# **ROS2环境搭建及第三方库**

# ROS2安装（Ros2 fox须在Ubuntu20.04下安装）

**0.更换国内源(中科大)**

sudo sed -i 's/cn.archive.ubuntu.com/mirrors.ustc.edu.cn/g' \  
/etc/apt/sources.list

**1. 设置key**

sudo wget https://gcore.jsdelivr.net/gh/ros/rosdistro@master/ros.key \  
 -O /usr/share/keyrings/ros-archive-keyring.gpg

**2. 配置源**

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

**3. 安装**

apt update  
apt install -y python3-colcon-common-extensions \  
python3-colcon-argcomplete python3-rosdep2 \  
 python3-pip build-essential  
apt install -y ros-foxy-ros-base ros-foxy-rmw-cyclonedds-cpp  
apt install -y ros-foxy-gps-msgs ros-foxy-can-msgs \  
ros-foxy-geographic-msgs ros-foxy-visualization-msgs  
apt install -y ros-foxy-pcl-ros ros-foxy-geometry2 \  
ros-foxy-rosbridge-library ros-foxy-geodesy \  
 ros-foxy-ament-index-cpp ros-foxy-pcl-ros \  
 ros-foxy-pcl-conversions ros-foxy-rosbridge-library  
apt install -y libgoogle-glog-dev libopencv-dev \  
libusb-1.0-0-dev libgeographic-dev libyaml-cpp-dev \  
 libtinyxml2-dev libtins-dev  
apt install -y mosquitto mosquitto-clients  
apt install -y sshpass

**4. 环境变量**

echo "source /opt/ros/foxy/setup.bash" >> ~/.bashrc  
echo "source /usr/local/auto\_truck/setup.bash" >> ~/.bashrc  
echo "export RMW\_IMPLEMENTATION=rmw\_cyclonedds\_cpp" >> ~/.bashrc