

# Terminal 1

```
docker ps -a | grep ros_noetic_persistent
```

```
docker start ros_noetic_persistent
```

```
docker exec -it ros_noetic_persistent bash
```

```
docker run -it --name ros_noetic_persistent --net=host --device=/dev/input/js0 ros:noetic bash
```

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

```
roscore
```

```
vishal-alan@Vishal-alan-ROG:~$ docker stop ros_noetic_persistent
docker rm ros_noetic_persistent
ros_noetic_persistent
ros_noetic_persistent
vishal-alan@Vishal-alan-ROG:~$ docker run -it --name ros_noetic_persistent --net=host --device=/dev/input/js0 ros:noetic bash
root@Vishal-alan-ROG:/# source /opt/ros/noetic/setup.bash
root@Vishal-alan-ROG:/# roscore
... logging to /root/.ros/log/698405f4-f518-11ef-9581-346f24c06515/roslaunch-Vishal-alan-ROG-45.log
Checking log directory for disk usage. This may take a while.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://Vishal-alan-ROG:44615/
ros_comm version 1.17.0

SUMMARY
=====

PARAMETERS
* /rostdistro: noetic
* /rosversion: 1.17.0

NODES

auto-starting new master
process[master]: started with pid [53]
ROS_MASTER_URI=http://Vishal-alan-ROG:11311/

setting /run_id to 698405f4-f518-11ef-9581-346f24c06515
process[rosout-1]: started with pid [63]
started core service [/rosout]
```

## ***Terminal 2***

```
docker exec -it ros_noetic_persistent bash
```

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

```
rosrun joy joy_node
```

```
apt update && apt install -y ros-noetic-joy
```

```
apt install -y ros-noetic-joy
```

```

bash: /home/vishal-alan/microros_ws/install/setup.bash: No such file or directory
vishal-alan@Vishal-alan-ROG:--$ docker exec -it ros_noetic_persistent bash
root@Vishal-alan-ROG:/# source /opt/ros/noetic/setup.bash
root@Vishal-alan-ROG:/# rosrun joy joy_node
[rospack] Error: package 'joy' not found
root@Vishal-alan-ROG:/# apt update
Get:1 http://packages.ros.org/ros/ubuntu focal InRelease [4679 B]
Get:2 http://security.ubuntu.com/ubuntu focal-security InRelease [128 kB]
Get:3 http://archive.ubuntu.com/ubuntu focal InRelease [265 kB]
Get:4 http://packages.ros.org/ros/ubuntu focal/main amd64 Packages [822 kB]
Get:5 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [4243 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal-updates InRelease [128 kB]
Get:7 http://archive.ubuntu.com/ubuntu focal-backports InRelease [128 kB]
Get:8 http://archive.ubuntu.com/ubuntu focal/universe amd64 Packages [11.3 MB]
Get:9 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [4379 kB]
Get:10 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [1301 kB]
Get:11 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [30.9 kB]
Get:12 http://archive.ubuntu.com/ubuntu focal/multiverse amd64 Packages [177 kB]
Get:13 http://archive.ubuntu.com/ubuntu focal/restricted amd64 Packages [33.4 kB]
Get:14 http://archive.ubuntu.com/ubuntu focal/main amd64 Packages [1275 kB]
Get:15 http://archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [4577 kB]
Get:16 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [4727 kB]
Get:17 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [1592 kB]
Get:18 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [34.6 kB]
Get:19 http://archive.ubuntu.com/ubuntu focal-backports/main amd64 Packages [55.2 kB]
Get:20 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [28.6 kB]
Fetched 53.3 MB in 38s (927 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
45 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@Vishal-alan-ROG:/# apt install -y ros-noetic-joy
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
 alsa-topology-conf alsa-ucm-conf dbus evemu-tools evtest inputattach
  joystick libapparmor1 libasound2 libasound2-data libasynclib0 libbsd0
  libbsd1-1 libbevdv2 libevemu3 libflac8 libogg0 libpulse0 libsd12-2.0-0
  libsndfile1 libvorbits0a libvorbisenc2 libwayland-client0 libwayland-cursor0
  libwayland-egl1 libwrap0 libx11-6 libx11-data libxau6 libxcb1 libxcursor1
  libxdmcp6 libxext6 libxf86vm3 libxi6 libxinerama1 libxkbcommon0 libxrandr2
  libxrender1 libxss1 libxxf86vm1 ros-noetic-diagnostic-updater x11-common
  xkb-data
Suggested packages:
  default-dbus-session-bus | dbus-session-bus libasound2-plugins alsa-utils

```

## Terminal 3

`docker exec -it ros_noetic_persistent bash`

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

`rostopic echo /joy`

```
vishal-alan@Vishal-alan-ROG:~$ docker exec -it ros_noetic_persistent bash
root@Vishal-alan-ROG:/# source /opt/ros/noetic/setup.bash
root@Vishal-alan-ROG:/# rostopic echo /joy
header:
  seq: 1
  stamp:
    secs: 1740667219
    nsecs: 454329735
  frame_id: "/dev/input/js0"
axes: [0.0, 0.0, -0.0, 0.0, 0.0, 0.0, 0.0, 0.0]
buttons: [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]
---
header:
  seq: 2
  stamp:
    secs: 1740667219
    nsecs: 470072469
  frame_id: "/dev/input/js0"
axes: [0.0, 0.0, -0.023311322554945946, 0.0, 0.0, 0.0, 0.0, 0.0]
buttons: [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]
---
header:
  seq: 3
  stamp:
    secs: 1740667219
    nsecs: 486056925
  frame_id: "/dev/input/js0"
axes: [0.0, 0.0, -0.06671185791492462, 0.0, 0.0, 0.0, 0.0, 0.0]
buttons: [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]
```

## ***Terminal 4***

```
docker exec -it ros_noetic_persistent bash
```

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

```
python3 /root/Desktop/joystick_control.py
```

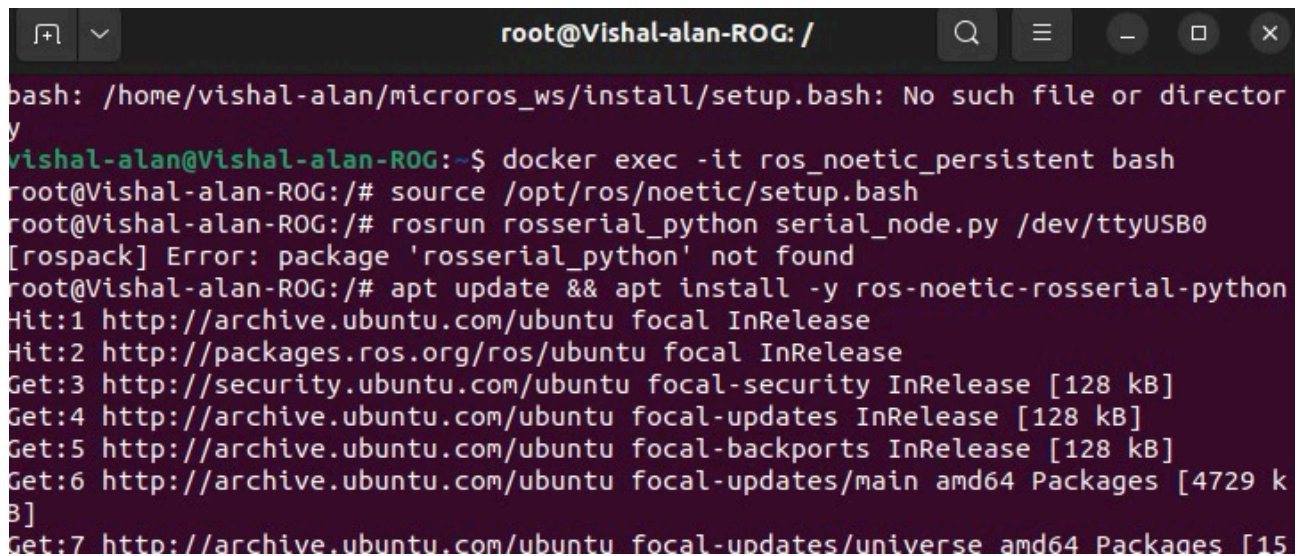
## Terminal 6

```
docker exec -it ros_noetic_persistent bash
```

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

```
roslaunch roserial_python serial_node.py /dev/ttyUSB0
```

```
apt update && apt install -y ros-noetic-roserial-python
```

A terminal window titled 'root@Vishal-alan-ROG: /' with standard Ubuntu window controls. The terminal shows a sequence of commands and their outputs. It starts with an attempt to run a script that fails. Then, it enters a Docker container, sources ROS setup, and runs a roslaunch command that fails with a 'package not found' error. Finally, it runs 'apt update' and 'apt install' to install the missing package, showing progress bars and download statistics for various Ubuntu repositories.

```
root@Vishal-alan-ROG: /
bash: /home/vishal-alan/microros_ws/install/setup.bash: No such file or director
y
vishal-alan@Vishal-alan-ROG:~$ docker exec -it ros_noetic_persistent bash
root@Vishal-alan-ROG:/# source /opt/ros/noetic/setup.bash
root@Vishal-alan-ROG:/# roslaunch roserial_python serial_node.py /dev/ttyUSB0
[rospack] Error: package 'roserial_python' not found
root@Vishal-alan-ROG:/# apt update && apt install -y ros-noetic-roserial-python
Hit:1 http://archive.ubuntu.com/ubuntu focal InRelease
Hit:2 http://packages.ros.org/ros/ubuntu focal InRelease
Get:3 http://security.ubuntu.com/ubuntu focal-security InRelease [128 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal-updates InRelease [128 kB]
Get:5 http://archive.ubuntu.com/ubuntu focal-backports InRelease [128 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [4729 k
B]
Get:7 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [15
```

# ***Potentiometer and steering angle***

```
rostopic echo /potentiometer_data  
rostopic echo /steering_angle
```

## ***Terminal 5***

```
docker exec -it ros_noetic_persistent bash  
source /opt/ros/noetic/setup.bash  
rostopic echo /nano_control
```