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Running on Raspberry Pi

Prerequisites

If you are using Raspbian, then you must have Raspbian Jessie as a minimum version. Raspbian Buster is the currently supported version.

Installing 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 [here](#).

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



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` first to ensure npm is able to build any binary modules it needs to install.

This script will:

- remove the pre-packaged version of Node-RED and Node.js if they are present
- install the current Node.js LTS release using the [NodeSource](#). If it detects Node.js is already installed from NodeSource, it will ensure it is at least Node 8, but otherwise leave it alone
- 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 Raspbian repositories and appears in their list of 'Recommended Software'. This allows it to be installed using `apt-get install nodered` and includes the Raspbian-packaged version of Node.js, but *does not* include npm.

While using these packages is convenient at first, we **strongly recommend** using our 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 Raspbian 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](#)

[Node-RED](#): Low-code programming for event-driven applications.

A project of the [OpenJS Foundation](#).

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