

# Node-RED

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# Covering

- Node-RED
- the ThingBox
- Raspbian Jessie
- Examples
- Cloud Services: Ubidots, Adafruit IO and IFTTT
- Demonstration

# Node-RED

- Node-RED is a tool for wiring together hardware devices, APIs and online services in new and interesting ways.
- <http://nodered.org>
- Node.js
- Flows
- Javascript

# the ThingBox

- <http://thethingbox.io>
- Downloadable image file
- Additional palette nodes built in
- Easy to add more nodes

# Raspbian Jessie

- <http://nodered.org/docs/hardware/raspberrypi.html>
- Desktop: Menu->Programming->Node-RED
- Start: node-red-start
- Stop: node-red-stop
- Browser: <http://ipaddress:1880>

It's not possible to install Node.js native add-ons with this variant of Node.js.

- Note that it's possible to workaround this issue by adding `REPLACE_INVALID_UTF8 = 0`
- `sudo nano`  
`/usr/include/nodejs/deps/v8/include/v8.h`
- Add: `REPLACE_INVALID_UTF8 = 0`
- To the end: `enum WriteOptions {`

# Adding palette nodes

- <http://flows.nodered.org>
- `sudo apt-get install npm`
- `cd ~/.node-red`
- `npm install node-red-{example node name}`

# Examples

- Temperature / Humidity measurement
- People counter
- Central Heating control (Hive)
- Animal Feeder
- Dinosaur control



# Blinkstick

- `sudo apt-get install libudev-dev`
- `npm install node-red-node-blinkstick`
- Error: LIBUSB\_ERROR\_ACCESS
- `echo "SUBSYSTEM=="usb",  
ATTR{idVendor}=="20a0",  
ATTR{idProduct}=="41e5", MODE=="0666" |  
sudo tee /etc/udev/rules.d/85-blinkstick.rules`

Cheerlights

# cheer lights

- Api: <http://cheerlights.com/cheerlights-api/>
- <http://api.thingspeak.com/channels/1417/field/2/last.json>

# Cloud Services

- Ubidots
- Ada fruit IO
- IFTTT

Demo

# Twitter

- Nick O'Leary @knolleary
- Dave Conway-Jones @ceejay
- Dr Boris Adryan @BorisAdryan
- Lucy Rogers @drlucyrogers
- Andy Stanford Clark @andysc

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