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About This Document

Purpose

This Installation and Configuration Guide describes how to install Red Brick® Warehouse and configure it for use on a Windows NT™ system.

This guide also contains platform-specific information for Red Brick Warehouse running on the Windows NT operating system. Other Windows NT-specific information is found in the Warehouse Administrator’s Guide for Windows NT Platforms.

Audience

The intended users of this guide are system administrators and database administrators who plan the warehouse installation, configure the operating system, install the software, and maintain the data-warehousing environment.

Knowledge of the operating system and basic system-administration procedures is assumed.
Organization

This guide is divided into four chapters:

• Chapter 1, “Preparing for an Installation”
• Chapter 2, “Installing Red Brick Warehouse”
• Chapter 3, “Installing a New Release”
• Chapter 4, “Administering a Warehouse on a Windows NT System”

If you already have Red Brick Warehouse running at your site and want to install a new release, read Chapter 3, “Installing a New Release,” instead of Chapter 2. If you are installing an update or “patch” release, first refer to the instructions delivered with the release media, then read the section about upgrading warehouse databases on page 3-8 of this guide (if upgrading is necessary).

Appendix A, “Warehouse Directories and Files,” illustrates the structure of the directories and files you have installed and configured, and briefly describes their contents.

Appendix B, “Recommended Locale Specifications,” identifies the languages, territories, character sets, and collation sequences supported by Red Brick products.
# Related Documentation

The standard documentation set for Red Brick Warehouse includes the following documents:

<table>
<thead>
<tr>
<th>Document Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Installation and Configuration Guide</strong></td>
<td>Installation and configuration information, as well as platform-specific material, about Red Brick Warehouse and related products. Customized for either UNIX-based or Windows NT systems.</td>
</tr>
<tr>
<td><strong>Warehouse Administrator’s Guide</strong></td>
<td>Description of warehouse architecture, supported schemas, and other concepts relevant to warehouse databases. Procedural information for designing and implementing a warehouse database, maintaining a database, and tuning a database for performance. Includes a description of the system tables and the configuration file (rbw.config). Customized for either UNIX-based or Windows NT systems.</td>
</tr>
<tr>
<td><strong>Table Management Utility Reference Guide</strong></td>
<td>Description of the Table Management Utility, including all activities related to loading and maintaining data. Also includes information about data replication and the rb_cm copy management utility.</td>
</tr>
<tr>
<td><strong>SQL Reference Guide</strong></td>
<td>Complete language reference for the Red Brick Systems SQL implementation and RISQL® extensions for warehouse databases.</td>
</tr>
<tr>
<td><strong>SQL Self-Study Guide</strong></td>
<td>Example-based review of SQL and introduction to the RISQL extensions, the macro facility, and Aroma, the sample database.</td>
</tr>
<tr>
<td><strong>RISQL Entry Tool and RISQL Reporter User’s Guide</strong></td>
<td>Complete guide to the RISQL Entry Tool, a command-line tool used to enter SQL statements, and the RISQL Reporter, an enhanced version of the RISQL Entry Tool with report-formatting capabilities.</td>
</tr>
<tr>
<td><strong>Messages and Codes Reference Guide</strong></td>
<td>Complete listing of all informational, warning, and error messages generated by warehouse products, including probable causes and recommended responses. Also includes event log messages that are written to the log files.</td>
</tr>
<tr>
<td><strong>Release Notes</strong></td>
<td>Information pertinent to the current release that was unavailable when the documents were printed.</td>
</tr>
</tbody>
</table>
In addition to the standard documentation set, the following documents are included for specific sites:

**Red Brick Vista User’s Guide**
Description of the Red Brick Vista™ aggregate navigation and advice system, including procedures for rewriting queries and getting advice on the best set of aggregate tables and views to create. Includes detailed examples of queries whose performance can be dramatically increased by using aggregate navigation.

**SQL-BackTrack for Red Brick Warehouse User’s Guide**
Complete guide to SQL-BackTrack™ for Red Brick Warehouse, a command-line interface for backing up and recovering warehouse databases. Includes procedures for defining backup configuration files, performing online and checkpoint backups, and recovering the database to a consistent state.

**Client Connector Pack Installation Guide**
Procedures for installing and configuring the Red Brick ODBC Driver, the RISQL Entry Tool, and the RISQL Reporter on client systems. Included for those sites that purchase the Client Connector Pack.

**ODBC Connectivity Guide**
Information about ODBC conformance levels as well as instructions for compiling and linking an ODBC application using the Red Brick ODBClib SDK.

**Red Brick Data Mine User’s Guide**
Description of the data mining process, and procedural information for using the Red Brick Data Mine™ SQL-based interface to find hidden or unpredictable relationships among the data in a data set. Included for those sites that purchase the Red Brick Data Mine option.

**Red Brick Data Mine Builder™ User’s Guide**
Description of the data mining process, and procedural information for performing data mining using Red Brick’s GUI-based product in a Microsoft Windows environment.

Additional references you might find helpful include:
- An introductory-level book on SQL
- An introductory-level book on relational databases
- Documentation for your hardware platform and operating system

**Online Documentation**
The English version of the Red Brick Warehouse documentation is also available in Adobe Acrobat format (PDF) on a separate CD-ROM.
Conventions

Throughout Red Brick Systems technical publications, the following notation and syntax conventions are used.

- Computer input and output, including commands, code, and examples, appear in **Courier**.
- Information that you enter or that is being emphasized in an example appears in **Courier bold** to help you distinguish it from other text.
- Filenames, system-level commands, variables, and document titles appear in *Palatino italic* or *Courier italic*, depending on the context.
- Names of database tables and columns are capitalized (Sales table, Dollars column). Names of system tables and columns are in all uppercase (RBW_INDEXES table, TNAME column).

Syntax Notation

This guide uses the following conventions to describe the syntax of operating-system commands:

<table>
<thead>
<tr>
<th>Command Element</th>
<th>Example</th>
<th>Convention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values and parameters</td>
<td><em>table_name</em></td>
<td>Items that you replace with an appropriate name, value, or expression are in <em>italic</em> type style.</td>
</tr>
<tr>
<td>Optional items</td>
<td>[ ]</td>
<td>Optional items are enclosed by square brackets. Do not type the brackets.</td>
</tr>
<tr>
<td>Choices</td>
<td>ONE</td>
<td>TWO</td>
</tr>
<tr>
<td>Required choices</td>
<td>{ONE</td>
<td>TWO}</td>
</tr>
<tr>
<td>Default values</td>
<td>**ONE</td>
<td>TWO**</td>
</tr>
<tr>
<td>Repeating items</td>
<td>name, ...</td>
<td>Items that can be repeated are followed by a comma and an ellipsis. Separate the items with commas.</td>
</tr>
<tr>
<td>Language elements</td>
<td>() , ; .</td>
<td>Parentheses, commas, semicolons, and periods are language elements. Use them exactly as shown.</td>
</tr>
</tbody>
</table>
Customer Support

Please review the following information before contacting the Customer Support Center at Red Brick Systems.

Support Solutions Warehouse

The Support Solutions Warehouse is the Customer Support Center’s external web site, an online resource that registered Red Brick customers can use to:

- Submit new cases.
- Read release notes.
- Find answers to frequently asked questions (FAQs).
- Search the Problems and Solutions database.

To use the Support Solutions Warehouse, point your web browser to the following URL and enter your registered username and password:

http://www.redbrick.com/RBCustomer/index.htm

If you do not have a registered username and password, contact the Customer Support Center by telephone, fax, or e-mail.

General and Technical Questions

If you have general sales-related questions or technical questions about Red Brick products or services, contact Red Brick Systems as follows:

Telephone
General Questions (408) 399-3200 or 1 (800) 777-2585
Technical Questions (408) 399-7100 or 1 (800) 727-1866

FAX
General Questions (408) 399-3277
Technical Questions (408) 399-3297

Internet e-mail
General Questions info@redbrick.com
Technical Questions support@redbrick.com

World Wide Web www.redbrick.com
Existing Cases

If you want to inquire about the status of an existing case, please have the case number ready. The case number will always be given to you by the support engineer who logs the case or first contacts you. This number is used to keep track of all the activities performed during the resolution of each problem.

New Cases

If you want to log a new case, please have the following information ready:

- Red Brick Warehouse version
- Platform and operating-system version
- Error messages returned by Red Brick Warehouse or the operating system
- Concise description of the problem, including any commands or operations performed prior to the occurrence of the error message
- List of Red Brick Warehouse and/or operating-system configuration changes made prior to the occurrence of the error message

If you think the problem concerns client-server connectivity, please have the following additional information ready:

- Name and version of the client tool in use
- Version of Red Brick ODBC Driver in use (if applicable)
- Name and version of client network and/or TCP/IP stack in use
- Error messages returned by the client application
Troubleshooting Tips

You can often reduce the time it takes to close your case by providing the smallest possible reproducible example of your problem. The more you can isolate the cause of the problem, the more quickly the support engineer can help you resolve it.

- For SQL query problems, try removing columns or functions, or restating WHERE, ORDER BY, or GROUP BY clauses until you can isolate the part of the statement causing the problem.
- For TMU load problems, verify the datatype mapping between the source file and the target table to ensure compatibility. Try loading a small test set of data to determine whether the problem concerns volume or data format.
- For connectivity problems, verify that the network is up and running by issuing the `rbping` command from the client to the host. If possible, try another client tool to see if the same problem arises.

Documentation Questions and Comments

If you have questions or comments about the Red Brick Warehouse documentation, please contact the Technical Publications Department at Red Brick Systems as follows:

**Telephone**  
+1 408 399 3200  
+1 800 727 1866 (USA only)

**Internet e-mail**  
docs@redbrick.com
Preparing for an Installation

This chapter will help you gather information and set up your environment in preparation for installing Red Brick® Warehouse or Red Brick Warehouse for Workgroups. After you have worked through this chapter, you will be ready to respond to the prompts from the Setup program.

You should complete the preparation steps discussed here before beginning the procedure in Chapter 2, “Installing Red Brick Warehouse.”

Note: Read the release notes that accompany the software before beginning the preparation tasks.

The procedures in this chapter apply to both Red Brick Warehouse and Red Brick Warehouse for Workgroups, unless otherwise stated.
Preparing for an Installation

Preview of Preparation Tasks

Before installing Red Brick Warehouse or Red Brick Warehouse for Workgroups, you need to complete the following tasks:

- Verify that the Windows NT™ version and available disk space meet Red Brick Warehouse requirements.
- Configure operating-system parameters.
- Specify a locale for the installation.
- Select a warehouse logical name.
- Determine network information for the Red Brick Warehouse Service.
- Create the redbrick account for warehouse administration, and assign group membership and privileges.

Note: Some steps in this chapter require Administrator privileges and are typically performed by the Windows NT administrator. If the Windows NT administrator is not also the warehouse administrator, administration activities must be carefully coordinated to ensure the success of the warehouse installation.

Designed for Microsoft BackOffice

Red Brick Warehouse for Windows NT is designed with Systems Management Server support for Microsoft® BackOffice™. To conform to Microsoft BackOffice requirements, Red Brick Warehouse for Windows NT includes the following features:

- Runs as a Windows NT service.
- Supports the WinSock 2.0 network protocol stack.
- Supports an unattended installation using Systems Management Server.
Preparing for an Installation
Verifying Operating-System Version and Disk Space

Verifying Operating-System Version and Disk Space

To install and run Red Brick Warehouse on the Windows NT system, you must be running Windows NT Version 4.0 or later software and meet the following system hardware and memory requirements:

- A computer with one of the following types of processors:
  - An Intel 486DX2-66 processor (or equivalent). A Pentium processor is recommended.
  - A Digital Alpha processor.
- A minimum of 45 megabytes of free disk space on the workstation where Red Brick Warehouse will be installed.
- A minimum of 32 megabytes of RAM, with an additional 1.5 megabytes for each additional concurrent user the system supports. 64 megabytes or more of RAM with an additional 1.5 megabytes for each additional concurrent user is recommended.

Note: Red Brick Warehouse is supported only on NTFS filesystems.

In addition to the disk space required to install Red Brick Warehouse, you need sufficient disk space to store and manage the databases in Red Brick Warehouse. For information about how to estimate the disk space required for your database, refer to the Warehouse Administrator’s Guide for Windows NT Platforms.

Disk Space

Determine how much disk space is available on the workstation where you want to install the warehouse. Be sure to use a disk with enough free space to provide the storage needed for Red Brick Warehouse, other optional Red Brick products, and the sample database.

To determine the disk space on the workstation, start the File Manager or Windows NT Explorer and click the drive icon where you want to install the warehouse. The amount of available disk space on that drive appears in the lower left corner of the File Manager or Explorer window.
Running the Setup Program

The instructions on page 2-4 apply to computers running the Windows NT operating system on an Intel-based or a Digital Alpha-based system. If you have inserted the CD-ROM into a drive other than drive d:, use that drive letter instead.

Configuring Operating-System Parameters

Red Brick Warehouse is a high-performance server designed to support the needs of tens or hundreds of users in a distributed client/server computing environment. In order to provide sufficient resources for this large number of client users, certain operating-system configuration parameters may require modification.

Virtual Memory

Virtual Memory should be set to greater than or equal to the Recommended Size. In the Control Panel, select System, then select the Performance tab to display the workstation’s Virtual Memory information.

Tasking

Tasking should be set to Foreground and Background Applications Equally Responsive. In the Control Panel, select System, then select the Performance tab. In the Application Performance section, move the “Boost” slider to “None” to give equal boost to the foreground and background applications.
Determining the Locale

During the installation process, you will be asked to specify a locale. A *locale* is the unique combination of a language and a location. The locale you specify will apply to all databases created for this installation.

For more information about locale specifications, refer to Appendix B.

Locale Components

A locale consists of four components:

- Language
- Territory
- Character set
- Collation sequence

Each component is described briefly in the following sections. The *Warehouse Administrator’s Guide* describes these components in more detail.

Language

The language component (in conjunction with the territory) controls which translation is used. In general, text strings are accepted and displayed in the user’s chosen language. These strings include information and warning messages, object names, month and day names, and character data returned in query results. However, the fixed elements of a programming language, such as the keywords used in SQL commands, are not translated.

Territory

The territory component controls country-dependent information such as currency symbols, numeric and monetary formatting rules, and date and time formats. For example, although English is used in both the United States and the United Kingdom, and Spanish is used in both Spain and Mexico, the use of these languages differs according to location. (Sometimes, a single territory applies to more than one *country* in a region.)

Character Set

The character set, or code page, component specifies the character encoding or character set used to format and display information.
Preparing for an Installation
Determining the Locale

Collation Sequence

The sort component of the locale, or collation sequence, defines the rules used to compare character strings and arrange them in the correct order. There are two main types of character comparisons: binary and linguistic.

Defining the Warehouse Locale

During the installation of the Red Brick Warehouse software, a locale specification is requested for the data warehouse. The locale supplied during installation is stored as the NLS_LOCALE LOCALE parameter in the rbw.config file. If no locale is supplied, the default value of this parameter is used:

English_UnitedStates.US-ASCII@Binary

This locale specification applies to the whole Red Brick Warehouse installation, regardless of the number of databases that will be created for that installation. (An installation is defined by the contents of the rbw.config file found in the directory referenced by the RB_CONFIG environment variable.)

If you want to specify a locale that is different from the default locale specification, you must define each of its four components—language, territory, character set, and collation sequence. Refer to Appendix B for a list of locale specifications supported by Red Brick Warehouse. Record your warehouse locale specification here:

| Language:  |
| Territory: |
| Character set: |
| Collation sequence: |
Selecting a Warehouse Logical Name

The default for the logical name is the literal name “RB_HOST.” This is the name of the Red Brick Warehouse Service and is entered into the Registry.

For standard installations, the Setup program provides a default value for the warehouse logical name (RB_HOST). If you want to use a name that is different from the default value, record a different warehouse logical name here:

```
Logical name of warehouse service:  
(RB_HOST by default)
```

Determining the Port Number for TCP/IP

The installation process asks you to supply a TCP/IP port number.

Use the default port, if it is not already in use. The default port for TCP/IP is 5050. If this port is in use, use a number between 2048 and 65535 that is not being used. Because numbers between 1024 and 2048 are commonly used for standard system ports, Red Brick Warehouse Service installation and configuration utilities do not accept values below 2048. Use a number above 4097 to minimize the chance of conflict.

**Note:** Be sure to choose a port that will not be used by another application on the system.

If you plan to run two versions of Red Brick Warehouse simultaneously, you must specify a different port number for each one.

Record the Red Brick Warehouse Service port here:

```
Red Brick Warehouse Service port:
```
Preparing for an Installation
Creating the redbrick Account

Creating the redbrick Account

Before you begin installing Red Brick Warehouse, you must create a user account that is used for all database administration activity following installation with the Setup program. The default name for this account is redbrick, although you can choose any name. Throughout the Red Brick Warehouse documentation, this user account is referred to as redbrick, and this user ID is used for all warehouse administration activities at the operating system level.

As the Administrator, create the redbrick account using the User Manager (for Windows NT Workstation) or the User Manager for Domains (for Windows NT Server). You can create this account on the domain or the local machine. Note whether you have created the account on the domain or the local machine; you will need this information when assigning privileges to the account.

Note: If you are creating the redbrick account on a machine that is a Primary Domain Controller or Backup Domain Controller, you can create the account only in the domain.

The redbrick account must:

• Be a member of the Administrators group (for Windows NT Workstation) or the Domain Administrators group (for Windows NT Server).
• Have the privilege to log on as a service on the local machine.
• Have the privilege to act as part of the operating system on the local machine.

To grant group membership and privileges to the redbrick user, first open the User Manager or User Manager for Domains by opening the Start menu, then open the Programs menu and select Administrative Tools.

Granting Membership in the Administrators Group

To grant membership in the Administrators or Domain Administrators group, select Properties from the User menu, then click the Groups button in the User Properties screen. In the Group Memberships screen, add the redbrick user as a member of the appropriate group (Administrators or Domain Administrators).
Granting Privileges

To grant the privilege to log on as a service, select User Rights from the Policies menu. In the User Rights Policy screen, click the Show Advanced User Rights box at the bottom of the screen to show all the available rights. Select Log On as a Service, then click Add and choose REDBRICK from the list.

To grant the privilege to act as part of the operating system, select User Rights from the Policies menu. In the User Rights Policy screen, click the Show Advanced User Rights box at the bottom of the screen to show all the available rights. Select Act as Part of the Operating System, then click Add and choose REDBRICK from the list.

You must grant both of these privileges (Log On as a Service and Act as Part of the Operating System) on the local machine, and they must be granted to the redbrick account you have created. Note that it is possible to have two redbrick accounts on a single machine: one created in the domain and one created on the local machine. If this is the case, you must assign the privileges to the correct account (that is, the account you will use to install Red Brick Warehouse and perform administrative tasks) or the system will not function properly.

If your local machine name does not appear in the drop-down list when you click Add in the User Rights Policy screen (the local machine name will be preceded by two backslashes; for example, SPOCK), choose Select Domain from the User menu and add your local machine to the list.

Providing License Keys

Red Brick Warehouse requires that you provide a valid license key before you start the warehouse service. In addition, if you have purchased optional Red Brick products (for example, Enterprise Control and Coordination), you must enable these products with license keys before using them.

The interactive Setup program provides an interface for entering license keys directly into the Red Brick Warehouse configuration file. This procedure is described in Chapter 2 of this guide. Your license key for a licensed option is provided on a one-page document that is delivered with Red Brick Warehouse when an optional product is purchased.
The Installation Procedure

After completing the preparation tasks in this chapter, you are ready to begin the installation procedure. The procedure is described in Chapter 2, “Installing Red Brick Warehouse,” if you are installing Red Brick Warehouse for the first time, or in Chapter 3, “Installing a New Release,” if you are installing a new version of Red Brick Warehouse.

Checklist of Preparation Steps

1. Verify that you are running Windows NT Version 4.0 or later.
2. Verify that you have sufficient disk space to install and run the software.
3. Set up your environment by configuring the operating-system parameters discussed on page 1-4.
4. Choose a locale for the installation.
5. Select a warehouse logical name (default is RB_HOST).
6. Determine the TCP/IP port number to use.
7. As the Administrator, create the redbrick user account, assign it membership in the Administrators group, and assign it the privileges to log on as a service and to act as part of the operating system on the local machine.
8. Have your license keys ready; one for each product or option you have purchased is provided in a separate document delivered with Red Brick Warehouse.
9. Go to Chapter 2 or Chapter 3 for installation instructions.
This chapter explains how to install Red Brick Warehouse or Red Brick Warehouse for Workgroups for the first time. The procedures in this chapter apply to both products, unless otherwise stated. The installation procedure installs the software, a sample database named Aroma, a utility directory named `util`, and all optional Red Brick products (for example, Enterprise Control and Coordination). As part of the installation procedure, you also have to license Red Brick Warehouse and any products you have purchased.

The installation procedure uses a Windows NT Setup program, which displays a menu of installation options. You can install a full-feature release of Red Brick Warehouse or enable optional Red Brick products with a license key. For more information about installing an update release, refer to the release notes distributed with your update release media and Chapter 3, “Installing a New Release.”

Red Brick Warehouse installation is typically done by the system or database administrator. You must have Administrator privileges or be logged in as the `redbrick` user to complete the steps in the installation procedure, and to start the Red Brick Warehouse Service. For more information about the `redbrick` user, refer to “Providing Security Information” on page 2-11.
Read the release notes delivered with the software and complete the pre-installation tasks described in Chapter 1, “Preparing for an Installation.” The release notes discuss important information that was unavailable when this document was printed.

The following conditions will prevent you from successfully installing the software:

- Incorrect user privileges
- Insufficient disk space
- Media failure (damaged CD-ROM)

If you see an error message during installation, make sure you have sufficient disk space for the warehouse software. For more information about system requirements, refer to “Verifying Operating-System Version and Disk Space” on page 1-3.

If you are still unable to install the warehouse and the sample database, or if the CD-ROM is damaged, contact Customer Support at Red Brick Systems as described on page x.
Preview of Installation Tasks

To install a first-time warehouse, you will perform the following tasks:

- Log on as the redbrick user or Administrator.
- Run the Setup program, responding to the prompts as required.
- Enable Red Brick Warehouse with a valid license key.
- Enable additional products or options with valid license keys, if applicable.

Unattended Installation

If you are using Microsoft Systems Management Server (SMS), you can perform an unattended installation of the Red Brick Warehouse software. Refer to “Performing an Unattended Installation” on page 2-20 for instructions on how to perform this installation.

Installing in a Non-Networked Environment

If you are not connected to the network or if you do not have a network card installed, refer to “Installing in a Non-Networked Environment” on page 2-19.
Running the Setup Program

You use a Windows NT Setup program to install Red Brick Warehouse. Setup contains a menu interface that calls supporting installation files during the installation. You run the same program to install both Red Brick Warehouse and Red Brick Warehouse for Workgroups. You must be the redbrick user or Administrator to run the program.

Log on as the redbrick user and start the installation process by inserting the CD-ROM and selecting Run from the File menu on the Windows NT File Manager. (You can also run Setup from a Windows NT shell window.)

The Run dialog box is displayed.

For Intel-based systems, type:

```
d:\i386\disk1\setup
```

For Digital Alpha-based systems, type:

```
d:\alpha\disk1\setup
```

and click OK.

**Note:** If you have inserted the CD-ROM into a drive other than drive d:, use that drive letter instead.

Setup displays a message informing you that the installer is being prepared. After a few moments, the Welcome screen is displayed. Click Next to continue the installation.

Setup displays the Select Components screen. You have three choices:

- Install Red Brick Products
- Enable Red Brick Products
- Verify Red Brick Products

Choose Install Red Brick Products and click Next.
Accepting the License Agreement

The Setup program displays the License Agreement. Read the agreement carefully before proceeding. If you accept the terms of the agreement, click Yes to continue the installation. If you do not accept the terms, click No and the installation will terminate.

From this point on, the Setup program prompts you for information and gathers this information as you respond. Later in the installation process, you are asked to verify that the information you have provided is correct.

When a default value exists for an installation parameter, that value appears in the appropriate field. To use a default value, leave the field’s value as it is. To use another value, type the new value in the field.

Stopping the Installation

You can stop the installation from any Setup screen by clicking Cancel.

The Exit Setup screen is displayed:

Setup is not complete. If you quit the Setup program now, the program will not be installed.

You may run the Setup program at a later time to complete the installation.

To continue installing the program, click Resume. To quit the Setup program, click Exit Setup.

Providing User Information

The Setup program displays the User Information screen and asks you to provide your name and your company name.

Type your name in the Name field and your company name in the Company field, then click Next.
Installing Red Brick Warehouse
Running the Setup Program

**Specifying the Installation Type and Warehouse Directory**

The Setup program displays the Setup Type screen and asks you to specify the type of installation you wish to perform:

- **The Typical installation** installs all the Red Brick Warehouse executable files, along with the sample database.

  The installation verification procedure requires the sample database named Aroma, which is also used extensively in the examples provided in Red Brick Warehouse documentation. Therefore, most sites should install the sample database. The Aroma scripts, data, and database require approximately 16 megabytes of disk space and can be removed later if they are no longer needed.

- **The Compact installation** installs only the Red Brick Warehouse executable files.

- **The Custom installation** allows you to choose the options you wish to install, including the Red Brick Warehouse executable files, the Aroma database, and the administration database. This option is recommended for experienced users only.

  The administration database is a database that administrators can issue commands against as a means of monitoring and controlling multiple databases across an enterprise.

  You do not need to build this database if you have not purchased the Enterprise Control and Coordination option. If you have purchased this option, however, you must install the administration database in order to take advantage of all the Enterprise Control and Coordination features.

  For detailed information about the uses of this database, refer to the *Warehouse Administrator's Guide for Windows NT Platforms*.

**Note:** You can rerun the Setup program later and build the administration database as a separate task, as long as the warehouse files are already installed.

Select an installation option by clicking the appropriate check box.
The Setup Type screen also asks you to specify the directory into which you want Red Brick Warehouse installed. The default directory is \RedBrick\RBW (In this guide, the default directory is called the redbrick directory, or redbrick_dir.) If you want to specify another directory, click the Browse button and choose the directory, then click OK to go back to the Setup Type screen.

**Note:** If you are installing a new release of Red Brick Warehouse, you should choose another directory name, such as \RedBrick\RBWNEW. (Throughout this guide, the new directory is referred to as the new_redbrick directory, or new_redbrick_dir).

Click Next to go to the next installation screen. If you have selected the Typical or Compact installation, refer to “Specifying the Locale” on page 2-9. If you have selected the Custom installation option, see the next section.
**Specifying Custom Installation Options**

If you selected the Custom installation option in the Setup Type screen and clicked Next, the Select Components screen is displayed. Here you select the components you want to install:

- Program Files
- Sample Database (Aroma)
- Administration Database

The screen shows the amount of disk space each component will require.

To select a component to install, click to the left of its name. A check mark appears next to each selected component. To deselect a component, click its check mark. You can see the total amount of space your choices will require, along with the disk space remaining on the current drive, at the bottom of the screen.

To view the space remaining on any other drives connected to your workstation, click the Disk Space button and select the drive from the drop-down list.

Click Next to go to the next installation screen.
**Specifying the Locale**

The Locale Language Specification dialog box is displayed.

1. Select the language and click Next.
   
The language component of the locale specification controls which translation is used to display information and warning messages, object names, month and day names, and character data returned in query results.

   The Locale Components Specification dialog box is displayed.
The default values appearing in the Locale Components Specification dialog box will differ depending on which language you selected. For example, if you selected English as your language, the default values are territory: UnitedStates; character set: US-ASCII; and sort order: Binary.

2. Choose a territory, character set, and sort order and click Next.

For a detailed description of locale specifications, refer to the Warehouse Administrator’s Guide.

**Specifying the Program Folder**

The Setup program displays the Select Program Folder screen and asks you to specify the Program Folder to contain Red Brick Warehouse. This name appears on the title bar of the Program Group in the Windows NT Program Manager.

The default folder is Red Brick Warehouse. If you want to specify a different Program Folder, select one from the list of existing folders or type a new name.

Click Next to go to the next installation screen.
Providing Security Information

The Setup program displays the Security Information screen.

You should have created a *redbrick* account prior to starting the installation, as described in “Creating the *redbrick* Account” on page 1-8. If you have created this account, choose the REDBRICK account and type the password and password confirmation in the appropriate fields.

If you have not created the *redbrick* account, choose SYSTEM Local Account.

Click Next to go to the next installation screen.
Providing Server Information

The Setup program displays the Server Information screen next.

The Setup program asks for:

- A logical name for the Red Brick Warehouse Service. To use the default logical name (RB_HOST), leave the field as it is. To use the logical name you recorded on page 1-7, type that name in the field.

  **Note:** If you are going to run two releases of Red Brick Warehouse simultaneously during the test period, specify a logical host name other than the default RB_HOST (if you used the default for your existing installation). For example, you might enter RB_HOST_TEST.

- The maximum number of servers (there is one server thread per concurrent user) for which the warehouse is licensed. To use the default number (50), leave the field as it is. To change the number, type a new number in the field.

Click Next to go to the next installation screen.
Providing TCP/IP Information

You are prompted for the appropriate port number to be used by the Red Brick Warehouse Service as its communications port. Red Brick Systems recommends using the default port (5050) for the Red Brick Warehouse Service. To use the default port, leave the field as it is.

**Note:** If you are installing a new release of Red Brick Warehouse, you must use a port other than the one you used for your existing installation. For example, use 5051.

If you type a port number that is not within the allowed range, Setup displays this message:

Invalid port number provided. Please reenter.

**Note:** If you provide a port number that is already in use, the installation will proceed, but verification will fail. If this happens, rerun the Setup program with a different port number.

Click Next to go to the next installation screen.
Verifying Your Settings and Installing Files

The Setup program displays the Start Copying Files screen. All the choices you have made on the previous Setup screens are displayed.

To change your choices, click Back until you reach the screen that contains the information you want to change. When you have made all your changes, return to the Start Copying Files screen. Your changes are reflected in the list.

Click Next to continue the installation.

Finishing the First Phase of Installation

After you have completed the user-input phase of the installation process, the Setup program begins copying files from the CD-ROM into your specified directory.

Setup uses the information you supplied to create and configure Red Brick Warehouse files. For a description of these files, refer to Appendix A, “Warehouse Directories and Files.” Setup also places a “Red Brick Setup” icon in your Red Brick Warehouse Program Group.

When the Red Brick Warehouse installation is complete, Setup displays the Install Complete screen.

You must now enable Red Brick Warehouse with a license key and verify your installation. Click Next to begin the enablement process.
Enabling Red Brick Warehouse and Optional Products

Before you can use Red Brick Warehouse, you must enable it by providing a license key. Setup allows you to enable Red Brick Warehouse and any optional products that you have purchased.

Select Enable Red Brick Products from the Select Components screen. Click Next.

You see the following choices:

- Enable Red Brick Warehouse
- Enable Red Brick Warehouse for Workgroups

Select the appropriate choice, then click Next. Depending on your choice, you will see one of two different menus of Red Brick products and options. In the list of choices, check the boxes for all products that you have purchased, then click Next.

Product Licenses

Product licenses for Red Brick Warehouse include the following:

- RED_BRICK_WAREHOUSE
- RED_BRICK_WAREHOUSE_10
- RED_BRICK_WAREHOUSE_25
- RED_BRICK_WAREHOUSE_50
- RED_BRICK_WAREHOUSE_75
- RED_BRICK_WAREHOUSE_100
- RED_BRICK_WAREHOUSE_150
- RED_BRICK_WAREHOUSE_200
- MORE THAN 200

as well as licenses for various products such as RISQL-_REPORTER, ENTERPRISE_-CONTROL_-AND_COORDINATION, and RED_BRICK_VISTA.
Product Licenses for Red Brick Warehouse for Workgroups

Product licenses for Red Brick Warehouse for Workgroups include the following:

- RED_BRICK_WAREHOUSE_FOR_WORKGROUPS_5
- RED_BRICK_WAREHOUSE_FOR_WORKGROUPS_10
- RED_BRICK_WAREHOUSE_FOR_WORKGROUPS_20
- RED_BRICK_WAREHOUSE_FOR_WORKGROUPS_30

as well as licenses for various products such as RED_BRICK_VISTA, ENTERPRISE_COPY_MANAGEMENT, and RISQL_REPORTER.

Entering License Keys

After you have selected the products to license, Setup displays the License Information window. It asks you to enter the license key for each product you selected. After you enter each key and click Next, you are asked to enter the next one until you have entered keys for each product you have purchased.

Note: You can enable additional products and options at any time by running the Setup program again.

Example

To enable Red Brick Warehouse for a 10-user license, select the product in the License Information window, then respond to the following prompt:

Please enter the license key for RED_BRICK_WAREHOUSE_10

Enter your license key (a string of characters and/or numbers), as printed on the one-page document delivered with the software. Each product listed in the menu has a separate license key document. You must enter the key exactly as it appears in the document. Click Next.

If you enter a valid license key, the system displays the prompt for the next product you have purchased. The Setup program enters the license key you provided into the rbw.config file.
If you enter the license key incorrectly, a message like this is displayed:

Invalid license key provided. Please reenter.

Re-enter the license key and click Next.

After you have entered all the license keys for the products and options you have purchased, click Next.

**Enabling Red Brick Products**

The Setup program displays an Information screen. This screen shows you which products you have enabled with license keys. If any products you have purchased have not been enabled, click Back to go back to the Select Components screen and select them, then enter their license keys.

When all the products you purchased have been enabled, click Next on the Information screen to complete the setup.

**Note:** One of the RED_BRICK_WAREHOUSE options must be enabled, or verification of the installation will fail.

Setup creates the Red Brick Warehouse Service, starts the service, creates and loads the sample database, and creates the administration database (if you chose to install these components). This process takes a few moments; status boxes appear indicating progress.
Finishing Setup

The Setup program displays the Setup Complete screen with the following messages:

Setup has successfully enabled the options you requested and verified the installation.

Please view the contents of the release notes file before using Red Brick Warehouse.

If you want to review the Release Notes now, click Finish. Setup displays the Release Notes file in Notepad. If you want to review it later, deselect the checkbox and then click Finish. The Release Notes file icon is located in the Red Brick Warehouse Program Group in your Program Manager.

If the verification process is not successful, Setup displays this message:

Setup has successfully enabled the options you requested, however verification did NOT succeed.

Please review the contents of the verification log file (c:\redbrick_dir\VERIFY\VERIFY.LOG) to diagnose the problem.

Verifying Your Installation

The Setup program automatically verifies your installation during the process of enabling the products you have purchased. However, if you want to perform verification at another time, you can do so by running Setup and selecting Verify Red Brick Products from the Select Components screen.
Installing Red Brick Warehouse
Installing in a Non-Networked Environment

Installing in a Non-Networked Environment

The procedure for installing Red Brick Warehouse assumes you are operating in a networked environment. There are two additional configurations to consider:

- You do not have a network card installed.
- You have a network card installed but are disconnected from the network.

Without a Network Card

If you are using Red Brick Warehouse on a Windows NT machine in a non-networked environment and you do not have a network card installed, you must perform the following steps:

1. Install Remote Access Service (RAS).
   When configuring RAS, you can choose any COM port (for example, COM1 or COM2) and any modem driver, even if you do not have a modem installed.

2. Install the TCP/IP software if it is not already installed.

3. Configure TCP/IP (Control Panel —> Network) to use any IP address, such as 127.0.0.1, and to bind TCP/IP to RAS. The binding is done automatically by default.

4. From an MS-DOS prompt, use the ping command to test that the network software can communicate with the machine you are working on, as in the following example:
   ```c:\> ping <machine_name>```
   where `<machine_name>` is the name or IP address of the computer on which you are working.

5. Install Red Brick Warehouse.

With a Network Card

If you are using Red Brick Warehouse on a Windows NT machine in a non-networked environment but you have a network card installed in your computer, you must perform the following steps:

1. Install the Network Adapter software if it is not already installed (Control Panel —> Network).

2. Install the TCP/IP software if it is not already installed.
3. Configure TCP/IP (Control Panel —> Network) to use any IP address, such as 127.0.0.1, and to bind TCP/IP to RAS. The binding is done automatically by default.

4. From an MS-DOS prompt, use the `ping` command to test that the network software can communicate with the machine you are working on, as in the following example:

```
c:\> ping <machine_name>
```

where `machine_name` is the name or IP address of the computer on which you are working.

5. Install Red Brick Warehouse.

**Performing an Unattended Installation**

If you are using Microsoft SMS, you can perform an unattended installation. This procedure installs Red Brick Warehouse with default values for all the required parameters, or you can override the default values by setting values in a file called `redbrick.ini`. The `redbrick.ini` file, which is located in either the `i386` directory or the alpha directory on your CD-ROM along with a README file describing its use, is only used for unattended installation.

Use one of the following commands to initiate the unattended installation. For descriptions of each of the installation types, refer to “Specifying the Installation Type and Warehouse Directory” on page 2-6. For more information about SMS, refer to the *SMS Administration Guide*, published by Microsoft.

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPICAL</td>
<td>Performs the Typical installation.</td>
</tr>
<tr>
<td>CUSTOM</td>
<td>Performs the Custom installation.</td>
</tr>
<tr>
<td>COMPACT</td>
<td>Performs the Compact installation.</td>
</tr>
<tr>
<td>DEINSTALL</td>
<td>De-installs the Red Brick Warehouse software.</td>
</tr>
</tbody>
</table>
The redbrick.ini File

During the unattended installation process, the Setup program reads the redbrick.ini file to determine the values specified for each of the installation parameters. If no values are specified in the redbrick.ini file, Setup uses the default values.

The following tables show the parameters and default values contained in the redbrick.ini file. To change a parameter to a non-default value, remove the comment character (;) from the line in the file and add the new value following the equal sign (=).

For a complete description of each installation parameter, refer to page 2-5 through page 2-18.

Note: You must enter the correct license keys for each Red Brick Warehouse option you specify before beginning unattended installation, or the process will fail.

[SETUP] Section

The following parameters are specified in the [SETUP] section of the redbrick.ini file.

<table>
<thead>
<tr>
<th>Installation Parameter</th>
<th>Default Value</th>
<th>Possible Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERSION=</td>
<td>5.1.x</td>
<td>Version number</td>
</tr>
<tr>
<td>OPTION=</td>
<td>INSTALL</td>
<td>INSTALL</td>
</tr>
</tbody>
</table>
## [INSTALL] Section

The following parameters are set in the [INSTALL] section of the `redbrick.ini` file.

<table>
<thead>
<tr>
<th>Installation Parameter</th>
<th>Default Value</th>
<th>Possible Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>LICENSE=</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>USERNAME=</td>
<td>“Name”</td>
<td>Username</td>
</tr>
<tr>
<td>COMPANYNAME=</td>
<td>“Company”</td>
<td>Company name</td>
</tr>
<tr>
<td>LOCATION=</td>
<td>c:\RBW51</td>
<td>Path to location where Red Brick Warehouse software will be installed.</td>
</tr>
<tr>
<td>TYPE=</td>
<td>TYPICAL</td>
<td>Installation type: TYPICAL</td>
</tr>
<tr>
<td>PROGRAMFOLDER=</td>
<td>Red Brick Warehouse</td>
<td>Name of Program Folder that will contain Red Brick Warehouse.</td>
</tr>
<tr>
<td>ACCOUNT=</td>
<td>SYSTEM</td>
<td>REDBRICK</td>
</tr>
<tr>
<td>DOMAIN=</td>
<td>“”</td>
<td>&lt;text clear string&gt; (Note: Only required when REDBRICK account is used.)</td>
</tr>
<tr>
<td>PASSWORD=</td>
<td>“”</td>
<td>&lt;text clear string&gt; (Only required when REDBRICK account is used.)</td>
</tr>
<tr>
<td>HOST=</td>
<td>RB_HOST</td>
<td>string</td>
</tr>
<tr>
<td>MAXUSERS=</td>
<td>50</td>
<td>number</td>
</tr>
<tr>
<td>PORT=</td>
<td>5050</td>
<td>Port number</td>
</tr>
</tbody>
</table>
**[ENABLE] Section**

The following parameters are set in the [ENABLE] section of the `redbrick.ini` file.

<table>
<thead>
<tr>
<th>Installation Parameter</th>
<th>Default Value</th>
<th>Possible Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDITION=</td>
<td>NT</td>
<td>WORKGROUPS</td>
</tr>
</tbody>
</table>

Red Brick Warehouse for Windows NT License Keys—One must be set if “NT” is specified in EDITION.

- RED_BRICK_WAREHOUSE= ""
- RED_BRICK_WAREHOUSE_10= ""
- RED_BRICK_WAREHOUSE_25= ""
- RED_BRICK_WAREHOUSE_50= ""
- RED_BRICK_WAREHOUSE_75= ""
- RED_BRICK_WAREHOUSE_100= ""
- RED_BRICK_WAREHOUSE_150= ""
- RED_BRICK_WAREHOUSE_200= ""
- RED_BRICK_WAREHOUSE_250= ""
- RED_BRICK_WAREHOUSE_500= ""

Red Brick Warehouse for Workgroups License Keys—One must be set if “WORKGROUPS” is specified in EDITION.

- RED_BRICK_WAREHOUSE_FOR_WORKGROUPS_5= ""
- RED_BRICK_WAREHOUSE_FOR_WORKGROUPS_10= ""
- RED_BRICK_WAREHOUSE_FOR_WORKGROUPS_20= ""
- RED_BRICK_WAREHOUSE_FOR_WORKGROUPS_30= ""

Red Brick Warehouse Options License Keys—Must be set for each option purchased.

- BACKUP_RESTORE= ""
- AUTO_AGGREGATE= ""
- ENTERPRISE_CONTROL_ANDCOORDINATION= ""
- RISQL_REPORTER= ""
- ENTERPRISE_COPY_MANAGEMENT= ""
- RED_BRICK_VISTA= ""
Checklist of Installation Tasks

1. Log on as the redbrick user or Administrator and run the Setup program.

2. Select Install Red Brick Products and answer the questions on the installation screens, using the Next and Back buttons for navigation.

3. Select Enable Red Brick Products. Enter license keys to enable all of the products you have purchased.

4. Click Finish to complete the installation and verification process and view the Release Notes file.

Note: First complete the preparation tasks in Chapter 1.
Installing a New Release

This chapter is for existing Red Brick Systems customers who want to install a new feature or maintenance release of Red Brick Warehouse or Red Brick Warehouse for Workgroups. The procedures in this chapter apply to both products, unless otherwise stated.

The installation procedure installs the warehouse software, including the sample database named *Aroma*, the utility directory named *util*, and all optional Red Brick products (for example, Enterprise Control and Coordination). It also includes a licensing mechanism that you use to enable the software and any optional products you have purchased.

There are two methods for installing Red Brick Warehouse over an existing installation:

- You can keep the current release of Red Brick Warehouse running at your site, installing the new release in a separate directory and with separate run-time configuration settings for test purposes. A description of this method begins on page 3-3.
- You can replace the existing release with the new release. A description of this method begins on page 3-11.

Deciding which method to use depends on the level of change in the release, the system resources, and the production status of the implementation at your site.
Installing a New Release

For example, if the new release represents a major release from your existing warehouse software; you have room on your system to run two concurrent warehouse servers and store two databases; and your warehouse is in full-production mode, then simply overwriting your existing system is not wise. In this case, you will want to install the new release in a separate directory, test it to see how the changes will affect your warehouse implementation, and then upgrade production databases later.

On the other hand, if the new release is a maintenance release that contains few significant changes from the release running in your production environment, you might choose to skip the test step and overwrite the existing release immediately.

Depending on the level of change between your installed release and the new release, you might have to upgrade existing databases with the Table Management Utility (TMU) before they can be accessed by the new warehouse server. This operation is described in “Upgrading Databases” on page 3-8.

For more information about the level of change in this release and whether you need to upgrade your existing databases, refer to the release notes distributed with the new release of Red Brick Warehouse.

Note: After a database has been upgraded, it cannot be accessed by earlier releases of the software. Therefore, Red Brick Systems recommends that you use newly loaded data or copies of your current databases for test purposes.
Running Two Releases of Red Brick Warehouse

The procedure for installing and simultaneously running two releases of Red Brick Warehouse is similar to the first-time installation procedure except for directory name and location and some configuration parameters.

You need not shut down any existing Red Brick Warehouse services to perform this installation. Full production use of the existing release can continue.

The installation procedure for Red Brick Warehouse uses a Windows NT Setup program, which displays a menu of installation options. These options let you do any of the following:
- Install a full-feature or maintenance release of Red Brick Warehouse.
- Install a partial update, or “patch,” release.
- Enable an additional Red Brick product with a license key.

For more information about installing an update release, refer to the release notes that are distributed with the update release.

Red Brick Warehouse installation is typically done by the system or database administrator. You must have Administrator privileges or be logged in as the redbrick user to complete the steps in the installation procedure, and to start the Red Brick Warehouse Service.

You can install a new release of Red Brick Warehouse while users are accessing the currently installed release as long as you do not overwrite the current release with the new release.
Installing a New Release
Preview of Installation Tasks

To install the warehouse, you will perform the following tasks:

• Log on as the redbrick user or Administrator.
• Run the Setup program, responding to the prompts as required.
• Enable Red Brick Warehouse with a valid license key.
• Enable additional products or options with valid license keys, if applicable.
• Verify your installation.
• Redirect client-application systems to the new release for testing purposes.
• Upgrade your test database(s).
• Test the new features of Red Brick Warehouse before migrating production databases to the new release.
• Upgrade production databases to the new release.
• Migrate users to the new release.
• Optionally, replace the old release of Red Brick Warehouse with the new release.

Note: Database backups created with Red Brick Warehouse for the existing release might not be compatible with the new release you are installing. (For details, or whether a new release requires an UPGRADE operation, refer to the release notes for the new release.) If you might need access to backups, do not remove your existing warehouse software from your system.

Unattended Installation

If you are using Microsoft SMS, you can perform an unattended installation of the Red Brick Warehouse software. Refer to “Performing an Unattended Installation” on page 2-20 for instructions on how to perform this installation.
Installing Red Brick Warehouse

The procedure for installing Red Brick Warehouse is described in Chapter 2. When installing a new version of Red Brick Warehouse in addition to your existing installation, you must select an installation directory that is different from your existing installation directory. For example, if your current installation is in `redbrick_dir`, then you might install your new installation in a directory named `new_redbrick_dir`.

You must also select a warehouse logical name that is different from the logical name you used for your existing installation. For example, if your existing warehouse logical name is RB_HOST, you might choose RB_HOST_TEST as the logical name for your new installation.

Follow the instructions in Chapter 2, starting on page 2-4, then continue with the instructions beginning on page 3-6.
Redirecting Client Applications for Test Purposes

Redirect the client-application system(s) that you want to use to test the new release by specifying the TCP/IP port you chose during installation (for example, 5051) in the `win.ini`, or `interfaces` file. You should probably leave most client systems directed to the existing TCP/IP port until you finish testing the new warehouse.

You now have two independent warehouse services running.

**Note:** To use a mixed-version host properly via the Windows NT shell, you must explicitly specify both the pathname of the RISQL binary (such as `c:\rbw50\bin\risql`) and the name of the service to use (such as `c:\rbw50\bin\risql -h RBW_5014`); otherwise, the more recent RISQL binary and service such as `c:\rbw\bin\risql -h RBW_51` will be run.

If you are going to use existing databases to test the new release, you must upgrade them to the new release as described in the following sections.
Migrating Databases to the New Release

After testing the new release of Red Brick Warehouse and becoming familiar with the new features and changes from previous releases, migrate your production databases to the new release. There are three ways to do this:

- Use the UPGRADE command provided with the new release to upgrade existing databases.
- Run a Table Management Utility (TMU) UNLOAD operation with the existing release of the TMU, re-create all tables and other database objects in the new server, and reload (LOAD) with the new TMU.
- Run a TMU LOAD DATA operation with the data input files for the existing database using the new warehouse server release.

Only the UPGRADE procedure is described in this guide. For information about unloading and reloading data or loading from original data input files, refer to the Table Management Utility Reference Guide.

Note: Databases created under previous releases are not always compatible with new warehouse server releases. For example, if you need to access a database backup that was created with a previous release of Red Brick Warehouse, you might need access to a compatible server release. To check compatibility between releases, refer to the release notes for the new release.
Upgrading Databases

To upgrade an individual database, invoke the Table Management Utility (TMU) and specify a control file that contains an UPGRADE statement.

**Note:** Upgrades are not required for all new releases; check the current release notes for compatibility issues.

The upgrade operation creates backup copies of certain files for your database (such as the RB_DEFAULT_IDX file), which you can delete when you are satisfied that the upgrade process was successful. Which files are backed up varies from upgrade to upgrade.

Upgrade each database as follows:

1. Create a TMU control file containing an UPGRADE statement as specified in the Table Management Utility Guide or the release notes for the version you are installing.

2. Invoke the TMU, using a command of the form:

   ```
c:\> rb_tmu -d db_name control_file dba_username dba_password
   ```

   where:

   **db_name**
   
   The database to upgrade. This is the logical database name, as defined in the new_redbrick_dir\rbw.config file. If you do not use the -d option, the TMU uses the logical database name specified by the RB_PATH environment variable.

   **control_file**
   
   Name of file containing the UPGRADE command.

   **dba_username, dba_password**
   
   Username and password for the user with DBA authorization for the database to be upgraded.

Depending on the releases involved in a given upgrade, you might have to perform a REORG operation on your databases after upgrading. To find out whether or not this operation is necessary, refer to the current release notes.

For more information about TMU syntax, refer to the Table Management Utility Reference Guide.
Upgrade Messages

If a database referenced by a logical database name in the rbw.config file or a database named with the RISQL Entry Tool or RISQL Reporter -d startup option does not point to a valid database, the TMU issues a message like this:

**FATAL** (519) Directory 'c:\db\sales' does not contain a valid Red Brick Warehouse database. Missing 'c:\db\sales\RB_DEFAULT_LOCKS'.

If the database is already a valid Version 5.1 database, the TMU issues a message like this:

**ERROR** (558) UPGRADE command does not need to be run on database c:\db\sales.

After the database has been successfully upgraded, the TMU issues a message like this:

**INFORMATION** (559) UPGRADE of Red Brick Warehouse database c:\db\sales successful.
Migrating Users to the New Release

To migrate users to the new release:

1. Back up your existing production databases.
2. Run the UPGRADE script, as described in previous sections, to make databases compatible with the new release.
3. If necessary, perform a REORG operation to ensure referential integrity and optimal performance. To find out whether you need to perform a REORG operation, refer to the release notes for the current release.
4. Redefine users’ existing environment variables to point to the directory containing the new release software (new_redbrick_dir\bin).

The production version of the new Red Brick Warehouse release is now ready for use.
Replacing an Existing Warehouse with the New Release

If the new release you are installing is a maintenance release containing few substantial changes from the release running in your production environment, you can install the new release directly in the redbrick directory rather than set up a test directory. Installing in a directory that already contains a release of Red Brick Warehouse consists of the following tasks:

- Shutting down the Red Brick Warehouse Service
- Installing, enabling and verifying the new software
- Upgrading existing databases, if necessary
- Announcing to user groups that the new release is available

These procedures are described in the following sections.

Note: You must perform all steps in the procedure as the redbrick user.

Caution: Before you install the new software, schedule a warehouse shutdown and warn all users that warehouse databases will not be accessible during the shutdown period.

Shutting Down the Service

1. Log in as the redbrick user.
2. Open the Control Panel in the Windows NT Program Manager and click the Services button.
3. In the Services screen, select RedBrickService <HOST_NAME>, then click the Stop button to stop the service.
Installing a New Release
Replacing an Existing Warehouse with the New Release

Installing the New Release

Follow the installation instructions in Chapter 2, “Installing Red Brick Warehouse,” to install the new release in your standard redbrick directory.

Note: Red Brick Systems recommends backing up the existing release at this time in case you need access to backup copies of databases that were created with the earlier release of Red Brick Warehouse. Eventually, these Red Brick Warehouse backup files can be removed from your system.

During installation, Setup automatically saves your existing rbw.config file under the name rbw.config.org, and installs the new rbw.config file in its place. If you need to use parameter values from your old rbw.config file, you must manually copy them from rbw.config.org to the new rbw.config.

Enable each optional Red Brick product you have purchased with a valid license key at this time.

Upgrading Existing Databases

Upgrade existing databases, as described under “Migrating Databases to the New Release” on page 3-7.

Announcing the New Release

Finally, describe any changes and improvements this release offers to the user community at your site.
Checking of Installation Tasks

To run two releases of Red Brick Warehouse concurrently:

1. Install and verify Red Brick Warehouse, following the instructions in Chapter 2.
2. Redirect client applications to the new release for testing purposes.
3. Migrate your databases to the new release by performing an upgrade.
4. Migrate users to the new release.

Note: First complete the preparation tasks in Chapter 1.

To replace an old release of Red Brick Warehouse with the new release:

1. Stop the Red Brick Warehouse Service for the existing release.
2. Install the new release, following the instructions in Chapter 2.
3. Upgrade existing databases, if necessary; check the release notes for details.
4. Announce the availability of the new release to users.

Note: Check the release notes for upgrade requirements.
Installing a New Release
Checklist of Installation Tasks
Administering a Warehouse on a Windows NT System

This chapter contains administration information for Red Brick Warehouse, much of which is specific to hardware platforms running the Windows NT operating system.

Configuring the Services for Automatic Startup

To configure the Red Brick Warehouse Service and the Copy Management Service for automatic startup when the operating system starts, open the Control Panel in the Windows NT Program Manager and click the Services button.

In the Services screen, select RedBrickService<HOST_NAME> (for Red Brick Warehouse Service) and/or RedBrickService-CopyManagement (for the Copy Management Service), then click the Startup button. The Service screen appears. Under Startup, select Automatic. When you restart your computer, the warehouse services will start automatically.
Removing Red Brick Warehouse

To remove Red Brick Warehouse, you must first stop the Red Brick Warehouse Service, because the Uninstaller cannot remove any files that are currently in use.

To stop the Red Brick Warehouse Service (if it is running) and remove the Red Brick Warehouse software:

1. Log in as the redbrick user.
2. Open the Control Panel in the Windows NT Program Manager and click the Services button.
3. In the Services screen, select Red Brick Service <HOST_NAME>, then click the Stop button to stop the service.
4. Click the Uninstaller icon in the Red Brick Warehouse program group.

The Uninstaller deletes any files that were copied to the new_redbrick directory during installation. It also removes most of the Registry settings specified by the Setup program.

Note: The Uninstaller does not delete any log files or files added to the directory during the Enable and Verify portions of installation, nor does it delete files you added after the initial files were copied to the directory. To remove these files, delete the entire new_redbrick directory.
This appendix describes a typical warehouse directory structure, built using the standard configuration provided by the Red Brick Warehouse installation procedure. Throughout the Red Brick Systems documentation, the warehouse directory is referred to as the `redbrick` directory or `redbrick_dir`.

The following illustration is a graphical representation of the directory hierarchy. A brief description of each significant file follows the illustration.
The following table describes the directories and files in the redbrick directory. In the Name column, directories are marked with a backslash (\) character, and their contents are indented.

### Directories and Files Under redbrick Directory

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIN\</td>
<td>Directory for warehouse server binary files and scripts.</td>
</tr>
<tr>
<td>cmclient.exe</td>
<td>Copy Management client program.</td>
</tr>
<tr>
<td>cmservice.exe</td>
<td>Copy Management Service.</td>
</tr>
<tr>
<td>cmsetup.exe</td>
<td>Copy Management network setup program.</td>
</tr>
<tr>
<td>dbcreate.exe</td>
<td>Database creation/deletion utility.</td>
</tr>
<tr>
<td>dmcgth32.dll</td>
<td>Library for Red Brick Data Mine.</td>
</tr>
<tr>
<td>dmcgth32.dll</td>
<td>Library for Red Brick Data Mine.</td>
</tr>
<tr>
<td>dmrb32.dll</td>
<td>Library for Red Brick Data Mine.</td>
</tr>
<tr>
<td>logdview.exe</td>
<td>Log file viewer.</td>
</tr>
<tr>
<td>msvcrt.dll</td>
<td>C runtime library.</td>
</tr>
<tr>
<td>msvcrt10.dll</td>
<td>C runtime library.</td>
</tr>
<tr>
<td>msvcrt20.dll</td>
<td>C runtime library.</td>
</tr>
<tr>
<td>msvcrt40.dll</td>
<td>C runtime library.</td>
</tr>
<tr>
<td>rb_cm.exe</td>
<td>Binary file for the Copy Management utility.</td>
</tr>
<tr>
<td>rb_tmu.exe</td>
<td>Binary file for the Table Management Utility (TMU).</td>
</tr>
<tr>
<td>rb_translate</td>
<td>Translation-support file.</td>
</tr>
<tr>
<td>rbclean.bat</td>
<td>Sample batch file to clean index build and spill area.</td>
</tr>
<tr>
<td>rbping32.exe</td>
<td>RBPing program.</td>
</tr>
<tr>
<td>rbping.hlp</td>
<td>RBPing online help.</td>
</tr>
<tr>
<td>rbw.exe</td>
<td>Red Brick Warehouse Service.</td>
</tr>
<tr>
<td>rbwservice.exe</td>
<td>Red Brick Warehouse Service administration utility.</td>
</tr>
<tr>
<td>risql.exe</td>
<td>Binary file for the RISQL Entry Tool.</td>
</tr>
<tr>
<td>risqlrpt.exe</td>
<td>Optional binary file for the RISQL Reporter.</td>
</tr>
</tbody>
</table>
## Warehouse Directories and Files

### Directories and Files Under redbrick Directory (Continued)

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MESSAGES</strong>\</td>
<td>Directory containing the messages file for the language of choice (for example, English) and a corresponding log file.</td>
</tr>
<tr>
<td><strong>LOCALE</strong>\</td>
<td>Directory of files containing product error messages in the language and character sets specified by their parent directories. These files enable errors to be reported in a specific language and character set.</td>
</tr>
<tr>
<td>rbw.config</td>
<td>Text file containing configuration parameters.</td>
</tr>
<tr>
<td>rbwapid.log</td>
<td>File where log entries are written; an _old extension indicates the previous log file.</td>
</tr>
<tr>
<td><strong>SAMPLE_INPUT</strong></td>
<td>Directory containing files used to create Aroma, the sample database. File contents are indicated by their extensions as follows:</td>
</tr>
<tr>
<td></td>
<td>• .tmu—Control statements for the Table Management Utility; for example, LOAD DATA</td>
</tr>
<tr>
<td></td>
<td>• .risql—SQL and RISQL commands; for example, CREATE TABLE</td>
</tr>
<tr>
<td></td>
<td>• .txt—Data input for the tables</td>
</tr>
<tr>
<td><strong>AROMA_DB</strong>\</td>
<td>Sample database built by the rbw.verify program that results from the sample_input files.</td>
</tr>
<tr>
<td><strong>ADMIN_DB</strong>\</td>
<td>Administration database built by the installation script for users of the Enterprise Control and Coordination option.</td>
</tr>
<tr>
<td><strong>INSTALL</strong>\</td>
<td>Directory containing installation log files.</td>
</tr>
<tr>
<td><strong>LOGS</strong>\</td>
<td>Default directory that contains log files created by the log thread (rbwlogd).</td>
</tr>
<tr>
<td><strong>UTIL</strong>\</td>
<td>Directory containing collection of miscellaneous tools and utilities for use with Red Brick Warehouse. For information on contents and use, refer to the README file in this directory.</td>
</tr>
<tr>
<td><strong>VERIFY</strong>\</td>
<td>Directory containing verification scripts and the verify.log file.</td>
</tr>
</tbody>
</table>
This appendix identifies the languages, territories, character sets, and collation sequences supported by the Red Brick products. The following table lists the logical combinations of these locale components; however, any combination can be used in a locale specification.

The values shown in boldface are the default values for the corresponding language when an incomplete locale is specified. For example, the default character set for German is Latin1.

Refer to the Warehouse Administrator’s Guide for more information.
Recommended Locale Specifications

<table>
<thead>
<tr>
<th>Language</th>
<th>Territory</th>
<th>Character Set</th>
<th>Sort</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>United States</td>
<td>US-ASCII</td>
<td>Binary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Latin1</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MS1252</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>UTF-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Canada</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td></td>
<td></td>
</tr>
<tr>
<td>German</td>
<td>Germany</td>
<td>Latin1</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MS1252</td>
<td>Binary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UTF-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Austria</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>German-Switzerland</td>
<td></td>
<td></td>
</tr>
<tr>
<td>French</td>
<td>France</td>
<td>Latin1</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MS1252</td>
<td>Binary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UTF-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>French-Canada</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>French-Switzerland</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spanish</td>
<td>Spain</td>
<td>Latin1</td>
<td>Spanish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MS1252</td>
<td>TraditionalSpanish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UTF-8</td>
<td>Binary</td>
</tr>
<tr>
<td></td>
<td>Argentina</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chile</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portuguese</td>
<td>Portugal</td>
<td>Latin1</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MS1252</td>
<td>Binary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UTF-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brazil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italian</td>
<td>Italy</td>
<td>Latin1</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MS1252</td>
<td>Binary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UTF-8</td>
<td></td>
</tr>
<tr>
<td>Norwegian</td>
<td>Norway</td>
<td>Latin1</td>
<td>Danish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MS1252</td>
<td>Binary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UTF-8</td>
<td></td>
</tr>
<tr>
<td>Swedish</td>
<td>Sweden</td>
<td>Latin1</td>
<td>Swedish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MS1252</td>
<td>Binary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UTF-8</td>
<td></td>
</tr>
<tr>
<td>Danish</td>
<td>Denmark</td>
<td>Latin1</td>
<td>Danish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MS1252</td>
<td>Binary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UTF-8</td>
<td></td>
</tr>
</tbody>
</table>
### Recommended Locale Specifications

<table>
<thead>
<tr>
<th>Language</th>
<th>Territory</th>
<th>Character Set</th>
<th>Sort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finnish</td>
<td>Finland</td>
<td>Latin1, MS1252, UTF-8</td>
<td>Swedish</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Binary</td>
</tr>
<tr>
<td>Japanese</td>
<td>Japan</td>
<td>MS932, JapanEUC, UTF-8</td>
<td>Binary</td>
</tr>
</tbody>
</table>

**Notes**

- The component strings in this table must be used in locale specifications exactly as shown, with the exception that they are not case-sensitive.

- In the Sort column, anything that is not “Binary” is a linguistic sort definition. “Default” refers to the sort definition specified by the CAN/CSA Z243.4.1 Canadian ordering standard, which covers English and several Western European languages.

- *All* character sets include US-ASCII as a subset, so any of the listed character sets can safely be used when the language is English; however, the character sets listed for each language are the most appropriate choices.

- Character set conversions can reliably be performed between any two character sets listed for a given language. Conversions outside the scope of each language row in the table are not supported. For example, characters can be converted from Latin1 to MS1252 but not from Latin1 to JapanEUC.

- The MS932 character set, listed for Japanese, is a superset of Shift-JIS.

- Unicode is not a supported character set, nor are any shifted encoding schemes.
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