ROS_MQTT_Client Guide

Table of Contents

Installation:

Just run the following command:

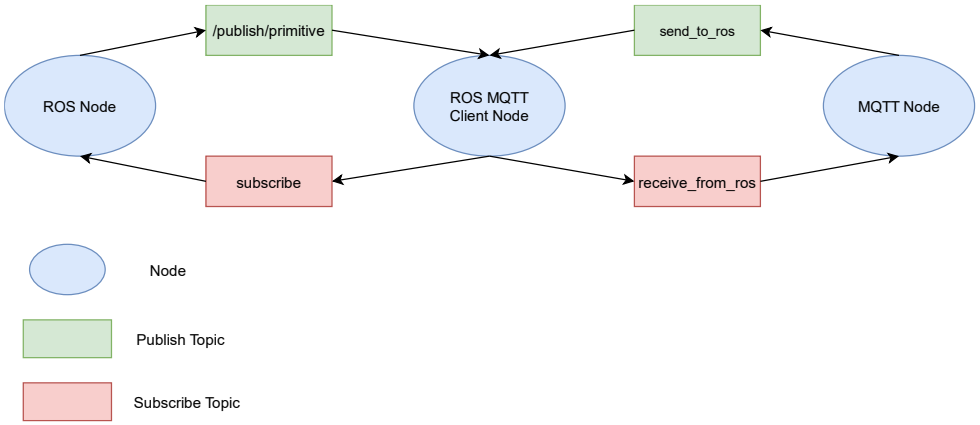
sudo apt update

sudo apt install ros-$ROS_DISTRO-mqtt-client

For more information visit the following site: https://wiki.ros.org/mqtt_client

Architecture:

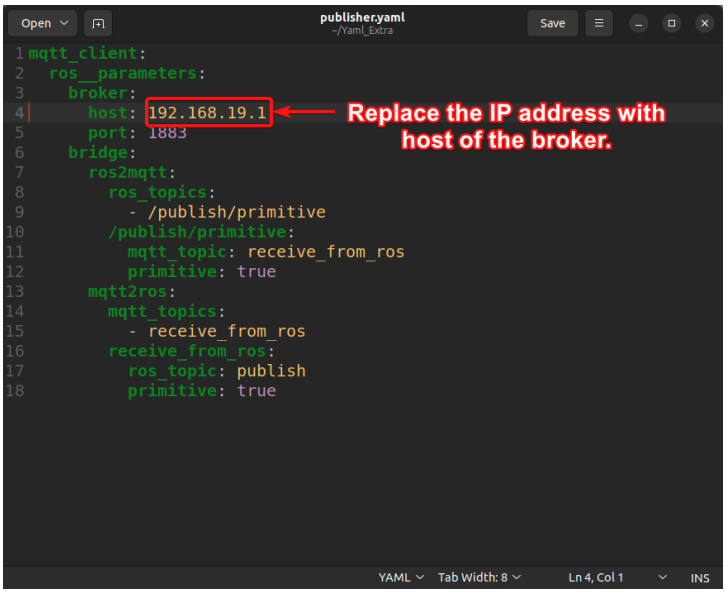
Note the following diagram is based on the two yaml files provided regarding the names of the topics



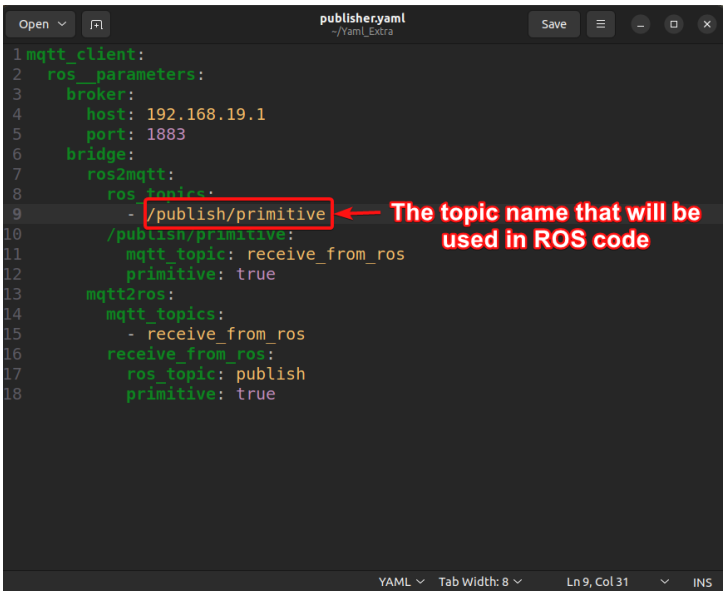
ROS MQTT Client Settings:

To effectively utilize the ROS MQTT client, you need a YAML file that specifies the topic names and the local host. Since the compiler adheres to a specific YAML file structure, it's advisable to use the provided YAML file as a template. Simply modify the topic names and local host to prevent compilation errors.

Setting Local Host:

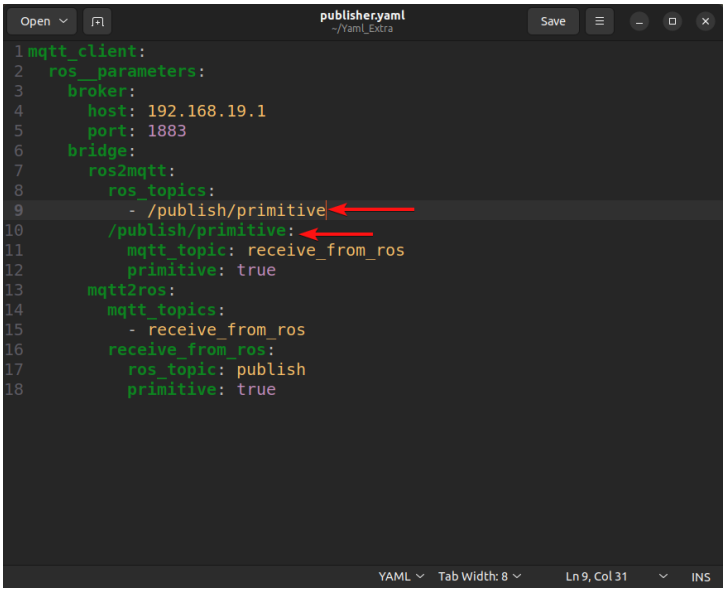


Setting ROS Publisher Topic:

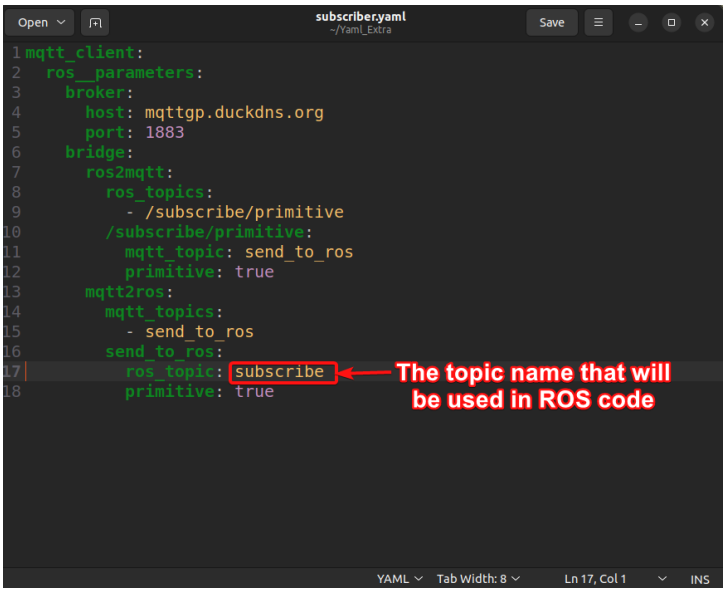



```
self.esp_publisher_ = self.create_publisher(String, "/publish/primitive", 10)
```

To change topic name, edit the following:

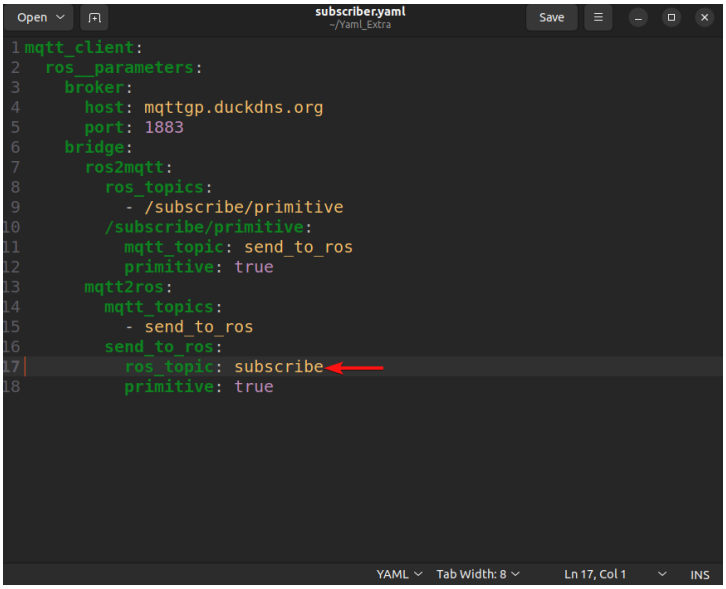


Setting ROS Subscriber Topic:



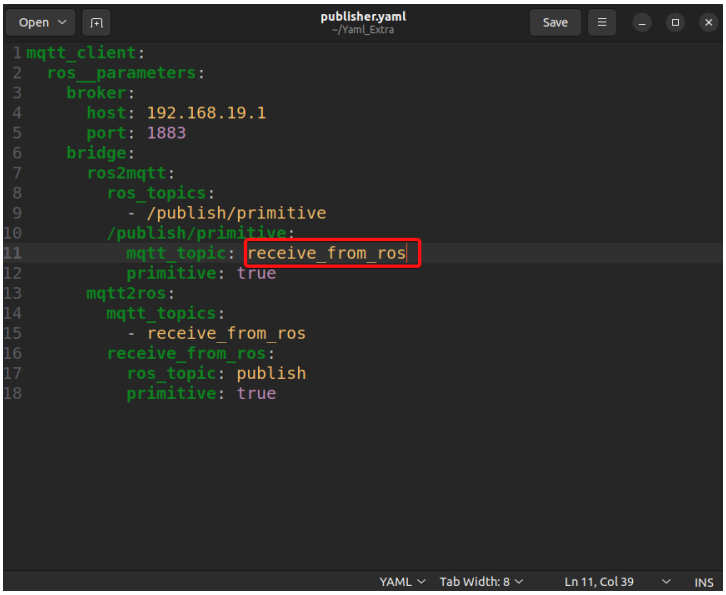

```
self.pose_subscriber_1_ = self.create_subscription(String, "subscribe", self.pose_callback, 10)
```

To change topic name, edit the following:

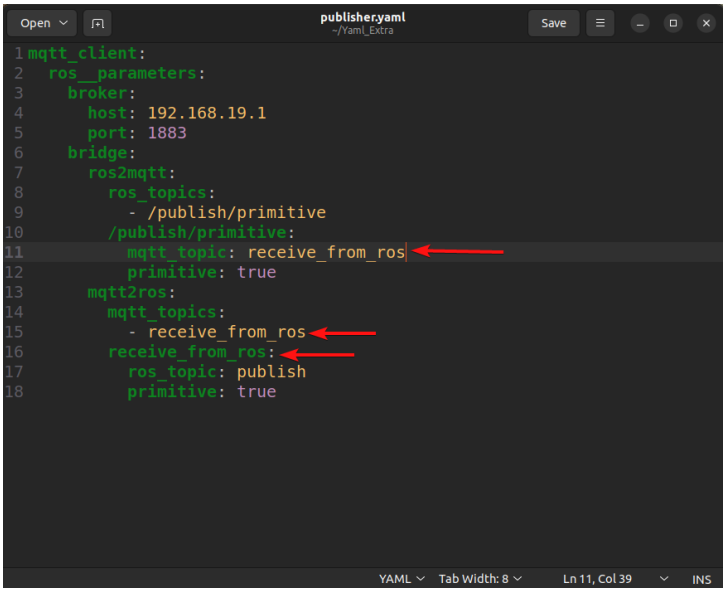


Setting MQTT Topics:

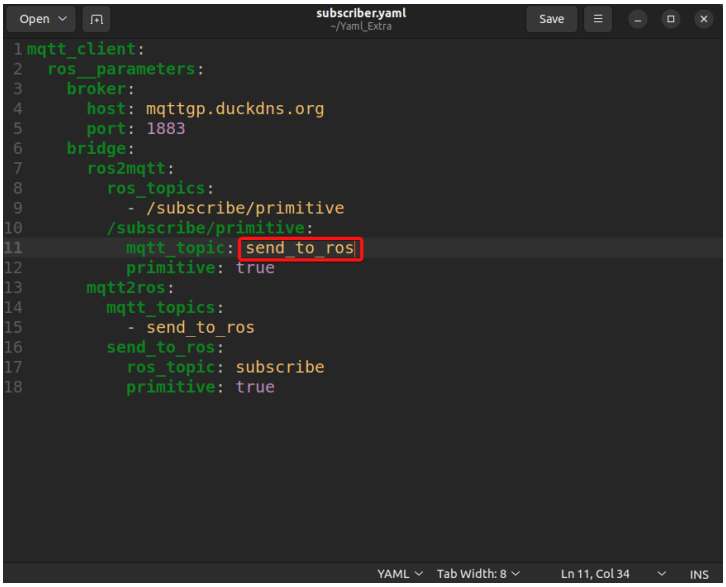
Subscribe to the following topic to receive data published by ROS **(ROS → MQTT)**



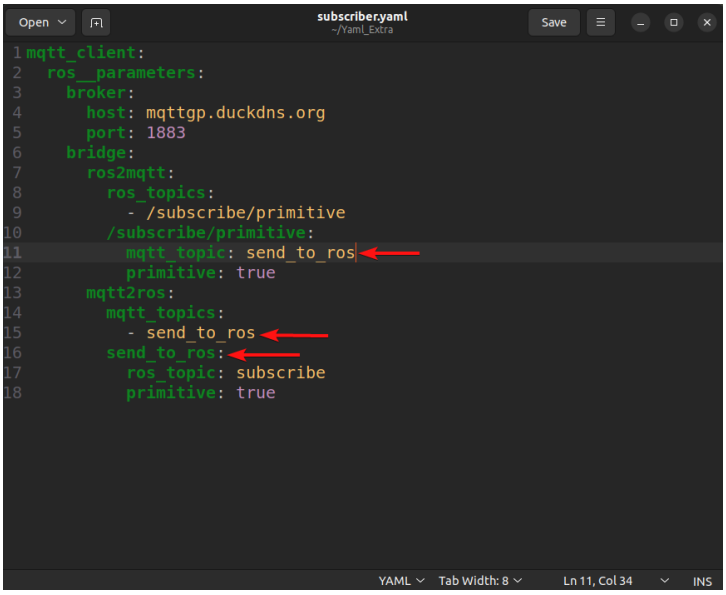
To change topic name, edit the following:



Publish to the following topic to send data to ROS **(MQTT → ROS)**



To change topic name, edit the following:



Starting ROS MQTT Client:

We need 2 ROS_MQTT_Client, one for sending from ROS to MQTT and the other for sending from MQTT to ROS. If you doing only one of them no need to launch the other.

In your terminal run the following command to launch a ROS_MQTT_Client.

ros2 launch mqtt_client standalone.launch.ros2.xml params_file:= YAML File Directory

Example: