Deploy a multi-language App with Docker on the Cloud: Hackpack

September 15, 2021 / 7:00 PM - 8:30 PM ET

Description

Got one teammate who only knows Python and refuses to use JS? Got your app working in Mac but crashes in Windows? Don't worry, "Intro to Docker and Microservices" explores how developers can utilize Docker in building an application that has the same runtime and can utilize multiple languages. Come join us to explore this popular technology and deploy it to the cloud!

Learning Outcomes

This is what you will gain from the workshop and why it's valuable to you:

- Gain a deeper understanding of internet communication
- Writing a basic single and multi service web applications through Docker
- Deploy a multi-service Docker application to Google Cloud Platform
- Takeaway a standard template to help you structure your own code

Prerequisite Knowledge

In order to get the most out of this workshop you should be comfortable with the following concepts:

- Git + GitHub
- General programming knowledge
  - We will be using Python, JavaScript and Racket
  - You don't need to be good at these languages, a basic understanding is enough
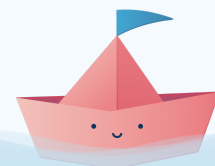- Basic command line knowledge

Pre-Workshop Checklist

Before the workshop, please make sure you complete the following items:

- Install Docker and test it by typing **docker run hello-world** in the command line

OR

- Run Docker on Docker Playground. Note: (1) You need a Docker Hub account and (2) the only text editor is Vim
- Google Cloud Platform Account
- Clone these two repos: Hack the North Goose Counter

Timeline (1 ½ hour)

Time	Module	Description
2 min	Introduction	About us
5 min	Web Server Basics	How does the internet work?
10 min	Monolithic vs. Microservices architectures	Different types of application architectures
10 min	Intro to Docker	What is Docker and why use it?
10 min	Working of various Docker components	Understanding images, containers, dockerfile and docker-compose
15 min	Live Coding session 1 (Ani)	Getting familiar with the basic docker commands
10 min	Introducing the Goose Counter	Brief introduction to the app that we will be developing in the workshop
20-30 min	Live Coding Session 2 (Eric)	Developing the App and deploying it to the cloud

Workshop Lead Contact

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Additional Resources

Hack the North Resources

Hack the North 2021 Event Schedule

Check this out to stay up-to-date on activities, workshops, and other key happenings this weekend.

Workshop-Specific Resources

Docker Basics by Fireship IO

Learn to run a simple node app using Docker

Learning the basics of Docker

https://docker-curriculum.com/

Learning the basics of Flask

https://youtu.be/MwZwr5Tvyxo