Google Developer Group
Reading & Thames Valley

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Without them it would be a whole lot harder!

# Chatbots and DevOps

How to use GCP, Stackdriver, Docker and Hu:toma to host a chatbot.

The Workshop Version (based on feedback)

# Github

https://github.com/chrisguest75/gdgstackdriver

# Questions

- Who knows about GCP?
- Who considers themselves to be a developer?
- Docker and Containers?
- Stackdriver?
- Chatbots?

# Overview

- Chatbots
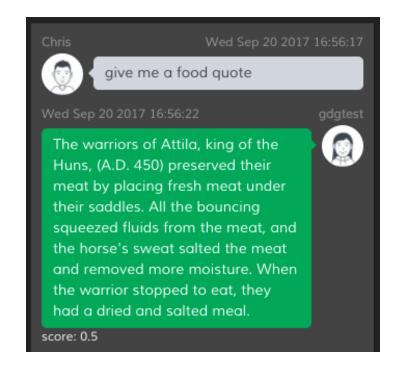- Webhooks
- Docker
- Stackdriver

# ChatBots

- An automated entity that responds to questions or statements
- Takes free form text and attempts to discover an intent
- They are predominantly domain specific.
- Usually used to help a user solve a problem

# Quick Demo

- Use a Hu:toma Weatherbot to find the weather in Reading tomorrow

# Webhooks

- Trained bots invoke webhooks for intents
- Http request response
- Simplifies distributed event processing – chaining
- Usually json payload is posted to the endpoint
- Lots of examples; Slack, CI build tooling, If this then that.

# Docker

- A revolution
- Make processes (almost) agnostic of execution environment
- Package up immutable processing agents
- (Potentially) lightweight – much lighter than VM's
- Versioned; 10:Publish, 20:Pull, 30:Upgrade… Goto 10



**Docker**
Community Edition

Version 17.09.0-ce-rc1-mac28 (19152)
Channel: edge
0b5253f4d1

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# Stackdriver

- Log and Metric collection for your infrastructure – AWS, GCP, Local
  - Push direct
  - Stdout scraping
  - Log harvesting
- Tracing and Debugging
- Uptime Checks
- Dashboards and Alerting
- FluentD Agent based

# Writing Basic Webhook

- Python
- Flask "Hello world" Service
- Curl testing
- Containerise
- Push to Registry

# GCP Hosting

- Free account $300 for a year!!!
- Gcloud SDK - https://cloud.google.com/sdk/
- Projects
- VPC's
- Enabling API's – Billing, Container Registry
- Service Accounts and IAM's
- Firewalls
- Compute
- SSH

# gcloud Automation

- In the absence of a desired state configuration tool use 'gcloud'
- Save your scripts and repeat

# Note to self

- Logs
  - Filters
- Monitoring of the VMs
  - Processes & Memory
- Uptime checks
- Log Metrics

# Key Points

- gcloud makes it simple to build replica infrastructure
- Logging lots of logging
- Health endpoints
- Hu:toma chatbots are fun to make

# Next

- SSL
- Use DNS instead of IP addresses
- Clustered load balancing of the webhooks
- Metrics rather than logs

# Questions

- Continue this story?
- A hands on workshop?
- Other ideas?