

CREAT NODE RED SERVICE :

PROJECT NAME :GAS LEAKAGE MONITORING AND ALERTING SYSTEM FOR INDUSTRIES

TEAMLEAD :GOLLA VEENA

TEAMMEAMBER 1:NISHWANTH KUMAR

TEAMMEAMBER 2:DHAYALAN.G

TEAMMEAMBER 3:MOHAMMAD YUSUF.S

Running on Raspberry Pi

Prerequisites

If you are using Raspberry Pi OS, Buster is the currently supported version.

Installing and Upgrading Node-RED

We provide a script to install Node.js, npm and Node-RED onto a Raspberry Pi. The script can also be used to upgrade an existing install when a new release is available.

Running the following command will download and run the script. If you want to review the contents of the script first, you can view it [on Github](#).

```
bash <(curl -sL https://raw.githubusercontent.com/node-red/linux-installers/master/deb/update-nodejs-and-nodered)
```

There are extra parameters you can pass to the script. Add --help to the above command to see them.

This script will work on any Debian-based operating system, including Ubuntu and Diet-Pi. You may need to run `sudo apt install build-essential git curl` first to ensure npm is able to fetch and build any binary modules it needs to install.

This script will:

- remove the existing version of Node-RED if present.
- if it detects Node.js is already installed, it will ensure it is at least v12. If less than v12 it will stop and let the user decide whether to stay with Node-RED version 1 - or upgrade Nodejs to a more recent LTS version.

If nothing is found it will install the current Node.js LTS release using the [NodeSource](#) package.

- install the latest version of Node-RED using npm.
- optionally install a collection of useful Pi-specific nodes.
- setup Node-RED to run as a service and provide a set of commands to work with the service.

Node-RED has also been packaged for the Raspberry Pi OS repositories and appears in their list of 'Recommended Software'. This allows it to be installed using `apt-get install nodered` and includes the Raspberry Pi OS-packaged version of Node.js, but *does not* include npm.

Note: at this time the default node.js included with RaspiOS Bullseye is still v12. This means that the latest Node-RED version that can be installed is the 2.x branch. While using these packages is convenient at first, we strongly recommend using the install script above instead.

Running locally

As with [running Node-RED locally](#), you can use the `node-red` command to run Node-RED in a terminal. It can then be stopped by pressing Ctrl-C or by closing the terminal window.

Due to the limited memory of the Raspberry Pi, you will need to start Node-RED with an additional argument to tell the underlying Node.js process to free up unused memory sooner than it would otherwise.

To do this, you should use the alternative `node-red-pi` command and pass in the `max-old-space-size` argument.

```
node-red-pi --max-old-space-size=256
```

Running as a service

The install script for the Pi also sets it up to run as a service. This means it can run in the background and be enabled to automatically start on boot.

The following commands are provided to work with the service:

- **node-red-start** - this starts the Node-RED service and displays its log output. Pressing Ctrl-C or closing the window does *not* stop the service; it keeps running in the background
- **node-red-stop** - this stops the Node-RED service
- **node-red-restart** - this stops and restarts the Node-RED service
- **node-red-log** - this displays the log output of the service

You can also start the Node-RED service on the Raspberry Pi OS Desktop by selecting the Menu -> Programming -> Node-RED menu option.

Autostart on boot

If you want Node-RED to run when the Pi is turned on, or re-booted, you can enable the service to autostart by running the command:

```
sudo systemctl enable nodered.service
```

To disable the service, run the command:

```
sudo systemctl disable nodered.service
```

Opening the editor

Once Node-RED is running you can access the editor in a browser.

If you are using the browser on the Pi desktop, you can open the address: <http://localhost:1880>.

We recommend using a browser outside of the PI and pointing it at Node-RED running on the Pi. However you can use the built in browser and if so we recommend Chromium or Firefox-ESR and *not* Epiphany

When browsing from another machine you should use the hostname or IP-address of the Pi: <http://<hostname>:1880>. You can find the IP address by running `hostname -I` on the Pi.

Next steps

- [Learn how to secure your editor](#)
- [Create your first flow](#)

- Adding nodes to the palette