

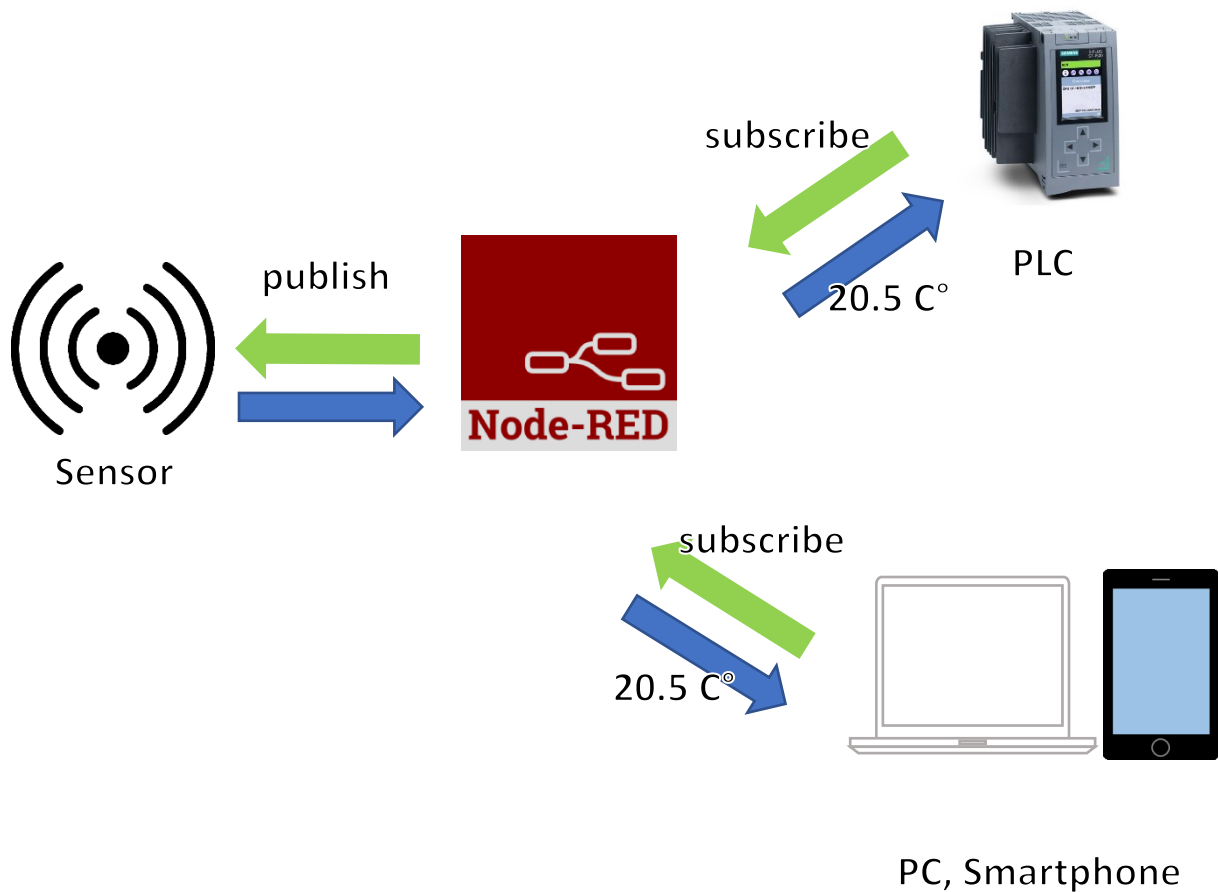
คู่มือการฝึกอบรม
NODE-RED



Node red communication IOT install Program

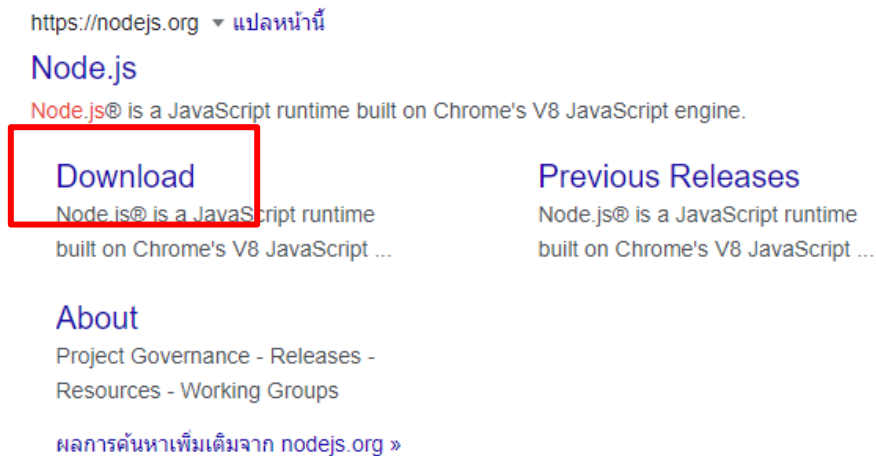
NODE RED

Node Red เป็น MQTT Protocol รูปแบบหนึ่งถูกออกแบบมาเพื่อใช้ในการเชื่อมต่อแบบ อุปกรณ์หนึ่งไปยังอีกอุปกรณ์ โดยมีตัวกลางเป็น MQTT เพื่อให้อุปกรณ์ทั้งสองสามารถติดต่อสื่อสารกันได้ การทำงานของ MQTT จริง ๆ นั้นมีส่วนประกอบ 3 อย่างคือ ผู้ส่ง (publish) ผู้รับ (subscribe) และ ตัวกลาง (MQTT broker) ซึ่ง node red เป็นเพียงแค่ตัวกลางในการส่งผ่านข้อมูลเท่านั้น แต่ผู้ใช้งานก็สามารถทำการปรับแก้ไขข้อมูลจากผู้ส่ง หรือเพิ่มข้อมูลบางอย่างก่อนส่งไปยังผู้รับอีกทีหนึ่งได้

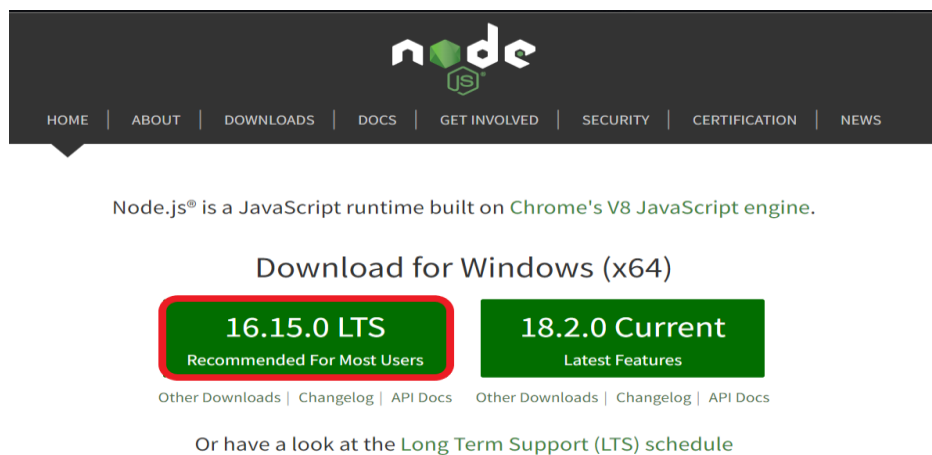


Download program Node.js

- Go to web browser and then download through the website. <https://nodejs.org/en/download/> or search for Node.js

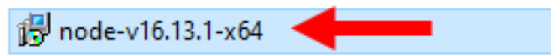


- Recommended for most user

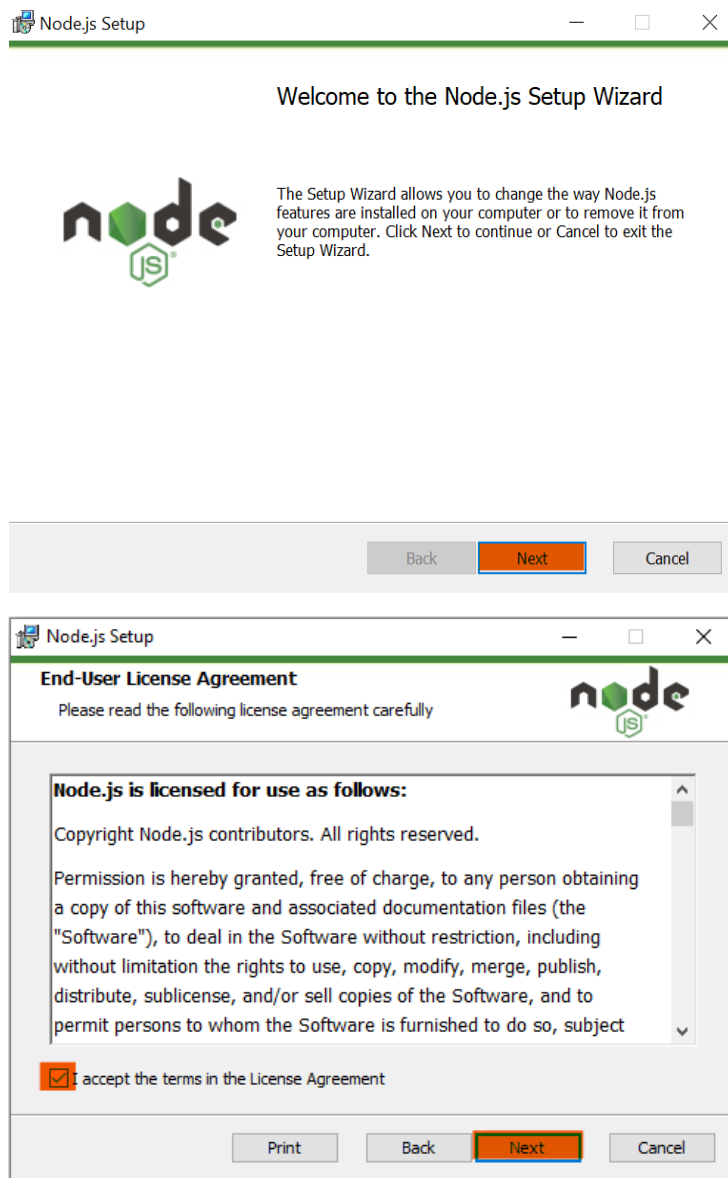


Node-RED – Installation

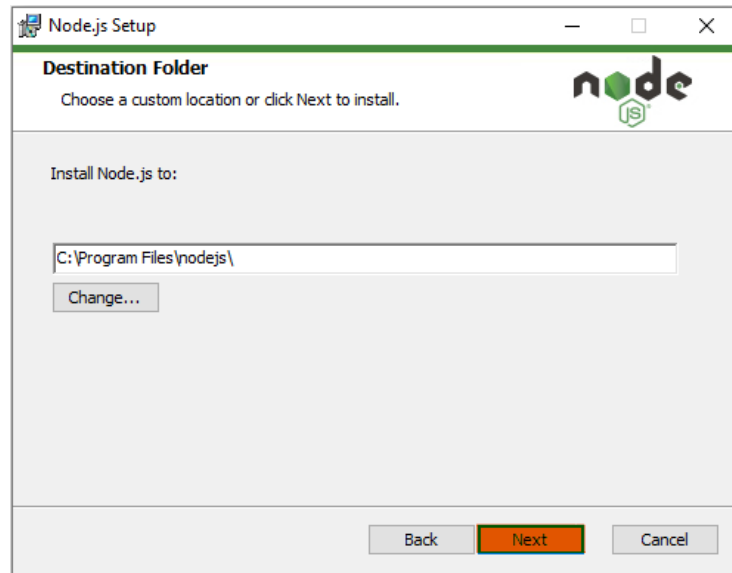
- Install the downloaded msi-file by double- clicking it in the file explorer.



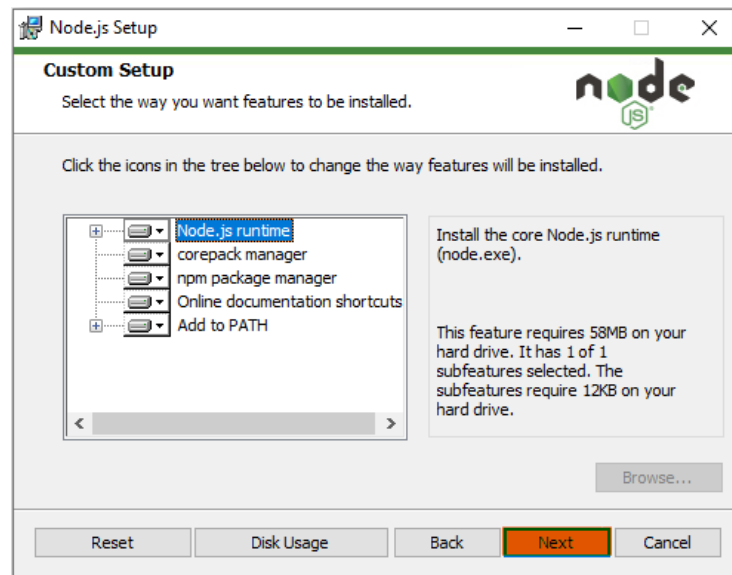
- Confirm the first installation dialog by clicking “Next”.



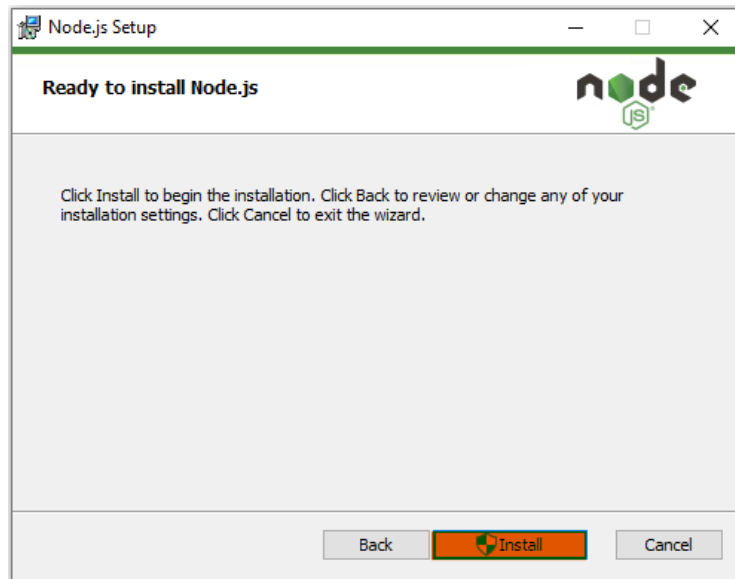
- Confirm the default target directory by clicking “Next”



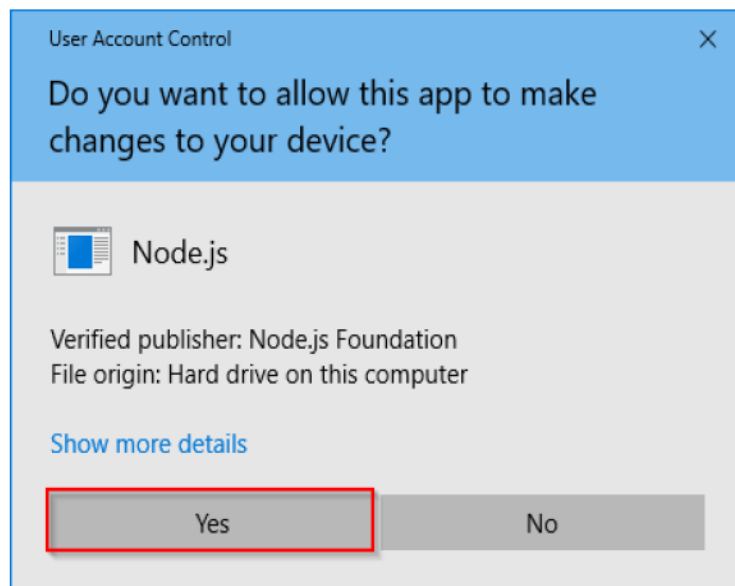
- Accept the pre-defined feature list by clicking the “Next” button.



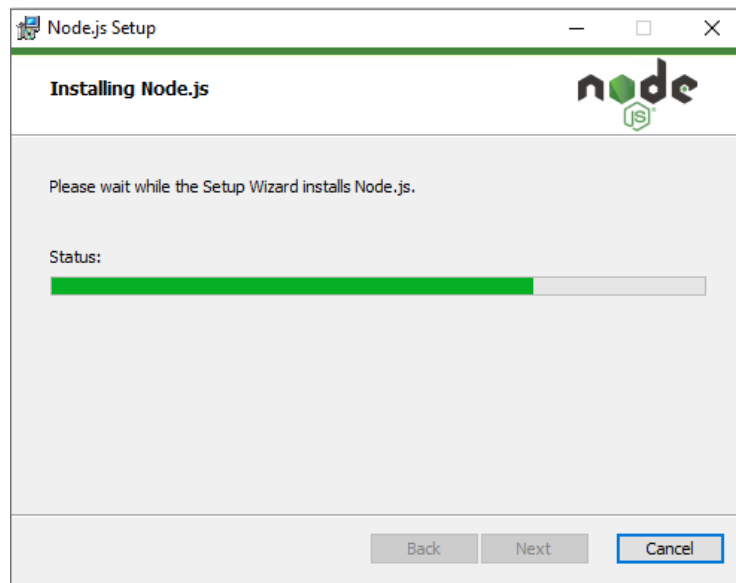
- Give your final confirmation for the installation process by clicking “Install”.



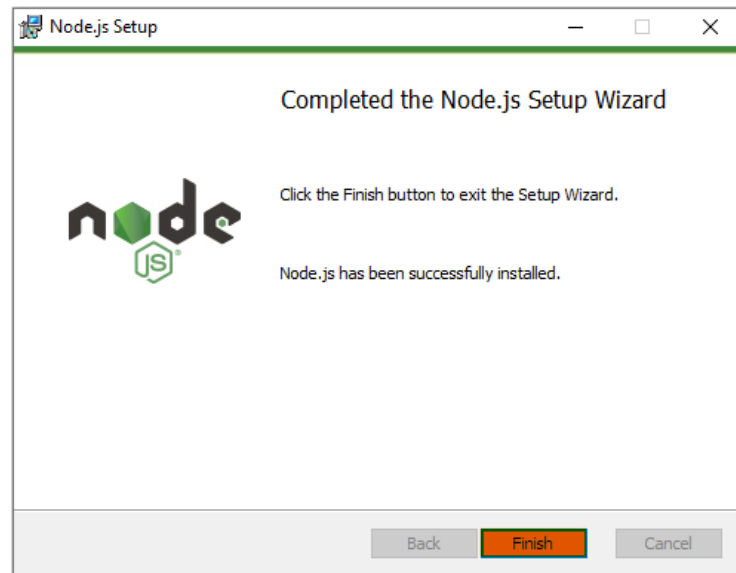
- Agree to updates on your computer by the Node.js installer by clicking “Yes”.



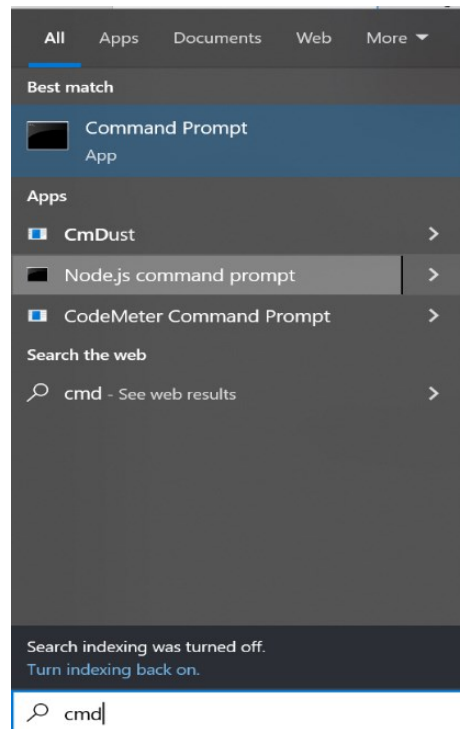
- Wait for the finalization of the installation process.



- End the Node.js installation by clicking "Finish".



- Open the app “Command Prompt” under Windows System.



- Click into the command window and enter (or copy and paste) the following line

“
node --version && npm -version
”

```
Command Prompt
Microsoft Windows [Version 10.0.19042.1706]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Im_Do>node --version && npm -version
v16.15.0
8.9.0
```


- Click into the command window and enter (or copy and paste) the following line

“

`npm install -g --unsafe-perm node-red`

”

```
ca. npm install node-red
Microsoft Windows [Version 10.0.19044.1706]
(c) Microsoft Corporation. All rights reserved.

C:\Users\DELL>npm install -g --unsafe-perm node-red
npm WARN config global `--global`, `--local` are deprecated. Use `--location=global` instead.
npm WARN config global `--global`, `--local` are deprecated. Use `--location=global` instead.
[ ] - idealTree:npm: sill idealTree buildDeps
```

- The installation process will take some minutes.

```
Run `npm audit` for details.
npm notice
npm notice New minor version of npm available! 8.11.0 -> 8.12.1
npm notice Changelog: https://github.com/npm/cli/releases/tag/v8.12.1
npm notice Run npm install -g npm@8.12.1 to update!
npm notice
C:\Users\DELL>
```

- Update version program (Refer to the version in command.)

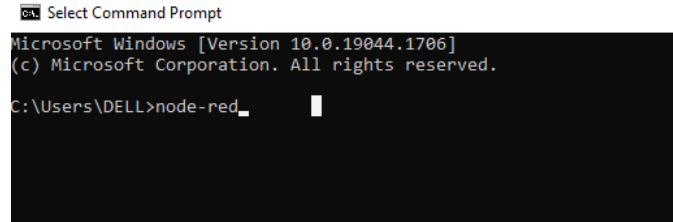
“

`npm install -g npm@8.12.1`

”

Starting Node-RED

- On the command line enter “node-red”.

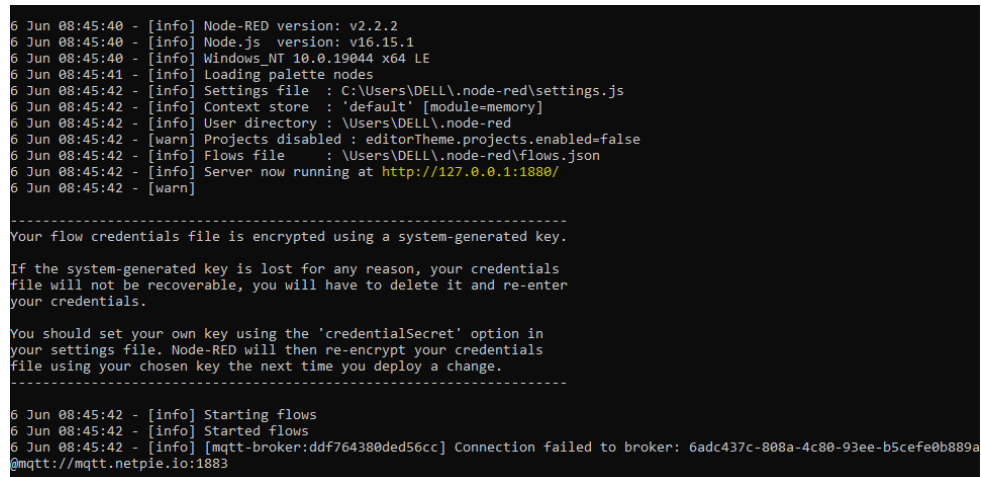


```

Select Command Prompt
Microsoft Windows [Version 10.0.19044.1706]
(c) Microsoft Corporation. All rights reserved.

C:\Users\DELL>node-red
  
```

Note: Do not close the command window as long as you are using Node-RED!



```

6 Jun 08:45:40 - [info] Node-RED version: v2.2.2
6 Jun 08:45:40 - [info] Node.js version: v16.15.1
6 Jun 08:45:40 - [info] Windows_NT 10.0.19044 x64 LE
6 Jun 08:45:41 - [info] Loading palette nodes
6 Jun 08:45:42 - [info] Settings file : C:\Users\DELL\.node-red\settings.js
6 Jun 08:45:42 - [info] Context store : 'default' [module=memory]
6 Jun 08:45:42 - [info] User directory : \Users\DELL\.node-red
6 Jun 08:45:42 - [warn] Projects disabled : editorTheme.projects.enabled=false
6 Jun 08:45:42 - [info] Flows file : \Users\DELL\.node-red\flows.json
6 Jun 08:45:42 - [info] Server now running at http://127.0.0.1:1880/
6 Jun 08:45:42 - [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 Jun 08:45:42 - [info] Starting flows
6 Jun 08:45:42 - [info] Started flows
6 Jun 08:45:42 - [info] [mqtt-broker:ddf764380ded56cc] Connection failed to broker: 6adc437c-808a-4c80-93ee-b5cefe0b889a
@mqtt://mqtt.netpie.io:1883
  
```

Connecting to the server

- Open a browser (Edge, Chrome) and enter the following URL which can be found in the log messages

“

<http://127.0.0.1:1880>

”



<http://127.0.0.1:1880>

- This is the GUI you can use to create and manage Node-RED flows.

