

# **Watson Services on IBM Cloud**

## **Watson Assistant**

Ehningen, 29. April 2020

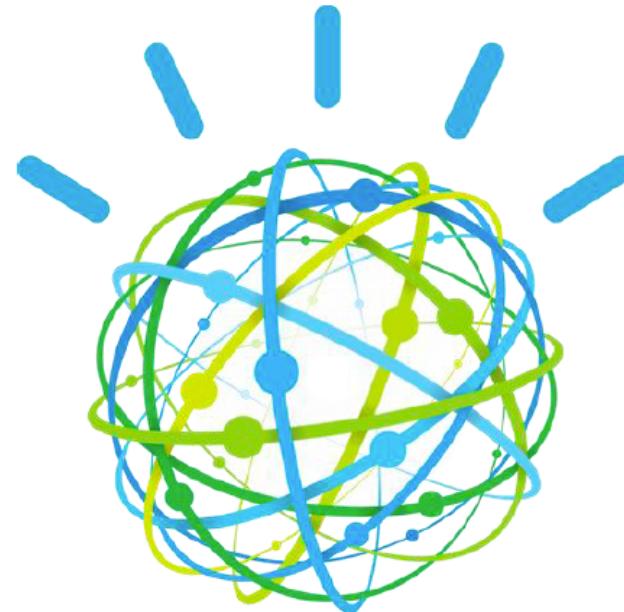
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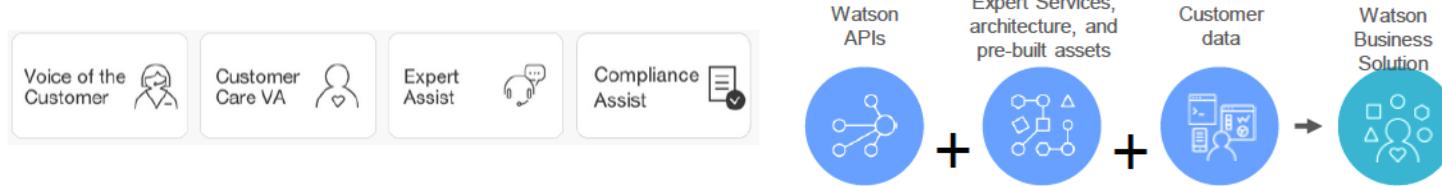
# What is IBM Watson?

- An innovative AI-Platform for Enterprises
- Processes Information like a human - cognitive



# Watson – Product Offerings

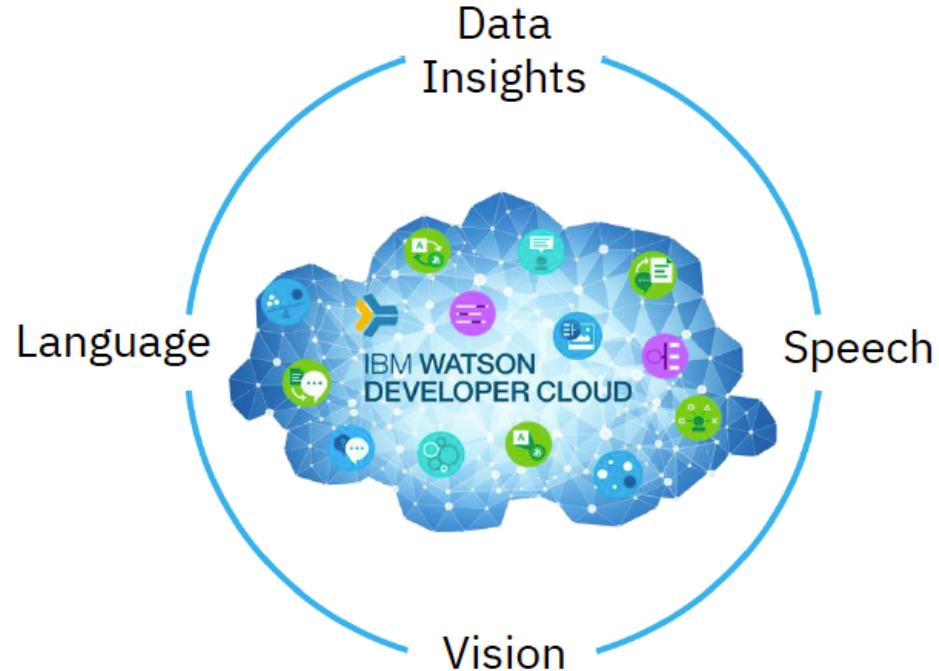
- IBM Cloud: SaaS-Produkte
  - [Industry Solutions](#) for Retail, Education, Finance, Healthcare, IoT, Marketing, Supply Chain, HR
- IBM Cloud: Open APIs (PaaS)
  - [Watson Services in the IBM Cloud](#), use cognitive capabilities in your applications
- Watson Business Solutions



- On-premise Lösung: [Watson Explorer](#)

# Watson Services in der IBM Cloud

- Cloud-Services to develop cognitive solutions
- Available in the IBM Cloud and in IBM Cloud Packs
- Accessible as RESTful APIs
- Custom training possible



# AI-Ecosystem – Watson Services in the IBM Cloud

<https://cloud.ibm.com/catalog/?category=ai>

## Understanding:

Watson Assistant

Tone Analyzer

Visual Recognition

Knowledge Studio

## Knowledge Management and Search

Discovery

Natural Language Understanding

Natural Language Classifier

## Basic cognitive skills

Speech to Text / Text to Speech

Personality Insights

Language Translation

## Data Science

Watson Studio

Machine Learning

Knowledge Catalog

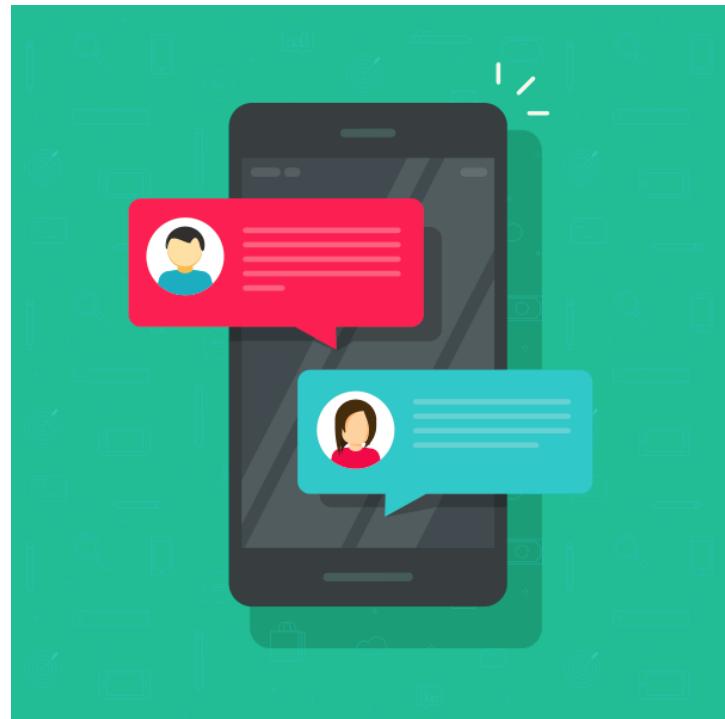
The image displays a grid of 14 service cards, each representing a different Watson service. The services are arranged in four rows: Row 1 contains Watson Assistant (formerly Conversation), AI OpenScale, Compare Comply, and Discovery; Row 2 contains Knowledge Catalog, Knowledge Studio, Language Translator, and Machine Learning; Row 3 contains Natural Language Classifier, Natural Language Understanding, Personality Insights, and Speech to Text; Row 4 contains Text to Speech, Tone Analyzer, Visual Recognition, and Watson Studio. Each card includes the service name, a small icon, the provider (Lite or IBM), and a brief description.

|  |   |   |  |
|--|---|---|--|
| Watson Assistant (formerly Conversation)<br>Lite • IBM<br>Add a natural language interface to your application to automate interactions with your end users. Common applications include virtual agents. | AI OpenScale<br>Lite • IBM<br>IBM AI OpenScale operationalizes your AI with trust and transparency by giving your business the tools and confidence to deploy AI into their most... | Compare Comply<br>IBM • Beta<br>Process governing documents to convert, identify, classify, and compare important elements  | Discovery<br>Lite • IBM<br>Add a cognitive search and content analytics engine to applications.  |
| Knowledge Catalog<br>Lite • IBM<br>Discover, catalog, and securely share enterprise data.  | Knowledge Studio<br>Lite • IBM<br>Teach Watson the language of your domain.   | Language Translator<br>Lite • IBM<br>Translate text, documents, and websites from one language to another. Create industry or region-specific translations via the service's...               | Machine Learning<br>Lite • IBM<br>IBM Watson Machine Learning - make smarter decisions, solve tough problems, and improve user outcomes. |
| Natural Language Classifier<br>IBM<br>Natural Language Classifier performs natural language classification on question texts. A user would be able to train their data and the predict...                | Natural Language Understanding<br>Lite • IBM<br>Analyze text to extract meta-data from content such as concepts, entities, emotion, relations, sentiment and more.                  | Personality Insights<br>Lite • IBM<br>The Watson Personality Insights derives insights from transactional and social media data to identify psychological traits                              | Speech to Text<br>Lite • IBM<br>Low-latency, streaming transcription   |
| Text to Speech<br>Lite • IBM<br>Synthesizes natural-sounding speech from text.   | Tone Analyzer<br>Lite • IBM<br>Tone Analyzer uses linguistic analysis to detect three types of tones from communications: emotion, social, and language. This insight can...        | Visual Recognition<br>Lite • IBM<br>Find meaning in visual content! Analyze images for scenes, objects, faces, and other content. Choose a default model off the shelf, or create your own... | Watson Studio<br>Lite • IBM<br>Embed AI and machine learning into your business. Create custom models using your own data.               |

- Can be combined with more than 150 other cloud services

# Watson Assistant – Develop Chatbots

- Answer Questions – **Customer service**
- Any time, any where
  - ✓ Service support – **Around the clock**
  - ✓ **Omnichannel:** Integrate in Social Media, Messaging Platforms, Websites, mobile Apps, Roboter
- Operate Applications in **natural language**
- **Analysis**-Dashboard: Get to know your customers better



## Watson Assistant – find key information

„I‘m frustrated, I was not able to log in to your online billing system.“

|          |                              |
|----------|------------------------------|
| Intent   | Passwort zurücksetzen        |
| Entity   | Online billing system        |
| Emotion* | Annoyance                    |
| Context  | Mike Miller, 47, Gold Member |
| Context  | Mobile                       |

\*Emotion: Watson Tone Analyzer

# Watson Assistant - Training

Training with web tool oder API

- **Intents** (what...)

- change password
- Give a complaint
- Directions
- Weather
- ...

- **Entities** (variable Infos)

- Persons
- Places
- Time
- ...

- **Dialog-Tool**

- Definition of the dialog flow

The screenshot shows the IBM Watson Assistant training interface. It includes sections for intents, entities, and a dialog flow editor.

**#greetings**

- + Add a new user example...
- 'Ello Miss
- Hello
- Hello?
- hey there!
- Hi!
- Howdy

**@returnItems**

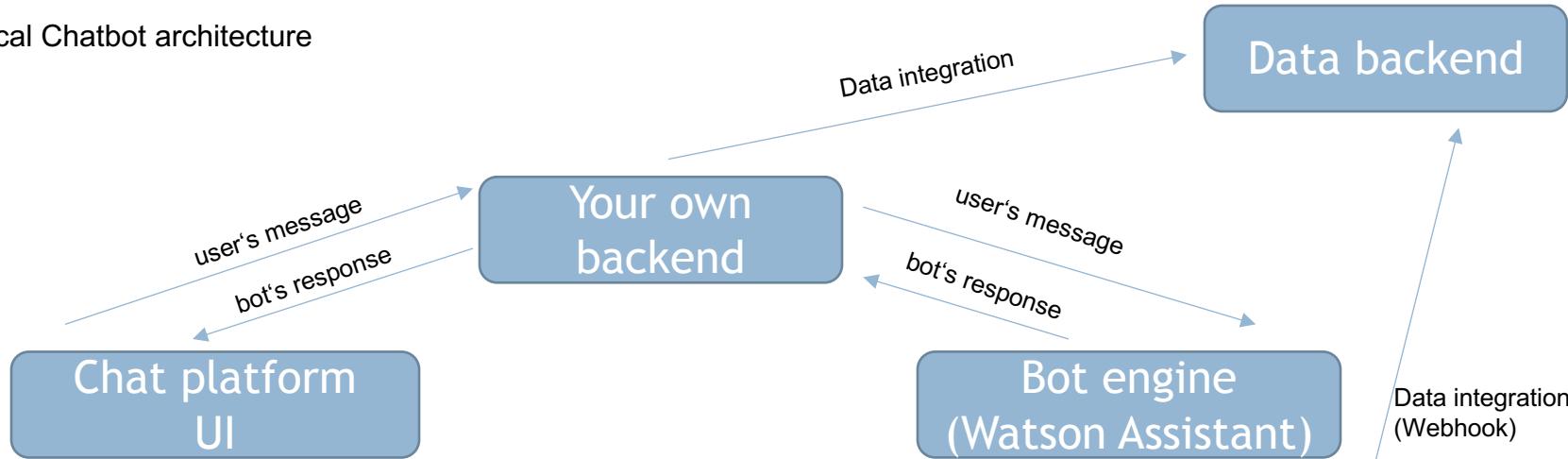
- + Add a new value
- book text tome
- parrot bird macaw Norwegian Blue
- video cassette movie tape

**Dialog Flow Editor**

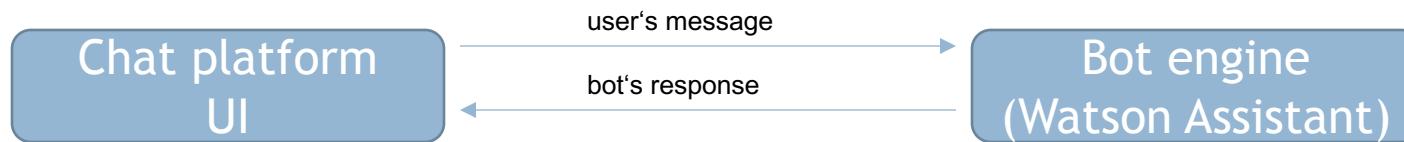
- Add node Add child node
- Name this node...
- If bot recognizes: #complaint
- Then respond with:
  - Add response condition
  - 1. Sorry to hear that, what can I help you with?
  - Add a variation to this response
- bleh**
- Welcome**  
welcome  
1 Response / Context set
- Greeting response**  
#greetings  
1 Response / Context set
- #complaint**  
1 Response / Context set

# Watson Assistant Architecture

Typical Chatbot architecture



Simple Chatbot architecture



# Watson Assistant Support Pläne <https://www.ibm.com/cloud/watson-assistant>

IBM Watson Assistant   Overview   Features   Pricing   Docs & Resources   Get Started

**Recommended**

| Lite  | Standard  | Plus  | Premium  | IBM Cloud Private   |
|---|---|---|--|---|
| Free  | \$0.0025USD/message   | Contact sales for a 30-day trial  | Custom pricing   | Custom pricing  |
| <ul style="list-style-type: none"><li>— 10,000 messages/month</li><li>— 5 skills</li><li>— 100 dialog nodes</li></ul> | <ul style="list-style-type: none"><li>— Unlimited messages/month</li><li>— 20 skills</li><li>— 10 versions per skill</li><li>— Unlimited dialog nodes</li></ul> | <ul style="list-style-type: none"><li>— Unlimited messages/month</li><li>— 50 skills</li><li>— 10 versions per skill</li><li>— Unlimited dialog nodes</li><li>— Service desk integrations</li></ul> | <ul style="list-style-type: none"><li>— Unlimited messages/month</li><li>— 50 skills</li><li>— 50 versions per skill</li><li>— Unlimited dialog nodes</li><li>— Service desk integrations</li><li>— Data isolation</li></ul> | <ul style="list-style-type: none"><li>— Unlimited messages/month</li><li>— 50 skills</li><li>— Unlimited dialog nodes</li><li>— Data resides onsite</li></ul> |

**Lite**  
Free  

- 10,000 messages/month
- 5 skills
- 100 dialog nodes

[Get started free](#)

**Standard**  
\$0.0025USD/message  

- Unlimited messages/month
- 20 skills
- 10 versions per skill
- Unlimited dialog nodes

[Get started](#)

**Plus**  
Contact sales for a 30-day trial  

- Unlimited messages/month
- 50 skills
- 10 versions per skill
- Unlimited dialog nodes
- Service desk integrations

[Contact for Plus](#)

**Premium**  
Custom pricing  

- Unlimited messages/month
- 50 skills
- 50 versions per skill
- Unlimited dialog nodes
- Service desk integrations
- Data isolation

[Contact for Premium](#)

**IBM Cloud Private**  
Custom pricing  

- Unlimited messages/month
- 50 skills
- Unlimited dialog nodes
- Data resides onsite

[Contact for Private](#)

# Demo – [ibm.biz/eagdach\\_lab](http://ibm.biz/eagdach_lab)

**IBM EAG Watson Assistant/Speech Lab**

Watson: Welcome to the CSAD Demo!

Watson: How can I help you?

Watson: The current time is 10:53:40 AM

Watson: IBM Ecosystem Advocacy Group - 2020

**Lab 3a - Watson Assistant with Webhook/Webchat**

An IBM Watson Assistant cloud service - Webhook/Cloud Function, UI via Webchat

[Instructions](#)

[Cloud Function](#)

**IBM EAG NLU-Tester**

Watson: Welcome to the CSAD Demo!

Watson: How can I help you?

Watson: The time is 10:53:40 AM

Watson: IBM Ecosystem Advocacy Group - 2020

**Lab 4 - Natural Language Understanding**

A simple Node.js application that uses IBM Watson Natural Language Understanding service

[Instructions](#)

[Github repository](#)

**IBM EAG Watson Assistant/Speech Lab**

Watson: Welcome to the CSAD Demo!

Watson: How can I help you?

Watson: The current time is 10:53:40 AM

Watson: IBM Ecosystem Advocacy Group - 2020

**Lab 5a - Watson Discovery**

Sample Watson Discovery Collection that extends Lab 3a - Integration via Webhook/Cloud Function, UI via Webchat

[Instructions](#)

[Cloud Function](#)

[HTML Page](#)

**IBM EAG Watson Assistant/Speech Lab**

Watson: Welcome to the CSAD Demo!

Watson: How can I help you?

Watson: The current time is 10:53:40 AM

Watson: IBM Ecosystem Advocacy Group - 2020

**Lab 6 - Watson Assistant - Speech**

A simple Node.js application that uses Watson Assistant, Speech To Text and Text to Speech - Integration via Node.js server

[Instructions](#)

[Cloud Function](#)

# Thank you!

<https://console.ng.bluemix.net>