



# Laboratorio 8:

## ThinkgSpeak y Node-Red Parte 2

# ThingSpeak: Comunicación con MQTT



- Utilizamos mosquitto desde la máquina virtual para poder comunicarse con ThingSpeak.
- Requiere crear un Dispositivo MQTT en ThingSpeak.

Credenciales: ID,  
User y Password.  
Son necesarias para  
comunicarse.

MQTT Devices / Edit MQTT\_IoT\_Device

### Edit MQTT\_IoT\_Device

Device Information

Name: MQTT\_IoT\_Device

Description: Enter optional information about this device for later reference.

MQTT Credentials

Use these MQTT credentials to publish and subscribe to ThingSpeak channels. [Learn More](#)

Client ID: AykmJxgkCg4wPD0aBhIDCD0

Username: AykmJxgkCg4wPD0aBhIDCD0

Password: .....

Authorize channels to access ⓘ

-- Select a Channel --

...

Add Channel

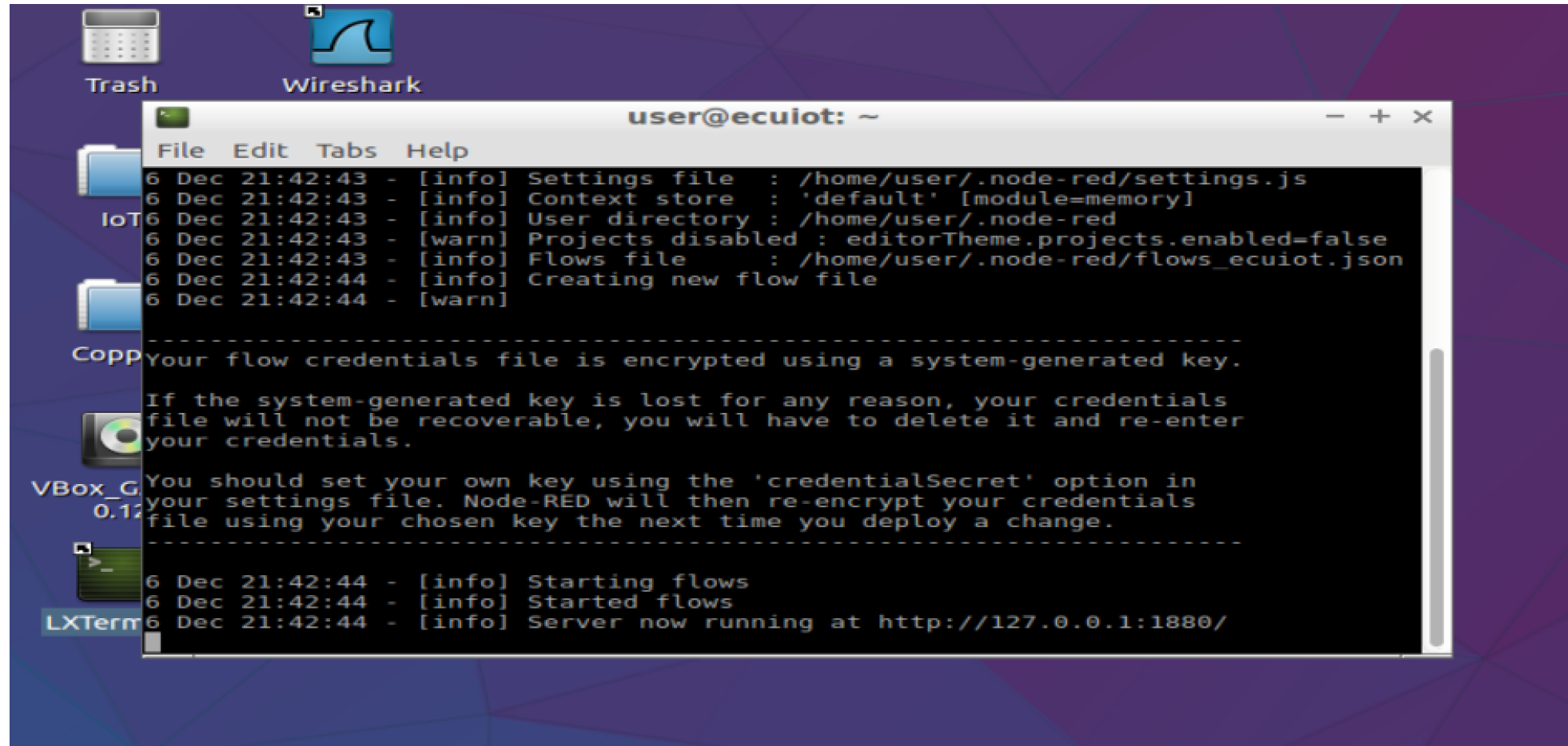
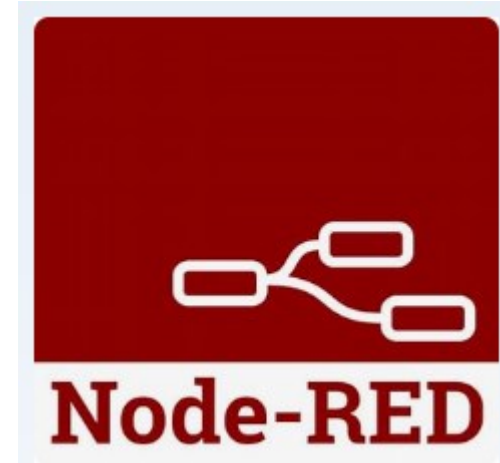
Authorized Channel ⓘ	Allow Publish	Allow Subscribe
IoT Demo (2360507)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

```
mosquitto_pub -h "mqtt3.thingspeak.com" -p  
1883 -u -P -i -t "channels//publish" -m  
"field1=XX&field2=YY&status=MQTTPUBLISH"
```

# Node-Red

Node-Red ya está instalado en su máquina virtual.

En la Terminal se abre escribiendo: "node-red".

A screenshot of a terminal window titled "user@ecuiot: ~" showing the output of the "node-red" command. The terminal displays various status messages, including file paths for settings, context store, user directory, and flows, as well as warnings about disabled projects and encrypted credentials. It also shows the server starting and running on http://127.0.0.1:1880/. The background of the terminal window shows a desktop environment with icons for Trash, Wireshark, IoT, Copp, VBox\_G, and LXTerm.

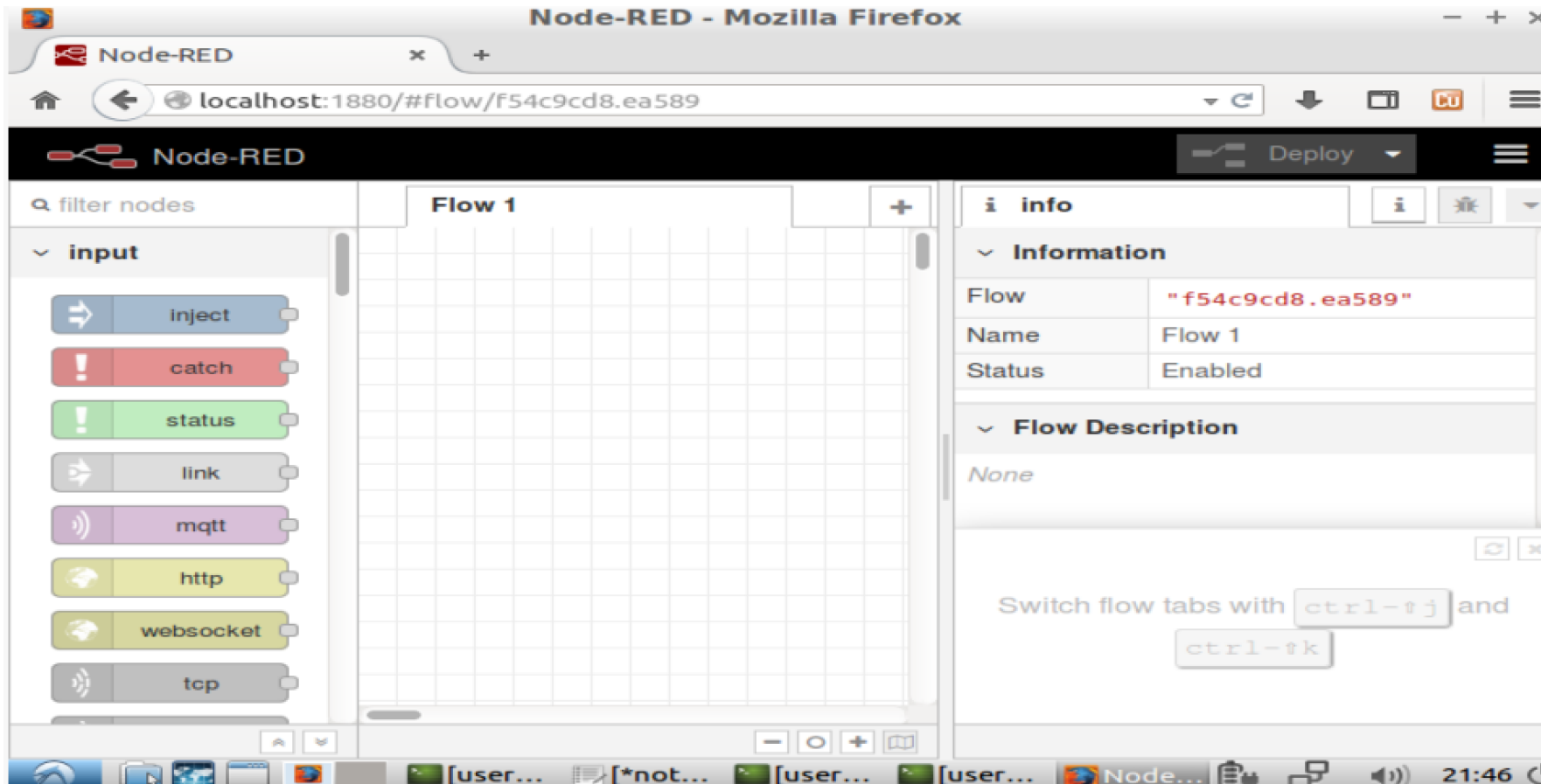
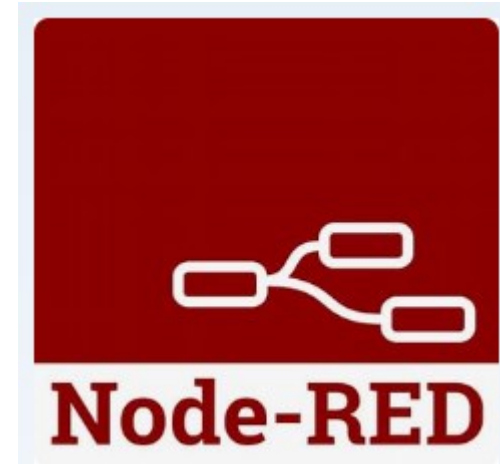
```
user@ecuiot: ~
File Edit Tabs Help
6 Dec 21:42:43 - [info] Settings file : /home/user/.node-red/settings.js
6 Dec 21:42:43 - [info] Context store : 'default' [module=memory]
6 Dec 21:42:43 - [info] User directory : /home/user/.node-red
6 Dec 21:42:43 - [warn] Projects disabled : editorTheme.projects.enabled=false
6 Dec 21:42:43 - [info] Flows file : /home/user/.node-red/flows_ecuiot.json
6 Dec 21:42:44 - [info] Creating new flow file
6 Dec 21:42:44 - [warn]
-----
Your flow credentials file is encrypted using a system-generated key.

If the system-generated key is lost for any reason, your credentials
file will not be recoverable, you will have to delete it and re-enter
your credentials.

You should set your own key using the 'credentialSecret' option in
your settings file. Node-RED will then re-encrypt your credentials
file using your chosen key the next time you deploy a change.
-----
6 Dec 21:42:44 - [info] Starting flows
6 Dec 21:42:44 - [info] Started flows
6 Dec 21:42:44 - [info] Server now running at http://127.0.0.1:1880/
```

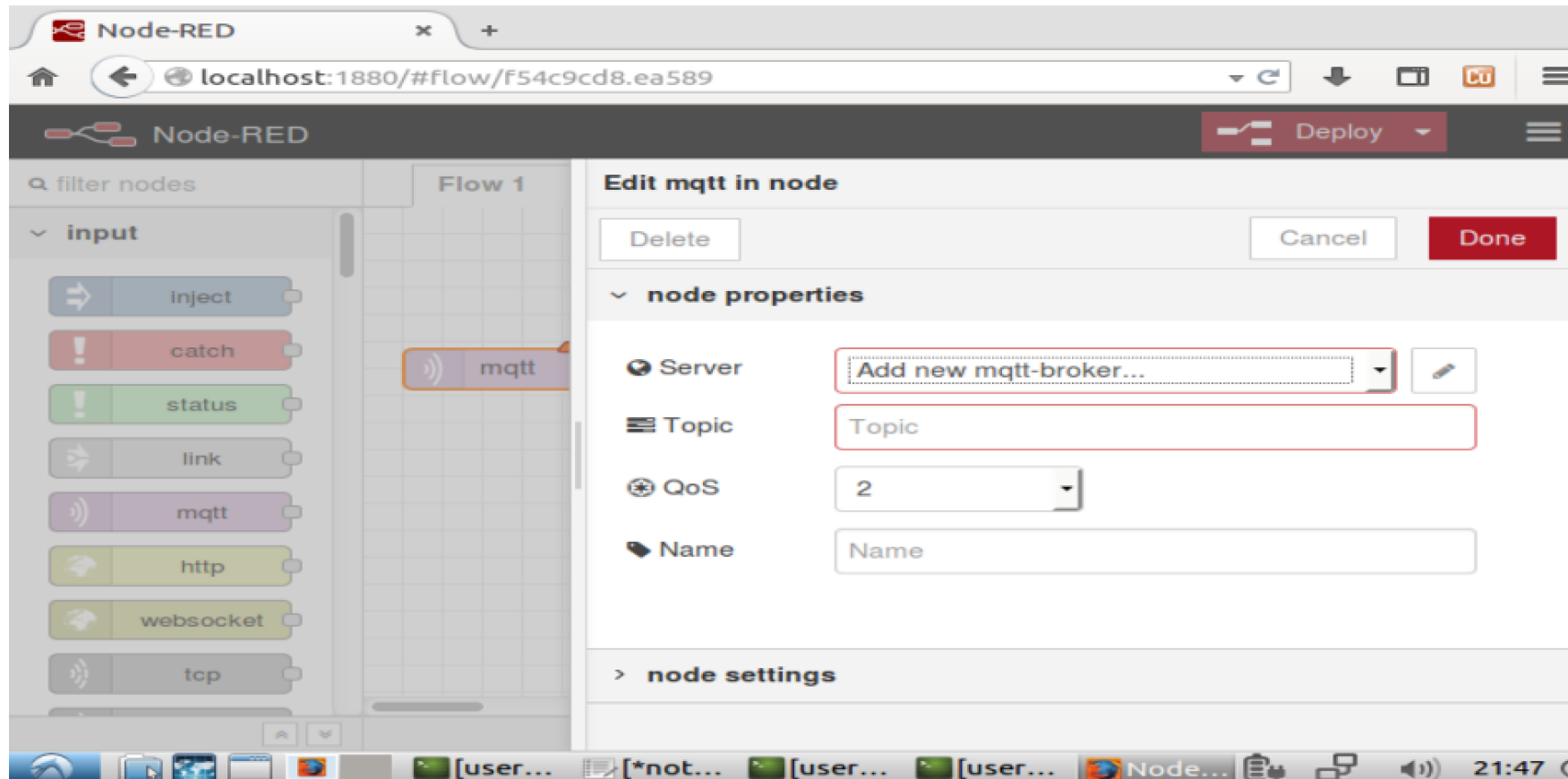
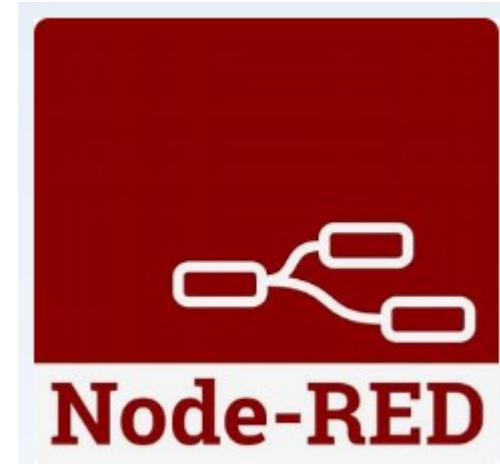
# Node-Red

En mozilla escribe: "localhost:1880"



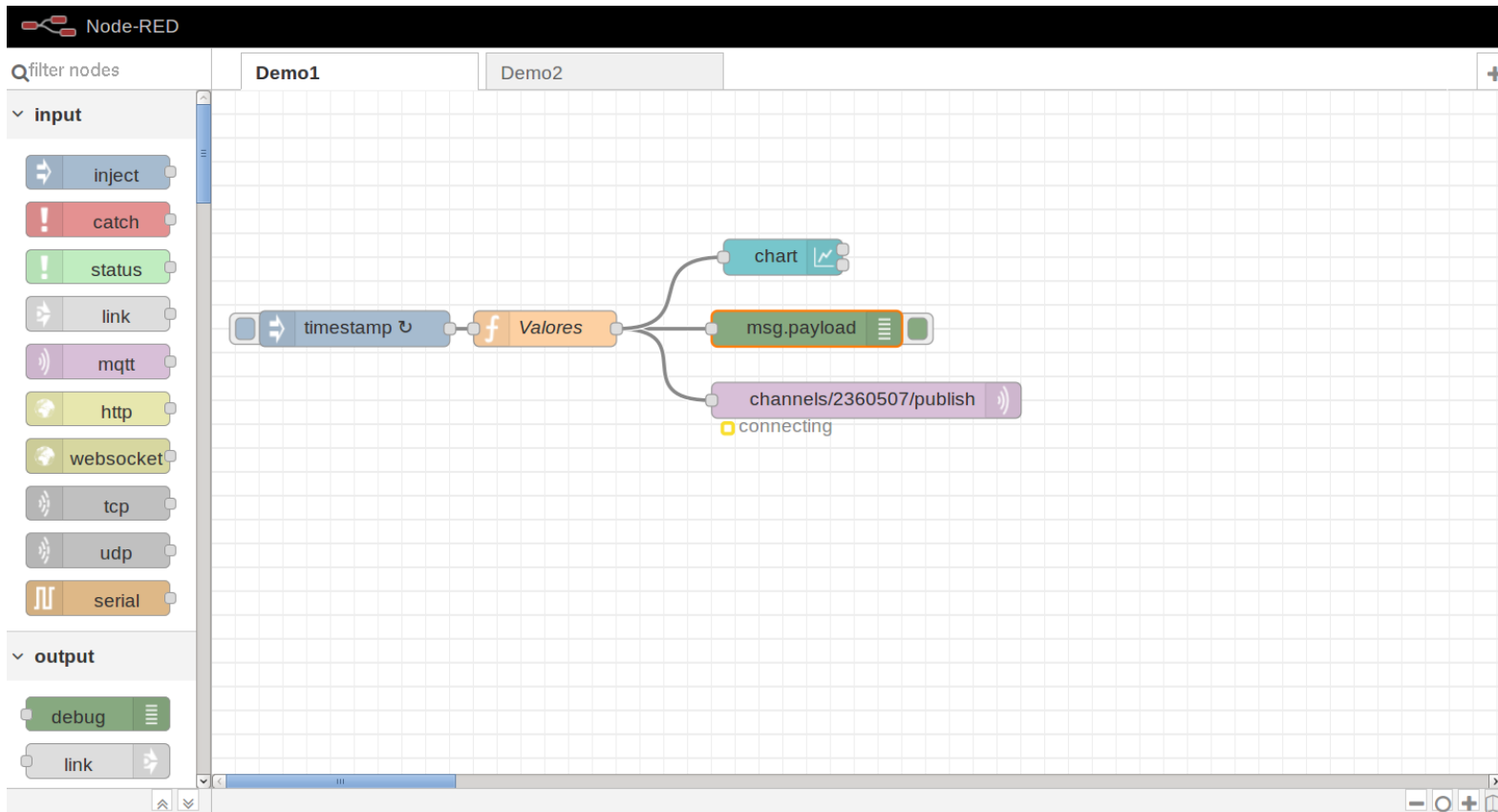
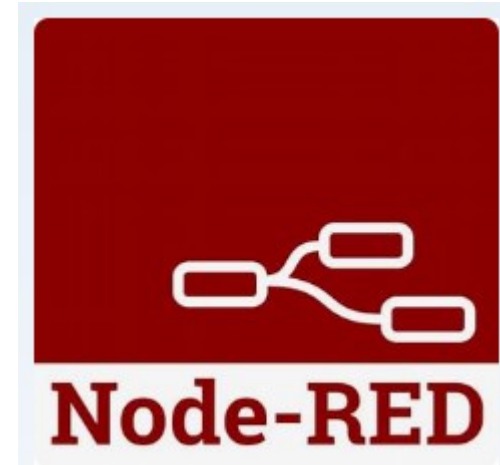
# Node-Red

Utilizando el bloque "mqtt" podemos configurar el broker para nuestra aplicación.

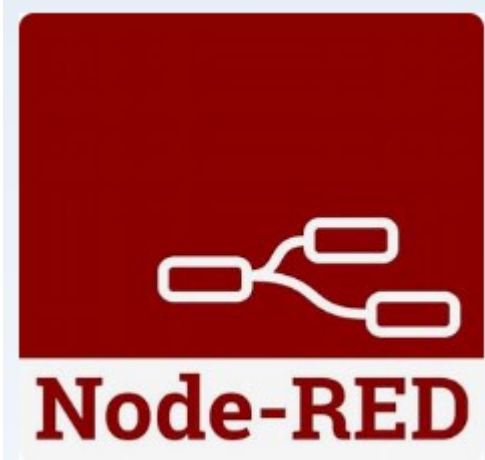


# Node-Red

ThingSpeak y node-red deberían comunicarse e intercambiar información.



# Node-Red con HTTP



Node-RED - Mozilla Firefox

Node-RED 127.0.0.1:1880/#flow/7b74b376.b947fc

Node-RED Deploy

filter nodes

tcp udp

output

debug link mqtt http response websocket tcp udp

function

function template delay

Flow 1

timestamp http request msg.payload

Flow 2

timestamp change: 2 rules http request msg.payload

debug

all nodes

```
application state. -->
<link rel="shortcut icon"
href="?__debugger__=yes&
amp;cmd=resource&
amp;f=console.png">
<script
src="?__debugger__=yes&
amp;cmd=resource&
amp;f=jquery.js"></script>
<script
src="?__debugger__=yes&
amp;cmd=resource&
amp;f=debugger.js">
</script> <script
type="text/javascript">
var TRACEBACK =
3872643724, CONSOLE_MODE =
false, EVALEX = true,
EVALEX_TRUSTED = false,
SECRET =
"d6RQ8zNxKLYTdJE4t5ZN";
</script> </...>
```

7/12/2023 21:08:09 node: 8f8e2432.1f110d  
msg.payload : string[0]  
▶ "15.29"

7/12/2023 21:09:11 node: 8f8e2432.1f110d  
msg.payload : string[27]  
▶ "{ \"error\": \"Not found\"}"

[user@e... [user@e... [user@e... Node-RE... 21:11

# Node-Red MQTT y ThingSpeak

