

Continuous Delivery Automation



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Introduction

Test, Build and Release Automation

- GNU Make build system
- Automating the workflow

Workflow Infrastructure

- Github
- Docker Hub

Demo

Using the Make build system

- Workflow automation strategy
- Why make?
- Creating a Makefile
- Describing the workflow
- Testing the workflow
- Parameterizing the workflow

Workflow Automation Strategy

docker

```
docker build ... test
docker build ... cache
docker build ... builder
docker run ... db
docker run ... agent
docker run ... cache
docker run ... test
docker run ... builder
```



Dockerfile



Supporting Files
e.g. Scripts, config files

docker-compose

```
docker-compose build
docker-compose up agent
docker-compose up test
docker-compose up builder
```



docker-compose.yml

make

```
make test
make build
```



Makefile

Why make?



GNU Make

Designed for the shell

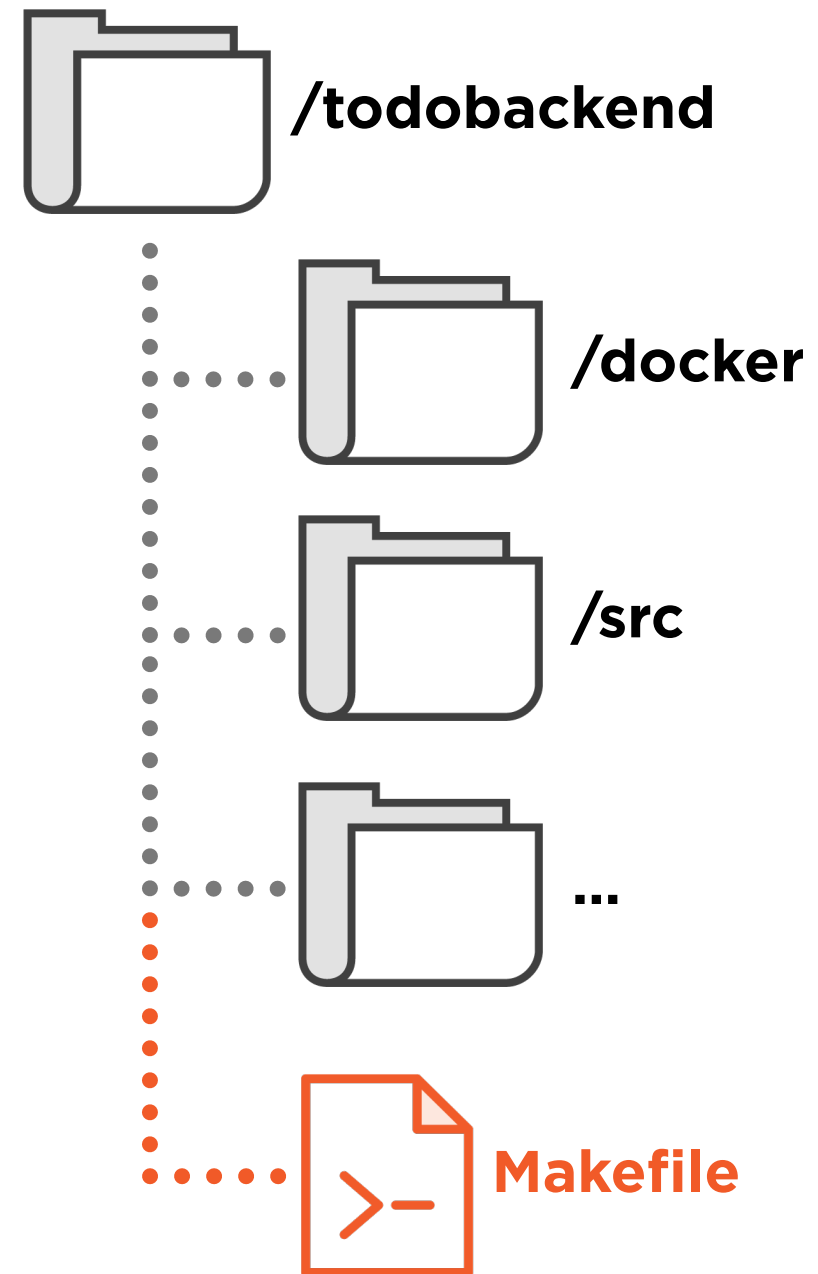
Simple, imperative format

Popular

- Installed by default on OS X
- Packaged for all major Linux distributions

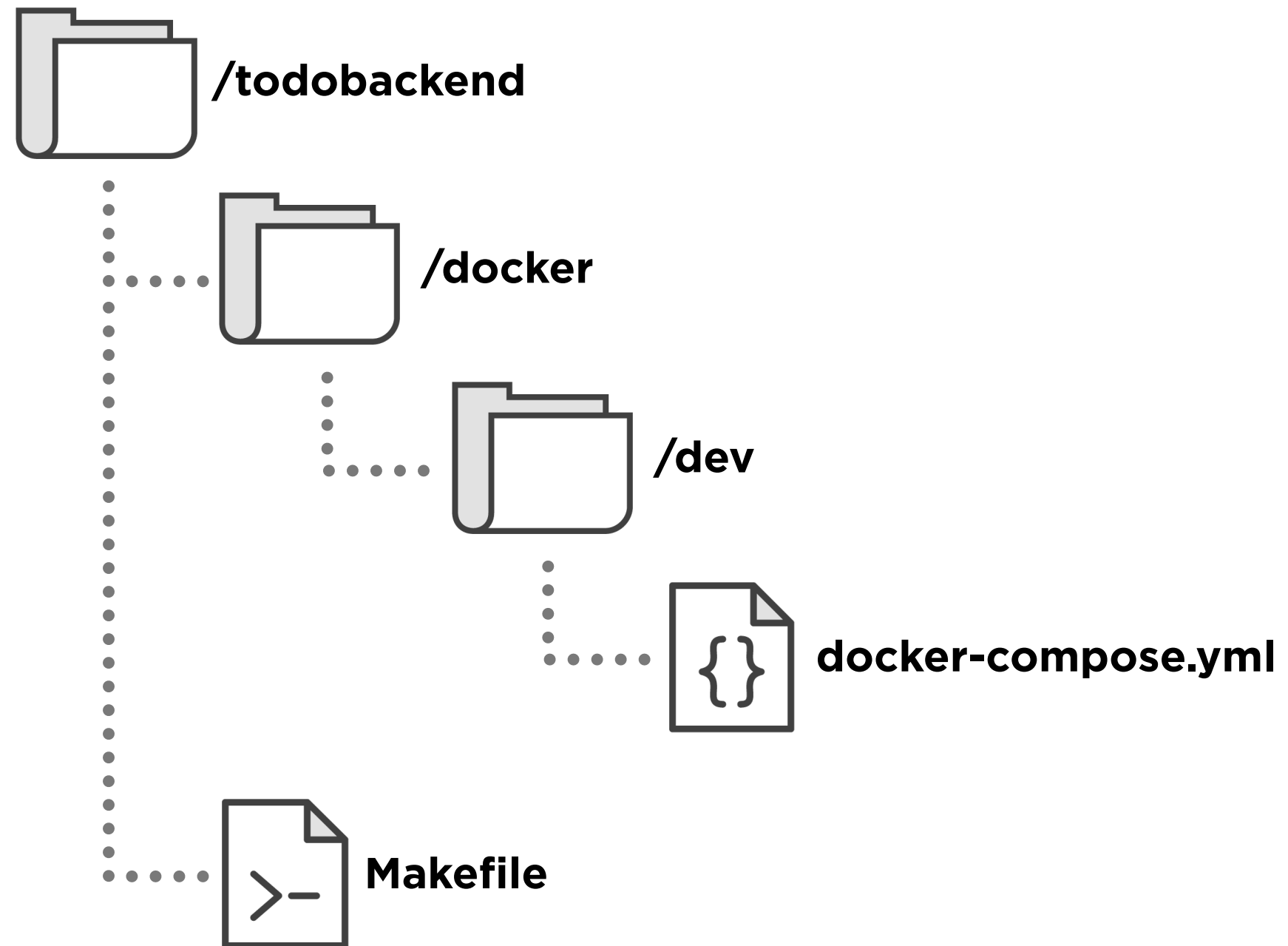
Creating a Makefile

Makefile Location



Describing the Workflow

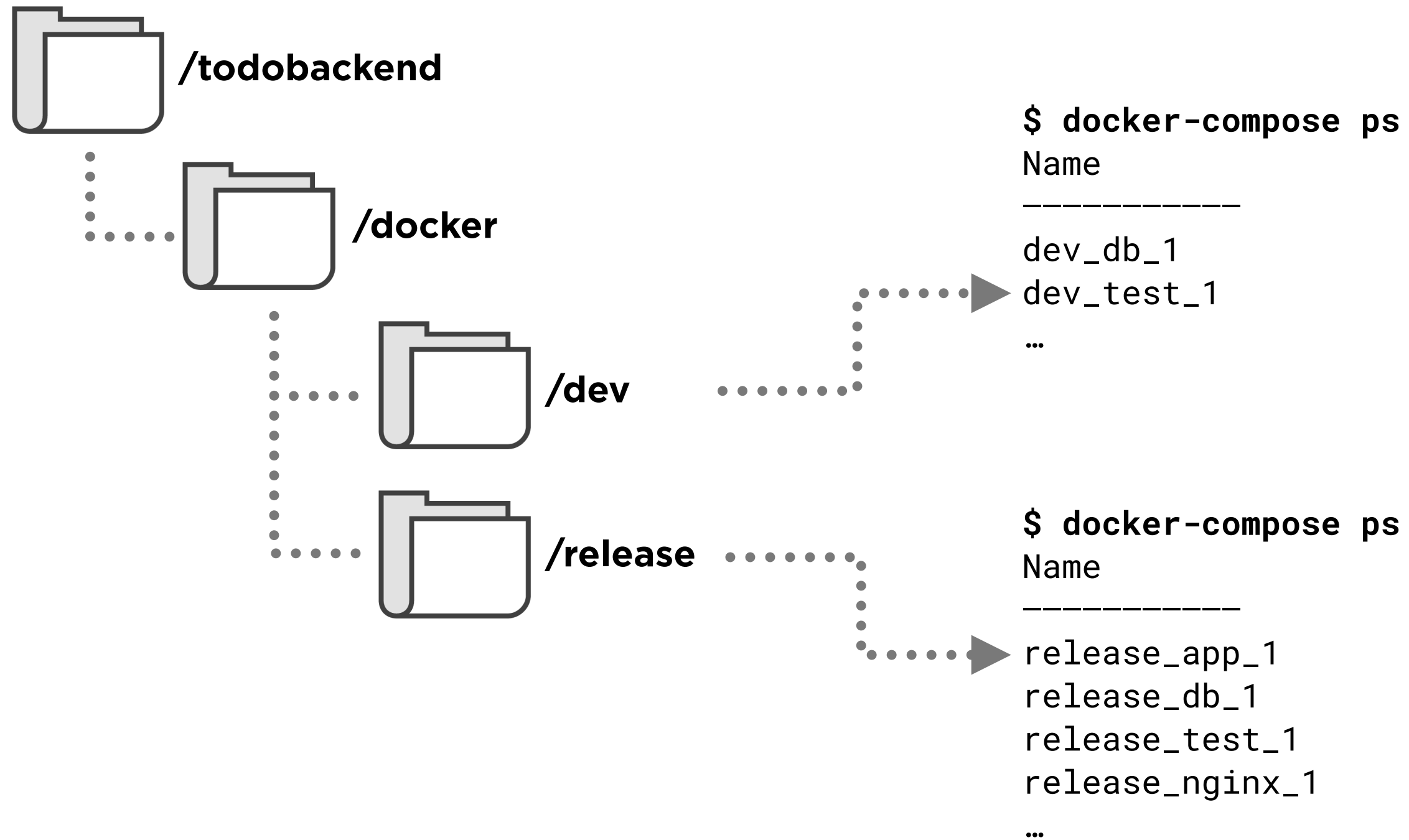
Running Docker Compose



Testing the Workflow

Parameterizing the Makefile

Docker Compose Default Project Naming



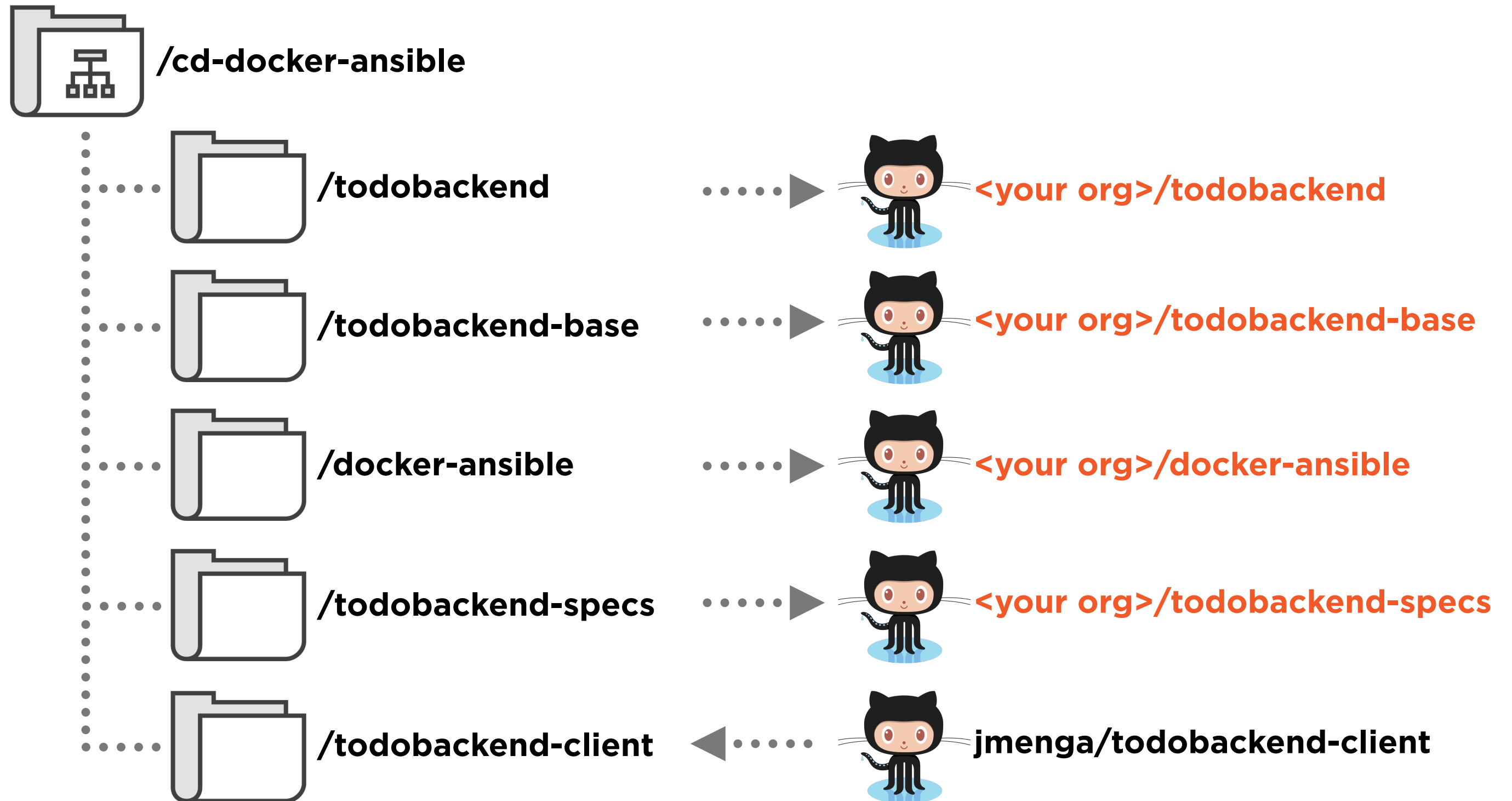
Demo

Workflow Infrastructure

- Creating Github repositories
- Creating Docker Hub repositories
- Creating Automated Builds

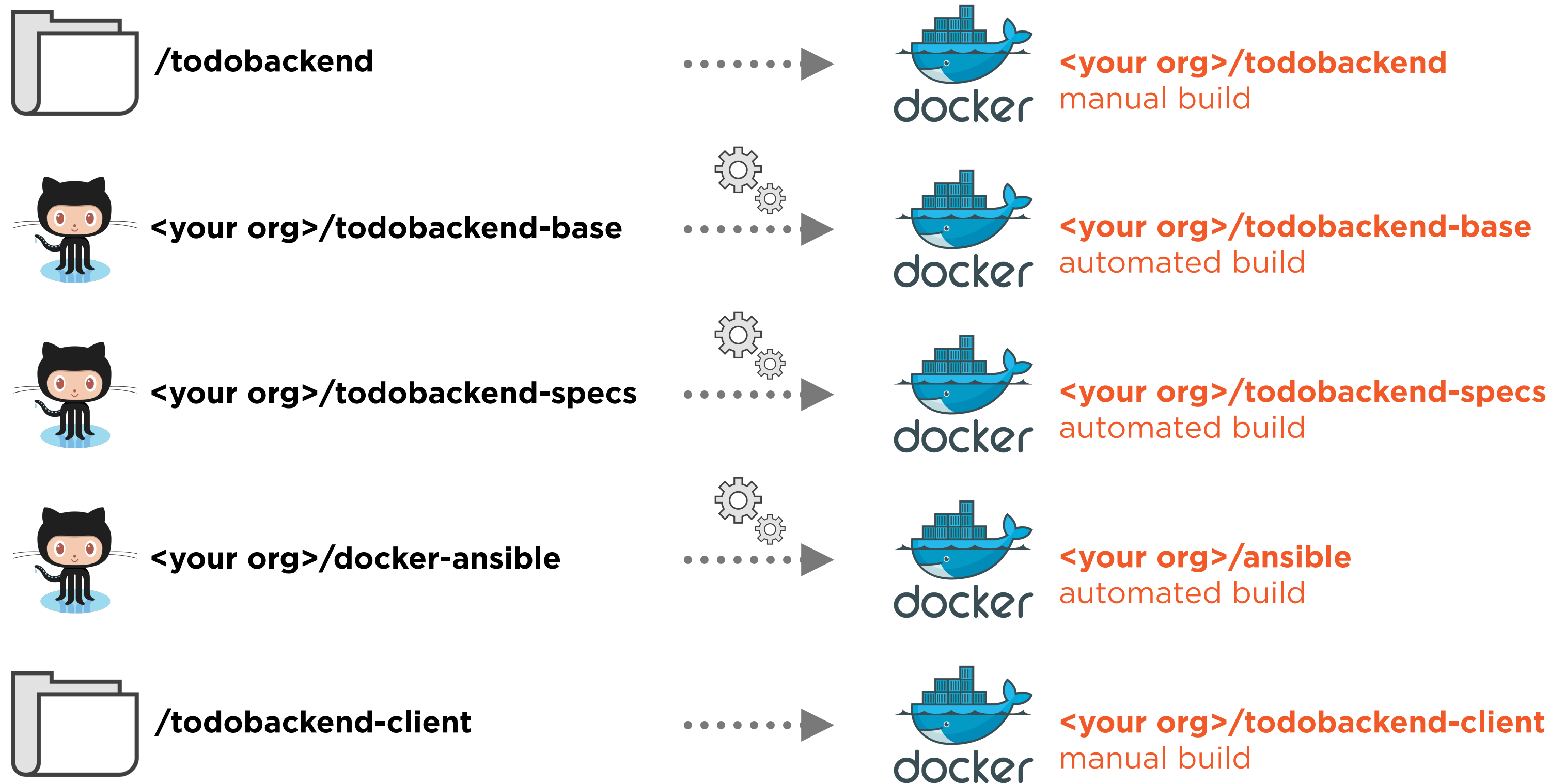
Creating Github Repositories

Github Repositories



Creating Docker Hub Repositories

Docker Repositories



Creating Automated Builds

Summary

Continuous Delivery Automation

- Make build system
- make test, make build, make release
- Makefile variables

Workflow Infrastructure

- Github
- Docker Hub
- Automated image builds