Experiments with Docker

Clustering Docker Service

Building Application Container

- Dockerfile defines application
  - What to install (requirements.txt)
  - What to run (app.py)
- Check ./application folder for content
- Build application from ./application
  - sudo docker build -t <application name>
- Check Local Images
  - docker images
- Note, this image cannot be executed yet
  - Volume to be created

Create Volume

- Read Docker volume theory here
  - https://docs.docker.com/engine/admin/volumes/volumes/
- Create Volume
  - docker volume create my-vol
- List Volumes
  - docker volume ls
- Inspect Volume
  - docker volume inspect my-vol
  - Find path in “Mountpoint”
- Copy ./application/servicename.txt to “Mountpoint” location

Running Standalone Application

- Copy ./application/servicename.txt
  - To Mountpoint path from created volume
  - This file will be available at /mnt/servicename.txt in container
- Command to start application
  - docker run -d -p 4000:80 --mount source=my-vol,target=/mnt friendlyhello servicename.txt 80
- Parameter explanations
  - *run* starts application container
  - *-d* demonizes application
  - *-p* maps ports: <user port>:<container port>
    - Find container port 80 defined as exported port in Dockerfile
    - Application will be accessible at port 4000
  - *--mount* mounts docker volume to a container’s mount point
    - Find /mnt export point defined in Dockerfile
    - Docker application will reference content in source volume by /mnt
- Access application
  - http://localhost:4000 in browser
  - curl http://localhost:4000
- Stopping application
  - Find container ID: docker container ls
  - Stop application: docker container stop <container ID>

Starting Services

- Simple Guide: https://docs.docker.com/get-started/part3/#introduction
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