

# Example of a user application installation

This example will show how to install **Octave** on the hipotetical user *username* home directory **HOME/soft/octave/5.1.0**. The example will use the interactive host to install the software but if you can also write a script and submit a job as long the command line instructions could be automatized.

## Login on the submit node

Login on the cluster submission node, check the page [How to Access](#) for more information:

```
$ ssh -l <username> hpc7.ncg.ingrid.pt
[username@hpc7 ~]$ _
```

## Download the source code

```
[username@hpc7 ~]$ wget ftp://ftp.gnu.org/gnu/octave/octave-5.1.0.tar.xz
[username@hpc7 ~]$ tar Jxf octave-5.1.0.tar.xz
[username@hpc7 ~]$ cd octave-5.1.0
```

## Configure and install

```
[username@hpc7 ~]$ ./configure --prefix=/home/mygroup/username/soft/octave/5.1.0 --enable-shared
[username@hpc7 ~]$ make
[username@hpc7 ~]$ make check
[username@hpc7 ~]$ make install
```

## Setup environment

The most basic would be to configure the appropriate environment variables, or better, create a shell script to load when needed:

```
[username@hpc7 ~]$ cat .octave.bash
export OCTAVE_HOME=/home/mygroup/username/soft/octave/5.1.0
[ -z "$PATH" ] && export PATH=$OCTAVE_HOME/bin || export PATH=$OCTAVE_HOME/bin:$PATH
[ -z "$CPATH" ] && export PATH=$OCTAVE_HOME/include || export CPATH=$OCTAVE_HOME/include:$CPATH
```

```
[ -z "$LD_LIBRARY_PATH" ] && export LD_LIBRARY_PATH=$OCTAVE_HOME/lib || export
LD_LIBRARY_PATH=$OCTAVE_HOME/lib:$LD_LIBRARY_PATH
[ -z "$PKG_CONFIG_PATH" ] && export PKG_CONFIG_PATH=$OCTAVE_HOME/lib/pkgconfig || export
PKG_CONFIG_PATH=$OCTAVE_HOME/lib/pkgconfig:$PKG_CONFIG_PATH
```

## Activate environment for application

```
[username@hpc7 ~]$ . .octave.bash
```

## Run the application

```
[username@hpc7 ~]$ which octave
~/soft/octave/5.1.0/bin/octave

[username@hpc7 ~]$ octave
octave:1> _
```

## Better way to setup environment: [USE MODULES](#)

A better way to provide configuration would be using the "module environment tool" customized for the user, check the [User Customization With module](#) page. It would be easier to manage and share with other users if needed.

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