
Administrator's Guide to RODOS-Lite

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Administrator's Guide to RODOS-Lite EURANOS(CAT2)-TN(07)-07

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Management Summary

This document addresses the brief but accurate description of fine-tuning RODOS-Lite to country respectively institution specific requirements. Some in-depth parameters of RODOS-Lite are hidden from the graphical user interface and can only be manipulated by changing configuration files. As this configuration requires advanced knowledge about the operating system and RODOS-Lite and may also affect the installation system-wide, care should be taken before changing the configuration.

Therefore the modifications described in this guide should be performed by RODOS administrators only.

Acronyms and Abbreviations

Acronym / Abbreviation	Definition
Ant	Makefile like controlling of Java compile processes
API	Application Programming Interface
Linux	Open Source UNIX-like operating system
HP-UX	UNIX-Derivative of the company Hewlett-Packard
HTML	Hypertext Markup Language
Java	Object oriented programming language
JNI	Java Native Interface
GIS	Geographic Information System
GUI	Graphical User Interface

Table of Contents

1	INTRODUCTION.....	7
1.1	Basic requirements for a RODOS-Lite administrator.....	7
1.2	Structure.....	7
2	MODIFY DEFAULT VALUES.....	8
2.1	Quick step by step guide.....	8
2.2	Useful things to know.....	8
3	LOCAL TRANSLATION.....	9
3.1	Quick step by step guide.....	9
3.2	Extensive description.....	9
3.3	Useful things to know.....	9
4	MODIFYING HELP-SYSTEM.....	11
4.1	Quick step by step guide.....	11
4.2	Useful things to know.....	11
5	ADDING SITE INFORMATION.....	12
5.1	Quick step by step guide.....	12
5.2	Useful things to know.....	12
6	CHANGING SYSTEM PROPERTIES.....	13
6.1	Quick step by step guide.....	13
6.2	Configuring message logging to achieve debug information.....	13
6.3	Changing tool tip display time.....	13
6.4	Changing executable retrieving weather data.....	13
6.5	Useful things to know.....	13
7	COMPILING RODOS-LITE.....	15
7.1	Quick step by steps guide.....	15
7.2	Extensive description.....	15
7.2.1	Build targets.....	15
7.2.2	Additional parameters.....	15
7.2.3	Examples.....	16
7.3	Useful things to know.....	16
8	TROUBLESHOOTING.....	17

1 Introduction

The current RODOS user interface is not up to date to the state-of-the-art men-machine-interfaces. It is not intuitive, requires many special parameters and provides a deprecated look and feel.

RODOS-Lite was developed to provide an easy to use state-of-the-art interface to the main RODOS system. RODOS-Lite only focuses on the mandatory input for parameterizing a RODOS run. These parameters are collected in a line of sequential, self-explaining input windows presented to the RODOS user.

1.1 Basic requirements for a RODOS-Lite administrator

Depending on what modification described in this guide should be performed a RODOS-Lite administrator should possess at least basic knowledge on the following: copying and deleting files, creating and manipulating HTML pages, creating and manipulating text files including different encoding formats and Java properties handling[1].



Important: in general modifying the RODOS-Lite configuration requires to be „administrator“ of the RODOS-Lite system, i.e. to be logged in as user *rodos*. Some menus of RODOS-Lite will appear only in this context.

1.2 Structure

RODOS-Lite is usually located in a subdirectory of RODOS. The following paths and labels are used within this document as shortcuts.

- *\$RODOS_HOME* denotes the path to the RODOS installation
- *\$RODOS-LITE_HOME* denotes the path to the RODOS-Lite installation. Usually this evaluates to *\$RODOS_HOME/rolite*
- *\$RODOS-LITE_BIN* denotes the directory containing the standalone launcher and compiling environment for the RODOS-Lite system. It evaluates to *\$RODOS-LITE_HOME/bin*
- *\$RODOS-LITE_CONFIG* denotes the unique directory containing the RODOS-Lite system configuration. It evaluates to *\$RODOS-LITE_HOME/config*
- The documentation including off-line help and API is located in the directory *\$RODOS-LITE_HOME/docs*
- The sources are located in the directory *\$RODOS-LITE_HOME/src*. In general it is not necessary to rebuild the application.
- Third party libraries are located in *\$RODOS-LITE_HOME/lib* directory. In general nothing should be changed there.

- The name of the user actually working with the RODOS system is referred to as *\$USER* in this document
- *\$USER_HOME* denotes the user's home directory. Usually this evaluates to */home/\$USER* or something similar
- The configuration for each user is located in the hidden subdirectory *\$USER_HOME/.rodosLite* of the user's home directory.

2 Modify default values

At startup system-wide default values are loaded for the input fields of RODOS-Lite. This values can be modified.



2.1 Quick step by step guide

1. Start RODOS-Lite as user *rodos*
2. Change the values of some/all input fields to your desired default values
3. Choose the menu entry
Tools→Manage Defaults→Store current values as defaults
4. To reset the values to the original values choose the menu entry
Tools→Manage Defaults→Reset default values



2.2 Useful things to know

- The defaults are stored as several XML files that are basically a split up interface XML file. In general each input panel reflects in a separate XML file.
- The XML files are located in the directory *\$RODOS-LITE_CONFIG*
- Encountering problems you can explicitly reset the application to the defaults at installation time by manually deleting all files named *default.*.xml* in the directory *\$RODOS-LITE_CONFIG*

3 Local translation

The strings displayed by the GUI can be translated to local needs. To achieve this the administrator must modify the table like entries of a translation file.



3.1 Quick step by step guide

1. Start RODOS-Lite as user *rodos*
2. Choose the menu entry
Tools→*Create local translation and help*
3. A dialog appears. Use it to create an identifier for your locale translation
4. Edit the created file at location *\$RODOS-LITE_HOME/config/i18n/rodos/light/resources/i18n/GUI_xx_YY_label.properties*

3.2 Extensive description

RODOS-Lite can create a translation template file, which you can easily modify to your system needs. The file contains string entries of the form *key=translation*. You should not change the keys, but you can change the translation part to your needs. However, you may delete keys you definitely do not want to change for the sake of clarity. Missing keys will be taken from lower level members of the translation group (see below).

Example: The first item of the menu bar is labeled *File*. The key-translation pair looks like *menu_file=File*. To change the item label to *Datei*, change the key-translation to *menu_file=Datei*.

You may change the „translation group“ (Java term: *locale*) to which your translation belongs. By default the system locale is chosen. This reflects in a filename like *GUI_xx_YY_label.properties*, where *xx* refers to the system language and *YY* to the system country, e.g. *GUI_de_AT_MyTranslation.properties* which refers to german language, Austrian country and the label *MyTranslation*. This is important inasmuch missing translations will be taken from lower level members of the group. If a key is missing in the file *GUI_de_AT_MyTranslation.properties* because you deleted it, it is searched in the lower level file *GUI_de_AT.properties* and so on. For more information on resource bundle management see [2].

The path *rodos/light/resources/i18n* to the translation file is forced by technical circumstances and cannot be changed.



3.3 Useful things to know

- If you do not want to change the complete translation file step by step, but you cannot simply guess the key for a specific graphical component you want to translate, search instead for the currently used translation to find the corresponding key.
- Special characters can be entered „as they are“, e.g. */ ? . , > < [] { }* and many more. The exclamation mark, colon and equal sign must be escaped though, e.g. written as *\!*, *\:*, and *\=* respectively. Localized umlauts may also be used „as they are“ using an editor capable of encoding to ISO-8859-1 (=Latin1) character encoding, but may cause problems in displaying them. The safe way to encode them is to escape them as unicode sequence like e.g. „*Zur\u00FCck*“ instead of „*Zurück*“. Some editors may support conversion to this format. However you may want to test your editors behavior by translating a single key and checking the application before translating everything.

- You can change the country names and release group labels by editing the files *Countries_xx_YY_label.properties* respectively *ReleaseGroups_xx_YY_label.properties*
- You do not need to restart the application if you changed something during runtime. Switching to a different language and back will reread the translation file.

4 Modifying Help-System

The help system provides first aid for and basic overview on RODOS-Lite. It is context sensitive, i.e. different help buttons provide help on their local environment. The content of the help pages can be adapted to local needs.



4.1 Quick step by step guide

1. Start RODOS-Lite as user *rodos*
2. Choose the menu entry
Tools→*Create local translation and help*
3. Enter a label for your locale translation and confirm
4. Edit the files created at location *\$RODOS-LITE_HOME/config/help/html_xx_YY_label*



4.2 Useful things to know

- A local help system is linked to a local translation. Therefore you need to create a local translation to create a local help system. See page 9, section 3 „Local translation“ for additional information.
- The help pages are simple HTML files that can be handled as HTML files usually are, e.g. you can add images and links to external web pages.

5 Adding site information

Additional information can be displayed for each site. This concerns an overview map, a close-up view map and arbitrary textual information. Also sites close to a country's border can be defined.



5.1 Quick step by step guide

1. Add an overview image with file name *site_3CharacterCountryCode.extension* to the directory *\$RODOS-LITE_HOME/config/sites*. (Example: *fzk_ger.gif*)
2. Add a close-up view image with file name *site.extension* to the directory *\$RODOS-LITE_HOME/config/sites*. (Example: *fzk.gif*)
3. Add a HTML formatted textual description with file name *site.html* to the directory *\$RODOS-LITE_HOME/config/sites*. (Example: *fzk.html*)
4. Copy lines referring to the sites close to your country's border from the file *\$RODOS-LITE_HOME/sysin/defaultinfo/siteinfo* into the file *\$RODOS-LITE_HOME/config/closeToBorder.cfg*



5.2 Useful things to know

- Supported image formats (extensions) for image files are png, jpg or gif.
- If you are not sure which file name is checked you can enable logging to debug level *info* and check the output of *rodos.light.gui.site.SiteInformationPanel* (search for String *SiteInformationPanel* in the log file). See also page 13, section 6.2, „Configuring message logging to achieve debug information“.
- Sites that are configured as close to your country's border can be selected in the site panel's site selection combo box.

6 Changing system properties

Several system-wide parameters of RODOS-Lite can be adapted.



6.1 Quick step by step guide

1. As user *rodos* open a terminal (console) window
2. Change to the directory `$RODOS-LITE_CONFIG`
3. Edit the file `log4j.xml` to your site's debug message preferences
4. Edit the file `system.properties` to your site's system preferences

6.2 Configuring message logging to achieve debug information

RODOS-Lite can create a lot of debug information which can help both developers and system administrators in case something fails. By default only sparse information is logged. Logging is performed using the Ant `log4j` tool [4],[5]. Messages of certain granularity reflecting in a certain amount of messages can be distributed to different destinations. Both granularity and destinations can be configured by the XML configuration file located at `$RODOS-LITE_CONFIG/log4j.xml`.

To change the granularity edit this file and search for a node `log4j:configuration/root/level`. This node should have an attribute named *value*. Alternatively you can search for a line beginning with `<level value=`. Change the content of the attribute *value* to a valid log level e.g. *debug*. You have to restart RODOS-Lite to make your changes taking effect.

Additionally you can change the destination for the log messages to go e.g. to a web logging client, an explicit log file despite the main RODOS log file, and many more. Only a few have been preconfigured, but many more can be added. (see the `log4j` project page more details [4]). However in general it is not necessary to change the destination of the logging messages.

6.3 Changing tool tip raise and display time

Hovering the mouse cursor over graphical components of the GUI should display a short text message briefly (the tool tip) explaining the intention of the component. The tool tip vanishes after some time. This delay before and duration of the tool tip display can be configured.

Edit the file `$RODOS-LITE_CONFIG/system.preferences`. Find the line beginning `Default.tooltipDelay` respectively `Default.tooltipDuration`. Change the corresponding integer value to your needs. The time is measured in milliseconds.

6.4 Changing executable retrieving weather data

To retrieve current weather data executables can be called directly from within RODOS-Lite. The executables can be defined using the GUI. You must be the user *rodos*. To add respectively change the executable to acquire the latest weather data select the menu entry `Tools→Latest data executable`. You will be presented a file chooser dialog. Choose your executable here. Do the same using the menu entry `Tools→Realtime data executable` to define the executable to acquire the realtime weather data.



6.5 Useful things to know

- By default the logging level is set to warnings and the default logging destination is standard output. Nevertheless RODOS redirects all console output of RODOS-Lite to the file `$RODOS_HOME/rolog/liteerr.$USER`.
- Valid log levels in descending order of logging amounts are *debug*, *info*, *warn*, *error*, *fatal*, and *off*. In general you should not use the levels *fatal* and *off*.
- Never remove the line `<appender-ref ref="Dummy"/>` from the configuration file.

- To remove the acquire buttons respectively the executables for weather data you have to explicitly remove the corresponding entries from the file *\$RODOS-LITE_CONFIG/system.preferences*.

7 Compiling RODOS-Lite



7.1 Quick step by steps guide

5. As user *rodos* open a terminal (console) window
6. Change to the directory *\$RODOS-LITE_BIN*
7. Rebuild the application. Enter the command:
java -jar launcher.jar build
8. Launch RODOS-Lite in standalone mode:
java -jar launcher.jar run

7.2 Extensive description

Building and standalone run is controlled by an Ant [3] XML-script named *build.xml*. Similar to a makefile this file contains targets for certain purposes. The ant script is executed by the Java wrapper *launcher.jar*. The following targets are available.

7.2.1 Build targets

- *help*
print how to get more information on commands
- *run*
running RODOS-Lite as standalone application. This is the default target if no target name is specified
Executes the target *jar* if necessary
- *version*
prints the version including build number and latest build date of RODOS-Lite to the console window
- *build*
forces compiling and creating of the RODOS-Lite archive (i.e. main application executable)
Executes the targets *clean*, *compile*, and *jar* if necessary
- *jar*
Create the RODOS-Lite archive from already compiled sources
Executes the target *compile* if necessary
- *compile*
Compile Java sources if they are outdated i.e. if they class files are missing or the sources have changed
- *clean*
Delete the Java classes and the RODOS-Lite archive. Usually used just before recompiling the application
- *apidocs*
Create the API documentation from source codes with javadoc. The API documentation is of interest for system developers only
- *tidy*
Cleanup the sources directory removing e.g. editor backups, CVS entries, and cleaning user directories
- *release*
Creates a *tar.gz* archive for redistributing purposes. Unlikely to be used.
Executes the targets *tidy* and *jar* if necessary

7.2.2 Additional parameters

- `-DRODOS_DIR=myDir`
Use the directory `myDir` as RODOS main directory in standalone mode. Unlikely to be used for other than testing purposes
- `-DRODOS_LITE_HOME=myDir`
Use the directory `myDir` as RODOS-Lite main directory in standalone mode. Very unlikely to be used for other than testing purposes

7.2.3 Examples

- Starting RODOS-Lite in standalone mode using the directory `/opt/test/rodos` as RODOS main directory
`java -jar launcher.jar -DRODOS_DIR=/opt/test/rodos`
- Completely rebuilding RODOS-Lite after some updates have been patched into the sources directory
`java -jar launcher.jar build`
- Fast compilation and creating of the RODOS-Lite archive in case some source possibly changed
`java -jar launcher.jar jar`



7.3 Useful things to know

- Executing the ant command `java -jar launcher.jar -projecthelp` will display all available targets and their short description (like `help`, `build`, `jar`, ...)
- DO NOT CHANGE the `build.xml` file. Modifying this file is likely to cause failure of executing RODOS-Lite respectively `runrodosL`
- Compilation is only possible as user `rodos`
- The sources are available at the `$RODOS-LITE_HOME/src` directory. They are usually deployed during the RODOS main installation
- The shell script `run` in the directory `$RODOS-LITE_BIN` is a shortcut to quickstart the application in standalone mode
- The shell script `build` in the directory `$RODOS-LITE_BIN` is a shortcut to quickly rebuild the application

8 Troubleshooting

Q: Single users cannot start RODOS-Lite where other users can

A: The personal preferences may be damaged. Delete the directory `$USER_HOME/.rodosLite/` probably creating backups. The directory is recreated after the next start of RODOS-Lite.

Q: RODOS-Lite crashes during startup

A: The default settings may be deprecated or damaged. Delete the files `default*` in the directory `$RODOS-LITE_CONFIG`. You may also try to delete the whole directory. Remember to create backups of your system additions like site maps.

Q: The summary is not displayed.

A: Possible the user directory does not exist or is not writable. Check the existence and access rights of the directory `$RODOS-LITE_HOME/user`

Q: Something is not working

A: Check the log file by either browsing the file `$RODOS-LITE_HOME/rolog/liteerr.$USER` or directly via the menu entry *Help*→*Display log*. See also page 13, section 6.2, „Configuring message logging to achieve debug information“.

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