

IBM Rational
System Architect Process Integrator
Installation Guide
Release 11.3.1.3

Before using this information, be sure to read the general information under Appendix, “Notices,” on page 18.

This edition applies to **Release 11.3.1.3, IBM® Rational® System Architect® Process Integrator™** and to all subsequent releases and modifications until otherwise indicated in new editions.

© Copyright IBM Corporation 1986, 2010

US Government Users Restricted Rights—Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Table of Contents

Introduction	1
Installation overview	2
Operating System Requirements:	2
Hardware requirements:	3
License Requirements	3
Rational SA Process Integrator Overview	5
Rational System Architect:	5
Rational System Architect XT Server	5
Rational System Architect Catalog Manager	7
Installing Rational SA Process Integrator	8
Part I – Select the Rational SA Process Integrator Version to Install	8
Part II – Run the Rational SA Process Integrator Installation Wizard	9
Configuring Rational SA Process Integrator Options	10
Enabling Online/Offline Encyclopedia Access	10
Changing the Timeout Settings for User Sessions	10
Rational SA Process Integrator Login Credentials for SQL Oracle Servers	11
Changing the Port on the Server	12
Restarting the Rational SA Process Integrator Service	13
Silent Installation for Rational SA Processor Integrator– Visio 2003	14
Contacting IBM Rational Software Support	15
Notices	18
Trademarks	20

Installing Rational SA Process Integrator

Introduction

The IBM® Rational® System Architect® Process Integrator™ is a paid-for add-on product that enables Microsoft® Office Visio® process modelers to work in their preferred environment. They can work in Visio only, and use the export/import mechanism to exchange repository artifacts. They can work in Visio only, but additionally, setup connections to Rational System Architect repositories and work in online or offline modes. This eliminates the need to use the export/import mechanism and offers a direct means of getting diagrams from and placing diagrams to the encyclopedia repositories.

The Rational SA Process Integrator offers Visio users Business Process Modeling Notation (BPMN) templates, modeling error checking, and central repository storage for model and artifact management and reuse. Visio process models can be opened in Rational System Architect for detailed analysis, simulation, and execution. The combination of the two modeling solutions allows Visio models to be incorporated into the Rational System Architect suite of applications, including Rational System Architect® Web Publisher™ and IBM Rational System Architect® XT™.

This guide provides all the information that you need to install and run Rational SA Process Integrator, including license, system, and software requirements.

Installation overview

Rational SA Process Integrator provides installation packages for Visio 2003 and Visio 2007. Rational SA Process Integrator also supports Visio 2003 with Service Pack 1 and Visio 2007 with Service Pack 1. The older version requires that you install the Microsoft .Net Framework 2.0 and the Visual Studio 2005 Tools for Office Second Edition Runtime. Both of those components are provided in your installation package. The 2007 version does not require you install those components. Installation instructions on the Rational SA Process Integrator for each Visio versions are provided later in this guide.

Note: The person who installs Rational SA Process Integrator must have administrative privileges on the system (during the installation only).

Operating System Requirements:

- Microsoft Windows Server 2003, Standard Edition 32-bit (with Service Pack 2)
- Microsoft Windows XP (with Service Pack 2)
- Microsoft Windows Vista Business Edition - the installation and run-time requirements of Rational SA Process Integrator on Windows Vista Business Edition depend on your version of Visio, as follows:

Microsoft Visio 2003, Standard or Professional Editions

- The User Account Control (UAC) should be 'On' before running the installation. To enable the UAC from the Control Panel (select Classic View, open User Accounts, and select the 'On').
 - You must provide license information during the installation.
 - The UAC setting must be 'On' at Rational SA Process Integrator run-time.
 - If Microsoft's Office suite is installed, it must be Office 2003.
- o Microsoft Visio 2007, Standard or Professional Editions
 - Microsoft Visio 2007
 - The User Account Control should be 'Off' before you install Rational SA Process Integrator.
 - If Microsoft's Office suite is installed, it must be Office 2007.
- Microsoft Windows Terminal Service or Citrix® server

Hardware requirements

The hardware requirements for the Rational SA Process Integrator and Visio are as follows:

- Administrative privileges on the system (during the installation only).
- Pentium-class PC, 500 MHz or higher, minimum of 256 MB of RAM, Super VGA monitor (with the screen resolution set to at least 800 x 600, small fonts setting).
- Disk space: 100MB during installation and 60 MB after the install are complete.
- The hard disk requirements for Microsoft Office Visio versions are as follows:
 - Visio 2007 - Standard Edition- 1.5 gigabyte (GB) of hard disk space.
 - Visio 2007 - Professional Edition - 1.5 GB of hard disk space.
 - Visio 2003 - Standard Edition -160 MB of hard disk space, including 75 MB on the hard disk where the operating system is installed. The optional installation files cache requires an additional 155 MB of available hard disk space.
 - Visio 2003 - Professional Edition - 210 MB of available hard disk space, including 75 MB on the hard disk where the operating system is installed. The optional installation files cache requires an additional 155 MB of available hard disk space.

License Requirements

There are two types of licenses available for use with Rational SA Process Integrator. The license type that you need depends on the environment in which you are running Microsoft Visio. The license options areas follows:

- **Node-Locked License** – to run Rational SA Process Integrator on a machine with either of the supported versions of Windows (i.e., Microsoft Windows XP (with Service Pack 2), Microsoft Windows Vista Business Edition, Microsoft Windows Server 2003, Standard Edition (with Service Pack 1) or later). Node-Locked Licenses are ‘tied’ to individual client machines.
- **Concurrent License** – to run Rational SA Process Integrator on a Citrix or Terminal Server environments. Licenses are managed by Macrovision’s FLEXnet Licensing system. At runtime, Rational SA Process Integrator uses ‘Rational System Architect-Process-Integrator’ license feature.

You can provide license information during the installation or the first time you run Rational SA Process Integrator.

Installing Rational SA Process Integrator

For more information on licenses, see the 'IBM Rational Lifecycle Solutions Licensing Guide', available in the IBM Rational Support Site (<http://www.ibm.com/software/rational/support/telelogic/>) and in the installation package.

Rational SA Process Integrator Overview

The Rational SA Process Integrator works with the Rational System Architect suite of products described below. For detailed installation information about these products see the 'System Architect and System Architect XT Installation Guide' available in the IBM Rational Support Site (<https://support.telelogic.com/systemarchitect>) and in your installation package.

Rational System Architect

Users who get and post BPMN diagrams through the Import/Export mechanism do not need access to servers where Rational System Architect encyclopedias reside. However, users who enable the advanced Online/Offline feature require that someone on the network have Rational System Architect installed. Rational SA Process Integrator is an add-on product to Rational System Architect, and you cannot create encyclopedias with it. Therefore, at least one Rational System Architect user is needed, with privileges create encyclopedias, and to use Rational SA Catalog Manager to manage access to enterprise encyclopedias.

Note: there is no restriction to installing Rational System Architect on the same machine as Rational SA Process Integrator.

Rational System Architect XT Server

For a Rational SA Process Integrator client to connect to an enterprise encyclopedias, it needs to use the Rational System Architect XT SAService. The SAService is a Rational System Architect XT component that bridges a Rational SA Process Integrator client to the server where enterprise encyclopedias reside. On the server, access to the encyclopedias is managed by Rational SA Catalog Manager (see below). This SAService component needs to run if users want to enable the advanced Online/Offline features.

IMPORTANT: At runtime, when a Rational SA Process Integrator connects to encyclopedias with the Online method, the SAService connects to the license server and consumes a SA-PROCESS-INTEGRATOR-SERVER license. It releases the license when the client disconnects and works in Offline mode.

You can employ the SAService as follows:

- If Rational System Architect XT is already installed, or is being installed on server on the network, the Rational SA Process Integrator client can use the SAService being run by that installation.

- If Rational System Architect XT is not installed on the network, you can install the Rational System Architect XT software with the SAService component. This is done by running the Rational System Architect XT installation wizard with command line switch (see below). This installation option installs SAService and it does not require that you purchase Rational System Architect XT client licenses.

Installing the Rational System Architect XT SAService component

To install the SAService component proceed as follows:

1. Obtain the Rational System Architect XT installation file from the installation package or the web.
2. Click **Start**, select Run, type **cmd** in the **Open** field, and click **OK**.
3. Navigate to the folder where the installation file **ratlSysArch_XT_11-3-1-2.exe** is located.
4. Type the installation command with the command line options as follows:

```
ratlSysArch_XT_11-3-1-2.exe /V"SAPI_SERVER=\\"Yes\""
```

Or,

```
ratlSysArch_XT_11-3-1-2.exe /v"SAPI_SERVER=\\"Yes"
```

5. Press **Enter** to begin the installation.
6. Follow the instructions provided by the IBM Rational System Architect XT InstallShield® Wizard to complete the installation. For more information, please see the 'Rational System Architect and System Architect XT Installation Guide', available in the IBM Rational Support Site (<http://www.ibm.com/software/rational/support/telelogic/>) and in the installation package.

Optionally, to confirm the SAService has been installed successfully, you can go to the 'Services' component of the Windows Control Panel, where you should see 'SAService' and that its Status is 'Started.'

Rational System Architect Catalog Manager

Rational System Architect Catalog Manager provides role-based, enterprise-level access control to Rational System Architect encyclopedias. Access control is enforced by an Enterprise Catalog. You attach to the catalog encyclopedias to which you want to control access-these are termed 'Enterprise' encyclopedias.

Because Rational SA Process Integrator only supports Enterprise encyclopedias, you must use Rational System Architect Catalog Manager to create Users, assign them encyclopedias, and grant them one or more Roles on Enterprise encyclopedias.

Rational System Architect Catalog Manager is automatically installed with Rational System Architect and Rational System Architect XT. You can use the version installed by either product, as long as it has access to the server where the encyclopedias to be accessed through Rational SA Process Integrator reside.

Enterprise Catalogs

An enterprise catalog is an SQL Server or Oracle database that holds information about other databases (that is, Rational System Architect encyclopedias) on the same server. In Oracle, the catalog is a schema within the database. The catalog controls encyclopedias that are attached to it. These are termed 'Enterprise' encyclopedias. Through the catalog, Rational System Architect Catalog Manager enables you to control which users can access 'Enterprise' encyclopedias, and what they can view or do in them.

There is a one-to-one correspondence between a server and a catalog, and one catalog can control access to multiple encyclopedias. Rational System Architect Catalog Manager also controls permissions to the catalog database, enabling you to assign the Administrator role to other users. This lets you relegate some or all catalog-related tasks to others. However, as the Rational System Architect Catalog Manager installer, you have ultimate control over catalogs and by extension, to all the encyclopedias you attached to them.

Installing Rational SA Process Integrator

IBM provides separate Rational SA Process Integrator installation packages for Visio 2003 and for Visio 2007. Because the installation requirements for each of these versions vary, the preliminary steps you need to take before you run the installation wizard depend on the version you install.

Part I – Select the Rational SA Process Integrator Version to Install

The Rational SA Process Integrator installation files are available on DVD or on the Web. Depending on the version of Visio on your computer, install the corresponding version of Rational SA Process Integrator as described below.

If you are installing from a DVD, insert the disc into the DVD drive, select the version you want to install, and follow the onscreen instructions.

If you downloaded from the Web, unpack your installation files to a folder and proceed according to the Rational SA Process Integrator version that you downloaded.

- **Rational SA Process Integrator for Visio 2003**
 - a. The file name for Rational SA Process Integrator for Visio 2003 is **ratlSysArch_ProcIntegrVisio03_11-3-1-2.zip**.
 - b. Extract the contents of the zip file to your folder of choice. The zip file you extract contains three executable files.
 - c. Click on the **dotnetfx.exe** file to install the Microsoft .Net Framework 2.0. If an earlier version of the Framework is installed, the installation of version 2.0 leaves it intact. Other applications using older versions are not affected.
 - d. Click on the **vstor.exe** file. This installs the required 'Visual Studio 2005 Tools for Office Second Edition Runtime.'
 - e. Click the **setup.exe** file to install the Rational SA Process Integrator 2003.
 - f. Go on to **Part II – Run the Rational SA Process Integrator Installation Wizard** section below to complete the installation.

- **Rational SA Process Integrator for Visio 2007**
 - a. Open the folder onto which you downloaded the Rational SA Process Integrator for Visio 2007 file, named **SAPI_Visio2007_11.3.1.exe**.
 - b. Click on the **ratlSysArch_ProcIntegrVisio07_11-3-1-2.exe** file.
 - c. Go on to **Part II – Run the Rational SA Process Integrator Installation Wizard** section below to complete the installation.

Part II – Run the Rational SA Process Integrator Installation Wizard

After you have started the installation of Rational SA Process Integrator for Visio 2003 or Rational SA Process Integrator for Visio 2007 as described above, complete the installation as follows:

1. In the initial **IBM Rational SA Process Integrator** wizard screen, click **Next**. The **License Agreement** screen is displayed.
2. Select the **I accept the terms of the license agreement** option and click **Next**. You can print the license agreement from this screen.
3. In the Customer Information screen, enter User Name and Company Name in the corresponding fields. Review the Install this application for field and select Anyone who uses this computer (all users) or Only for me (<your user name>). If you are installing on a Terminal Server or Citrix, you must select the All Users option.
4. Click **Next**. The **Choose Destination Location** screen is displayed.
5. Select where to install Rational SA Process Integrator. You can accept the default folder (C:\Program Files\IBM\Rational\System Architect Suite\11.3.1\SA-Process Integrator) or click on **Browse** to select a different folder.
6. Click **Next**. The **License Information** screen is displayed. See the 'License Requirements' section above for license options.
7. Click **Next**. The **Start Copying Files** screen is displayed. This screen summarizes the installation options you selected for you to review them and go back if you need to make changes.
8. The **Setup Status** screen displays the actions being performed by the installation wizard.
9. Click **Finish** to complete the Rational SA Process Integrator installation.

Configuring Rational SA Process Integrator Options

If you will only use only the default Import/Export mechanism to work BPMN diagrams and definitions, you do not need to configure anything else. You simply need to work with Visio, and import or export diagrams or definitions as XML files. Please see the online help for information on working in this mode.

Optionally, after you complete the installation, you may need or choose to configure the SAService as described in the sections that follow.

IMPORTANT:

1. You should make a backup copy of the 'SAService.dll.config' file before modifying it; the SAService may not restart if you make invalid modifications.
2. If you make any changes to the SAService in the 'SAService.dll.config' file, you need to have all users log off, and restart the service for your changes to take effect (see the 'Restarting the Rational SA Process Integrator Service' section below.).

Enabling Online/Offline Encyclopedia Access

If you want to connect to encyclopedias and use the Online/Offline mechanism, which enables you to connect directly to encyclopedia repositories, you need to configure Rational SA Process Integrator as described in the 'Enabling Online/Offline Encyclopedia Access' section of the online help. To view the online help, start Rational SA Process Integrator and click on the help icon in the Rational SA Process Integrator toolbar.

Changing the Timeout Settings for User Sessions

To change the session Timeout settings for users proceed as follows:

1. Open the **SAService.dll.config** file (installed by default to subfolder C:\Program Files\IBM\Rational\System Architect Suite\11.3.1\SA-Process Integrator).
2. Add the **leaseTime** and **renewOnCallTime** properties, which work as follows:

LeaseTime – The 'leaseTime' setting limits the number of minutes a client license can be idle before the Rational SA Process Integrator Server releases that license to make it available for other clients. The default 'leaseTime' value is '0,' meaning that the Timeout option is 'Off.' Changing that value to a positive number turns the setting 'On.' For example, setting the Timeout value to '30M' releases any client

license that is idle for 30 minutes. Commonly used Timeout values are between 15M - 30M.

RenewOnCallTime – The ‘renewOnCallTime’ setting renews the Timeout counter to a value you select, as long as the value you select is greater than the ‘leaseTime’ value. The ‘renewOnCallTime’ is not applicable when the ‘leaseTime’ value is ‘0’ (the default). It is only applicable if the ‘leaseTime’ value is greater than ‘0.’ Commonly used values are between 15M - 30M.

Note: If you change the ‘leaseTime’ and ‘renewOnCallTime’ values to very short intervals, it may affect how users work and how they save their work.

Change the Timeout settings as desired using these parameters:

D for Days,
H for Hours,
M for Minutes,
S for Seconds, or
MS for Milliseconds.

The following **SAService.dll.config** file code sample sets the Timeout value to 15 Minutes:

```
<lifetime leaseTime="15M" renewOnCallTime="15M"
sponsorshipTimeOut ="0M" pollTime="30s"/>
```

3. Save changes and close the **SAService.dll.config** file.
4. Restart Rational SA Process Integrator Service (SASevice) for your changes to take effect, as described in the ‘Restarting the Rational SA Process Integrator Service’ section below.

Rational SA Process Integrator Login Credentials for SQL Oracle Servers

The Rational SA Process Integrator Service provides the following authentication mechanisms for users to access SQL Oracle servers:

- **Rational System Architect Catalog Manager Authentication** – users are added to the catalog through Rational System Architect Catalog Manager. Through Rational System Architect Catalog Manager, you add the user name (must be added in the form ‘DomainName\UserName’), to grant user access to the encyclopedias in the Enterprise Catalog. The user must be an authenticated user on the network domain.

- **Windows Authentication** – only the user account that starts the SAService on the server needs Admin access to the SQL server or Oracle database. By default, the SAService is started by the 'Local System Account', which gains access to SQL database running on the same machine automatically. For Oracle, the user starting SAService has to be granted access to the database manually.

If the SAService is not running on the same machine as the SQL/Oracle servers, then a network user logged in through Windows Authentication needs to start/restart the SAService for it to make Enterprise encyclopedias available to users (as described above).

- **Database Authentication** – this mechanism allows Oracle users to gain access to Oracle databases. You can add your values for Database Authentication at install time, or by adding them to the DBUser and DBPassword properties in the SAService.dll.config file (located in the default installation path C:\Program Files\IBM\Rational\System Architect Suite\11.3.1\SA-Process Integrator). In the 'SAService.dll.config,' you enter the appropriate 'DBUser' and 'DBPassword' values in the 'connectionString' tag as follows:

```
<connectionStrings>
<add name="DBUser" connectionString="DBUserName"/>
<add name="DBPassword" connectionString="DBUserPassword"/>
</connectionStrings>
```

Changing the Port on the Server

The Rational SA Process Integrator Server uses Port Number '8022' by default. To change the port number after installing the Rational SA Process Integrator Server, you need to edit the 'SAService.dll.config' file as described below.

Note: it is recommended that you make a backup copy of the 'SAService.dll.config' file before you modify it; the SAService does not start with invalid modifications.

To change the port number, proceed as follows:

1. Using a text editor, open the 'SAService.dll.config' file, located in the default installation path (C:\Program Files\IBM\Rational\System Architect Suite\11.3.1\SA-Process Integrator).
2. The code sample below shows the 'channel' tag wherein the port number is specified.

```
<channels>
<channel name="SAServer" ref="tcp" port="8022" displayName="TCP
Channel (SAServer)"/>
```


</channels>

3. Change the port number to your preferred port.
4. Save and close the 'SAService.dll.config' file.

Restart SA Process Integrator Service for your changes to take effect, as described in the 'Restarting the SA Process Integrator Service' section below.

Restarting the Rational SA Process Integrator Service

You need to restart the Rational SA Process Integrator Service for any changes to the 'SAService.dll.config' file to take effect. A best practice is for all users to log off before you restart the service.

To restart the Rational SA Process Integrator Service proceed as follows:

1. Click the Windows **Start** menu, select **Settings, Control Panel**, and select **Administrative Tools**.
2. Click on **Services**. The **Service** console is displayed.
3. Right-click on the **SAService** and select **Restart**. A **Service Control** dialog shows the restart progress and informs when it is done (on Windows XP with SP 2; dialogs and messages may vary according to Windows versions).
4. Click **OK** to close the Service **Control** dialog.

Silent Installation for Rational SA Processor Integrator– Visio 2003

In addition to the standard installation options above, you can install Rational SA Process Integrator for Visio 2003 (Rational SA Process Integrator 2003) in Silent mode. A Silent installation uses Microsoft Windows Installer (MSI) Technology, enabling you to install Rational SA Process Integrator 2003 without presenting dialog boxes requiring users to enter installation values. Systems Administrators find this useful to perform the same installation for multiple users.

Requirements for Rational SA Process Integrator 2003 Silent Installation

The following software needs to be already installed on your computer:

- Microsoft .Net Framework 2.0
- Microsoft Visual Studio 2005 Tools for Office Runtime (VSTO) – An add-on (of project types and controls) that allows VSTO applications and Office add-ins to be developed with Visual Studio IDE. This version is for 2003 and 2005.
- Microsoft Office 2003 Primary Interop Assemblies – Facilitates the interoperability between managed code and Office 2003 COM-type libraries.

Running a Silent Rational SA Process Integrator 2003

You can run the Silent Installation with the Command Line options to submit the property values and execute silent install.

Rational SA Process Integrator 2003 Silent Install with Command Line Options

1. Click **Start**, select Run, type **cmd** in the **Open** field, and click **OK**.
2. Type your command line options (do not copy and paste values instead because a white space may be inserted and prevent the installation from working properly).

Using your actual Property values, type your command line options as in the following example:

```
msiexec /i "SAVisioDesigner.msi" /qn TARGETDIR=" C:\Program Files\IBM\Rational\System Architect Suite\11.3.1\SA-Process Integrator"
```

3. Press **Enter** to begin the installation.

IBM Support

Contacting IBM Rational Software Support

If you cannot resolve a problem with the self-help resources, contact IBM® Rational® Software Support.

Note: If you are a heritage Telelogic customer, you can find a single reference site for all support resources at <http://www.ibm.com/software/rational/support/telelogic/>

Prerequisites

To submit a problem to IBM Rational Software Support, you must have an active Passport Advantage® software maintenance agreement. Passport Advantage is the IBM comprehensive software licensing and software maintenance (product upgrades and technical support) offering. You can enroll online in Passport Advantage at <http://www.ibm.com/software/lotus/passportadvantage/howtoenroll.html>.

- To learn more about Passport Advantage, visit the Passport Advantage FAQs at http://www.ibm.com/software/lotus/passportadvantage/brochures_faqs_quickguides.html.
- For further assistance, contact your IBM representative.

To submit a problem online (from the IBM Web site) to IBM Rational Software Support:

- Register as a user on the IBM Rational Software Support Web site. For details about registering, go to <http://www.ibm.com/software/support/>.
- Be listed as an authorized caller in the service request tool.

Other information

For Rational software product news, events, and other information, visit the IBM Rational Software Web site: <http://www.ibm.com/software/rational/>.

Submitting Problems

To submit a problem to IBM Rational Software Support:

1. Determine the business impact of the problem. When you report a problem to IBM, you are asked to supply a severity level. Therefore, you need to understand and assess the business impact of the problem.

To determine the severity level, use the following table.

Severity	Description
1	The problem has a critical business impact: you are unable to use the program, resulting in a critical impact on operations. This condition requires an immediate solution.
2	The problem has a significant business impact: the program is usable, but it is severely limited.
3	The problem has some business impact: the program is usable, but less significant features (not critical to operations) are unavailable.
4	The problem has minimal business impact: the problem causes little impact on operations or a reasonable circumvention to the problem was implemented.

2. Describe the problem and gather background information. When you describe the problem to IBM, be as specific as possible. Include all relevant background information so that IBM Rational Software Support specialists can help you solve the problem efficiently. To save time, know the answers to these questions:
 - What software versions were you running when the problem occurred?
 - To determine the exact product name and version, use the option applicable to you:
 - Start the IBM Installation Manager and click **File > View Installed Packages**. Expand a package group and select a

- package to see the package name and version number.
 - Start your product, and click **Help > About** to see the offering name and version number.
 - What is your operating system and version number (including any service packs or patches)?
 - Do you have logs, traces, and messages that are related to the problem symptoms?
 - Can you recreate the problem? If so, what steps do you perform to recreate the problem?
 - Did you make any changes to the system? For example, did you make changes to the hardware, operating system, networking software, or other system components?
3. Are you currently using a workaround for the problem? If so, be prepared to describe the workaround when you report the problem.
4. Submit the problem to IBM Rational Software Support in one of the following ways:
- Online: Go to the IBM Rational Software Support Web site at <https://www.ibm.com/software/rational/support/>. In the Rational support task navigator, click **Open Service Request**. Select the electronic problem reporting tool, and open a Problem Management Record (PMR) to describe the problem.
 - For more information about opening a service request, go to <http://www.ibm.com/software/support/help.html>.
 - You can also open an online service request by using the IBM Support Assistant. For more information, go to <http://www.ibm.com/software/support/isa/faq.html>.
 - By phone: For the phone number to call in your country or region, visit the IBM directory of worldwide contacts at <http://www.ibm.com/planetwide/> and click the name of your country or geographic region.
 - Through your IBM Representative: If you cannot access IBM Rational Software Support online or by phone, contact your IBM Representative. If necessary, your IBM Representative can open a service request for you. For complete contact information for each country, visit <http://www.ibm.com/planetwide/>.

Notices

© Copyright IBM Corporation 1986, 2010.

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send written license inquiries to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785

For license inquiries regarding double-byte character set (DBCS) information, contact the IBM Intellectual Property Department in your country or send written inquiries to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106-0032, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions. Therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without

notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

Intellectual Property Dept. for Rational Software
IBM Corporation
1 Rogers Street
Cambridge, MA 02142
U.S.A

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names

of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

Copyright license

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. 2000 2010.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at “[Copyright and trademark information](http://www.ibm.com/legal/copytrade.html)” at www.ibm.com/legal/copytrade.html.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product or service names mentioned may be trademarks or service marks of others.