

```
*****
***** Steps for Runing Node Programs *****
*****
```

1) Installation

- NanoStack can be installed either from a Sensinode 6LoWPAN Devkit CD-ROM, or from the NanoStack SourceForge project <<http://www.nanostack.org>> pages. This section assumes installation is performed from a CD-ROM. This manual assumes use of Sensinode Nano Series hardware. The CD-ROM has the following structure:

- datasheets: Datasheets for Devkit products
- manuals: NanoStack, NodeView and nRP manuals
- cygwin: CygWin installation program for Windows users
- toolchains: Development toolchains for Linux and Cygwin
- NanoStack: Latest NanoStack version ready for use NodeView
- NodeView: JAR and sources

- For the choice between using Cygwin or Linux platform, or installation of these, consult the manual for the DevKit. "NanoStack manual page 9".

2) Steps for proper installation of programs.

These two programs should be installed in the folder .../Examples/ of NanoStack in order to use the NanoStack Makefile. Another possibility is following this Steps:

1-To begin to create our own directory in the directory nanostack.
mkdir /nanostack/project/

2-Then create a directory for the application.
mkdir /nanostack/project/own_app

3-Now your working directory or the project is at the same level as the examples of nanostack and therefore we can use the same makefile. After that the best option is to copy the files:

Makefile, app.rules, FreeRTOSConfig.h for example from:
nanostack/Example/nano_example_n120/

3) There are several procedures to be performed before program the sensors:

-In the folder "/Tools" in NanoStack, you should run the command "make" for the proper functioning of the sensor programmer.
When trying to program the sensor with the command "make program" before the "make" in the file previously described, causes the error:

```
*** [Program] Error 127
```

-You must modify the file app.rules the next line in case of opting for programming from Cygwin.
It is for programming using the USB port.

```
#USB device 0.
```

4) To receive data from the sensors is necessary to read the USB port.

For Windows, a quick alternative is HyperTerminal, which is part of a default Windows installation.
For HyperTerminal, open the program and create a new connection.
The serial port parameters for these applications are:

- 115200 bps.
- 8 data bits.
- no parity.
- 1 stop bit.
- Flow control should be disabled.