Introduction

- About Me
- Tools We Will Look Into
  - Individual Tools
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About Me

- Paola Garcia Cardenas
- Costa Rica
- Soccer
- Run
- 2 dogs & 2 cats
About Me

• Drupal Front-end Developer, Bixal
  HTML, CSS, SASS, Javascript, PHP

• Computer Science Adjunct, STAC

• Cybersecurity student & InfoSec TA, NYU
  Kali Linux, Metasploit, ZAP, CTFs, AppSec, Ethical Hacking
Tools We Will Look Into

1. Composer
2. Docker containers
   - Docker4Drupal
3. GitHub
   - Drupal-composer / drupal-project
   - Bixal / Drupal-project
4. Makefile (your best friend)
Why Composer?
Why Composer?

- Not a package manager
- Dependency management of libraries in PHP
- Libraries on a per-project basis
- Install/update libraries for you
Why Composer?

• Libraries on libraries on libraries = no worries

• Linux / Unix / macOS / Windows

• Install/run composer using a single command
Why Docker Containers?
Why Docker Containers?

• Standard unit of software

• Abstraction at the app layer

• Packages code and dependencies together
Why Docker Containers?

- Lightweight, standalone
- Linux and Windows-based applications
  Software will run the same, regardless of infrastructure
Docker4Drupal by Wodby

• Open Source

• Offers a Drupal 8 Stack (with services) to deploy and manage the app
Docker4Drupal by Wodby

• Pre-configured docker-compose.yml

• Linux, Mac OS X, Windows
GitHub
GitHub

- At a high level: cloud-base development platform that helps developers host and manage their code using a version control system, Git
GitHub

- Developers store code within a repository (repo)
- Repositories can be public or private, and can be shared with other developers or team members for collaboration
GitHub Basics

- Repositories
- Forks
- Branches
- Commits
- Pull Requests
- Git
GitHub | Basics

• Repositories: store code, folders, files
• Forks: creating a copy of someone else’s repo
• Branches: abstract way of separating code
• Commits: saving changes to a branch
• Pull Requests: proposing a change to the main code
• Git: version control software
GitHub - Drupal-composer / drupal-project

- Composer template for Drupal projects
- Easy install
- Management of site dependencies
- Structural tasks organized automatically
GitHub - Bixal / Drupal-project

- Combines Docker4Drupal and Drupal-Composer

- Elements from Docker4Drupal
  - HTTP server
  - Drupal
  - Database
GitHub - Bixal / Drupal-project

- Elements from Drupal-Composer
  - Composer yml file
  - Makefile
  - CI/CD
What’s a Makefile?
What's a Makefile?

• File with a set of directives/tasks to be executed

• Make (utility) build automation tool

• Generates a specified task more efficiently
What's a Makefile? - Examples

```
include .env

.PHONY: up down stop prune ps shell dbdump dbrestore uls cim cex

default: up

up:
  @echo "Starting up containers for $(PROJECT_NAME)..."
  docker-compose pull
  docker-compose up -d --remove-orphans

down:
  @echo "Removing containers."
  docker-compose down

stop:
  @echo "Stopping containers for $(PROJECT_NAME)..."
  docker-compose stop

prune:
  @echo "Removing containers for $(PROJECT_NAME)..."
  docker-compose down -v

ps:
  @docker ps --filter name="$(PROJECT_NAME)+"

shell:
  docker exec -ti $(shell docker ps --filter name='$(PROJECT_NAME)_php' --format "{{.ID}}") sh
```
Quick Demo

Up and running in less than 10 minutes!
Version checks

- This demo installation assumes you have Git and Composer installed
Installation and running the project

• Make sure you’re running Docker in your computer. Personally, I use Docker Desktop for Mac.

• Docker for Windows only runs on Windows 10 Pro or Enterprise.

• Docker Toolbox is for older Mac or Windows systems that do not meet the requirements.
Recap

- Composer
- Docker containers
- GitHub
- Makefile
- Setup Demo
Resources

- https://getcomposer.org/doc/00-intro.md
- https://getcomposer.org/doc/articles/troubleshooting.md#memory-limit-errors
- https://github.com/drupal-composer/drupal-project
- https://github.com/wodby/docker4drupal
Resources

- https://github.com/Bixal/drupal-project
- https://opensource.com/article/18/8/what-how-makefile
- https://www.docker.com/resources/what-container
Questions?
Thank You!

paola.garcia@bixal.com
paolagarcia.codes
bixal.com