



# PSI3541 2023

## SISTEMAS EMBARCADOS DISTRIBUIDOS

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AULA 06 18/04/2023

ATIVIDADE 6.2 CONECTAR NODE-RED (GATEWAY/EDGE) AO IOT CENTRAL

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# OBJETIVOS

- CONECTAR UM SMARTPHONE COMO SENSOR AO BROKER MQTT HIVEMQ
- CONECTAR O NODE-RED AO BROKER MQTT HIVEMQ
- PROJETAR UM FLUXO NODE-RED PARA PROCESSAMENTO LOCAL DOS DADOS DE TELEMETRIA DO SMARTPHONE
- CONECTAR O NODE-RED AO AZURE IOT CENTRAL

# BROKER MQTT

- Broker Público HIVEMQ
- Endereço: [broker.hivemq.com](https://broker.hivemq.com)
- Porta: 1883



# Reliable Data Movement for Connected Devices

HiveMQ's MQTT broker makes it easy to move data to and from connected devices in an efficient, fast and reliable manner. We make it possible to build connected products that enable new digital businesses.

- Learn more
- Get HiveMQ
- Contact Us

- Overview
- Glossary
- MQTT 5 Essentials
- MQTT Essentials
- MQTT Buyer's Guide
- Sparkplug Essentials
- UNS Essentials
- Security
- Client Library
- MQTT Toolbox
- Public MQTT Broker

Announcing the release of the HiveMQ Enterprise MQTT Platform 4.14

Learn more FAQ

## Develop Efficient IoT Solutions

IoT applications can generate a LOT of data. It is critical





# The Free Public MQTT Broker

An MQTT broker, which is the heart of the MQTT Publish/Subscribe protocol, is a server that receives all messages from the MQTT clients and then routes the messages to the appropriate subscribing clients. We host a free online [public MQTT broker](#) and [HiveMQ MQTT WebSocket client](#) to make it easy for you to experiment with MQTT messages. To evaluate an enterprise-ready MQTT broker, check out [HiveMQ MQTT broker](#).

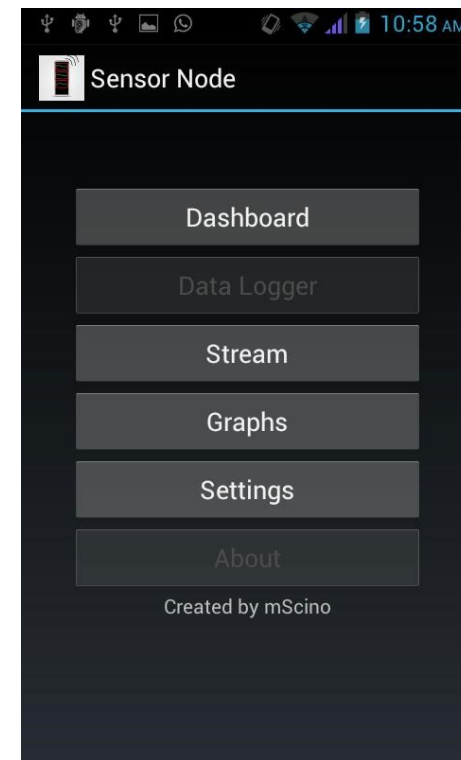
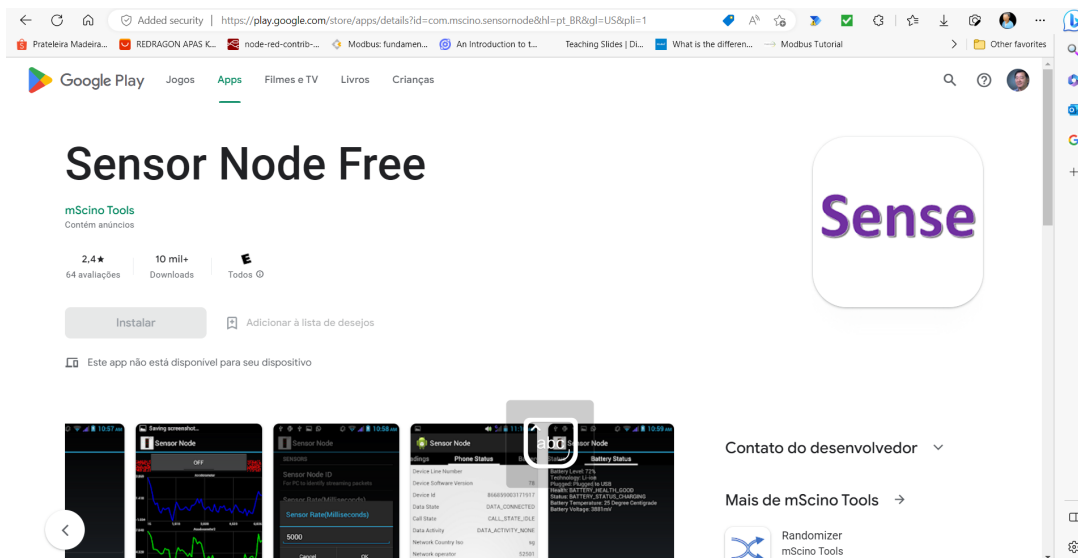
**Public MQTT Broker**

For a quick introduction to MQTT, check out our [MQTT Essentials](#) blog series, our [MQTT Glossary Page](#) and [MQTT FAQ](#).

**MQTT Browser Client**

# SMARTPHONE

- VAMOS UTILIZAR UM SMARTPHONE ANDROID COMO SENSOR
- APP ANDROID: SENSOR NODE



# NODE-RED

- MÓDULOS USADOS:
  - DASHBOARD
  - AZURE IOT CENTRAL
- DESCRIÇÃO DO FLUXO:
  - LEITURA DOS DADOS DO SMARTPHONE:
    - CLIENTES MQTT SUBSCRIBERS
  - ENVIO DOS DADOS AO IOT CENTRAL:
    - NÓ DE INTEGRAÇÃO AZURE IOT CENTRAL
  - DASHBOARD DE MONITORAÇÃO LOCAL:
    - DASHBOARD NODE-RED

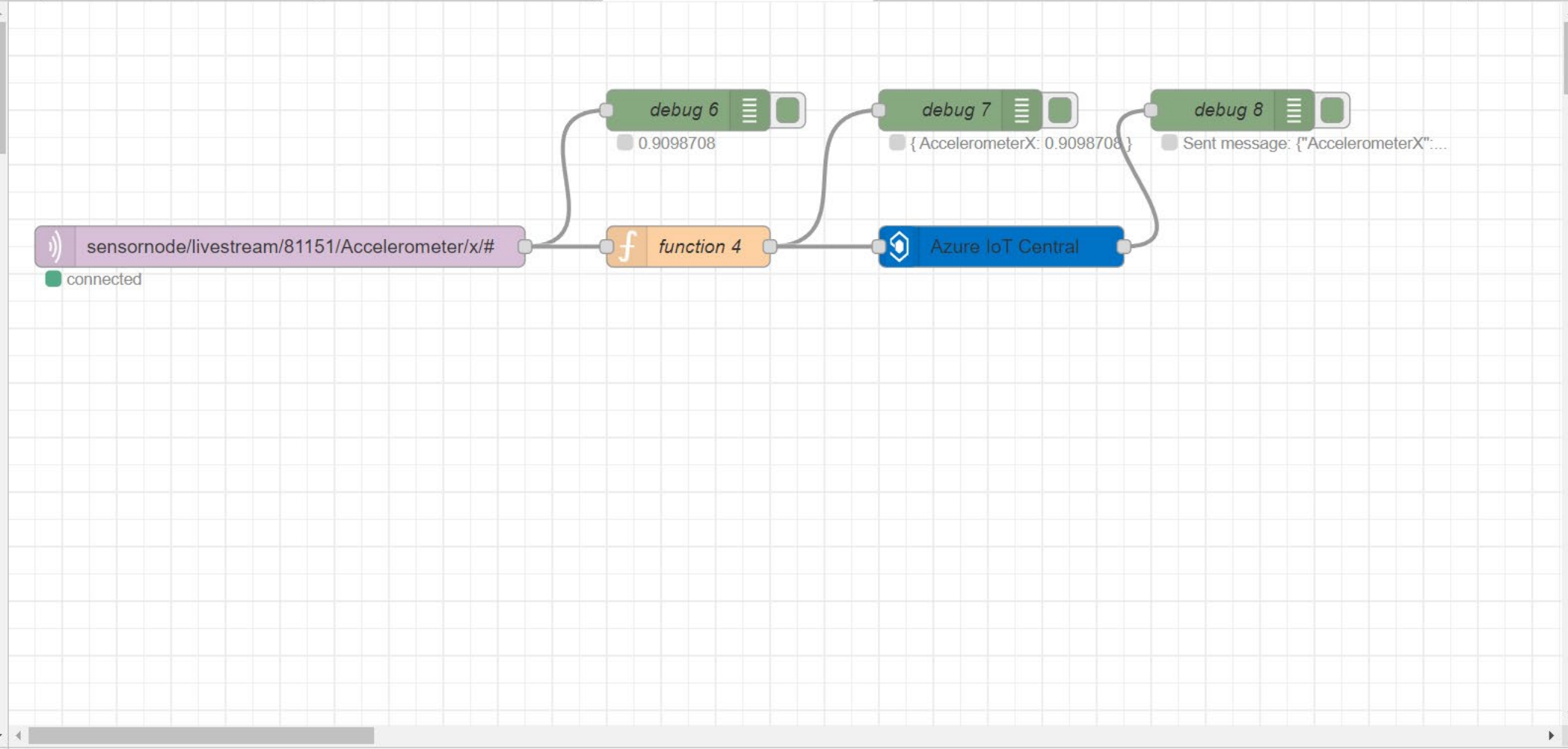


common

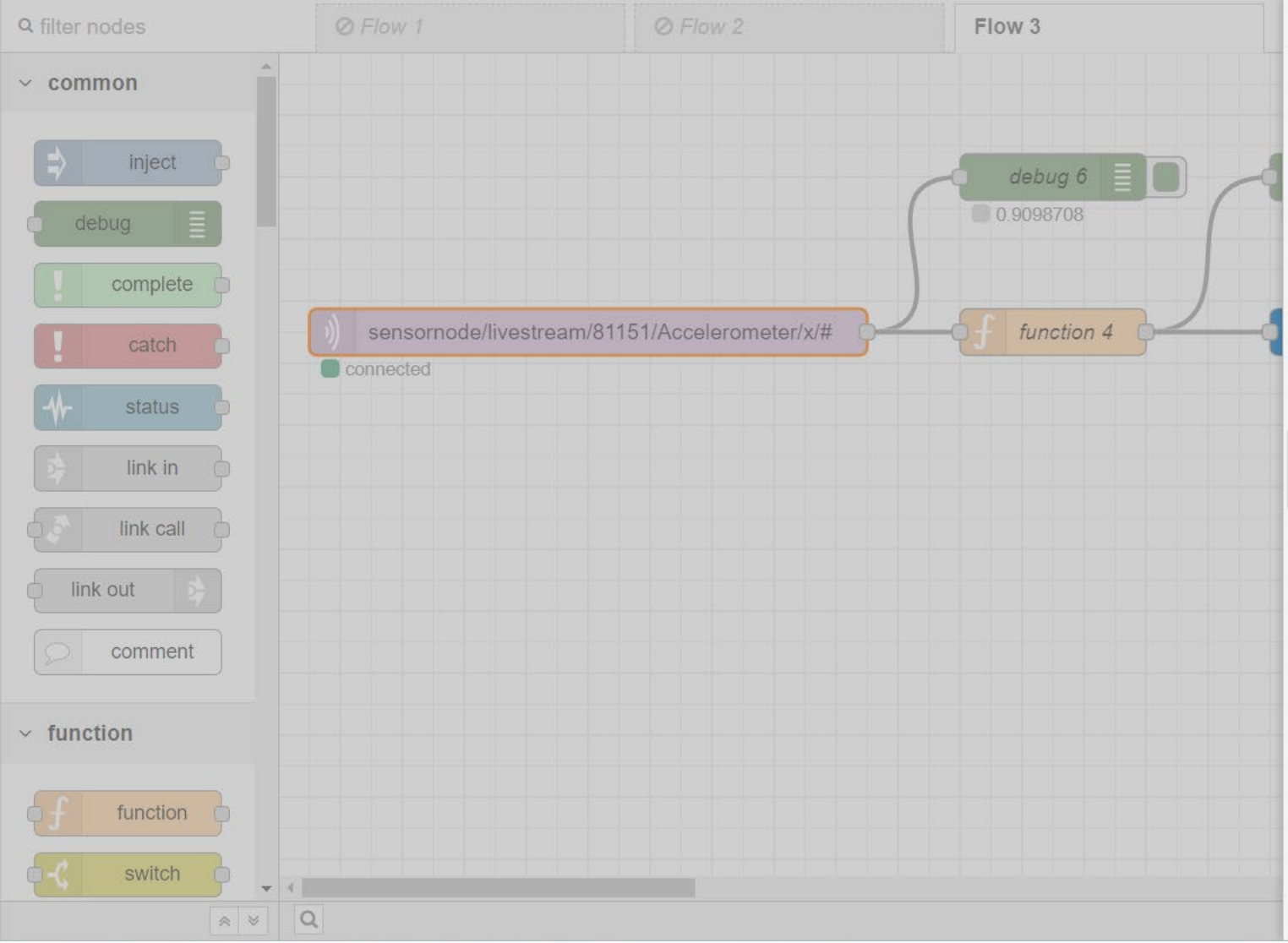
- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function

- function
- switch







### Edit mqtt in node

Delete Cancel Done

#### Properties

- Server: HIVEMQ
- Action: Subscribe to single topic
- Topic: sensornode/livestream/81151/Accelerometer/x/#
- QoS: 2
- Output: auto-detect (parsed JSON object, string or buff)
- Name: Name

Enabled

filter nodes

Flow 1 Flow 2 Flow 3

common

- inject
- debug
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function

- function
- switch

The workspace shows a flow with three nodes: a purple sensor node labeled 'sensornode/livestream/81151/Accelerometer/x/#' with a 'connected' indicator, an orange function node labeled 'function 4', and a green debug node labeled 'debug' with a value of '0.90987'. The sensor node is connected to the function node, which is then connected to the debug node.

### Edit function node

Delete Cancel Done

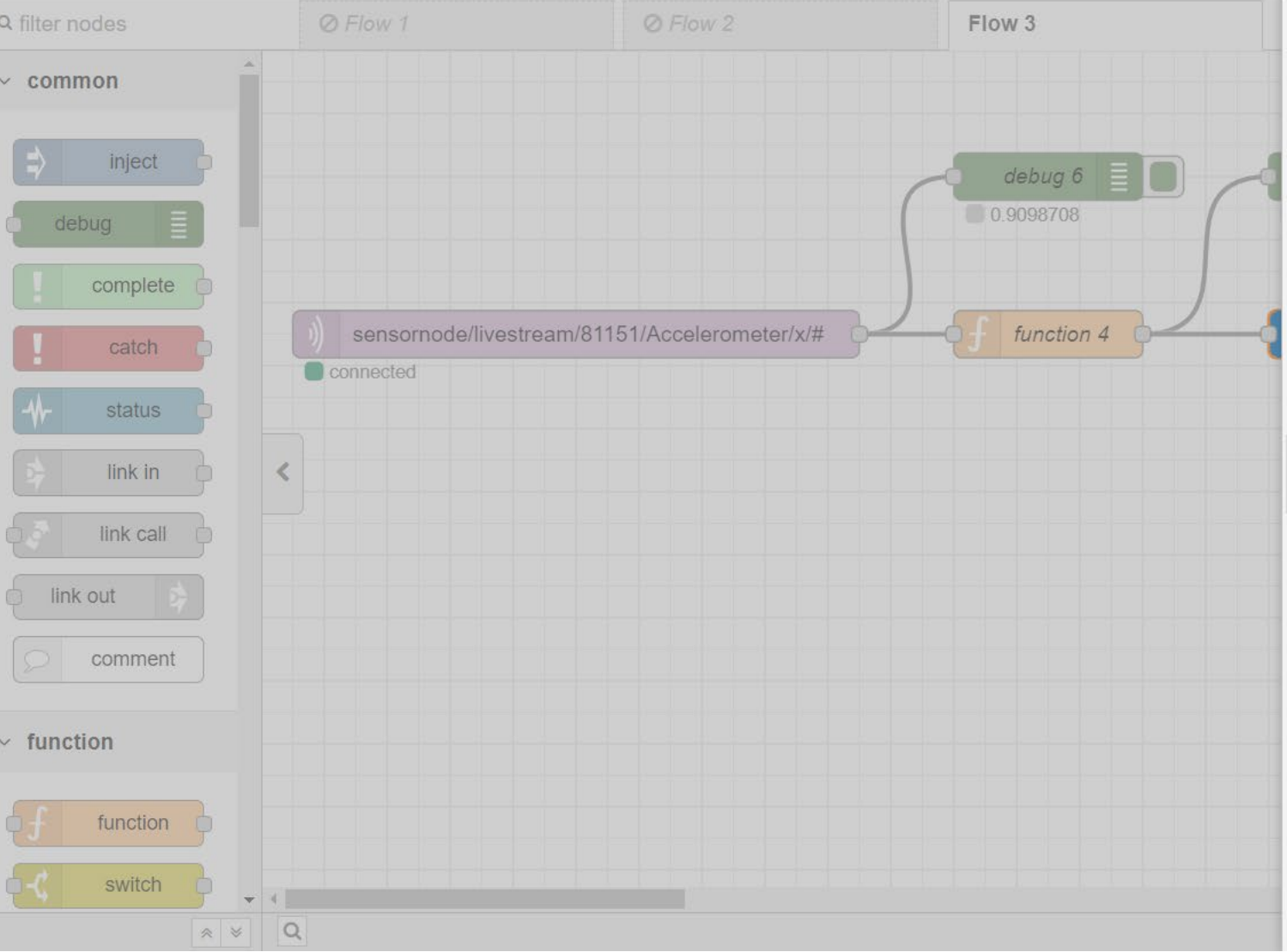
#### Properties

Name: function 4

Setup On Start **On Message** On Stop

```
1 msg.payload={"AccelerometerX":msg.payload};
2 return msg;
```

Enabled



### Edit Azure IoT Central node

Delete Cancel Done

#### Properties

Transport	MQTT
Authentication	SAS
Scope ID	0ne009C8D98
Device ID	1fsluozbali
Primary Key	HGe1NslOYtbgBSHrd4zbfCzc9OgrLtJyoiGGNC
Command Name	Insert the command name of your model interfac
Command Name	Insert the command name of your model interfac
Command Name	Insert the command name of your model interfac
Command	
<input type="radio"/> Enabled	

# DÚVIDAS?

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