# Aqua-Sim Installation Guide

## Installing the essential packages

Before installing Aqua-Sim, you should make sure that your linux system contains the essential libs for the installation of ns-allinone-2.30. Usually, it requires gcc/g++ complier, automake, X11 lib.

## Installing Aqua-Sim

First, enter the directory you place aqua-sim-1.0.tgz (suppose the directory is ~/aqua-sim). Then run the following commands one by one:

~/aqua-sim$ tar zxvf aqua-sim-1.0.tgz
~/aqua-sim$ ./install

After finishing the installation, add the following environment variable into .bashrc in the directory of your home directory, i.e., ~/.bashrc

```
export NS_HOME=~/aqua-sim
export PATH=$NS_HOME/bin:$NS_HOME/tcl8.4.13/unix:/$NS_HOME/tk8.4.5/unix:$PATH
export LD_LIBRARY_PATH=$NS_HOME/otcl-1.12:$NS_HOME/lib:$LD_LIBRARY_PATH
export TCL_LIBRARY=$NS_HOME/tcl8.4.13/library:$TCL_LIBRARY
```

Then, you should restart the terminal or use "source .bashrc" to activate the new environment variables.

Now, you can input ns in the command line, and '%' will appear if the installation is successful.

```
$ ns
%
```

After quitting ns by inputting exit, you can enter directory "~/aqua-sim/ns-allinone-2.30/ns-2.30/underwatersensor/uw_tcl/" and test underwatersensor module via running the scripts in this directory. For example,

```
$ ns vbf_example_5.tcl
```

## Trouble shooting:

Some original parts of ns-allinone-2.30 might not be installed successfully to certain compiler. For example, otcl-1.12 fails if gcc version is 4.4. For such errors of original ns2 package, please search the corresponding solutions to ns-2.30. Usually, you can solve the problem. If it still does not work, please contact us.