

# **Production Supporting Systems in Factories**

**ระบบสนับสนุนการผลิตในโรงงานอุตสาหกรรม**

# Setting up Node-Red

# Software

- Install [Node.js](#)
- Install [Visual Studio Code](#)

# VSCode

- Change default terminal in `VSCode` (Windows only)
  - Open a window
  - Select `terminal` -> `New Terminal`
  - press `ctrl` + `p`
  - Type `> Terminal: Select Default Profile` and click
  - Select `cmd`

- Install `Node-Red`
  - Create a new folder
  - Drag a folder into `VSCode`
  - Select `terminal` -> `New Terminal`
  - (Terminal) `npm init -y`
  - (Terminal) `npm install node-red`
  - Create a directory called `local`

- Configure Node-Red
  - Click at the file `package.json` to edit
  - Add this line `"start": "npx node-red -u ./local -p 1880"`

```
{  
  // ...  
  "scripts": {  
    "test": "echo \"Error: no test specified\" && exit 1",  
    // Add a new line here  
    // Don't forget to add the extra "," above.  
    "start": "npx node-red -u ./local -p 1880"  
  }  
  // ...  
}
```

- Start `Node-Red`
  - (Terminal) `npm start`
- Visit the web browser at
  - `http://127.0.0.1:1880` or
  - `http://localhost:1880`

# Navigating around Node-Red



# Create flows to

- Show timestamp in the `debug` panel.
- Show date and time using `function` node. (See code on the other page.)
- Send continuous random numbers. (Use `Math.random()` )
- Use `switch` and `change` .

```
const date = new Date();  
msg.payload = date.toDateString();  
return msg;
```