

Simplify Your Life with Your
Own IBM Watson Personal
Assistant, Lab 3200

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**World of
Watson
2016**

IBM

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Introduction – Trending Tech

More powerful than ever before when powered by cognitive:

Emergence of Voice Interfaces

- Typing can be time consuming and frustrating, especially on a tiny keyboard / screen
- A future with less need to learn new interface for every device

Emergence of Conversational Bots

- Dialogue reduces complexity of applications
- Reduces cost

Bot Examples



Ask Watson All sessions (1311) My agenda

are some ways to get started.

See what's trending

Show cloud sessions on Monday morning

Have Watson recommend sessions

When is Ginni speaking?

Ginni Rometty

Ginni Rometty will give the Wednesday keynote at World of Watson

WED

A World with Watson

+

Wednesday, 1:00 PM - 2:30 PM | **Recommended**

Session resources:

▶

Video (01:01:17)

📁

Product details

Building Your Own Personal Assistant

Obviously, everyone has one on their phone already, which can provide weather and news

Point of this lab is to:

- Tap into the limitless potential of leveraging Watson API's and other Bluemix services
 - PA is a fun example everyone understands
- Learn more about rapid prototyping with Node-RED and the Bluemix cloud platform

Technology Overview

Under the Hood

- Front-end: Javascript client application
 - Watson Speech-to-Text service
- Backend: NodeJS application called “Node-RED”
 - 3 Bluemix services:
 - Watson Text-to-Speech
 - Weather Company Data
 - Alchemy News API
 - 1 non-Bluemix services:
 - Google maps API

Technology Overview

Node-RED

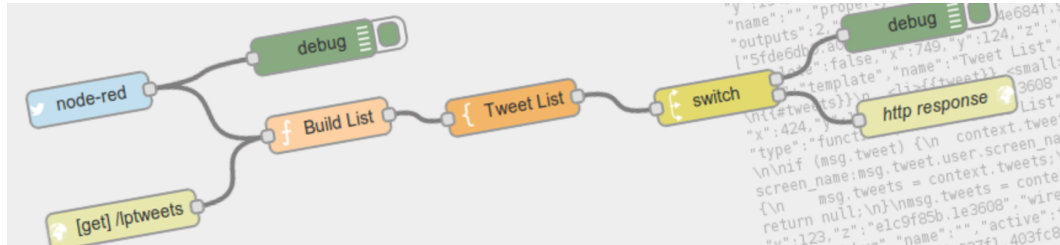
- An open-source visual tool that allows you to wire together hardware devices, API's and online services to build applications
- Data flows left to right
 - Input nodes trigger flow (twitter stream, IoT device, manual click, REST call, etc).
 - Output nodes persist data, send alerts or trigger some action
 - Middle has your application logic to make decisions, transform your data (msg) and route the flow
- Great for prototype “POC”, education, hackathons



Technology Overview

Node-RED (2)

- Built on NodeJS, fully extensible w/community
- Originated at IBM, now owned by the JS foundation
- Learn more at www.nodered.org
- flows.nodered.org – 678 nodes and 353 flows shared
- Special Bluemix boilerplate version has hooks into Bluemix services and Watson API's – will use this for the lab



Technology Overview

Watson Speech-To-Text

- Uses machine intelligence to analyze the grammar and language structure to generate an accurate transcription in real time.
- Transcription of the incoming audio is sent back continuously via socket interface and corrected as more speech is heard.
- Confidence scores from Watson assigned to each word along with alternative words that it was considering.
- Verizon uses for their call center, 100 million users, billions of transactions

Watson Text-To-Speech

- Produces natural-sounding speech from input text with appropriate cadence and intonation and also supports a variety of languages.

Technology Overview

The Weather Company Data Service

- Lets you integrate weather data from The Weather Company into your IBM Bluemix application for any specified geolocation
- Supports real-time as well as forecasts and historical weather data.
- The Weather Company was acquired by IBM in 2015 and is the world's largest private weather enterprise, delivering up to 26 billion forecasts daily.
- TWC powers top weather apps on all major mobile platforms Verizon



Technology Overview

Alchemy News Service

- Indexes hundreds of thousands of articles and blogs every day
- Analyzes the text with machine learning algorithms
- Articles are searchable across a variety of fields, including concept and sentiment.
- API documentation: <http://docs.alchemyapi.com/docs>



Next Steps

Let's get started!

- Demo
- Instructions: <https://github.com/CDSLab/WOW2016>
- First steps: Create Bluemix account and Node-RED boilerplate

Extensions

- Watson conversation node / service can create dialogue by training intents, and combining with entities and context to build a flow
- Watson tone analyzer can also direct the conversation
- Example of this at:
 - https://github.com/watson-developer-cloud/node-red-labs/tree/master/starter-kits/ok_watson
- Also, alchemy API can provide entity analysis

Surveys/uGifting

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