rgb 相机 demo

1. 修改 gazebo.xacro

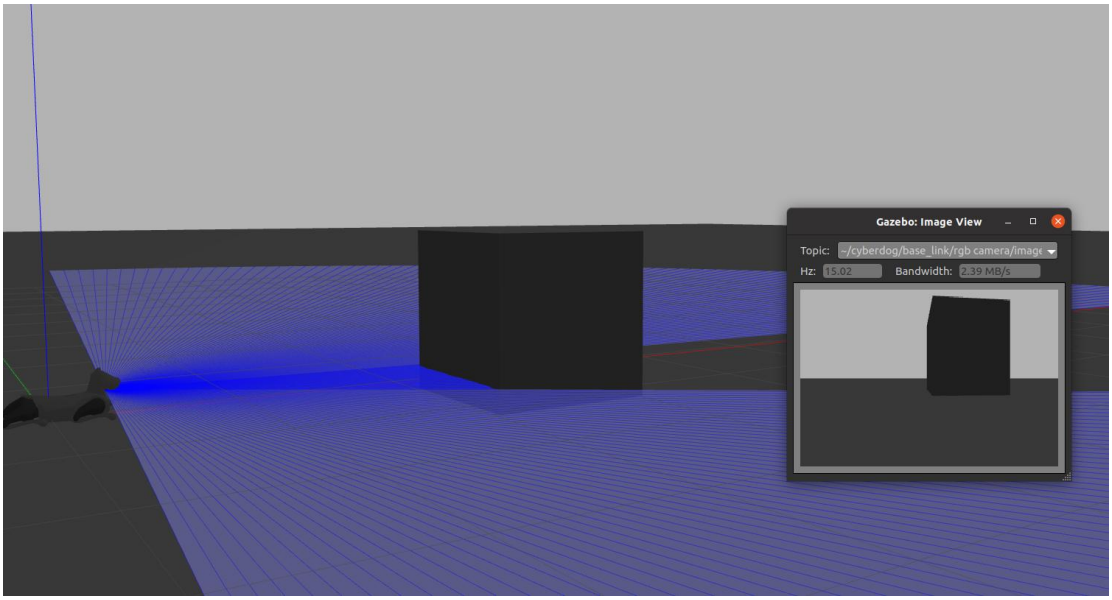
在 gazebo.xacro 中添加并保存

```
PowerShell
<gazebo reference="RGB_camera_link">
    <sensor type="camera" name="rgb camera">
        <always_on>true</always_on>
        <update_rate>15.0</update_rate>
        <camera name="rgb_camera">
            <horizontal_fov>1.46608</horizontal_fov>
            <image>
                <width>320</width>
                <height>180</height>
                <format>R8G8B8</format>
            </image>
            <distortion>
                <k1>0.0</k1>
                <k2>0.0</k2>
                <k3>0.0</k3>
                <p1>0.0</p1>
                <p2>0.0</p2>
                <center>0.5 0.5</center>
            </distortion>
        </camera>
        <plugin name="rgb_camera_plugin"
filename="libgazebo_ros_camera.so">
            <ros>
                <!-- <namespace>stereo</namespace> -->
                <remapping>~/image_raw:=image_raw</remapping>
                <remapping>~/camera_info:=camera_info</remapping>
            </ros>
            <!-- Set camera name. If empty, defaults to sensor
name (i.e. "sensor_name") -->
            <camera_name>rgb_camera</camera_name>
            <!-- Set TF frame name. If empty, defaults to link
name (i.e. "link_name") -->
            <frame_name>RGB_camera_link</frame_name>
```

```
            <hack_baseline>0.2</hack_baseline>
        </plugin>
    </sensor>
    </gazebo>
```

2. 运行仿真程序

运行仿真程序后可通过 window->Topic Visualization 中找到对应 topic 并打开,可确认 rgb 相机正常运行

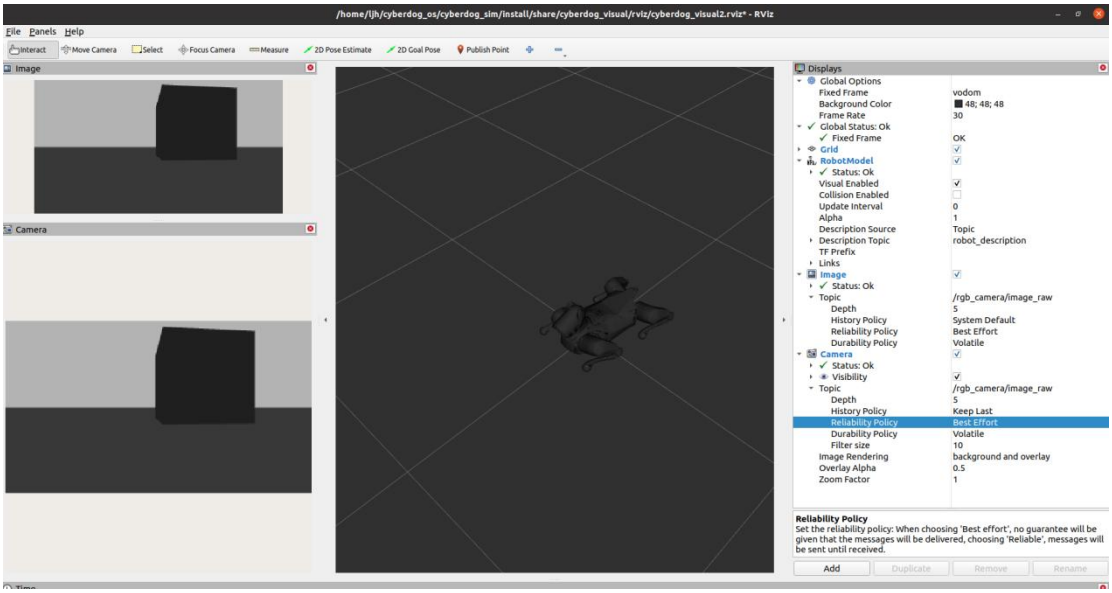


通过 ros2 echo topic 可确认 topic 正常发送

```
ljh@ljh-Precision-3640-Tower:~/cyberdog_os/cyberdog_sim$ ros2 topic list
/opt/ros/galactic/bin/ros2:6: DeprecationWarning: pkg_resources is deprecated as
 an API. See https://setuptools.pypa.io/en/latest/pkg_resources.html
  from pkg_resources import load_entry_point
/apply_force
/clock
/imu
/parameter_events
/performance_metrics
/rgb_camera/camera_info
/rgb_camera/image_raw
/rosout
/scan
/yaml_parameter
```

3. rviz 可视化

在 rivz2 中通过以下设置可将 topic 可视化


/home/ljh/cyberdog_os/cyberdog_sim/install/share/cyberdog_visual/rviz/cyberdog_visual2.rviz* - RViz
File Panels Help
Interact
Move Camera
Select
Focus Camera
Measure
2D Pose Estimate
2D Goal Pose
Publish Point
Image
Camera
Displays
Global Options
Fixed Frame vodom
Background Color 48; 48; 48
Frame Rate 30
Global Status: Ok
Fixed Frame OK
Grid
RobotModel
Status: Ok
Visual Enabled
Collision Enabled
Update Interval 0
Alpha 1
Description Source Topic
Description Topic robot_description
TF Prefix
Links
Image
Status: Ok
Topic /rgb_camera/image_raw
Depth 5
History Policy System Default
Reliability Policy Best Effort
Durability Policy Volatile
Camera
Status: Ok
Visibility
Topic /rgb_camera/image_raw
Depth 5
History Policy Keep Last
Reliability Policy Best Effort
Durability Policy Volatile
Filter size 10
Image Rendering background and overlay
Overlay Alpha 0.5
Zoom Factor 1
Reliability Policy
Set the reliability policy: When choosing 'Best effort', no guarantee will be given that the messages will be delivered, choosing 'Reliable', messages will be sent until received.
Add
Duplicate
Remove
Rename