

ARTIS Installation Guide

1 INTRODUCTION

This document explains the ARTIS installation process. That is, which are the software dependencies, what you will obtain once you have installed it.

2 EXTRA SOFTWARE TOOLS

ARTIS is not only an agent architecture, it also provides a set of tools to design applications for it.

2.1 *Kiwi*:

A graphic tool to display the trace data corresponding to an execution of an ARTIS application.

2.2 Trace Tools:

Tools used to trace the execution of ARTIS applications. *mem2trace* and *trace2kiwi* help the user to extract the tracing data and to translate it to *.ktr* format (which is the format *kiwi* understands).

2.3 *TNT*:

A graphic tool-kit to design ARTIS applications easily. *TNT* generates a set of XML files which contain the specification of the ARTIS application.

2.4 XML parsers:

A set of programs to generate the C source code corresponding to the XML generated by *TNT*.

2.5 Templates:

A set of templates that are useful to create new ARTIS applications from scratch (i.e: without using *TNT*).

2.6 Scripts:

A set of scripts that are useful to create from scratch and run ARTIS applications.

3 SOFTWARE DEPENDENCIES

Before describing the installation process of ARTIS, it is necessary to specify every software dependency.

3.1 *Linux* and *RT-Linux*

The version of *RT-Linux* for which ARTIS has been developed is *rtlinux-3.2-pre1* (free version) and the *Linux* kernel to be patched should be an standard 2.4.18 or 2.4.27 kernel

Probably ARTIS can also be run over later versions of *Linux* and *RT-Linux*, but since they have not been tested, we can't be sure of that...

The *Linux* kernel can be obtained from <http://www.kernel.org/> and the *RT-Linux* kernel can be obtained from <http://rtportal.upv.es/>

3.2 Java

To run *TNT*, the graphic toolkit to design ARTIS applications, you will need to install JDK5 or later. JDK and other Java utilites can be downloaded from <http://java.sun.com/>

3.3 ARTIS XML parsers

In order to generate ths C source code from the XML files which are generated by *TNT*, you will need to have the expat XML parser installed on your computer. It can be obtained from <http://expat.sourceforge.net/>

3.4 Tcl/Tk

To run kiwi, you will have to have Tcl/Tk 8.0 or later installed on your computer. You can obtain it from <http://www.tcl.tk/>

4 HOW TO BUILD AND INSTALL ARTIS

To build and install ARTIS on your machine you just have to execute the following:

```
cd <artis_src_dir>/make
make
make install
```

Once you have made this, ARTIS will be installed in */usr/local/artis*

5 HOW TO UNINSTALL ARTIS

To uninstall ARTIS from your computer just execute the following:

```
cd <artis_src_dir>/make
make uninstall
```

Once you have made this, ARTIS will be uninstalled from your computer.

6 HOW TO RUN ARTIS EXAMPLES

Some ARTIS examples are found in

```
<artis_src_dir>/tests
```

The names of the examples are `hello_world`, `producer_consumer` and `prod_cons_incremental`. To build them and run them just execute the following in the directory of the test you want to run:

```
cd <artis_src_dir>/tests/<example_dir>
make
rtload [<execution_time_in_seconds> <trace_file>]
```

If you don't specify the execution time and the trace file the example runs until you execute

```
mmod rtl_tasks
```

Take into account that if ARTIS has been built with trace support, it will generate a lot of tracing data and it may fill your HDD!!!