# Download and install

This page provides guidelines for installation of HPP. Several versions are available:

Stable

## Binary installation on ubuntu-18.04 64 bit with ros-melodic

To install all the packages on ubuntu 18.04 LTS 64 bit, you should do the following steps:

1. install ROS-melodic: follow steps 1.1 to 1.3 of the ROS installation website..
2. install robotpkg: follow the robotpkg installation website.
3. install HPP: `sudo apt-get install robotpkg-hpp-tutorial robotpkg-osg-dae`
4. install (optionnal) extra packages for demonstrations: `sudo apt-get install robotpkg-hpp-tutorial robotpkg-osg-dae ros-melodic-pr2-description robotpkg-hpp-environments robotpkg-romeo-description
5. setup your environment variables by adding the following lines to your `.bashrc`:

```
source /opt/ros/melodic/setup.bash

export PATH=/opt/openrobots/bin${!PATH:-:}${PATH}
export LD_LIBRARY_PATH=/opt/openrobots/lib${!LD_LIBRARY_PATH:-:}${LD_LIBRARY_PATH}
export PYTHONPATH=/opt/openrobots/lib/python2.7/site-packages${!PYTHONPATH:-:}${PYTHONPATH}
export ROS_PACKAGE_PATH=/opt/openrobots/share${!ROS_PACKAGE_PATH:-:}${ROS_PACKAGE_PATH}

export CMAKE_PREFIX_PATH=/opt/openrobots${!CMAKE_PREFIX_PATH:-:}${CMAKE_PREFIX_PATH}
export PKG_CONFIG_PATH=/opt/openrobots${!PKG_CONFIG_PATH:-:}${PKG_CONFIG_PATH}
```

6. open `/opt/openrobots/share/doc/hpp-doc/index.html` in a web brower and you will have access to the documentation of most packages.

## Source installation on ubuntu-18.04 64 bit with ros-melodic

To install all the packages on ubuntu 18.04 LTS 64 bit, you should do the following steps:

1. install ROS-melodic: follow steps 1.1 to 1.3 of the ROS installation website..
2. install robotpkg: follow the robotpkg installation website.
3. install by apt-get

```
sudo apt-get install \
  g++ \
  cmake \
  doxygen \
  libboost-dev \
  liburdfdom-dev \
  libassimp-dev \
  libeigen3-dev \
  libgraphviz-dev \
  robotpkg-omniorb \
  robotpkg-qpoases+doc \
  robotpkg-roboptim-core \
  robotpkg-roboptim-trajectory \
  robotpkg-romeo-description \
  robotpkg-py36-omniorbpy \
  ros-melodic-xacro \
  libccd-dev \
  ros-melodic-octomap \
  ros-melodic-resource-retriever \
  ros-melodic-srdfdom \
  ros-melodic-pr2-description \
  git \
  libomniorb4-dev \
  omniorb-nameserver \
  libltdl-dev \
  python-omniorb \
  python-matplotlib \
  libxml2 \
  libtinyxml2-dev \
  qt4-dev-tools \
  libqt4-opengl-dev \
  libqtgui4 \
  libqtwebkit-dev \
  oxygen-icon-theme \
  libopenscenegraph-dev \
  openscenegraph \
  libpcre3-dev \
  wget \
  libcdd-dev
```

4. Choose a directory on your file system and define the environment variable `DEVEL_HPP_DIR` with the full path to this directory.
    - the packages will be cloned into `$DEVEL_HPP_DIR/src`,
    - the packages will be installed in `$DEVEL_HPP_DIR/install`. It is recommanded to set variable `DEVEL_HPP_DIR` in your `.bashrc` for future use.

```
mkdir -p $DEVEL_HPP_DIR/src
```

5. Copy Config and Makefile

```
wget -O $DEVEL_HPP_DIR/config.sh https://raw.githubusercontent.com/humanoid-path-planner/hpp-doc/master/doc/config/ubuntu-18.04-melodic.sh
wget -O $DEVEL_HPP_DIR/src/Makefile https://raw.githubusercontent.com/humanoid-path-planner/hpp-doc/master/doc/Makefile
```

6. cd into `$DEVEL_HPP_DIR` and type

```
cd ${DEVEL_HPP_DIR}
source config.sh
```

7. cd into `$DEVEL_HPP_DIR/src` and type

```
cd ${DEVEL_HPP_DIR}/src
make iai_maps.install;
source ../config.sh;
make all
```

8. open `$DEVEL_HPP_DIR/install/share/doc/hpp-doc/index.html` in a web brower and you will have access to the documentation of most packages.