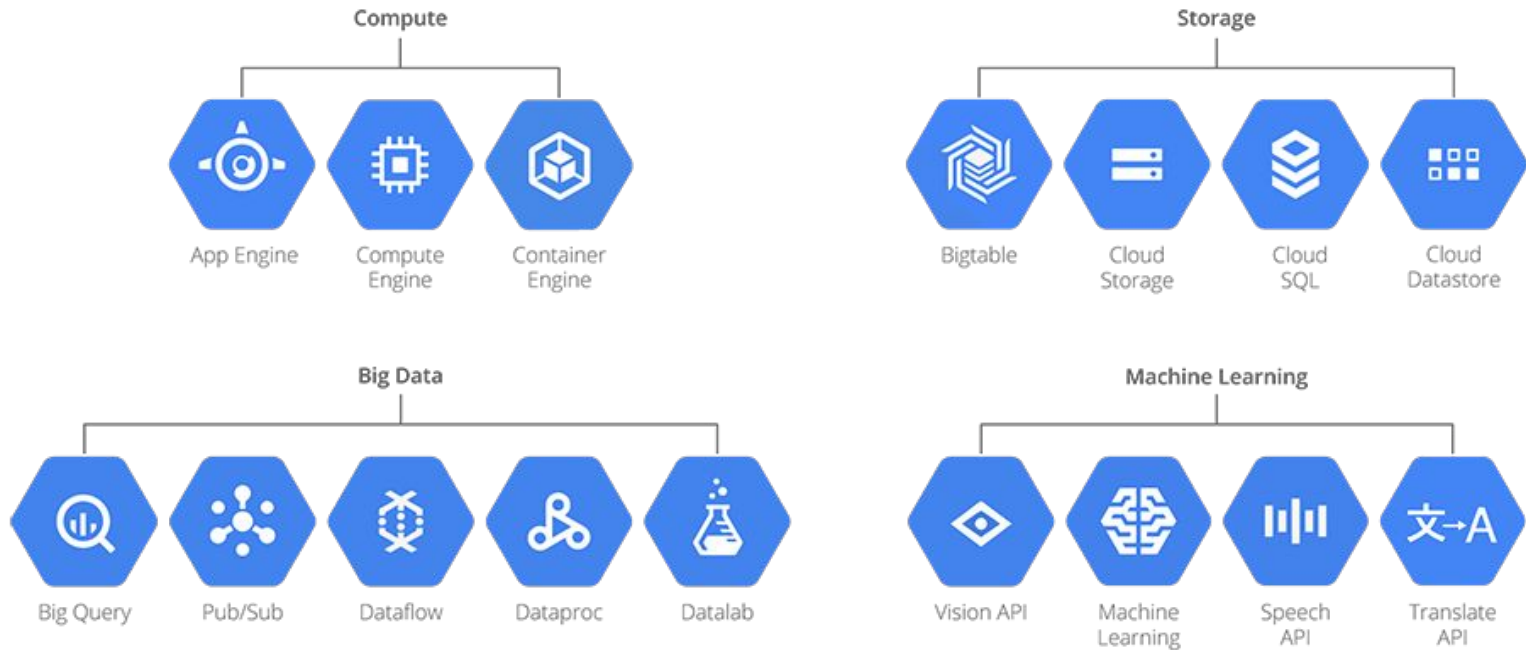Google Cloud Platform

App Engine

10/3/18

Hello!

I'm your GCP student instructor:

- *Alex Supkay*

- *4/4 Computer Science Bachelors Software Engineering Masters*

- *2nd year as a Google Student Innovator*

Google Cloud Platform

Compute

App Engine   Compute Engine   Container Engine

Storage

Bigtable   Cloud Storage   Cloud SQL   Cloud Datastore

Big Data

Big Query   Pub/Sub   Dataflow   Dataproc   Datalab

Machine Learning

Vision API   Machine Learning   Speech API   Translate API

3

Course overview

App Engine is a fully managed serverless application platform that can seamlessly scale from zero to infinity. This allows the developer to focus on coding instead of on infrastructure.
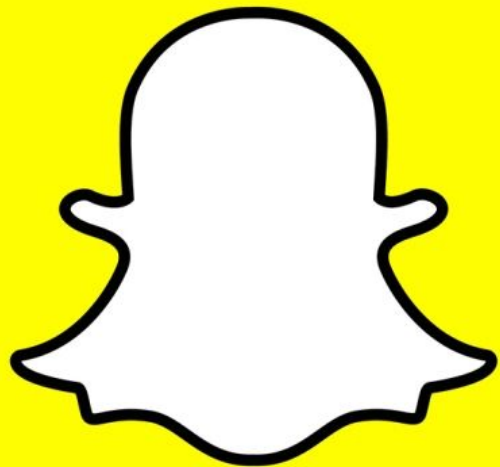
At the end of this course you will be able to:

- Talk about the different uses of App Engine

- To deploy simple apps to App Engine Standard Environment

Companies That Use App Engine in Production

- SnapChat
- Khan Academy
- Ubisoft
- Best Buy
- Many more

Google Cloud

Agenda

Uses

- *Web facing HTTP/S request-response*
- *Stateless serving applications*
- *Scaling to high traffic*
- *Want to focus on code*
- *Multi-versioning*

Non-Uses

- *Sockets (Node.js) (maybe)*
- *Long request times*
  - *60 minutes for Flexible*
  - *60 seconds for Standard*

Running your websites

Why App Engine over Compute

- All security and operating system updates are applied on a weekly basis
- No need to set up NGINX or managed instance groups
- Autoscaling
- Multi-versioning

Standard vs. Flexible

Flexible Environment

- *Runs Docker Containers*
- *Also lots of open source runtimes for:*
  - *Node.js, Ruby, Java, Python, Go, PHP, .NET*
- *Need to depend on other software such as imagemagick, ffmpeg, etc.*
- *Runs on managed VMS*
- *Storage is ephemeral (cache - kinda)*
- *Pricing based on usage of vCPU, memory, and persistent disks*

Standard Environment

- *Scale to zero functionality (Auto scaling)*
- *Scales up way faster minutes vs. seconds*
- *Only supports*
  - *Python 2.7, Python 3.7 (beta)*
  - *Java 8, Java 7*
  - *PHP 5.5, PHP 7.2 (beta),*
  - *Go 1.6, 1.8, 1.9*
  - *Node.js 8 (beta)*
- *A lot cheaper than Flexible (based on instance hours)*

Demo

Wrap up

- *What App Engine is*

- *Standard vs. Flexible*

- *I will send a post-event survey by email.*

- *Contact Information: alex@supkay.net 813-298-9846*

- *Office hours: 5:30 - 7:30 pm Thursday in EAS 403*

- *Github: https://github.com/Asupkay/GCP-App-Engine-Node-Tutorial*

Resources

Writing Infinitely Scalable Apps in App Engine: https://bit.ly/2OiW3aQ

App Engine Documentation: https://cloud.google.com/appengine/docs/

Choosing an App Engine Environment:
https://cloud.google.com/appengine/docs/the-appengine-environments

Where should I run my code: https://bit.ly/2DA2fHj

The Raffler: https://raffler-185618.appspot.com/

Questions?

Additional materials

Codelabs: https://codelabs.developers.google.com/

	16 min
Deploy Node.js Express Application in App Engine	
START	Updated Jun 22, 2018

	74 min
Deploy Refinery CMS to App Engine flexible environment	
START	franknatividad Updated Sep 7, 2018

	11 min
Deploy Spring Boot Application in App Engine standard	
START	Updated Feb 6, 2018

	44 min
Deploy a Ruby on Rails app to App Engine Flexible Environment	
START	franknatividad Updated May 9, 2018

	25 min
Deploy an ASP.NET Core app to App Engine	
START	Updated Nov 26, 2017

	34 min
Deploying a Python Flask Web Application to App Engine Flexible	
START	ryanmats Updated Nov 7, 2017

Extend an Android frontend with a Kotlin backend running on App Engine	
START	Wisdom D'Almeida Updated Sep 20, 2018

	13 min
Getting Started with App Engine (Go)	
START	Daisuke Suzuki Updated Jul 10, 2018

	13 min
Getting Started with App Engine (Python)	
START	Updated May 12, 2017

	17 min
Getting Started with Endpoints Frameworks on App Engine	
START	Updated Nov 14, 2017

	29 min
Running WordPress on App Engine Flexible Environment	
START	Updated Mar 2, 2017

18