7. Web page real-time monitoring

The operating environment and software and hardware reference configurations are as follows:

- Reference model：ROSMASTER X3
- Robot hardware configuration: Arm series master, Slan A1 LiDAR, AstraPro Plus depth camera
- Robot system: Ubuntu (version not required) + docker (version 20.10.21 and above)
- PC VM: Ubuntu (20.04) + ROS2 (Foxy)
- Usage scenario: Used on a relatively clean 2D plane

7.1. Environment Construction

The web video server function package corresponding to ros2 needs to be installed. The environment has been configured in the docker container. Here, docker is used to demonstrate

7.2. Steps

This is demonstrated with the AstraPro Plus camera, other cameras can also be used (monocular, binocular, etc.)

7.2.1. Enter the docker container

Enter the docker container step see the docker course section [5. enter the robot docker container]

Here, you just need to ensure proper mount cameras have been used.

7.2.2. Start related node

In the docker container, launch the camera

```
ros2 launch astra_camera astro_pro_plus.launch.xml
```

In the docker container, launch the web_video_server

```
ros2 launch web_video_server view_web_video_demo_launch.py
```

7.3. effect demonstration

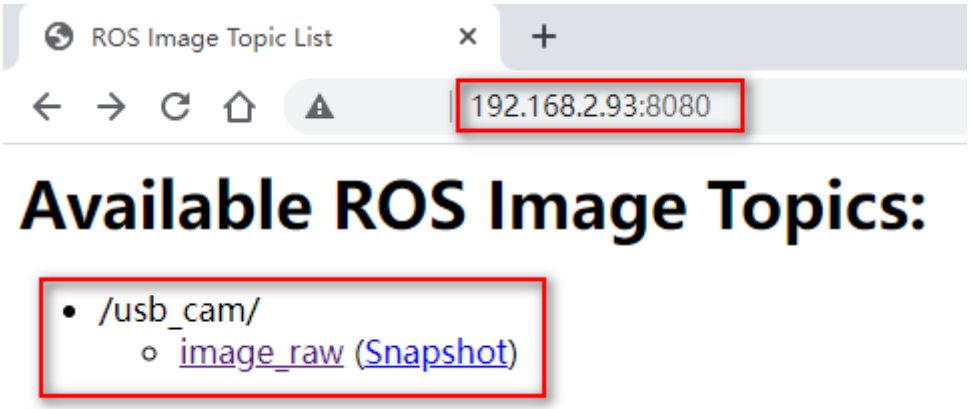
- View in local web browser

```
http://localhost:8080/
```

- View other devices (must be under the same LAN, 192.168.2.93 is the IP address of the master)

```
http://192.168.2.93:8080/
```

Note: It is recommended to use Google Chrome, other browsers may not be able to open the image



Click [image_raw] to view the camera image in real time, and click [Snapshot] to display only one frame of image.