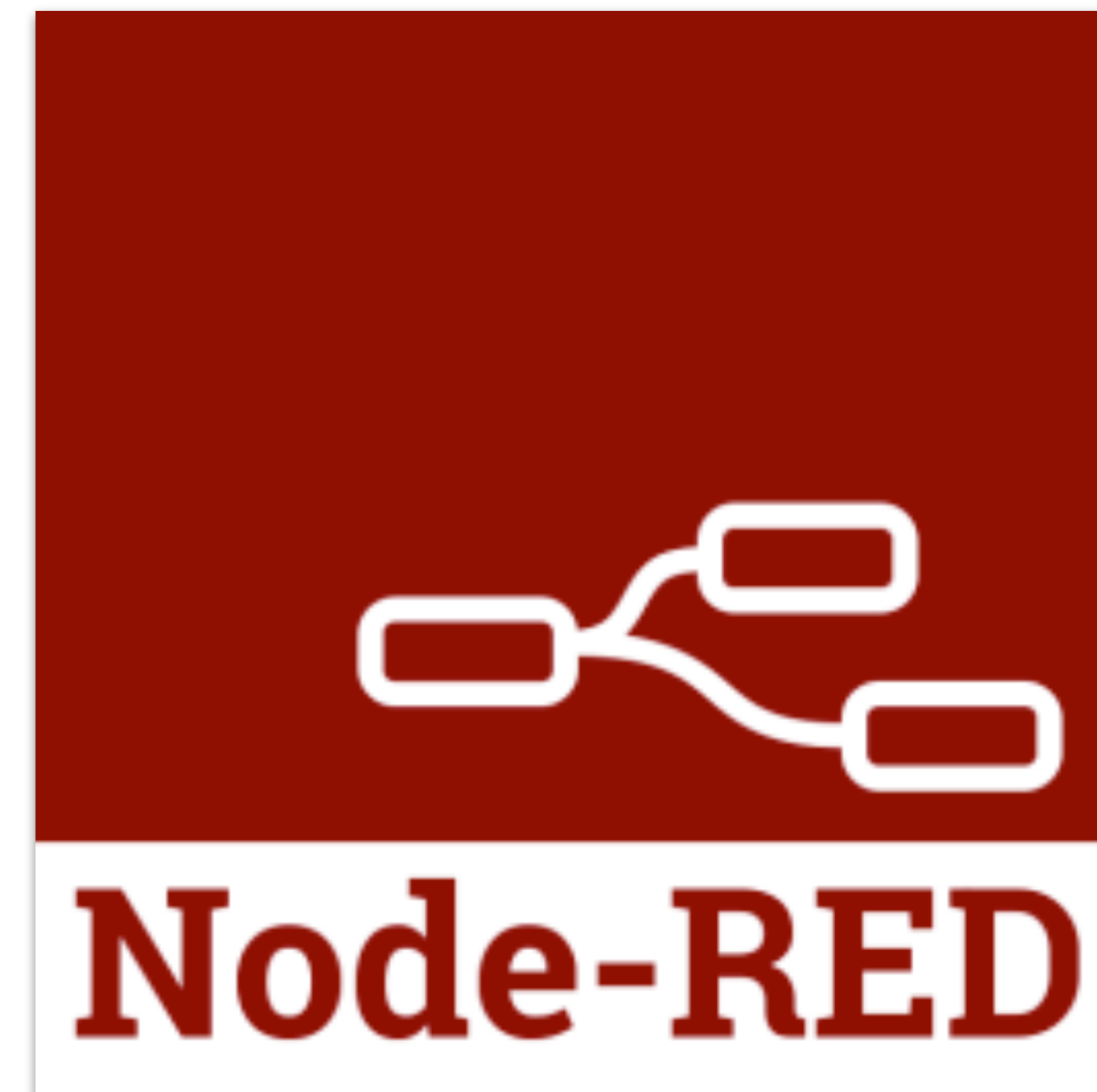



Building a FileMaker Server Dashboard with Node-Red



short Introduction

- Marcel Moré
 - from Wülperode, Germany
 - born 1969
 - computer kid in the 80ties
- 
- professional IT and Design background for 36 years
 - FileMaker developer since FM v3
 - Information Architect • Developer • Consultant

Who?



Welcome!

Recap on part I

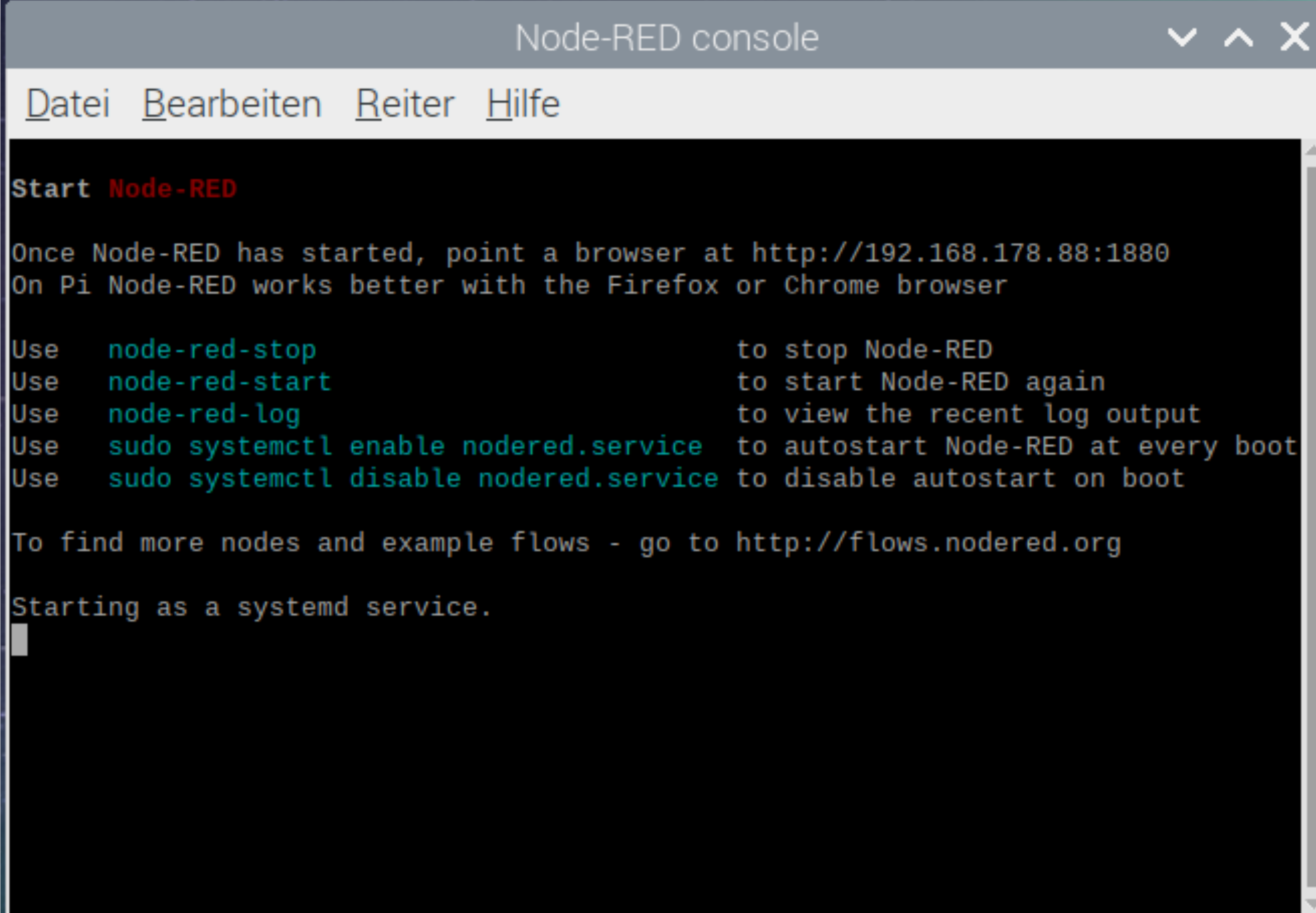
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- cheap Linux Box
- fully equipped PC
- ready in 3 Minutes!
- preinstalled Software
- Node-Red

Raspi 400





The screenshot shows a window titled "Node-RED console" with a menu bar containing "Datei", "Bearbeiten", "Reiter", and "Hilfe". The main content area has a black background with white and red text. It starts with the heading "Start Node-RED" in red. Below this, it provides instructions on how to access Node-RED via a browser and how to manage it as a systemd service using various command-line tools. A vertical scrollbar is visible on the right side of the text area.

```
Node-RED console

Datei Bearbeiten Reiter Hilfe

Start Node-RED

Once Node-RED has started, point a browser at http://192.168.178.88:1880
On Pi Node-RED works better with the Firefox or Chrome browser

Use  node-red-stop          to stop Node-RED
Use  node-red-start        to start Node-RED again
Use  node-red-log          to view the recent log output
Use  sudo systemctl enable nodered.service to autostart Node-RED at every boot
Use  sudo systemctl disable nodered.service to disable autostart on boot

To find more nodes and example flows - go to http://flows.nodered.org

Starting as a systemd service.
█
```

Node-RED : 192.168.178.88 - Chromium

Node-RED : 192.168.178.88 x Dashboard x +

← → ↻ ⚠ Nicht sicher | 192.168.178.88:1880/admin/#flow/f1d5d062.0cdf3

☆ 🔒 🔥 ⚙ M ⋮

Node-RED

deploy

⋮

Nodes filtern

xt Thermometer Rest API PLZ Flow 1 Flow 2 Flow 3 Flow 4 Flow 6 Flow 5 ▶ + ≡

common

inject debug complete catch status link in link out comment

Funktion

function switch change range template delay trigger exec buffer array config file path to buffer fullsplitter ipwhois random smooth rbe

network

Eingabe

info

Flows durchsuchen

Flows Subflow Global Configuration Nodes

Flow 1

Flow f1d5d062.0cdf3



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The screenshot displays a Node-RED workspace with a workflow designed for FileMaker API integration. The workflow consists of several nodes connected in a sequence:

- timestamp** (blue node) connects to **Product Info** (teal node).
- Product Info** connects to **msg.payload** (green node).
- timestamp** (blue node) connects to **Databases** (teal node).
- Databases** connects to **Database Scripts** (teal node).
- Database Scripts** connects to **msg.payload** (green node).
- timestamp** (blue node) connects to **Login** (teal node).
- Login** connects to **msg.payload** (green node).
- A **Catch: all** (red node) is connected to the **msg.payload** node following the **Login** node.

The right sidebar shows the **Debugging** panel with a log entry for the message payload:

```
3.6.2021, 18:01:37 node: 78bf7447-a4d54c  
msg.payload: Object  
*object  
  name: "FileMaker Data API Engine"  
  buildDate: "12/01/2020"  
  version: "19.2.1.23"  
  dateFormat: "MM/dd/yyyy"  
  timeFormat: "HH:mm:ss"  
  timeStampFormat: "MM/dd/yyyy HH:mm:ss"
```

And within five minutes, and then you can play around

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Safari Ablage Bearbeiten Darstellung Verlauf Lesezeichen Entwickler Fenster Hilfe

node-red-marcel-more.de 1800/24min/24h/1000/195/4000

Node-RED: node-red-marcel-more.de

Node-RED: node-red-marcel-more.de

Das aktuelle Wetter der Wetterstation Brucken: https://www.wetter.com/de/brucken/wetter.html

Node-RED

deploy

filtern

10 Hue light Weather FileMaker API FMM Forum Shop Dashboard Shop Server Dashbc API E

HTTP-Anforderung

p.temperatur > strong

msg.payload[0] ändern

Brucken

msg payload

HTTP-Anforderung

msg.payload.weather[0].description

msg.payload.main.temp

Temperatur

Osterwieck

Wetter

Wetter

HTTP-Anforderung

msg.payload.weather[0].description

msg.payload.main.temp

Temperatur

Berlin Tegel

Weather

Berlin Weather

Debugging

3.8.2021, 18:01:37 node: 7bf7447.a4d54c

msg.payload: Object

```
*object
  name: "FileMaker Data API Engine"
  buildDate: "12/01/2020"
  version: "19.2.1.23"
  dateFormat: "MM/dd/yyyy"
  timeFormat: "HH:mm:ss"
  timeStampFormat: "MM/dd/yyyy HH:mm:ss"
```

3.8.2021, 18:02:20 node: 280874bc.28243c

msg.payload: Object

```
*object
  *databases: array[3]
    *0: object
      name: "FMSLog Data API"
    *1: object
      name: "PLZ"
    *2: object
      name: "Test Data API"
```

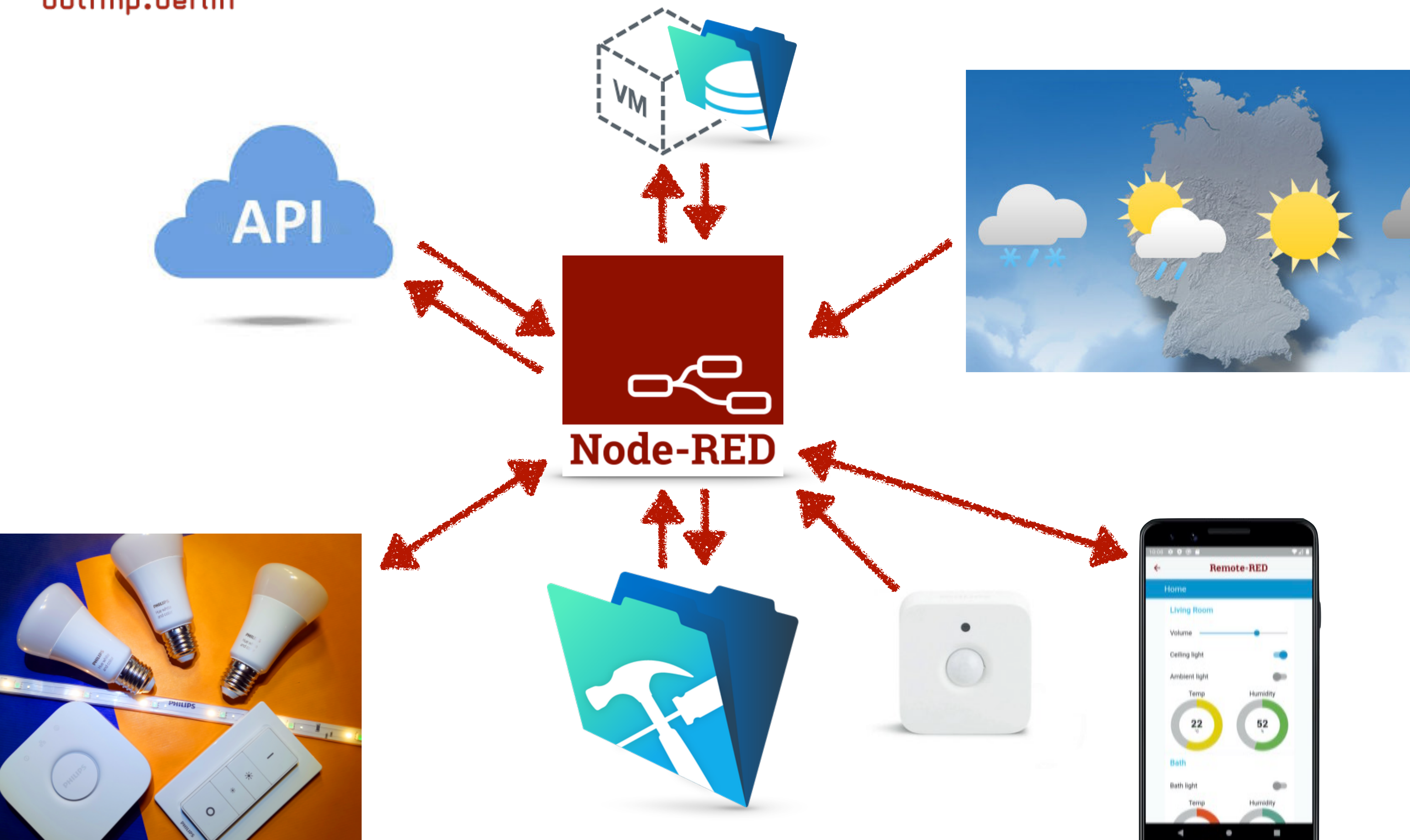
3.8.2021, 18:02:20 node: 4c617034.c5d75

msg.payload: Object

```
*{ databases: array[3], scri
  array[4] }
```

and the same is true here with it

zoom



What is Node-Red?

What is Node-Red?

- Low Code Platform
- Build Flows easily in your Webbrowser
- Integrate with IoT and Cloud-Services
- Deploy your own APIs

...and of course we're in the RED pill room again!

How does Node-Red work?

Node-Red basics

- it's all about JSON
- every object, flow or message is build as JSON
- Node-Red is a **message broker**
- build on top of Node.js
- message-pipeline works **autonomous** / in parallel

Node-Red basics

- **Nodes** trigger and receive Messages
- a **message** has a **payload** and metadata
- messages can be build, transformed, routed
- building blocks for **basic operations**
- modular **plugin architecture** for integrations
- **JavaScript** coding for own logic (within objects)

Node-RED

homeaboutblogdocumentationforumflowsgithub

Node-RED


Low-code programming for event-driven applications

Latest version: v1.2.7 (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](#)

A video thumbnail for 'Node-RED Essentials Introduction'. The thumbnail shows a Node-RED flow editor interface with a red background and a play button in the center. The text 'Node-RED Essentials Introduction' is overlaid on the image.



Browser-based flow editing

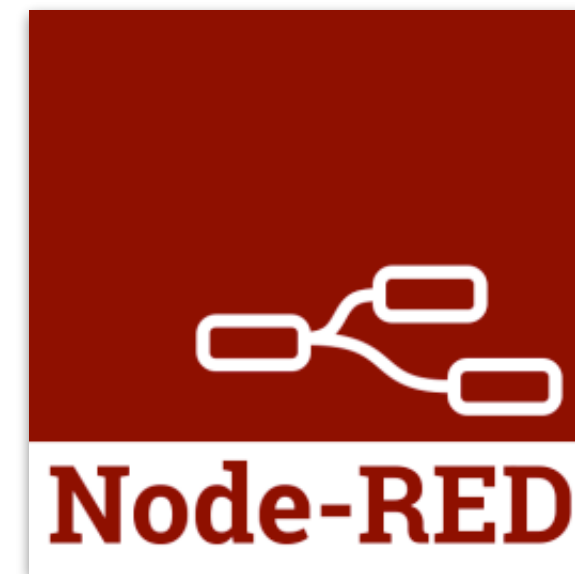
Node-RED provides a browser-based flow editor that makes it easy to wire together flows using the wide range of nodes in the palette. Flows can be then deployed to the runtime in a single-click.

JavaScript functions can be created within the editor using a rich

How does Node-Red integrate?

Node-Red mechanics

- based on `Node.js` and `npm` Packet manager
- 3300+ contributions as open source plugins
- access to IoT network protocols
- access to WAN / WEB / Cloud APIs
- access to local network
- access to local filesystem
- access to local hardware



let's get practical...

demo

- Node-Red workspace
- Dashboards
- connect to FileMaker
- basic setup for FM
- read Server Logfiles
- pipe events to Dashboard
- pipe events to FM File via DataAPI
- a mobile GUI for FM Go
- Notifications

Demo

45 min

Summary

why is Node-Red great?

- open source, quick start, no fees
- runs on any platform
- huge community
- huge docs + tutorials
- huge plugins (even for FileMaker!)
- ideal platform to learn »low code«



- QuickStart Guide
- Node-Red Links
- Raspi-Links
- Tutorials
- Sample-Files



further information

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- your turn!
- learn Node-Red
- exchange ideas at local meetups
- show your results at the next conference

Let's improve the
**FileMaker Server
Dashboard!**

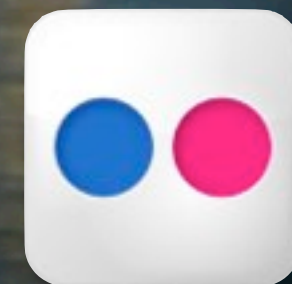


Challenge...

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blog.marcel-more.de



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[@dateimacher](#)



[____marcel____](#)



[marcel-moré-0b865684](#)

Links

thank you!

Q & A

