



# 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.

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"/>

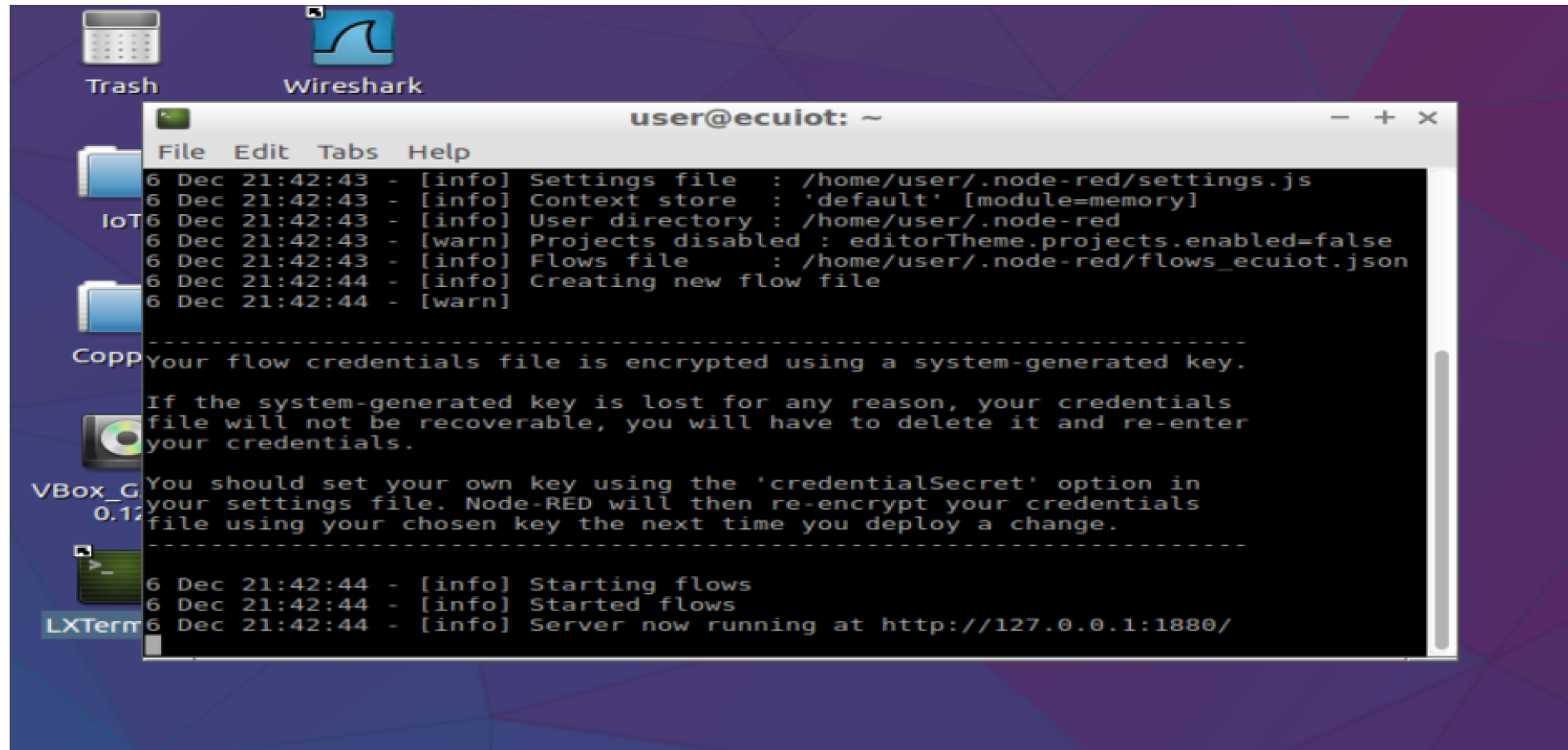
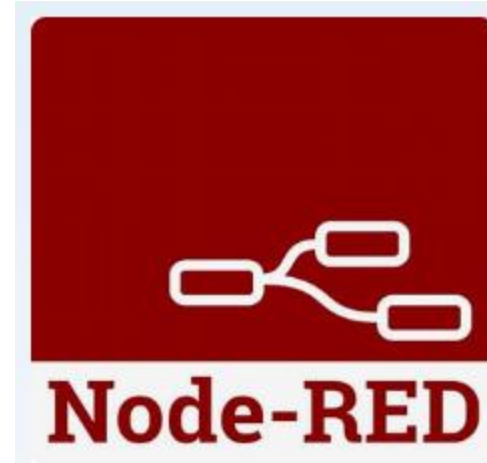
Credenciales: ID,  
User y Password.  
Son necesarias para  
comunicarse.

```
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 Linux desktop environment with a purple background. In the foreground, a terminal window titled "user@ecuiot: ~" is open, displaying the output of the "node-red" command. The terminal shows various informational and warning messages about the configuration files and the starting of flows. The desktop background has several icons: "Trash", "Wireshark", "IoT", "Copp", "VBox\_G", and "LXTerm".

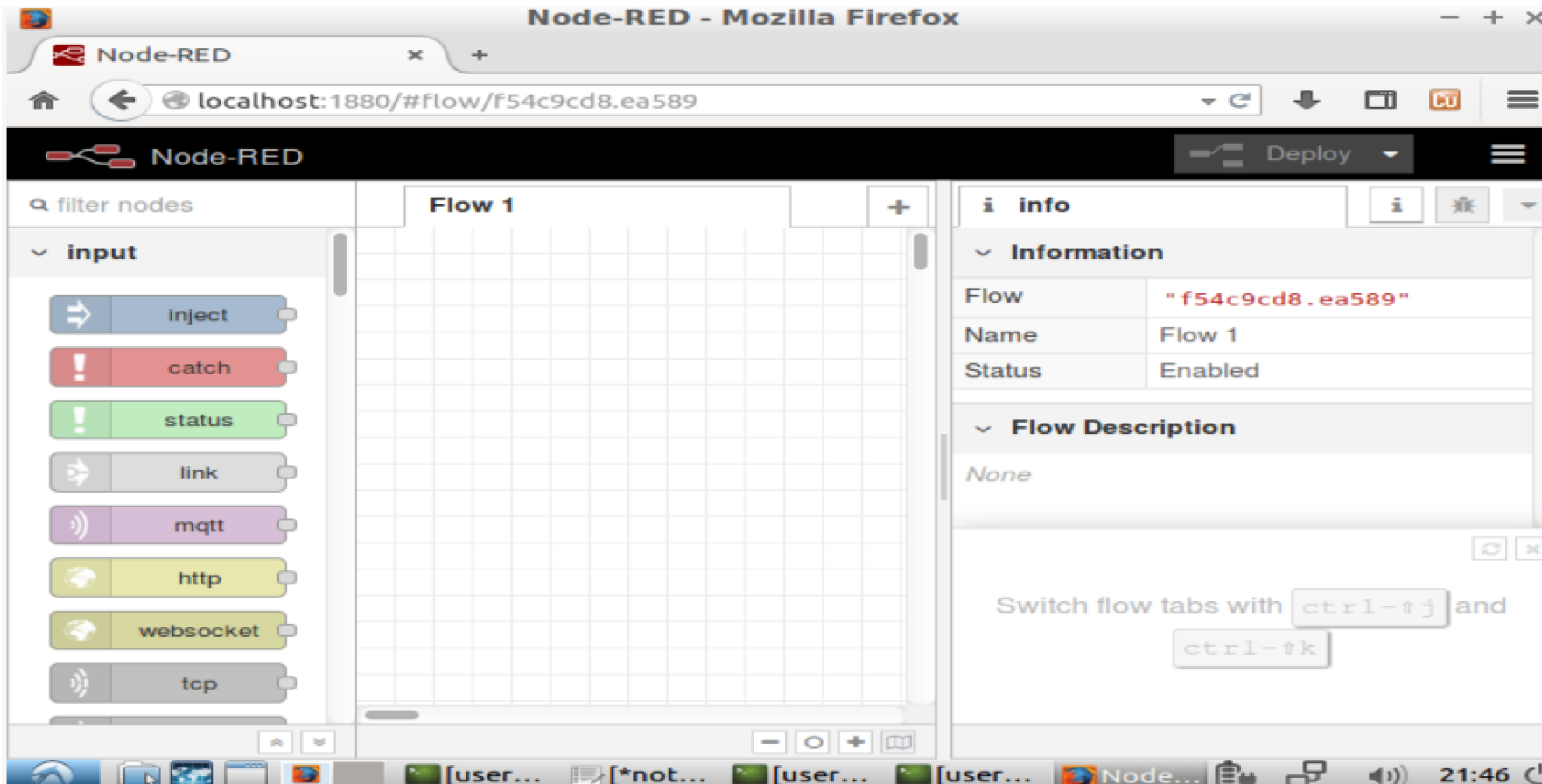
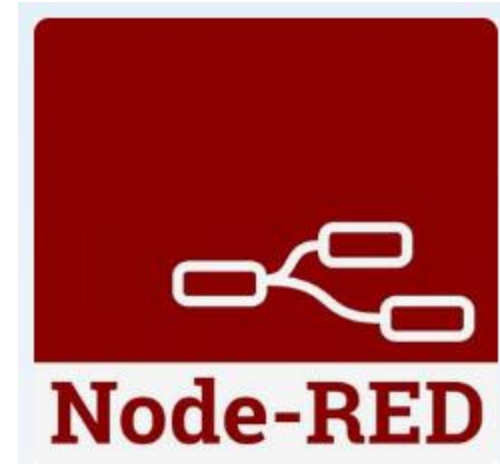
```
user@ecuiot: ~
File Edit Tabs Help
6 Dec 21:42:43 - [info] Settings file : /home/user/.node-red/settings.js
6 Dec 21:42:43 - [info] Context store : 'default' [module=memory]
6 Dec 21:42:43 - [info] User directory : /home/user/.node-red
6 Dec 21:42:43 - [warn] Projects disabled : editorTheme.projects.enabled=false
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/
```

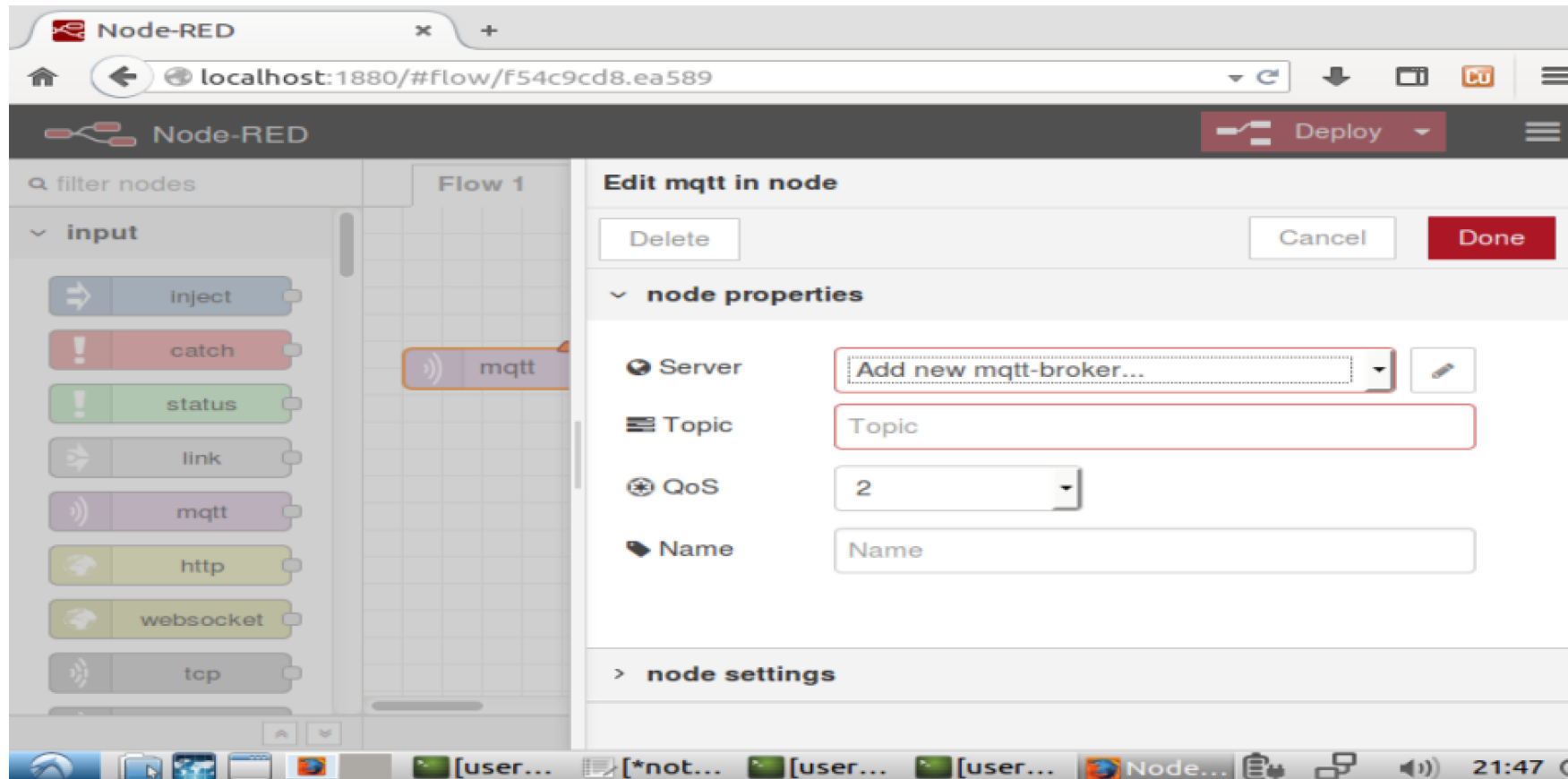
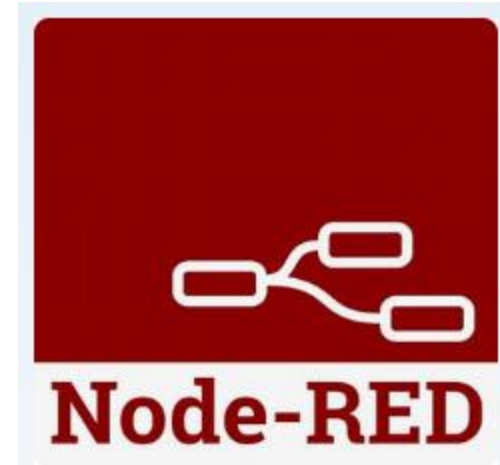
# Node-Red

En mozilla escribe: "localhost:1880"



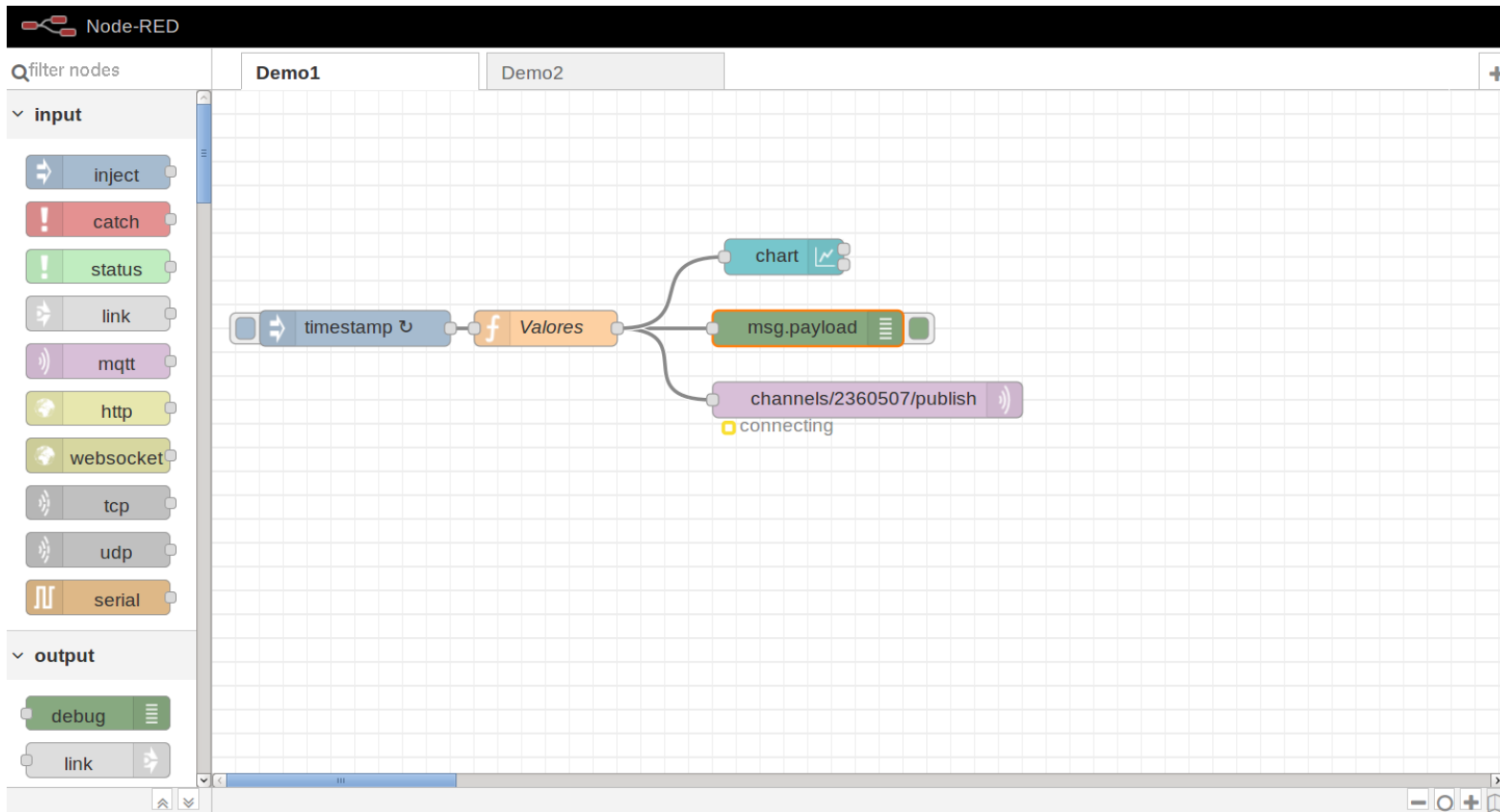
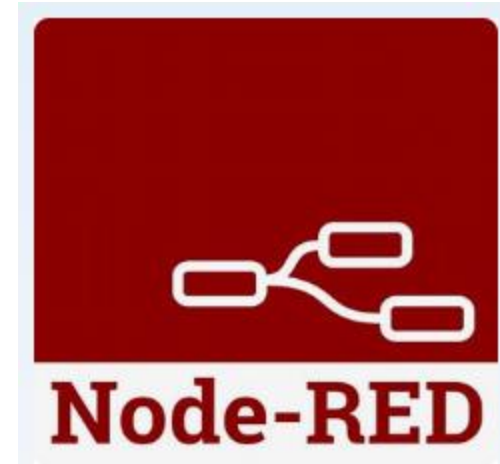
# Node-Red

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

template

delay

Flow 1

Flow 2

timestamp

http request

msg.payload

timestamp

change: 2 rules

http request

msg.payload

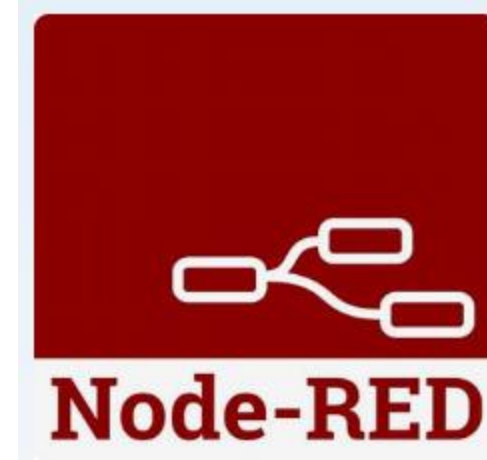
debug

all nodes

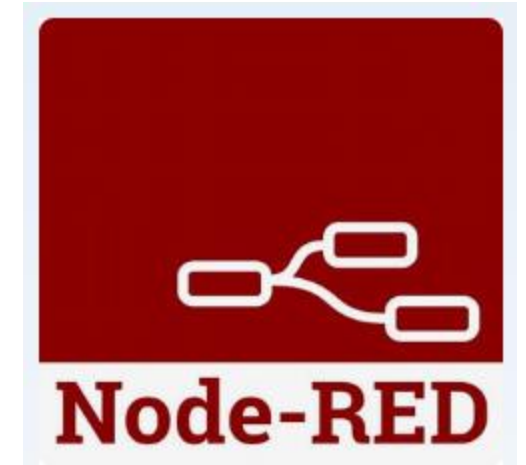
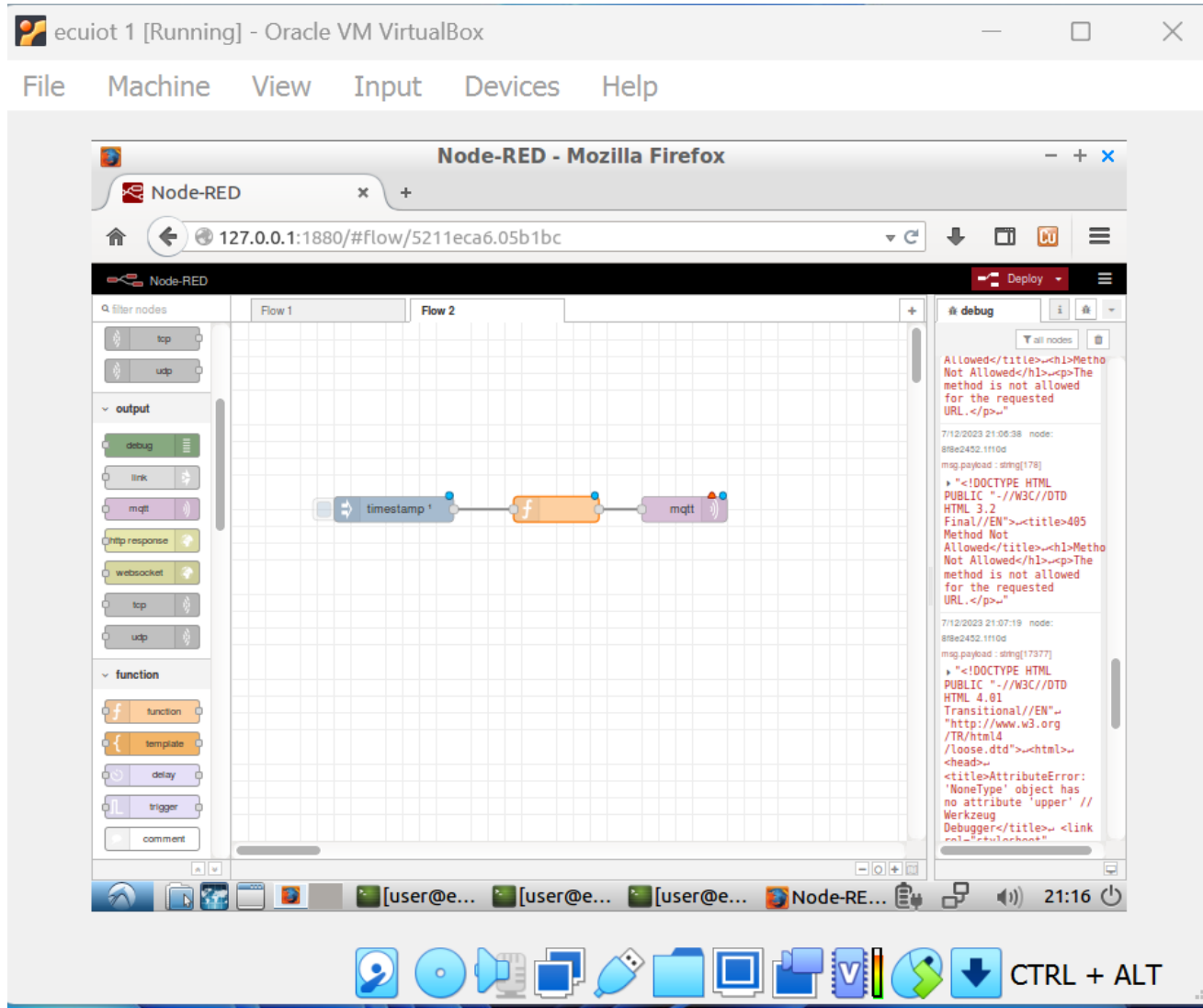
```
application state. -->
<link rel="shortcut icon"
href="?_debugger_=yes&
amp;cmd=resource&
amp;f=console.png">
<script
src="?_debugger_=yes&
amp;cmd=resource&
amp;f=jquery.js"></script>
<script
src="?_debugger_=yes&
amp;cmd=resource&
amp;f=debugger.js">
</script> <script
type="text/javascript">
var TRACEBACK =
3072643724, CONSOLE_MODE =
false, EVALEX = true,
EVALEX_TRUSTED = false,
SECRET =
"d6RQ8zNxKLYtdJE4t5ZN";
</script> </...>
```

7/12/2023 21:09:09 node: 8f8e2452.1f10d  
msg.payload : string[0]  
▶ "15.29"

7/12/2023 21:09:11 node: 8f8e2452.1f10d  
msg.payload : string[27]  
▶ "{ "error": "Not found" }"



# Node-Red MQTT y ThingSpeak



ThingSpeak