Patika.dev & Ford Otosan

Full Stack (.Net & Vue.js) & Cloud Programı

Week 10

Introduction to Version Control Systems

At a basic level, version control is the process of tracking and managing changes to files over time.

svn, mercurial, git

Git & Github

Git

Git is a distributed version control system that tracks changes in any set of computer files, usually used for coordinating work among programmers collaboratively developing source code during software development.

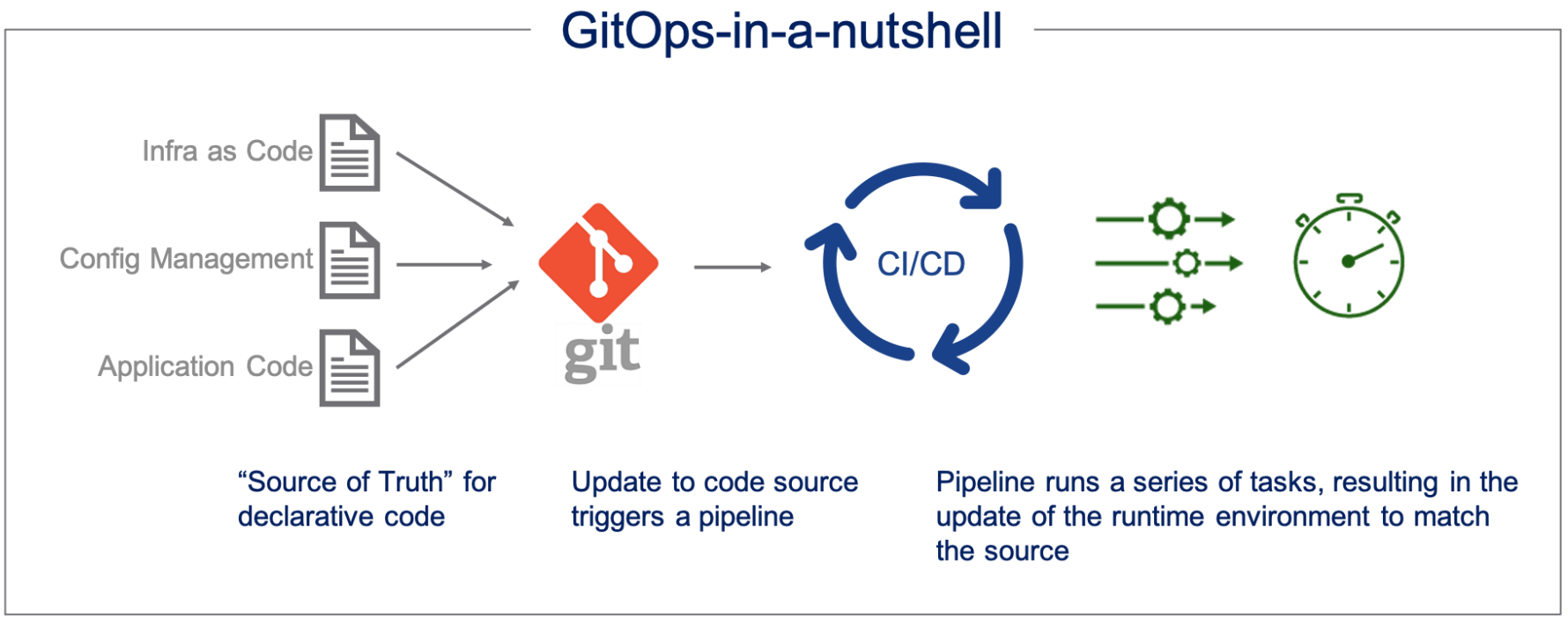
```
config, init, branch, status, add, commit, push, pull request, merge, clone, checkout, pull, fetch, switch, reset, remote, tag, rm, show, log
```

Github

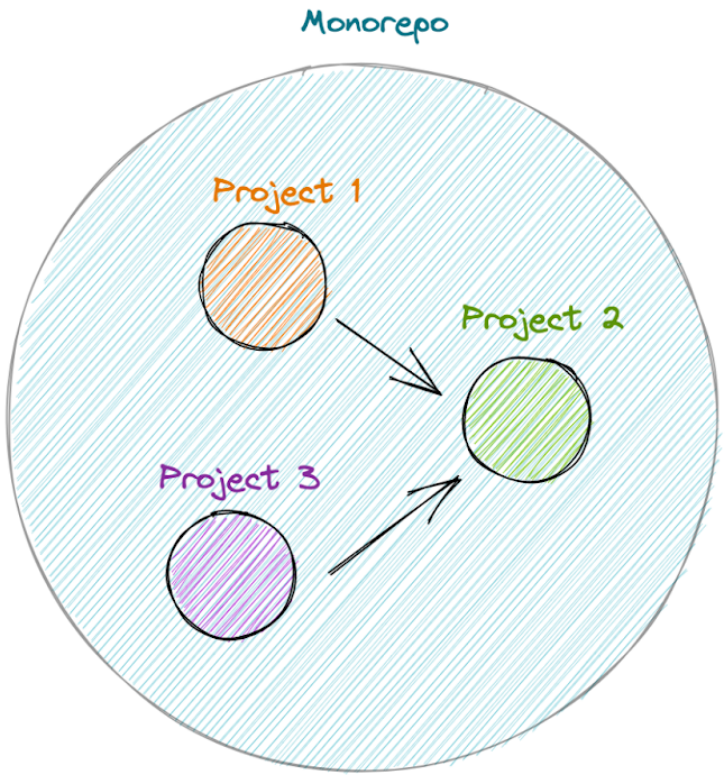
Managed online git hosting owned by Microsoft

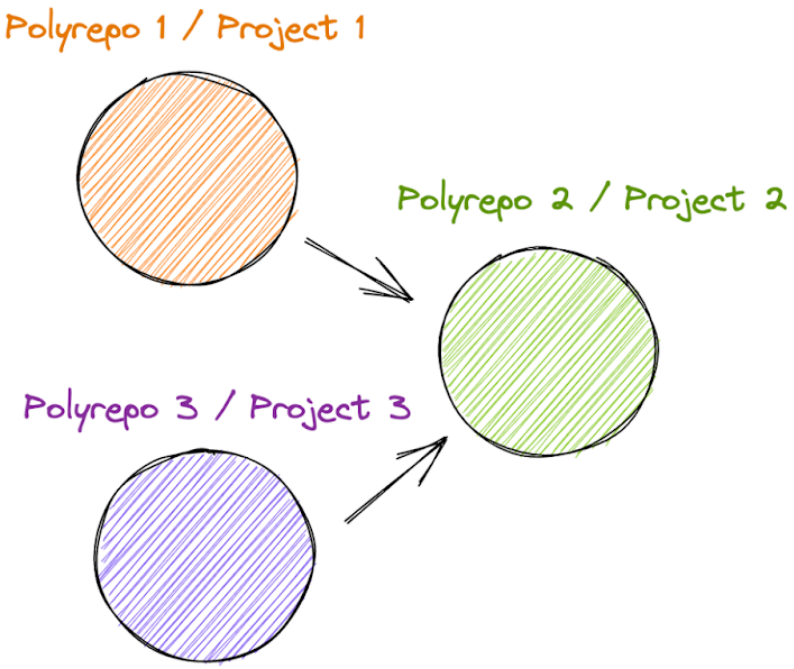
```
Source Code, Tasks, Teams, Actions, Registry
```

Git for DevOps

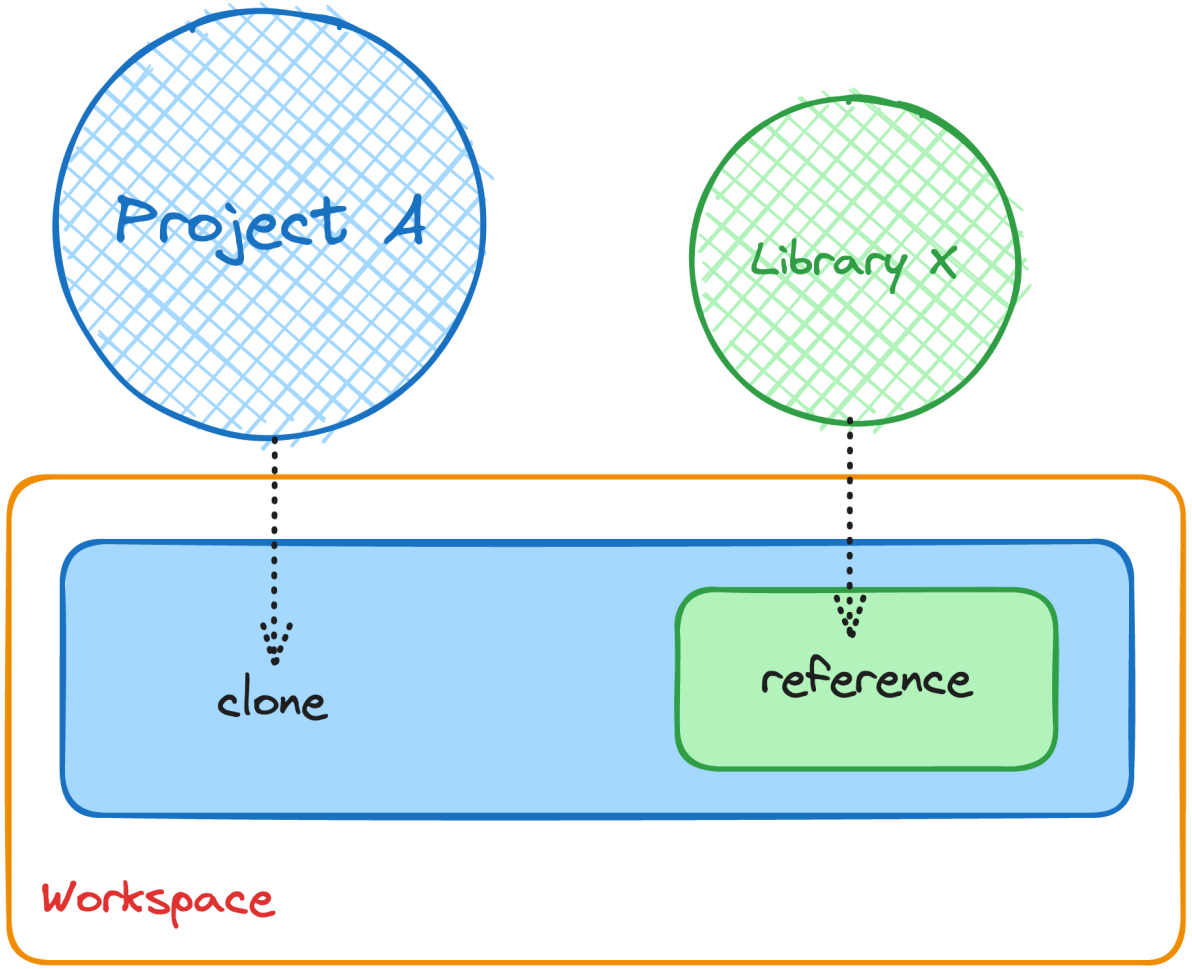


Monorepo vs Polyrepo



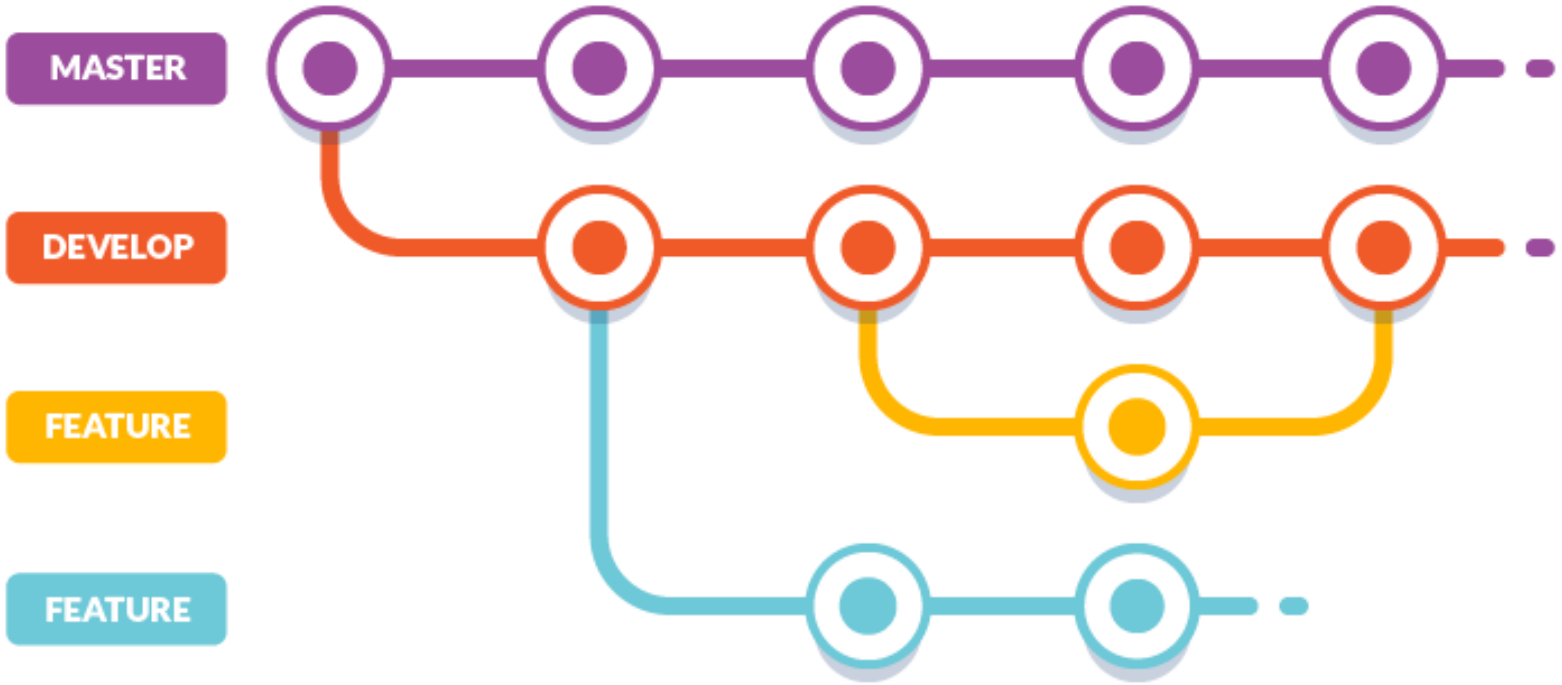


Git Submodules

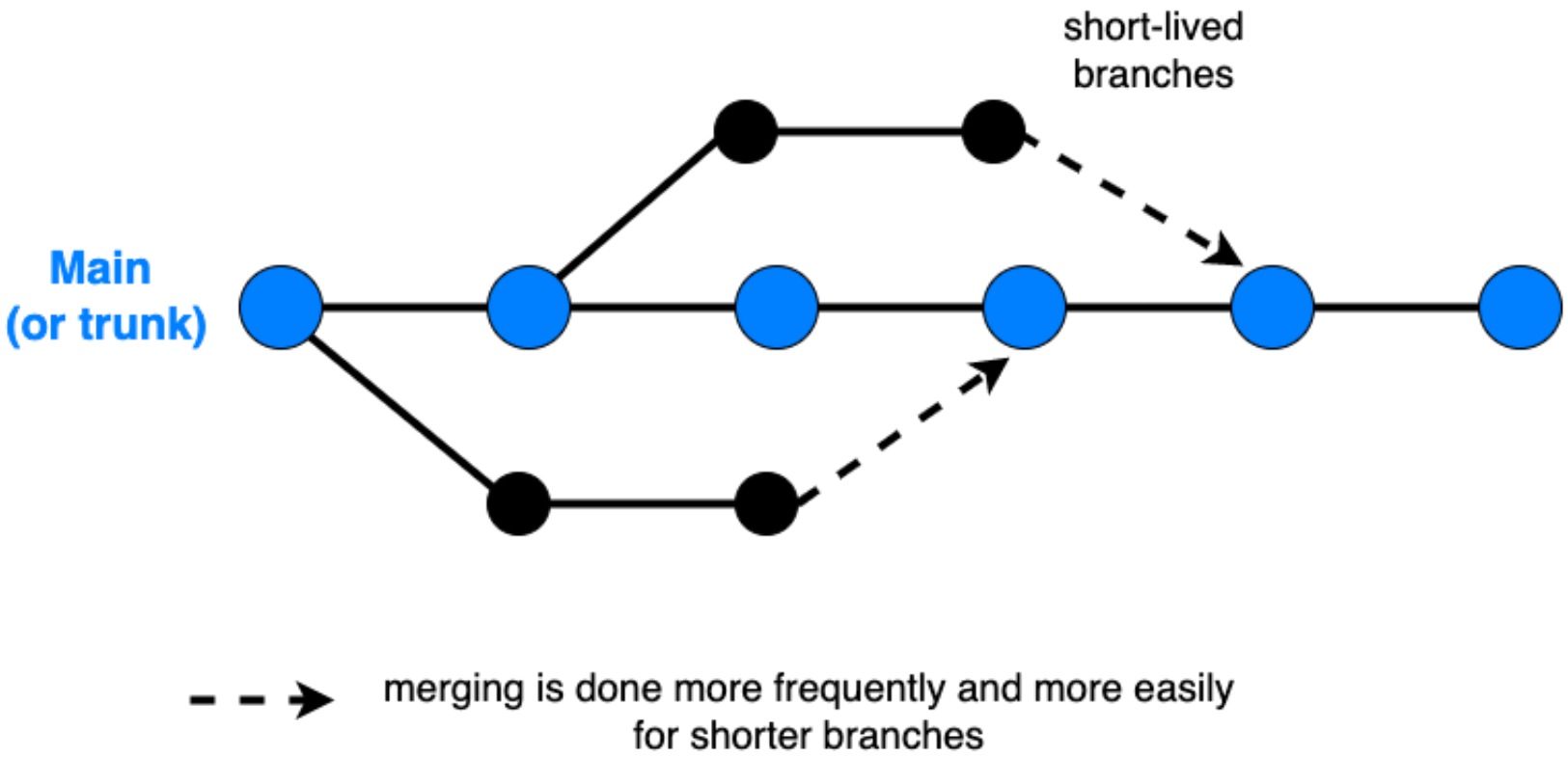


Branching strategies

Git Flow



Trunk Based Development (TBD)



Build & Package Manager Tools

Build tools

```
Set of programs that automate the process of building an executable application from source code

packer, gulp, grunt, ant, maven, docker, gradle
```

Package Managers

```
OS Level: yum, pacman, choco, homebrew, aptitude, apt, winget
```

```
Application Level : Bitnami, npm, NuGet, pip, RubyGems, yarn, conda
```

Build an artifact

```
The compiled or packed application as artifact
```

Run Application artifact

```
exe, bin, image, jar, war, elf, dll
```

Publish application artifact & artifact repository

```
registries, artifact repositories
```

Dependency Management in Sofware Development - Package Manager in JS app

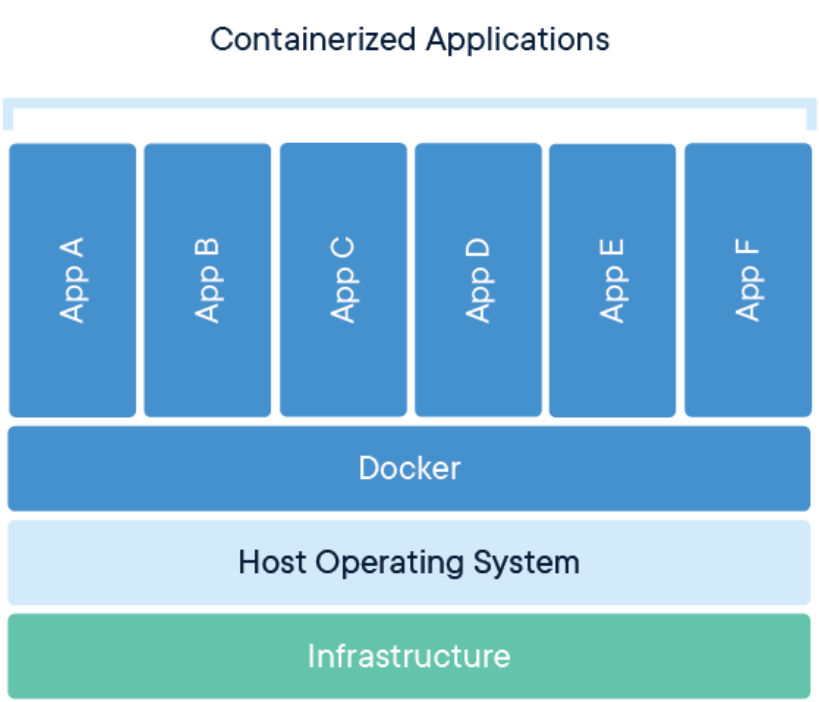
```
npm init
```

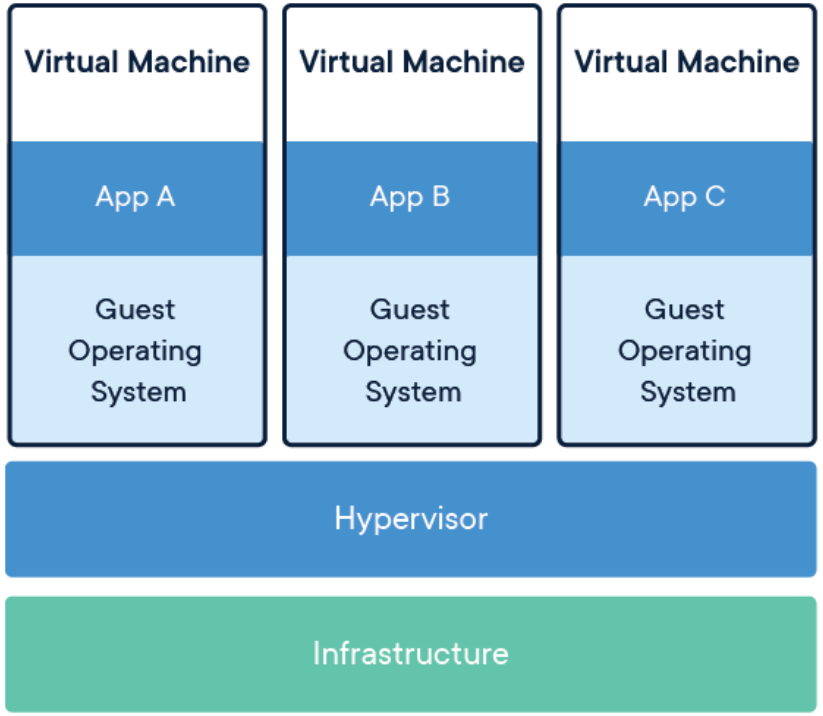
Build and run applications in JS

```
const express = require('express')
const app = express()
const port = 3000

app.get('/', (req, res) => {
  res.send('Hello World!')
})

app.listen(port, () => {
  console.log(`Example app listening on port ${port}`)
})
```

Build Tools & Docker

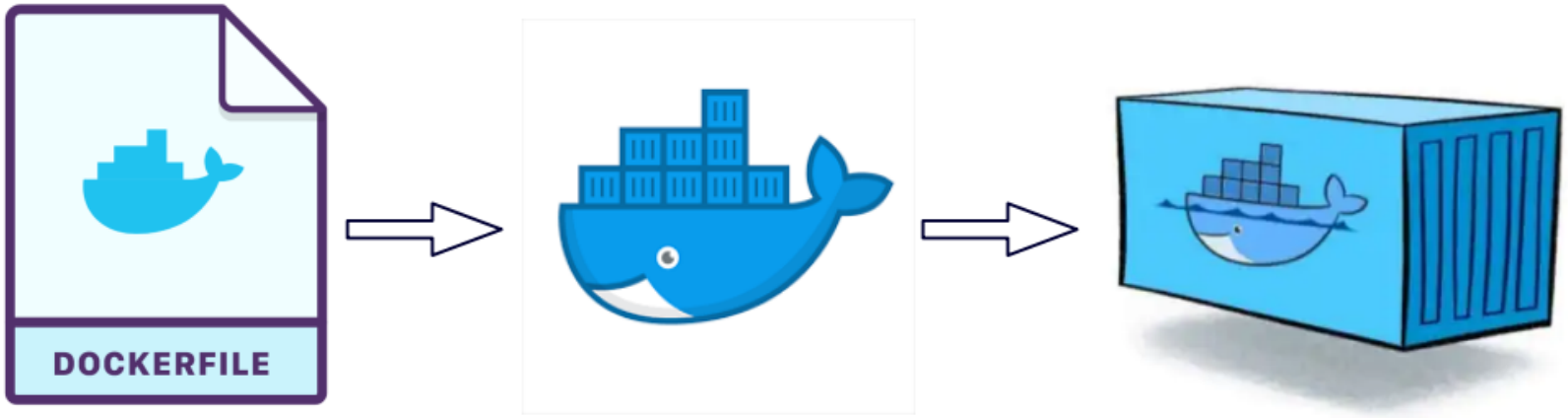
What is Docker? Basic Concepts and Getting Started



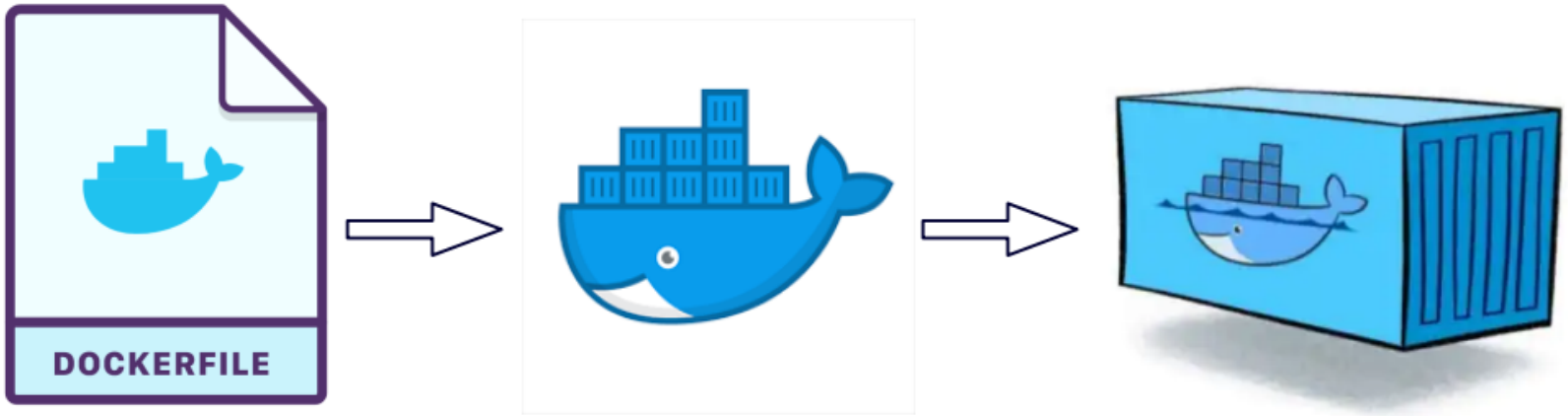


Docker Installation and Setting up the Environment

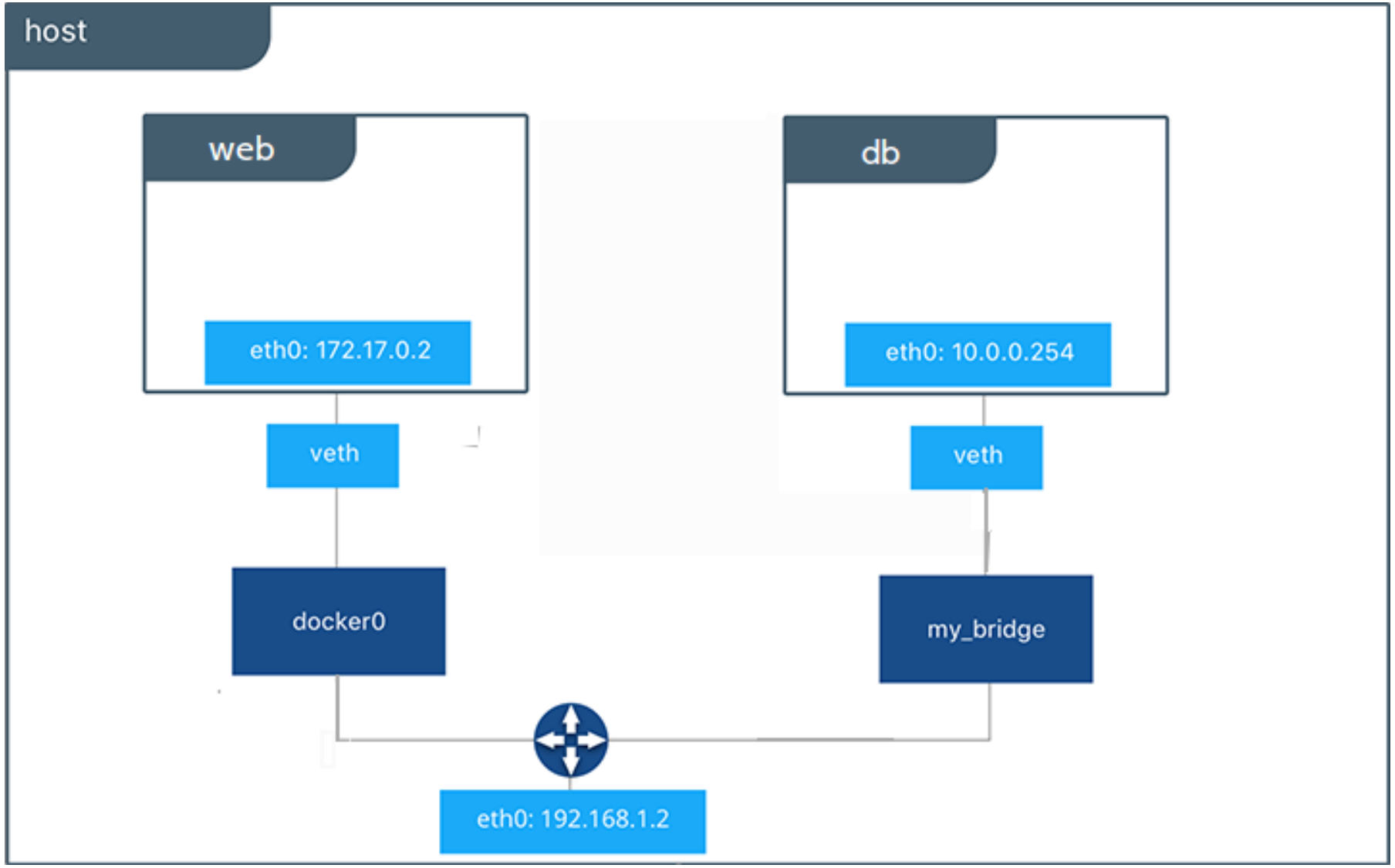
Docker Images: Creation, Management, and Distribution



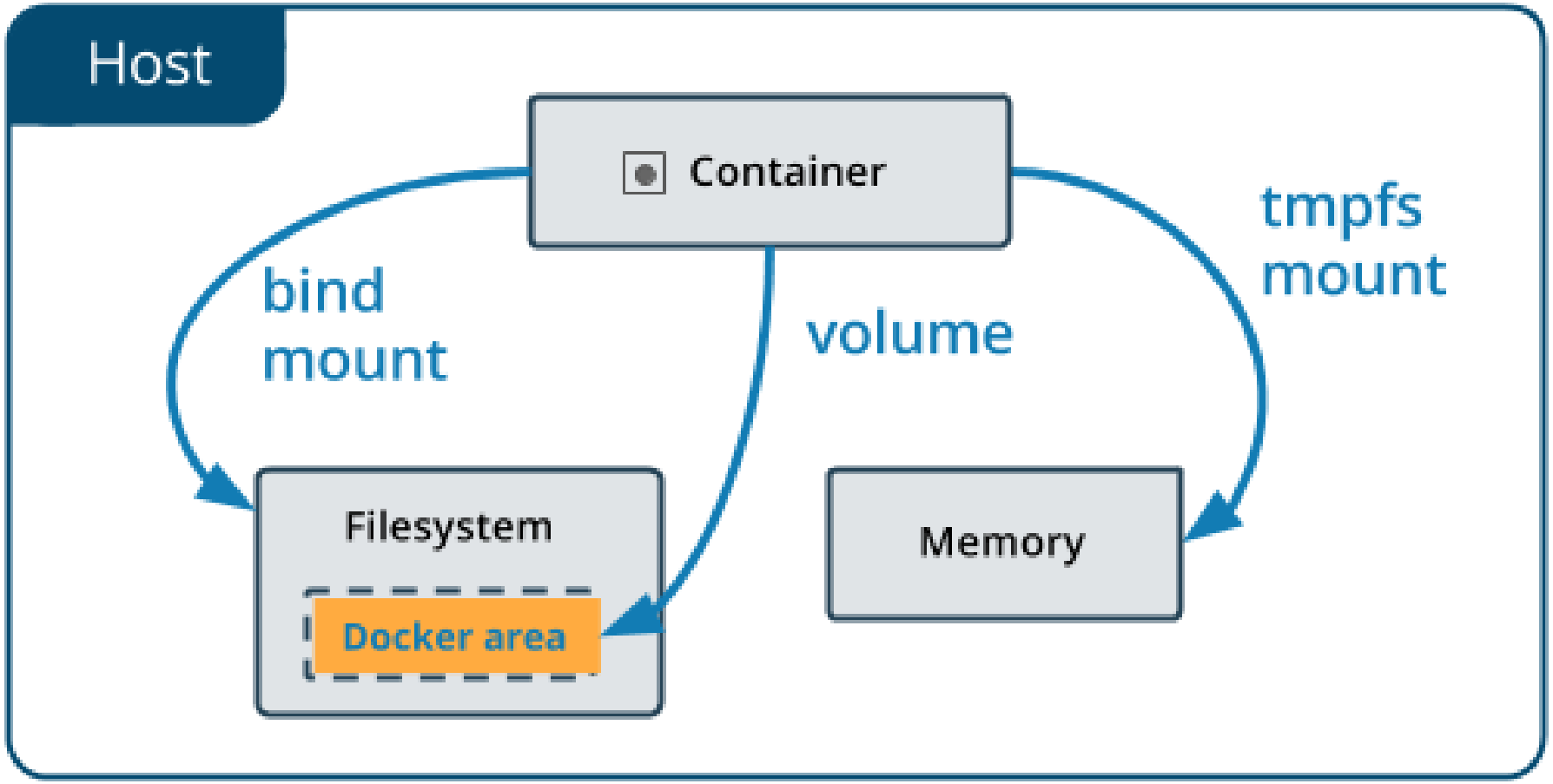
Docker Containers: Creation, Running, and Management



Docker Networks: Container Communication and Network Settings



Docker Storage: Storing and Sharing Data



Docker Compose: Managing and Deploying Application Stacks

Many thanks.

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