JavaScript 物聯網實作

Node-RED

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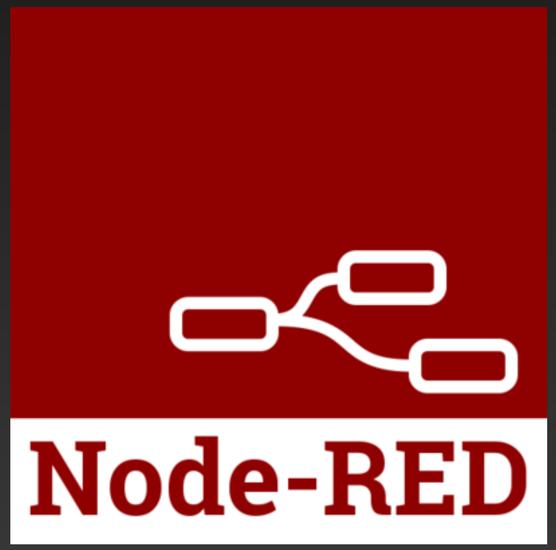
Node-RED

- IBM 開發的視覺化 IoT 開發工具
- 以 Node.js 為基礎
- 純粹透過流程圖的方式工作
- 不需要會 Node.js 也可透過 Node-RED 完成後端
- 官網：https://nodered.org/



Node-RED

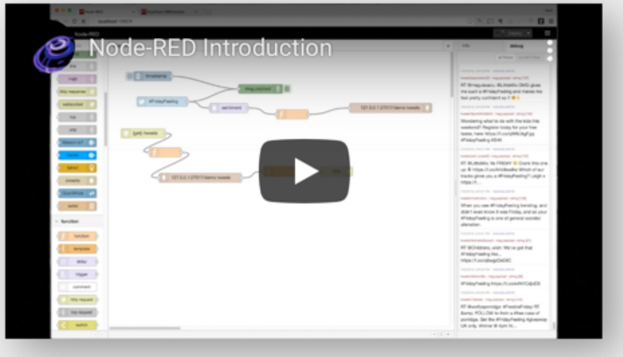
Low-code programming for event-driven applications

Latest version: v1.0.6 (npm)

Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways.

It 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 runtime in a single-click.

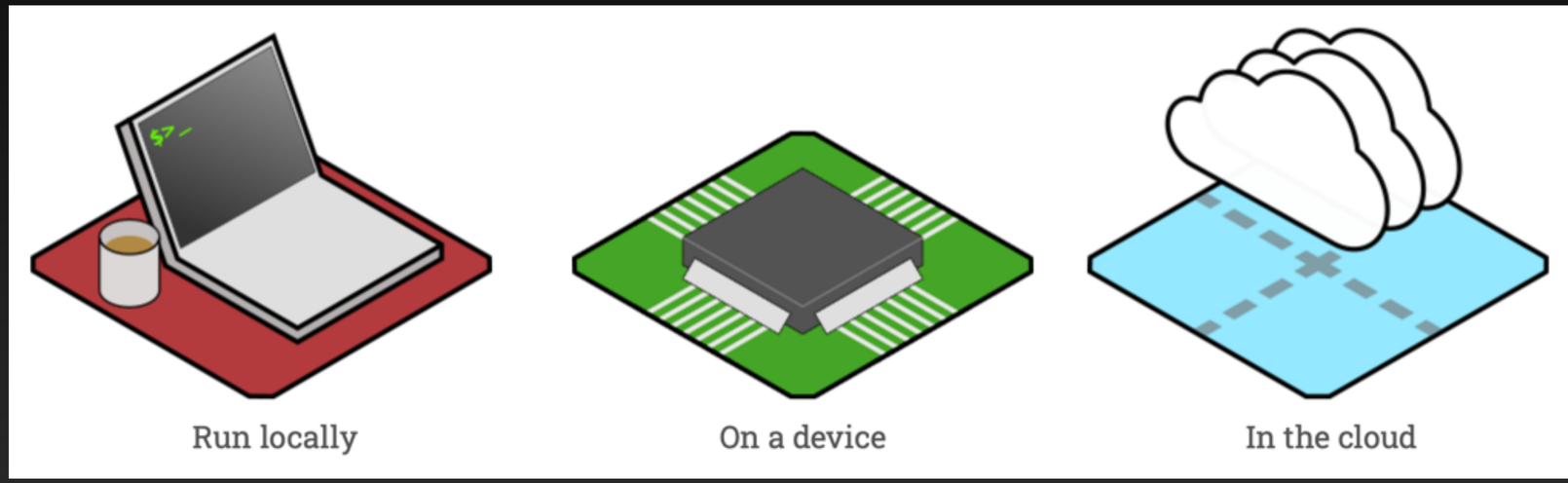
Features Get Started Community



Browser-based flow editing

Node-RED provides a browser-based flow editor that makes it easy to wire together flows using the wide range of nodes in the palette. Flows can be then deployed to the runtime in a single-

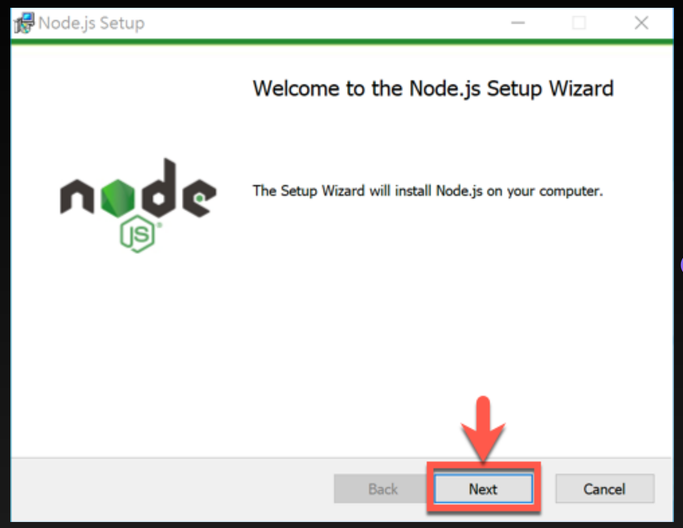
開發環境



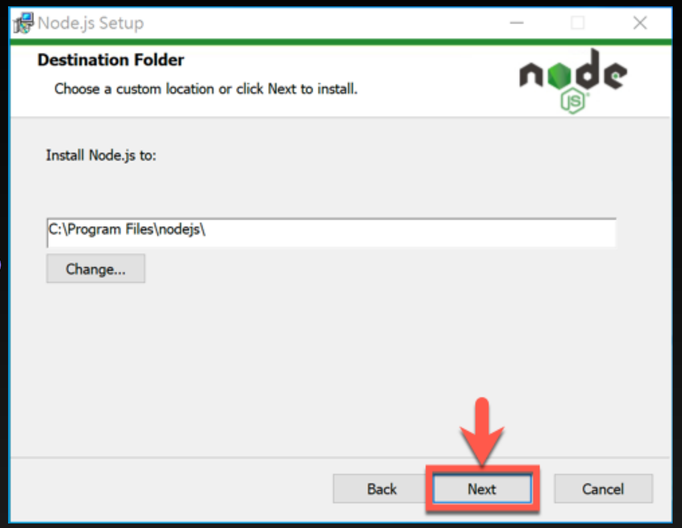
安裝 Node-RED

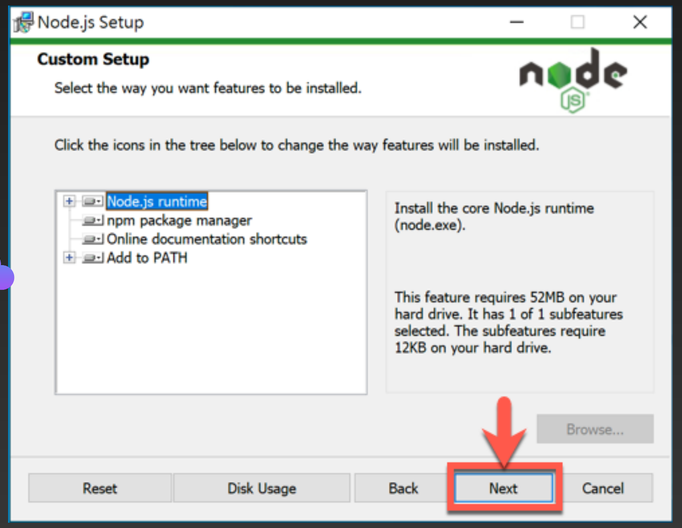
安裝 Node.js

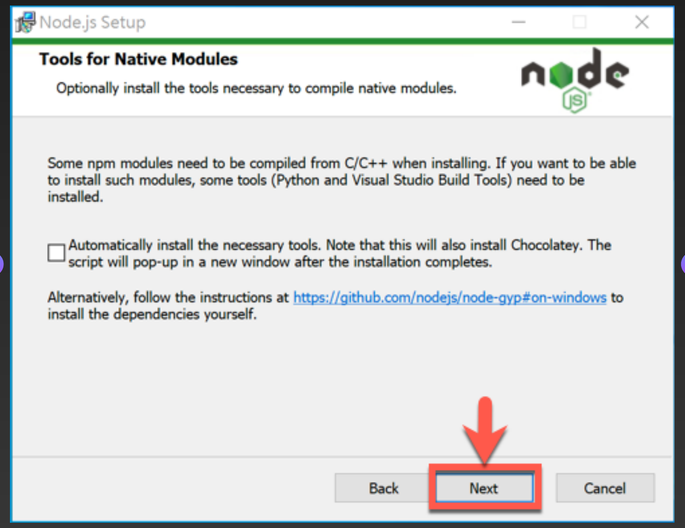
https://nodejs.org/en/

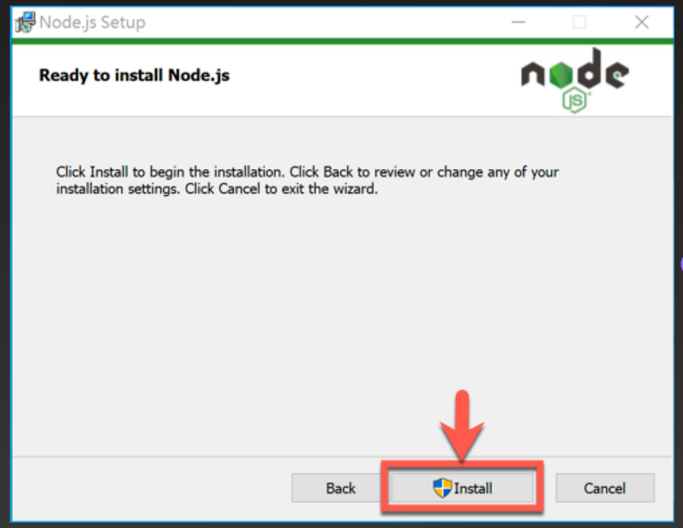

Node.js Setup
Welcome to the Node.js Setup Wizard
The Setup Wizard will install Node.js on your computer.
Back
Next
Cancel

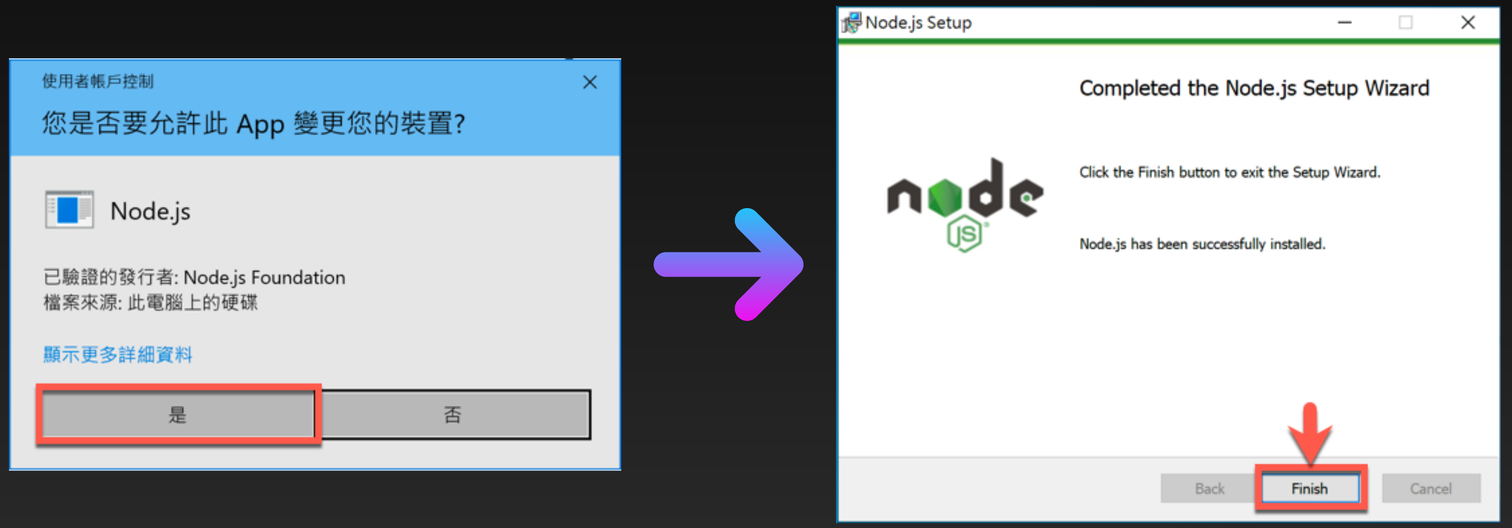
Node.js Setup
End-User License Agreement
Please read the following license agreement carefully
Node.js is licensed for use as follows:
Copyright Node.js contributors. All rights reserved.
Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so,
accept the terms in the License Agreement
Print
Back
Next
Cancel


Node.js Setup
Destination Folder
Choose a custom location or click Next to install.
Install Node.js to:
C:\Program Files\nodejs\
Change...
Back
Next
Cancel


Node.js Setup
Custom Setup
Select the way you want features to be installed.
Click the icons in the tree below to change the way features will be installed.
Node.js runtime
npm package manager
Online documentation shortcuts
Add to PATH
Install the core Node.js runtime (node.exe).
This feature requires 52MB on your hard drive. It has 1 of 1 subfeatures selected. The subfeatures require 12KB on your hard drive.
Browse...
Reset
Disk Usage
Back
Next
Cancel


Node.js Setup
Tools for Native Modules
Optionally install the tools necessary to compile native modules.
Some npm modules need to be compiled from C/C++ when installing. If you want to be able to install such modules, some tools (Python and Visual Studio Build Tools) need to be installed.
Automatically install the necessary tools. Note that this will also install Chocolatey. The script will pop-up in a new window after the installation completes.
Alternatively, follow the instructions at https://github.com/nodejs/node-gyp#on-windows to install the dependencies yourself.
Back
Next
Cancel


Node.js Setup
Ready to install Node.js
Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard.
Back
Install
Cancel

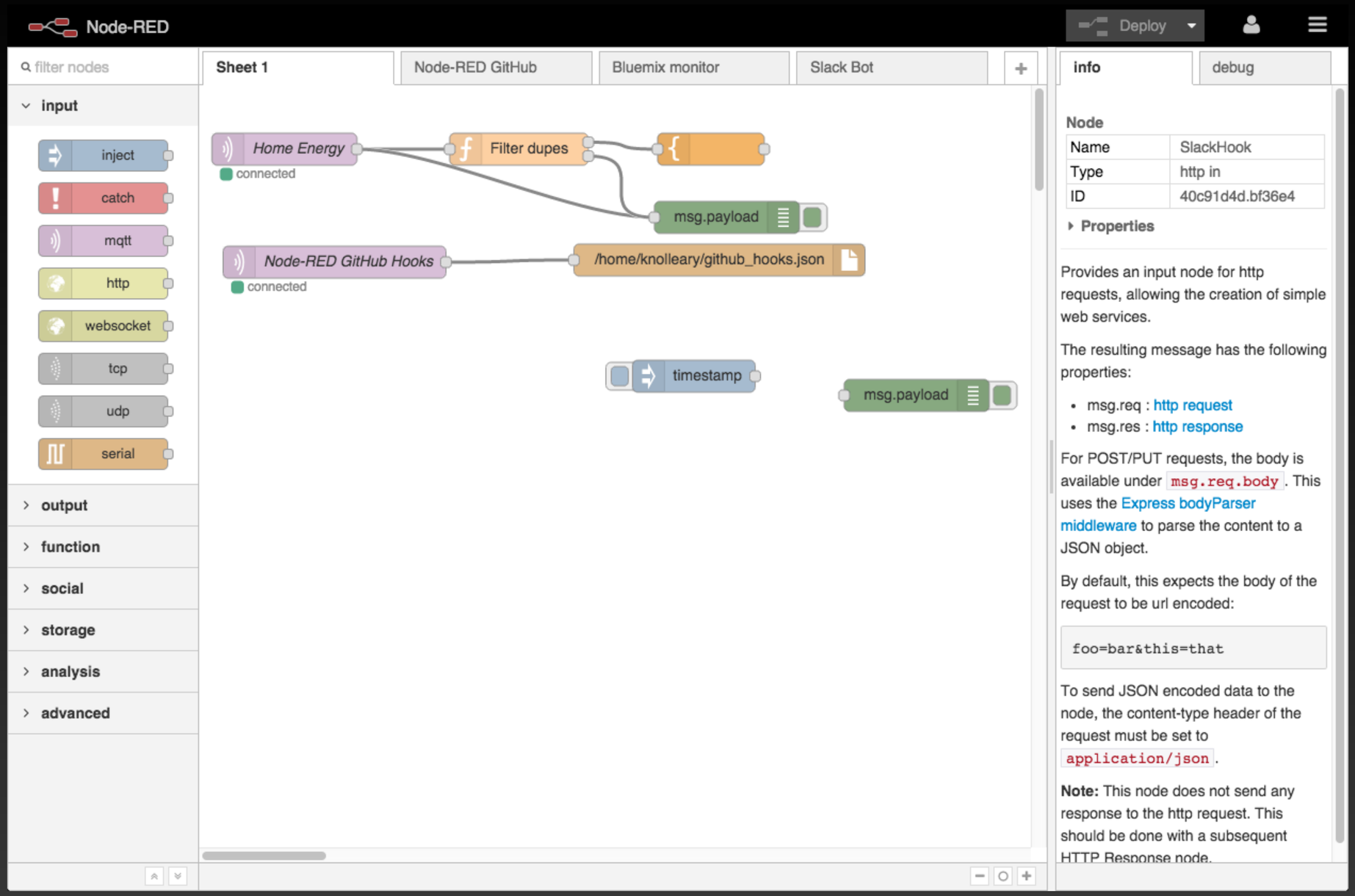

使用者帳戶控制
您是否要允許此 App 變更您的裝置?
Node.js
已驗證的發行者: Node.js Foundation
檔案來源: 此電腦上的硬碟
顯示更多詳細資料
是
否
Node.js Setup
Completed the Node.js Setup Wizard
Click the Finish button to exit the Setup Wizard.
Node.js has been successfully installed.
Back
Finish
Cancel

安裝 Node-RED

- 安裝 Node.js 完成後，打開終端機
- 輸入 npm install -g node-red 就可以完成 Node-RED 的安裝
- 如果是 Mac 前面要加上 sudo
- 安裝完成後，只要繼續輸入 node-red，就會啟動 Node-RED

啟動 Node-RED

- 打開終端機輸入 node-red 就會啟動 Node-RED
- 打開瀏覽器，網址列輸入 http://127.0.0.1:1880/，就可以打開 Node-RED
- 左邊是一些功能流程的節點，每個節點都有各自的功能
- 中間的區域就是透過這些節點組成流程圖


Node-RED
Deploy
filter nodes
input
inject
catch
mqtt
http
websocket
tcp
udp
serial
output
function
social
storage
analysis
advanced
Sheet 1
Node-RED GitHub
Bluemix monitor
Slack Bot
Home Energy
connected
Filter dupes
msg.payload
Node-RED GitHub Hooks
connected
/home/knolleary/github_hooks.json
timestamp
msg.payload
info
debug
Node
Name
SlackHook
Type
http in
ID
40c91d4d.bf36e4
Properties
Provides an input node for http requests, allowing the creation of simple web services.
The resulting message has the following properties:
msg.req : http request
msg.res : http response
For POST/PUT requests, the body is available under msg.req.body. This uses the Express bodyParser middleware to parse the content to a JSON object.
By default, this expects the body of the request to be url encoded:
foo=bar&this=that
To send JSON encoded data to the node, the content-type header of the request must be set to application/json.
Note: This node does not send any response to the http request. This should be done with a subsequent HTTP Response node.

講義、範例程式下載：

- http://ycwang812.at.tw

  Repositories > UCH

- https://github.com/ycwang812/UCH