

Build your AI powered IoT apps fast and  
easy! Talk to your car

Hans Boef  
Developer Advocate

Amsterdam, Netherlands

@hansb001

[hboef@nl.ibm.com](mailto:hboef@nl.ibm.com)



# Agenda

1. Purpose of the workshop
2. Node-RED
3. Watson
4. Recommendations and Links
5. Let's start

Before you start. Create a free account here:

<https://ibm.biz/BdzLni>

# Purpose of the workshop

During this workshop you will quickly build a Node-RED app and use the Watson cognitive services for audio conversations. You'll use the Watson Assistant service and its Car Dashboard Conversation workspace as a starting point to building your conversation app. You can create or import your own conversation workspace, but using this provided one will get you started quickly.

This app records your speech, sends it to the Watson services to process the request. It can handle requests for the weather, or you can send commands and receive responses through a conversation to turn on the lights or play music. The possibilities are endless. Show us what you'll build. 😊

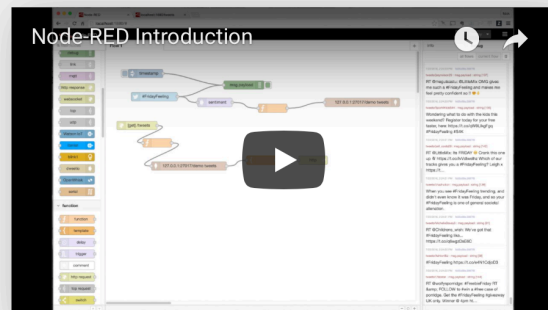
# Node-RED

Flow-based programming for the Internet of Things

Latest version: v0.18.4 (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](#)

<https://nodered.org>

<https://www.youtube.com/watch?v=XaNNAVPGS4Q>

# Node-RED

Node-RED makes use of so called 'nodes'

Nodes are building blocks with own functionality, which you can configure.

These nodes can be wired together to build an application. The output of one node is input for another node. You can install additional nodes and add your own Node.js code.

The nodes you will use, are:

- Function nodes
- Watson nodes (Assistant, Speech to text, Text to Speech and Tone Analyzer)
- Debug node

# What is IBM Watson?

## **Watson cognitive API's**

- Assistant (conversation): Watson Assistant allows you to quickly build, test and deploy a bot or virtual agent across mobile devices, messaging platforms like Slack or even on a physical robot.
- Tone Analyzer: Tone Analyzer uses linguistic analysis to detect three types of tones in written text: emotions, social tendencies, and writing style. Use the Tone Analyzer service to understand emotional context of conversations and communications
- Speech to Text: Easily convert audio and voice into written text for quick understanding of content.
- Text to Speech: Convert written text into natural-sounding audio in a variety of languages and voices.

# Recommendations for a great app:

Start here:

Node-RED: <https://node-red.org>

Use <https://developer.ibm.com> as a starting point

See what Github has to offer

If you want to build something yourself please go to:

<https://developer.ibm.com/patterns/>

Just start and build your idea!

# Let's start

1. Create an account here: <https://ibm.biz/BdzLni>
2. for instructions, go to:

<https://github.com/hansb001/mic-sts-nlu-weather-tone-analyzer>



↳ Go to <https://ibm.biz/BdzLni> and build your app!



