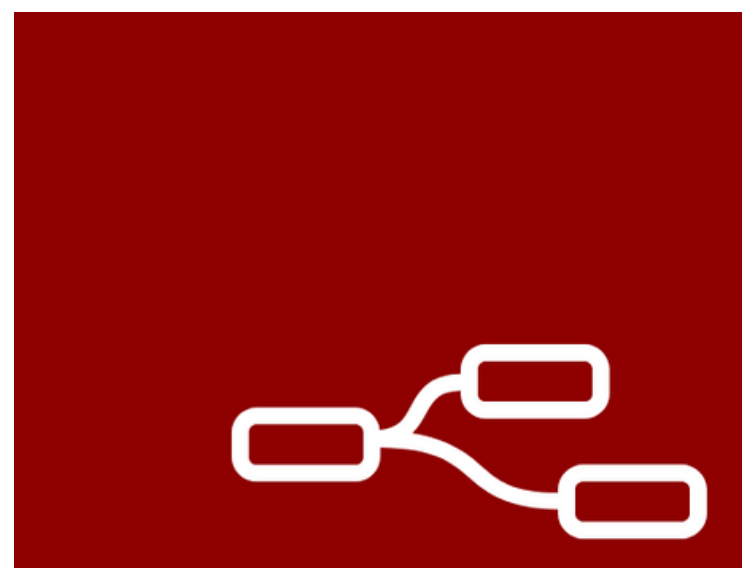# Install Node-red and its nodes

List of Topics:

▶ Definition of Node-red

▶ Node.js installation

▶ Node-red installation

▶ Install packages in Node-red

▶ An Overview of Node-red

▶ Import project in Node-red

Node-red

Node-RED is a visual programming tool aimed at connecting hardware devices, APIs and online services in alternative ways, without the need for traditional programming experience. The software provides a browser-based editor that makes it easy to wire together flows using the wide range of nodes in the palette that can be deployed to its run-time in a single-click.

Starting install Node.js

Visit https://nodejs.org/en/download
and choose the appropriate download option for your OS from the picture below.

Node.js installation

Once the installation is complete, open up a Windows command prompt, input the following:

Command Prompt

```
Microsoft Windows [Version 10.0.22621.2215]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Advice>node -v
v18.16.0

C:\Users\Advice>
```

Using command: "node -v"

The output will display version of node.js
(If the output doesn't show version, check your installation of node.js)

Node-red installation

Now we can begin to install Node-RED, navigate to CMD and input the command:

```
Microsoft Windows [Version 10.0.22621.2215]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Advice>node -v
v18.16.0

C:\Users\Advice>node --version && npm --version
v18.16.0
9.5.1

C:\Users\Advice>npm install -g --unsafe-perm node-red

added 298 packages in 5s

42 packages are looking for funding
  run `npm fund` for details
```

Using command: "npm install -g --unsafe-perm node-red"

Once this command is ran Node-RED will begin to install. Please note this can take some time to complete.

Install packages in Node-red

Node-RED-dashboard

Using command: "npm install -g node-red-dashboard"

This module adds nodes which allow us to easily create a live data dashboard.

```
C:\Users\Advice>npm install -g node-red-dashboard

added 54 packages in 11s

C:\Users\Advice>
```

node-red-contrib-modbus

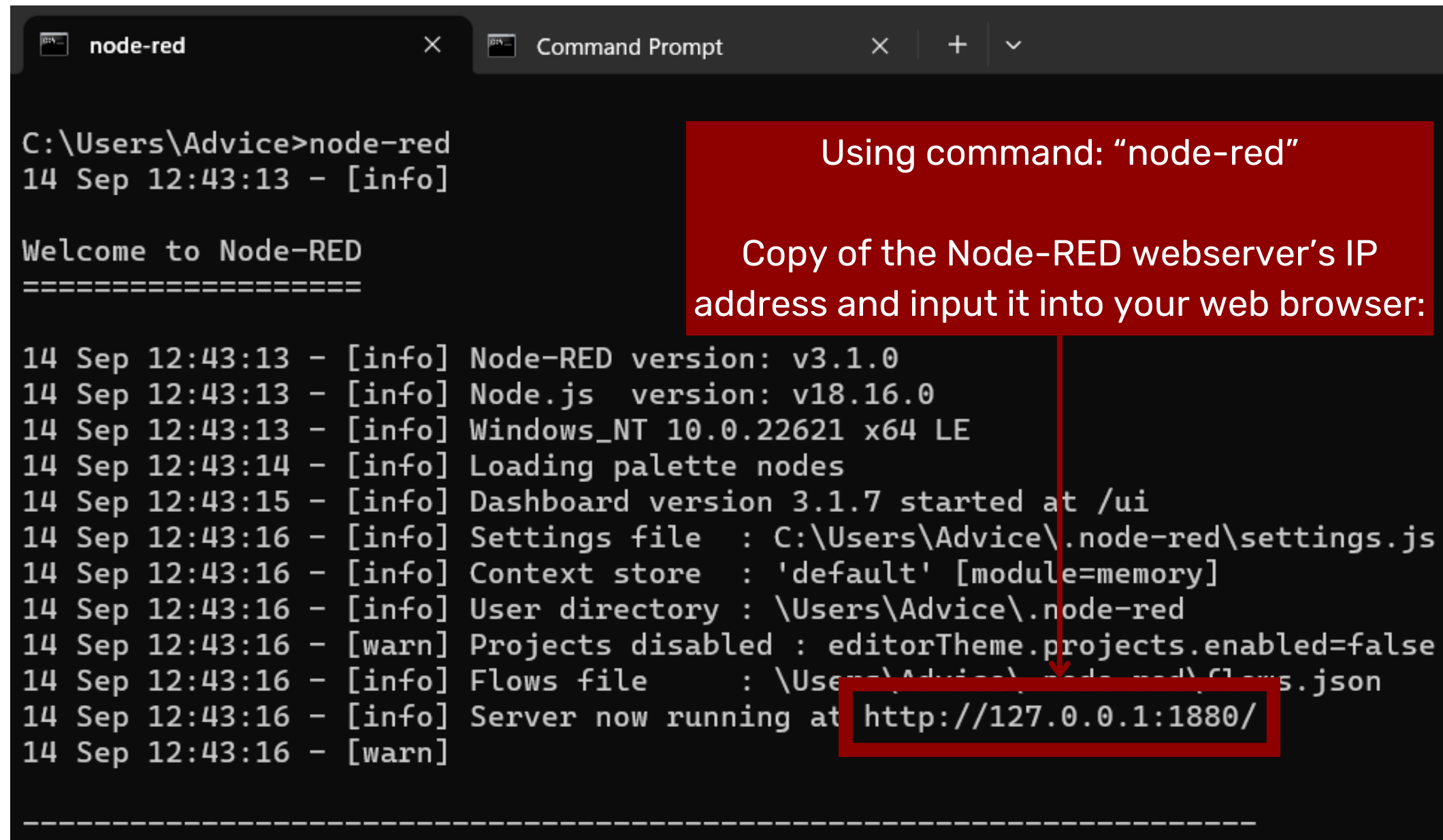Using command: "npm install -g node-red-contrib-modbus"

This module adds nodes that allow us to communicate in ModbusTCP

```
C:\Users\Advice>npm install -g node-red-contrib-modbus
npm WARN deprecated vm2@3.9.19: The library contains critical security is
 maintenance of the project has been discontinued. Consider migrating you

added 43 packages in 17s

18 packages are looking for funding
  run `npm fund` for details

C:\Users\Advice>
```

Running Node-RED

Once everything has been successfully installed you can now begin to run your Node-RED webserver. You can do this by navigating to a command prompt and typing in the following command:

Starting flow

You have now successfully installed, booted up, and accessed your Node-RED webserver. You can now begin to create your own flows.
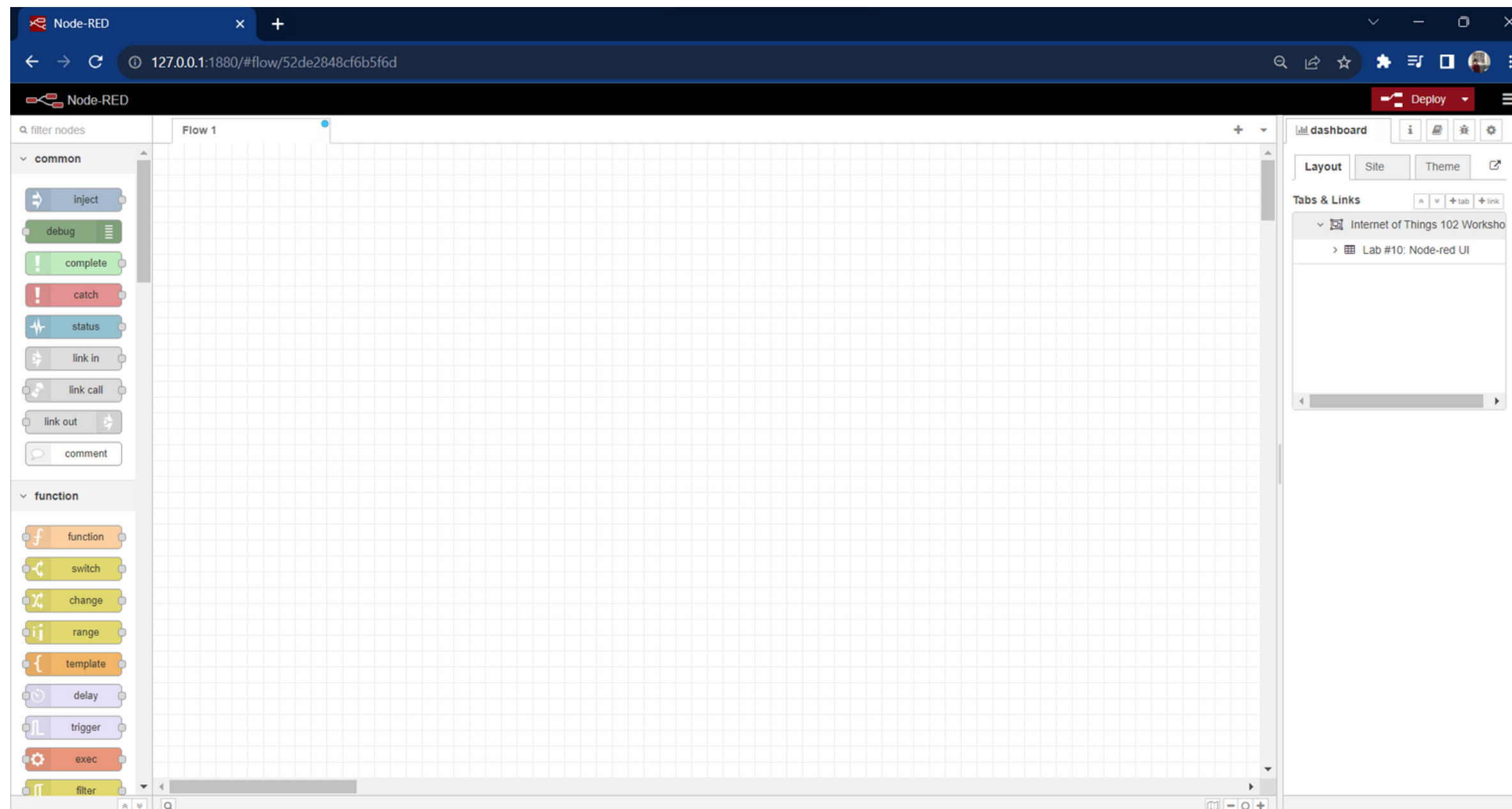
An Overview of Node-RED

Palette

The palette on the left contains all the different nodes available for use.
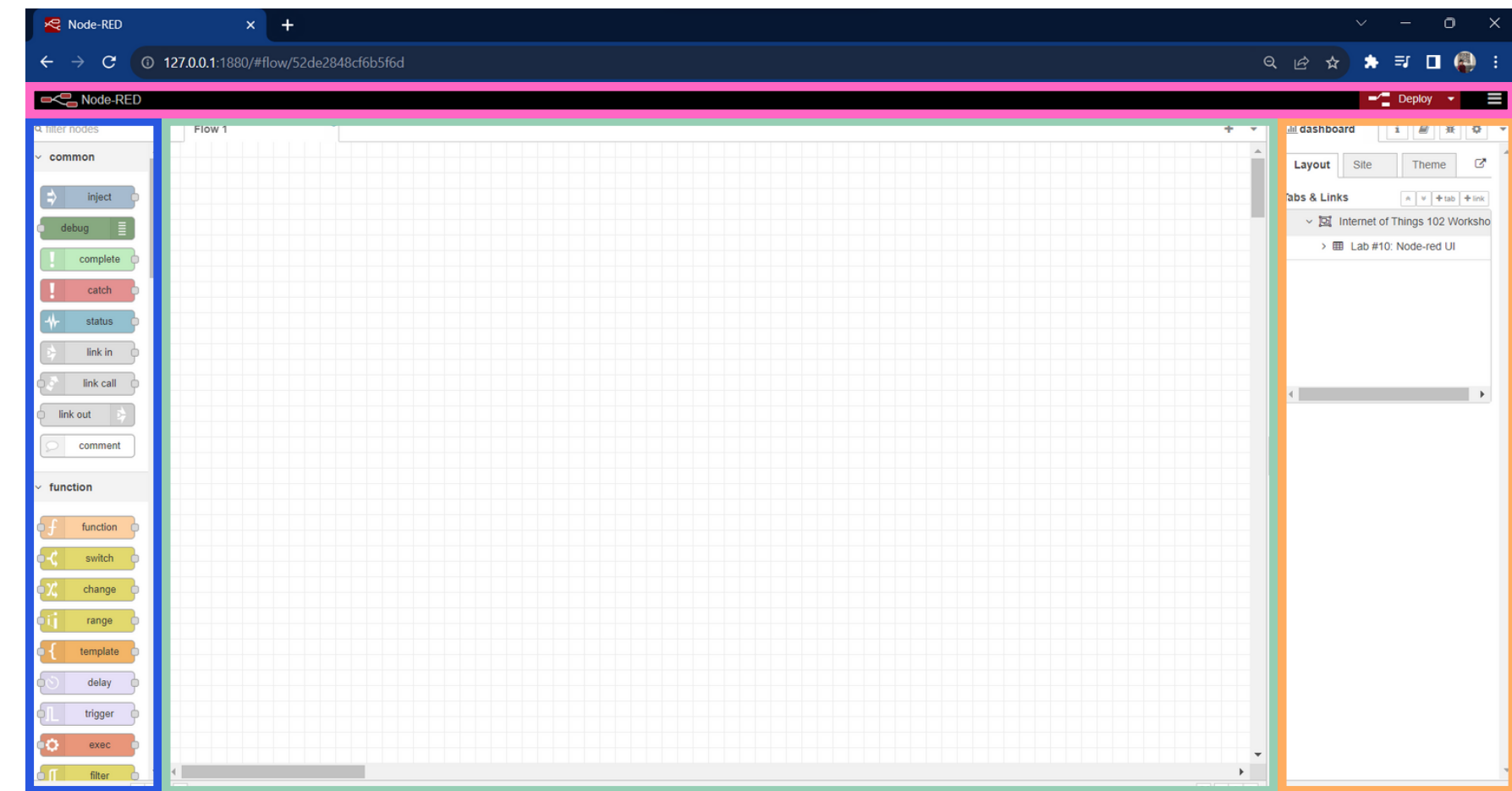
Worksapace

The workspace in the middle is where your flows will be created.

Sidebar

The sidebar on the right provides additional settings and debug information.
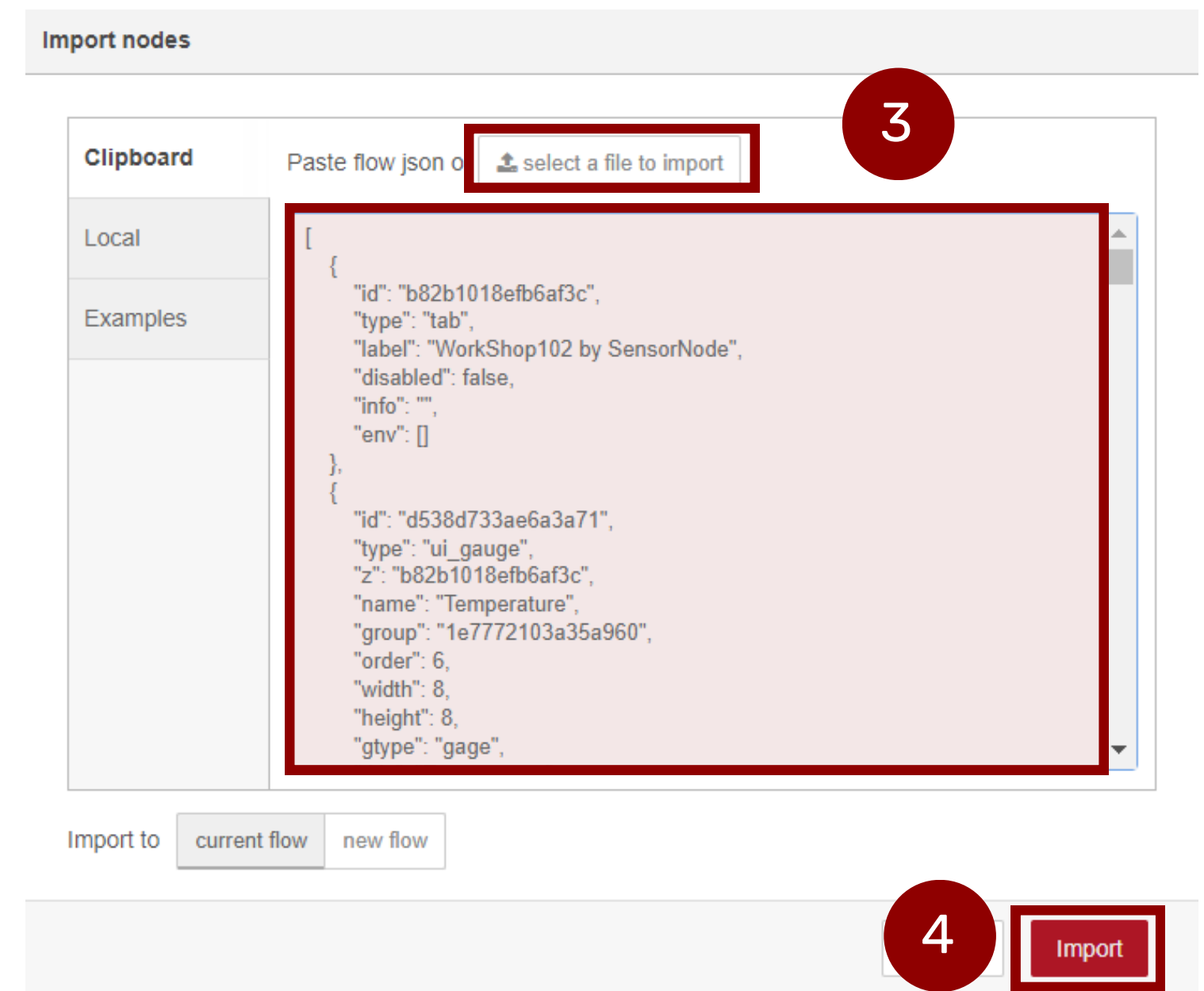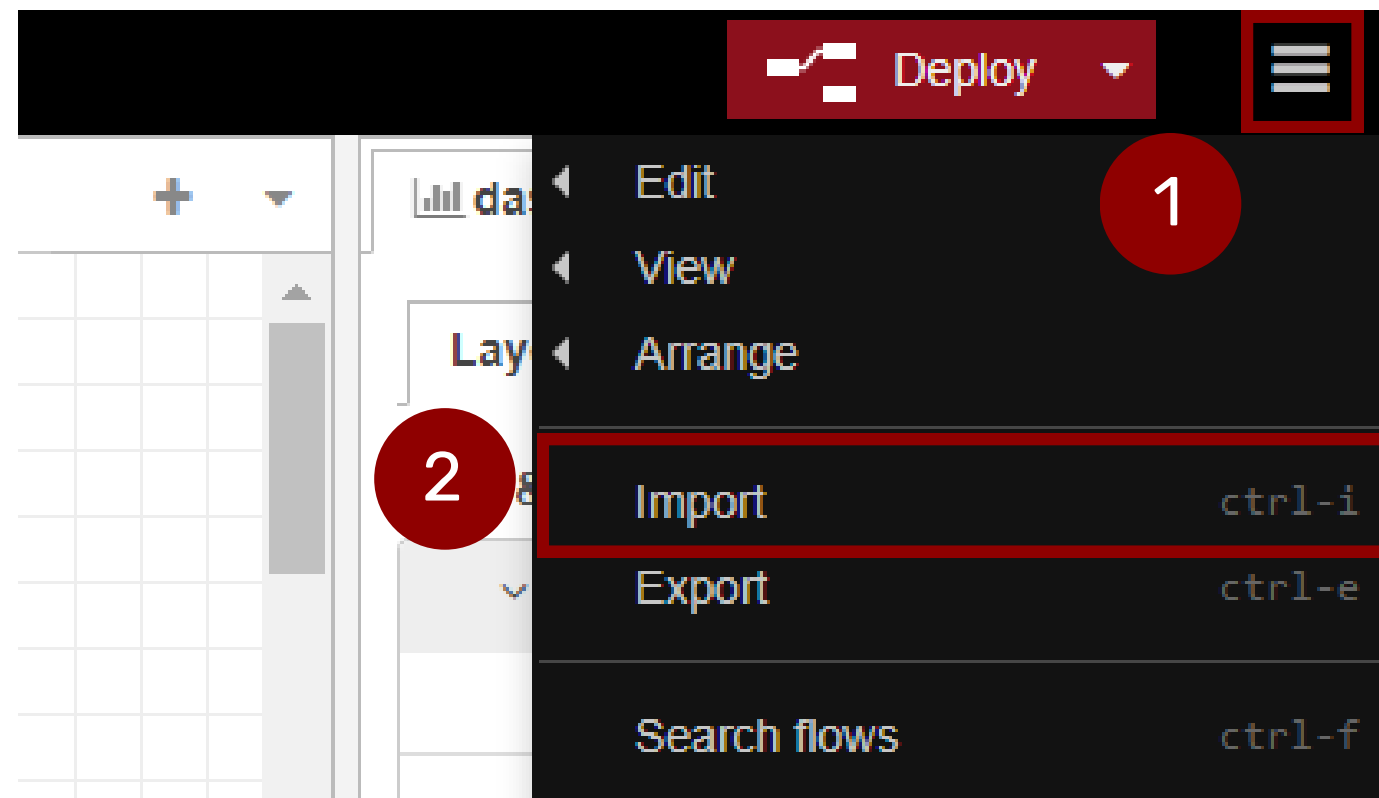
Header

The header at the top, contains the deploy button, which is used for deploying your current workspace.

Import project in Node-RED

1. Go to sidebar in header.
2. Click import.
3. paste JSON format or you can select a JSON file to import.
4. Click import.

Thank You