Docker Compose

- Why: configure relationships between containers
- Why: save our docker container run settings in easy-to-read file
- Why: create one-liner developer environment startups
- Comprised of 2 separate but related things
- 1. YAML-formatted file that describes our solution options for:
  - containers
  - networks
  - volumes
- 2. A CLI tool `docker-compose` used for local dev/test automation with those YAML files

docker-compose.yml

- Compose YAML format has it's own versions: 1, 2, 2.1, 3, 3.1
- YAML file can be used with `docker-compose` command for local docker automation or..
- With `docker` directly in production with Swarm (as of v1.13)
- `docker-compose --help`
- `docker-compose.yml` is default filename, but any can be used with `docker-compose -f`

docker-compose CLI

- CLI tool comes with Docker for Windows/Mac, but separate download for Linux
- Not a production-grade tool but ideal for local development and test
- Two most common commands are
  - `docker-compose up`   # setup volumes/networks and start all containers
  - `docker-compose down` # stop all containers and remove cont/vol/net
- If all your projects had a `Dockerfile` and `docker-compose.yml` then "new developer onboarding" would be:
  - `git clone github.com/some/software`
  - `docker-compose up`

Assignment: Writing A Compose File

- Build a basic compose file for a Drupal content management system website. Docker Hub is your friend
- Use the `drupal` image along with the `postgres` image
- Use `ports` to expose Drupal on 8080 so you can localhost:8080
- Be sure to set `POSTGRES_PASSWORD` for postgres
- Walk though Drupal setup via browser
- Tip: Drupal assumes DB is `localhost`, but it's service name
- Extra Credit: Use volumes to store Drupal unique data

Using Compose to Build

- Compose can also build your custom images
- Will build them with `docker-compose up` if not found in cache
- Also rebuild with `docker-compose build`
  - or all in one: `docker-compose up --build`
- Great for complex builds that have lots of vars or build args

Assignment: Build and Run Compose

- "Building custom `drupal` image for local testing"
- Compose isn't just for developers. Testing apps is easy/fun!
- Maybe your learning Drupal admin, or are a software tester
- Start with Compose file from previous assignment
- Make your `Dockerfile` and `docker-compose.yml` in dir `compose-assignment-2`
- Use the `drupal` image along with the `postgres` image as before
- Use `README.md` in that dir for details