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### PATENT

Portions covered by U.S. Patent Nos.5,193,180 and 5,335,334 and 5,535,329 and 5,835,701 and 5,574,898 and 5,649,200 and 5,675,802.

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Thank you for selecting **Rational Rose RealTime**, the real-time industry's leading environment that unifies software teams by integrating with best-in-class Rational products including Rational ClearCase, Rational RequisitePro, and Rational SoDA.

These release notes describe:

- "What's New" on page 2
- "PLEASE READ FIRST" on page 3
- "Platform Requirements Windows NT" on page 5
- "Licensing Requirements" on page 9
- "Integration Notes" on page 11
- "Known Problems and Limitations" on page 15
- "Documentation Updates" on page 35
- "Technical Support" on page 37

Please read these Release Notes before you install or use Rational Rose RealTime.

*Note:* In some cases, you may note discrepancies between the printed documentation and the online documentation. In these cases, the online documentation is the most up-to-date and should be followed.

Please visit the Rational Web site for the latest Release Notes, patches, and information:

http://www.rational.com/support

If you encounter any problems while installing or running Rose RealTime, please check here first to see if you encountered a known problem. If you find a problem that is not yet documented, please call Rational Technical Support so we can investigate it, provide you with a workaround, and track the problem for further action.

Contact information for this release is in "Technical Support" on page 37.

### What's New

These are the new features included in this release of Rational Rose RealTime.

- Support for Automated Testing
  - Rational Quality Architect RealTime
- Support for Additional platforms and languages
  - now includes Java language support
  - new host support
    - Solaris 2.8
- Team Development Improvements
  - D Model Integrator improvements
  - enhanced model sharing with shared interface packages
- Usability Improvements
  - □ improved start-up with a customizable frameworks wizard
  - runs in English, supports non-English data on German,
     French, Italian, Swedish, and Japanese operating systems

### PLEASE READ FIRST

Please read the following notes before you install Rational Rose RealTime.

### You Must Install License Keys to Run this Product

With your software shipment, you received an envelope containing your Start-up License Key Certificates for this product. You need these keys in order to run your software. The start-up keys will expire a few weeks after shipment. Be sure to request your permanent license keys as soon as they are available. The availability date for your permanent keys is indicated in the top section of your Start-up Licence Key Certificate.

Please check the *Rational Rose RealTime Installation Guide* for detailed instructions on how to install your start-up license keys and how to request your permanent license keys.

**Note:** If you are installing license keys on a Unix platform, please refer to the Installation Guide for Instructions. **Do not** follow the instructions on the Rational Start-up License Certificate or on the envelope in which the certificate is delivered to you.

### Notice To Beta Customers

IF YOU WERE A BETA CUSTOMER FOR RATIONAL ROSE REALTIME, PLEASE UNINSTALL BOTH THE WINDOWS AND UNIX COMPONENTS OF THE BETA VERSION FROM YOUR SYSTEM BEFORE BEGINNING YOUR INSTALLATION.

### Notice To Customers Running Earlier Rose RealTime Releases

You cannot run earlier versions of Rose RealTime on Windows NT or Windows 2000 with the latest version of Rose RealTime.



Chapter 2

# Platform and Toolchain Requirements

This section describes the platform and toolchain requirements for running Rose RealTime.

*Note:* Rational Rose RealTime is not supported on Windows 95 or Windows 98.

### Platform Requirements — Windows NT

The minimum supported configuration for running Rose RealTime on Windows NT is:

- Windows NT 4.0 with service pack 6a
- Minimum Pentium 150 MHz. We recommend 500 MHz or faster CPU
- Minimum 128 MB of RAM. We recommend 256 MB of RAM
- Minimum 325 MB of disk space for the Rose RealTime installation
- Minimum display 1024 X 768. We recommend 1280 X 1024 or better
- Postscript printer for printing
- Browser requirement Internet Explorer 5.01 or 5.5 or Netscape Navigator 4.7 or 6.0. We recommend Internet Explorer 5.01 or 5.5

### Platform Requirements — Windows 2000

The minimum supported configuration for running Rose RealTime on Windows 2000 is:

■ Windows 2000 Professional, with service pack 1

- Minimum Pentium 150 MHz. We recommend 500 MHz or faster CPU
- Minimum 128 MB of RAM. We recommend 256 MB of RAM
- Minimum 325 MB of disk space for the Rose RealTime installation
- Minimum display 1024 X 768. We recommend 1280 X 1024 or better
- Postscript printer for printing
- Browser requirement Internet Explorer 5.01 or 5.5 or Netscape Navigator 4.7 or 6.0. We recommend Internet Explorer 5.01 or 5.5

### **Platform Requirements — UNIX**

The minimum supported configuration for running Rose RealTime on UNIX is:

- Solaris 2.6, Solaris 2.7, Solaris 2.8, or HPUX 10.20
  - For Solaris operation, the minimum workstation is an UltraSpare 10 with 500 MB or RAM. We recommend an UltraSpare 60 with 600 MB or RAM. We recommend the Solaris 2.8 operating system.
  - □ For HPUX operation, we support installation of the HP 700 series architecture
  - Please see the Rational Rose RealTime web site (http://www.rational.com/support) for a list of the required UNIX patches applicable to your operating system.
- The minimum is 500 MB or RAM. We recommend 600 MB of RAM
- Minimum 370 MB of disk space for the Rose RealTime installation
- Postscript printer for printing

### **Toolchain Requirements**

### Help Viewer (Windows Platforms Only)

The Help Viewer requires that Microsoft Internet Explorer (version 3.02 or later) be set up on a user's computer. It is not required that Internet Explorer be used as the system's default browser, or that the Internet Explorer icon be visible on the user's desktop.

If you choose not to have Internet Explorer as the default browser, you will need to run Hhupd.exe. This file is the distribution executable that installs the run-time components needed for an HTML Help Project, such as Hh.exe, Hhctrl.ocx, Itss.dll, and Itircl.dll. Hhupd.exe is in the Redist folder of the HTML Help Workshop folder.

### Compiler

You must have a C++ compiler installed on your system to make use of the code generation and execution capabilities for Rose RealTime. Different compilers are required for host workstation and for embedded system targets. The list of supported compilers and targets is provided in the *Rational Rose RealTime Installation Guide*.

### **Real-Time Operating System**

If you are planning to deploy your model on a real-time operating system, your operating system, hardware, and tool lineup must be one of the supported lineups listed in the *Rational Rose RealTime Installation Guide*. If you do not have a supported lineup, you may be able to get support for your lineup from a Rational RoseLink partner, or by customizing the Rose RealTime Services Library for your target. See the *C++ Reference* or *C Reference* for instructions on customizing the Services Library and compiling for new target platforms.



Chapter 3

# Licensing Requirements

Please refer to the *Installation Guide*, *Rational Rose RealTime* for instructions on "Installing a Startup License" and "Obtaining a Permanent License"

*Note:* If you are installing licenses on a UNIX platform, *do not* follow the instructions on the Rational Start-up License Certificate or on the envelope in which the certificate is delivered to you.

If you have existing licenses for release 6.1, 6.1.1, or 6.2, you do not need new licenses. Please save your license file before uninstalling. UNIX licenses are stored in the file "license.dat". Windows licenses are stored in the file "rational-server-perm.dat".

### License Usage

A toolset launched manually will require a license.

A second toolset session launched manually on the same platform will require a second license.

A toolset launched as a COM Automation server will NOT require a license unless it is explicitly made visible by setting the RRTEI Application object's Visible property to True. For more information on RRTEI, see the *RRTEI Reference Guide* in the Rose RealTime online Help.

A toolset launched with a compiled script passed as a command line argument will require a license since the toolset will be made visible before running the script. A toolset launched with both the -runScriptAndQuit and a compiled script passed as a command line argument, will NOT require a license since the toolset will not be made visible when running the script.

*Note:* A toolset session, regardless of how it is initiated, will require a license if the toolset is made visible.



Integration Notes

This section describes integrating Rational Rose RealTime with other tools.

### Migrating from Rational Rose and ObjecTime Developer

In order to migrate models into Rose RealTime from either Rational Rose or ObjecTime Developer where models were previously stored in a configuration management system, the model must be brought into the Rational Rose or the ObjecTime Developer tool and written out to a single file. Please refer to the chapter on Migration in the Rational Rose RealTime Installation Guide.

When importing a model from Rose into Rose RealTime, you are encouraged to resolve any model errors in Rose (Tools > Check Model) before trying to import the model. In particular it is important to fix unresolved references. In general, Rose is not concerned with unresolved references; however, they are very important in Rose RealTime as they can result in incomplete code generation and compilation errors.

In order to export the ObjecTime model in a format that is readable by Rose RealTime, a patch must be applied to the 5.2 or 5.2.1 toolset to format the file in a single linear form file with all the required information. The patch is available from Rational Customer Support for both the 5.2 and 5.2.1 product release only. Please contact the Rational Customer Support group for further information.

Once the model has been imported into Rose RealTime, it can then be stored in the configuration management system.

### **Microsoft Development Environment**

We recommend that you install the latest service packs available from Microsoft for Visual Studio or Visual C++.

### **Configuration for Operation with Rational ClearCase**

For more information on this integration, refer to the *Guide to Team Development for Rose RealTime*.

### Integration with Rational Robot

Installing the 2001A.04.00 release of Rational Rose RealTime will interfere with the operation of the 6.1 release of Rational Robot.

We recommend that you upgrade to the 6.3 release of Rational Robot.

### Rational ClearCase on a UNIX Server and Clients on Both NT and UNIX

You can access a ClearCase server on UNIX with Rose RealTime clients running on both NT and UNIX workstations. For more information on integrating these tools, refer to the *Guide to Team Development for Rose RealTime*.

### **Rational SoDA**

Both Rational SoDA and Rose RealTime must be properly installed and licensed before starting. SoDA may be installed either as part of a suite or as an individual product.

Please refer to the product support page at

http://www.rational.com/support

for the latest updates on SoDA integration.

**Note:** In order to generate a report using SoDA, the Rose RealTime model must have been saved at least once. If the Rose RealTime model has never been saved, it will be untitled. An untitled model will cause SoDA to generate errors.

### **Rational RequisitePro**

Both Rational RequisitePro and Rose RealTime must be properly installed and licensed before starting. RequisitePro may be installed either as part of a suite or as an individual product. See "RequisitePro" in the *Rational Rose RealTime Installation Guide*.

Please refer to the product support page at

http://www.rational.com/support

for the latest updates on RequisitePro integration.

**Note:** The Rose RealTime Requisite Pro integration does not support the association of a Rose RealTime package with a RequisitePro project. Use Case and Model association is supported.

### **Rational Purify**

### Adding Options to Purify on UNIX

The toolset looks for an installation of Purify by checking for an environment variable named **PURE\_HOME**. This environment variable is not set up by installing Rational Purify.

You must set this environment variable manually. The variable need not point to a directory containing Purify, nor is it required to point to a directory. The variable may contain anything, but must be set.

Occasionally, you may need to add options during a Purify'd build on UNIX. For example, Purify on HP needs to know the name of the linker or collector used by **Gnu g++**.

Options can be added by changing **PURIFY\_OPTIONS** in the **CompilationMakeInsert** field of the executable component.

The default value of **PURIFY\_OPTIONS** (generated in the Makefile by the code generator) is:

### PURIFY\_OPTIONS = -log-file=\$(BUILD\_TARGET).txt -windows=no

To accommodate using g++ on HP, you can add the following, or similar:

**PURIFY\_OPTIONS = -log-file=**\$(**BUILD\_TARGET**).txt - windows=no -collector=/usr/lib/gcc-ld -g++=yes

Where the path of to the collector, **gcc-ld** in most cases, should be the path that is specific to your environment.

For proper integration of Purify when running the Purify'd executable from the toolset, you should preserve the default options.

For an explanation of Purify options, see *Running a component instance with Purify* in the *Toolset Guide*.



Chapter 5

# Known Problems and Limitations

### Installation and Startup Issues

### **File Association for Compiled Scripts**

Windows NT: Rose RealTime does not install a file association for compiled scripts (.ebx). This means that they cannot be automatically run by double-clicking on the file from Windows Explorer.

### Suite Objects.dll Not Found

When installing on Windows NT, or attempting to run Rose RealTime, an error message sometimes occurs indicating that "suite objects.dll" cannot be found in the path.

Adding "C:\Program Files\Rational\common" to the path will fix this problem.

This problems only occurs on Windows NT systems that have had a previous version of Rose RealTime installed.

### Start-up Problems

If Rose RealTime has problems starting up, look at the task bar and use the Task Manager to see if there are running copies of Rose RealTime. Terminating all running copies will allow new copies of the tool to start properly.

Note that more than one copy of Rose RealTime can be run at the same time; however, if startup problems exist, find and terminate any runaway processes.

### Uninstall

Sometimes files are left behind after an Uninstall. For example, if a model has been saved in one of the Rose RealTime subdirectories, the subdirectory and its parents will not be removed. You must remove these manually if you wish to return your system to a clean state.

### **General Issues**

### **Unique Ids**

Unique ids are unique internal names associated with model elements. They are used internally by Rational Rose RealTime, and not all model elements require unique ids. Rational Rose RealTime includes a feature that helps Model Integrator by generating unique ids for those model elements that would otherwise not require them, for internal use. For Model Integrator, an element with a unique id is easier to merge.

For information on how to enable the Unique ids, see "Model Specification" in the online Help.

RRTEI users will find traceability easier when they set this option. Unique ids improve the traceability of model elements of other tool integrations that use RRTEI.

It is necessary to plan and choose when to incorporate the new unique ids into the project model since virtually all controlled units will be modified implicitly. Additionally, the generated new ids are dependent on time and location. For example, generating unique ids for a given model at different times, or on different machines, produces different ids.

*Caution:* We strongly recommend any team involved in parallel development use this option.

*Caution:* Setting this option creates unique ids for model elements that currently do not have them. This typically affects most of the model, so you will be prompted to check out those parts when setting this option.

When saving the model, the size of the affected file increases by approximately 20%, and the time to load the model also increases.

*Caution:* Do not set this option in multiple streams, otherwise, objects with similar characteristics will be treated differently since their unique id's will differ.

For more information about when and how to use this feature, see the *Guide to Team Development for Rose RealTime*..

*Caution:* If you clear this option, your merge results will not be as reliable.

### Probes

When a message hit causes a probe to halt the execution of a running model, there is no way of finding out which probe in the model causes the model to stop executing. To determine which probe execution is halted on, open trace windows for each enabled probe.

### License Manager

When there is no License manager running, a pop-up window appears indicating that the toolset cannot obtain a license.

### **Changes to Code that Uses Default Arguments**

ObjecTime Developer models which used the RTTimespec constructor with only one parameter, as in the following code:

timer.informIn(RTTimespec(2));

will result in a compile error after conversion of the model to Rational Rose RealTime. The compile error will appear something like:

..\rtg\Driver.cpp(67) : error C2440: 'type cast' : cannot convert from 'const int' to 'struct RTTimespec' No constructor could take the source type, or constructor overload resolution was ambiguous.

The reason is that in ObjecTime Developer, the RTTimespec constructor included default arguments, that is, RTTimespec (long=0, long=0). The default constructor values are not supported on RTTimespec in Rose RealTime. Any code that made use of the default arguments needs to be changed to supply both constructor arguments. For example:

```
OTD = RTTimespec (2);
```

must be changed to:

RRT = RTTimespec (2, 0);

### Spaces in Directory Names

On Windows NT, in order to allow the use of cross-compilers that do not allow spaces in the path names, you need to use the subst command and map a drive to the value of %ROSERT\_HOME% after the installation. For example, if you wish to use the K: drive, and your Rose RealTime installation directory is:

ROSERT\_HOME=C:\Program Files\Rational\Rose RealTime

you must map this directory to the drive by running the following commands from a console window:

```
subst K: "%ROSERT_HOME%"
set ROSERT HOME=K:
```

Spaces in directory names can cause problems with the following *operating system.compiler library set.development platform*: systems:

OSE411T.ppc603-Diab-4.3f.NT4

VRTX4T.ppc603-Microtec-1.4.NT40

TORNADO101T.i960-cygnus-2.7.2-960126.NT40

TORNADO101T.m68040-cygnus-2.7.2-960126.NT40

TORNADO101T.ppc-cygnus-2.7.2-960126.NT40

TORNADO101T.x86-cygnus-2.7.2-960126.NT40

TORNADO2T.ppc630-GreenVX-1.8.9.NT40

TORNADO2T.ppc630-GreenVX-2.0.NT40

TORNADO2T.m68040-cygnus-2.7.2-960126.NT40

TORNADO2T.ppc-cygnus-2.7.2-960126.NT40

TORNADO2T.ppc860-cygnus-2.7.2-960126.NT40

For Tornado line-ups, you should also use the substituted drive to point to the load script directory when running Target Observability. On the detail tab of the processor specification, the Load Script path should not contain any spaces. If spaces are present, when attempting to load the executable in Basic or Debugger-Tornado[2] modes, the error message, **Unable to Execute** appears. This does not occur when loading the executable in manual mode.

Spaces in directory names can also cause problems with ClearMake.

### **Too Many Files Open**

You can have a maximum of 1024 file pointers open simultaneously.

### **Executing Component Instances**

If you are getting the message "Unable to connect to target" when trying to connect to a target (both host and embedded), change the Connect Delay on the Component Instance specification to two or more seconds.

### **Sequence Diagrams**

There still remain a few conditions under which the Sequence Diagram will incorrectly draw Messages / FOCs. If a Message or FOC appears to be incorrectly drawn, select the Message (or the Message that starts the FOC) and, using the center 'reorient' handle, slightly move the Message. This will force the Diagram to recalculate the correct display values for that message.

### Build Dependencies on Case-Insensitive File Systems (NT only)

During a build, Rose RealTime detects and records build dependencies for comparison during subsequent builds; this is done to facilitate build-avoidance by only regenerating or recompiling targets when a build dependency has changed. These build dependencies preserve the case of the filenames involved, even when the underlying file-system (for example, NTFS) is case-insensitive. This can cause trouble when using names which are distinct within the toolset, and distinct on casesensitive drives, but indistinct on case-insensitive drives. In most cases, the toolset or code-generator will identify and quietly avoid or warn against potential case-insensitive name collisions. However, some case-insensitive filename collisions cannot be detected. For example, if a component is renamed to something that is caseinsensitive-identical (for example, renaming from "myComponent" to "MyComponent"), a build may incorrectly reuse all previous build results, since the underlying build dependencies will be indistinct according to the file-system.

Users are advised to use case-sensitive file-systems if possible. Otherwise, users should avoid case-insensitive name collisions when they create or rename classes, components or controllable units.

### Using the Debugger-xxgdb Tool and Running your Component Instance

When using the xxgdb tool, you should run your component instance, add any breakpoints and then restart it to enable the breakpoints in gdb.

### **Running Multiple Sessions on the Same Workstation**

If you are experiencing instability when running multiple Rose RealTime sessions on the same workstation, please try to limit your usage to a single session at any given time.

### Use of C and C++ Add-ins

You cannot use C and C++ Add-ins at the same time in Rational Rose RealTime.

### Symbolic Links with TargetRTS

When using LynxOS 3.1.0, do not install Visual Lynx 3.1.0 for Windows NT on a network (NFS) disk. It should only be installed on a local NTFS drive; otherwise, symbolic links to some **include** directories will not work properly. This will cause compilation errors if you recompile the TargetRTS.

If you have installed Visual Lynx 3.1.0 on a network disk, and if you see compilation errors stating that **include** directories *netinet/in.h* or *net/if.h* are not found, locate the entries **net** and **netinet** in the following directory:

\$LYNX\_HOME/usr/lynx/3.1.0/ppc/usr/include

If these entries are text files containing the following text: **!<symlink>bsd** 

rename these files and create new symbolic links called '**net**' and '**netinet**' that both point to the directory *bsd*.

### McAfee VirusScan Affects Startup and Shutdown

On Startup of shutdown, McAfee VirusScan will scan the RoseRT.ini file appoximately 426 times, causing a very slow startup or shutdown.

To enable a much faster shutdown, exclude the INI extension from the McAfee VirusScan Program File Extensions list.

### Creating Capsules with the Same Name in Different Packages

While Rose RealTime allows users to create capsules with the same name in the different packages, Target Observability for both C++ and Java might confuse such capsules.

As a temporary workaround, we recommend either renaming such capsules so that they have unique names, or placing the capsules to be observed directly under the "Logical View". The first method is preferred.

# Code Generator Runs Out of Memory When Generating Very Large Models

When you attempt to generate a very large model (over 450 classes), the code generator may run out of memory.

To improve memory usage when generating very large models, we suggest that you:

- ensure you are using at least 1800 Mbytes of RAM.
- write each file as it is generated as opposed to generating and storing all the output files before starting to write any files.

### Integrations Issues

### Error Loading Large Models from ClearCase

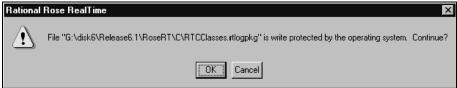
If you have problems loading large models from ClearCase —that is, it takes a long time or an empty model appears—check your error messages. It may be because there are too many files open. Use the following steps to resolve this problem:

- 1. Go to the Control Panel, and double-click on the Clearcase applet. The Clearcase Properties dialog appears.
- 2. Go to the MVFS Performance tab.
- 3. Under Mnodes, click the Override boxes for both "Maximun number of mnodes to keep on the free list" and "Maximum number of mnodes to keep for cleartext free list", and set the value for both to "800".
- 4. Click **OK** to apply the changes and close the dialog.
- 5. Reboot the Windows NT machine.

### RequisitePro

When the RequisitePro add-in is enabled in Rose RealTime, there is a known problem with File > Save As.

There will be numerous prompts of the form



as RequisitePro attempts to save the units of RTClasses and RTCClasses. The number of prompts will be less if only one of C or C++ is enabled. Clicking **OK** to all the prompts causes no harm. Other possible workarounds are disabling the RequisitePro add-in for the **Save As** (make sure the model is saved up-to-date before doing this) or removing the RT packages if they aren't required at this time.

Please refer to the product support page at

http://www.rational.com/support

for the latest updates on RequisitePro integration.

### SoDA

SoDA can be installed without Rose 2000 and will still function with Rose RealTime. However, when run from Rose RealTime, the menu of templates presented are the Rose templates, not the Rose RealTime ones. Some of these templates will issue errors.

Please refer to the product support page at

http://www.rational.com/support

for the latest updates on SoDA integration.

Note that in order to install the Rose RealTime domain for SoDA, you need to select the Full/Customer install option during your SoDA installation.

### **Online Help Issues**

# Problems Accessing Rose Help when Concurrently Running Rose RealTime on Windows NT

### Problem

Running both Rose RealTime and Rose may cause the latter not to be able to access its help files.

### **Explanation**

In order to allow Rose add-ins' help to be accessible when used from within the Rose RealTime toolset, Rose RealTime temporarily replaces a registry key value installed by Rational Rose. This registry key is located in [HKEY\_LOCAL\_MACHINE\Software\Rational Software\Rose] and is named "HelpFileDir".

When the toolset starts up, it substitutes this key's value by its own Help File directory. The value installed by the Rational Rose installation program is backed up and restored when the last instance of the running toolset exits.

### Workaround

You can disable this behavior by setting the value of the key located in [HKEY\_LOCAL\_MACHINE\Software\Rational Software\Rose RealTime\6.3] whose name is "ReplaceRoseHelpDir" to "No".

### **Java Reference**

The formatting of some text (including code) does not appear correctly in the Java Reference online Help book. Please refer to either the *jguide.pdf* or the Java Reference book to verify the content.

### Navigating through the QuickStart Tutorial Online Help

You can either select a topic in the **Contents** tab or click the **Next** or **Previous** buttons, and the topic appears in the main window.

*Note:* If you click *Previous*, although the previous topic appears in the main window, the incorrect topic is highlighted in the *Contents* tab. However, this does not affect the navigating to the selected topic.

### **UNIX Issues**

### **Executing the Current Version with a Previous Version**

The current and previous toolsets do not work together by default, due to sharing the *MWRPC\_ENDPOINT* and *MWSHM\_KEY* environment variable settings. These settings are only calculated if the environment does not already have them set.

To execute a current and a previous toolset from the same host or shell:

- 1. Invoke the first toolset with the **-env** parameter ( and **&** to have it run in the background)
- 2. Find the *MWRPC\_ENDPOINT* environment variable and note the value, for example, **10633**
- 3. Set the *MWRPC\_ENDPOINT* environment variable for the second toolset to be one greater than the previous:

setenv MWRPC ENDPOINT 10634

*MWRPC\_ENDPOINT* values must be between 10000 and 65000 to be valid.

4. Set the MWSHM\_KEY to the same value as the MWRPC\_ENDPOINT

### setenv MWSHM KEY 10634

*MWSHM\_KEY* environment variable values must be integers less than 1048576, to be valid. We recommend that you use the RPC value for convenience.

5. Invoke the second toolset with the **-env** parameter to confirm environment settings.

### **Refresh Problems with Exceed**

The screen sometimes does not refresh completely when running the UNIX version of Rose RealTime and displaying it on a PC using Hummingbird Exceed. The problem can be fixed by changing your Exceed settings. Start Xconfig and open the Performance dialog. Use the following settings: Save Unders = No, Maximum Backing Store = When Mapped, Default Backing Store = None, Minimum Backing Store = None.

### **HP-UX Make Dependency Filename Restriction**

On the HP-UX platform, the HP-UX Make restricts dependency filenames to 160 characters. We recommend the use of Gnu-Make to work around this problem. Alternatively, you may shorten the path names to your class files to avoid this issue.

### Non-GUI-based External Editors

On UNIX, the toolset will freeze when the user specifies "/bin/vi" as the external editor and then tries to launch the external editor from the code edit pane. If you are using a non-GUI-based external editor, this should be specified using "xterm -e /bin/vi" so that the editor has a terminal (tty) to display to.

### **Case Sensitivity within Paths**

The UNIX temporary directory name is translated to all lower case. If you set the environment variable TEMP, make sure the path name is all lower case or the directory will not be found. This will cause problems when Help is started.

### **Troubleshooting Rose RealTime Toolset Freezes on UNIX**

Occasionally, the Rose RealTime toolset freezes (does not respond to user input, window will not refresh, etc.). We have been unable to fully characterize these problems. If you encounter a toolset freeze, please complete the following steps:

- 1. Run "top" from your UNIX shell and save the output to a file.
- 2. If on Solaris, run /usr/proc/bin/pstack <Rose RealTime pid> and save the output to a file.
- 3. Kill the Rose RealTime process.
- 4. Run Rose RT -cleanup.
- 5. Attempt to reproduce the problem.
- 6. Note Rose RealTime build information (Help / About Rational Rose RealTime) and the operating system information.
- 7. If you are using ClearCase, were you in a ClearCase view at the time of the freeze and what version of ClearCase are you using?
- 8. Please send all the above information to Technical Support (see "Technical Support" on page 37 for contact information), and use "Rose RealTime" in the subject of your email message.

### Toolset freezing on startup

Under certain configurations, when starting Rose RealTime on Solaris and displaying to an exceed X-server, the "Welcome to ..." window appears momentarily, then disappears. After this, the main application GUI is locked out and freezes.

The workaround is as follows:

- 1. Kill the Rose RealTime process.
- 2. Edit the **RoseRT.ini** file in the ~/.registry.2001A.04.00 directory and change **ShowStartupDialog=Yes** to **ShowStartupDialog=No**.
- 3. Run RoseRT -cleanup.
- 4. Run RoseRT.

### **Online Help**

# Context-sensitive help on UNIX may not invoke the correct help page

Context-sensitive help on UNIX may not invoke the correct help page. The workaround is to use the advanced search capabilities of the online-help to find the appropriate topic.

### Cannot open some links with online help

Some links to multimedia content do not work on UNIX.

The online help browser on UNIX does not support hyperlinks to external files. This affects the links to the readme file and to the example models. The workaround is to open the readme file with a regular text editor and to open the examples directly with Rose RealTime.

## **RQA-RT**

### Limitations

States in a specification sequence diagram are not referenced to states in a model (they are independent).

RQA-RT is not supported for C models.

Only leaf node instances in the interaction/sequence diagram can be specified as a driver/stub.

Within a sequence diagram, each interaction instance without a specified role must have a unique name. Only one interaction instance per test set can be left unnamed.

Within a sequence diagram, if you run multiple tests in a single pass, a port from a CUT can be used by only one interaction instance with an unspecified role.

As it is impossible to specify cardinality index for the interaction instances with no roles specified, care should be taken then using such objects with capsules under test and/or ports with cardinality greater than 1.

If the generated trace sequence diagram is directly compared with the specification diagram, it is important to remember that such comparison is asymmetric – sequence diagram should be used in place of sequence diagram; trace diagram should be used in place of trace diagram.

When running multiple specifications in a test in sequence, ensure that you complete each sequence when using a CUT, so that the CUT is self-contained. This prevents a CUT from replying to a message from a CUT in the previous sequence diagram.

In a controlled model when you generate a new harness with affected model elements not checked out, many warnings will be generated.

In RQA-RT Java, there may be some problems when specifying deeply nested replicated subcapsules as drivers/stubs. The RQA-RT test harness will not be able to distinguish particular driver instances if driver cardinality is greater than 1. This might lead to unexpected behavior as settings of the first driver instance (like minimum run time) will be used for all driver instances. This limitation does not applies to the drivers present on the top level of driver selection dialog and drivers with cardinality equal to 1.

# Additional documentation on create messages and sequence diagrams

The **Item Properties** in the Create Message Specification dialog, with the exception of **Thread**, only apply if you are creating a Capsule Under Test (CUT). **Thread** applies in every case. The **Item Properties** entries are as follows:

- Capsule class A capsule name. Enter a value here only if you
  want to override the default capsule class associated with the role
  that is associated with the interaction instance being created.
- Initial data Enter a value here only if your Capsule Under Test (CUT) requires data on startup. To provide data you must specify an attribute in the driver sending the create message with the appropriate initial values. You cannot provide initial data in create messages sent from the environment.
- Data Descriptor If you provided initial data, you must specify the type descriptor of the type of data that you specified. This is in the format RTType\_<type of initial data>.
- Thread name.

# Additional documentation on send message specification data field format for Java

- For the data to be passed with the messsages, the data type should be specified as <data\_type> <constructor\_arguments>. For example, to pass Integer object referring to the number 5, place the following line: Integer 5 or java.lang.Integer 5.
- If <data\_type> is omitted, Integer is assumed.
- The <constructor\_arguments> should contain the exact line to be passed as an argument to constructor. For example, for the MyObject(Integer, String) the following line can be used: MyObject 5, "Acme".

**Note:** No additional brackets or quotes need to be placed around <contructor\_arguments>.

#### **Problems Addressed**

The following customer originated cases have been addressed in this release:

PR number	Vantive Case Id	Details
16004	561830	UNIX install forces you to install in a directory ending on /RoseRT
16880	321721	Use case name appears under use case and the name cannot be moved
16881	321721	Include and extends relationships in use case diagram should be dashed arrows
16914	325931	NT-exception: Inheritance browser
18905	372790,5	Not all incarnate functions have a default index value (contrary to docs)
19179	375576	Model saved with 6.0.356 cannot be loaded again - error invalid syntax
19303	395493	Problem with type descriptor of nested classes
19445	384230	Directions for Overriding operations within a model don't work

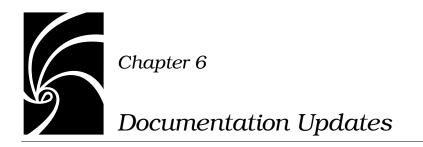
PR number	Vantive Case Id	Details
19505	611356	Add Dependencie broken in toolset patch 0
19769	422282	Attribute descriptor not generated
19819	422518	Web Publisher not generating all the sequence diagrams
19974	441179	TypeSafeSignals (Protocol, C++ TargetRTS) doc error
20344	478235	The standard startup banner does not appear in telnet window when target is NT
20373	485249	Superflucious warning generated during generation
20374	485249	Codegenerator generates #includes for nested classes when using association
20381	491181	UNIX exception: 0fQCOGeneralizationNUpdateBecauselP6JDepObjectP6OCO Notification
20456	502905	UNIX exception: 0fQCOMonitorDiagramJhideProbeP6LCOProbeViewiTC
20459	485162	Saving .rtto and .rtusr files takes a long time when saved in a view
20522	474654	Main Code pain cannot launch external editor. (Expected functionality)
20542	v513930	Unsupported petal version 43 when opening Rose2000E .mdl file from RoseRT2000.02
20667	529261	Compilation error if default constructor not generated
20744	630249	RTMI: To acces Help Topics on UNIX you have to browse for modelintRT.hlp file
20831	551875	Show Access Violations Problem if Packages not in Logical View
20858	554086	C Language AddIn: Enumerate does not work as in documentation
20953	565206,5	Abstract capsule operation makes capsule abstract
20959	565496	Toolset does not want to import petal files with an all caps name

PR number	Vantive Case Id	Details
21096	575802	RoseRT online help: Dynamic sizing, broken link
21109	555159,5	Code copying is unpredictable
21120	579821	Odd codegeneration bug when overriding transition action code
21176	579208	Controlled-unit class causes NTexception if later nested in another class
21186	566332	Constructor argument listed filled in when overriding constructor
21252	591375	Forward reference not generated from Class to Protocol
21276	595769	Model conversion error (OTD 521->RRT2000)
21279	596012	Select all with ctrl+a doesn't work
21305	598672	Def. arg. parameter (C++ Exec tab on component) does not work with /DEBUG (VC++)
21310	597392	Parsing error after creating link from note to external file
21323	597396	NT Exception: 001B:02E1BE40
21324	599978	UI problems on high cpu load (compilation, generation)
21325	601035	Duplicate Unique ID's in .rtto
21330	549246	The file for <elem>has changed since it was last saved or loaded.</elem>
21343	629178	Welcome to Rational Rose RealTime window disappears - locks out main GUI
21359	604459	Broken link "Diagrams Overview"
21366	595998	Tabulator width in certain edit fields
21417	607714	Long model load times with a corrupted RoseRT.ini file
21451	612867	NT Exception: 001B:0E14C074 RSCNRN22.DLL
21456	586117	Target crash when using RTS_COUNT
21532	618130	Problem with printing detail code after toolset patch 5

PR number	Vantive Case Id	Details
21549	615040	If trace is open model freezes problem sending a specific data class
21555	619519	Code generation failure of class scoped attributes
21562	613973	Grandchild transitions are deleted when parent class is deleted
21564	623041	Problem with decoding bool
21576	611109	clearmake/omake, setting OutputDirectory outside of VOB trips up RTmakefiles
21600	627489	Type descriptors do not take base address shift into account
21619	629511	RTWrapper assignment operator deleting wrong object.
21636	616829	Enhanced filtering support for Capsules
21653	622026	RRTEI diagram::layout() does not work correctly.
21662	638940	Anchor line from note to signal lost when importing Rose Models
21689	642628	UNIX Exception: 0fSCOControllableUnitNSetControlledi
21691	635725	WebPublisher state and structure diagrams don't appear on Windows 2000
21692	633283	Bugs in help - What's New and Readme file links don't work
21702	639009	Chinese OS - Problems with high-region ascii code "<<"
21717	636980	Runtime enters infinite loop due to RTObserver bug and winsock behavior
21719	639916	RoseRT hangs when CC view server is interrupted or ended
21723	648244	Model Integrator ignores Replication and Conjugated settings for ports
21733	643851	Testing for installation of PURIFY is flawed. PURE_HOME is locally set.
21749	635134	Sequence diagram from trace has criss-crossed messages

PR number	Vantive Case Id	Details	
21753	v650965	Deleting RoseRT testscope generated framework causes exception	
21755	639007	Purify does not report memory leaks when shut-down normally with TO	
21778	655176	Add Class Dependencies: "Serious error occurred" when elements are read-only	
21787	655416	Bug in RTQueue::next causes unwired ports not to bind	
21816	659684	RTPort_deregister problem	
21874	668560	Can no longer open model file RoseRT just disappears without an error message	
21888	669337	Duplicate text in default.mk file for C	
21892	659909	Inter-thread message received in capsule before initial transition has executed	
21895	655511	RTMI: Error: Unresolved reference from Capsule "Derived"	
21896	655511	RTMI: After merge, connection added in derived capsule shown grey	
21903	664099	Log messages from toolset load are unreachable	
21939	667656	Opening large LF file in RoseRT appears to hang system	
21951	674694	Rose Real Time terminates on opening class diagrams	
21999	678136	RTDebugger::checkObservability() function bug	
22033	682149	Public wired endport	
22127	693966	Multiple Capsule Names allowed in model with no warning message generated	
22141	681450	Unable to change the scope of a operation using the RRTEI	
22150	690031	Certain cases result in sequence diagram with no messages when opened from trace	
22194	683392	NT Exception: 001B:6C372552	

PR number	Vantive Case Id	Details
22206	702121	When signals are added or deleted, all elements are recompiled
22219	708467	RoseRT 2001 (6.2) check_rose_reqs does not check for required MainWin patches
22247	696033	Problems recalling messages in C TargetRTS when two capsules are doing recalls
22283	715564	Use of exception.userError() as documented does not work.
22299	709535	NT Exception: 001B:00573070 doubleclick on model file when license near expiring
22312	719109	RoseRT crashes on model load after package hierarchy changed
22316	718815	RQA locks up when choosing File->Exit from the debugger
22324	720671	Printing in Landscape in UNIX does not work
22352	720462	RoseRT 6.2 with GNU compiler warnings
22361	715136	RoseRT performance very slow due to repeated searching for Rational_Location
22366	721951	C TargetRTS registerAs problem if using a string var containing service name
22401	728429	UNIX Exception: 1cEItemMgetRelations6kMrnKOrdCollect_pknNCRuntimeCl ass_v_



For the most recent documentation updates, please visit the Product Support section of the Rational Rose RealTime web site at:

http://www.rational.com/support



This section describes how to submit problem reports, feature requests and support requests to Rational Technical Support.

# **Submitting Problem Reports**

With Rational Rose RealTime, you can email problem reports to the Rational Software Technical Support department that services your location. When you email a problem report directly from the Rose RealTime application, a wizard guides you through the process, ensuring that you provide the correct information to the Rational Technical Support team. This information includes contact and location information, and a detailed description of the problem that you are reporting.

To submit a problem report:

1. From the Help menu, click Email Technical Support.

A submenu appears, providing you with three options.

2. Click Problem Report.

The General Information dialog appears.

3. Type your contact and location information in the text areas provided and click **Next**.

The Problem Report - Additional Information dialog appears.

- 4. In the **Defect Title** text area, type a detailed name for the problem that your are reporting.
- 5. Select the type of problem that you are reporting from the appropriate list boxes.

- 6. Describe the problem, using the categories provided in the **Details** area.
- 7. Click Next.

The Email Summary dialog appears.

8. Ensure that the information that appears in the Email Summary dialog is accurate.

*Note:* The email information displayed in the Technical Support Email Address is choosen based on the location information that you provided in the General Information dialog. It is not recommended that you edit the email address.

- 9. If you want to save or print a copy of the email, click the appropriate button.
- 10. Click Send Email to send your email.

### **Submitting Feature Requests**

With Rational Rose RealTime, you can email feature requests to the Rational Software Technical Support department that services your location. When you email a feature request directly from the Rose RealTime application, a wizard guides your through the process, ensuring that you provide the correct information to the Rational Software Technical Support department. This information includes contact and location information, and a detailed description of the feature that your are requesting.

To submit a feature request:

1. From the Help menu, click Email Technical Support.

A submenu appears, providing you with three options.

2. Click Feature Request.

The General Information dialog appears.

3. Type your contact and location information in the text areas provided and click **Next**.

The Feature Request - Additional Information dialog appears.

- 4. In the **Request Title** text area, type a detailed name for the Feature that you are requesting.
- 5. Select the level of urgency for the feature that you are requesting.

- 6. Describe the feature, using the categories provided in the **Details** area.
- 7. Click Next.

The Email Summary dialog appears.

8. Ensure that the information that appears in the Email Summary dialog is accurate.

*Note:* The email information displayed in the Technical Support Email Address is choosen based on the location information that you provided in the General Information dialog. It is not recommended that you edit the e-mail address.

- 9. If you want to save or print a copy of the email, click the appropriate button.
- 10. Click Send Email to send your email.

## **Submitting Support Requests**

With Rational Rose RealTime, you can email Support requests to the Rational Software Technical Support department that services your location. When you email a Support request directly from the Rose RealTime application, a wizard guides you through the process, ensuring that you provide the correct information to Rational Software Technical Support department. This information includes contact and location information, and a detailed description of the support request that you are submitting.

To submit a support request:

1. From the Help menu, click Email Technical Support.

A submenu appears, providing you with three options.

2. Click Support Request.

The General Information dialog appears.

3. Type your contact and location information in the text areas provided and click **Next**.

The Support Request - Additional Information dialog appears.

- 4. In the **Request Title** text area, type a detailed name for the request that you require.
- 5. Select the level of urgency for the question with which you need help.

- 6. Type your question in the Question text area.
- 7. Click Next.

The Email Summary dialog appears.

8. Ensure that the information that appears in the Email Summary dialog is accurate.

*Note:* The email information displayed in the Technical Support Email Address is choosen based on the location information that you provided in the General Information dialog. It is not recommended that you edit the e-mail address.

- 9. If you want to save or print a copy of the email, click the appropriate button.
- 10. Click Send Email to send your email.

#### **Contacting Rational Technical Support by Email or Telephone**

When contacting Rational Technical Support by email or by telephone, please be prepared to supply the following information:

- Name, telephone number, and company name
- Product name and version number
- Operating system and version number (for example, Windows NT 4.0, Windows 2000, Solaris 2.6/2.7/2.8, or HP-UX 10.20)
- Computer make and model
- Your case id (if you are calling about a previously reported problem)
- A summary description of the problem, related errors, and how it was made to occur

If your organization has a designated, on-site support person, please try to contact that person before contacting Rational Technical Support.

You can obtain technical assistance by sending electronic mail to the appropriate email address. Electronic mail is acknowledged immediately and is usually answered within one working day of its arrival at Rational. When sending an email place "Rational Rose RealTime" in the subject line, and in the body of your message include a description of your problem. When sending email concerning a previously-reported problem, please include in the subject field: "CaseID: v0XXXXX", where XXXXX is the caseid number of the issue. For example:

CaseID: v0176528 New data on rational rose realtime install issue

Sometimes Rational technical support engineers will ask you to fax information to help them diagnose problems. You can also report a technical problem by fax if you prefer. Please mark faxes "Attention: Technical Support" and add your fax number to the information requested above.

Telephone and fax numbers for Rational Technical Support are contained in the following table. If you have problems or questions regarding licensing, please see "License Support Contact Information" on page 42.

Region	Telephone Number	Fax Number
Americas	800-433-5444	408-863-4300
Asia Pacific (includes support for Japan, China, India, Korea, Taiwan)	+61-2-9419-0111	+61 2 9419 0123
Europe, Middle East, and Africa (includes support for Israel)	31 (0)20 4546 200	+31 23 569 4302
Other worldwide locations	408-863-5000	

Table 1Support Telephone and Fax

Email addresses for Rational Technical Support are listed in the following table.

Region	Email Address
Americas and other worldwide locations	support@rational.com
Asia Pacific (includes support for Japan, China, India, Korea, Taiwan)	support@apac.rational.com
Europe, Middle East, Africa (includes support for Israel), and Scandinavia	support@europe.rational.com

Table 2Support Email

#### **License Support Contact Information**

If you have a problem or questions regarding the licensing of your Rational Software products, please contact the Licensing Support office nearest you.

Telephone numbers for license support are listed in the following table. Ask for, or select, Licensing Support.

Table 3 License Support Telephone and Fax

Region	Telephone Number	Fax Number
Americas	800-433-5444	781-676-2510
Europe, Israel, and Africa	+31 23 554 10 62	+31 23 554 10 69
North Asia Pacific (Mainland China, Hong Kong, Taiwan)	+852 2143 6382	+852 2143 6018
Korea	+82 2 556 9420	+82 2 556 9426
South Asia Pacific Australia, New Zealand, Malaysia, Singapore, Indonesia, Thailand, The Philippines, Vietnam, Guam and India	+612 9419 0100	+612 9419 0160
Japan	+81 3 5423 3611	+81 3 5423 3622

Email addresses for license support are listed in the following table.

Table 4License Support Email

Region	Email Address
Americas	lic_americas@rational.com
Europe, Israel, and Africa	lic_europe@rational.com
North Asia PacificMainland China, Hong Kong, Taiwan, and Korea	lic_apac@rational.com
South Asia Pacific Australia, New Zealand, Malaysia, Singapore, Indonesia, Thailand, The Philippines, Vietnam, Guam and India	lic_apac@rational.com
Japan	lic_japan@rational.com