

1. Trot gait leaning forward

Quick use

1. DOGZILLA POWER UP

First of all, we switch on the switch power of the robot dog and start the robot dog



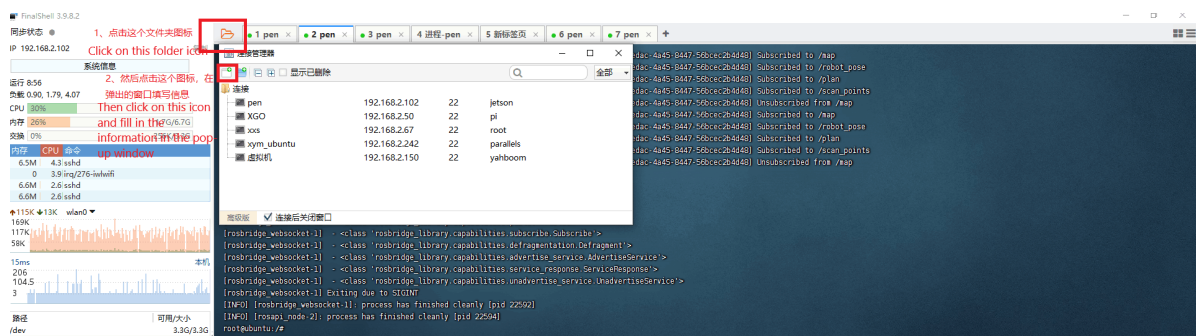
After startup, we can view the IP address on the robot dog's small screen.

2. Open shell to connect to DOGZILLA

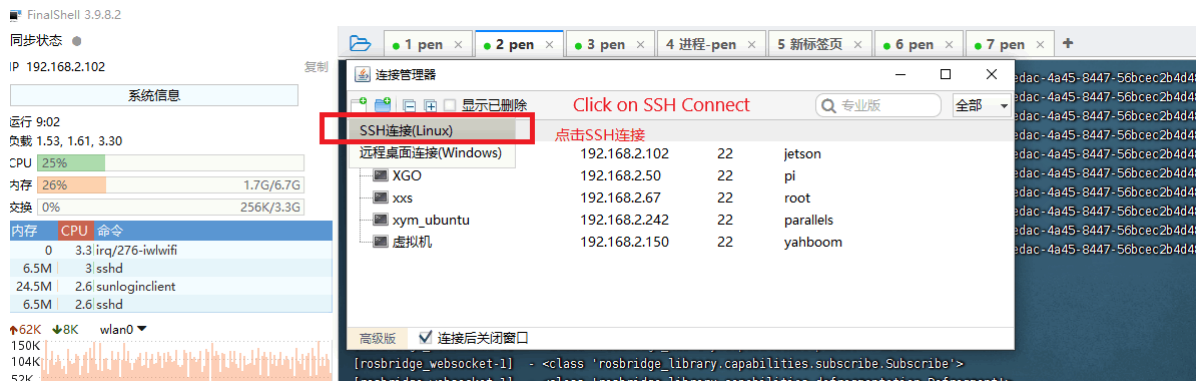
Then use the ssh terminal to connect to robot dog.

Note: At the time of writing this tutorial, the IP address used is 192.168.2.102 and the username is pi and the password is yahboom, so the actual IP address will prevail.

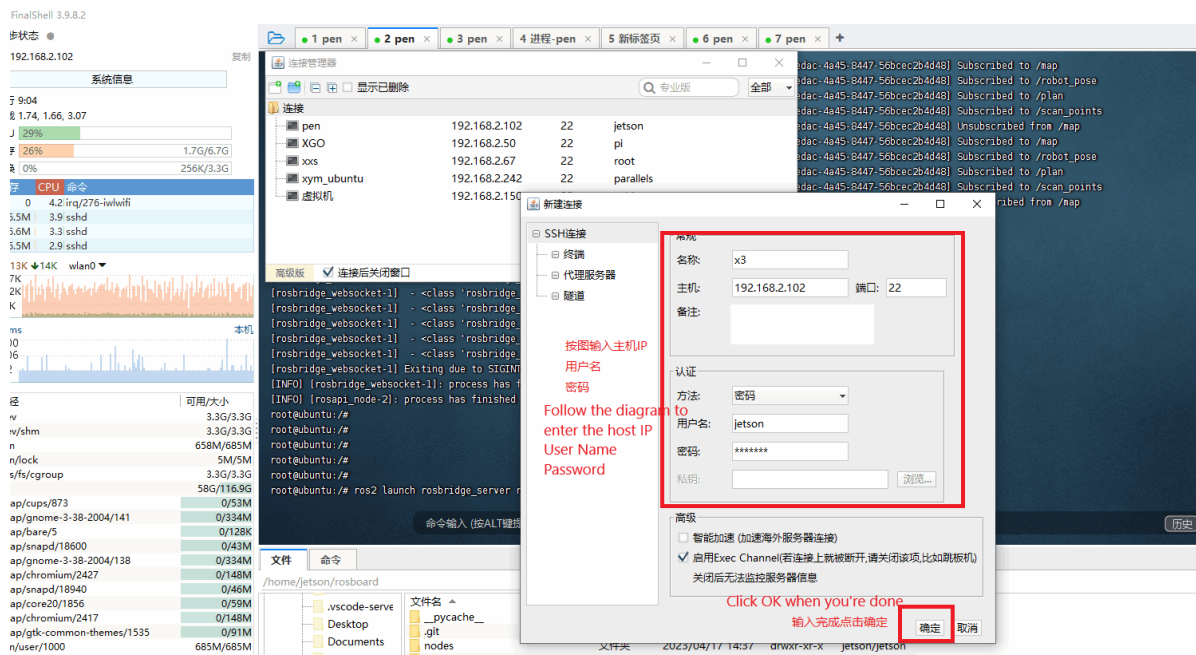
Open the shell utility, here I use FinalShell, enter the username, password, port, connection name and other information.



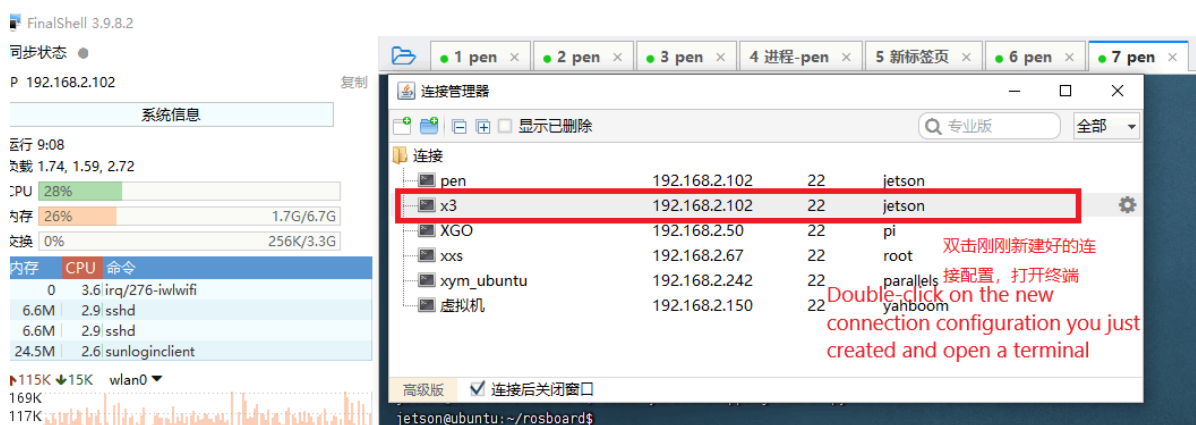
Select ssh connection to create a new ssh connection



Here username fill in pi, password fill in yahboom, ip address fill in the real robot dog's IP address.



Here select the new ssh connection you just created.



3. Starting the DOGZILLA chassis

Start the chassis task by entering the command in the terminal.

```
sudo systemctl restart XgoStart.service
```

```
pi@yahboom:~$  
pi@yahboom:~$  
pi@yahboom:~$  
pi@yahboom:~$  
pi@yahboom:~$ sudo systemctl restart XgoStart.service
```

4. Start the robot dog Attitude Adjustment Node

Enter the following command in the terminal

```
cd cartographer_ws2/
```

```
source install/setup.bash
```

```
pi@yahboom:~$ cd cartographer_ws2/  
pi@yahboom:~/cartographer_ws2$  
pi@yahboom:~/cartographer_ws2$  
pi@yahboom:~/cartographer_ws2$ source install/setup.bash  
pi@yahboom:~/cartographer_ws2$
```

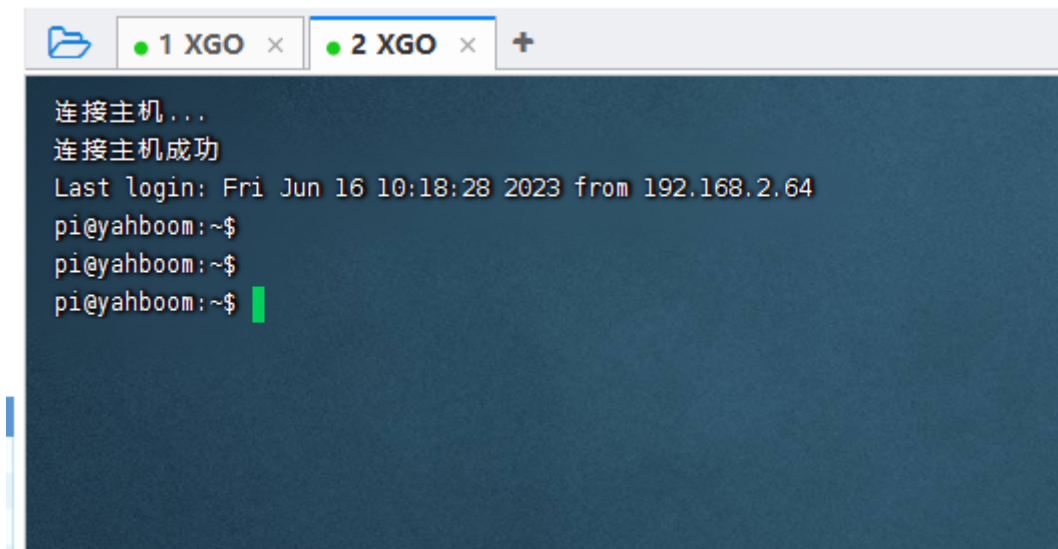
Then enter the following command

```
ros2 launch yahboom_set_height yahboomSetHeightLaunch.launch.py xGoHeight:=95  
attitude_p:=10 move_x:=0 move_y:=0
```

Note: The parameter `attitude_p` sets the angle at which the robot dog leans down, a positive number leans down and a negative number leans up, ranging from -15 to 15. The parameter `xGoHeight` is the height of the robot dog, ranging from 75 to 115.

```
pi@yahboom:~/cartographer_ws2$  
pi@yahboom:~/cartographer_ws2$ ros2 launch yahboom_set_height yahboomSetHeightLaunch.launch.py xGoHeight:=95 attitude_p:=10 move_x:=0 move_y:=0  
[INFO] [launch]: All log files can be found below /home/pi/.ros/log/2023-08-03-20-34-58-942657-yahboom-32821  
[INFO] [launch]: Default logging verbosity is set to INFO  
<launch.substitutions.launch_configuration.LaunchConfiguration object at 0xffff84acee50>  
[INFO] [yahboom_set_height-1]: process started with pid [32975]  
[yahboom_set_height-1] [INFO] [1691066104.582500697] [yahboom_set_height]: xGoHeight_value: 95!  
[yahboom_set_height-1] [INFO] [1691066104.588612796] [yahboom_set_height]: attitude_p_value: 10!  
[yahboom_set_height-1] [INFO] [1691066104.594274636] [yahboom_set_height]: move_x_value: 0!  
[yahboom_set_height-1] [INFO] [1691066104.600045653] [yahboom_set_height]: move_y_value: 0!  
[yahboom_set_height-1] 95  
[yahboom_set_height-1] 10  
[yahboom_set_height-1] 0  
[yahboom_set_height-1] 0
```

Restart a terminal that starts the same way as item 2.

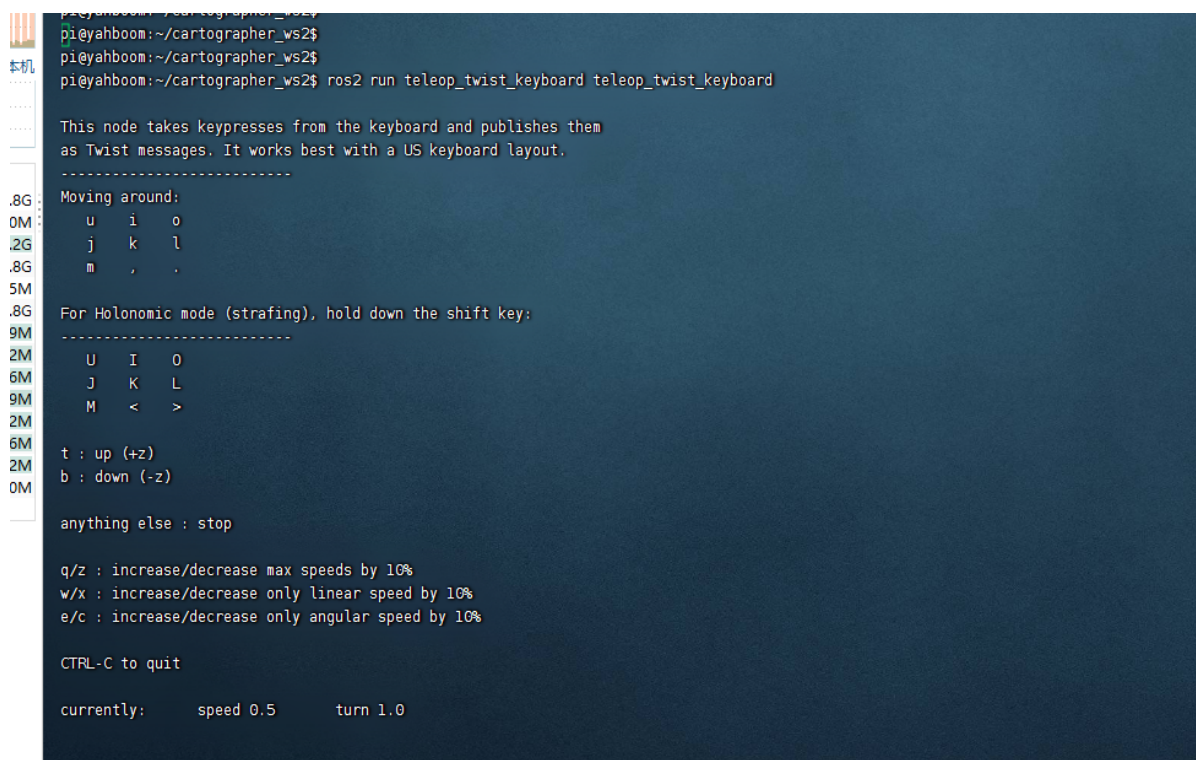


Enter the following command in a new terminal

```
cd cartographer_ws2/
```

```
source install/setup.bash
```

```
ros2 run teleop_twist_keyboard teleop_twist_keyboard
```



You can use the keyboard to control the robot dog to walk prone. Where the keys i is forward, k is stop,, is backward , j is turn left in place, l is turn right in place.