

ROS入门  
21讲













## 5.安装ROS系统

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主讲人：古月

# • ROS版本选择

发行版本	发布日期	海报	海龟	停止支持日期
ROS Melodic <b>Morenia</b>	2018 年 5 月 23 日			2023 年 5 月
ROS Lunar Loggerhead	2017 年 5 月 23 日			2019 年 5 月
ROS Kinetic Kame (推荐版本)	2016 年 5 月 23 日			2021 年 4 月
ROS Jade Turtle	2015 年 5 月 23 日			2017 年 5 月
ROS Indigo Igloo	2014 年 7 月 22 日			2019 年 4 月
ROS Hydro Medusa	2013 年 9 月 4 日			2015 年 5 月

ROS Groovy Galapagos	2012 年 12 月 31 日			2014 年 7 月
ROS Fuerte Turtle	2012 年 4 月 23 日			--
ROS Electric Emys	2011 年 8 月 30 日			--
ROS Diamondback	2011 年 3 月 2 日			--
ROS C Turtle	2010 年 8 月 2 日			--
ROS Box Turtle	2010 年 3 月 2 日			--

ROS所有发布版本的相关信息

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## Ubuntu install of ROS Melodic

We are building Debian packages for several Ubuntu platforms, listed below. These packages are more efficient than source-based builds and are our preferred installation method for Ubuntu. Note that there are also packages available from Ubuntu upstream. Please see [UpstreamPackages](#) to understand the difference.

Ubuntu packages are built for the following distros and architectures.

Distro	amd64	arm64	armhf
Artful	X		
Bionic	X	X	X

If you need to install from source (**not recommended**), please see [source \(download-and-compile\) installation instructions](#).



**If you rely on these packages, please support OSRF.**

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ROS安装步骤: <http://wiki.ros.org/melodic/Installation/Ubuntu>



## 1. 添加ROS软件源

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

## 2. 添加密钥

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

## 3. 安装ROS

```
$ sudo apt update
```

```
$ sudo apt install ros-melodic-desktop-full
```

## 4. 初始化rosdep

```
$ sudo rosdep init
```

```
$ rosdep update
```

## 5. 设置环境变量

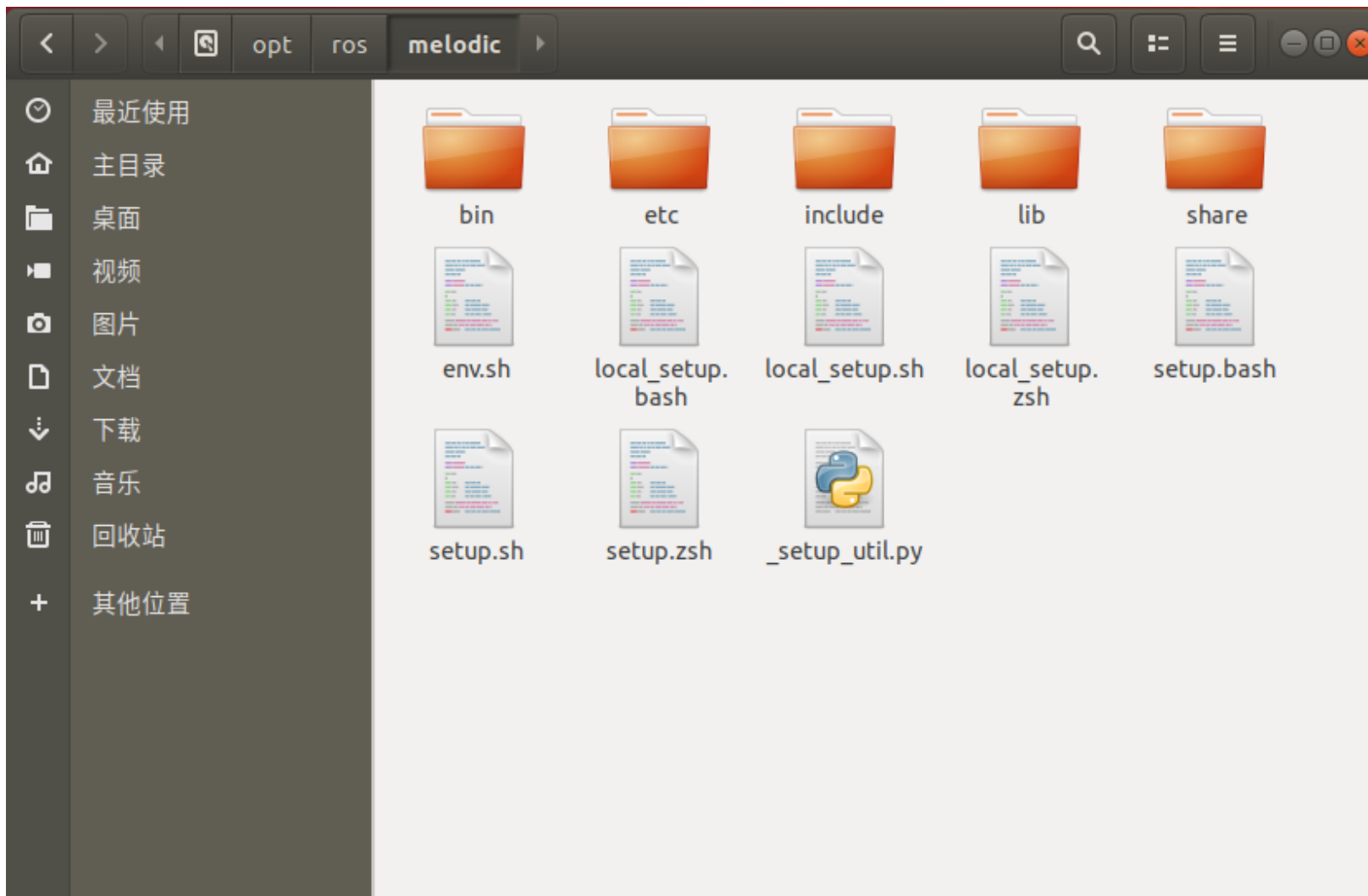
```
$ echo "source /opt/ros/melodic/setup.bash" >> ~/.bashrc
```

```
$ source ~/.bashrc
```

## 6. 安装rosinstall

```
$ sudo apt install python-rosinstall python-rosinstall-generator python-wstool build-essential
```

# • 安装完成



安装目录，默认在/opt/ros路径下

```
hcx@hcx-vpc:~$ roscore
... logging to /home/hcx/.ros/log/afee815c-94db-11e9-8cc9-000c29d22e4d/roslaunch-hcx-vpc-26763.log
Checking log directory for disk usage. This may take awhile.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://hcx-vpc:37365/
ros_comm version 1.14.3

SUMMARY
=====

PARAMETERS
* /rostdistro: melodic
* /rosversion: 1.14.3

NODES

auto-starting new master
process[master]: started with pid [26774]
ROS_MASTER_URI=http://hcx-vpc:11311/

setting /run_id to afee815c-94db-11e9-8cc9-000c29d22e4d
process[rosout-1]: started with pid [26785]
started core service [/rosout]
█
```

使用roscore命令启动ROS Master

- 安装完成

启动ROS Master

```
$ roscore
```



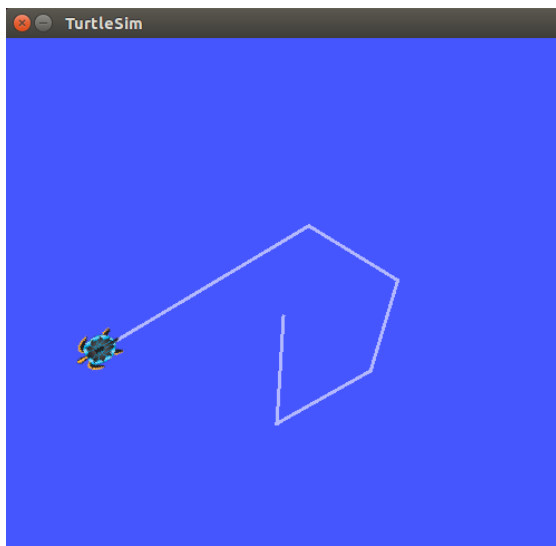
启动小海龟仿真器

```
$ rosrun turtlesim turtlesim_node
```



启动海龟控制节点

```
$ rosrun turtlesim turtle_teleop_key
```



小海龟仿真器界面

```
hcx@hcx-vpc:~$ rosrun turtlesim turtlesim_node
[ INFO] [1561200736.947992315]: Starting turtlesim with node name /turtlesim
[ INFO] [1561200736.954437402]: Spawning turtle [turtle1] at x=[5.544445], y=[5.544445], theta=[0.000000]
```

启动海龟仿真器节点

```
hcx@hcx-vpc:~$ rosrun turtlesim turtle_teleop_key
Reading from keyboard
-----
Use arrow keys to move the turtle.
```

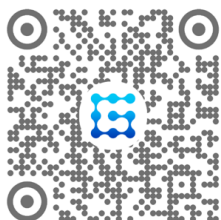
启动海龟控制节点



# 感谢观看

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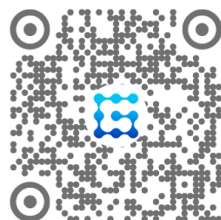
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