IBM Rational Programming Patterns
Version 9.6

Installation Guide

GC14-7413-10

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Note
Before using this information, be sure to read the general information under "Notices" on page 51.

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This edition applies to IBM Rational Programming Patterns V9.6 (program number 5725--H03) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. Introduction

The installation instructions guide you in installing, updating, and uninstalling Rational® Programming Patterns V9.6.

Rational Programming Patterns is a set of development tools that are built on the Eclipse platform (www.eclipse.org). You can think of the Eclipse platform as the framework and Rational Programming Patterns and other bundled offerings as the tool contributors.

Rational Programming Patterns is installed on the IBM® Rational Software Delivery Platform. This platform is a common development environment that contains the development workbench and other software components that are shared by multiple products.

Rational Programming Patterns is constituted of the following components:

- The migration procedures.
- An Eclipse client that is integrated with different products, depending on your environment: IBM Developer for z Systems™ (Rational Developer for z Systems) or Rational Developer for AIX® and Linux.

  The client is also always integrated with Rational Team Concert™.

  If you want to work on Batch Flow Charts and Screen Navigation Charts that come from the PacDesgin module of VisualAge® Pacbase, you must also install Rational Software Architect in the client.
- A web client that is integrated into the Rational Team Concert graphic web interface. It is available as a chargeable component. It can be used to analyze the applications on the server without updating them. It does not require any specific installation because the plugins that are used for its operation are included in the installation package of the Rational Programming Patterns server. Therefore, the installation instructions of the Rational Programming Patterns Eclipse client do not apply to the web client. The Rational Programming Patterns instances that are contained in a Rational Team Concert project area can be viewed from the Rational Programming Patterns web client with appropriate licenses only. Refer to “Specific licenses for the Rational Programming Patterns web client” on page 33.
- A server that is integrated with Jazz™ Team Server.

You can install Rational Programming Patterns V9.6 by updating version V9.5.1 or one of its fixpacks.

You can also complete a full installation of the new version.

Chapter 2. Rational Programming Patterns installation requirements

This section presents the installation requirements for VisualAge Pacbase, the Rational Programming Patterns Eclipse client, and the server.

Installation requirements for the migration procedures

The migration procedures can be run on data that comes from VisualAge Pacbase 3.5 V10 or higher.

The VisualAge Pacbase installation is documented in the VisualAge Pacbase installation guide specific to your platform.

The VisualAge Pacbase installation guides are shipped with the VisualAge Pacbase product. They are also available on the VisualAge Pacbase documentation site (section **The administrator's documentation**).

Important: The VisualAge Pacbase migration procedures are documented in the Rational Programming Patterns Knowledge Center, under the entry *Updating and migrating*. Expand *Migrating Pacbase data to Rational Team Concert*, then *Extracting and migrating Pacbase data*. The installation and use of the procedures according to the environment are explained in The Pacbase analysis and migration procedures.

Rational Programming Patterns Eclipse client installation requirements

You must verify the requirements to install the Eclipse client on System z® or System p, depending on your environment.

Installation requirements for a System z environment

To install the Rational Programming Patterns client in a System z environment, you must verify that your workstation meets the minimum hardware and software requirements for installing the client environment: IBM Developer for z Systems (Rational Developer for z Systems), Rational Team Concert, and Rational Programming Patterns. If you want to work on Batch Flow Charts and Screen Navigation Charts that come from the PacDesgin module of VisualAge Pacbase, you must also verify the installation requirements of Rational Software Architect.

Verify the prerequisites of each product from the search interface of the Detailed system requirements (http://publib.boulder.ibm.com/infocenter/prodguid/v1r0/clarity/softwareReqsForProduct.html). In this interface, enter the product name and click the search icon. Select the relevant product in the search results and select the values of the required fields. Then, submit the search.

Installation requirements for a System p environment

To install the Rational Programming Patterns client in a System p environment, you must verify that your workstation meets the minimum hardware and software requirements for installing the client environment: Rational Developer for AIX and Linux, Rational Team Concert, and Rational Programming Patterns. If you want to work on Batch Flow Charts and Screen Navigation Charts that come from the

PacDesgin module of VisualAge Pacbase, you must also verify the installation requirements of Rational Software Architect.

Verify the prerequisites of each product from the search interface of the Detailed system requirements (http://publib.boulder.ibm.com/infocenter/prodguid/v1r0/clarity/softwareReqsForProduct.html). In this interface, enter the product name and click the search icon. Select the relevant product in the search results and select the values of the required fields. Then, submit the search.

Installation requirements for the Rational Programming Patterns server

To install the Rational Programming Patterns server, you must verify that your workstation meets the minimum hardware and software requirements for installing Jazz Team Server and the Rational Programming Patterns server. To use IBM Developer for z Systems (Rational Developer for z Systems) specific functions, you can optionally install the IBM Developer for z Systems (Rational Developer for z Systems) server.

Important: See the important note on the Jazz Team Server version in "Installing the product required for the server" on page 13.

Verify the prerequisites of each product from the search interface of the Detailed system requirements (http://publib.boulder.ibm.com/infocenter/prodguid/v1r0/clarity/softwareReqsForProduct.html). In this interface, enter the product name and click the search icon. Select the relevant product in the search results and select the values of the required fields. Then, submit the search.

User privileges requirements

You must have a user ID that meets the following requirements before you can install Rational Programming Patterns:

- Your user ID must not contain double-byte characters.
- To install for all the users of the system, you must have an ID that belongs to the Administrators group. If you do not have Administrator privileges, you can install for the current user only.

Chapter 3. Planning to install the Rational Programming Patterns Eclipse client and server

Read this section before attempting to install any of the product features. Many problems can be avoided by planning and understanding the key aspects of the installation process before actually starting the installation.

IBM Installation Manager

IBM Installation Manager is a program that helps you install the Rational Programming Patterns product package on your workstation. It also helps you update, modify, and uninstall any package that you install. A package can be a product, a group of components, or a single component that is designed for Installation Manager to install.

IBM Installation Manager helps you keep track of what you have installed, determine what is available for you to install, and organize installation directories. It is installed on your system the first time you install a Rational Software Delivery Platform product.

Installing products from their launchpad is recommended because it automatically starts IBM Installation Manager. The necessary repository location information and the packages to be installed are automatically preselected. Moreover if the IBM Installation Manager version is not compatible with the version required to install the new packages, its update is automatically proposed.

IBM Installation Manager includes wizards that make it easy to maintain packages through their lifecycles:

- The **Install** wizard walks you through the installation process. You can install a package by accepting the defaults, or you can change the default settings to customize an installation. Before you install a package, you see a summary of your selections throughout the wizard. Using the wizard, you can install one or more packages at one time.
- The **Update** wizard searches for available updates to packages that you have installed. An update can be a released fix, a new feature, or a new version of the product. Details of the contents of the update are provided in the wizard. You can decide whether to apply an update.
- With the **Modify** wizard, you can change certain elements of a package that you have installed. During the first installation of the package, you select the features to install. If you require other features later, you can use the **Modify** wizard to add the features. You can also remove features.
- The **Manage Licenses** wizard helps you 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 the type of license to use for each package.
- The **Roll Back** wizard reverts to a previous version of a package.
- The **Uninstall** wizard removes a package from your computer. You can uninstall more than one package at a time.

For more information, see the Installation Manager documentation.

Upgrade and coexistence considerations

Before installing Rational Programming Patterns, you must install other products in the same package group. You must then be aware of the compatibility between the various products to obtain a consistent installation.

Important: You must also ensure that you installed the Pacbase version that corresponds to the Rational Programming Patterns version. A version incompatibility can create errors.

General 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 into an existing package group, or whether you want to create a package. IBM Installation Manager blocks the 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.

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, both the development and testing functionalities are available in your user interface. If you add a product with modeling tools, all of the products in the package group have the development, testing, and modeling functionality available.

Note: If you install several packages at the same time, they are all installed in the same package group.

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 is available in both products. If you uninstall the product with the greater functionality, the original product remains

Note: Each product installed into a unique location can be associated with only one package group. A product must be installed into multiple locations in order to be associated with multiple package groups.

Each package group is assigned a name automatically. However, you choose the installation directory for the package group.

When you create the package group by successfully installing a package, you cannot change the installation directory for the package group. The installation directory contains files and resources specific to the packages installed into that package group. Other resources in the packages that can potentially be shared by other package groups are placed in the shared resources directory.

Important: You can specify the shared resources directory only the first time you install a package. For best results, use your largest drive. You cannot change the directory location later unless you uninstall all packages.

Considerations about Rational Programming Patterns

When you install Rational Programming Patterns, you must indicate a package group for all the products of the client part and another package group for all the products of the server part.

You can install Rational Programming Patterns V9.6 by updating version V9.5.1 or one of its fixpacks.

You can also complete a full installation of the new version. You must then choose one of the following methods:

- Uninstall and reinstall the products in the same package groups.
- Keep the package groups that contain the previous versions of the products and create package groups to install the new versions of the products. Start working in the new installation. If everything works fine, you can remove the old installation. This method is recommended.

If your current Installation Manager version is too old to install Rational Programming Patterns and its required products, it will be automatically updated when you install one of the products from a launchpad.

The client part requires the installation of the following products in the same package group:

- IBM Developer for z Systems (Rational Developer for z Systems) for a System z environment,
- Rational Developer for AIX and Linux for a System p environment,
- Rational Team Concert,
- Rational Programming Patterns client,
- Rational Software Architect if you want to work on Batch Flow Charts and Screen Navigation Charts that come from the PacDesgin module of VisualAge Pacbase.

The server part requires the installation of the following products:

- For a Windows, AIX, Linux, or Linux for System z environment, install Jazz Team Server and Rational Programming Patterns server in a server package group.
- For a z/OS® environment, install Jazz Team Server and install the Rational Programming Patterns FMID.

  Note: You can optionally use the functions of the IBM Developer for z Systems (Rational Developer for z Systems) server. You must then install the Rational Developer for System z server with the SMP/E tool before you install Jazz Team Server in the same package group.

Installation methods for Rational Programming Patterns

Several installation methods are available.

You must consider the following questions to determine your installation method:

- What are the format and method by which you access your installation files?
- Are you installing onto your own workstation, or are making the installation files available to your enterprise?

- Are you installing with the Installation Manager GUI, or are you installing silently?
- Do you want to install a trial version before you buy the product?

The following installation methods are possible:

- Installing from a downloaded electronic image on your workstation,
- Installing from an electronic image on a shared drive,
- Installing from a repository on an HTTP server,
- Installing a trial version on your workstation.

Installing from a downloaded electronic image on your workstation

With this method, you download the installation files from IBM Passport Advantage® and you install Rational Programming Patterns on your own workstation.

Installing from an electronic image on a shared drive

With this method, you place the electronic image on a shared drive so that users in your company can access the Rational Programming Patterns installation files from a single location. It is also useful when you must install in silent mode on several user systems.

Installing from a repository on an HTTP server

With this method, you place the files of the IBM Rational Programming Patterns package, and possibly the associated products, on an HTTP or HTTPS web server with the IBM Packaging Utility. When they install, users indicate the URL of the web server that contains these package files to access them. The directory of the HTTP or HTTPS web server that contains the packages is named a repository.

For more information, see Chapter 12, “Appendix: IBM Packaging Utility,” on page 49.

Installing a trial version on your workstation

With this method, you download a free trial version of IBM Rational Programming Patterns with all its features for a period of 60 days. This version is available from DeveloperWorks at the following address: http://www.ibm.com/developerworks/downloads/r/rppz/.

Installing silently

If you install from an electronic image or a repository, you can run Installation Manager in silent mode.

You can then use a batch process to install, update, modify, and uninstall packages through scripts. If you are an administrator, it enables you to customize the installation on the developers' workstations.

A silent installation comprises the following main tasks:

1. If you are planning to install silently on multiple systems, copy the installation image to a location on a shared drive or server.

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

When you run Installation Manager in silent mode, its user interface is not available. So you use a response file instead to input the commands that are required to install the package. An `install.xml` sample response file is available in the `InstallerImage_win32` subdirectory of the client and in the `InstallerImage_system` subdirectory (where `system` is `aix`, `linux_s390`, `linux_x86`, or `win32`) of the server. You can use it as is or modify it to your own specifications.

For more information on how to work in silent mode, see the Installation Manager documentation.

Copying the installation image to a shared drive or server

If you are planning to install silently on multiple systems, you must copy the installation image to a location on a shared drive where other systems in your intranet can access it.

To copy the installation image from an electronic image to a shared location, take the following steps:

1. Extract each of the compressed files that you downloaded for Rational Programming Patterns and any bundled offerings you want to make available for silent installations to the shared location where you want to store the image. Alternatively, you can extract the compressed files on your local workstation and then copy the uncompressed files and directories to the shared location.
2. In the shared location, verify that you now have the following elements:
   - The Rational Programming Patterns installation files must be at the root of the shared directory.
   - A directory must also be created at the root of the shared directory for each bundled offering that you copied to your shared location.
   - Create the response file.
   - Perform the silent installations.

Alternatively, you can copy your installation image to a repository on an HTTP web server and install silently using the repository. To create a repository, you must use the IBM Packaging Utility. For more information, see Chapter 12, “Appendix: IBM Packaging Utility,” on page 49.

Chapter 4. Installing the required products

Follow the instructions indicated in this section to install VisualAge Pacbase and Rational Programming Patterns client and server.

Installing the required products for the Eclipse client

Follow the instructions provided in this section to install the Eclipse client on System z or System p, depending on your environment.

Installing for a System z client environment

To target a System z client environment only, you must install the IBM Developer for z Systems (Rational Developer for z Systems) client and then the Rational Team Concert client. You can also install the Rational Software Architect client.

Installing the IBM Developer for z Systems (Rational Developer for z Systems) client

Install the IBM Developer for z Systems (Rational Developer for z Systems) installation package. Do not clear any of the features that are selected by default on the **Features** page of Installation Manager.

Verify that the IBM Installation Manager page that displays the installation results shows: **The packages are installed**. There must not be any error or warning icon. Moreover the list of the installed packages must contain all the packages of the products that were selected for the installation.

Installing the Rational Team Concert client

You can install Rational Team Concert from its electronic image. But you can also install it as an optional feature to the IBM Developer for z Systems (Rational Developer for z Systems) client.

The Rational Team Concert client must be installed in the same package group as the IBM Developer for z Systems (Rational Developer for z Systems) client.

Note: The Rational Team Concert client version must be compatible with the version of Jazz Team Server and CCM Application, which is the Rational Team Concert server part. When you install the Rational Programming Patterns Eclipse client, you will have to select the Rational Team Concert extension according to this version.

Verify that the IBM Installation Manager page that displays the installation results shows: **The packages are installed**. There must not be any error or warning icon. Moreover the list of the installed packages must contain all the packages of the products that were selected for the installation.

Installing the Rational Software Architect client

Install the Rational Software Architect installation package. Do not clear any of the features that are selected by default on the **Features** page of Installation Manager.

The Rational Software Architect client must be installed in the same package group as the IBM Developer for z Systems (Rational Developer for z Systems) and Rational Team Concert clients.

Verify that the IBM Installation Manager page that displays the installation results shows: **The packages are installed**. There must not be any error or warning icon. Moreover the list of the installed packages must contain all the packages of the products that were selected for the installation.

Installing for a System p environment

To target a System p environment only, you must install Rational Developer for AIX and Linux and then the Rational Team Concert client. You can also install the Rational Software Architect client.

Installing Rational Developer for AIX and Linux

Install the Rational Developer for AIX and Linux installation package.

Verify that the IBM Installation Manager page that displays the installation results shows: **The packages are installed**. There must not be any error or warning icon. Moreover the list of the installed packages must contain all the packages of the products that were selected for the installation.

Installing the Rational Team Concert client

You can install Rational Team Concert from its electronic image.

The Rational Team Concert client must be installed in the same package group as the Rational Developer for AIX and Linux client.

Note: The Rational Team Concert client version must be compatible with the version of Jazz Team Server and CCM Application, which is the Rational Team Concert server part. When you install the Rational Programming Patterns Eclipse client, you will have to select the Rational Team Concert extension according to this version.

Verify that the IBM Installation Manager page that displays the installation results shows: **The packages are installed**. There must not be any error or warning icon. Moreover the list of the installed packages must contain all the packages of the products that were selected for the installation.

Installing the Rational Software Architect client

Install the Rational Software Architect installation package. Do not clear any of the features that are selected by default on the **Features** page of Installation Manager.

The Rational Software Architect client must be installed in the same package group as the Rational Developer for AIX and Linux and Rational Team Concert clients.

Verify that the IBM Installation Manager page that displays the installation results shows: **The packages are installed**. There must not be any error or warning icon. Moreover the list of the installed packages must contain all the packages of the products that were selected for the installation.

Installing the product required for the server

Before you install the Rational Programming Patterns server, you must install Jazz Team Server and CCM Application.

- If you install on Windows, AIX, Linux, or Linux for System z, the Jazz Team Server and CCM Application must be installed with Installation Manager.

  Important: If you install the Jazz Team Server and CCM Application in a version lower than 6.0.3 and later decide to migrate to version 6.0.3, you must refer to the Rational Team Concert help before you migrate. The migration must be carefully planned and must be validated in a test environment first.

  If you install Jazz Team Server and CCM Application 6.0.3 directly, you will have to run the **`repotools -addTables`** command after you install the Rational Programming Patterns server to trigger the server indexing. See the Rational Team Concert help for explanations on this command.

  Verify that the IBM Installation Manager page that displays the installation results shows: **The packages are installed**. There must not be any error or warning icon. Moreover the list of the installed packages must contain all the packages of the products that were selected for the installation.
- If you install on z/OS, the Jazz Team Server and CCM Application must be installed with SMP/E.

Note: Installing the Rational Developer for System z host components is not required for using the Rational Programming Patterns server. However, if you want to use IBM Developer for z Systems (Rational Developer for z Systems) specific functions, you can install the IBM Developer for z Systems (Rational Developer for z Systems) server.

Chapter 5. Installing Rational Programming Patterns

Follow the instructions provided in this section to install Rational Programming Patterns.

Installing the migration procedures

You must install and run the migration procedures to access the Pacbase data from Rational Programming Patterns.

Procedure

1. From the IBM Passport Advantage Web site, download the compressed installation file of the migration procedures. You must select the file that corresponds to your environment.
2. Extract the installation image from the compressed file that you downloaded.
3. Install the migration procedures according to the explanations that are specific to your environment. These explanations can be found in The Pacbase analysis and migration procedures in the Rational Programming Patterns Knowledge Center.

Installing the Rational Programming Patterns Eclipse client

After installing the products required for your target environment, you must install the Rational Programming Patterns Eclipse client on Windows 7 or Windows 8.1. You install it from its launchpad.

Before you begin

The Rational Programming Patterns client must be installed in the same package group as the products required for the client part, with the same type of rights (administrator or user).

To select the installation method that is best suited to your needs, see the information in "Installation methods for Rational Programming Patterns" on page 7.

You start installing in different ways, depending on the selected method:

- Installing from an electronic image on your workstation.
  1. Download the installation files from IBM Passport Advantage. Extract the installation image from the compressed files that you downloaded.
  2. To start installing, open the Rational Programming Patterns launchpad.

     You start the launchpad program by running the **launchpad.exe** command from the root of the extracted directory.
- Installing from an electronic image on a shared drive.

  Download the installation files from IBM Passport Advantage. Extract the installation image from the compressed files that you downloaded.

  To install interactively from the installation files on the shared drive, run the **launchpad.exe** command from the root of the extracted directory.

  You can also install in silent mode. For explanations, see the note in the "Installing silently" on page 8.

- Installing from a repository on an HTTP web server.

  This method assumes that the repository that contains the packages for IBM Rational Programming Patterns and any bundled offerings was created on the HTTP or HTTPS web server. For information about how to copy installation packages to a web server, see Chapter 12, "Appendix: IBM Packaging Utility," on page 49.

  To install the Rational Programming Patterns package from a repository to a web server, complete the following steps:

  1. Start IBM 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. Click **Add repository** and indicate the URL of the repository that contains the installation packages. The new or changed repository location is listed. If the repository is not accessible, an error icon is displayed in the **Accessible** column.
  4. Click **OK** to exit.
- Installing a trial version on your workstation.

  Download the installation files from IBM Developer at the following address: http://www.ibm.com/developerworks/downloads/r/rppz/. Extract the installation image from the compressed files that you downloaded.

  Proceed like for an installation from a repository. Indicate the directory that contains the extracted files of the installation image.

Procedure

1. From the Rational Programming Patterns launchpad, select **Install Rational Programming Patterns** to open Installation Manager.

   The repository location information is automatically configured. So you do not have to set it manually in the Installation Manager preferences.
2. The first page of the **Install Packages** wizard displays the Rational Programming Patterns package available for installation. Select it.
3. You might be prompted to update IBM Installation Manager to a newer version if one is available. If you click **Yes**, Installation Manager updates itself and informs you that it must be restarted to complete the update. Click **OK** to restart Installation Manager.
4. On the **Licenses** page, read and accept the license agreement for the selected package. Rational Programming Patterns will be installed with a trial license that expires in 60 days. You will need to activate the licensed version of the product to use it after the expiration date.
5. On the **Location** pages, the location that already contains the products required for the client part must be selected.
6. On the first **Features** page, select the languages that you want to install for this package group. On the next **Features** page, select the features that you want to install.

   Select the feature **PacDesign (only for an installation on top of RSA)** if you want to migrate the instances of the PacDesign Batch Flow Charts and Screen Navigation Charts to Rational Software Architect. If Rational Software Architect is not installed, the references of the selected features cannot be resolved and an error is displayed.

   You must also select one of the Rational Team Concert extensions: **RTC extension for RTC < 6.0.3** or **RTC extension for RTC >= 6.0.3**. You must not

select both extensions. If you select an extension that does not correspond to the installed Rational Team Concert version, the dependency controls detect the error and block the installation.

Note: The two extensions are differentiated because each is adapted to the corresponding version of Jazz Team Server and CCM Application, which is the server part of Rational Team Concert. Both extensions then contain Rational Programming Patterns plugins that are adapted to the Jazz Team Server and CCM Application version.

Click **Next**.

7. On the **Summary** page of Installation Manager, click **Install**.

Results

Verify that the IBM Installation Manager page that displays the installation results shows: **The packages are installed**. There must not be any error or warning icon. Moreover the list of the installed packages must contain all the packages of the products that were selected for the installation.

Installing the Rational Programming Patterns server

You can install the Rational Programming Patterns server on Windows, AIX, Linux, Linux for System z, or on z/OS.

Before you begin

Jazz Team Server must be already installed.

The Rational Programming Patterns server must be installed in the same package group as the Jazz Team Server with the same type of rights (administrator or user).

Installing the server on Windows, AIX, or Linux

You access the installation files of the server from its electronic image, or an HTTP or HTTPS server.

Procedure

1. Depending on the installation method you selected, you must complete one of the following actions:
   - Download the installation image from the IBM Passport Advantage website and extract all the compressed files. If you are an administrator, you can make them available on a shared drive.
   - Access a repository on an HTTP web server.

     For explanations, see the “Installation methods for Rational Programming Patterns” on page 7.
   - Download a trial version of the installation image from the DeveloperWorks website and extract all the compressed files.

   The extracted installation image contains the following elements:
   - A `docs` directory, with the relevant documentation.
   - A `distributed` directory that contains the following elements:
     – A `disk1` subdirectory, with the Rational Programming Patterns server repository.

- Four `InstallerImage_system` subdirectories, where `system` is `aix`, `linux_s390` (Linux for System z), `linux_x86` or `win32` (for Windows). These subdirectories contain the repository for Installation Manager and the executable files of the Rational Programming Patterns server, adapted to the operating system.

  Each of these directories also contains an `install.xml` sample response file for the installation in silent mode.
- For UNIX, the `installRPP_system_admin.sh` and `installRPP_system_user.sh` script files, where `system` is `aix`, `linux_s390` (Linux for System z) or `linux_x86`. Each of these scripts starts the installation of the Rational Programming Patterns server, according to the selected operating system. The installation is automatically carried out from Installation Manager, with administrator or user rights, with all the preferences and selections already entered for you.
- Two batch command files `installRPP_win32_admin.bat` and `installRPP_win32_user.bat`, which start the Rational Programming Patterns server installation on Windows. The installation is automatically carried out from Installation Manager, with administrator or user rights, with all the preferences and selections already entered for you.

2. To perform a standard installation, run one of the following files:
   - One of the script files for AIX, Linux, or Linux for System z (`installRPP_system_admin.sh` or `installRPP_system_user.sh`).
   - The `installRPP_win32_admin.bat` or `installRPP_win32_user.bat` file for Windows.

   To specify your own installation selections, install the server from one of the four subdirectories (`InstallerImage_system`). Open Installation Manager, enter the path to the Rational Programming Patterns server repository and select your preferences on all the Installation Manager pages.

   You must select the Rational Team Concert extension that corresponds to the installed version of Jazz Team Server and CCM Application: **RTC extension for RTC < 6.0.3** or **RTC extension for RTC >= 6.0.3**. You must not select both extensions. If you select an extension that does not correspond to the installed version, the installation will be incoherent.
3. If you install the server on the Jazz Team Server and CCM Application 6.0.3, you must run the **`repotools -addTables`** command to trigger the server indexing. See the Rational Team Concert help for explanations on this command.

Installing the server on z/OS

To install the Rational Programming Patterns V9.6 server on z/OS, you must install the HAKF960 FMID on the server that is already installed.

Procedure

1. Access the files that are required to install the Rational Programming Patterns server on z/OS. To do so, download its electronic image from the IBM Passport Advantage website and extract all the compressed files. If you are an administrator, you can make them available on a shared drive.

   Note: You can also download a trial version of the installation image from the DeveloperWorks website and extract all the compressed files.

   The extracted electronic image contains the following elements:
   - A `docs` directory, with the relevant documentation.

This directory contains the HAKF960.pdf installation guide (Program Directory). It contains all the instructions to install the Rational Programming Patterns server on z/OS, through SMP/E.

- A zos directory that contains a compressed file for the installation through SMP/E. This file contains the following installable parts of the HAKF960 FMID:
  - IBM.HAKF960.F1.BIN,
  - IBM.HAKF960.F2.BIN,
  - IBM.HAKF960.SMPMCS.

2. Follow the instructions of the Program Directory in the docs directory.
3. In z/OS, parametrize and run the BRPCPCCM JCL to copy the rpp-profile.ini file to the directory that will contain all the applications customized configuration files.

   The **BLZHOME**, **BLZCONF**, and **BLZWORK** parameters must be identical to those of the BLZCPCCM JCL.
4. If you install the server on the Jazz Team Server and CCM Application 6.0.3, you must run the **repotools -addTables** command to trigger the server indexing. See the Rational Team Concert help for explanations on this command.

Chapter 6. Post-installation tasks

The Pacbase facet of Rational Programming Patterns runs only with the default encoding of the workspace in the Software Delivery Platform. If the field **Text file encoding**, available from **Window** > **Preferences** > **General** > **Workspace**, contains another value than the default value **Cp1252**, you must change it. Any other value causes use problems.

Furthermore, make sure that you do not use Unicode characters when you work with Rational Programming Patterns because this type of encoding is not supported.

Integrating the Eclipse client and the server with Rational Team Concert

Rational Programming Patterns is now installed on top of IBM Rational Team Concert. You must configure Rational Team Concert to integrate Rational Programming Patterns with it.

About this task

The purpose of this integration is to prepare the building of indexes in the Rational Programming Patterns server. You must complete the following actions:

- From the Rational Team Concert web client, ensure that the user has the required permissions for the configuration.
- From the Rational Team Concert Eclipse client, create a project area (if it has not already been done).
- From the Rational Team Concert Eclipse client, create four language definitions and associate indexing scanners to them.
- From the Rational Team Concert Eclipse client, select the data streams that will be scanned.

For an optimum integration, you are advised to modify some default parameters.

Note: After successive installations or reinstallations, the server cache might be desynchronized with the actual server configuration. For example, the Rational Programming Patterns scanners might not be displayed. So, the language definitions that are related to Rational Programming Patterns cannot be correctly specified. You must then reset the cache.

1. Log in as an administrator to `https://[fully-qualified hostname]:9443/ccm/admin?internal`.
2. In the **Internal tools** entry, click **Provision status**. All the contributors to the Rational Team Concert server are displayed. If the Rational Programming Patterns plug-ins are displayed among these contributors, you must reset the cache.
3. To reset the cache, click **Reset server** that is located after **Provision status**.
4. Click **Request server reset**. The cache will then be reset when the server is started again.
5. Stop and start the server again. The server start takes longer than a standard start because the cache is reset.

Procedure

1. Create a user and assign permissions to this user.
   a. Start the Jazz Team Server and open its setup wizard from `https://[fully-qualified hostname]:9443/jts/setup`.

      Follow all the steps that are explained in the Rational Team Concert documentation Running the setup wizard
   b. Create a user, if it has not already been done.
   c. Assign this new user a **Developer for IBM Enterprise Platforms** Client Access License.
   d. Verify that the created user has all the repository permissions and the **Developer for IBM Enterprise Platforms** Client Access License.
2. Create a project area.
   a. Start Rational Programming Patterns.
   b. Open the **Work Items** perspective.
   c. In the **Team Artifacts** view, create a repository connection at the following address with the administrator user that is already created:

      `https://[fully-qualified hostname]:9443/ccm`
   d. Create a project area.

      Note: All the explanations about project areas can be found in the Rational solution for Collaborative Lifecycle Management documentation.
3. Verify the access permissions.

   As an administrator, you must verify that the user who is to create the language definitions for the Rational Programming Patterns artifacts has the appropriate access permissions.
   a. From the **Work Items** perspective of the Eclipse workspace, open the project area by right-clicking it and selecting **Open**.
   b. On the **Overview** tab of the project area, verify the role that is assigned to the user who is to create the language definitions.
   c. Open the **Process Configuration** tab. Expand **Project Configuration** in the **Configuration** tree and select **Permissions**. In the list of **Roles**, select the role of the user who is to create the language definitions. In the **Permitted actions** tree, verify that the lines **Language Definitions** and **Source Code Data** are selected.

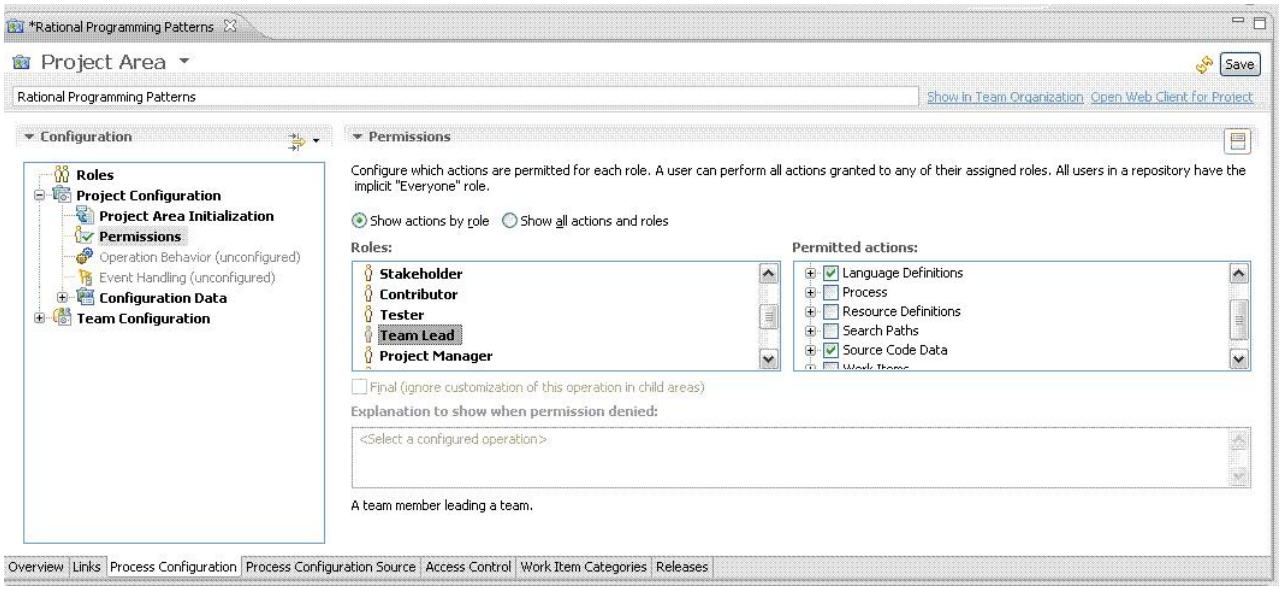

Figure 1. The **Process Configuration** *tab*

d. Save.

4. Create the language definitions and select the associated scanners.

   You can now create four language definitions:

   - `RPP Design`
   - `RPP Design Path`
   - `RPP Generated`
   - `RPP Macro`

   a. Expand the project area in the **Team Artifacts** view. Then, expand **Enterprise Extensions** > **System Definitions** > **z/OS**. Right-click **Language Definitions** and select **New Language Definition**. The **Language Definition** editor opens. It contains a **General** tab and a **Scanners** tab.

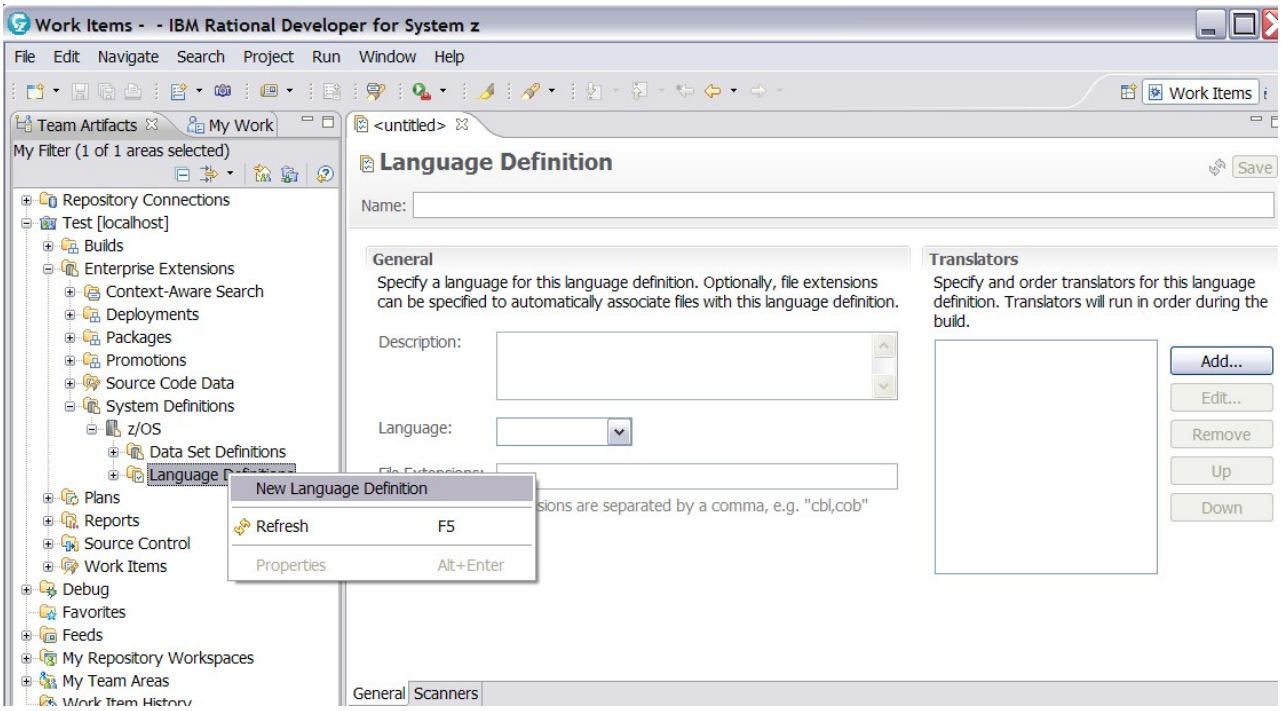

Figure 2. The **Language Definition** *editor*

b. Create the language definition for the design artifacts.
   1) In the **General** tab, complete the following steps:
      - Enter `RPP Design` in the **Name** field.
      - Enter an optional description, such as `RPP Design File Scanner`, in the **Description** field.
      - Select **COBOL** in the **Language** field.
      - Enter the following file extensions in the **File Extensions** field. Only these file extensions are used by Rational Programming Patterns. Wildcards cannot be used. Since all these file extensions must be indicated, you are advised to copy and paste the following lines:
        – If you use the entities of the Pacbase facet, copy the lines:

          ```
          dataaggregate,dataelement,dataunit,pacblockbase,pacdialog,pacscreen,
          pacdialogserver,pacserver,paclibrary,pacprogram,pacreport,pacinputaid,
          pactext,metaentity,userentity,metadataaggregate,metaentitytype,
          pacerrorlabel,paccopybook,pacvolume,pacfolder,pacdialogfolder,pacfolderview,
          pacdialogfolderview,paccommunicationmonitor,pacdialogcommunicationmonitor
          ```

          Attention: Up until version V9.1, the `pacmacro` extension was one of the design artifact extensions. A specific language definition is now dedicated to it. You must then remove it from the language definition for the design artifacts and create a language definition for the Macros.
        – If you use the entities of the COBOL facet, copy the following lines:

          ```
          metaentity,userentity,metadataaggregate,metaentitytype,
          copy,program,skeleton,micropatterncode,sourcecode
          ```
   2) In the **Scanners** tab, remove the default scanner and add the `RPP Design Scanner` for this language definition.
   3) Save.
c. Create the language definition for the design path artifacts.

1) Select **New Language Definition** again.
2) In the **General** tab, complete the following steps:
   - Enter `RPP Design Path` in the **Name** field.
   - Enter an optional description, such as `RPP DesignPath File Scanner`, in the **Description** field.
   - Select **COBOL** in the **Language** field.
   - Enter the following file extension in the **File Extensions** field:

     ```
     designpath
     ```

     Important: Only this file extension is used by Rational Programming Patterns. Wildcards cannot be used.
3) In the **Scanners** tab, remove the default scanner and add the `RPP DesignPath Scanner` for this language definition.
4) Save.

d. Create the language definition for the generated artifacts.
   - Select **New Language Definition** again.
   - In the **General** tab, complete the following steps:
     – Enter `RPP Generated` in the **Name** field.
     – Enter an optional description, such as `RPP Generated File Scanner`, in the **Description** field.
     – Select **COBOL** in the **Language** field.
     – Enter the following file extensions in the **File Extensions** field. Only these file extensions are used by Rational Programming Patterns. Wildcards cannot be used. Since all these file extensions must be indicated, you are advised to copy and paste the following lines:
       - If you use the entities of the Pacbase facet, copy the following line:

         ```
         cblpdp,bmspdp,mappdp,mfspdp,ddlpdp,txtpdp,cpypdp
         ```
       - If you use the entities of the COBOL facet, copy the following line:

         ```
         cblpdp,cpypdp
         ```

         Moreover, to trigger the analysis of the sources that are generated from the Source Code instances, you must also add the name of each extension, followed by `pdp`. The extension name is the value that is indicated in the **Source code generated file extension** in the **Definition** tab of the generic Skeleton that is referenced in the Source Code. If this value is not indicated, the extension name is the name of the generic Skeleton. For example, for the `txt` extension, you must indicate `txtpdp` for the scanner.
     – In the **Scanners** tab, remove the default scanner and add the `RPP Generated File Scanner` for this language definition.
     – Save.

e. Create the language definition for the Macros.
   - Select **New Language Definition** again.
   - In the **General** tab, complete the following steps:
     – Enter `RPP Macro` in the **Name** field.
     – Enter an optional description, such as `RPP Macro Scanner`, in the **Description** field.
     – Select **COBOL** in the **Language** field.
     – Enter the following file extension in the **File Extensions** field:

`pacmacro`

Important: Only this file extension is used by Rational Programming Patterns. Wildcards cannot be used.

- In the **Scanners** tab, remove the default scanner and add the `RPP Macro Scanner` for this language definition.
- Save.

5. Associate data streams with the language definitions.

   Specify which streams are to be scanned. In the **Team Artifacts** view, under **Enterprise Extensions**, right-click **Source Code Data**. Then, click **Select streams for scanning**. Specify the stream.

   If you cannot see any stream, you must create one before you select it. Follow the instructions in the Rational Team Concert documentation.

   With Rational Team Concert V6.0.1 and later, you can configure the source code data scanning for the stream. To know how to do it, see the explanations in the Rational Team Concert documentation: Creating a scan configuration for a stream.

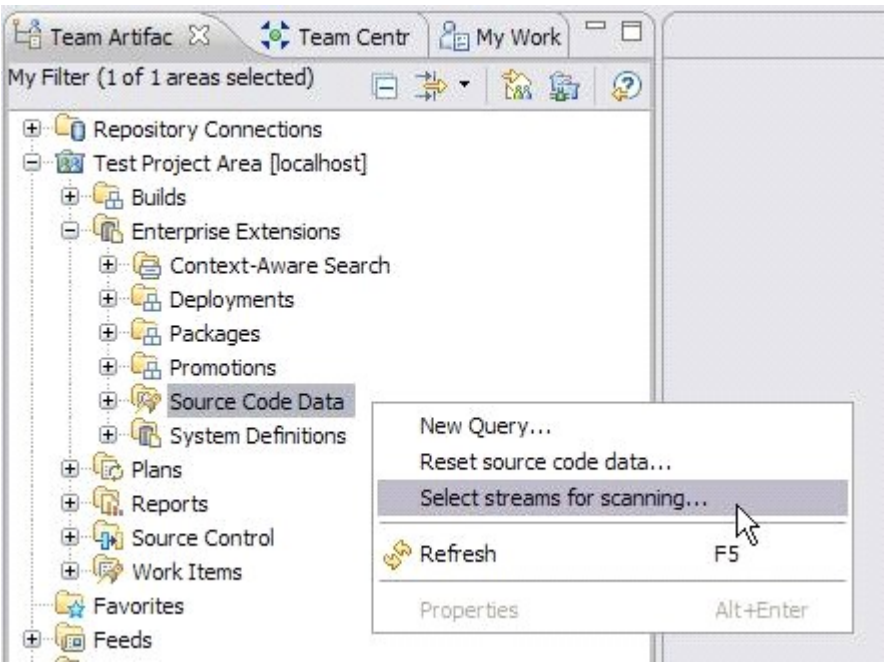

Figure 3. How to access the stream selection wizard

6. If the Rational Programming Patterns server is installed for the first time on Rational Team Concert V6.0.3 or higher, you must run the **`repotools-ccm -addTables`** Rational Team Concert command to index the server content. See the Rational Team Concert help for explanations on this command.
7. Modify some parameters.
   - Memory parameters of the client workstation:
     - `eclipse.ini`.

       You must modify the memory parameter of the Software Delivery Platform. Its maximum value varies according to the operating system and the memory available. You must then find the maximum value for your configuration.

To do so, edit the `eclipse.ini` file that is located directly under the root of your Software Delivery Platform.

The Java™ heap size is set to 1024 by default (in **`-Xmx1024m`**). You can increase this value to adapt it to your configuration.

Note: For an installation in 32-bit mode, the maximum value is 1.5 gigabytes.

– `scm.ini`.

The migration of data from Pacbase to Rational Programming Patterns uses the scmtools to save the migrated data in Rational Team Concert

You must modify the `scm.ini` file like the `eclipse.ini` file.

The `scm.ini` file is in `...\scmtools\eclipse`. The Java heap size is set to 512 by default (in **`-Xmx512m`**).

- Memory parameter of the server:

  You can adapt the `server.startup.bat` file that is in the `...\server` directory. In a 64-bit environment, and if the server allows it, you can modify the line `set JAVA_OPTS=%JAVA_OPTS% -Xmx4G` to increase the maximum memory in use to `8G`.

- Properties of the Rational Team Concert server:
  – No creation of duplicate components.

  By default, the component names are not unique in the Rational Team Concert repository. To avoid inconsistencies, an administrator is then advised to prevent users from creating components whose names are not unique.

  a. Log in as an administrator to `https://[fully-qualified hostname]:9443/ccm/admin`.
  b. In the **Configuration** entry, click **Advanced properties**.
  c. Scroll the properties down to the **SCM** category. Scroll the category down to **com.ibm.team.scm.service.internal.tasks.InternalScmService**.
  d. Find the property **Encourage component names to be unique**.
  e. Click its current value (**false** by default) and change it to **true**.
  f. Click **Save** at the beginning of the properties page.

  – Maximum number of files in source code data resource.

  With this modification, you avoid a too large memory consumption.

  a. Log in as an administrator to `https://[fully-qualified hostname]:9443/ccm/admin`.
  b. In the **Configuration** entry, click **Advanced properties**.
  c. Scroll the properties down to the **Source code data collection** category. This category contains the line **com.ibm.team.enterprise.internal.metadata.collection.service.MetadataCollectionService**.
  d. Change the value of the property **Max. number of files in source code data resource**. Click its current value and enter `100` instead.

- DB2® parameter:

  To run Rational Team Concert with a DB2 database, you can see the jazz.net site for information about the DB2 tuning. To import large DB2 databases, you must increase the following values:

```
db2 UPDATE DB CFG FOR CCM using LOGPRIMARY 100
db2 UPDATE DB CFG FOR CCM using LOGSECOND 100
```

where 100 is the increased value. To see the values, use the following command:

```
db2 GET DB CFG FOR sample |grep '(LOG[FPS]'
```

You obtain the following values:

```
 Size of journal files (4 Kb)      (LOGFILSIZ) = 1000
 Number of primary journal files   (LOGPRIMARY) = 3
 Number of secondary journal files (LOGSECOND)  = 2
```

Results

The configuration steps are now finished.

When you deliver a project that contains Rational Programming Patterns artifacts, the artifacts will be indexed after the indexing process has been manually or automatically activated. You will then be able to run searches on the server repository.

Managing a Rational Programming Patterns local workspace

You are strongly advised against reusing a local workspace that was created with a previous version of the product. However, running a new migration from Pacbase is not necessary.

You are advised to start from an empty local workspace and to load the content of the repository workspace into it. You can reuse the repository workspace that was used before. The metadata will then be correctly reset for Rational Programming Patterns and its required products.

Even if it is not advised, reusing a local workspace remains possible. If updating the local workspace is required in a new Rational Programming Patterns version, then a migration process for the existing local workspace will be provided as far as possible. This process might be simple, that is to say an individual migration upon the opening of an editor, or the migration of an entire workspace in a command-line mode. In any case, this process will be documented with the version.

To fully benefit from the evolutions of this new version, you are advised to reindex the content of the existing local workspace. If you are an administrator, you are also advised to reindex the content of the Rational Team Concert server.

- To reindex the content of an existing local workspace, open the **Pattern Driven Programming** perspective and the **Design Explorer** view. Right-click each location and select **Rebuild Local Workspace**. Then, select **Rebuild the mapping between the designs and the generated files**.
- To reindex the content of the Rational Team Concert server, open the **Work Items** perspective and the **Team Artifacts** view. Expand each project area and expand **Enterprise Extensions**. Right-click **Source Code Data** and select **Reset Source Code Data**.

Accessing the help

The help from the Rational Programming Patterns Eclipse client or server is the remote help, which requires an Internet connection. With this remote help, you always have the latest content available from within your product. After you start the product, you can also install the help locally.

By default, Rational Programming Patterns is configured to access the remote help from the IBM Knowledge Center at the following address:

`http://www.ibm.com/support/knowledgecenter/SSKPEG_9.6.0`

When you install, you cannot select the way that the help is accessed. However, you can modify it later at any moment.

For more information about installing and configuring help, see the section Configuring help content in the *Using the help* entry of the IBM Knowledge Center.

To install the help content locally, see one of the following topics:

- To install the help content on the workstation, see Installing help on your computer.
- To install the help content on an intranet server, see Installing help on an intranet server.

Note: The help cannot be accessed from the Rational Programming Patterns web client. However, you can refer to the help from the Rational Programming Patterns Knowledge Center.

Managing licenses

Licensing is administered with the **Manage Licenses** wizard in IBM Installation Manager. This wizard displays license information and helps you configure the licenses for each of your installed packages.

Note: The required licenses for the web client is explained in "Specific licenses for the Rational Programming Patterns web client" on page 33.

The license that is provided with Rational Programming Patterns expires 60 days after installation. You must activate Rational Programming Patterns to use it after the expiration date.

Using the **Manage Licenses** wizard, you can upgrade the trial version to a licensed version by importing an 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 about the Rational Programming Patterns licenses, see the Rational licensing support page at the following address:

`http://www-306.ibm.com/software/rational/support/licensing/`

License types

You can buy different types of licenses.

Authorized user license

This license enables 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.

Floating license

This license is 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 can use the product at any 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 user requests for access to the license keys. It grants access to the number of concurrent users that matches the number of licenses that the organization purchased.

Token license

The token-based license model means that you can buy some token licenses.

Token-based licenses can be used with floating licenses only. They cannot be used for authorized user license

License enablement

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

Licenses are enabled in the following two ways:

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

Product activation kits contain permanent or term license keys. You purchase the activation kit, download the activation kit `.zip` file to your local workstation, and then import the activation kit `.jar` file to enable the license. Use IBM Installation Manager to import the activation kit to your product.

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

Importing a product activation kit

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

About this task

You must first purchase an activation kit. Download the activation kit from IBM Passport Advantage to an accessible workstation. The activation kit is packaged as a Java archive (`.jar`) file. The `.jar` file contains the permanent license key and must be imported to activate your product.

Procedure

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

3. Select the **Rational Programming Patterns** package and click **Import Activation Kit**.
4. Click **Next**. Details for the selected package are shown, including the current license type and the version range of the license.
5. Download the 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 installation directory of the activation kit, the product that the new license applies to, and version information.
7. Click **Finish**.

Results

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

Activating floating licenses

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

About this task

Before you activate floating license enforcement, you must obtain the license server connection information from your administrator.

Procedure

1. Start IBM Installation Manager.
2. On the main page, click **Manage Licenses**
3. Select the appropriate Rational Programming Patterns package and click **Configure Floating license support**.
4. Click **Next**
5. On the **Licenses** page, accept the license agreement for the selected package
6. On the **Floating License Support** page, select the **Enable Floating license enforcement**.
7. Configure one or more license server connections by following these steps:
   a. Click an empty field in the **Servers** table or click **Add**.
   b. If your administrator provided you with information for a redundant server environment, click **Redundant Server**. Fields for the primary, secondary, and tertiary server names and ports are displayed.
   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 **Test Connection** to confirm that the connection information is correct and that the server is available.
   g. Click **OK**.
8. Click **Next**.

9. (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.
10. Click **Finish**.

Results

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

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 more product licenses for team members.

Procedure

1. Determine the type of license you want to purchase
2. Go to ibm.com® or contact your IBM marketing 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, go to Passport Advantage and follow the instructions there for downloading your product activation kit file. After you download the activation kit, you must import the product activation `.jar` file with Installation Manager.
   - If you purchase floating licenses, connect to the IBM Rational License Key Center. An IBM registration is required. 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 you import the activation kit, you can switch from a floating to a permanent license type if you use work offline for long periods.

   To import the activation kit or enable floating license support for your product, use the **Manage Licenses** wizard in IBM Installation Manager.

Installing and configuring licenses in silent mode

You can import product licenses and configure floating license support silently, in the same way you can install packages silently.

You must generate a response file to be used by IBM Installation Manager to configure your licenses.

When you record the response file, use the **Manage Licenses** wizard to import an activation kit or configure floating license support before you exit Installation Manager. The information necessary for performing these tasks silently are written in the response file.

For information about silent installation, see "Installing silently" on page 8.

Viewing license information

From IBM Installation Manager, you can review the license information of your installed packages, including the license types and their expiration dates.

Procedure

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

Specific licenses for the Rational Programming Patterns web client

The Rational Programming Patterns instances that are contained in a Rational Team Concert project area can be seen through the Rational Programming Patterns web client only if the user has the appropriate licenses. The **RPP** tab is included in the menu bar of the Rational Team Concert web client only if these licenses are active.

A Rational Programming Patterns Web UI license must be assigned to each user who wants to access the Rational Programming Patterns web interface. A Rational Team Concert license higher than or equal to the contributor license is also required.

To manage these licenses, you must log in to the Jazz Team Server Administration page. Follow the explanations in Managing licenses in the Rational Team Concert.

Then, you just need a web browser.

For explanations about how to use the web client, see The web client in the Rational Programming Patterns Knowledge Center.

Chapter 7. Starting the Rational Programming Patterns Eclipse client

You can start the Rational Programming Patterns Eclipse client from the Windows desktop environment or the command-line interface.

About this task

To start Rational Programming Patterns from the Windows **Start** menu, click **Start** > **All Programs** > **IBM Software Delivery Platform** > **IBM Rational Programming Patterns**. You can then create a shortcut on your desktop to easily start Rational Programming Patterns.

To start Rational Programming Patterns from a command line, type

```
<product_inst_dir>eclipse.exe -product com.ibm.pdp.rpp.product.ide
```

The **Pattern Driven Programming** perspective is automatically added to your workspace and it becomes the default perspective. The PDP editors also become the default editors.

Chapter 8. Running Rational Programming Patterns command lines on AIX

Rational Programming Patterns cannot be installed on AIX. However, a package is standardly supplied with the Rational Programming Patterns client part to run some commands on this operating system.

About this task

The package contains the following Rational Programming Patterns commands:

- **--refresh** to refresh the workspace,
- **--daemon** to start and stop the daemon,
- **--commands** to run a list of commands,
- **--help** to display the help on a specific command.

Procedure

1. Decompress the file that contains the `.sh` commands. This file is available from the installation directory of your Rational Software Delivery Platform, under `rpp/resources`.

   Choose the file that is adapted to your environment:

   - `rpp-batch-product-aix.gtk.ppc.zip` for a 32-bit environment
   - `rpp-batch-product-aix.gtk.ppc64.zip` for a 64-bit environment
2. Verify that you have the authorization to run the `rpp.sh` and `lrpp.sh` commands by entering the following command on the AIX machine:

   ```
   chmod +x *.sh
   ```
3. Run the `.sh` commands on the AIX machine.

Results

In the same way as with the `rpp.bat` command for Windows, you can create your own commands by using the API and extension points that are provided. For explanations, see User command lines.

You can also use the MAF API. For explanations, see Navigation in the models: MAF.

Create your plug-in in the Rational Programming Patterns graphical environment on Windows. Then, you simply put your packaged plug-in in the `plugins` directory where you decompressed the package for AIX.

Chapter 9. Testing the installation

Before you can work with the new products, you must ensure that the installation was successful.

Procedure

1. At the end of each product installation, you must ensure that no error has occurred. This verification step is indicated in this document for each installation.
2. Verify that all the products of the client part are installed in the same package group and that all the products of the server part are installed in the same package group (different from the package group of the client part).

   To do so, start IBM Installation Manager by selecting **Start** > **All programs** > **IBM Installation Manager** > **View installed packages**. You must see the package group that contains Rational Programming Patterns client. Verify that this group also contains the packages of the required products.

   Do the same for the server part.
3. Start Rational Programming Patterns. The **Pattern Driven Programming** perspective is automatically displayed.
   a. From the **Design Explorer** view, create a location (similar to a VisualAge Pacbase database). Right-click and select **New** > **Location**. Name this location and click **Finish**.
   b. Create a Library. It contains the generation parameters of each instance.
      1) Right-click the location and select **New** > **Library**.
      2) Enter the following information in the Library creation wizard:
         - Indicate a project name.
         - Leave the package to blank.
         - Enter the Library name on 3 characters.
         - Enter the Library label.
      3) Click **Finish**.
   c. Create a Data Element.
      1) Right-click the location and select **New** > **Data Element**.
      2) Enter the following information in the Data Element creation wizard:
         - Leave the default project. This project is the project where you created the Library.
         - Leave the package to blank.
         - Enter the Data Element name on 6 characters maximum.
         - Leave the **Parent Data Element** to blank.
         - Enter the Data Element format (X for example).
         - Click **Browse** in the **Generation parameters** field. Select the created Library.
         - Enter the Data Element label.
      3) Click **Finish**.
   d. Create a Program and test its generation.
      1) To create a Program, follow these steps:
         a) Right-click the location and select **New** > **Program**.

b) Enter the following information in the Program creation wizard:
   - Leave the default project. This project is the project where you created the Library.
   - Leave the package to blank.
   - Enter the Program name on 6 characters maximum.
   - Click **Browse** in the **Generation parameters** field. Select the created Library.
   - Enter the Program label.
   - Verify that the option **Open editor on finish** is selected.
   - Click **Finish**.

2) In the Program editor that opens automatically, specify the type of code to generate in the following way:
   a) Click the **Definition** tab.
   b) In the field **Type of COBOL code**, select **3: UNIX, WINDOWS**.
   c) Save the modification with Ctrl + S.
3) To test the generation of the Program, follow these steps:
   - Expand the **Program** line that is nested under the location in the **Design Explorer** view.
   - Right-click the new Program. Select **Generate** > **Program generation**.

     The generation starts and a progress bar is displayed.

     Important: If an error message indicates that `Msvcr71.dll` is not in the **`PATH`**, you must install this `dll`. It corresponds to the Microsoft® C runtime library (CRT). You install it in two ways, depending on the products that are installed in your Software Delivery Platform:
   - If Rational Developer for System z V9.1 or one of its fix packs is installed, copy `Msvcr71.dll` from `...\SDPShared\plugins\com.ibm.etools.cobol.win32*\importer\cobol` (where * replaces all the characters of the version number). Then, paste it to the `rpp\BIN` folder of your Software Delivery Platform.
   - With IBM Developer for z Systems (Rational Developer for z Systems) V9.5 or higher, or with Rational Developer for AIX and Linux, install `Msvcr71.dll` from the Microsoft® .NET Framework Version 1.1 Redistributable Package site (https://www.microsoft.com/en-US/download/details.aspx?id=26). It is automatically installed in `C:\Windows\Microsoft.NET\Framework\v1.1.4322`. Then, copy it and paste it to the `rpp\BIN` folder of your Software Delivery Platform.

4. Create a connection to the Rational Team Concert server that will store all the artifacts of your applications. These steps are explained in "Integrating the Eclipse client and the server with Rational Team Concert" on page 21.
   a. Start Jazz Team Server.
   b. Create a repository connection from the **Team Artifacts** view of the **Work Items** perspective.
   c. Connect to the project area created upon the integration.
   d. From the project area, verify that four language definitions were created upon the integration. Expand **Enterprise Extensions** > **System Definitions** > **z/OS** > **Language Definitions**. Each of these new language definitions must be exclusively associated with one of the following scanners:
      - `RPP Design Scanner`

- `RPP DesignPath Scanner`
- `RPP Generated File Scanner`
- `RPP Macro Scanner`

5. In the project area, create a stream on the server by right-clicking **Source Code Data** and by selecting **New** > **Stream**. Save.
6. Create a repository workspace from this stream by selecting **New** > **Repository workspace**. You can optionally modify the default name. Then, click **Finish**.
7. Share the project in which you created the Library and the Data Element.
   a. In the **Design Explorer** view of the **Pattern Driven Programming** perspective, right-click the project and select **Team** > **Share project**.
   b. Select the repository type (**Jazz Source Control**) and click **Next**.
   c. Select the repository workspace and create a component by clicking **New component**. Its name usually corresponds to the Library name on 3 characters.
   d. Select the component.
   e. Share the project by clicking **Finish**.
8. Upload the new Library and Data Element to the Rational Team Concert server.
   a. Open the **Pending changes** view.
   b. Expand the component line and expand the **Outgoing** > **Share projects** line. The two new instances must be displayed under the project indicated in their creation wizards.
   c. Select the line **Share projects**. Right-click and select **Deliver**. The changes are then uploaded to the server.
9. Verify that the upload completed successfully and that the two instances are now on the server.

   In the **Team Artifacts** view of the **Work Items** perspective, expand your project area. Verify that the component is in the stream by expanding **Source control**. Display the repository files by right-clicking the component and selecting **Show** > **Repository files**. The Library and the Data Element must be displayed in the **Repository files** view.
10. Verify that the server indexing that is processed by the Rational Programming Patterns scanners is active.
    a. In the **Team Artifacts** view of the **Work Items** perspective, start an incremental update of the indexes. Expand **Enterprise Extensions** > **Source code data**. Right-click and select **Update Source code data**.
    b. Start a server search on the Rational Programming Patterns artifacts to extract the two instances that were previously uploaded to the server.

Chapter 10. Updating Rational Programming Patterns

IBM periodically provides updates for Rational Programming Patterns. So the latest updates can be installed as soon as they are available. You can access these updates from the IBM update server or from a compressed file that you download from Fix Central. To update the Rational Programming Patterns server that is installed on z/OS, you must apply the PTF that is available with the fix.

Updating from the IBM update server

With the package updating function of IBM Installation Manager, you can identify and install the updates for the Rational products that are installed on your workstation. You must install with the same Windows account that originally installed the IBM Rational Programming Patterns product.

Before you begin

By default, an Internet access is required to install updates unless your repository preferences point to a local or network update repository to which your system has access.

Each installed package integrates the URL of its IBM update repository by default. To make IBM Installation Manager search for the packages installed in the IBM update repositories, the option **Search service repositories during installation and updates** must be selected in the repositories preferences page. It is selected by default.

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

Procedure

1. On the **Start** page of Installation Manager, click **Update**. The update wizard opens.
2. If a new release or an update of IBM Installation Manager is found, you must continue with the installation of the new release or update. Follow the instructions in the wizard to complete the installation or update of Installation Manager
3. On the **Update packages** page, select the package group that contains the version of the Rational Programming Patterns to be updated. Click **Next**.

   IBM Installation Manager searches for updates in its repositories and the predefined update sites for Rational Programming Patterns. A progress indicator is then displayed.
4. If updates are found, they are displayed in the **Updates** list on the **Update Packages** page below their corresponding package. Only the recommended updates are displayed by default. Click **Show all** to display all updates found for the available packages.
   - To learn more about an update, click the update and review its description under **Details**.

- If more information about the update is available, a **More info** link is 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 **IBM Rational Programming Patterns** and its new version. Select any other required or optional updates from the list. You cannot select any of the updates that are already installed.

   Note: You can click **Select Recommended** to restore the default selections. Updates that have a dependency relationship are automatically selected and cleared together
6. Click **Next**.
7. Read the license agreements for the selected updates. If you agree to their terms, click **I accept the terms of the license agreements**. Click **Next**.

   Rational Programming Patterns will be installed with a trial license that expires in 60 days. You will need to activate the licensed version of the product to use it after the expiration date.
8. Select the features to be updated.

   Select the feature **PacDesign (only for an installation on top of RSA)** if you want to migrate the instances of the PacDesign Batch Flow Charts and Screen Navigation Charts to Rational Software Architect. If Rational Software Architect is not installed, the references of the selected features cannot be resolved and an error is displayed.

   You must also select one of the Rational Team Concert extensions: **RTC extension for RTC < 6.0.3** or **RTC extension for RTC >= 6.0.3**. You must not select both extensions. If you select an extension that does not correspond to the installed Rational Team Concert version, the dependency controls detect the error and block the installation.

   Note: The two extensions are differentiated because each is adapted to the corresponding version of Jazz Team Server and CCM Application, which is the server part of Rational Team Concert. Both extensions then contain Rational Programming Patterns plugins that are adapted to the Jazz Team Server and CCM Application version.

   Click **Next**.
9. Review your selections on the **Summary** page.
   - If you want to change the choices you made on previous pages, click **Back**, and make your changes
   - When you are satisfied, click **Update** to download and install the updates. A progress indicator shows the percentage of the installation completed.
10. Click **Finish** to close the wizard.

Results

Verify that the IBM Installation Manager page that displays the installation results shows: **The packages are installed**. There must not be any error or warning icon. Moreover the list of the installed packages must contain all the packages of the products that were selected for the installation.

Updating from a compressed file

Ideally, this update should be installed directly from the IBM update server. However, you can also download a compressed file that contains the update.

About this task

You can select this method in the following cases

- You have a slow or unstable Internet connection and want to use a download manager that can resume the download.
- You have difficulty accessing the live IBM update servers from behind a firewall.
- You prefer to download the update and install it later.

Procedure

1. Connect to the IBM Fix Central site.
   a. Select the **Rational** product group, the **Rational Programming Patterns** product, its version, and the platform. Click **Next**.
   b. Select **Show fixes that get me to this version** and click **Next**.
   c. Select **IBM Rational Programming Patterns** followed by the version and click **Next**.
   d. Sign in.
   e. Select your download option and click **Next**.
   f. Click **Download now**.
2. Extract the content of this file to a folder on your system.
3. Start IBM Installation Manager by selecting, by default, **Start** > **All Programs** > **IBM Installation Manager** > **IBM Installation Manager**.
4. From the menu bar, select **File** > **Preferences** to specify the location of the extracted file.
5. On the **Repositories** page, click **Add repository**. Browse to the extraction directory. This directory contains subdirectories. Expand the subdirectory that corresponds to the client or server installation and select **diskTag.inf**. Click **OK**.
6. Click **Test connections** to ensure that the new repository can be found.
7. Click **OK**.

What to do next

The local repository is now set. Follow the procedure that is described in "Updating from the IBM update server" on page 43.

Updating the server on z/OS

To update the Rational Programming Patterns server that is installed on z/OS, you must apply the PTF that is available with the fix.

Procedure

1. Allocate host data sets for the fix

   A sequential data set must be allocated on z/OS to receive the fix that you will upload from your workstation. You can do it by submitting the job below. Add a job card and modify the parameters to meet requirements of your site before you submit it.

   Note: The following code contains the generic values HXXXXXX and UXXXXXX. You must replace them with the actual values that are available on the support website

```
//ALLOC    EXEC PGM=IEFBR14
//*
//UXXXXXX    DD DSN=hlq.IBM.HXXXXXX.UXXXXXX,
```

```
//            DISP=(NEW,CATLG,DELETE),
//            DSORG=PS,
//            RECFM=FB,
//            LRECL=80,
//            UNIT=SYSALLDA,
//*            VOL=SER=volser,
//*            BLKSIZE=6160,
//            SPACE=(TRK,(103,20))
//*
```

2. Upload the fix from your workstation to z/OS

   Upload the file in binary format from your workstation to the z/OS data set. On a Windows system, you can use FTP from a command line to upload the file. The table shows the commands that are entered by the user, and the values that are assumed.

User enters:	**Values**
`mvsaddr`	TCP/IP address of the z/OS system
`tsouid`	TSO user ID
`tsopw`	TSO password
`d:`	Drive that contains the fix files
`hlq`	High-level qualifier that you used for the data set that you allocated in the job above

```
C:\>ftp mvsaddr
Connected to mvsaddr.
220-FTPD1 IBM FTP CS %version% at mvsaddr, %time% on %date%.
220 Connection will close if idle for more than 60 minutes.

User (mvsaddr:(none)): tsouid
331 Send password please.

Password: tsopw
230 tsouid is logged on.  Working directory is "tsouid.".

ftp> cd ..
250 "" is the working directory name prefix.

ftp> cd hlq
250 "hlq." is the working directory name prefix.

ftp> binary
200 Representation type is Image

ftp> put d:\IBM.HXXXXXX.UXXXXXX
200 Port request OK.
125 Storing data set hlq.IBM.HXXXXXX.UXXXXXX
250 Transfer completed successfully
5744800 bytes sent in 0.28 seconds

ftp> quit
221 Quit command received. Goodbye.
```

3. Perform SMP/E `RECEIVE` and `APPLY` for the fix
4. Parameterize and run the `BRPCPCCM` JCL that is supplied in `hlq.IBM.HXXXXXX.F1` to copy the `rpp-profile.ini` file into `BLZCONF`.

   The **`BLZHOME`**, **`BLZCONF`**, and **`BLZWORK`** parameters must be identical to those of the `BLZCPCCM` JCL.

Chapter 11. Uninstalling Rational Programming Patterns

The Rational Programming Patterns installation process does not automatically uninstall the previous versions of the product.

About this task

The **Uninstall** option of IBM Installation Manager uninstalls packages that were previously installed with IBM Installation Manager.

To uninstall packages on Windows, you must connect with the user account that installed the product.

You can uninstall Rational Programming Patterns without uninstalling the other products.

However, if you want to uninstall IBM Developer for z Systems (Rational Developer for z Systems) or Rational Developer for AIX and Linux, you must also uninstall Rational Team Concert and Rational Programming Patterns.

Procedure

1. Close all the programs that you installed with Installation Manager.
2. From the start page of Installation Manager, click **Uninstall**.
3. On the **Uninstall Packages** page, select the packages that you want to uninstall. Click **Next**.
4. On the **Summary** page, review the list of the packages that will be uninstalled and then click **Uninstall**.
5. The **Complete** page is displayed after the uninstallation finishes.
6. Click **Finish** to exit.

Chapter 12. Appendix: IBM Packaging Utility

You can use the IBM Packaging Utility software to copy packages to a repository that can be placed on a web server available over HTTP or HTTPS. It is useful if you have different offerings or service updates you want to place in a single repository in addition to Rational Programming Patterns. You can use this repository to perform interactive or silent installations.

You can use this utility to perform the following tasks:

- Generate a new repository for packages.
- Copy packages to a new repository. You can copy multiple packages into a single repository; you then create a common location in your enterprise from which products can be installed with IBM Installation Manager.
- Delete packages from a repository.

For detailed instructions on installing and using IBM Packaging Utility, see the Installation Manager product documentation.

To install the Rational Programming Patterns package from a repository on an HTTP or HTTPS server, take the following steps:

1. Place the installation files in a temporary directory on your workstation.
2. Install the IBM Packaging Utility.
3. With the Packaging Utility, copy the Rational Programming Patterns package.
4. Copy the output of the IBM Packaging Utility to an HTTP or HTTPS web server.
5. Copy the installation files for IBM Installation Manager to a shared drive.
6. Instruct users in your organization to install IBM Installation Manager.
7. Provide users the URL for the repository that contains the Rational Programming Patterns package you created earlier.

Note: You can also use the repository to install silently. For more information about silent installation, see "Installing silently" on page 8.

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