



青岛能征智能基础资料

ros2 humble 安装

修订记录

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ros2 humble 安装

1.设置utf8语言环境

```
locale
```

```
sudo apt update && sudo apt install locales
sudo locale-gen en_US en_US.UTF-8
sudo update-locale LC_ALL=en_US.UTF-8 LANG=en_US.UTF-8
export LANG=en_US.UTF-8
```

```
locale ## verify settings
```

2.设置源

```
sudo apt install software-properties-common
sudo add-apt-repository universe
```

使用 apt 添加 ROS 2 GPG 密钥

```
sudo apt update && sudo apt install curl -y

sudo curl -sSL https://raw.githubusercontent.com/ros/rosdistro/master/ros.key \
-o /usr/share/keyrings/ros-archive-keyring.gpg

#####
```

上面是指令是将 <https://raw.githubusercontent.com/ros/rosdistro/master/ros.key> 文件下载下来放到 `/usr/share/keyrings/` 目录下改名为 `ros-archive-keyring.gpg`
这个网站如果访问不到的话可以直接去 https://gitee.com/master-turtle/ros2_demo 这个地址下载 `ros.key` 文件然后复制到 `/usr/share/keyrings/` 目录下改名为 `ros-archive-keyring.gpg`

接下来将软件源添加到您的源列表中

```
echo "deb [arch=$(dpkg --print-architecture) \
signed-by=/usr/share/keyrings/ros-archive-keyring.gpg] \
http://packages.ros.org/ros2/ubuntu \
$(. /etc/os-release && echo $UBUNTU_CODENAME) main" | \
sudo tee /etc/apt/sources.list.d/ros2.list > /dev/null
```

3. 安装 ros2

```
sudo apt-get update
sudo apt-get upgrade
```

桌面安装（推荐）：ROS、RViz、演示、教程。

```
sudo apt install ros-humble-desktop
```

添加环境变量

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

也就是在~/.bashrc文件后面添加 `source /opt/ros/humble/setup.bash`

4. 安装 colcon

```
sudo apt install python3-colcon-common-extensions
```

5.ros2 安装验证

```
wub@wub:~$ ros2 run demo_nodes_cpp talker
[INFO] [1714036035.679785136] [talker]: Publishing: 'Hello World: 1'
[INFO] [1714036036.679330436] [talker]: Publishing: 'Hello World: 2'
[INFO] [1714036037.679588162] [talker]: Publishing: 'Hello World: 3'
[INFO] [1714036038.679293145] [talker]: Publishing: 'Hello World: 4'

## 另外建一个终端
wub@wub:~$ ros2 run demo_nodes_py listener
[INFO] [1714036273.699201424] [listener]: I heard: [Hello World: 239]
[INFO] [1714036274.671316847] [listener]: I heard: [Hello World: 240]
[INFO] [1714036275.670648235] [listener]: I heard: [Hello World: 241]
```

6.rqt 安装

```
sudo apt install ros-humble-rqt
```

7.tf2 安装

```
sudo apt install ros-humble-tf2-tools
```

8.gazebo 安装

gazebo 是一个模型仿真的软件,按需要装,如果不是仿真可以不装

```
sudo apt install ros-humble-gazebo-*
ros2 launch gazebo_ros gazebo.launch.py
```

9. 卸载

如果您需要卸载ROS 2或在已从二进制文件安装后切换到基于源代码的安装，请运行以下命令：

```
sudo apt remove ~nros-humble-* && sudo apt autoremove
```

您还可以删除存储库：

```
sudo rm /etc/apt/sources.list.d/ros2.list  
sudo apt update  
sudo apt autoremove  
  
sudo apt upgrade
```