Building a "Serverless Cloud Native App"

Microsoft® Most Valuable Professional

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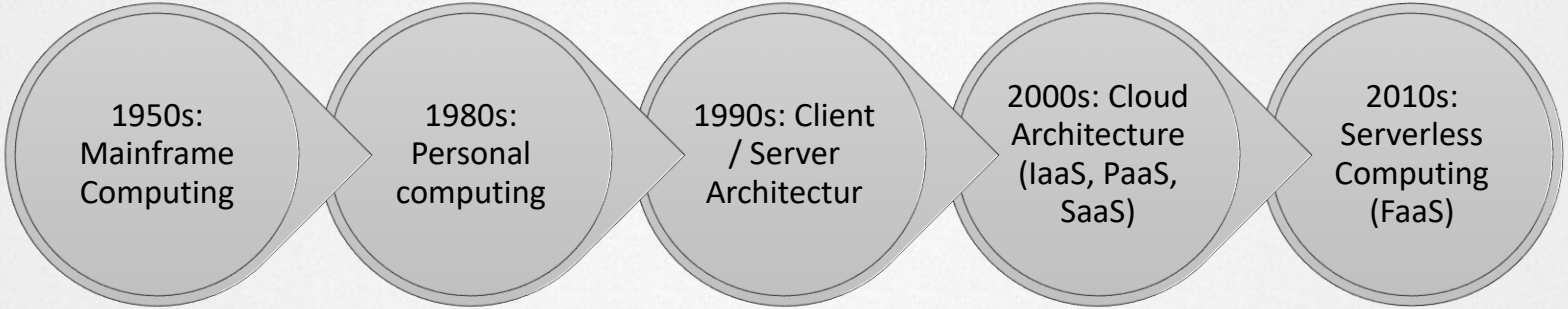
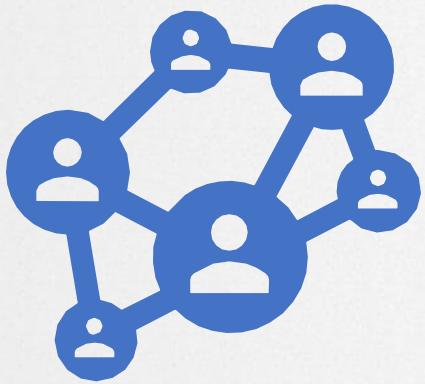
A bit of history



- 2006: AWS
- 2008: Google
- 2010: Azure

- 2014: Lambda
- 2016: Google Cloud Functions and Azure Functions

What is a “Serverless Cloud Native App”?

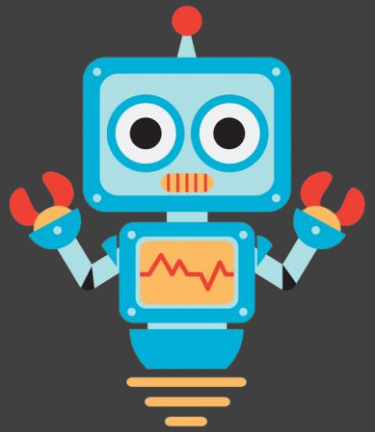


- Cloud = Someone else’s Computer (Server)
- Serverless ≠ There are no Servers
  - It‘s just not >your server(s)< and you don‘t really care
  - Pay per use
- Cloud Native = Born in/for the Cloud
  - You couldn‘t/wouldn‘t run it elsewhere

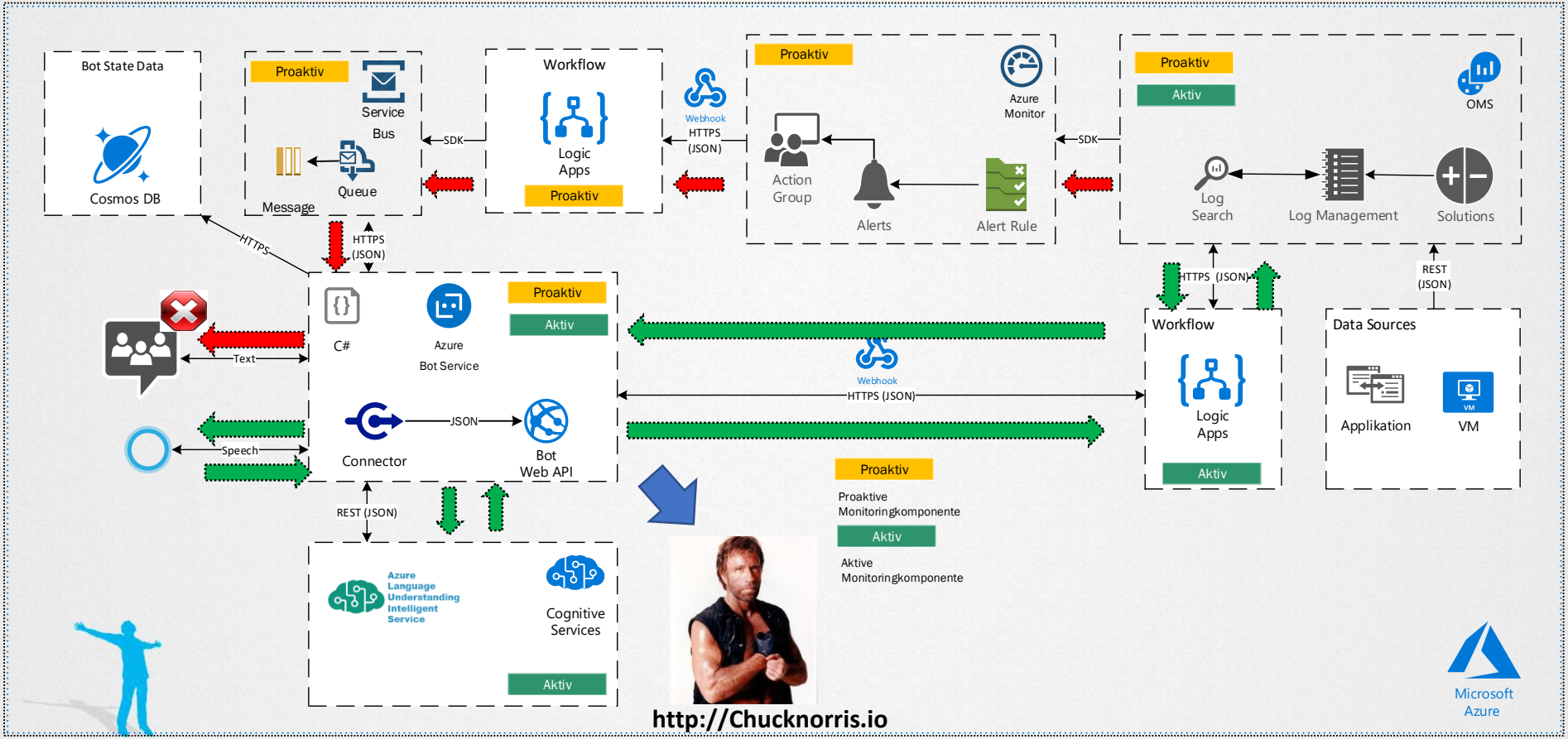
Voice Controlled Monitoring System

- Answer questions monitoring questions and send proactive messages while chatting
- Voice and text support
- Flexible architecture

Demo
M.A.X



How it works

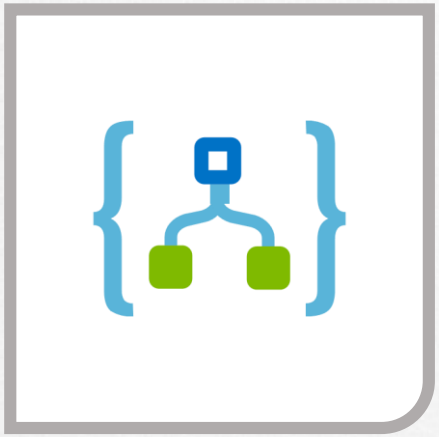

Bot State Data
Cosmos DB
Proaktiv
Service Bus
Message
Queue
SDK
Workflow
Logic Apps
Proaktiv
Webhook
HTTPS (JSON)
Proaktiv
Azure Monitor
Action Group
Alerts
Alert Rule
SDK
Proaktiv
Aktiv
OMS
Log Search
Log Management
Solutions
HTTPS
HTTPS (JSON)
HTTPS (JSON)
REST (JSON)
Text
C#
Azure Bot Service
Proaktiv
Aktiv
Webhook
HTTPS (JSON)
Workflow
Logic Apps
Aktiv
Data Sources
Applikation
VM
Speech
JSON
Connector
Bot Web API
REST (JSON)
Azure Language Understanding Intelligent Service
Cognitive Services
Aktiv
Proaktiv
Proaktive Monitoringkomponente
Aktiv
Aktive Monitoringkomponente
http://Chucknorris.io
Microsoft Azure

Azure Log Analytics (Data Store)

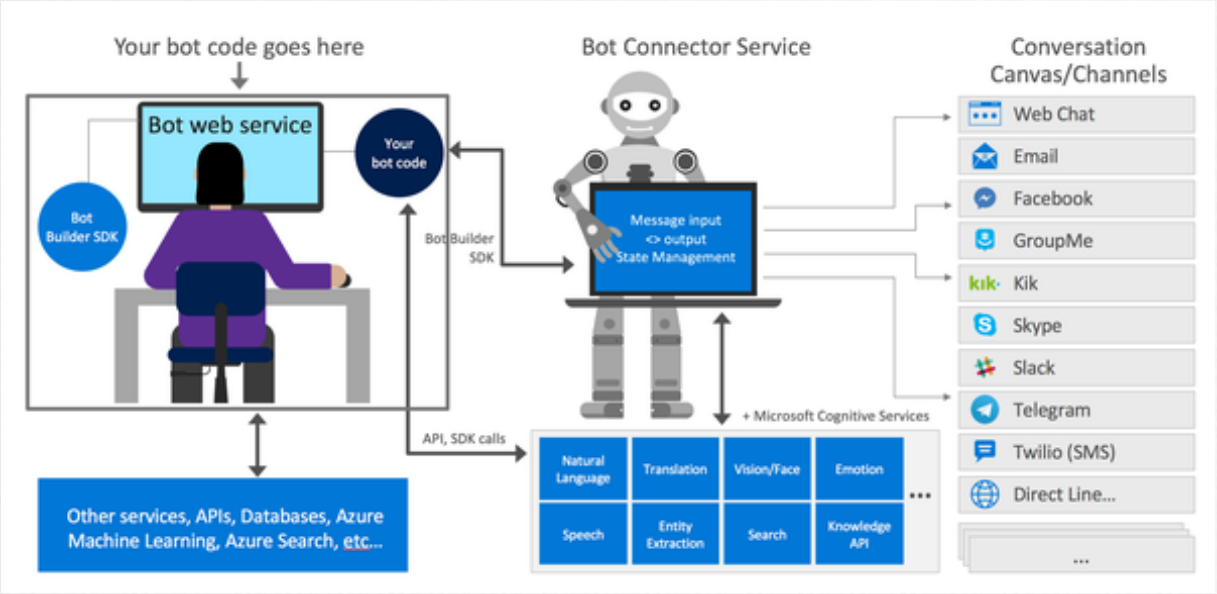
- Central component of Azure Monitor
- Lightning fast search
- Proprietary „Kusto“ Query Language
- Gather Data from Servers, VMs and Applications
- Push Data to Log Analytics

Logic Apps (Workflow)

- Automate, orchestrate tasks, business processes, and workflows
- MS Flow vs. Logic Apps
- > 200 Connectors & Triggers

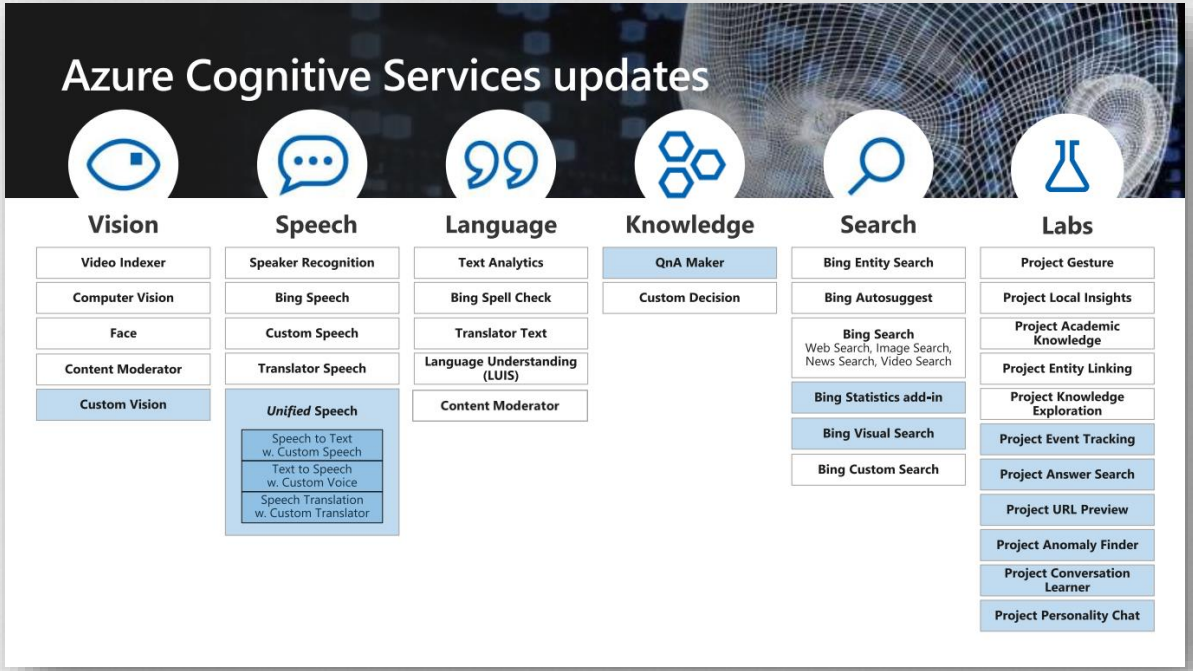


Demo Azure Monitor / Azure Log Analytics / Logic Apps



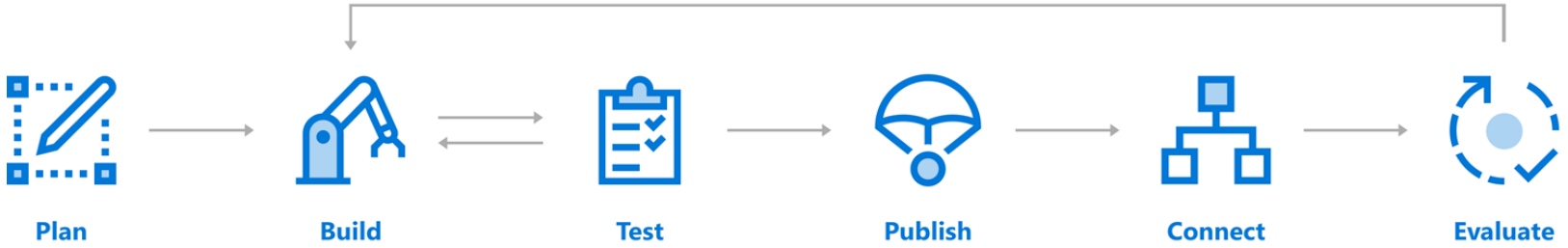
What is a bot?

- An experience that feels less like using a computer
- Feels more like a person or at least intelligent robot
- Program that receives input and returns output

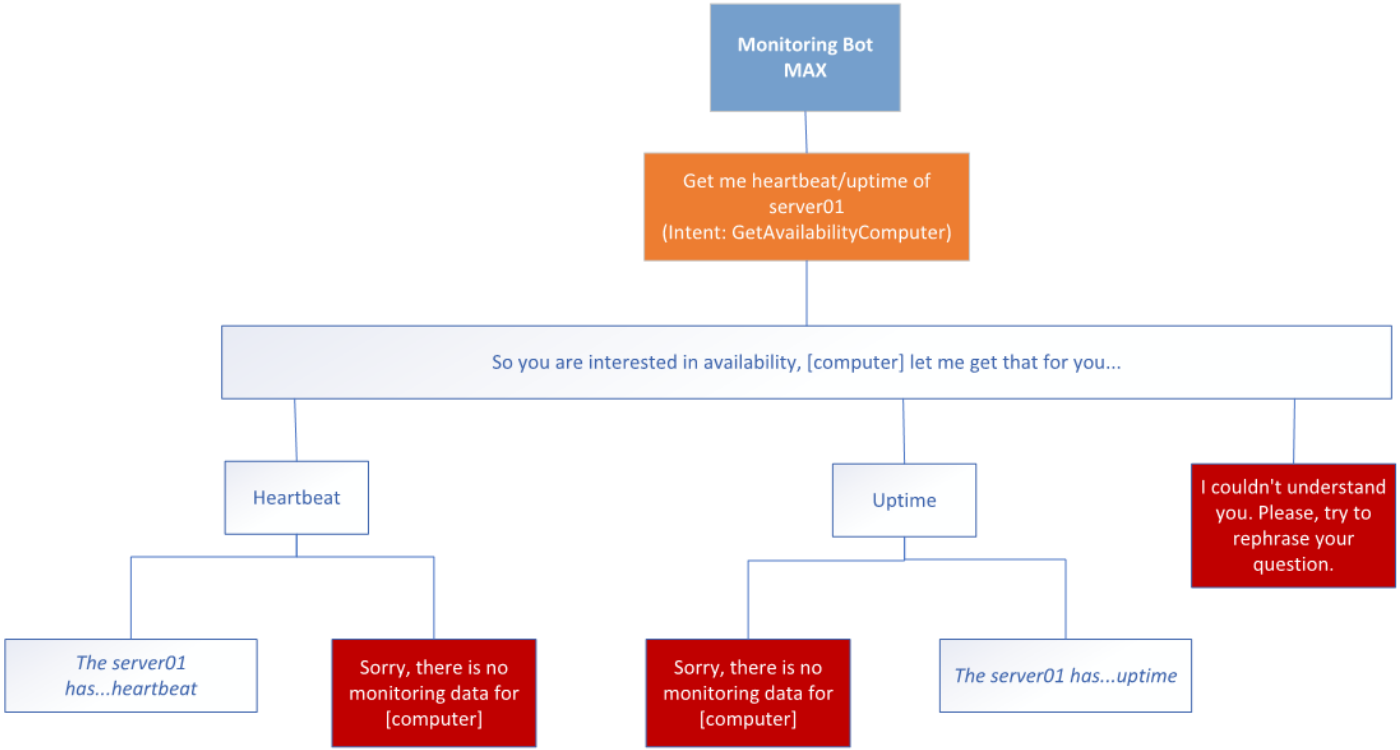


Cognitive Services

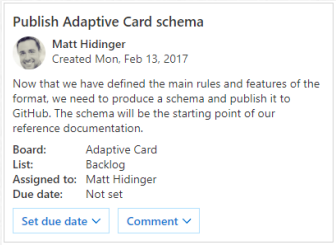
- LUIS: Language Understanding
- Speech Recognition
- Recognize intent



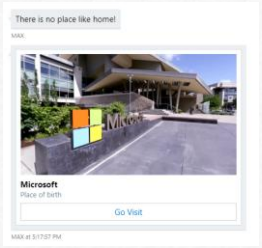
We need a plan…


Monitoring Bot MAX
Get me heartbeat/uptime of server01 (Intent: GetAvailabilityComputer)
So you are interested in availability, [computer] let me get that for you...
Heartbeat
Uptime
I couldn't understand you. Please, try to rephrase your question.
The server01 has...heartbeat
Sorry, there is no monitoring data for [computer]
Sorry, there is no monitoring data for [computer]
The server01 has...uptime

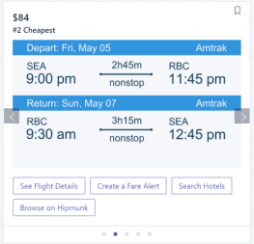
UX Samples



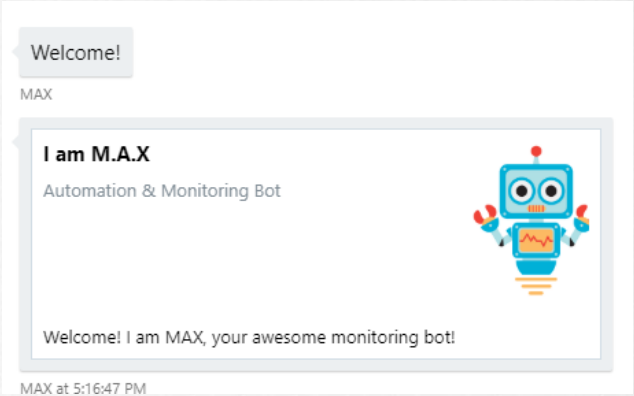
Adaptive Cards



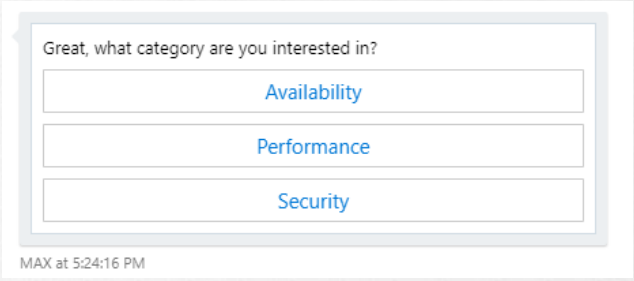
Hero Card



Carousel Collection

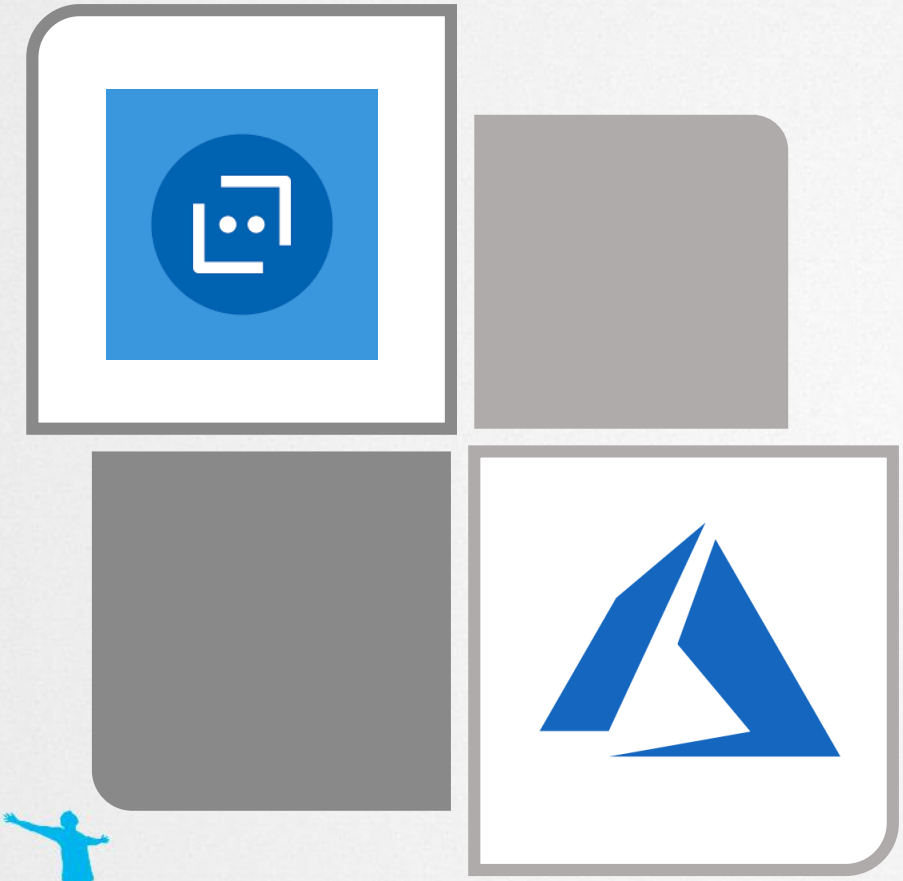


Thumbnail Card



Form Flow

Microsoft Azure



Demo Bot Service

LUIS Terminology

Create Entities and Intents:

Intent:
Get CPU Of Computer XY

Entitiy:
CPU, Computer

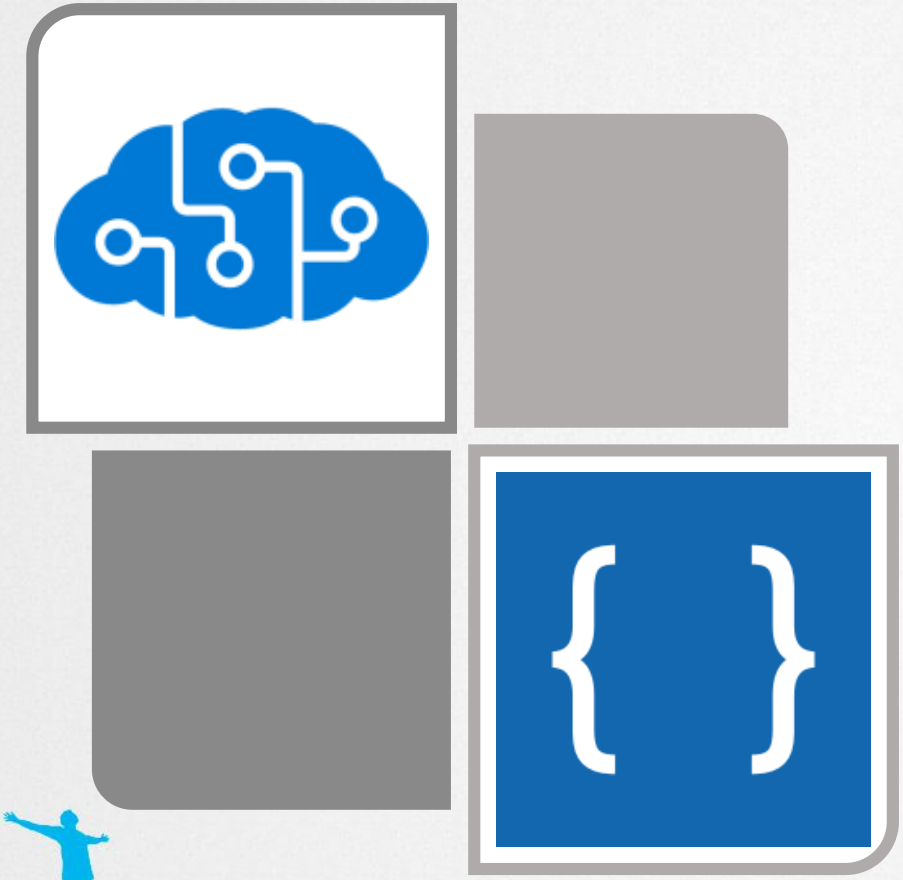
Try utterance:

What is CPU of computer XYZ

Train, Test:

Add more utterance and train the model

Publish trained model. Get API key, add it to your bot.



Demo
LUIS

What about costs?

- Web App Bot, the Azure Bot Service will run as standard Azure Web App plan
- Azure Logic App per execution $0,000150
- Azure Service Bus $0.05 per million operations (API calls)
- LUIS 10’000 transactions free. Speech $ 5.50 / 1000 transaction or text $1.50 / 1000 transactions
- Azure Log Analytics 5GB / month (free). Ingestion $2.30 GB / month.
- Azure Monitor Log Alert 5min interval $1.50 per log per month
- Notification web hooks 100’000 / month (free) them $0,60 / 1’000’000 web hooks

It can go wrong…

Build it yourself!

- Microsoft Bot Framework https://dev.botframework.com/
- Bot Builder Samples https://github.com/Microsoft/BotBuilder-Samples https://github.com/Microsoft/BotBuilder
- Cortana Skill Samples https://github.com/Microsoft/Cortana-Skills-Samples-Build-2017
- Azure Service Bus Samples https://github.com/Azure/azure-service-bus
- Bot Framework Samples https://github.com/Microsoft/BotFramework-Samples/