. Click **Next**.
4. Click the **Enable Floating license enforcement** button.
5. Configure one or more license server connections.
 - a. Click an empty field in the **Servers** table or click the **Add** button.
 - b. If your administrator provided you with information for a redundant server environment, click the **Redundant Server** button. Fields for the primary, secondary, and tertiary server names and ports appear.
 - c. Enter the host name of the license server in the **Name** field.
 - d. (Optional) Enter a value in the **Port** field for environments where a firewall is used. Do not assign a value to this port unless your administrator instructs you to do so.
 - e. For redundant server environments, enter the names and ports (if required) for the secondary and tertiary servers.
 - f. (Optional) You can click the **Test Connection** button to confirm that the connection information is correct and that the server is available.
 - g. Click **OK**.
6. Click **Next**.
7. (Optional) Configure the license usage order for your shell shared or custom packages. The order of licenses in the list determines the order in which your package attempts to obtain access to license keys for a given licensed package.
8. Click **Finish**.

The Manage Licenses wizard indicates whether the floating licenses configuration is successful.

Now, when you next open the enabled product, a connection is created to the license server to obtain a license key from the pool of available floating license keys.

Purchasing licenses

You can purchase new licenses if your current product license is about to expire or if you want to acquire additional product licenses for team members.

To purchase licenses and enable your product, complete the following steps:

1. Determine the type of license you want to purchase.
2. Go to ibm.com[®] or contact your IBM sales representative to purchase the product license. For details, visit the IBM Web page on How to buy software.
3. Depending on the type of license you purchase, use the Proof of Entitlement you receive and do one of the following to enable your product:
 - If you purchase Authorized User licenses for your product, go to Passport Advantage and follow the instructions there for downloading your product activation kit .zip file. Once you have downloaded the activation kit, you must import the product activation .jar file using Installation Manager.
 - If you purchase Floating licenses for your product, click the link to the IBM Rational Licensing and Download site, login (IBM registration is required), and then select the link to connect to the IBM Rational License Key Center. There you can use your Proof of Entitlement to obtain floating license keys for your license server.

Optionally, you can also go to Passport Advantage to download the activation kit for your product. After importing the activation kit, you have the option of switching from a floating to a permanent license type if you use your PC offline for long periods.

When you want to import the activation kit or enable floating license support for your product, use the Manage Licenses wizard in IBM Installation Manager.

Increasing the number of file handles on Linux workstations

Important: For best results, before you work with your Rational product, increase the number of file handles available for Rational Software Architect, because it uses more than the default limit of 1024 file handles per process. (A system administrator might need to make this change.)

Exercise caution when using the following these steps to increase your file descriptors on Linux. Failure to follow the instructions correctly might result in a computer that will not start correctly. For best results, have your system administrator perform this procedure.

To increase your file descriptors:

1. Log in as root. If you do not have root access you will need to obtain it before continuing.
2. Change to the etc directory
3. Use the vi editor to edit the initscript file in the etc directory. If this file does not exist, type `vi initscript` to create it.

Important: If you decide to increase the number of file handles, **do not** leave an empty initscript file on your computer. If you do so, your machine will not start up the next time that you turn it on or restart.

4. On the first line, type `ulimit -n 4096` (the key here is that the number is significantly larger than 1024, the default on most Linux computers). **Caution:** do not set this too high, because it can seriously impact system-wide performance.
5. On the second line, type `eval exec "$4"`.
6. Save and close the file after making sure you have done steps 4 and 5.

Note: Ensure you have followed the steps correctly, as not doing this correctly will result in a machine that does not boot.

7. Optional: Restrict your users or groups by modifying the limits.conf file in the etc/security directory. Both SUSE Linux Enterprise Server (SLES) Version 9 and Red Hat Enterprise Linux Version 4.0 have this file by default. If you do not have this file, you might consider a smaller number in step 4 above (for example, 2048). You need to do this so that most users have a reasonably low limit on the number of allowable open files per process. If you used a relatively low number in step 4, it is less important to do this. However, if you choose to set a high number in step 4, refraining from establishing limits in the limits.conf file can seriously impact computer performance.

The following is a sample limits.conf file would look that restricts all users and then sets different limits for others afterwards. This sample assumes you set descriptors to 8192 in step 4 earlier.

```
*      soft nofile 1024
*      hard nofile 2048
root   soft nofile 4096
root   hard nofile 8192
user1  soft nofile 2048
user1  hard nofile 2048
```

Note that the * in the example above sets the limits for all users first. These limits are lower than the limits that follow. The root user has a higher number of allowable descriptors open, while user1 is in between the two. Make sure you read and understand the documentation contained within the limits.conf file before making your modifications.

For more information on the ulimit command, refer to the man page for ulimit.

Starting Rational Software Architect

You can start Rational Software Architect from the desktop environment or a command-line interface.

For Windows: Click **Start** → **Programs** → **<package group name>** → **IBM Rational Software Architect** → **IBM Rational Software Architect**. For example, click **Start** → **Programs** → **IBM Software Development Platform** → **IBM Rational Software Architect** → **IBM Rational Software Architect**

To start Rational Software Architect from a command-line:

- For Windows: `<product installation directory>\eclipse.exe -product com.ibm.rational.rsa.product.ide`
- For Linux: `<product installation directory>/eclipse -product com.ibm.rational.rsa.product.ide`

Modifying installations

The Modify Packages wizard in the IBM Installation Manager enables you to change the language and feature selections of an installed product package.

By default, Internet access is required unless the repository preferences points to a local update site. See the Installation Manager help for more information.

Note: Close all programs that were installed using Installation Manager before modifying.

To modify an installed product package:

1. From the Start page of the Installation Manager, click the **Modify Packages** icon.
2. In the Modify Packages wizard, select the installation location for the Rational Software Architect product package and click **Next**.
3. On the Modify page, under Languages, select the languages for the package group, then click **Next**. The corresponding national language translations for the user interface and documentation for the packages will be installed. Note that your choices apply to all packages installed under this package group.
4. On the Features page, select the package features that you want to install or remove.
 - a. To learn more about a feature, click the feature and review the brief description under **Details**.
 - b. If you want to see the dependency relationships between features, select **Show Dependencies**. When you click a feature, any features that depend on it and any features that are its dependents are shown in the Dependencies window. As you select or exclude features in the packages, Installation Manager will automatically enforce any dependencies with other features and display updated download size and disk space requirements for the installation.
5. When you are finished selecting features, click **Next**.
6. On the Summary page, review your choices before modifying the installation package, and then click **Modify**.
7. Optional: When the modification process completes, click **View Log File** to see the complete log.

Updating Rational Software Architect

You can install updates for packages that were installed with IBM Installation Manager.

By default, Internet access is required unless your repository preferences points to your local update site.

Each installed package has the location embedded for its default IBM update repository. For Installation Manager to search the IBM update repository locations for the installed packages, the preference **Search service repositories during installation and updates** on the Repositories preference page must be selected. This preference is selected by default.

See the Installation Manager help for more information.

Note: Close all programs that were installed using Installation Manager before updating.

To find and install product package updates:

1. From the Start page of the Installation Manager, click **Update Packages**.
2. If a new version of Installation Manager is found, you are prompted to confirm that you want to install it before you can continue. Click **OK** to proceed. Installation Manager automatically installs the new version, stops, restarts, and resumes.
3. In the Update Packages wizard, select the location of the package group where the Rational Software Architect product package you want to update is installed or select the **Update All** check box, and then click **Next**. Installation Manager searches for updates in its repositories and the predefined update sites for Rational Software Architect. A progress indicator shows the search is taking place.
4. If updates for a package are found, then they are displayed in the **Updates** list on the Update Packages page below their corresponding package. Only recommended updates are displayed by default. Click **Show all** to display all updates found for the available packages.
 - a. To learn more about an update, click the update and review its description under **Details**.
 - b. If additional information about the update is available, a **More info** link will be included at the end of the description text. Click the link to display the information in a browser. Review this information before installing the update.
5. Select the updates that you want to install or click **Select Recommended** to restore the default selections. Updates that have a dependency relationship are automatically selected and cleared together.
6. Click **Next** to continue.
7. On the Licenses page, read the license agreements for the selected updates. On the left side of the **License** page, the list of licenses for the updates you selected is displayed; click each item to display the license agreement text.
 - a. If you agree to the terms of all the license agreements, click **I accept the terms of the license agreements**.

- b. Click **Next** to continue.
 - 8. On the Summary page, review your choices before installing the updates.
 - a. If you want to change the choices you made on previous pages, click **Back**, and make your changes.
 - b. When you are satisfied, click **Update** to download and install the updates. A progress indicator shows the percentage of the installation completed.
- Note:** During the update process, Installation Manager might prompt you for the location of the repository for the base version of the package. If you installed the product from CDs or other media, they must be available when you use the update feature.
- 9. Optional: When the update process completes, a message that confirms the success of the process is displayed near the top of the page. Click **View log file** to open the log file for the current session in a new window. You must close the Installation Log window to continue.
 - 10. Click **Finish** to close the wizard.

Uninstalling Rational Software Architect

The Uninstall Packages option in the Installation Manager enables you to uninstall packages from a single installation location. You can also uninstall all the installed packages from every installation location.

To uninstall the packages, you must log in to the system using the same user account that you used to install the product packages.

Note: If you are uninstalling Rational Software Architect server, Installation Manager will only remove the files that it installed. If you installed the Rational Software Architect server manually on an application server, then you must uninstall it manually.

To uninstall the packages:

1. Close the programs that you installed using Installation Manager.
2. On the Start page click **Uninstall Packages**.
3. In the Uninstall Packages page, select the Rational Software Architect product package that you want to uninstall. Click **Next**.
4. In the Summary page, review the list of packages that will be uninstalled and then click **Uninstall**. The Complete page is displayed after the uninstallation finishes.
5. Click **Finish** to exit the wizard.

Installing optional software

The following optional software is included on the Rational Software Architect installation image:

- IBM WebSphere Portal Version 5.1 test environment
- IBM WebSphere Portal Version 6.0 test environment
- IBM Rational Agent Controller Version 7.0.1
- IBM Rational ClearCase LT Version 7.0
- Crystal Reports Server XI Release 2

Installing the WebSphere Portal Test Environment version 5.1.0.x

The portal test environment allows you to test portal applications from the Rational Software Architect workbench. .

For complete instructions on installing and uninstalling WebSphere Portal 5.1.0.x on Windows and Linux workstations, as well as detailed system requirements, see the WebSphere Portal 5.1 information center at <http://www.ibm.com/websphere/portal/library>.

Installing the WebSphere Portal Test Environment version 5.1.0.x from a CD-ROM or electronic image

You must have Rational Software Architect installed before you can install the portal test environment. We recommend that you stop Rational Software Architect before you start the portal test environment installation.

To install the WebSphere Portal Test Environment 5.1.0.x, follow these steps:

1. If you have installed any of WebSphere Application Server, WebSphere Portal, WebSphere Application Server Integrated Test Environment, or WebSphere Portal integrated test environment, ensure all of them are stopped and ensure you stop any HTTP servers. Otherwise, the installation may fail.
2. Start the WebSphere Portal test environment version 5.1 installation program using one of the following methods:
 - From the Rational Software Architect launchpad program (see “Starting the launchpad program” on page 31), click **WebSphere Portal V5.1 test environment**.
 - Insert the setup CD of WebSphere Portal 5.1.0.x. On Windows systems, the installation program should start automatically. If it does not, or if you are installing on a Linux system, run the following command from the root of the setup CD or disk image:
 - For Windows: `install.bat -W dependency.useValidation=false`
 - For Linux: `install.sh -W dependency.useValidation=false`

Note: If you start the installation program from an electronic image, you might receive a “:bad interpreter : no such file or directory” error. To start the installation successfully, change to the directory of the setup disk image and then run the command `dos2unix install.sh -W dependency.useValidation=false`.

3. Select the language you want the installation program run in and click **OK** to continue
4. Read the information in the Welcome page of the installation program and click **Next**.
5. Accept the license agreement and click **Next**
6. Select the **Test Environment** radio button and click **Next**. Depending on your platform, you may receive an error message indicating the operating system prerequisite check failed. This happens because some operating systems (for example, Red Hat Enterprise Linux Workstation Version 3.0) are only supported in the portal test environment. You can safely ignore this message — click **OK** to continue with the installation.
7. Accept the default installation directory for WebSphere Application Server V5.1, or browse to select a new one, and click **Next**. The default installation directory is C:\Program Files\Portal51UTE\AppServer for Windows and opt/Portal51UTE/AppServer for Linux. Unless you do not have enough space, the default installation directory is recommended.
8. Accept the default installation directory for the Portal Test Environment, or browse to select a new one, and click **Next**. The default installation directory is C:\Program Files\Portal51UTE\PortalServer for Windows and opt/Portal51UTE/PortalServer for Linux. Unless you do not have enough space, the default installation directory is recommended.
9. Specify the user ID and password that you want to use with the Portal Test Environment. Click **Next**.
10. Review the information in the summary screen and click **Next**.
11. When you are prompted to, insert the appropriate WebSphere Portal 5.1 CD and specify its drive location.
12. When the installation is finished, click **Finish** to close the installation program.

Using DB2 or Oracle database as the WebSphere Portal configuration repository

By default, the WebSphere Portal 5.1 test environment installs and uses the Cloudscape™ database to store information about user identities, credentials, and permissions for accessing portal resources. Cloudscape is a WebSphere Portal built-in Java database that is well suited to basic portal environments.

To install and configure a DB2 or Oracle database, please refer to the WebSphere Portal V5.1 InfoCenter at www.ibm.com/websphere/portal/library. You can find the instructions in the WebSphere Portal version 5.1 InfoCenter under **Configuring** → **Database**. Note that when referring to the configuration instructions in the InfoCenter, *<wp_root>* in the InfoCenter corresponds to the installation directory of the WebSphere Portal 5.1 Test Environment, and *<was_root>* in the InfoCenter corresponds to the installation directory of WebSphere Application Server V5.1 (see above for the default locations). Also, to verify the database connection, you will create the WebSphere Portal 5.1 Test Environment and start the server, instead of following the steps in the InfoCenter.

Uninstalling WebSphere Portal Test Environment version 5.1.0.x

You can uninstall WebSphere Portal Test Environment 5.1.0.x using a graphical uninstallation program.

Refer to the complete instructions on uninstalling WebSphere Portal 5.1 from Windows and Linux systems found in the WebSphere Portal 5.1 information center at <http://www.ibm.com/websphere/portal/library>. You will find information on decisions and steps you might take before uninstalling as well as information on other uninstallation methods, such as manually uninstalling.

To uninstall the WebSphere Portal test environment 5.1.0.x using the graphical uninstallation program:

1. Launch the uninstallation program by doing one of the following steps:
 - **Windows only:** Select WebSphere Portal from the Add/Remove Programs window in the Control Panel.
 - Start the uninstall program from a command prompt.
 - a. Change to the directory: *portal__server_root/uninstall*
 - b. Run the following command, according to your operating system:
 - For Linux: `./uninstall.sh`
 - For Windows: `uninstall.bat`
2. Select the language for the uninstallation, and click **OK**. The welcome panel is displayed.
3. Select the component to uninstall and click **Next**.

Note: The WebSphere Application Server uninstall program purposely leaves behind its root registry key in the Windows registry.

4. Click **Next** to display the confirmation panel.
5. Click **Next** to begin the uninstallation process. When the uninstallation program finishes, the program displays a confirmation panel.
6. Click **Finish** to close the uninstallation program.
7. Restart the machine. You must do this, especially if you intend to install WebSphere Portal again on the same machine.

Installing the WebSphere Portal Version 6.0 Test Environment

The portal test environment allows you to test portal applications from the Rational Software Architect workbench. .

For complete instructions on installing and uninstalling WebSphere Portal 6.0 on Windows and Linux workstations, as well as detailed system requirements, see the WebSphere Portal 5.0 information center at <http://www.ibm.com/websphere/portal/library>.

Installing the WebSphere Portal Test Environment version 6.0 from a CD-ROM or electronic image

The following instructions will guide you through installing WebSphere Portal 6.0. For complete details, refer to the IBM WebSphere Portal Version 6.0 Information Center, available at <http://www.ibm.com/websphere/portal/library>.

To install the WebSphere Portal Test Environment 6.0, follow these steps:

1. If you are installing from an electronic image, ensure that you extracted or copied all the portal disk images into the same directory. Refer to “Extracting the downloaded files” on page 19.

2. If you have installed any of WebSphere Application Server, WebSphere Portal, WebSphere Application Server Integrated Test Environment, or WebSphere Portal integrated test environment, ensure all of them are stopped and ensure you stop any HTTP servers. Otherwise, the installation may fail.
3. Start the WebSphere Portal Test Environment version 6.0 installation program using one of the following methods:
 - From the Rational Software Architect launchpad program (see “Starting the launchpad program” on page 31), click **WebSphere Portal V6.0 test environment**.
 - Insert the setup CD of WebSphere Portal 6.0. On Windows systems, the installation program should start automatically. If it does not, or if you are installing on a Linux system, run the following command from the root of the setup CD or disk image:
 - For Windows: `install.bat`
 - For Linux: `install.sh`
4. Select the language you want the installation program run in and click **OK** to continue
5. Read the information in the Welcome page of the installation program and click **Next**.
6. Read the license agreement and the non-IBM terms. If you agree, select **I accept the both the IBM and the non-IBM terms**, and click **Next**
7. Accept the default installation directory for WebSphere Application Server V6.0, or browse to select a new one, and click **Next**. The default installation directory is `C:\Program Files\IBM\Portal60UTE\AppServer` for Windows and `opt/IBM/Portal60/AppServer` for Linux. Unless you do not have enough space, the default installation directory is recommended.
8. Accept the default WebSphere application server properties, or specify the following things:
 - The cell name.
 - The node within the WebSphere Application Server cell where you want the WebSphere Portal application server to be installed. This value must be unique among other node names in the same cell. Typically, this value is the same as the host name for the computer.
 - The fully-qualified DNS name, short DNS name, or the IP address of the computer that is running WebSphere Application Server. Do not use local host or a loopback address.
9. Enter the user ID and password for the WebSphere Application Server administrator. Do not use blanks in either the user ID or the password, and ensure that the password is at least five characters in length. This user ID is used to access WebSphere Application Server with administrator authority after installation. Note that this user ID is only used to log in to WebSphere Application Server and is not related to any user IDs that are used to access the operating system itself. Click **Next** to continue.
10. Select if you want to install WebSphere Portal Process Server for business process support, and click **Next** to continue. **Important:** If you are installing the product with the intention of adding the resulting node to a managed cell or using the node as part of a cluster, you can follow one of two approaches:
 - If you require business process integration support in your managed cell or cluster, you must install WebSphere Portal on a node that has already been federated to a deployment manager. Exit this installation process, and refer to the topic “Setting up a cluster” in the WebSphere Portal version 6.0 information center.

- If you do not require business process integration support in your managed cell or cluster, select Do not install WebSphere Process Server on this panel and continue.

If you require business process integration support in your managed cell or cluster, you must install WebSphere Portal on a node that has already been federated to a deployment manager. Exit this installation process, and refer to Setting up a cluster for instructions. If you install WebSphere Portal, including support for business process integration, on an unmanaged node, you will not be able to add that node to a managed cell or use it as part of a cluster at a later time.

11. Accept the default installation directory for the Portal Server or browse to select a new one, and click **Next**. The default installation directory is C:\Program Files\IBM\Portal60UTE\PortalServer for Windows and opt/IBM/Portal60UTE/PortalServer for Linux. Unless you do not have enough space, the default installation directory is recommended. If the directory that you specify does not exist, it will be created. If you are installing on Windows, do not include periods (.) in the installation path. Click **Next**
12. Enter the user ID and password for the WebSphere Portal administrator. Do not use blanks in either the user ID or the password, and ensure that the password is at least five characters in length. This user ID is used to access WebSphere Portal with administrator authority after installation. Note that this user ID is only used to log in to WebSphere Portal and is not related to any user IDs that are used to access the operating system itself. If you intend to use a Lightweight Directory Access Protocol (LDAP) directory to manage your users, ensure that the administrator user ID that you specify here conforms to the recommendations that are specified in Special characters in user IDs and passwords. Click **Next**.
13. Verify the products to be installed and click **Next**. The installation program begins installing the selected components. Throughout the installation and configuration process, the installation program displays progress indicators for the different components.

Note: The installation can take some time to complete. Use the progress indicators and the process monitoring facilities of your platform to monitor the overall progress of the installation.

14. If you are installing from the CDs: When you are prompted to, insert the appropriate WebSphere Portal 6.0 CD and specify its drive location.
15. When the installation is finished, the installation program displays a confirmation panel listing the components that have been installed. Note the following information before clicking **Finish**:
 - The port number that is used to access WebSphere Portal is displayed on the confirmation panel. Make a note of the port number for use in verifying the WebSphere Portal URL. This value is also stored in the WpsHostPort property in the <portal installation directory>/config/wpconfig.properties file.
 - If you want to use the WebSphere Portal First Steps to access WebSphere Portal, ensure that Launch First Steps is selected. From First Steps you can access WebSphere Portal or read the WebSphere Portal documentation.
16. Click **Finish**.
17. To verify that WebSphere Portal is running, open the following URL in a browser: http://example.com:port_number/wps/portal, where example.com is the fully qualified host name of the machine that is running WebSphere

Portal and port_number is the port number that is displayed on the confirmation panel. For example, <http://www.ibm.com:10038/wps/portal>.

18. WebSphere Portal is up and running. **Important:** At this point you are running with security enabled.

For information on using WebSphere Portal 6.0, refer to the IBM WebSphere Portal Version 6.0 Information Center at <http://www.ibm.com/websphere/portal/library>.

Using a DB2, Oracle or SQL Server database as the WebSphere Portal configuration repository

The WebSphere Portal Test Environment, Version 6.0 stores configuration, access control, such as user identities, credentials, and permissions for accessing portal resources, and user data in a database. By default, WebSphere Portal installs and uses the Cloudscape database. However, you might want to use another supported database.

For information on installing and configuring another supported database for use with WebSphere Portal V6.0, such as a DB2, Oracle or SQL Server database, please refer to the WebSphere Portal V6.0 information center at www.ibm.com/websphere/portal/library. You can find the instructions in the WebSphere Portal version 6.0 information center under **Configuring** → **Configuring databases**.

Uninstalling WebSphere Portal Test Environment version 6.0

You can uninstall WebSphere Portal Test Environment 6.0 using a graphical uninstallation program.

Refer to the complete instructions on uninstalling WebSphere Portal 6.0 from Windows and Linux systems found in the WebSphere Portal 6.0 information center at <http://www.ibm.com/websphere/portal/library>. You will find information on planning to uninstall as well as information on other uninstallation methods, such as manually uninstalling.

To uninstall the WebSphere Portal test environment 6.0 using the graphical uninstallation program:

1. Review the information on planning to uninstall WebSphere Portal 6.0 from Windows and Linux systems found in the WebSphere Portal 6.0 information center at <http://www.ibm.com/websphere/portal/library>.
2. Launch the uninstallation program by doing one of the following steps:
 - **Windows only:** Select WebSphere Portal from the Add/Remove Programs window in the Control Panel.
 - Start the uninstall program from a command prompt.
 - a. Change to the directory: *portal_server_root/uninstall*
 - b. Run the following command, according to your operating system:
 - For Linux: `./uninstall.sh`
 - For Windows: `uninstall.bat`
3. Select the language for the uninstallation, and click **OK**. The welcome panel is displayed.
4. Select the component to uninstall and click **Next**.

Note: The WebSphere Application Server uninstall program purposely leaves behind its root registry key in the Windows registry.

5. Click **Next** to display the confirmation panel.

6. Click **Next** to begin the uninstallation process. When the uninstallation program finishes, the program displays a confirmation panel.
7. Click **Finish** to close the uninstallation program.
8. Restart the machine. You must do this, especially if you intend to install WebSphere Portal again on the same machine.

Installing Agent Controller

Agent Controller is a daemon that allows client applications to launch and manage local or remote applications and provides information about running applications to other applications. You must install Agent Controller separately before you can use the following tools:

- Profiling tools to profile your applications. Agent Controller must be installed on the same system as the application that you are profiling.
- Logging tools to import remote log files. Agent Controller must be installed and running on the remote system from which the log files are imported.
- Component testing tool to run test cases. Agent Controller must be installed on the systems on which you run the test cases.
- Tools for remote application testing on WebSphere Application Server version 5.0 or 5.1. (Agent Controller does not have to be installed for remote *publishing* of applications; or for local application publishing or testing.) Note that WebSphere Application Server version 6.0 has this functionality built in, so Agent Controller is not required on version 6.0 target servers.

Note:

- It is highly recommended that you install Agent Controller behind a firewall.
- For more information on the security implications of using Agent Controller, refer to the Agent Controller documentation.
- The online documentation for Agent Controller is not installed until the software is installed. At that time, the documentation is added to the online help.
- Before installing Agent Controller version 7.0.1, you must uninstall the previous version of Agent Controller using the instructions provided below.

Refer to the instructions below for more information on silently installing Agent Controller.

Hardware prerequisites

- Windows, Linux/IA32: Intel Pentium II processor minimum. Pentium III 500 MHz or higher is recommended.
- AIX®: PowerPC® 604e 233MHz (IBM RS/6000® 7043 43P Series) minimum
- HP-UX: PA8500 300MHz (HP Workstation C3000) minimum
- Solaris: UltraSPARC-IIi 300MHz (Sun Ultra 10 Workstation) minimum
- OS/40: iSeries™ (as required by the operating system)
- z/OS®, LINUX/S39: zSeries® (as required by the operating system)
- Linux/ppc64: POWER5™ processor based pSeries® and iSeries (as required by the operating system)
- 512 MB RAM minimum (768 MB RAM is recommended)
- Disk space:
 - You will require 100 MB minimum disk space for installing
- Display resolution:
 - 800 x 600 display minimum (1024 x 768 recommended)

Supported platforms

Note for Linux: The Agent Controller is compiled using libstdc++-libc6.2-2.so.3 shared library. Ensure that this shared library exists under the /usr/lib directory. If it does not exist, you have to install the RPM package compat-libstdc++ that comes with the operating system installation media.

Agent Controller v7.0.1 is supported on the following platforms:

- AIX v5.2, v5.3, and 5L on PowerPC (32-bit)
- z/OS V1R4, V1R5, V1R6 and V1R7 on zSeries (32-bit)
- OS/400® V5R2, V5R3 and V5R4 on iSeries
- Linux 2.4 and 2.6 kernel. Examples of supported distributions include:
 - Red Hat Linux Advanced Server v2.1 on Intel IA32
 - Red Hat Enterprise Linux AS release 3 on PowerPC (64-bit)
 - Red Hat Enterprise Linux (RHEL) v3.0 and v4.0
 - SUSE Linux Enterprise Server (SLES) v9 on Intel IA32
 - SUSE Linux Enterprise Server (SLES) v8 on zSeries (32-bit)
- Windows 2000 Server or Advanced Server (SP4) on Intel IA32
- Windows 2000 Professional (SP3) on Intel IA32
- Windows 2003 Server Standard and Enterprise (SP1) on Intel IA32
- Windows 2003 Server Enterprise x64 Edition (SP1) on EM64T (64-bit)
- Windows XP Professional (SP2) on Intel IA32
- HP-UX v11.0, v11i on PA-RISC
- Sun Solaris v8, v9, and v10.0 on SPARC

Supported JVMs

In general, Agent Controller works with Java Virtual Machine (JVM) version 1.4 and above. Here are the JVM versions (java -fullversion) that Agent Controller has been tested on:

- AIX: J2RE 1.4.1 IBM AIX build ca1411-20040301
- AIX: J2RE 1.5.0 IBM AIX build pap32devifx-20060310 (SR1)
- HP-UX: J2RE 1.4.2.03-040401-18:59-PA_RISC2.0
- Linux for Intel IA32: J2RE 1.4.1 IBM build cxia321411-20040301; J2RE 1.4.2 IBM.
- Linux for Intel IA32: J2RE 1.5.0 IBM Linux build pxi32dev-20060511 (SR2)
- Linux for PPC64: J2RE 1.4.2 IBM build exp64142-20040917 (JIT enabled: jitc)
- Linux for PPC64: J2RE 1.5.0 IBM Linux build pxp64devifx-20060310 (SR1)
- Linux for OS/390®: J2RE 1.4.1 IBM build cx3901411-20040301
- Linux for OS/390: J2RE 1.4.2 IBM build cx390142-20050609
- z/OS: J2RE 1.4.1 IBM z/OS Persistent Reusable VM build cm1411-20030930
- z/OS: J2RE 1.5.0 IBM z/OS build pmz31dev-20051104a
- OS/400: J2RE 1.4 IBM
- OS/400: J2RE 1.5 IBM
- Solaris SPARC: Sun Java 2 Standard Edition (build 1.4.2_04-b05)
- Solaris SPARC: 1.5.0_06-b05
- Windows: IA32 J2RE 1.4.1 IBM Windows 32 build cn1411-20040301a; J2RE 1.4.2 IBM Windows 32; Sun Java 2 Standard Edition (build 1.4.2_04-b05)
- Windows_IA32: 1.5.0_04-b05, J2RE 1.5.0 IBM Windows 32 build pwi32dev-20051222

- Windows_EM64T (64-bit): Sun Java 2 Runtime Environment, Standard Edition (build 1.5.0_06-b05) v1.5.0 06

Locating the installation files

The installation files are located on the Agent Controller disk in the following directories:

- For AIX: <Agent Controller CD>/aix_powerpc
- For HP-UX: <Agent Controller CD>/hpux
- For OS/400: <Agent Controller CD>/os400
- For Linux on z/Series: <Agent Controller CD>/linux_s390
- For Linux on Intel IA32: <Agent Controller CD>/linux_ia32
- For Linux on PPC64: <Agent Controller CD>/linux_ppc64
- For Solaris: <Agent Controller CD>/solaris_sparc
- For Windows on Intel IA32: <Agent Controller CD>\win_ia32
- For Windows on Intel Extended Memory 64 Technology (64-bit): <Agent Controller CD>\win_em64t
- For Windows on Intel Itanium® systems (64-bit): <Agent Controller CD>\win_ipf
- For z/OS: <Agent Controller CD>/os390

Installing Agent Controller on a workstation (AIX, HP-UX, Linux, Windows, Solaris)

Uninstalling previous versions of Agent Controller

Note: Before installing Agent Controller version 7.0.1, you must uninstall the previous version of Agent Controller:

- If Agent Controller 7.0 or 6.x is found, the Agent Controller v7.0.1 installer will block the installation with a warning: Please remove any existing IBM Rational Agent Controller and run the install again. When using the silent installer, the Agent Controller v7.0.1 installer will exit the installation without any warning.
- If a previous installation of Agent Controller v7.0.1 is found, the installer displays the following warning: This product is already installed at <rac_install_dir>. To overwrite the existing installation, click "Next". If you choose to continue with the installation, the installer will overwrite the existing installation. When using the silent installer, the existing installation will be overwritten without any warning.

When uninstalling Agent Controller V6.x on Windows, you will need to manually remove any residual files. To do this, stop the Agent Controller, uninstall it, and clean up any of the following files which may be left behind after uninstalling:

Windows:

```
%RASERVER_HOME%\*.* (directory where
Agent Controller is installed)
%SystemRoot%\system32\piAgent.dll (Windows' system32
directory)
%SystemRoot%\system32\LogAgent.dll
%SystemRoot%\system32\hcbnd.dll
%SystemRoot%\system32\hcc1co.dll
%SystemRoot%\system32\hcc1dt.dll
%SystemRoot%\system32\hcc1s.dll
%SystemRoot%\system32\hcc1serc.dll
```

```
%SystemRoot%\system32\hcc1sert.dll
%SystemRoot%\system32\hcc1sm.dll
%SystemRoot%\system32\hcjbnd.dll
%SystemRoot%\system32\hclaunch.dll
%SystemRoot%\system32\hcthread.dll
%SystemRoot%\system32\piAgent.dll
%SystemRoot%\system32\rac.dll
%SystemRoot%\system32\sysperf.dll
```

When uninstalling Agent Controller V6.x or V7.x on UNIX® platforms, you will need to manually remove any residual files. To do this, stop the Agent Controller, uninstall it, and clean up any of the following files which may be left behind after uninstalling:

Linux, AIX, HP-UX, Solaris:

```
$RASERVER_HOME/* (directory where Agent Controller is installed)
/usr/lib/libpiAgent.so (or .sl on HP-UX)
/usr/lib/libLogAgent.so
/usr/lib/libhcbnd.so
/usr/lib/libhcc1co.so
/usr/lib/libhcc1dt.so
/usr/lib/libhcc1s.so
/usr/lib/libhcc1serc.so
/usr/lib/libhcc1sert.so
/usr/lib/libhcc1sm.so
/usr/lib/libhcbnd.so
/usr/lib/libhclaunch.so
/usr/lib/libhcthread.so
```

In version 7.0.1, Agent Controller is installed in these places:

Windows:<rac_install_dir>\bin

Linux:<rac_install_dir>/lib

Where <rac_install_dir> is the installation directory of Agent Controller.

Installing Agent Controller

1. Log in as Administrator (or root).
2. Change directory to the directory where you unzipped the installation files for the appropriate platform.
3. Close all Eclipse platforms before continuing with the installation.
4. Run the program **setup.exe**. For non-Windows platforms, run **setup.bin**.
5. Click **Next** on the welcome screen to proceed.
6. Read the license agreement.
7. Select **I accept the terms in the license agreement** and click **Next** to proceed.
8. Specify the path where Agent Controller should be installed and click **Next** to proceed.
9. Specify the path of the Java Runtime Environment (JRE) executable program `java.exe` or `java` which Agent Controller should be using. The JRE entered here will be used by Agent Controller for launching Java applications. Therefore, you may want to change the JRE path pre-filled by the installer program.

Note: The JRE you provide at this time will be used both to run Agent Controller and for Agent Controller to launch Java applications. You may, however, later configure Agent Controller to use separate JRE for each of these functions. For details, refer to Agent Controller help topic *Configuring Applications to be launched by Agent Controller*.

Click **Next** to proceed.

10. Optional: Specify the version of IBM WebSphere Application Server if "Remote Support for WebSphere Application Server" was selected in step 9 above. Click **Next** to proceed.
11. Optional: Specify the paths of IBM WebSphere Application Server version 5.0 (Windows only) and 5.1 if "Remote Support for WebSphere Application Server" was selected in step 9 above. Click **Next** to proceed.
12. Specify which hosts can access Agent Controller. The choices are:
 - **This computer only** allows only the local host to access Agent Controller.
 - **Specific computers** allows a specified list of clients to access Agent Controller. If you select this option, and if Security was selected in step 9 above, click **Next** to proceed to the Access List panel. Type a comma-separated list of host names that can access Agent Controller.
 - **Any computer** allows any client to access Agent Controller. (Default selection.)

Note: If you use an authentication mechanism such as Lightweight Directory Access Protocol (LDAP), selecting "Any computer" will require that you disable the Agent Controller user authentication after the installation process is completed. Refer to the Agent Controller documentation for details.

Click **Next** to proceed.

13. Choose the security setting

Note: If you selected "Any computer", then security is enabled by default (refer to "Enable" below). Communications will be encrypted and all connections will be authenticated. To disable security, refer to the Agent Controller documentation.

- **Disable:** Communication will not be encrypted and access control will be limited to the defined host list. (Default selection except for "Any computer".)
- **Enable:** Communication will be encrypted and all connections will be forced to authenticate for Secure Sockets Communications.

If Enable is selected, click **Next** and under **Security** type a comma-separated list of users that can connect to Agent Controller. These users will be required to authenticate to use the tool.

Click **Next** to proceed.

14. Click **Next** on the summary screen to install Agent Controller.
15. Click **Finish** after the installation has completed.

Installing Agent Controller silently

You can run the installation process silently using the following parameters with the setup command:

Parameter	Description
-silent	Optional: tells the installer to run silently otherwise you will get an install wizard with passed inputs.
This variable is required if silent is used:	
-V licenseAccepted=true	

Parameter	Description
-P installLocation	<p>Optional: specifies the installation path. The default installation path is '\$D(install)/IBM/AgentController'.</p> <p>Examples:</p> <p>for Windows: C:\Program Files\IBM\AgentController</p> <p>for UNIX^(R)/Linux: /opt/IBM/AgentController</p>
-V VJavaPath	<p>Required: specifies the fully-qualified path of the java executable</p>
-V VAccessLocal -V VAccessCustom -V VAccessAll	<p>Optional: specifies how clients can connect to Agent Controller (ALL, LOCAL, CUSTOM). Set only one of the variables to "true" and the others to false. By default, VAccessAll="true"</p> <ul style="list-style-type: none"> Any computer: VAccessAll="true" : allow any client This computer only : VAccessLocal="true" : allow only localhost (default) Specific computers : VAccessCustom="true" : allow a list of clients (also requires the -V VHosts parameter)
-V VHosts	<p>Required if VAccessCustom="true"</p> <p>specifies the client hostnames, separated by commas</p>
The following two variables must both be specified and should be set as opposites: -V VSecurity="true" or "false" -V VSecurityDisable="false" or "true"	<p>Optional: (true, false)</p> <p>default: VSecurity=true VSecurityDisable=false</p>
-V VUsers	<p>Required: if VSecurity="true"</p> <p>specifies which users can connect to Agent Controller</p>
-V VWAS6 -V VWAS5	<p>Optional:</p> <p>-V VWAS6="true" (default) : If WAS V6 is used</p> <p>-V VWAS5="true" : If WAS V5.x is used</p>
-V VWAS_HOME_V50 -V VWAS_HOME_V51	<p>Optional: if -V VWAS5="true"</p> <p>specifies the installed location of IBM WebSphere Application Server 5.1 and 5.0</p>

Examples:

Installing from the command line:

```
-P installLocation="D:\IBM\AgentController"
-V VJavaPath=" D:\jdk1.4.2\jre\bin\java.exe "
-V VAccessLocal="false"
-V VAccessCustom="true"
```

```

-V VAccessAll="false"
-V VHosts="host1,host2"
-V VSecurity="true"
-V VSecurityDisable="false"
-V VUsers="user1,user2"
-V VWAS5="true"
-V VWAS_HOME_V51="D:\WebSphere5.1\AppServer"
-V VWAS_HOME_V50="D:\WebSphere5.0\AppServer"

```

Installing using a response file:

You can create a response file, for example `setup.rsp`, to store all the parameters, instead of specifying them on the command line. Following is a Windows example, Linux/UNIX platforms would be similar:

```
setup.exe -silent -options setup.rsp
```

Contents of the response file:

```

# Start of response file

-P installLocation="D:\IBM\AgentController"

-V licenseAccepted="true"

-V VJavaPath=" D:\jdk1.4.2\jre\bin\java.exe "

-V VAccessLocal="false"

-V VAccessCustom="true"

-V VAccessAll="false"

-V VHosts="host1,host2"

-V VSecurity="true"

-V VSecurityDisable="false"

-V VUsers="user1,user2"

-V VWAS5="true"

-V VWAS_HOME_V51="D:\WebSphere5.1\AppServer"

-V VWAS_HOME_V50="D:\WebSphere5.0\AppServer"

# End of response file

```

Starting and stopping Agent Controller on a Windows workstation

- On Windows, the Agent Controller system service (RASvc.exe) will be started automatically.
- Use the Windows Services dialog under Control Panel to start or stop the Agent Controller service (**Start > Settings > Control Panel > Administrative Tools > Services > IBM Rational^(R) Agent Controller**).

Starting and stopping Agent Controller on a non-Windows workstation

- On non-Windows platforms, the Agent Controller process (RAServer) does not start automatically. You must start it yourself.
- **Important:** The following environment settings for non-Windows platforms must be set before starting Agent Controller.
 - **Solaris:** /usr/sbin must be added to the PATH environment before starting Agent Controller. Enter the following commands to set the path:


```
PATH=/usr/sbin:$PATH
export PATH
```
 - **AIX:** For certain JVMs, the LDR_CNTRL environment variable needs to be set to USERREGS to work properly with the Agent Controller. To set this variable, run the following command before running the RASStart.sh script:


```
export LDR_CNTRL=USERREGS
```
 - **Linux, AIX, Solaris, HP-UX, z/OS:** RAServer requires the directories of the JRE that contain executable libraries such as libjvm.so to be added to the library path environment variable. The table below shows the path variable setting for each platform, based on default installation locations of the JVMs supported for the platform.

Note: The path you enter must match the path for the JRE you will specify when you install Agent Controller. The JRE you specify will be used by Agent Controller for launching Java applications.

Platform	Library path setting
AIX	LIBPATH=/usr/java14/jre/bin: /usr/java14/jre/bin /classic:\$LIBPATH export LIBPATH
HP-UX	SHLIB_PATH=/opt/java1.4/jre/ lib/PA_RISC/server:/opt/java1.4/ jre/lib/PA_RISC:\$SHLIB_PATH export SHLIB_PATH
Linux/IA32	LD_LIBRARY_PATH=/opt/IBMJava2-141/ jre/bin/classic:/opt/IBMJava2-141 /jre/bin:\$LD_LIBRARY_PATH export LD_LIBRARY_PATH
Linux/PPC64	LD_LIBRARY_PATH=/opt/IBMJava2-ppc64-142/ jre/bin:/opt/IBMJava2-ppc64-142/ jre/bin/classic:\$LD_LIBRARY_PATH export LD_LIBRARY_PATH
Linux/390	LD_LIBRARY_PATH=/opt/IBMJava2-s390-141/ jre/bin/classic:/opt/IBMJava2-s390-141/ jre/bin:\$LD_LIBRARY_PATH export LD_LIBRARY_PATH
Solaris	LD_LIBRARY_PATH=/usr/j2sdk1.4.2_04/ jre/lib/sparc/server: /usr/j2sdk1.4.2_04/jre/lib/ sparc:\$LD_LIBRARY_PATH export LD_LIBRARY_PATH

Platform	Library path setting
z/OS	<pre>LIBPATH=/usr/lpp/java/IBM/ J1.4/bin/classic:/usr/lpp /java/IBM/J1.4/bin:\$LIBPATH export LIBPATH</pre>

- To start the Agent Controller process, change to the installation location's **bin** directory (for example, /opt/IBM/AgentController/bin) and run `./RAStart.sh`
- To stop the Agent Controller process, change to the installation location's **bin** directory (for example, /opt/IBM/AgentController/bin) and run `./RAStop.sh`

Uninstalling Agent Controller on a Windows workstation

- Agent Controller can be removed from the **Add/Remove Programs** dialog under Control Panel.
- To perform a silent uninstallation, run the command `uninstall.exe -silent` from the installation location's **_uninst** directory (for example, C:\Program Files\IBM\AgentController_uninst).

Uninstalling Agent Controller on a non-Windows workstation

1. Run the program **uninstall.bin** from the installation location's **_uninst** directory (for example, /opt/IBM/AgentController/_uninst).
2. Follow the on-screen instruction to complete the uninstallation.
3. To perform a silent uninstallation, use the command `uninstall.bin -silent`.

Uninstalling Agent Controller that has multiple references on a workstation

Agent Controller version 7.0.1 prevents multiple instances of the product from being installed on a single workstation. When additional installations are performed, either by stand-alone install or as an embedded install inside a product, Agent Controller records a reference to the name of the product that is initiating the new installation.

If Agent Controller has been installed multiple times - in other words, there are multiple reference counts - either by stand-alone install or as an embedded install inside a product, it can be uninstalled only when the last referencing product is uninstalled; the last referencing product still requires Agent Controller.

If you attempt to uninstall Agent Controller while it is still required by another product, the uninstallation will not proceed and you will receive a message "This product cannot be uninstalled as it is required by another product."

Installing Agent Controller on OS/400 (iSeries)

Uninstalling previous versions of Agent Controller

If you have a previous version of Agent Controller, stop it and uninstall it before installing this version.

Installing Agent Controller

1. On the iSeries host, create a library called HYADESDC and another library called IBMRAC:

```
CRTLIB HYADESDC
CRTLIB IBMRAC
```

2. On the iSeries host, in the HYADESDC library, create an empty save file called HYADESDC.SAVF:

```
CRTSAVF HYADESDC/HYADESDC
```

3. On the iSeries host, in the IBMRAC library, create an empty save file called IBMRAC.SAVF:

```
CRTSAVF IBMRAC/IBMRAC
```

4. Use FTP to add the file IBMRAC.SAVF from the installation CD to the library IBMRAC located on the iSeries host using BINARY mode transfer.

5. Use FTP to add the file HYADESDC.SAVF from the installation CD to the library HYADESDC located on the iSeries host using BINARY mode transfer.

6. Restore the save file HYADESDC.SAVF located on the iSeries host to the library HYADESDC, by typing:

```
RSTOBJ OBJ(*ALL) SAVLIB(HYADESDC) DEV(*SAVF) SAVF(HYADESDC/HYADESDC)
```

7. Restore the save file IBMRAC.SAVF located on the iSeries host to the library IBMRAC, by typing:

```
RSTOBJ OBJ(*ALL) SAVLIB(IBMRAC) DEV(*SAVF) SAVF(IBMRAC/IBMRAC)
```

8. Start QShell and create, on the integrated file system (IFS), the /opt/hyadesdc directory.

9. Restore the save file HYADESIFS.SAVF in HYADESDC to the IFS directory /opt/hyadesdc. For example:

```
RST DEV('/QSYS.LIB/HYADESDC.LIB/HYADESIFS.FILE')
OBJ('/opt/hyadesdc/*')
```

10. Restore the save file IBMRACIFS.SAVF in IBMRAC to the IFS directory /opt/hyadesdc. For example, type the following command on one line:

```
RST DEV('/QSYS.LIB/IBMRAC.LIB/IBMRACIFS.FILE') OBJ('/opt/hyadesdc/*')
ALWOBJDIF(*ALL)
```

If you wish to install the National Language packs, complete steps 11 through 16 below. If not, proceed to step 17.

11. On the iSeries host, in the HYADESDC library, create two empty save files called HYADESNL1.SAVF and HYADESNL2.SAVF:

```
CRTSAVF IBMRAC/HYADESNL1
CRTSAVF IBMRAC/HYADESNL2
```

12. Use FTP to add the NL files HYADESNL1.SAVF and HYADESNL2.SAVF from the installation CD to the library HYADESDC located on the iSeries host using BINARY mode transfer.

13. On the iSeries host, in the IBMRAC library, create two empty save files called IBMRACNL1.SAVF and IBMRACNL2.SAVF:

```
CRTSAVF IBMRAC/IBMRACNL1
CRTSAVF IBMRAC/IBMRACNL2
```

14. Use FTP to add the NL files IBMRACNL1.SAVF and IBMRACNL2.SAVF from the installation CD to the library IBMRAC located on the iSeries host using BINARY mode transfer.

15. Restore the save file HYADESNL1.SAVF and HYADESNL2.SAVF in HYADESDC to the IFS directory /opt/hyadesdc. For example, type the following commands on one line:

```
RST DEV('/QSYS.LIB/HYADESDC.LIB/HYADESNL1.FILE') OBJ
('/opt/hyadesdc/*') ALWOBJDIF(*ALL)
RST DEV('/QSYS.LIB/HYADESDC.LIB/HYADESNL2.FILE') OBJ
('/opt/hyadesdc/*') ALWOBJDIF(*ALL)
```


16. Restore the save file IBMRACNL1.SAVF and IBMRACNL2.SAVF in IBMRAC to the IFS directory /opt/hyadesdc. For example, type the following commands on one line:


```
RST DEV('/QSYS.LIB/IBMRAC.LIB/IBMRACNL1.FILE') OBJ('/opt/hyadesdc/*')
ALWOBJDIF(*ALL)
RST DEV('/QSYS.LIB/IBMRAC.LIB/IBMRACNL2.FILE') OBJ('/opt/hyadesdc/*')
ALWOBJDIF(*ALL)
```
17. After you have installed Agent Controller, change the directory to the installed location's bin directory /opt/hyades/bin, and run the setup script by typing:


```
./SetConfig.sh
```
18. Follow the on-screen prompt to configure Agent Controller.

Starting and stopping Agent Controller on OS/400 (iSeries)

1. To start Agent Controller, add the HYADESDC and the IBMRAC libraries to the library list:


```
ADDLIBLE HYADESDC
ADDLIBLE IBMRAC
```
2. Submit the RASStart job by typing:


```
SBMJOB CMD(CALL RASERVER) JOBD(RASTART)
```
3. To stop Agent Controller, terminate the RASStart job by typing:


```
ENDJOB JOB(RASTART)
```

or, change the directory to the installed location's bin directory /opt/hyades/bin, and run the stop script:

```
./RASStop.sh
```

Uninstalling Agent Controller on OS/400 (iSeries)

1. Remove the HYADESDC and IBMRAC library.
2. Remove the IFS directory /opt/hyadesdc (including all subdirectories and files).

Installing Agent Controller on z/OS (OS/390)

Uninstalling previous versions of Agent Controller

If you have a previous version of Agent Controller, stop it and uninstall it before installing this version.

Installing Agent Controller

1. In a UNIX System Services shell, go to the directory where you want to install Agent Controller. It is recommended that you install it in the /usr/lpp/ directory.
2. Transfer the install images `ibmrac.os390.pax`, `tptpdc.os390.pax` to the installation directory.
3. Issue the following command to extract Agent Controller files:


```
pax -ppx -rvf ibmrac.os390.pax
```
4. Issue the following command to extract the test and performance tools (TPTP) Agent Controller files:


```
pax -ppx -rvf tptpdc.os390.pax
```
5. Change the directory to the installation bin directory `<rac_install_dir>/bin`, and run the script to create links to the Agent Controller libraries by typing:


```
./createLinks.sh
```

6. Make the Agent Controller shared object files program controlled by issuing the following commands in a UNIX System Services shell:


```
extattr +p /usr/lpp/IBM/AgentController/lib/*.so
```

 If you wish to install the National Language packs, complete steps 7 and 8 below. If not, proceed to step 9.
7. Transfer the NL install images `tptpdc.nl1.os390.pax`, `tptpdc.nl2.os390.pax`, `ibmrac.os390.nl1.pax`, `ibmrac.os390.nl2.pax` to the installation directory.
8. Issue the following command to extract Agent Controller files:


```
pax -ppx -rf tptpdc.nl1.os390.pax
pax -ppx -rf tptpdc.nl2.os390.pax
pax -ppx -rf ibmrac.os390.nl1.pax
pax -ppx -rf ibmrac.os390.nl2.pax
```
9. After you have installed Agent Controller, change the directory to the installed location's bin directory `/usr/lpp/IBM/AgentController/bin`, and run the setup script by typing:


```
./SetConfig.sh
```
10. Follow the on-screen prompt to configure Agent Controller.

Data Channel usage on z/OS:

In order to set a large `dataChannelSize` in the `serviceconfig.xml` file you may need to increase the maximum shared memory segment size setting on your machine. To do this, increase the `IPCSHMMPAGES` value in the `BPXPRMxx` parmlib member. This value is the maximum number of 4K pages that your data channel can be. For example, if you want to set `dataChannelSize` to 32M, you must set `IPCSHMMPAGES` to a value greater than 8192.

To allow Agent Controller to communicate with a large number of agents simultaneously, you must set the `IPCSHMNSEGS` value in the `BPXPRMxx` parmlib member to an appropriate value. This value specifies the maximum number of attached shared memory segments for each address space. The default value is 10 so you should increase this to 50.

For more information about the data channels used by Agent Controller, refer to the online help information for Agent Controller.

For more information about z/OS `BPXPRMXX` parmlib members and how to update them, refer to *IBM z/OS MVS™ Initialization and Tuning Reference*.

Starting and stopping Agent Controller on the z/OS (OS/390)

Note: RAServer requires the directories of the JRE that contain executable libraries such as `libjvm.so` to be added to the `LIBPATH` environment variable. For example, if you are using the IBM JRE 1.4.1, the `LIBPATH` variable would be set as follows:

```
export LIBPATH=/usr/lpp/java/IBM/J1.4/bin/classic:
/usr/lpp/java/IBM/J1.4/bin:$LIBPATH
```

- Start the server by logging in as root, opening the `/usr/lpp/IBM/AgentController/bin` directory and issuing the command:


```
./RASStart.sh
```
- To stop the server, log in as root, open the `/usr/lpp/IBM/AgentController/bin` directory, and issue the command:


```
./RASStop.sh
```

Uninstalling Agent Controller on the z/OS (OS/390)

- If you ran createLinks.sh when installing Agent Controller, then go to the /usr/lpp/IBM/AgentController/bin directory and issue the command:

```
./removeLinks.sh
```
- Remove the IBMRAC directory and all of its subdirectories by issuing the following command:

```
rm -rf /usr/lpp/IBM/AgentController
```

Using the Agent Controller security feature

The following list contains hints and tips for using the Agent Controller security feature on all platforms:

- Authentication is provided by the operating system. Only users specified at installation time will be allowed to authenticate. If the user name ANY is provided, any valid user name and password pairs will be forwarded to the operation system for authentication, otherwise only listed pairs will be forwarded.
- When security is enabled, the users you specified at installation time are required to authenticate with the operating system before any information can be exchanged with Agent Controller. The workbench user must provide a valid user name and password combination that is an operating system user name and password.
- **(Windows only)** Domain name passwords will not be authenticated. You must provide local user name and password pairs.
- There are no key management capabilities provided. Agent Controller uses Java keystores for security.
- A default keystore and exported certificate are in the Agent Controller directory <rac_install_dir>\security for Windows, and <rac_install_dir>/security for Linux. Where <rac_install_dir> is the installation directory of Agent Controller. These are samples only. You should replace these with a keystore containing meaningful certificates.

Workbench/Agent Controller compatibility summary

Backward compatibility (using an older workbench with a version 6.0.1 Agent Controller): Yes, they are compatible, in that the new Agent Controller supports all the features in previous versions (for example, Security on the control channel). However, you will not be able to use new features, including multiplexing (returning data via the control channel so that it can be secure).

Forward compatibility (using a 6.0.1 workbench with an older Agent Controller): No, in general, is not supported.

Cross-version Inter-Agent-Controller compatibility: Some products or tools (such as IBM Performance Optimization Toolkit) require that Agent Controllers on multiple hosts (apart from the workbench) "discover" and communicate with each other. Changes made from one version to the next surrounding this function mean that if you need to use this function, you must use either Agent Controller version 6.0.0.1 or Agent Controller version 6.0.1 on all involved hosts. That is, you cannot mix and match versions when using dynamic discovery between Agent Controller instances.

Known problems and limitations

This section covers known problems and limitations related to installing and uninstalling Agent Controller. Except where otherwise noted, the following information applies to all operating systems that are supported for Agent Controller.

Agent Controller may fail to start on non-Windows platforms

Agent Controller may fail to start on non-Windows platforms with the following message:

```
RAServer failed to start.
```

This failure is usually caused when TCP/IP port 10002 is not free. Agent Controller listens on this port by default. Another process running on the system may be using this port when Agent Controller is started or perhaps Agent Controller was just stopped and then restarted before the port could be released.

If Agent Controller failed to start, you can start it as follows:

- If port 10002 is being used by another process, you can change the port number by editing the `serviceconfig.xml` file. This is described in the documentation.

Note: If the communication port number that is configured in the `serviceconfig.xml` file has been changed, then the property `INSTANCE_RAC_PORT_NUM_ID` that is defined in the WebSphere Application Server configuration needs to be changed to the same port number.

- If Agent Controller was just stopped, wait a few minutes and try to start it again.

Other errors during installation and uninstallation

If you encounter errors during installation or uninstallation, this may be due to the fact that the object files of Agent Controller are loaded by running processes. To ensure the object files can be modified, do the following:

1. Shut down your Eclipse workbench.
2. Terminate all `java.exe` processes that contain either the Java Profiling Agent or the J2EE Request Profiler.

Installing ClearCase LT

Rational ClearCase LT is a configuration management tool for small project teams. ClearCase LT is part of the IBM Rational ClearCase product family that can scale from small project workgroups to the distributed, global enterprise.

Your installation media includes Rational ClearCase LT Version 7.0.0.0 It is installed separately from Rational Software Architect.

If you already have ClearCase LT installed on your workstation, then you might be able to upgrade it to the current version. Refer to the installation documentation for ClearCase LT for information on upgrading from previous versions.

To enable Rational Software Architect to work with ClearCase LT, you must install the Rational ClearCase SCM Adapter feature. By default, this feature is selected when you install Rational Software Architect; however, if you did not include it, you can install it later using the Modify Packages wizard in IBM Installation Manager. For details, refer to “Modifying installations” on page 61.

You must enable the Rational ClearCase SCM adapter before you can work with it. Refer to the online help for details on enabling and working with the adapter.

Locating the ClearCase LT installation instructions and release notes

For complete instructions on installing Rational ClearCase LT, refer to the installation documentation provided with the ClearCase LT installation media. It is also strongly recommended that you read the ClearCase LT release notes before you install the product.

Some documentation is in Acrobat PDF files. To open the files, you require the Adobe Reader software, which you can download from <http://www.adobe.com/products/acrobat/readstep2.html>.

For Windows: The installation instructions and release notes can be viewed from the ClearCase LT installation launchpad. Refer to “Starting an installation of Rational ClearCase LT” on page 88.

- To open the installation instructions:
 1. For Windows: From the first ClearCase LT installation CD (or disk directory for an electronic image), open `doc\books\install.pdf`. *IBM Rational ClearCase, ClearCase MultiSite[®], and ClearCase LT Installation and Upgrade Guide, Version 7.0 (Windows)* opens.
 2. For Linux: Go to <http://www-1.ibm.com/support/docview.wss?uid=pub1gi11636600> for instructions to download *IBM Rational ClearCase, ClearCase MultiSite, and ClearCase LT Installation Guide, 7.0, Linux and UNIX*.
- For Linux: *IBM Rational ClearCase, ClearCase MultiSite, and ClearCase LT Installation and Upgrade Guide, Version 7.0 (Linux)* opens.

Getting documentation from the IBM Publications Center

You can also download the installation instructions and release notes for Rational ClearCase LT from the IBM Publications Center.

1. Go to <http://www.ibm.com/shop/publications/order>.
2. Select your country/region on the Welcome page of the Publications Center.
3. Click Search for Publications.
4. Enter either the document title or publication number in the appropriate search field.
 - To search for a document by its title, enter the title in the Search on field.
 - To search for a document by its publication (Material ID) number, enter the number in the Publication number field.

Table 1. ClearCase publication numbers

Document	Publication number
IBM Rational ClearCase, ClearCase MultiSite, and ClearCase LT Installation and Upgrade Guide (Windows)	GI11-6365-00
IBM Rational ClearCase, ClearCase MultiSite, and ClearCase LT Installation and Upgrade Guide (UNIX)	GI11-6366-00
IBM Rational ClearCase LT Release Notes [®]	GI11-6369-00

Starting an installation of Rational ClearCase LT

The installation instructions in this section are to help you start the installation process for Rational ClearCase LT. You must refer to the complete installation instructions found in the Rational ClearCase LT Installation Guide when installing the product. Before installing, it is strongly recommended that you read the release notes.

Starting an installation of Rational ClearCase LT on Windows

1. Start the Rational ClearCase LT launchpad program using one of the following methods:
 - From the Rational Software Architect launchpad program (see “Starting the launchpad program” on page 31), click **Rational ClearCase LT**.
 - Insert the first CD of Rational ClearCase LT. The launchpad program should start automatically. If it does not run, run `setup.exe` from the root of the first CD or disk image.
2. Read the release information if you have not done so.
3. Click **Install IBM Rational ClearCase LT**. The Rational ClearCase LT Setup Wizard opens.

Follow the instructions in the Setup Wizard to complete the installation.

Installing Rational ClearCase LT on Linux

Complete instructions on installing Rational ClearCase LT version 7.0 on a Linux workstation are available in the document *IBM Rational ClearCase, ClearCase MultiSite, and ClearCase LT Installation Guide, 7.0, Linux and UNIX*, which you can download at 600.

Configuring Rational ClearCase LT licensing

When you have Rational Software Architect installed on the same computer as Rational ClearCase LT, you do not need to configure Rational ClearCase LT licensing. However, if you install Rational ClearCase LT without Rational Software Architect, then you will need to configure ClearCase LT Licensing.

See the ClearCase LT *Installation Guide* for details about configuring licensing

Installing Crystal Reports Server XI Release 2

Crystal Reports Server XI Release 2 is a common architecture for data access, reporting, and information delivery. It is designed to integrate with existing data, Web, and application investments. Based on Crystal Reports, Crystal Reports Server XI Release 2 is an effective solution for scaling information to thousands of users.

Crystal Reports Server XI Release 2 is a centralized platform for managing and securely distributing complex and interactive reports via the Web or integrated into intranet, extranet, Internet, and corporate portal applications and is available for both Windows and Linux.

As an integrated suite for reporting, analysis, and information delivery, Crystal Reports Server XI Release 2 provides a solution for increasing end-user productivity and reducing administrative efforts.

Installing Crystal Reports Server XI Release 2 on Windows

When you perform this default installation, all the client and server components are installed on your workstation. A MySQL database for the Central Management Server (CMS) is automatically created. Default user and group accounts are created, and sample reports are published to your system. When the installation is complete, the server components are started as services on your workstation.

To install all the components of Crystal Reports Server XI Release 2 on Windows:

1. From the Rational Software Architect installation launchpad, click **Install Crystal Reports Server XI Release 2**. If you are installing from CD ROM, you will be prompted to insert the first Crystal Reports Server XI Release 2 for Windows installation disk into your CD ROM drive.
2. From the Rational Software Architect installation launchpad, click **Install Crystal Reports Server XI Release 2**.
3. In the Setup wizard, select a setup language and click **OK**. This is the language that the installation process uses, not the language that will be installed.
4. On the Welcome page, click **OK**.
5. On the License Agreement page, read the license agreement and, if you accept the terms and conditions, click **I accept the license agreement** and click **Next**.
6. On the Select Client or Server Installation page, click **Perform Server Installation**.

Note:

This option installs all required Crystal Reports Server components. The **Perform Client Installation** option only installs client tools onto a machine that you can use to administer your Crystal Reports Server environment remotely.

7. Follow the instructions in the Setup wizard and on the Directory Selection page, accept the default location (C:\Program Files\Business Objects\BusinessObjects Enterprise 11.5), click **Next**, and proceed to Step 9.
8. If you choose to install on a drive other than the default location, the Setup wizard asks you to select a drive for the installation of shared files that are also used by Business Objects products such as Crystal Reports. To install several Business Objects products on the same machine without installing files on the default system drive, first install Crystal Reports Server. When you subsequently install Crystal Reports, it will use the common file directory created by Crystal Reports Server.
9. On the Install Type page, click **New** and complete the following steps:
 - If you want to install the MySQL database as your CMS database, click **Install MySQL database server**, click **Next** and proceed to Step 10. This is the recommended installation.
 - If you want to use another database for the CMS, such as Oracle or Sybase, click **Use an existing database server** and click **Next**.

For information and instructions on how to use an existing database server, refer to the BusinessObjects Enterprise Installation Guide. This information can be found in the chapter called Installing BusinessObjects Enterprise on Windows under the section named New installation.

10. If you have chosen to install the MySQL database as your CMS database, complete the following steps:
 - a. Enter the port number.

- b. Enter and confirm the password that will be used by MySQL's root user account.
 - c. Accept the default user name to access the CMS database or enter a new user name to override the default name.
 - d. Enter and confirm the password that will be used to access the CMS database.
 - e. Click **Next**
11. On the Choose Web Component Adapter Type page, complete one of the following steps:
 - If you want to use the Java Web component adapter only and use your own Java application server, click **Java application server**, click **Use preinstalled Java application server**, clear the **IIS ASP.NET** check box, and click **Next**; then proceed to Step 13.
 - If you want to use the Java Web component adapter only and install Tomcat, click **Java application server**, click **Install Tomcat application server**, clear **IIS ASP.NET**, and click **Next**; then proceed to Step 12.
 - If you want to use the IIS ASP.NET Web component adapter only, clear the **Java application server** check box, select the **IIS ASP.NET** check box, from the **Choose website** list, accept the default or select the Web site on which to deploy the WAR file, and click **Next**; then proceed to Step 13.
 - If you want to use both the Java and IIS ASP.NET Web component adapters, select both **Java application server** and **IIS ASP.NET**, from the **Choose website** list, accept the default or select the Web site on which to deploy the WAR file, click either **Use preinstalled Java application server** or **Install Tomcat application server**, and click **Next**; then proceed to Step 12 or Step 13.
 12. If you have chosen to install Tomcat application server, accept the defaults or change the default installation location and configure the Connection port, Shutdown port, and Redirect port, and click **Next**.

Note:

If you are installing Crystal Reports Server on the same machine as a BusinessObjects Enterprise 6.x deployment, do not use the default port number 8080 that may already be in use by another deployment.

13. On the Start Installation page, click **Next**. The installation begins. During the installation process, you may be prompted to reboot the machine and register your product.
14. On the last page of the Setup wizard, clear **Launch BusinessObjects Administration Console** unless you want to publish your own reports to Crystal Reports Server immediately and click **Finish**.

Uninstalling Crystal Reports Server XI Release 2 on Windows

To uninstall Crystal Reports Server XI Release 2 on Windows:

1. Click **Start** → **Settings** → **Control Panel**.
2. In the Control Panel window, click **Add/Remove Programs**.
3. In the Add or Remove Programs window, select **Crystal Reports Server XI Release 2** and click **Remove**.

Installing Crystal Reports Server XI Release 2 on Linux

Important: You *cannot* install Crystal Reports Server if you have root privileges; you must be a non-root user in order to install.

To install Crystal Reports Server XI Release 2 on Linux:

1. Access the first Crystal Reports Server XI Release 2 for Linux installation disk:
 - Insert the first Crystal Reports Server XI Release 2 for Linux installation disk into a CD ROM drive.
 - If you are installing from an electronic image, navigate the disk directory corresponding to the first Crystal Reports Server XI Release 2 for Linux disk in the directory where you extracted the electronic image.
2. Open the xir2_crs_quickinstall_linux_en.pdf file, which you can find in the /docs/en subdirectory of the installation disk. This file contains complete instructions for installing Crystal Reports Server XI Release 2 on Linux. You will need to refer to the instructions in this file to prepare your system and complete the installation process. You should also review the "Installation" section of the release.pdf file, which is located in the root directory of the installation disk, prior to installing the product.
3. Review the Quick Installation Guide for Crystal Reports Server on Linux section of the PDF file and perform all necessary actions before proceeding with running the installation script.
4. Disable any antivirus software before installing the product.
5. Follow the Beginning Your Installation instructions in the PDF file to complete the installation process. It describes the procedure for a user installation.

Uninstalling Crystal Reports Server XI Release 2 on Linux

To uninstall Crystal Reports Server XI Release 2 on Linux, run the uninstall script that is in the installation directory of the software.

All the files that are installed during your original installation are deleted.

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