

VM keyboard remote control

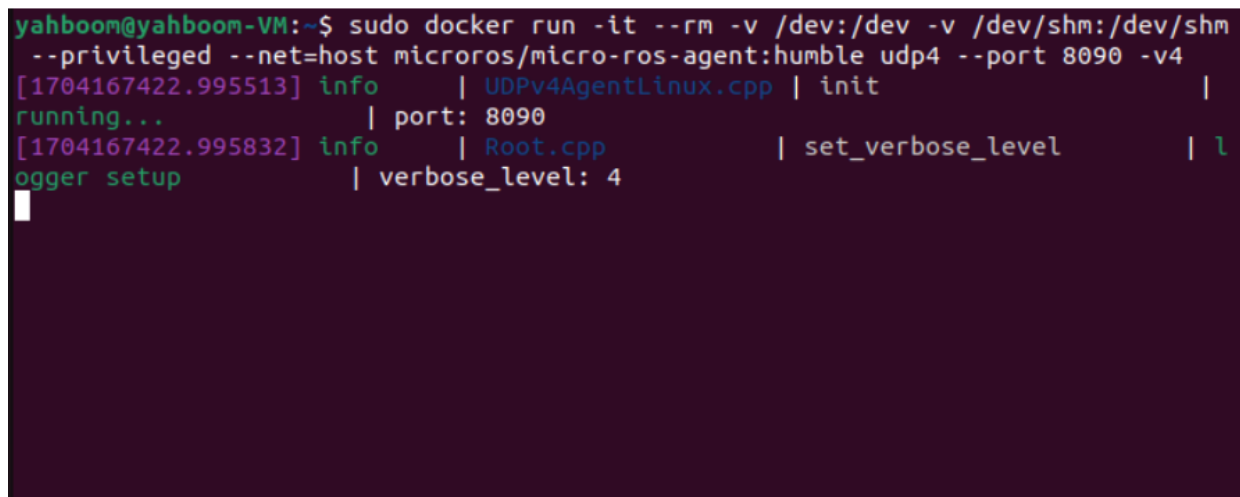
Note: The virtual machine needs to be in the same LAN as the car, and the ROS_DOMAIN_ID needs to be consistent. You can check [Must read before use] to set the IP and ROS_DOMAIN_ID on the board.

Here we take the [PS2-2.4G wireless controller] sold by Yabo Intelligent Technology Co., Ltd. as an example to explain how to quickly start the program and control the car. The code here only applies to the above handles, other handles are not applicable.

1. Start and connect to the agent

Taking the supporting virtual machine as an example, enter the following command to start the agent,

```
sudo docker run -it --rm -v /dev:/dev -v /dev/shm:/dev/shm --privileged --net=host  
microros/micro-ros-agent:humble udp4 --port 8090 -v4
```

A terminal window with a dark purple background. The prompt is 'yahboom@yahboom-VM:~\$'. The command entered is 'sudo docker run -it --rm -v /dev:/dev -v /dev/shm:/dev/shm --privileged --net=host microros/micro-ros-agent:humble udp4 --port 8090 -v4'. The output shows log messages: '[1704167422.995513] info | UDPv4AgentLinux.cpp | init | running... | port: 8090', '[1704167422.995832] info | Root.cpp | set_verbose_level | 1', and 'ogger setup | verbose_level: 4'. A cursor is visible on the line following the last log message.

```
yahboom@yahboom-VM:~$ sudo docker run -it --rm -v /dev:/dev -v /dev/shm:/dev/shm  
--privileged --net=host microros/micro-ros-agent:humble udp4 --port 8090 -v4  
[1704167422.995513] info | UDPv4AgentLinux.cpp | init |  
running... | port: 8090  
[1704167422.995832] info | Root.cpp | set_verbose_level | 1  
ogger setup | verbose_level: 4  
|
```

Then, turn on the car switch and wait for the car to connect to the agent. The connection is successful, as shown in the figure below.

```

[1702630014.015846] Info | ProxyClient.cpp | create_participant | participant created | client_key: 0x0B62A009, participant_id: 0x000(1)
[1702630014.135363] Info | ProxyClient.cpp | create_topic | topic created | client_key: 0x0B62A009, topic_id: 0x000(2), participant_id: 0x000(1)
[1702630014.223689] Info | ProxyClient.cpp | create_publisher | publisher created | client_key: 0x0B62A009, publisher_id: 0x000(3), participant_id: 0x000(1)
[1702630014.415510] Info | ProxyClient.cpp | create_datawriter | datawriter created | client_key: 0x0B62A009, datawriter_id: 0x000(5), publisher_id: 0x000(3)
[1702630014.428530] Info | ProxyClient.cpp | create_topic | topic created | client_key: 0x0B62A009, topic_id: 0x001(2), participant_id: 0x000(1)
[1702630014.527190] Info | ProxyClient.cpp | create_publisher | publisher created | client_key: 0x0B62A009, publisher_id: 0x001(3), participant_id: 0x000(1)
[1702630014.543889] Info | ProxyClient.cpp | create_datawriter | datawriter created | client_key: 0x0B62A009, datawriter_id: 0x001(5), publisher_id: 0x001(3)
[1702630014.554490] Info | ProxyClient.cpp | create_topic | topic created | client_key: 0x0B62A009, topic_id: 0x002(2), participant_id: 0x000(1)
[1702630014.737059] Info | ProxyClient.cpp | create_publisher | publisher created | client_key: 0x0B62A009, publisher_id: 0x002(3), participant_id: 0x000(1)
[1702630014.755072] Info | ProxyClient.cpp | create_datawriter | datawriter created | client_key: 0x0B62A009, datawriter_id: 0x002(5), publisher_id: 0x002(3)
[1702630014.818985] Info | ProxyClient.cpp | create_topic | topic created | client_key: 0x0B62A009, topic_id: 0x003(2), participant_id: 0x000(1)
[1702630014.840001] Info | ProxyClient.cpp | create_subscriber | subscriber created | client_key: 0x0B62A009, subscriber_id: 0x000(4), participant_id: 0x000(1)
[1702630014.864010] Info | ProxyClient.cpp | create_datareader | datareader created | client_key: 0x0B62A009, datareader_id: 0x000(6), subscriber_id: 0x000(4)
[1702630014.959908] Info | ProxyClient.cpp | create_topic | topic created | client_key: 0x0B62A009, topic_id: 0x004(2), participant_id: 0x000(1)
[1702630015.033537] Info | ProxyClient.cpp | create_subscriber | subscriber created | client_key: 0x0B62A009, subscriber_id: 0x001(4), participant_id: 0x000(1)
[1702630015.140350] Info | ProxyClient.cpp | create_datareader | datareader created | client_key: 0x0B62A009, datareader_id: 0x001(6), subscriber_id: 0x001(4)
[1702630015.158510] Info | ProxyClient.cpp | create_topic | topic created | client_key: 0x0B62A009, topic_id: 0x005(2), participant_id: 0x000(1)
[1702630015.241039] Info | ProxyClient.cpp | create_subscriber | subscriber created | client_key: 0x0B62A009, subscriber_id: 0x002(4), participant_id: 0x000(1)
[1702630015.347393] Info | ProxyClient.cpp | create_datareader | datareader created | client_key: 0x0B62A009, datareader_id: 0x002(6), subscriber_id: 0x002(4)

```

Then, connect the controller's receiver to the virtual machine's host and choose to connect to the virtual machine.

2. Start the handle control program

Take the supporting virtual machine as an example, enter in the terminal,

```

ros2 run joy joy_node
ros2 run yahboomcar_ctr1 yahboom_joy

```

After the program starts, observe the handle indicator light. If it stays on, it means the connection is successful. Press [START] and the car's buzzer will sound. Press the R1 button to turn on the handle control. You can use the left joystick to control the car forward and backward; you can use the right joystick left and right to control the car to turn left and right; you can control the linear speed and angular speed of the car by pressing the left and right remote sensors.