



Installation Instructions



© CoralTree Systems Limited 2009.

CoralTree Systems Limited are not liable for any errors or inaccuracies in this manual. Any errors found should be reported to the authors for correction in future editions.

The authors and their employers disclaim all warranties with regard to this software, including all implied warranties of merchantability and fitness. In no event shall the authors or their employers be liable for any special, indirect or consequential damages or any damages whatsoever resulting from loss of use, data or profits, whether in an action of contract, negligence or other tortious action, arising out of or in connection with the use or performance of this software.

Renaissance remains the property of CoralTree Systems Limited and can be used or copied only in accordance with the terms of the agreement. System i and iSeries are registered trademarks of International Business Machines Corporation.

Contents

Introduction	4
Requirements	4
Other considerations	4
Installing Renaissance on your System i	5
Upgrading to a new release	9
Appendix A: Notes on 3rd party products	10
Appendix B: Notes on setting up RNSSMS	12

Introduction

Renaissance is a Framework of RPG ILE programs, service programs, Javascript code and HTML designed to enable developers to quickly and easily build high-quality browser-based intranet applications for the IBM System i.

The Renaissance Framework provides:

- Full internationalisation capability.
- Full session management for maintaining state across multiple page requests.
- User security, with role-based authority to each function.
- The ability to define your own data tables and allow the end user to maintain data through functionally rich web pages without writing a single line of code.
- CSS based themes.

Applications built using the Renaissance Framework run on the System i Apache HTTP server, utilising the CGIDEV2 service procedures in order to deliver web-pages to a browser. Renaissance can optionally employ Ajax technology to provide the end user with smooth page transition and seamless server/browser interaction.

Renaissance is developed by CoralTree Systems Ltd, and freely available under the Open Source MPL Licence Version 1.1 (<http://www.mozilla.org/MPL/>).

Requirements

To run applications using the Renaissance framework you will need:

- An System i running V5R3M0 or above.
- Apache running on your System i.

After you have installed Renaissance you will need to add the following third-party products. Where any changes are needed to these products to make them System I compatible these changes are detailed in the installation instructions given in Chapter 2.

- Ajaxrequest
- TreeView

For more information on these products refer to the Appendix.

Other considerations

Before installing Renaissance on your System i, give consideration to the following:

Do you already have an Apache server listening on port 80 that you want to keep?

If not, installing Renaissance using all the default values should present no real problem. However, if you do have an existing server listening on port 80 you will need to either specify a virtual host name during installation (having first ensured that your DNS recognises that name and points correctly to your System i), or choose a different port number.

Installing Renaissance on your System i

You can download the latest version of Renaissance from the *Renaissance* section of the CoralTree website (www.coraltree.co.uk) as a two zipped save files: one containing the objects and one containing the source.



Before installing Renaissance you are advised to visit the 'Renaissance - Installation' message board on the CoralTree forum (<http://www.coraltree.co.uk/phpbb>) and read through the 'Known issues and workarounds' topic for the latest release.

1. Download the zip files to a known location on your PC and unzip them.
2. If you intend to use the library naming system (NAMEFMT=0) to identify System i file locations in your FTP session you will need to sign on to your System i as QSECOFR and create a save file using the commands:

```
CRTSAVF FILE(QGPL/RNSO) AUT(*ALL)
CRTSAVF FILE(QGPL/RNSS) AUT(*ALL)
```

This step is not necessary if you intend to use the directory path naming system (NAMEFMT=1).



In FTP sessions in which NAMEFMT is set to 0, transfer locations are listed in the DB2 UDB library and file.member format (library/file.member) and the file syntax for specifying DB2 UDB location names is /libraryname/filename.membername. If the .membername part of the notation is eliminated, FTP automatically transfers the first member in a file.

In FTP sessions in which NAMEFMT is set to 1, transfer locations must be listed in complete IFS notation, including the root (/) directory, and the file syntax for specifying DB2 UDB location names is /filesystemname/directoryname/ filename.extension for files residing in the root (/), QDLS, and QOpenSys file systems; /QOPT/volname/dirname/filename.extension is for optical files; and /QSYS.LIB/libraryname.LIB/ filename.FILE/membername.MBR is for DB2 UDB data.

3. Transfer the download files to your System i using native FTP. To do this navigate to the folder containing the download files, open an FTP session on your System i (using the QSECOFR profile and password), type *bin* to indicate that you intend to transmit files in binary mode, then enter PUT <save file name> RNSO and PUT <save file name> RNSS and .



Remember to run the command QUOTE SITE NAMEFMT 1 once you have established an FTP session if you intend to use directory path naming and have not therefore created a save file on your System i.

4. Once the upload has completed switch back to your System i session and, still signed on as QSECOFR, enter the commands:

```
RSTLIB SAVLIB(RNSOBJECTS) DEV(*SAVF) SAVF(QGPL/RNSO) RSTLIB(RNS)
RSTLIB SAVLIB(RNSSOURCE) DEV(*SAVF) SAVF(QGPL/RNSS) RSTLIB(RNS)
```

5. Once the RNS libraries have been restored you may wish to delete the save files from QGPL, along with the downloaded save files on your PC.
6. Add the library RNS to the top of your current library list by entering ADDLIBLE RNS at a command line.

7. If you are installing RNS for the first time type RNS/INSTALL at a command line and press F4. You can normally leave most parameters as their default values.

<i>Back end server subsystem</i>	The subsystem in which the back-end servers (and server manager and session manager) will run. This will be created by the install routine.
<i>Back end server subsystem: Library</i>	The library containing the subsystem entered above.
<i>Environment library</i>	The name of the library that will contain the framework and application data
<i>HTTP server name</i>	The name of the Apache server instance.
<i>HTTP server port</i>	<p>If you are a more advanced Apache user you may wish to change the port number or add virtual host names should you already have an instance of the Apache server running on port 80. In this situation you can choose whether to:</p> <ul style="list-style-type: none"> • specify a virtual host name, or • specify an alternative port on which RNS should listen.
Additional parameters	
<i>IFS path</i>	This parameter allows you to install Renaissance in a location other than the IFS root directory. The path you enter here is combined with the RNS root folder parameter to give the ultimate IFS path. For example, if you name your server <i>myrns</i> and change the IFS path from / to <i>/myapps/</i> RNS will install to <i>/myapps/myrns</i> .
<i>IFS object save file</i>	The name of the save file containing the IFS resources.
<i>IFS object save file: Library</i>	The name of the library containing the IFS save file.
<i>Virtual host</i>	If you opt for a virtual host name you should ensure that your DNS recognises that name and that it points to your System i. Before starting the install, it is recommended that you test it using PING <i><virtualhost></i> to ensure that it resolves to the correct address.
<i>RNS root folder</i>	The default entry of *HTTPSVR will cause this to default to the HTTP server instance. The folder name you enter here is combined with the IFS path to give the ultimate IFS path. For example, if you name your server <i>myrns</i> , change the IFS path from / to <i>/myapps/</i> , and leave this entry as *HTTPSVR, RNS will install to <i>/myapps/myrns</i> .
<i>Source CCSID</i>	You may wish to check the coded character set identification number (CCSID). If you leave this as the default value of *JOB the CCSID from the current job will be used; if you need to generate HTML using some other CCSID value enter it here. This will convert your source files into the correct CCSID and recompile

	them, ensuring that any HTML generated is correct for your locale.
--	--

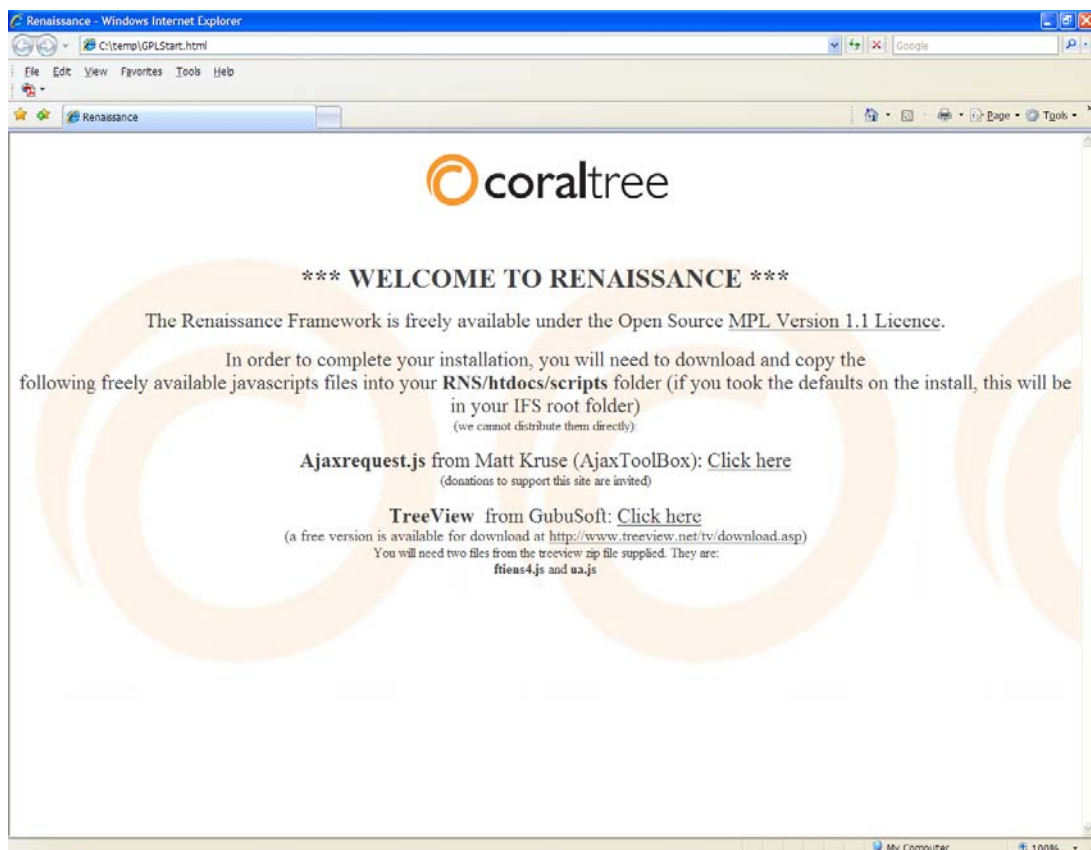
Once you are happy with all parameters press Enter. The INSTALL command will:

- Create the RNS work library RNSWORK.
- Create the environment library (i.e. the database library) specified.
- Populate the environment library with all essential configuration information.
- Create a user called RNSADMIN and set up all the queues required.
- Set up the back-end server subsystem, etc.
- Create an instance of the Apache HTTP server and install all necessary IFS resources.



If, during an install, you receive the message "Change of file xxxxxxxxxx may cause data to be lost. (C I)" you can ignore this warning so simply reply with an "I".

8. If a browser window does not open automatically open a web browser and go to the URL **http://<System i>** where **<System i>** is the System i name. If you changed the default port number when running INSTALL add **:nnnnn** to the end of the URL where **nnnnn** is the port number you specified.
9. If you have not yet installed the necessary third-party products the following page will be displayed each time you attempt to open Renaissance:



10. Install the necessary third-party products by downloading those JavaScript files listed into the /RNS/htdocs/scripts folder. You will need to make some minor changes to the

downloaded scripts, as described in the forum posting at <http://www.coraltree.co.uk/phpbb/viewtopic.php?t=141>.



Once all 3rd party products have been downloaded your /RNS/htdocs/scripts folder should contain the files `ajaxrequest.js`, `charting.js`, `datepicker.js`, `ftiens4.js`, `prototype.js`, `rico.js`, `ua.js` and `wrapper.js`, along with the sub-folders `mochikit` and `plotkit`.

11. Check that you are able to access the Renaissance log-in page, and enter the user ID RNSADMIN and the password RNSADMIN. You will then be 'forced' to change the password when logging on for the first time.
12. Once you have logged on for the first time it is a good idea to click on the *Users* menu option and 'copy' the registration of RNSADMIN to your own user profile. Thereafter you can log on with your own personal profile rather than RNSADMIN.
13. Initially, there will be one default environment. For this, and for any additional environments you wish to add, you can now log on and configure those items described below, and in the *RNS Configuration and Management Guide*, such as users, roles and functions.

Upgrading to a new release



Before upgrading you are advised to visit the 'Renaissance - Installation' message board on the CoralTree forum (<http://www.coraltree.co.uk/phpbb>) and read through the 'Upgrade instructions' topic for the latest release.

To upgrade to a new release of Renaissance:

1. Download the latest Renaissance zip file to a known location on your PC and unzip it.
2. Sign on to your System i as QSECOFR and create a save file using the command:
`CRTSAVF FILE(QGPL/RNS) AUT(*ALL)`
3. Transfer the download file to your System i using native FTP. Open an FTP session, log on to your System i using the QSECOFR profile and password, type *bin* to transmit files in binary mode, then enter `PUT <save file name> RNS`.
4. Once the upload has completed switch back to your System i session and, still signed on as QSECOFR, enter the command:
`RSTLIB SAVLIB(RNS) DEV(*SAVF) SAVF(QGPL/RNS) RSTLIB(RNSUPGRADE)`
5. Once the RNSUPGRADE library has been restored you may wish to delete the save files from QGPL, along with the downloaded save files on your PC.
6. Add the library RNSUPGRADE to your current library list by entering `ADDLIBLE RNSUPGRADE` at a command line.
7. Enter `RNSUPGRADE/UPGRADE` at a command line, or type `RNSUPGRADE/UPGRADE` and press F4 if you wish to review and change any of the parameters.



If, during an upgrade, you receive the message "Change of file xxxxxxxxxx may cause data to be lost. (C I)" you can ignore this warning so simply reply with an "I".



Each time you run the `UPGRADE` command both the framework and environment will, by default, be upgraded. As you may have more than one instance of RNS running (and hence more than one environment) you will probably only wish to upgrade both the framework and the environment the first time you run `UPGRADE`. To accommodate this there is a parameter on the `UPGRADE` command to allow you to optionally skip the framework rebuild.

8. Once you have completed the upgrade, modify the configuration file for your Renaissance Apache server(s) such that the *documentroot* directive refers to `/RNS/htdocs` rather than just `/`.

Appendix A: Notes on 3rd party products

Ajaxrequest

This tool sits as a layer over XMLHttpRequest functionality in order to make communication between Javascript and a server simpler for developers. It is available from www.ajaxtoolbox.com. As we are not permitted to redistribute this with the RNS framework you will need to download a copy of AjaxRequest.js directly from www.ajaxtoolbox.com should you wish to use it.

TreeView

This is used to construct tree-based menus and is freely downloadable from <http://www.treeview.net/tv/download.asp>. However, a link reading *JavaScript Tree Menu* is displayed at the top of the menu, unless you choose to purchase the licensed version. To purchase a licence for TreeView you will need to go to <http://www.regnow.com/softsell/nph-softsell.cgi?item=13669-5>. Once you have purchased a licence you will need to replace a file called *ftiens4.js* in *htdocs/scripts*, then remove the link by deleting a data area called *TREEVIEW* in the *RNS* library. *If you attempt to remove the link (or delete the data area) without purchasing the licence the menu will not be displayed.*



The information given above is correct at the time of writing but in all cases we recommend that you check with the manufacturer concerned for the latest licensing terms and conditions.

Appendix B: Notes on setting up RNSSMS

The following instructions describe how to configure the Apache server for, and start an instance of the server called RNSSMS, a server instance designed specifically to work with the CoralTree SMS Gateway.

The Apache server can be configured through the Apache admin page (for which you will need *IOSYSCFG authority) or by performing the following steps:

1. Create a new member in the file QUSRSYS/QATMHINSTC called RNSSMS.
2. Using UPDDTA on that member, enter the following record:

-apache -d /RNS -f conf/RNSSMS.conf -AutoStartY

3. Create the following file in the IFS:

/RNS/conf/RNSSMS.conf

4. Edit the file so that the contents match the following:

```
# RNS Apache server configuration
# General setup directives

Listen *:8890

KeepAlive Off

LogFormat "%h %l %u %t \"%r\" %>s %b \"%{Referer}i\" \"%{User-Agent}i\"" combined
LogFormat "%{Cookie}n \"%r\" %t" cookie
LogFormat "%{User-agent}i" agent
LogFormat "%{Referer}i -> %U" referer
LogFormat "%h %l %u %t \"%r\" %>s %b" common
CustomLog logs/rnssms_access_log combined
LogMaint logs/rnssms_access_log 7 0
LogMaint logs/rnssms_error_log 7 0
ErrorLog logs/rnssms_error_log
SetEnvIf "User-Agent" "Mozilla/2" nokeepalive
SetEnvIf "User-Agent" "JDK/1\.0" force-response-1.0
SetEnvIf "User-Agent" "Java/1\.0" force-response-1.0
SetEnvIf "User-Agent" "RealPlayer 4\.0" force-response-1.0
SetEnvIf "User-Agent" "MSIE 4\.0b2;" nokeepalive
SetEnvIf "User-Agent" "MSIE 4\.0b2;" force-response-1.0

SetEnv QIBM_CGI_CHANGE_CURLIB N
SetEnv QIBM_CGI_CHANGE_CURDIR N
SetEnv QIBM_CGI_LIBRARY_LIST "QTEMP;RNSWORK;RNS;QGPL;QHTTPSVR"
SetEnv RNS_TRACE 0
SetEnv RNS_FLUSH_TRACE 0

# The RNS_RCLACTGRPS environment variable will
# be used to perform a RCLACTGRP on the comma
# delimited list provided after each API request
# e.g SetEnv RNS_RCLACTGRPS RNS,RNSAPI

# The RNS_RCLACTGRP environment variable will
# be used to tell the CGI servers to perform a
# RCLACTGRP RNS prior to processing a login request
# e.g. RNS_RCLACTGRP 1

ScriptLog /logs/rnssms_ScriptErrors
CGIConvMode BINARY

Options +ExecCGI +Includes

DocumentRoot /RNS/htdocs
```

```
DirectoryIndex start.html index.html
AddOutputFilter INCLUDES .shtml
StartCGI 1
#### CGIInitialURL /qsys.lib/rnsrouter.lib/xr9600.pgm
ScriptAliasMatch (.*).pgm /QSYS.LIB/RNSROUTER.LIB/$1.pgm
<Directory /QSYS.LIB/RNSROUTER.LIB>
    Options +ExecCGI
    Allow From all
</Directory>
```

To start RNSSMS:

1. Ensure that the library RNS is in your library list.
2. Enter the following at a command line:

RNS *S RNSSMS

To end RNSSMS:

1. Ensure that the library RNS is in your library list.
2. Enter the following at a command line:

RNS *E RNSSMS