try
docker

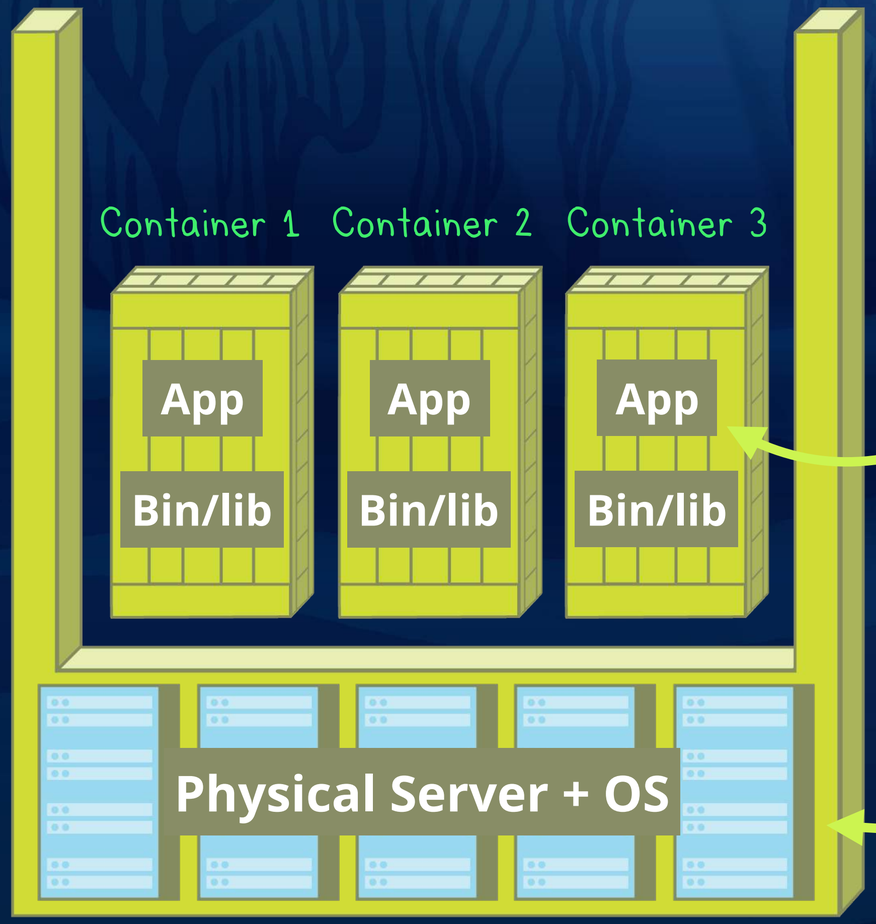
Level 1 – Section 1

Containers & Images

Running Your First Container

What Are Linux Containers?

Linux containers are a way to create isolated environments that can run code while sharing a single operating system.

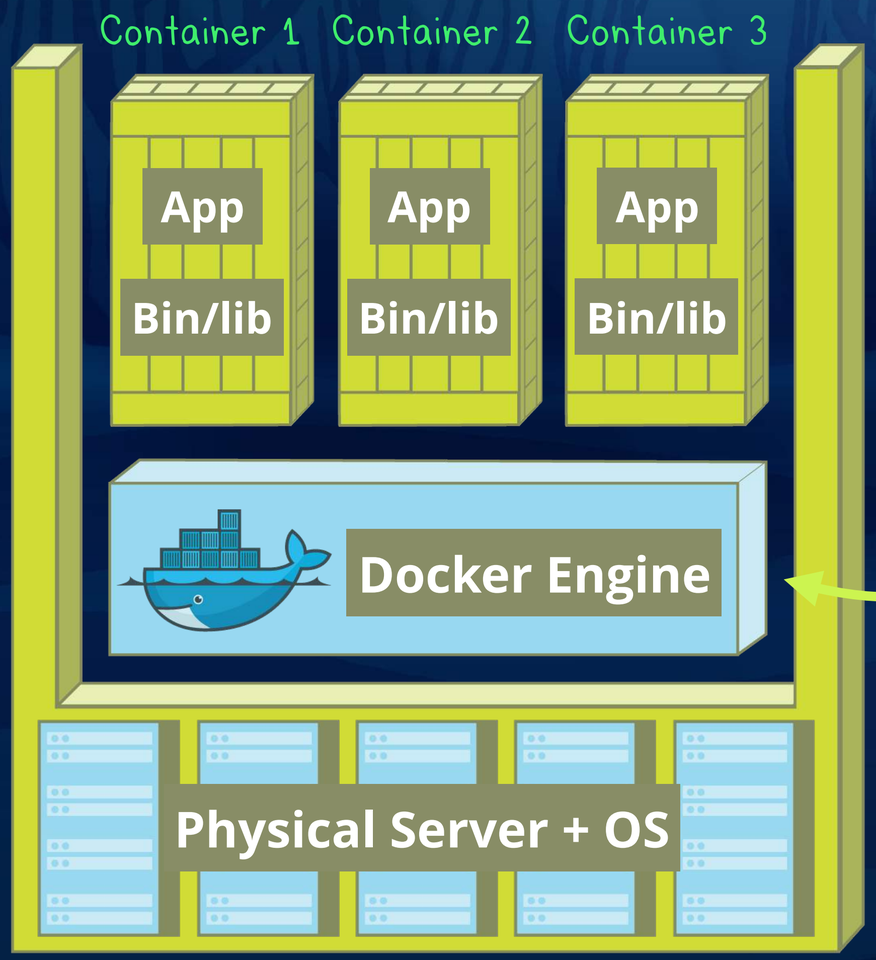


Each container is completely isolated from the others

A computer somewhere – could even be the laptop or desktop computer you're using right now!

Why Docker?

Managing Linux containers is hard.
Docker is a tool that makes it much easier to manage Linux containers.



Application that manages containers behind the scenes

How Can Docker Help Me?

There are many different ways people can use Docker.

Developers

- Create contained, controlled dev environment
- Share identical dev environment across team
- Bug reporting

IT Ops

- Testing
- Deployment

This is what we'll focus on in this course

Installing Docker

The simplest way to install Docker is to download one of the official Docker applications.

Applications

Docker for Mac - Community Edition

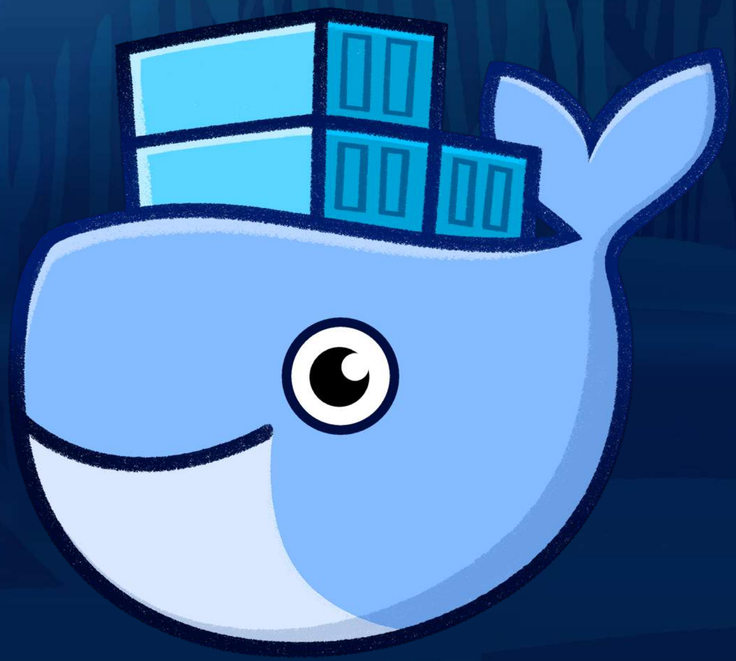
Docker for Windows - Community Edition

Installation Instructions

Linux AWS

Azure Windows Server

https://go.codeschool.com/install-docker



try docker

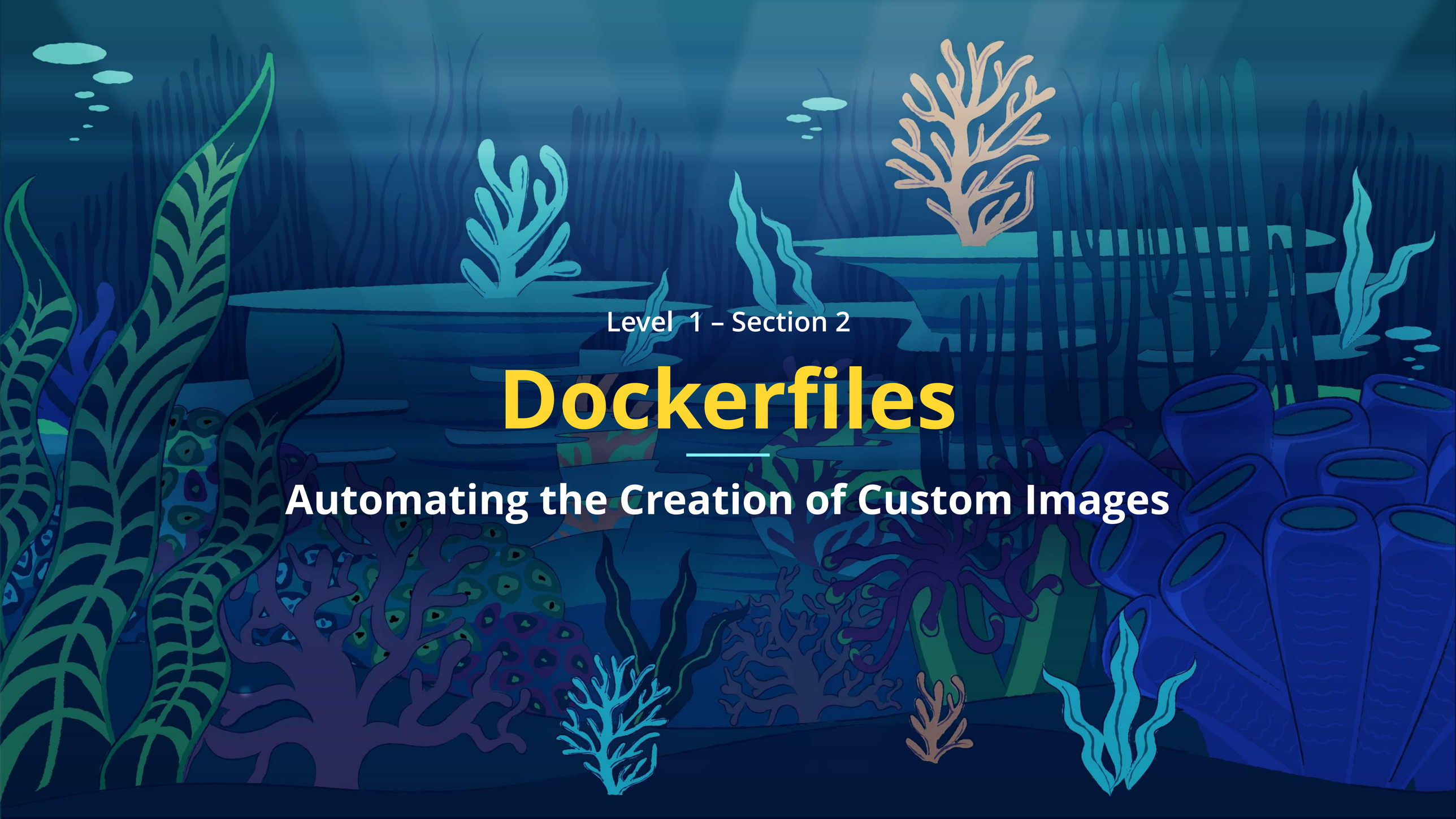
Containers & Images

An image is a blueprint for creating a container.

Pre-built images available in Docker Store (and Docker Hub)

trydocker

try
docker



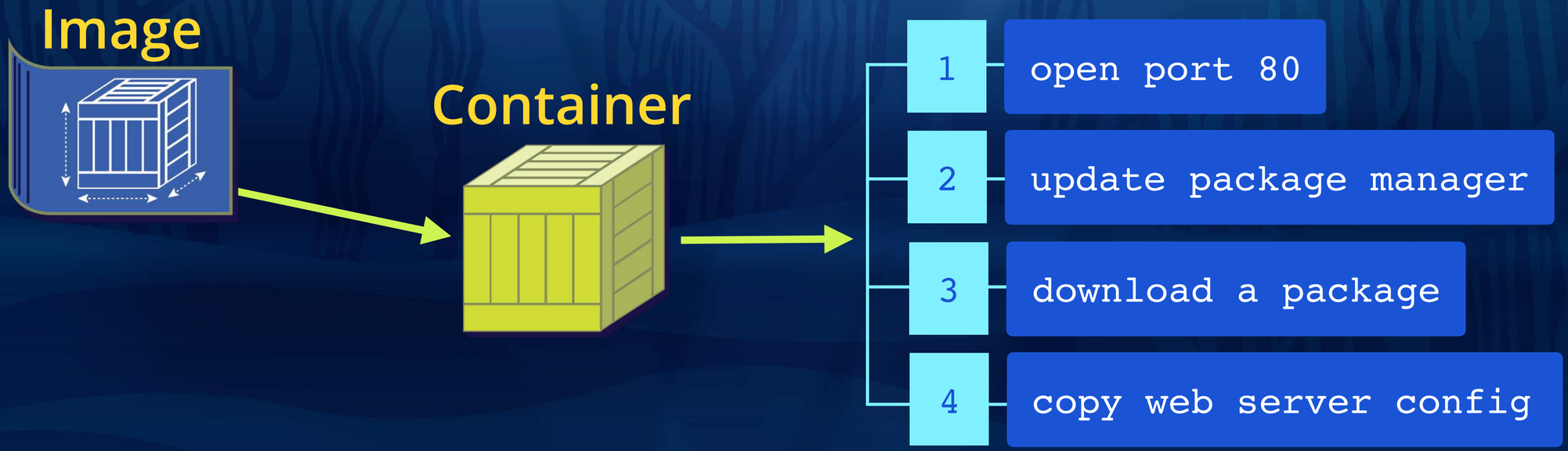
Level 1 – Section 2

Dockerfiles

Automating the Creation of Custom Images

The Problem: Creating Containers Is Clunky

Creating containers from the command line works, but it quickly gets a little clunky the more customization that you need to do.



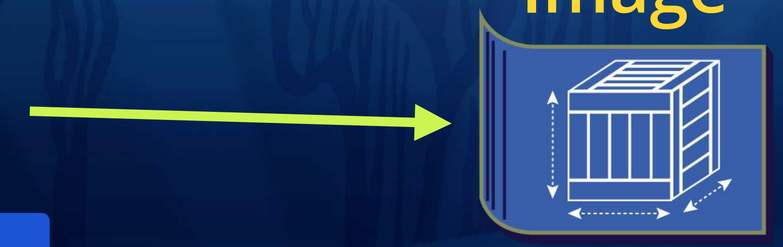
Each step modifies the container a little bit

Dockerfiles help make this process slightly less manual

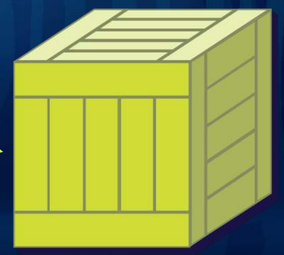
Dockerfiles Help You Create Images

A Dockerfile is a specially formatted text file where you can add a list of instructions that will run and result in a new image that can be used to make a container.

Dockerfile



Image



Container

```
1  open port 80
2  update package manager
3  download a package
4  copy web server config
```

The steps in a Dockerfile are run and turned into a single image

try
docker

Level 1 – Section 3

Volumes

Working With Data in Containers

Getting Data Into Containers

If the image you're building a container with doesn't already contain application files, you'll need an extra step to get them into your container.

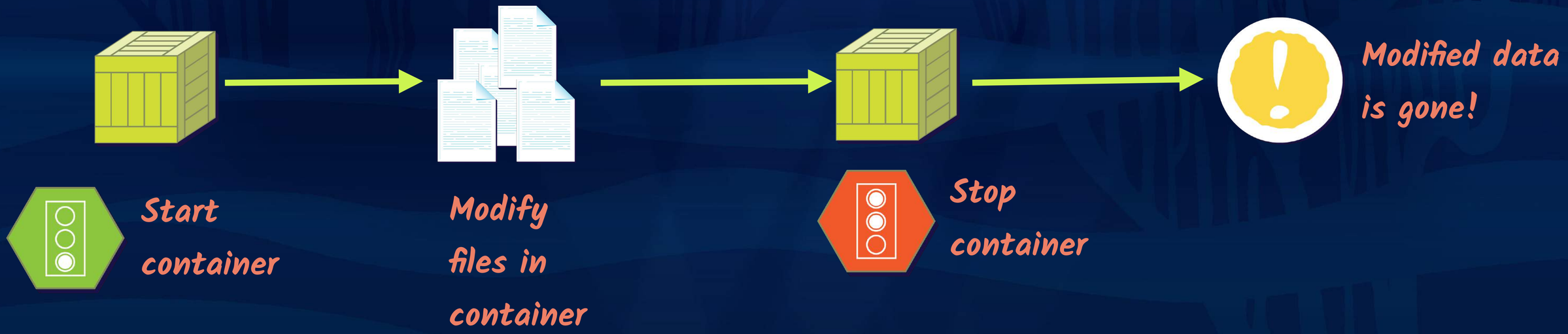
Copy a file into a container from the command line

Copy a file into an image with instructions in a Dockerfile

trydocker

The Problem: Containers Don’t Persist Data

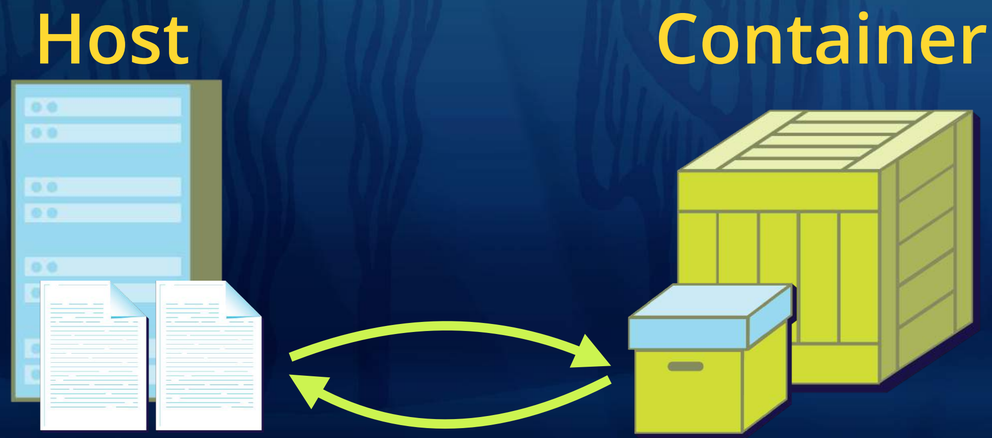
Our containers aren’t really doing much right now because we don’t have a way to get data in them.

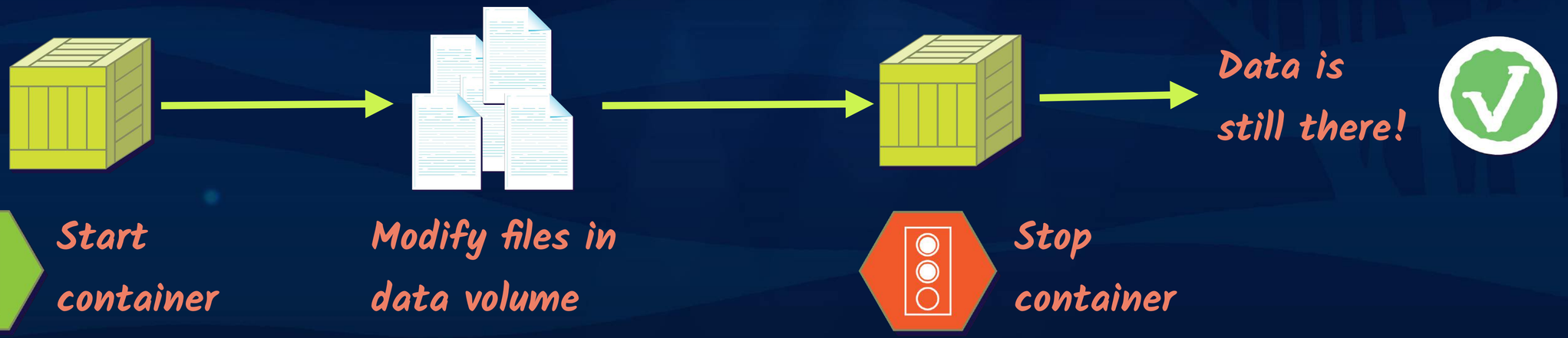


trydocker

The Solution: Data Volumes

Data volumes expose files on your host machine to the container.





try
docker