

Build your AI powered IoT apps fast
Talk to your car

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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/BdzwTi>

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. 😊

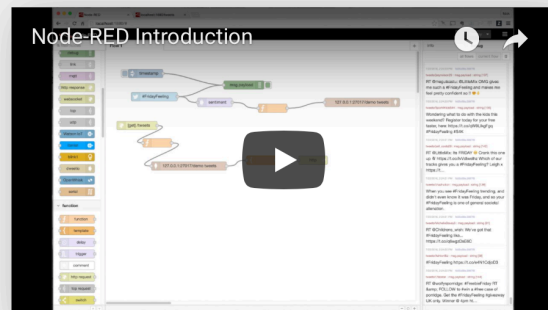
Node-RED

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!



Developer workshop Menu



Java

1. Serverless Java
Build with Apache OpenWhisk
2. Cloud-native Java Apps
Build Java apps with
MicroProfile
3. Cloud-native Spring
Boot
Build Java apps with Spring Boot

PaaS

4. Cloud Foundry (CF) Basics
Build CF apps without
infra worries
5. Isolated CF Enterprise
Apps Deploy and use an isolate
CF platform

Microservices

6. Build cloud native 1
Microservices and Cloud Platforms
7. Build cloud native 2
Continuous delivery (DevOps)
8. Build cloud native 3
Uptime and scaling across clouds
9. Build cloud native 4
Continuous Improvement


IoT

10. IoT Accelerometer game
Build IoT game and connect to AI
11. Connect devices to AI
Connect Raspberry Pi with Node-Red
12. Node-Red Fundamentals
Learn and build with Node-Red

Blockchain (BC)

13. Tracking donations
Build a donation App using Blockchain
14. Build your 1st
blockchain app
Build a Hyperledger app

15. Food Supply Chain
Implement foreign supplier
verification

16. Deploy BC to the cloud 
Deploy your BC network to the
cloud

Containers / Kubernetes

Workshops will be available per 2020

AI & Machine Learning



17. Robust image recognition
How to handle adversarial attacks

18. Building brains with TF2.0
large scale neural networks strat

19. Emotion and pose detection
Build an app that detects emotions

20. Visualize data w/ PixieDust
Create charts, maps and dashboards



21. Build a fair AI model
Understand Bias in IA models

22. DLaaS on Kubernetes
Deep Learning as a Service

23. IoT Accelerometer game
Build IoT game and connect to AI

24. Automated ML
Explore automated ML techniques


25. Build your AI powered app
in less than an hour


26. AI Robot with Qbo One
Enrich Qbo One robot with AI

27. Build a Virtual Assistant
Build a personalized chatbot

28. ML Model Deployment
Move from training into production

29. ML Asset Exchange
Build with ready to use ML models

30. iOS core ML + Watson API 
Integr Watson services in iOS App

31. Next level Virtual Assistant 
Enhance your bot with serverless

32. Connect devices to AI
Connect Raspberry Pi with Node-Red

33. Find Aliens with GPU's
Apply Anomaly detection and DL
To find Aliens in space

Serverless

34. Build serverless apps
Build with functions-as-a-service
35. Next level Virtual Assistant
Enhance your bot with Serverless

Quantum

36. Quantum for everyone
Explore algorithms with Qiskit
Aqua



Intermediate



Only demos



Coming soon

All sessions are
hands-on and require
an IBM Cloud account.
Please register via:

<http://ibm.biz/devmenu>

Let's start

1. Create an account here: <https://ibm.biz/BdzwTi>

2. for instructions, go to:

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

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



