



RODOS How to begin



RODOS tutorial How to Begin

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RODOS Tutorial: How to Begin

The directory structure of the current rodos distribution is divided in following dirs:

- rodos-core api and implementations for many different hardware platforms
- rodos-doc documentation
- rodos-support programs and libs often used in space applications
- rodos-tutorials Examples, for you

To begin you will need first the rodos-core and the rodos-tutorials

You can find general documentation, introduction and programming directives in the rodos-doc directory.

In this distribution you will find following implementations: for Linux-x86, AMR V*, Cortex*, LEON, PPC, Sparc, and on the top of other operating systems like Posix(Linux), Free-Rtos, Rtems, Windows. For ARM, PPC, LEON, etc you will need the corresponding cross compiler. You may download from our home-page a Virtual-Box or VmWare boot image which include already many of these compilers. As development computer we assume a linux installation. All compile scripts are bash scripts.

In each directory you will find a README_* file. please read this first, then continue.

Please read first the documentation found in

1. rodos-doc/doc/wikipedia-rodos-operating-system.pdf
2. rodos-doc/doc/intro-details.pdf

then you may try some tutorials to get the feeling. Please begin with

rodos-tutorials/first_steps

We recommend you to read:

- rodos-doc/doc/codingdirectives10b.pdf
- rodos-doc/doc/how_to_and_warnings

you will find doxygen code documentation, which you may use as developer reference. The best is to find an example. We added many for almost every thing in tutorials/core and in all others tutorials. (search with grep).

To compile the RODOS libraries and applications (test programs, tutorials, your applications) we use shell (bash) scripts (no makefiles). all scripts are in the directory named "make".

1. [Please start a bash shell.](#)

First we have to set some shell variables.

2. [go to your rodos-core directory](#)
3. [type "source make/rodosenvs"](#)



Now you create the rodos libraries

4. for linux type "[linux-lib](#)" (in which directory you are is not important)

To remove older compilations you may call the "[rodos-clear](#)" script. (do not do it now, else repeat step 4)

By the way it would not be bad to take a look to all scripts in `make/*`

Now go to the tutorials, read the README* files, compile and execute the delivered programs, then experiment with modifications and with your own programs.

5. go to the [rodos-tutorials](#)

Please follow this sequence:

first-steps	how to begin, your first steps with rodos
core	ref. basic functions: Threads, Time, Synchronisation
udp	communication with the external world
alice_bob_charly	simple intern communication using the middleware
middleware	intern communication using the RODOS middleware
middleware_distributed	networks, distributed computing and middleware
...	Other tutorials for special functions

In each tutorial directory, please read the [README_*.pdf](#) file.

for each file in the tutorial read the code, compile it using the command:

5. for linux: `linux-executable <file-name> [<file-name> <file-name> <file-name>]`

5. (alternative) for arm: `arm-executable <file-name>`

Please Note: you may compile several independent programs, they will be executed together. You do not need to modify source code or implement a "main" which call other modules in order to integrate many applications. In our way you may develop applications totally independent from each other, and then just compile them together. Try this! is total different than what you have use until now!

To execute the linux version please type

6. `tst`

To load the program in an ARM board and to execute it, please connect the ARM board to your host computer (in an USB-UART Port) and type

6. `arm-load`

Please be aware: All RODOS classes, functions, variables, etc are in the **namespace** RODOS;

For all RODOS sources, programs, documentation, algorithms, etc. apply:

Open-source and:



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