

# INSTALLATION ROS - 250 MIN

## Etape 1 : Installation installateur ROS - Environ 5 min

```
sudo sh -c 'echo "deb http://packages.ros.org/ros/ubuntu $(lsb_release -sc)
main" > /etc/apt/sources.list.d/ros-latest.list'

sudo apt-key adv --keyserver 'hkp://keyserver.ubuntu.com:80' --recv-key
C1CF6E31E6BADE8868B172B4F42ED6FBAB17C654

sudo apt-get update

sudo apt-get install -y python-rosdep python-rosinstall-generator python-wstool
python-rosinstall build-essential cmake
```

## Etape 2 : Initialisation de l'outils ROS Dependencies - Environ 1 min

```
sudo rosdep init

rosdep update
```

## Etape 3 : Création du répertoire des outils Environ 5 min

```
mkdir ~/ros_catkin_ws

cd ~/ros_catkin_ws

rosinstall_generator desktop --rosdistro melodic --deps --wet-only --tar >
melodic-desktop-wet.rosinstall

wstool init -j8 src melodic-desktop-wet.rosinstall

sudo apt-get install libogre-1.9-dev
```

## Etape 4 : Installation des dépendances - Environ 60 min

```
cd ~/ros_catkin_ws

rosdep install --from-paths src --ignore-src --rosdistro melodic -y
```

### Etape 5 : Installation des 186 outils de ROS - Environ 120 min

```
cd ~/ros_catkin_ws

sudo ./src/catkin/bin/catkin_make_isolated --install -DCMAKE_BUILD_TYPE=Release
--install-space /opt/ros/melodic -j2

source /opt/ros/melodic/setup.bash

echo "source /opt/ros/melodic/setup.bash" >> ~/.bashrc
```

### Etape 6 : Création du répertoire Catkin - Environ 5 min

```
mkdir -p ~/catkin_ws/src

cd ~/catkin_ws/

sudo apt-get install python-catkin-tools

catkin_make

echo "source $HOME/catkin_ws/devel/setup.bash" >> ~/.bashrc
```

### Etape 7 : Installation des packages additionnels - Environ 30 min

```
cd ~/catkin_ws/src

sudo git clone <link>

cd ..

sudo apt-get install python-rosdep

rosdep update

rosdep install --from-paths src --ignore-src -y

catkin_make
```

Lien Github qu'il faudra `git clone` :

Lidar	<a href="https://github.com/EAILOT/ydlidar.git">https://github.com/EAILOT/ydlidar.git</a>
Hector SLAM	<a href="https://github.com/tu-darmstadt-ros-pkg/hector_slam.git">https://github.com/tu-darmstadt-ros-pkg/hector_slam.git</a>
Ros auth	<a href="https://github.com/GT-RAIL/rosauth.git">https://github.com/GT-RAIL/rosauth.git</a>
Rosbridge	<a href="https://github.com/RobotWebTools/rosbridge_suite.git">https://github.com/RobotWebTools/rosbridge_suite.git</a>
Rosserial	<a href="https://github.com/ros-drivers/rosserial.git">https://github.com/ros-drivers/rosserial.git</a>
Mjpeg server	<a href="https://github.com/RobotWebTools/mjpeg_server.git">https://github.com/RobotWebTools/mjpeg_server.git</a>

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