

Rational Requisite[®] Installation Guide

Version 4.0

RATIONAL
SOFTWARE

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1

Rational Software Installation Quick Start

Installation Overview

The Rational Software Setup program lets you perform standard and custom installations of Rational software products.

This document provides you with:

- An overview of the installation procedures for Rational Software products, included in this chapter.
- Software licensing description and procedures. See “Licensing Overview” on page 47.

The online help for Rational License Key Administrator contains detailed information about licensing activities.

- Information needed to perform a typical installation of Rational Software. Additional information about the products in Rational Suite is available in the documentation for each of the products in the suite, including installation options and product customization.

Rational Software online documentation is available in either PDF, or HTML, or both formats. Adobe Acrobat Reader is required to view PDF files; a Web browser is required for HTML documents.

A copy of the Adobe Acrobat Reader installation kit is available on the Rational Windows Solutions CD in the [extras] directory. Rational Suite and several other Rational products are on a separate Rational Solutions for Windows – Online Documentation CD.

- Support information, including references to additional sources of information for Rational software and licensing. See Table 10, “Rational Customer Support Information,” on page 76.

Installing Rational Software Products and License Keys

This section provides a summary of the steps for installing Rational software products and the FLEXlm license server software.

For each product that you install, refer to the installation chapter for information about prerequisites and additional installation procedures.

Installation Quick Start

Table 1 summarizes the steps for installing Rational software and license keys:

Table 1: Installation Quick Start Guide

Step	For More Information
Install Rational software from the Rational Windows Solutions CD. Make certain that you are installing the product you have purchased.	See the chapter for the product you are installing for custom installation options and configuration procedures. Also, see "Additional Installation Information" on page 69
If you are using floating licenses: Install and configure the FLEXlm License Server software. The FLEXlm License Server software is on the Rational Solutions for Windows CD.	See "FLEXlm License Server Installation" on page 65.
Use the Rational License Key Administrator to install the startup license key.	See the Rational License Key Administrator online help for detailed instructions. The information you need to install the startup license key is included on your Startup License Key Certificate in your media kit.
Request permanent license keys from Rational using the License Key Administrator. Make certain that you are requesting keys for the product you have purchased and installed.	See "Rational Software Client Licensing" on page 51, "Rational Software Server Licensing" on page 55, and the Rational License Key Administrator online help.

Table 1: Installation Quick Start Guide (Continued)

Step	For More Information
If you are using node-locked licenses: Install the new permanent license key on your client system. If you are using floating licenses: Install the new permanent license key on your license server system.	See the Rational License Key Administrator online help.
If you are using floating licenses: Set up your client systems to use the licenses from the license server system.	See the Rational License Key Administrator online help.
Use the Start menu to select and start the program.	See the program's online help.

Note Startup license key information is included with your Rational Software software media kit. The startup license expiration date is noted on your startup license key certificate. For additional licensing information, see the Rational License Key Administrator online help.

Caution **Make certain that you select the product you purchased when you use the Rational Software Setup program. If you install a program other than the one you purchased and for which you do not have a license key, you will not be able to use that program.**

2

Rational RequisitePro Installation

This chapter describes how to use the Rational Software Setup wizard to install Rational RequisitePro Version 4.0.

RequisitePro 4.0 organizes your software development requirements, linking Microsoft Word to a requirements repository that can be shared among other Rational products. For additional information, see the readme document in the <Install Path>\RequisitePro\ directory.

Before You Start the RequisitePro Installation

The following sections provide you with steps you must take and information you must prepare prior to installing RequisitePro.

For more detail on the installation procedure, including an explanation of installation types, installing shared components, and accessing support, refer to the “Additional Installation Information” on page 69.

Installation Requirements

Note Make certain that you have a current backup of your Registry and system directories prior to running the Rational Software Installation procedure.

You must install either a startup or permanent license key to use this software. The Rational License Key Administrator online help provides detailed instructions for installing startup and permanent license keys. See “Rational Software Client Licensing” on page 51 for more information about licenses, including the procedure for obtaining an updated license key.

The installation program requires specific versions of Microsoft files. The installation program will install them or you may choose to install them yourself from other sources.

To use the Rational Software Setup program on a Windows NT system, you must have Windows NT administrator privileges on the local machine.

Table 2: RequisitePro Requirements

Item	Requirement
Operating System	Windows NT 4.0, SP3 or Windows 95 SR 1 Windows 98 US English Operating Systems only
Processor	133 MHz or greater
Memory	64 MB
Disk space	55 MB
Other Products	Microsoft Word 95 or 97

Installing RequisitePro with the Rational Software Setup Procedure

Preparing to Install RequisitePro

The Rational Software Installation procedure uses `C:\Program Files\Rational` as the default install path. You may specify another drive during the installation procedure.

If your `C:\` drive lacks sufficient free disk space, you may either specify another drive or make more space available on the default drive.

Caution Canceling an installation that is in progress may leave your system in an indeterminate state. If you click **Cancel** while the installation is in progress, you are asked to confirm that you want to exit from the incomplete installation.

This section describes a Typical installation of RequisitePro. For a more detailed description of the installation procedure, see “Using the Rational Software Setup Program” on page 69.

- 1 Insert the Rational Windows Solutions CD into your system's CD drive.

The setup program starts automatically.

If autorun is disabled on your system, click **Start → Run**. Using the drive letter of your CD-ROM drive, enter
drive:\SETUP.EXE.

- 2** The Rational Software Setup wizard guides you through the software installation. On each page, click **Next** to proceed to the next page.

The Rational Software Setup program writes a log of the installation activities. The log file is located in
<Install Path>\Rational\RSSetup\RSSetup.log.

- 3** At the Choose Products page, select **Rational RequisitePro 4.0**.

For additional detail on the installation procedure, including an explanation of installation types, installing shared components, and accessing support, refer to the “Additional Installation Information” on page 69.

Possible Reboot Required

If files that are required for the installation are in use during the installation procedure, the Rational Windows Setup program may need to reboot your system to complete the installation.

After rebooting, log on as the same user to complete the installation procedure.

Removing RequisitePro

This section describes how to remove RequisitePro from your system.

Preparing to Remove RequisitePro

Make sure that no one is using RequisitePro and any associated files. You will not be able to remove files that are in use.

To remove RequisitePro from a Windows NT system, you must have Windows NT administrator privileges on the local machine.

To Remove RequisitePro

Use the **Add/Remove Programs** control panel to select and remove RequisitePro. The Rational Software Setup removes RequisitePro from your system.

3

Rational RequisiteEnterprise Installation and Configuration

This chapter describes how to use the Rational Software Setup wizard to install Rational RequisiteEnterprise 4.0 and configure Oracle and Microsoft SQL Server databases for RequisitePro projects.

Rational RequisiteEnterprise offers expanded capabilities and flexible access to RequisitePro. An add-on to Rational RequisitePro 4.0, RequisiteEnterprise was developed to support large-scale, distributed projects and is fully extensible. Key features include:

- **Support for Client/Server Databases**

The use of client/server databases offers significantly increased power and expandability to your organization's implementation of Rational RequisitePro. RequisiteEnterprise provides the capability to use Oracle 7.3 and Microsoft SQL Server, as well as Microsoft Access databases. Project data currently in Access can be easily migrated to Oracle or SQL Server.

- **Fully Documented Extensibility Interface**

Rational RequisiteEnterprise is fully extensible. A fully documented COM-based API is provided allowing customers and third-party solution providers direct access to the requirement data.

Before You Start the RequisiteEnterprise Installation

The following sections provide you with steps you must take and information you must prepare prior to installing RequisiteEnterprise.

For more detail on the installation procedure, including an explanation of installation types, installing shared components, and accessing support, refer to the “Additional Installation Information” on page 69.

Installation Requirements

Note Make certain that you have a current backup of your Registry and system directories prior to running the Rational Software Installation procedure.

You must install either a startup or permanent license key to use this software. The Rational License Key Administrator online help provides detailed instructions for installing startup and permanent license keys. See “Rational Software Client Licensing” on page 51 for more information about licenses, including the procedure for obtaining an updated license key.

To use the Rational Software Setup program on a Windows NT system, you must have Windows NT administrator privileges on the local machine.

Oracle and SQL Server Databases

RequisiteEnterprise offers expanded database alternatives for RequisitePro projects.

To create and access RequisitePro projects in Oracle or Microsoft SQL Server databases, you must configure an Oracle or SQL Server schema on your database server, and install RequisitePro and RequisiteEnterprise on your client PC.

Database Setup

Refer to Oracle or Microsoft documentation for information on installing Oracle 7.3 or Microsoft SQL Server 6.5. To configure an Oracle or SQL Server database for RequisitePro projects, refer to the sections “Configuring Oracle for RequisiteEnterprise” on

page 21 and “Configuring SQL Server for RequisiteEnterprise” on page 31.

Client Installation

Access to RequisitePro projects on Oracle and SQL Server databases requires the installation of RequisitePro and RequisiteEnterprise on the client PC. If you are using an Oracle database, you must also install the Oracle client software on your PC.

There are no additional system requirements for the RequisiteEnterprise add-in on the client. See the chapter “Rational RequisitePro Installation” on page 13 for RequisitePro system requirements.

Installing RequisiteEnterprise

Preparing to Install RequisiteEnterprise

The Rational Software Installation procedure uses `C:\Program Files\Rational` as the default install path. You may specify another drive during the installation procedure.

If your `C:\` drive lacks sufficient free disk space, you may either specify another drive or make more space available on the default drive.

Caution Canceling an installation that is in progress may leave your system in an indeterminate state. If you click **Cancel** while the installation is in progress, you are asked to confirm that you want to exit from the incomplete installation.

This section describes a typical installation of RequisiteEnterprise. For a more detailed description of the installation procedure, see “Using the Rational Software Setup Program” on page 69.

- 1 Insert the Rational Windows Solutions CD into your system’s CD drive.

The setup program starts automatically.

If autorun is disabled on your system, click **Start → Run**. Using the drive letter of your CD-ROM drive, enter
`drive:\SETUP.EXE`.

- 2** The Rational Software Setup wizard guides you through the software installation. On each page, click **Next** to proceed to the next page.

The Rational Software Setup program writes a log of the installation activities. The log file is located in
`<Install Path>\Rational\RSSetup\RSSetup.log`.

- 3** At the Choose Products page, select **Rational RequisiteEnterprise 4.0**.

For additional detail on the installation procedure, including an explanation of installation types, installing shared components, and accessing support, refer to the “Additional Installation Information” on page 69.

Possible Reboot Required

If files that are required for the installation are in use during the installation procedure, the Rational Windows Setup program may need to reboot your system to complete the installation.

After rebooting, log on as the same user to complete the installation procedure.

Removing RequisiteEnterprise

This section describes how to remove RequisiteEnterprise from your system.

Preparing to Remove RequisiteEnterprise

Make sure that no one is using RequisiteEnterprise and any associated files. You will not be able to remove files that are in use.

To remove RequisiteEnterprise from a Windows NT system, you must have Windows NT administrator privileges on the local machine.

To Remove RequisiteEnterprise

Use the **Add/Remove Programs** control panel to select and remove RequisiteEnterprise. The Rational Software Setup removes RequisiteEnterprise from your system.

Configuring Oracle for RequisiteEnterprise

Purpose

This section provides information about configuring Rational's RequisiteEnterprise for use with Oracle7 database server, Version 7.3. It includes:

- database management information for setting up an Oracle schema to accommodate Requisite projects,
- instructions for accessing an Oracle host from the client PC using Oracle's SQL Net Easy Configuration tool, and
- a procedure for creating a Requisite project in the Oracle database.

These instructions are intended for use by Oracle database administrators, system administrators, and RequisitePro project managers.

Introduction

RequisiteEnterprise now offers the capability of using Oracle7, as well as Microsoft Access, for your project database. The use of Oracle offers significant power and expandability to your organization's implementation of RequisiteEnterprise.

This document assumes that you have Oracle7, Version 7.3, installed on your LAN and the Oracle client software installed on your PC. Refer to the Oracle7 documentation for all questions regarding that product.

To create and access RequisiteEnterprise projects in the Oracle database, follow the instructions in this document for enabling your Oracle database compatibility. RequisiteEnterprise supports multiple projects within a single Oracle schema. Refer to the procedure in this document, "Creating a Project in the Oracle Database" on page 28 for instructions on adding an Oracle

database project within RequisiteEnterprise. Use the same schema name for each of your RequisiteEnterprise projects.

Prerequisites

The following installation and configuration tasks need to be accomplished prior to performing the RequisiteEnterprise/Oracle integration outlined in this document.

Required Software

- RequisitePro 4.0
- RequisiteEnterprise 4.0
- Oracle7 database server, Version 7.3 on the server
- Oracle7 client software on the client PCs

Oracle Database Administration

Prior to configuring your access to Oracle from RequisiteEnterprise, the database administrator needs to provide the following information:

- Oracle database server name (TCP/IP Host Name)
- Oracle database instance (Oracle's default is WG73 – yours may be different)
- Oracle schema name for storing RequisiteEnterprise projects (see procedure below)
- your user ID for logging on to the Oracle database
- your user password for logging on to the Oracle database

Platform Compatibility

RequisiteEnterprise database implementation is compatible with all Oracle7-supported platforms.

Creating an Oracle Schema for RequisiteEnterprise

Oracle database administration allows the creation of multiple schemas within your Oracle database instance.

The scripts listed in the next section are included on your Rational Windows Solutions media in the following location:

CD-ROM:\\RequisitePro 4\Enterprise\Oracle\

Note: The scripts can be installed to your computer, using the “Custom/Full” installation option of RequisiteEnterprise.

Use these scripts to create a RequisiteEnterprise schema within Oracle for storing your projects. These scripts are designed to initially allocate disk space for the various database tables and indexes that are used by RequisiteEnterprise, based on the following assumptions:

- 25 projects
- 250 documents (10 per project)
- 125 document types (5 per project)
- 125 requirement types (5 per project)
- 1250 user defined attributes (10 per requirement type)
- 125 user groups (5 per project)
- 100 users
- 12,500 requirements (500 per project)
- 12,500 discussions (500 per project)

The extents, which are set to the size as the initial allocations, define additional table space that Oracle will allocate if the original allocation becomes insufficient.

As database administrator, you can customize the scripts to adjust the table space allocations for tables and indexes in order to accommodate your organization's intended use of RequisiteEnterprise.

Schema Creation Scripts

The following scripts are used for creating a RequisiteEnterprise schema within your Oracle database. They can be run automatically by executing the main script, `CREATE_REQPRO`, as described in the procedure “Creating a Schema” on page 26, or you can run them individually as needed.

CREATE_REQPRO

Establishes a log which can be used to review the results of running the script and runs the other scripts, listed below.

TABLESPACE

Creates table spaces for data and indexes. Creates disk files to support these table spaces.

CREATE_USER

Creates the default RequisitePro user (REQPRO) and password (REQPRO) and connects to the database with that user ID.

TABLES

Creates tables for the RequisiteEnterprise database.

PRIMARY

Creates primary keys for each table in RequisiteEnterprise.

INDEXES

Creates indexes for the RequisiteEnterprise database.

FOREIGN

Creates foreign key relationships between tables.

FUNCTIONS

Creates user-defined functions used within RequisitePro.

SEQUENCE

Creates sequences and triggers for auto-sequencing the RqToRelationships and RqQueryCriteria tables.

DATA

Inserts data into the RqKeys and RqRequisite tables.

GRANT_ROLE

Creates a user role with access to the RequisitePro schema objects.

Editing Scripts

Make the modifications described below to the CREATE_REQPRO script.

Specifying the Path for the Schema Scripts

Edit the DEFINE PATH entry to indicate the full path of your RequisiteEnterprise installation (where the .SQL scripts are located):

```
DEFINE PATH=$HOME/sql/
```

Indicating Data and Index Files Directory

Edit the DEFINE ORACLE _DATA entry to indicate the path and directory where the data file for the data table space will be created:

```
DEFINE ORACLE_DATA=/ORACLE_DATA/
```

Edit the DEFINE ORACLE _INDEX entry to indicate the path and directory where the data file for the index table space will be created:

```
DEFINE ORACLE_INDEX=/ORACLE_INDEX/
```

Customizing Disk Space Allocation for Database Objects

The schema creation scripts are designed to allocate disk space for the various database tables and indexes that are used by RequisiteEnterprise.

If you anticipate a much larger or smaller requirement for your organization's use of RequisiteEnterprise, you can customize the disk space allocation specified in the CREATE_REQPRO script to accommodate your projected capacity.

Edit the following sizing variables:

```
SMALL      = 10
MEDIUM    = 100
LARGE     = 1000
REQS      = 6000
REQHIST   = 75000
```

Note: The last two variables, REQS and REQHIST, are used for the requirements (RqRequirements) and requirement history (RqRequirementHistory) tables, respectively.

Edit the DEFINE DATA_SIZE and DEFINE INDEX_SIZE entries to reflect the change in the total size of the database caused by your edits to the sizing variables.

Creating a Schema

The Oracle database administrator performs the following procedure to create a RequisiteEnterprise schema in Oracle:

- 1** Edit the CREATE_REQPRO script, as described above in the section “Editing Scripts.”
- 2** Run SQL*Plus logging on to the Oracle database with system administrator permissions.
- 3** Run the CREATE_REQPRO script using the command:
@<setup directory>\CREATE_REQPRO

This script runs the schema creation scripts. A message appears upon successful completion of the schema creation. If errors occur, review the log CREATE_REQPRO.LOG.

User ID for Accessing Oracle Database

All RequisiteEnterprise projects should access the Oracle database using the same user ID, which was created during the schema creation process, described above. The initial user name and password created by the script is REQPRO/REQPRO.

Each user does not need a separate Oracle account because RequisiteEnterprise uses its own user and user group tables to control access to a project.

Using Multiple Projects within an Oracle Database

RequisiteEnterprise supports multiple projects within a single Oracle schema. Refer to the procedure “Creating a Project in the Oracle Database” on page 28 for instructions on adding an Oracle database project within RequisiteEnterprise. Use the same schema name for each of your RequisiteEnterprise projects.

Setting Up PCs for Oracle Access

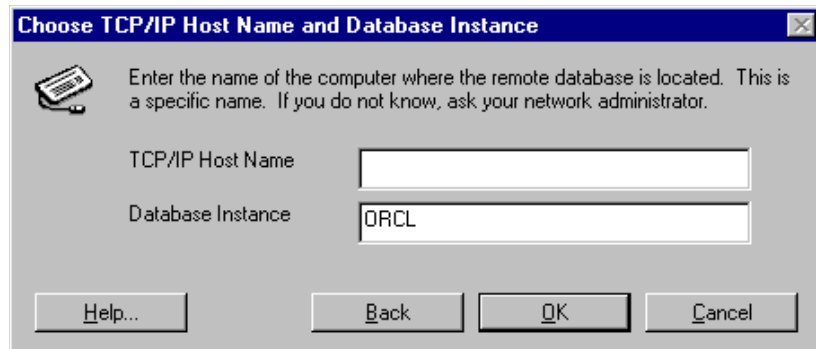
Configuring Your PC

Perform the following steps to configure your PC for accessing the Oracle database on a server. This assumes that you have installed the Oracle client software on your PC.

- 1 From your **Start** menu, select **Programs -> Oracle for Windows 95 or NT -> SQL Net Easy Configuration**.
- 2 Ensure that the **Add Database Alias** radio button is selected, then click **OK**.
- 3 Type the name for your **Database Alias**, such as “OracleDB.” This entry is not case-sensitive.

Note: This database alias must be identical when configuring all PCs that will access the RequisiteEnterprise projects in the Oracle database.

- 4 Select **OK**.
The “Choose TCP/IP Host Name and Database Instance” dialog box appears.



- 5 In the **TCP/IP Host Name** field, type the host name of your Oracle server. This should be supplied to you by your Oracle database administrator.
- 6 In the **Database Instance** field, type the Oracle database instance, which was created by your Oracle database

administrator when it was installed at your site. The default entry from Oracle is WG73, but this may have been changed by your administrator.

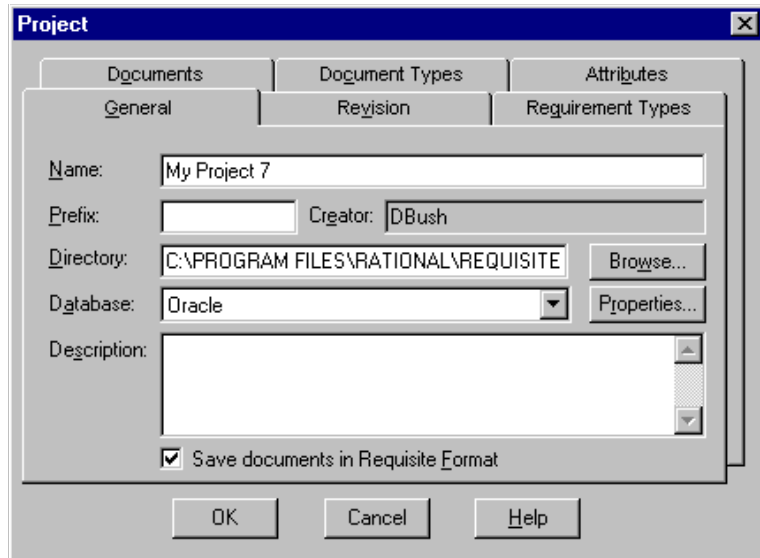
- 7 Select **OK**.
The “Confirm Adding Database Alias” dialog box appears.
- 8 Select **Yes** or **Back** if corrections are needed.
- 9 Select the **Exit SQL *Net Easy Configuration** radio button, and then **OK**.
- 10 Select **OK** on the Notification dialog box.

Creating a Project in the Oracle Database

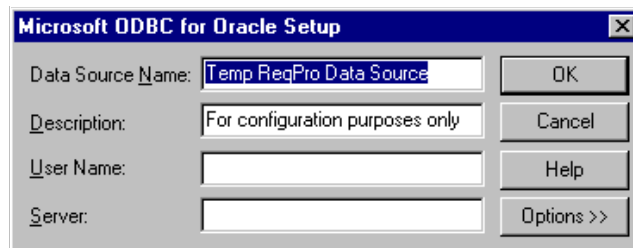
Perform the following steps to create a RequisiteEnterprise project that uses the Oracle database server for storing the RequisiteEnterprise project database.

- 1 Start RequisiteEnterprise.
- 2 On the **Project** menu, click **New**.
- 3 At the New Project dialog box, select the method **Blank project database**.

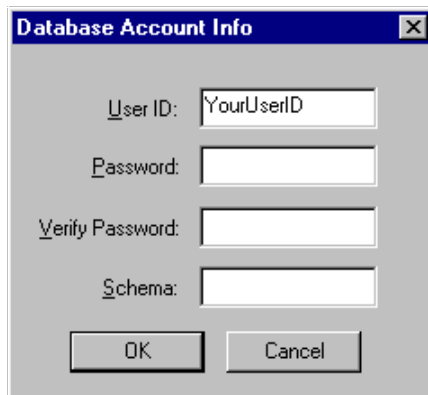
- 4 Click **OK**. The Project dialog box appears.



- 5 Perform all actions you would normally perform when creating a project; in addition, do the following.
- 6 In the Project dialog box General tab, select **Oracle** from the **Database** drop-down list.
- 7 Click the **Properties** button. The Database Properties dialog box appears.
- 8 Click the **Configure** button. The Microsoft ODBC for Oracle Setup dialog box appears.



- 9 Do not modify the default entries in the **Data Source Name** and **Description** fields.
- 10 Type your **User Name** for logging into the Oracle database. This should be supplied to you by your Oracle database administrator.
- 11 For the **Server** field, type the **alias** you created in step three of the procedure above, “Configuring Your PC” on page 27; for example: OracleDB.
Note: This database alias must be identical when configuring all PCs that will access the RequisiteEnterprise projects in the Oracle database.
- 12 Click **OK**.
- 13 On the Database Properties dialog box, click the **Account Info** button. The Database Account Info dialog box appears.



The image shows a dialog box titled "Database Account Info". It has a standard Windows-style title bar with a close button (X) on the right. The dialog contains four text input fields, each with a label to its left: "User ID:" (with the text "YourUserID" entered), "Password:", "Verify Password:", and "Schema:". At the bottom of the dialog are two buttons: "OK" and "Cancel".

- 14 Do not modify the User ID field.
- 15 Type your user password for logging into the Oracle server. This should be supplied to you by your Oracle database administrator.
- 16 Retype your password in the **Verify Password** field.
- 17 In the **Schema** field, type the name of the Oracle schema that your Oracle database administrator has established for storing RequisiteEnterprise data in Oracle.

- 18 Click **OK** to close the dialog box.
- 19 Click **OK** to close the Database Properties dialog.
- 20 Finish creating your project, then click **OK** to close the Project dialog box.

Archiving an Oracle Project

The RequisitePro archiving function is not supported in a RequisiteEnterprise Oracle database. In order to protect your work, you should back up the Oracle database and the project Word documents concurrently.

Configuring SQL Server for RequisiteEnterprise

Purpose

This section provides information about configuring Rational's RequisiteEnterprise for use with Microsoft SQL Server. The section includes:

- database management information for setting up a SQL Server schema to accommodate RequisitePro projects, and
- a procedure for creating a RequisitePro project in the SQL Server database.

This document is intended for use by SQL Server database administrators, system administrators, and RequisitePro project managers.

Introduction

RequisiteEnterprise now offers the capability of using Microsoft SQL Server, as well as Microsoft Access, for your project database. The use of SQL Server offers significant power and expandability to your organization's implementation of RequisitePro.

This document assumes that you have SQL Server, Version 6.5, installed on your LAN. Refer to the SQL Server documentation for all questions regarding that product.

To create and access RequisitePro projects in the SQL Server database, follow the instructions in this section for enabling your

SQL Server database compatibility. RequisiteEnterprise supports multiple projects within a single SQL Server schema. Refer to the procedure “Creating a Project in SQL Server” on page 35 for instructions on adding an SQL Server database project within RequisitePro. Use the same schema name for each of your RequisitePro projects.

Prerequisites

The following installation and configuration tasks need to be accomplished prior to performing the RequisitePro/SQL Server integration outlined in this document.

Required Software

- RequisitePro 4.0
- RequisiteEnterprise
- Microsoft SQL Server database server, Version 6.5

SQL Server Database Administration

Prior to configuring your access to SQL Server from RequisitePro, the database administrator needs to establish the following items:

- SQL Server machine name (TCP/IP Host Name)
- SQL Server default database for RequisitePro projects, such as “RequisitePro”
- a user ID for logging on to the SQL Server database, such as “ReqPro”
- a user password for logging on to the SQL Server database, such as “reqpro”

See the following sections for instructions on configuring these items.

Platform Compatibility

RequisiteEnterprise database implementation is compatible with all Microsoft SQL Server-supported platforms.

Creating a SQL Server Database for RequisitePro

Use the following instructions to create a SQL Server database and schema for RequisitePro projects. The initial database size is based on the following assumptions for your use of RequisitePro:

- 25 projects
- 250 documents (10 per project)
- 125 document types (5 per project)
- 125 requirement types (5 per project)
- 1250 user-defined attributes (10 per requirement type)
- 125 user groups (5 per project)
- 100 users
- 12,500 requirements (500 per project)
- 12,500 discussions (500 per project)

Creating Database Devices

1 Create a **database device for the RequisitePro database.**

- The recommended device name is “ReqProData.”
- The ideal size of the device depends on the number of RequisitePro projects that will be stored in the database, as well as the number of requirements in those projects. The recommended size is 150 MB.

2 Create a **database device for the RequisitePro log file:**

- The recommended device name is “ReqProLog.”
- The recommended size for the log device is one third (33%) of the size of the database device created in step 1, above.

3 Create a **database** in the ReqProData device created in step 1:

- The recommended database name is “RequisitePro.”
- The recommended size is the same as the database device created in step 1, above.
- Specify the ReqProLog device, created in step 2 above, as the log device for this database.

Running Schema Creation Scripts

The following scripts are used for creating a RequisitePro schema within your SQL Server database. Run them individually using the **iSQL_w** executable or the **SQL Query Tool** within the SQL Server Enterprise Manager. Run them in the sequence presented below.

The scripts are located in the Enterprise\SQLServer directory of your RequisitePro installation if you've installed RequisiteEnterprise using the "Custom/Full" installation option.

Login and User.sql

Creates a default RequisitePro login and user. For more information refer to the section below, "Default Login and User."

Defaults.sql

Creates default values used by various tables.

Tables and Indexes.sql

Creates the tables and indexes required by RequisitePro.

Triggers.sql

Creates triggers that enforce cascading deletes.

Initial Data.sql

Inserts data required by RequisitePro when it first runs.

Default Login and User

The schema creation scripts, described above, create default user information for accessing and creating projects in SQL Server. The user name also establishes the ownership and name of the schema (by default, "reqpro"). The default user permissions are required for use with RequisitePro.

User	Login	Password
ReqPro	ReqPro	reqpro

The ReqPro user is assigned the following statement permissions in SQL Server:

User	Statement Permissions
ReqPro	Create Default, Create Procedure, Create Rule, Create Table, Create View

As the owner of the RequisitePro database objects, the ReqPro user is automatically assigned the following database permissions in SQL Server:

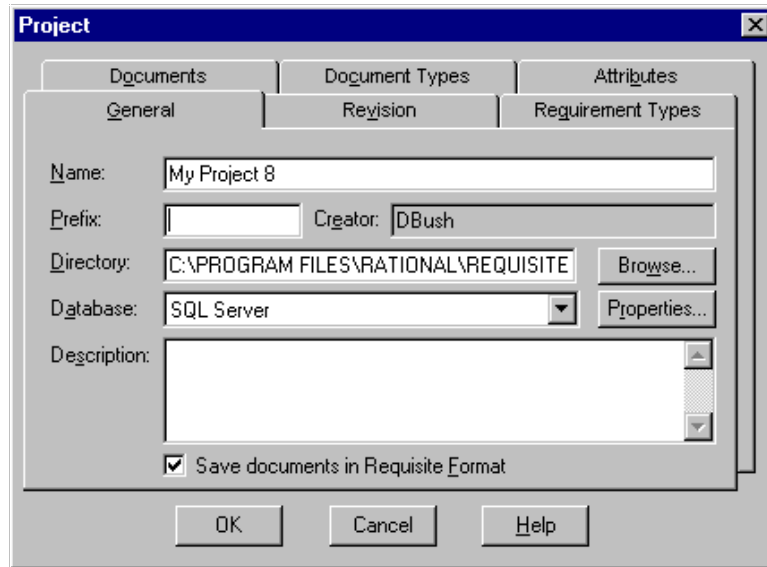
User	Database Permissions
ReqPro	Select, Insert, Update, Delete, DRI on all Tables and Views

Creating a Project in SQL Server

Perform the following steps to create a RequisitePro project that uses the SQL Server for the project database.

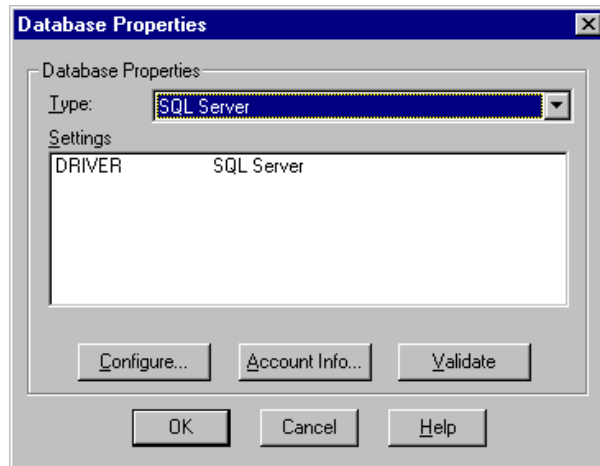
- 1 Start RequisitePro.
- 2 On the **Project** menu, click **New**.
- 3 At the New Project dialog box, select the method **Blank project database**.

- 4 Click **OK**. The Project dialog box appears.



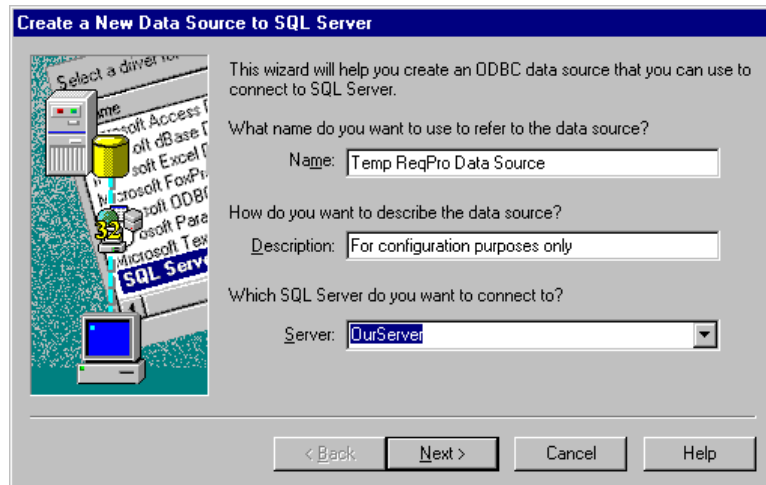
- 5 Perform all actions you would normally perform when creating a project; in addition, do the following.
- 6 In the Project dialog box General tab, select **SQL Server** from the **Database** drop-down list.

- 7 Click the **Properties** button. The Database Properties dialog box appears.

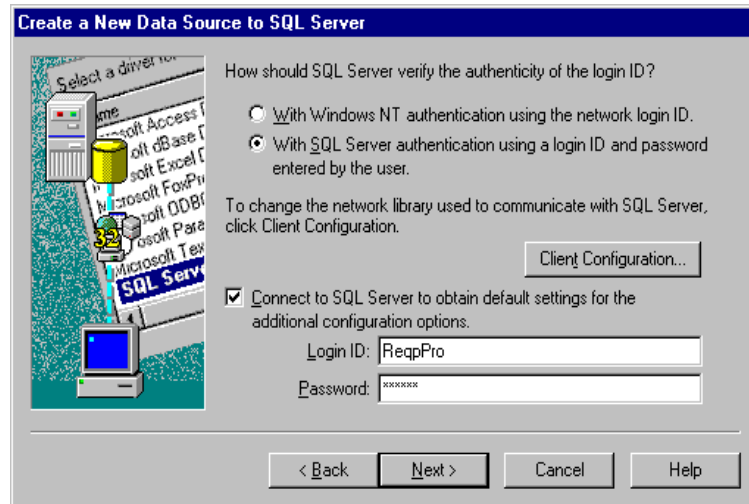


Configuring the Database

- 1 At the Database Properties dialog box, click the **Configure** button. The “Create a New Data Source to SQL Server” dialog box appears.



- 2 Do not modify the data source **Name** or **Description** fields
- 3 In the **Server** field, type the name of the SQL Server, supplied by your database administrator.
- 4 Click **Next**. The second data source screen appears.

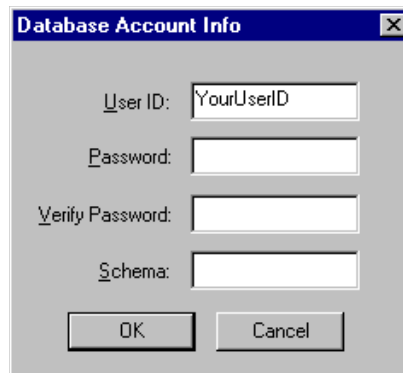


- 5 Select the option “**With SQL Server authentication using a login ID and password entered by the user.**”
- 6 Be sure the check box “**Connect to SQL Server to obtain default settings for the additional configuration options**” is checked.
- 7 Type a **login ID** and **password** supplied by your database administrator, such as “ReqPro” and “reqpro.”
- 8 Click **Next**.
- 9 Click the check box “**Change the default database to**” and select a database name supplied by your database administrator, such as “RequisitePro.”
- 10 Click **Next**.
- 11 Click **Next** to accept the default language, character, and regional settings. The use of log files, shown on the following screen, is optional.

- 12 Click **Finish**. The ODBC Microsoft SQL Server Setup dialog box appears.
- 13 Click the **Test Data Source** button. The SQL Server ODBC Data Source Test dialog box appears.
- 14 Click **OK**. The ODBC Microsoft SQL Server Setup dialog box appears.
- 15 Click **OK**. You return to the Database Properties dialog box.

Setting Up the Project Account Information

- 1 At the Database Properties dialog box, click the **Account Info** button. The “Database Account Info” dialog box appears.



The screenshot shows a dialog box titled "Database Account Info". It has a standard Windows-style title bar with a close button (X) on the right. The dialog contains four text input fields, each with a label to its left: "User ID:" (with the text "YourUserID" inside), "Password:", "Verify Password:", and "Schema:". At the bottom of the dialog are two buttons: "OK" and "Cancel".

- 2 Type the **user ID** and **password**, supplied by your database administrator for accessing the SQL Server database, such as “ReqPro” and “reqpro.”
- 3 Retype your password in the **Verify Password** field.
- 4 Type the name of the SQL Server **schema**, supplied by your database administrator, such as “ReqPro.”
- 5 Click **OK** to close the dialog box.
- 6 Click **OK** to close the Database Properties dialog.
- 7 Finish creating your project, then click **OK** to close the Project dialog box.

Archiving a SQL Server Project

The RequisitePro archiving function is not supported with a SQL Server database. In order to protect your work, you should back up the SQL Server database and the project Word documents concurrently.

4

Rational RequisiteWeb Installation and Configuration

Overview

This chapter describes the installation and configuration of Rational RequisiteWeb 4.0.

Rational RequisiteWeb allows clients to read and modify requirements information across the Internet or an Intranet. By utilizing browsers – Netscape Navigator or Microsoft Internet Explorer – RequisiteWeb provides platform-independent, thin-client access to RequisitePro project data.

RequisiteWeb requires the configuration of the Microsoft Internet Server and the installation of Web components on the same Microsoft Windows NT server. In addition, a Web browser must be installed on the client system. No Requisite application-specific files need to be installed on the client system.

RequisiteWeb Server

The following sections provide system requirements, installation, and configuration information for installing RequisiteWeb on your NT server.

For more detail on the installation procedure, including an explanation of installation types, installing shared components, and accessing support, refer to the “Additional Installation Information” on page 69.

Installation Requirements

Note: Make certain that you have a current backup of your Registry and system directories prior to running the Rational Software Installation procedure.

You must install either a startup or permanent license key to use this software. The Rational License Key Administrator online help provides detailed instructions for installing startup and permanent license keys. See “Rational Software Client Licensing” on page 51 for more information about licenses, including the procedure for obtaining an updated license key.

To use the Rational Software Setup program on a Windows NT system, you must have windows NT administrator privileges.

RequisiteWeb Server Requirements

Table 3 summarizes the requirements for the RequisiteWeb server.

Table 3: Server Requirements

Item	Requirement
Operating System	NT Server 4.0, SP 4 NT 4.0 Option Pack which includes: Microsoft Internet Information Server (IIS) 4.0
Processor	200 MHz or greater
Memory	128 MB
Disk space	RequisiteWeb (includes system DLLs) -- 40 MB ASPs, Web DLLs, bitmaps -- 2 MB Web Catalog -- 1 MB
Other products	Microsoft Word 97 (for displaying requirement documents in HTML format) Oracle 7.3 client software (for accessing RequisiteEnterprise projects in an Oracle database)

Installing RequisiteWeb on the IIS Server

- 1 Insert the Rational Windows Solutions CD into your system's CD drive.

The setup program starts automatically.

If autorun is disabled on your system, click **Start → Run**. Using the drive letter of your CD-ROM drive, enter
drive:\SETUP.EXE.

- 2 The Rational Software Setup wizard guides you through the software installation. On each screen, click the **Next** button to proceed to the next screen.

The Rational Software Setup program writes a log of the installation activities. The log file is located in
<Install Path>\Rational\RSSetup\RSSetup.log

- 3 At the Choose Product screen, select **Rational RequisiteWeb 4.0** on the drop-down list.
- 4 At the Setup Configuration screen:
 - click **Typical** to install all required RequisiteWeb components, including the Learning Projects, which provide initial sample projects;
 - click **Custom/Full** or **Compact** to install RequisiteWeb without the Learning Projects.

Possible Reboot Required

If files that are required for the installation are in use during the installation procedure, the Rational Windows Setup program may need to reboot your system to complete the installation.

After rebooting, log on as the same user to complete the installation procedure.

Configuring RequisiteWeb Components on the IIS Server

The IIS installation creates a `WWWROOT` directory in the server file structure; typically this is located in the `C:\INETPUB` directory.

The RequisiteWeb installation creates another WWWROOT directory in the Requisite installation directory; typically located in:

C:\Program Files\Rational\RequisitePro 4.

- 1 Create the following directory: C:\INETPUB\WWWROOT\REQWEB
- 2 Copy the contents of the
Program Files\Rational\RequisitePro 4\WWWROOT directory
to the INETPUB\WWWROOT \REQWEB directory of your IIS
installation.

Creating a Virtual Web Directory

RequisiteWeb requires a virtual directory on your Web server in order to access the RequisiteWeb catalog.

- 1 Launch Microsoft Management Console (MMC).
- 2 Navigate to the REQWEB directory under the Web site where you copied the RequisiteWeb files in the previous procedure; typically, this is your Default Web Site.
- 3 Right-click on the REQWEB directory and click **Properties**.
- 4 In the Application Settings frame, click the **Create** button to create a virtual Web directory.
- 5 In the **Name** field, type REQWEB. This virtual directory will become part of the URL for the RequisiteWeb product. For example, if the URL for the default Web site on this server is “www.mycompany.com,” the URL for RequisiteWeb application will be “www.mycompany.com/reqweb.”

Configuring for UNIX Browser Access

If any of your RequisiteWeb users will access the Web interface through a UNIX browser, you must use Microsoft Management Console (MMC) to disable the HTTP Keep-Alives setting for the RequisiteWeb default Web site.

- 1 Log on to the RequisiteWeb server.

- 2 Open **MMC**. This option is located on the Start/Programs menu at Windows NT 4.0 Option Pack/Microsoft Internet Information Server/Internet Service Manager.
- 3 In the left pane of the MMC display, right-click on the `Default Web Site` virtual directory and click **Properties**. The Properties dialog box appears.
- 4 Click the **Performance** tab.
- 5 Clear the check box **HTTP Keep-Alives Enabled** in the Connection Configuration frame.
- 6 Click **OK** to close the Properties dialog box.

Using the Web Project Catalog

Before projects are available for the RequisiteWeb clients, they must be cataloged on the RequisiteWeb server.

- 1 Using a text editor, open the **CATALOG.TXT** file in the `C:\INETPUB\WWWROOT\REQWEB` directory.
- 2 Type the full path and RequisitePro project file name (*.rqs).
- 3 Enter additional project files on successive lines of the text file.
- 4 Save and close the file.

Note: The default catalog file contains entries for the two Learning Projects.

Configuring E-mail for Discussions

Use the Rational E-mail Reader application, included with your RequisiteWeb installation, to configure inbound and outbound e-mail for all users with a valid e-mail address in their RequisitePro user information.

The Rational E-mail Reader application offers full e-mail integration with RequisitePro by associating an e-mail handler with each RequisitePro project. Initial discussion items and replies are automatically stored in the RequisitePro database and sent to discussion participants via e-mail. Participants can reply to the discussion items using their e-mail, as well as from within RequisiteWeb.

Refer to the online help in the Rational E-mail Reader for more information. Note: This configuration is required for enabling e-mail for use with RequisiteWeb discussions.

Removing RequisiteWeb

This section describes how to remove RequisiteWeb from your system.

Preparing to Remove RequisiteWeb

Prior to removing RequisiteWeb from your system, make sure that no one is using RequisiteWeb or any associated files. You will not be able to remove files that are in use.

To remove RequisiteWeb from the Windows NT system, you must have Windows NT administrator privileges on that machine.

To Remove RequisiteWeb

Use the **Add/Remove Programs** function in the Windows NT Control Panel to select and remove RequisiteWeb. The Rational Software Setup removes RequisiteWeb from your system.

RequisiteWeb Client

Browser Requirements

To access RequisiteWeb from client machines, one of the following Web browsers on the client system. No additional client installation is required for use of RequisiteWeb.

- Microsoft Internet Explorer 4.0
- Netscape Navigator 4.0 (Win 95/98/NT)
- Netscape Navigator 4.0 (UNIX)

5

Licensing Overview

This chapter provides an overview of the Rational software licensing, including descriptions of the types of licenses and license keys used with Rational software products.

“Installation Quick Start Guide” on page 10 provides a summary of the steps associated with installing and setting up license keys with Rational software products.

The Rational Software Licensing Model

Rational Software uses FLEXlm, a software-based license management tool from GLOBEtrotter, Inc. FLEXlm provides users with a powerful and flexible mechanism for managing licensing resources.

For more information about FLEXlm licensing, see the FLEXlm for Windows FAQ file on www.globetrotter.com/lmwinfaq.htm.

The Rational Software installation procedure automatically installs the FLEXlm licensing software on client systems, allowing client systems to use either node-locked or floating licenses. (Table 5, “License Types,” on page 49 describes node-locked and floating licenses.)

Most end users configure their own systems for licensing using software provided by Rational. In cases where customers choose to use floating licenses, a system administrator typically configures a license server system for licensing, using software provided by Rational and GLOBEtrotter.

For additional information about Rational software licensing, see “Rational Software Client Licensing” on page 51 and “Rational Software Server Licensing” on page 55.

License Types and License Key Types

Table 4 describes the types of license keys used by Rational licensing. Table 5, “License Types,” on page 49 describes the types of licenses supported by Rational licensing. The Glossary on page 79 contains definitions of the terms in this table, along with other licensing terms.

Table 4: License Key Types

License Key Type	Description	Notes
Startup	A time-limited license.	The expiration date for the startup license keys is noted on the startup license key certificate included with your software media kit.
Permanent	A license issued to a customer for running Rational products. Permanent licenses are keyed to a product and machine. Permanent Keys can be node-locked or floating. Node-locked Permanent Keys are installed on a client machine, and floating Permanent Keys are installed on a License Server machine.	The Rational issues Permanent Keys upon request. Use the Rational License Key Administrator to prepare and send your license requests to Rational.
TLA (Term License Agreement)	Variations of a Permanent Key. TLAs are issued to a site to allow their employees to use Rational software for a negotiated period of time.	TLAs are issued by the Rational Sales Team. If you are interested in obtaining TLAs for your organization, contact your local Rational Sales Team

Table 5: License Types

License Type	Description	Notes
Node-locked	<p>A license that permits a user to use the licensed software on a specified system.</p> <p>A node-locked license is configured for a specific system. To move a node-locked license to another system, you must request a new license key for the new system.</p>	<p>Use the License Key Administrator to add or modify a node-locked license.</p> <p>Contact Rational Support for help with node-locked licenses.</p>
Floating	<p>A floating license is installed on a license server system and permits a specified number of users to use the licensed software on a client system.</p> <p>Floating licenses are shared among all users of the licensed software.</p>	<p>A system administrator must install the FLEXlm License Server software on a server to set up floating licenses.</p> <p>Use Rational License Key Administrator to set up floating licenses for your system.</p> <p>See "FLEXlm License Server Installation" on page 65.</p>

6

Rational Software Client Licensing

This chapter describes the following topics related to Rational software licensing services:

- Installing and configuring Rational software node-locked license keys on a client system.
- Installing or changing license keys after installing Rational software.

If your system administrator has configured your license keys on your system, you can immediately start using your Rational software product.

Rational supports both node-locked and floating licenses. Node-locked licenses are restricted to an individual system. Floating licenses can be shared by multiple users, with one person using a license at a time.

The online help in the Rational License Key Administrator describes how to use the Rational License Key Administrator to review and modify your license configuration.

The Rational License Key Administrator online help is available by clicking **Help** in the License Key Administrator program or by opening `<Install Path>\Rational\Common\licadmin.hlp`.

Installing a Startup License on a Client System

After you install Rational software, you may install a startup license, allowing you to use Rational software until you obtain your permanent license key. The startup license key information is included with your software kit. The license key expiration date is noted on the startup license key certificate.

You can request permanent licenses keys, if available. The date that your permanent license key is available is noted on your startup license key certificate. You can request the permanent key as soon as it is available, whether you have installed a startup key or not.

In order to maintain uninterrupted use of your software, make sure you obtain and install your permanent license key before your startup license key expires.

To Install a Startup License Key on a Client System

- 1 Using your product's Windows Start menu, find and run the License Key Administrator. The Rational License Key Administrator is located in the program group for the program you have installed (for example, RequisitePro or Rational Suite Enterprise).
- 2 On the **License Key(s)** tab, click on **Enter a License Key**.
- 3 On the first wizard page, select **Startup License Key**.
- 4 On the second wizard page, select **Node-Locked License Key**.
- 5 On the wizard screen, provide the information in the fields based on the columns on the Startup License Key Certificate.

You must enter the information exactly as presented or the key will not work. If you enter incorrect or incomplete information, the License Key Administrator reports the following message:

There is an error in the license key as it was entered.
Please check your entries for a possible typo.

Review and correct the information in each of the fields.

- 6 Click **Finish**.

After you complete this step, the License Key Administrator displays the startup license key on the **License Key(s)** tab.

Configuring Your Client System to Use a Node-Locked License

If you are using a node-locked license, you do not need to set up or connect to a license server system; you simply install your license keys on your client system. The Rational License Key Administrator online help describes the license installation process.

Configuring Your Client System to Use a Floating License

Before configuring your system to use a floating license, you must obtain the name of your license server system from your system administrator. (If you are the system administrator, see “Rational Software Server Licensing” on page 55 for information about setting up server-based floating licenses.)

- 1 Ensure that the FLEXlm license server software is running on the license server system. Contact your system administrator or see “Installing Rational License Server Software” on page 56.
- 2 Start the Rational License Key Administrator on the client system.
- 3 Click the **Settings** tab.
- 4 Select the **Search Server** check box and specify the name of the FLEXlm license server system.
- 5 Click **Exit** to exit from the Rational License Key Administrator.

Acquiring a Node-Locked Permanent Key for Your Client System

This section summarizes the steps you follow to submit your request.

The Rational License Key Administrator online help provides instructions for preparing, sending, and receiving license key requests, and installing license key files.

- 1 Use the License Key Administrator to prepare the license request.
- 2 Send the request to Rational. You may send the request to Rational electronically using the Rational License Key Administrator, by printing and faxing the request, or by printing the request and making your request by telephone.

Notes

Review the Rational License Key Administrator online help before requesting permanent licenses. The online help describes the steps for any additional tasks. For example, the online help describes the steps needed to prepare license key requests for multiple systems and submitting those requests from a different system.

Make sure that the contact and account information is correct. The Rational License Key Administrator will identify any fields that are missing required information.

You must have an Internet connection to request license keys electronically with the Rational License Key Administrator.

See “Support Information” on page 76 for contact information regarding licensing questions.

If you request a new license electronically, Rational will send you a license key via e-mail. If you request a license by fax and have specified an e-mail address in your contact information, you will receive a license key file via e-mail.

You cannot request both a client license key and a server license key from the same system. You can request node-locked license keys from a client system and floating license keys from a server system.

7

Rational Software Server Licensing

This chapter describes the following topics related to Rational software licensing services:

- Installing Rational Software license management software.
- Installing and configuring license keys on a server system.
- Installing or changing license keys after installing Rational software.
- Special procedures and restrictions.

The information in this chapter is intended for system administrators or users who manage licenses.

If you are using node-locked licenses on a client system, you can skip this chapter. See “Rational Software Client Licensing” on page 51 for information about setting up node-locked licenses on a client system.

The online help in the Rational License Key Administrator describes how to use the Rational License Key Administrator to review and modify your license configuration. The online help also provides information about configuring the FLEXlm License Server software.

The Rational License Key Administrator online help is available by clicking **Help** in the License Key Administrator program or by opening `<Install Path>\Rational\Common\licadmin.hlp`.

Four steps are required to use floating licenses. These steps are described in the following sections:

- 1 Install the FLEXlm License Server software on the license server system.
- 2 Configure the license server software.
- 3 Install the floating license keys on the license server system.
- 4 Configure the client to use license keys from the server.

Setting up Rational License Software

Installing Rational License Server Software

To use floating licenses, you must first install and configure the FLEXlm License Server on a server system. See “FLEXlm License Server Installation” on page 65 for details.

Configuring the License Server Software

After installing the FLEXlm License Server software, you must provide the following additional information about your configuration. You can use the FLEXlm License Manager to configure:

- Location of the license key file. (Rational recommends that you keep a copy of the license in the location where the application expects it.)
- Location of licensing executables.
- Location of log files. The debug log files can be used to diagnose configuration problems and daemon software errors.
- TCP/IP port number used by the license manager process, `lmgrd`.

To Configure the License Server Software

Use the following steps to configure your FLEXlm License Server software:

- 1 Click **Start** and choose **Settings→Control Panel**.
- 2 Open the **FLEXlm License Manager** control panel.
- 3 Click the **Setup** tab. Enter the location of the `lmgrd.exe` file. The default location is
`<Install Path>\Program Files\Rational\Common\`
- 4 Enter the location of the license key file on your licenser server computer. Specify either `rational_server_perm.dat`, the permanent license key file, or `rational_server_temp.dat`, the startup license key file. The default location is
`<Install Path\Program Files\Rational\Common\`

5 Enter the location of the license debug log file. The default location is <Install Path\Program Files\Rational\Common\

6 Select the **Use NT Services** check box if you want to start the FLEXlm License Server software as a Windows NT service.

If you select the **Use NT Services** check box, you may also select the **Start Server at Power Up** check box. If you do not select the **Start Server at Power Up** check box, you must start the FLEXlm License Server manually each time you start your computer.

We recommend that you select both check boxes to start your license server as a Windows NT service automatically each time you boot your system.

To start the FLEXlm License Server manually, on the **Control** tab of the FLEXlm License Manager control panel, click the **Start** button.

7 Click **OK** to save this information and exit.

To Start the FLEXlm License Server Software

We recommend that you reboot your system before starting the FLEXlm License Server software for the first time.

- 1 Open the **FLEXlm License Manager** control panel.
- 2 On the **Control** tab, click the **Start** button to start the license server.
- 3 Click the **Status** button to confirm that the license server started.

Installing a Startup License Key on a Server System

You may install startup license keys, letting client systems use floating licenses from the server to use Rational software until you get your permanent license keys.

You can request permanent license keys, if available. Your startup license key certificate indicates the date that your permanent license key is available. You may request the permanent key as

soon as it is available, whether you have installed a startup key or not.

Review the information on Startup License Key Certificate, included with your software media kit. Your startup license key certificate indicates the startup license key expiration date.

To Install a Startup License Key on a Server System

- 1** From the Windows **Start** menu, select **Rational**→**License Key Administrator**.
- 2** On the **License Key(s)** tab, click the **Enter a License Key** button.
- 3** On the first wizard page, select **Startup License Key**.
- 4** On the next wizard page, select **Floating License Key**.
- 5** On the third wizard page, provide the information in the fields, based on the columns on the startup license key certificate. You must enter the information exactly as presented or the key will not work.
- 6** Click **Finish**.

After you complete this step, the License Key Administrator creates a file containing a startup license and displays the startup license key on the **License Key(s)** tab.

Acquiring Permanent Floating License Keys for Your Server System

You can use the Rational License Administrator to request changes to your license key configuration. For example, you can move license keys from one server to another or specify a new license contact.

The Rational License Key Administrator online help provides instructions for preparing, sending, and receiving license key requests, and installing license key files.

- 1 Use the License Key Administrator to prepare the license request.
- 2 Send the request to Rational. You may send the request to Rational electronically using the Rational License Key Administrator, by printing and faxing the request, or by printing the request and making your request by telephone.

Notes

Review the Rational License Key Administrator online help before requesting permanent licenses. The online help describes the steps for any additional tasks. For example, the online help describes the steps needed to prepare license key requests for multiple systems and submitting those requests from a different system.

Make sure that the contact and account information is correct. The Rational License Key Administrator will identify any fields that are missing required information.

You must have an Internet connection to request license keys electronically with the Rational License Key Administrator.

See Table , “Support Information,” on page 76 for contact information regarding licensing questions.

If you request a new license electronically, Rational will send you a license key via e-mail. If you request a license by fax and have specified an e-mail address in your contact information, you will receive a license key file via e-mail.

You cannot request both a client license key and a server license key from the same system. You can request node-locked license keys from a client system and floating license keys from a server system.

FLEXlm License Server

The following sections provide information about the FLEXlm License Server, including descriptions of the license daemons running on the server systems.

FLEXlm Components

The FLEXlm license configuration includes these major components, which are described in the following sections:

- License manager daemon
- Vendor daemon
- License key file
- Application program

License Manager Daemon (lmgrd)

The *license manager daemon* (`lmgrd`) handles the initial contact with the client application programs, passing the connection on to the appropriate vendor daemon. It also starts, stops, and restarts the vendor daemons.

Vendor Daemon

In FLEXlm, licenses are granted by running processes (unless they're node-locked, uncounted, in which case they need only to read the license key file to run). There is one process for each vendor who has a FLEXlm-licensed product on the network. This process is called the *vendor daemon*. The vendor daemon keeps track of how many licenses are checked out, and who has them. If the vendor daemon terminates for any reason, all users lose their licenses. (This does not mean the applications suddenly stop running. Users can save their work and exit safely.) Users normally regain their license automatically when `lmgrd` restarts the vendor daemon, although the applications may exit if the vendor daemon remains unavailable.

Client programs communicate with the vendor daemon, usually through TCP/IP network communications. The client application and the daemon processes (the license server) can run on separate nodes on your network, across any size wide-area network. Also, the format of the traffic between the client and the vendor daemon is machine-independent, allowing for heterogeneous networks. This means the license server and the computer running an application can be different hardware platforms or even different operating systems (for example, Windows NT as a server system and Windows 95 as a client).

License Key File

Licensing data is stored in a text file called the *license key file*. The license key file is created by the software vendor and is edited and installed by the license key administrator. It contains information about the server nodes and vendor daemons, and at least one line of data (called FEATURE or INCREMENT lines) for each licensed product. Each FEATURE line contains a license key based on the data in that line, the *hostids* specified in the SERVER lines, and other vendor-specific data.

In some environments, you can combine the licensing information for several vendors into a single license key file. The FLEXlm default location is:

```
<Install Path>\license.dat (Windows, Windows/NT  
/usr/local/flexlm/licenses/license.dat (Unix)
```

See Table 6, “License Key Files,” on page 63 for details about the files used by Rational.

If your site has software from multiple vendors with incompatible license key files (due to different sets of servers), you can keep the data in separate files and set the LM_LICENSE_FILE variable to reference multiple files.

You will not typically need to set the LM_LICENSE_FILE variable in order to use Rational software products. We strongly recommend that you keep a copy of the license key file in the vendor’s ‘default’ location, so that users do not need to set LM_LICENSE_FILE to run their applications.

The LM_LICENSE_FILE variable is used on UNIX systems and on systems with multiple license key files. On Windows systems, set the variable LM_LICENSE_FILE in the **Environment** tab of the **System** control panel.

Application Program

The application program using FLEXlm is linked with the program module (called the FLEXlm client library) that provides communication with the license server. On Windows, this module is called LMGRxxx.DLL, where xxx indicates the FLEXlm version. During execution, the application program communicates with the vendor daemon to request a license.

License Activation Process

When you run a 'counted' FLEXlm-licensed application, such as a Rational Suite product that uses a floating license, the following occurs:

- 1 The license module in the client application finds the license key file, which includes the host name of the license server node and port number of the license manager daemon, `lmgrd`.
- 2 The client establishes a connection with the license manager daemon (`lmgrd`) and specifies the appropriate vendor daemon.
- 3 `lmgrd` determines which machine and port correspond to the master vendor daemon and returns that information to the client.
- 4 The client establishes a connection with the specified vendor daemon and sends its license request.
- 5 The vendor daemon checks in its memory to see if any licenses are available and sends a grant or denial back to the client.
- 6 The license module in the application grants or denies use of the feature, as appropriate.

'Uncounted' features, where the number of licenses is '0' (zero), do not require a server and the FLEXlm client library routines in the application grant or deny usage based solely upon the license contents. Node-locked licenses, for example, set the license number to 0 (zero).

License Key Files

As a system administrator, you must be aware of the files used by Rational software licensing. You will need access to them only when you are making changes to your license configuration. Table 6, "License Key Files," on page 63 describes the license key files.

All files are installed in `<Install Path>\Rational\Common\` unless otherwise noted. Client files are installed during the installation of Rational software products with the Rational Software Setup program. Server files are installed on the license

server system during the installation of the FLEXlm license software.

Table 6: License Key Files

File Name	Description	Notes
rational_temp.dat	Contains all client startup license keys.	You must obtain a permanent license key to continue to use your Rational software product past the startup key expiration date.
rational_perm.dat	Contains all client permanent license keys.	Run the License Key Administrator program on your client system to request new permanent keys.
rational_redirect.dat	Used on a client to specify the name of the license server system that manages floating licenses.	This file is initially empty. The Rational License Key Administrator updates this file with the name of your license server when you select server-based licensing.
rational_server_temp.dat	Contains all startup server license keys on a license server.	You must obtain a permanent license key to continue to use your Rational software product.
rational_server_perm.dat	Contains all permanent server license keys on a license server.	Run the License Key Administrator program on your license server system to request new permanent license keys.

8

FLEXlm License Server Installation

This chapter describes how to use the Rational Software Setup wizard to install FLEXlm License Server Version 6.0, a software-based license server that:

- Provides flexible installation and maintenance of license keys
- Supports standard networking protocols

Before You Start the FLEXlm License Server Installation

The following sections list the steps you must take and information you must prepare before installing FLEXlm License Server.

Installation Requirements

Make sure that you have a current backup of your Registry and system directories before running the Rational Software Setup program.

Table 7, "FLEXlm License Server Requirements", lists the system and software requirements for installing FLEXlm License Server:

Table 7: FLEXlm License Server Requirements

Item	Requirement
Operating System	Microsoft Windows NT 4.0, SP3
Processor	133 MHz or greater
Memory	64 MB
Disk space	1.8 MB
Privileges	To use the Rational Software Setup program on a Windows NT system, you must have Windows NT administrator privileges on the local system.

After you finish installing the FLEXlm License Server software, you must configure your license server. See “Installing Rational License Server Software” on page 56.

Installing FLEXlm License Server

Preparing to Install FLEXlm License Server

The Rational Software Installation procedure uses `C:\Program Files\Rational` as the default install path. You can specify another drive during the installation procedure.

If your `C:\` drive lacks sufficient free disk space, you may either specify another drive or make space available on the default drive.

Caution Interrupting an installation that is in progress may leave your system in an indeterminate state. If you try to close the Rational Software Setup window while the installation is in progress, you are asked to confirm that you want to exit from the incomplete installation.

Typical Installation

This section describes a Typical installation of FLEXlm License Server.

For a more detailed description of the installation procedure, see “Using the Rational Software Setup Program” on page 69.

- 1 Insert the Rational Windows Solutions CD into your system’s CD drive.

The setup program starts automatically.

If autorun is disabled on your system, use Windows Explorer to locate and run the `SETUP.EXE` file on the Rational Windows Solutions CD.

- 2 The Rational Software Setup wizard guides you through the software installation. On each page, click **Next** to proceed to the next page.

The Rational Software Setup page provides general information about the software installation. Click **Browse** to review Rational product information. You must have a Web browser installed to view the product gallery.

The **Save** button lets you copy the contents of the setup wizard message window to a file. The **Copy** button copies the contents of the message window in the setup wizard to the Windows clipboard. The **Copy** and **Save** buttons are enabled on wizard pages that display the license agreement or installation messages.

The **Help** button is enabled on the Setup Configuration, Shared Components, and Software Use pages, providing you with additional information regarding setup options.

- 3 The Choose Product page provides a list of products for you to install. Select **GLOBETrotter FLEXIm License Server** from the list of products.
- 4 The License Agreement page displays the Rational Software license agreement. Choose to accept or not accept the license agreement.

If you accept the license agreement, the installation continues installing Rational software on your system. If you do not accept the license agreement, the installation does not let you proceed further. If you exit from the installation by clicking the **Finish** button at this point, no changes are made to your system.

- 5 Click **Finish** to exit from the Rational Software Setup wizard. If the **Launch License Key Administrator** check box is selected, the License Key Administrator will start after you click **Finish**.

The Rational Software Setup program writes a log of the installation activities. The log file is located in
<Install Path>\Rational\RSSetup\RSSetup.log.

Possible Reboot Required

If files required for the installation are in use during the installation procedure, the Rational Software Setup program may need to reboot your system to complete the installation.

- 1 After rebooting, log on as the same user to complete the installation procedure.

Part 2 of the installation automatically starts on your system.
- 2 Click **Finish** to exit from the Rational Software Setup program. If the **Launch License Key Administrator** check box is selected, the Rational License Key Administrator will start after you click **Finish**.
- 3 Click **Finish** to exit from the Rational Software Setup wizard.

You must then configure your license server and obtain your server licenses.

Removing FLEXlm License Server

This section describes how to remove FLEXlm License Server from your system.

Preparing to Remove FLEXlm License Server

Make sure that no one is using FLEXlm License Server or any associated files. You cannot remove files that are in use.

To remove FLEXlm License Server from a Windows NT system, you must have Windows NT administrator privileges on the local machine.

To Remove FLEXlm License Server

Use the Windows **Add/Remove Programs** control panel to select and remove FLEXlm License Server. The Rational Software Setup program removes FLEXlm License Server from your system. It does not remove directories that contain files that you have created using Rational Suite products.

9

Additional Installation Information

Troubleshooting Your Installation

If you have any problems running the Rational Software Setup program, try the following suggestions before you call Rational Customer Support for help:

- Be sure to stop all applications before you begin the installation.
- Turn off all virus protection software. These programs often run in the background and interfere with the installation and file decompression process.
- Turn off any user interface managers or desktop environments that run on top of Microsoft Windows.
- Change to a standard VGA video driver while Rational Setup is running, or disable video features such as virtual screens or screen switching.
- Change to a standard mouse driver, or disable special mouse features that perform tasks such as leaving pointer trails or changing pointer sizes.
- Make certain that your system meets the minimum system requirements listed in Table 2, “RequisitePro Requirements,” on page 14.

Using the Rational Software Setup Program

The Rational Software Setup program provides you with several installation types, letting you install the configuration most appropriate for your system. Table 8, “Installation Types,”

describes the installation types supported with the Rational Software Setup program.

Table 8: Installation Types

Type	Description
Typical	Installs the most commonly used features for a product. Use this option for standard installations.
Custom/Full	Allows you to add or remove features. Defaults to all features in a Typical installation.
Compact/Laptop	Installs a subset of the standard configuration. May omit optional files, including online documentation or online help. Use this option on systems with limited disk space.
Minimal	Installs the files needed to run the program from a CD or network location. Use this option to run the program from a centrally managed location.

Rational Software Setup lets you choose the Custom Installation option; you can set or clear the check box for products or product features on the Choose Features page. Setting or clearing installation options lets you install selected components of Rational software.

Software Use (Suites Installation Only)

The Rational Software Setup program lets you install a Rational Suite for use by a client, administrator, or evaluator. Select the installation option based on the way you will use the Rational Suite on this system. See Table 9, "Software Use Installation Choices for Rational Suite".

Make your selection on the Software Use page of the Rational Software Setup program.

Note: The software use options do not appear when you install Rational RequisitePro, RequisiteEnterprise, or RequisiteWeb.

Table 9: Software Use Installation Choices for Rational Suite

User	Description	After Installation
Client	Choose this option if you do not need to administer Rational Suite software. Installs software on your machine for use in a networked team environment. An administrator at your site will set up a Rational repository on the network for your team's use.	After you choose this option and complete the installation, start any of the Rational Test components and enter the path of the Rational repository in the login dialog box.
Administrator	Choose this option if users of client software depend on you to set up and manage the team's repositories and databases. In addition to installing client software, this option installs tools so you can create, move, and upgrade Rational repositories, Rational ClearQuest schema repositories, and ClearQuest user databases.	After you choose this option and complete the installation, use the Rational Administrator to create both a Rational repository and a ClearQuest Master Schema database.
Evaluator	Choose this option for minimal configuration before using the product. Choosing this option does not restrict your use of the software. Installs software on your machine and creates a sample Rational repository for use in a standalone environment.	After you choose this option and complete the installation, start any of the Rational Test components and select the Sample Repository in the login dialog box.

Installing Shared Components

The Rational Software Setup program needs to install shared components. A shared component is software provided by a company other than Rational. It is potentially available to other applications on your system.

If the setup program needs to update shared components, the setup program displays a list of the required files. The files listed must be installed on your system before the installation can proceed.

Setup installs U.S. English versions of the files. It does not overwrite newer file versions.

The check box, **Replace files with newer versions in English**, is enabled when you have installed earlier versions of the files that are localized to a non-U.S. English language. If you select this check box, the U.S. English versions of the files will replace your versions. If you clear this check box, the files will not be updated and you will need to update them yourself.

When to Install Files Yourself

In general, we recommend that you allow the installation procedure to install shared files for you. Under some circumstances, you may want to install the files yourself:

- You are using a U.S. English system, but installing new files may invalidate your current environment. In this case, you need to determine how to correct your environment so that you can run existing tools and the Rational products you want to install.
- Your site may mandate that you obtain shared files directly from the source, for example, from Microsoft, rather than using files supplied by a third party. Or your site may prohibit end-users from installing shared components.
- Rational supplies U.S. English versions of shared files. You may want to install equivalent files that are localized to your language.
- There may be a later version of the files available. Rational products should work with the supplied version of shared files or any later versions.

Using the Rational Software Setup Procedure

This section gives a more complete description of a Typical installation of Rational software than provided in the product chapters of this manual.

- 1 Insert the Rational Windows Solutions CD into your system's CD drive.

When you insert the Rational Windows Solutions CD, the setup program starts automatically.

If autorun is disabled on your system, use Windows Explorer to locate and run the `SETUP.EXE` file on the Rational Windows Solutions CD.

The Rational Software Setup wizard will guide you through the software installation. On each page, click **Next** to proceed to the next page.

- 2 The Rational Software Setup page provides general information about the software installation. Click **Browse** to review Rational product information. You must have a Web browser installed to view the archive.

The **Save** button lets you copy the contents of the setup wizard message window to a file. The **Copy** button copies the contents of the message window in the setup wizard to the Windows clipboard. The **Copy** and **Save** buttons are enabled on wizard pages that display the license agreement or installation messages.

- 3 The Choose Install Type page displays the installation options for the software installation.

Note If you have previously performed a Typical installation of Rational software with the Rational Software Setup program, the Minimal installation type is disabled. Similarly, if you performed a Minimal installation, then all other installation types are disabled. You must remove Rational software to enable all installation options.

The options are Typical, Custom, Compact, and Minimal, described in Table 8, "Installation Types," on page 70.

- 4 The Choose Product page presents a list of products for you to install.
- 5 The License Agreement page displays the Rational Software license agreement. Choose to accept or not accept the license agreement.

If you accept the license agreement, the installation continues installing Rational software on your system. If you do not accept the license agreement, the installation does not let you proceed further. If you exit from the installation by clicking the **Finish** button at this point, no changes are made to your system.

- 6 The Setup Configuration page describes the setup options for this software installation. Select the installation option.

Confirm that you have sufficient free space for the installation. If the amount of free space is less than the amount required, either exit from the installation procedure and make more space available on the specified disk or specify an alternate Install Path.

To specify another Install Path, type the new path in the Install Path field or use the **Browse** button to select a drive and directory.

The setup procedure installs Microsoft Core Components and some additional files on your C: drive, even if you have specified an alternate drive for installation. These files can require up to 20 MB of disk space on your C: drive.

Note The installation program requires that all Rational programs be installed in the same directory. If any Rational product has been previously installed with the Rational Software Setup program, the browse option and Install Path field are disabled. You must remove and reinstall Rational software to specify a new Install Path.

- 7 On the Choose Features page, if you choose the **Custom/Full** installation option, you will see the Choose Features page. This page lets you specify exactly which features and subfeatures to install on your system. Use the **+** to expand and select or deselect options as desired. There are dependencies

between some products which may force an installation option, even if you have deselected it.

- 8 The Shared Components page appears if the Rational Software Setup program needs to update some shared files on your system. Click **Next** to have Rational Software Setup install these files for you or **Cancel** to install these files yourself. For additional information, see “Installing Shared Components” on page 72 or the Rational Software Setup online help.

Note The Rational Software Setup wizard does not recalculate the disk space required for your custom selections.

- 9 The Software Use page appears if you have selected a Rational Suite, ClearQuest, or Robot product for installation. Table 9, “Software Use Installation Choices for Rational Suite,” on page 71 describes the available choices.

Note The software use options do not appear when you install Rational RequisitePro, RequisiteEnterprise, or RequisiteWeb.

- 10 The Confirmation page displays the product features that will be installed.
- 11 The Installation Summary page displays errors from the first part of the software installation. If the installation is successful, the message window on the Installation Summary page is blank.

The Rational Software Setup program writes a log of installation activities. The log file is located in

```
<Install Path>\Rational\RSSetup\RSSetup.log
```

Possible Reboot Required

If files required for the installation are in use during the installation procedure, the Rational Software Setup program may need to reboot your system to complete the installation.

- 1 After rebooting, log on as the same user to complete the installation procedure.
Part 2 of the installation automatically starts on your system.
- 2 Click **Finish** to exit from the Rational Software Setup program.

If the **Launch License Key Administrator** check box is set, the Rational License Key Administrator will start after you click **Finish**.

Installation Messages

Contact Rational Customer Support for information and assistance regarding any error messages you encounter while installing Rational software. Table 10 below, provides contact information.

Support Information

Contact Rational Customer Support if you have questions regarding the installation, use, or maintenance of this Rational Software product.

Table 10 provides Rational Customer Support telephone and e-mail contact information.

Table 10: Rational Customer Support Information

Rational Support Resource	Contact Information	Notes
U.S. and Canada	800-433-5444 781-676-2450 support@rational.com	Specify "Rational Software" in the subject line of the e-mail message. For existing issues, put the case ID of the issue in the subject line as well.
Europe	+31-23-569-4310	support@europe.rational.com
Asia Pacific	+61-2-9419-0111	support@apac.rational.com
World Wide Web	www.rational.com	Use the Feedback link to go to the feedback page.

Table 11 provides Rational License Support contact information. If you have questions about acquiring license keys for your Rational Software products, contact Rational License Support. See the online help in the Rational License Key Administrator for additional licensing support information.

Table 11: Rational Licensing Support

Region	Telephone	E-mail
North and South America	1-800-728-1212 1-781-676-2510 FAX: 781-676-2510	lic_americas@rational.com
Europe (includes Israel and Africa)	Phone: +31 23 554 10 62 FAX: +31 23 554 10 69	lic_europe@rational.com
Japan	Phone: +81-3-5423-3611 FAX: +81-3-5423-3622	lic_japan@rational.com
North Asia Pacific (China, Hong Kong, Taiwan)	Phone: +852 2143 6382 FAX: +852 2143 6018	lic_apac@rational.com
Korea	Phone: +82 2 556 9420 FAX: +82 2 556 9426	lic_apac@rational.com
South Asia Pacific (includes Australia, New Zealand, Malaysia, Singapore, Indonesia, Thailand, Vietnam, the Philippines, India, and Guam)	Phone: +612-9419-0100 FAX: +612-9419-0160	lic_apac@rational.com

10

Glossary

ANY-HOST

A license key issued for ANY-HOST will run on any system, and is not tied to the customer's system ID.

Emergency Key

A temporary license that allows customers to use Rational software for a fixed period of time if they cannot use their own license for some reason. The duration of the Emergency Key is 5 days. Emergency Keys can be node-locked or floating.

Emergency Keys are distributed by the Licensing Support Group and will run on any host.

Evaluation Key

A temporary license that allows a customer to use and evaluate Rational software for a fixed period of time. The product Business Unit determines the duration of the Evaluation Key. Evaluation Keys can be node-locked or floating. Evaluation Keys are distributed by the Sales team and will run on any host.

Floating License

A license type that links products to a License Server system. Client systems access licenses on the License Server system when they need to run a copy of Rational software. Multiple clients may share the pool of floating licenses; one license is granted per client per product. Floating Licenses on License Servers are typically administered by System Administrators.

GLOBEtrotter FLEXIm Server

Software license manager for Windows, NT, UNIX, Java and VMS.

Key Type

Node-locked and floating licenses may be enforced by different types of license keys. The types of license keys are: Startup and Permanent. Evaluation, Emergency, and Temporary keys are variations of Startup keys. These keys are issued by different

groups (i.e. Sales, Order Entry, Tech Support, License Support) at different times, for different purposes, and governed under different business rules and policies.

License

A legal right to use a product. Customers receive a license when they purchase the product. However, they need a License Key to actually associate the product and the system on which it is running with a license.

License Key Code

An encrypted code used to enforce a license agreement.

License Key Certificate

A piece of paper or electronic file that contains information needed by a customer in order to begin using Rational software with a license. The License Key Certificate is shipped to the customer with the software installation media.

License Key Administrator

A program written by Rational Software, which provides a customer interface to Rational's Licensing system. Starting with the release of Rational Suites 1.0 and associated point products, the License Key Administrator is installed whenever a Rational software product is installed on a Windows system. For hosting floating licenses, the License Key Administrator is installed when the Globetrotter FLEXlm server is installed on a License Server system.

License Key

Generic term used in this document to describe keys that enable licenses on a customer system. The types of License Keys are: permanent, startup, evaluation, emergency, and Term License Agreement (TLA).

License Type

The valid types of licenses are node-locked licenses and floating licenses.

Node-locked License

A type of license that links a product to a system. Typically, one node-locked license is issued per software copy, but exceptions may be made in the case of a user who needs to run a single copy

of the software on two systems.

Permanent Key

A license issued to a customer for running Rational products. Permanent licenses are keyed to a product and system. Permanent Keys have expiration dates that vary by product, but are usually two product cycles. Permanent Keys can be node-locked or floating. Node-locked Permanent Keys are installed on a client system, and floating Permanent Keys are installed on a License Server system. The Rational BackOffice issues permanent Keys.

Permanent Key Code

The FLEXlm encrypted code that permanently allows a customer to run a particular Rational product using a Permanent Key.

Startup Key

A short-term license key that allows a customer to run Rational software products. Startup licenses are not keyed to a specific system. Startup Keys can be node-locked or floating. Node-locked Startup Keys are installed on a client system, and floating Startup Keys are installed on a License Server system. Startup Keys are issued by the Rational BackOffice and will run on any host.

Startup Key Code

The FLEXlm encrypted code that temporarily allows a customer to run a particular Rational product using a Startup Key.

Temporary Key

A short-term license key that allows a customer to temporarily run Rational software products. The Licensing Support group creates temporary Keys when they are unable to immediately fulfill a customer's request for a permanent key. Temporary keys can be node-locked or floating. Temporary keys are specific to a customer and system. Currently used by Rose UNIX to grant emergency or short-term keys to customers.

Term License Agreements (TLAs)

Variations of a Permanent Key. TLAs are issued to a site to allow their employees to use Rational software for a negotiated period of time. TLAs are issued by Rational Sales.

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