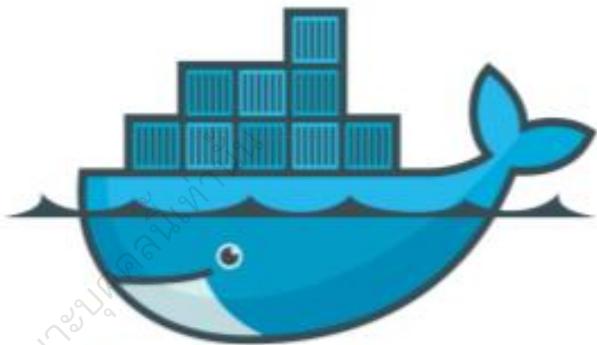


Intro to docker



Jirayut Nimsaeng (Dear)
CEO & Founder, Opsta (Thailand) Co.,Ltd.
Skooldio Online Course

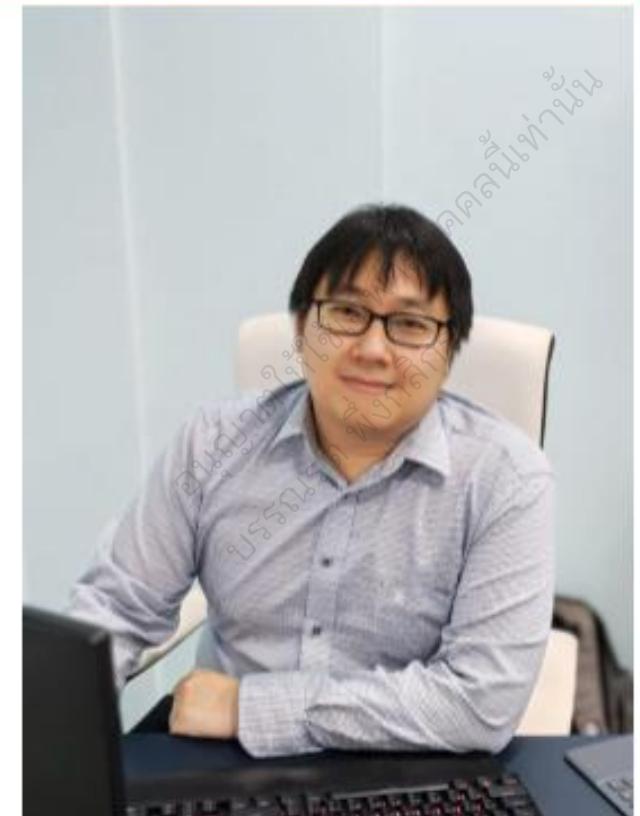


#whoami

Jirayut Nimsaeng (Dear)

Jirayut has been involved in DevSecOps, Container, Cloud Technology and Open Source for over 10 years. He has experienced and succeeded in transforming several companies to deliver greater values and be more agile.

- He is Founder and CEO of Opsta (Thailand) Co.,Ltd.
- He is Cloud/DevSecOps Transformation Consultant and Solution Architecture
- He is the first Certified Kubernetes Administrator (CKA) in Thailand and 146th of the world.
- He is first Thai Google Cloud Developer Expert (GDE) in Thailand
- Google Cloud Certified - Professional Cloud Architect and Associate Cloud Engineer



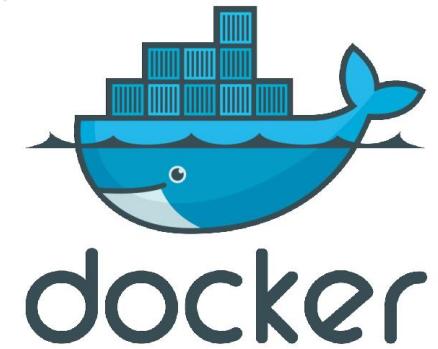


Agenda

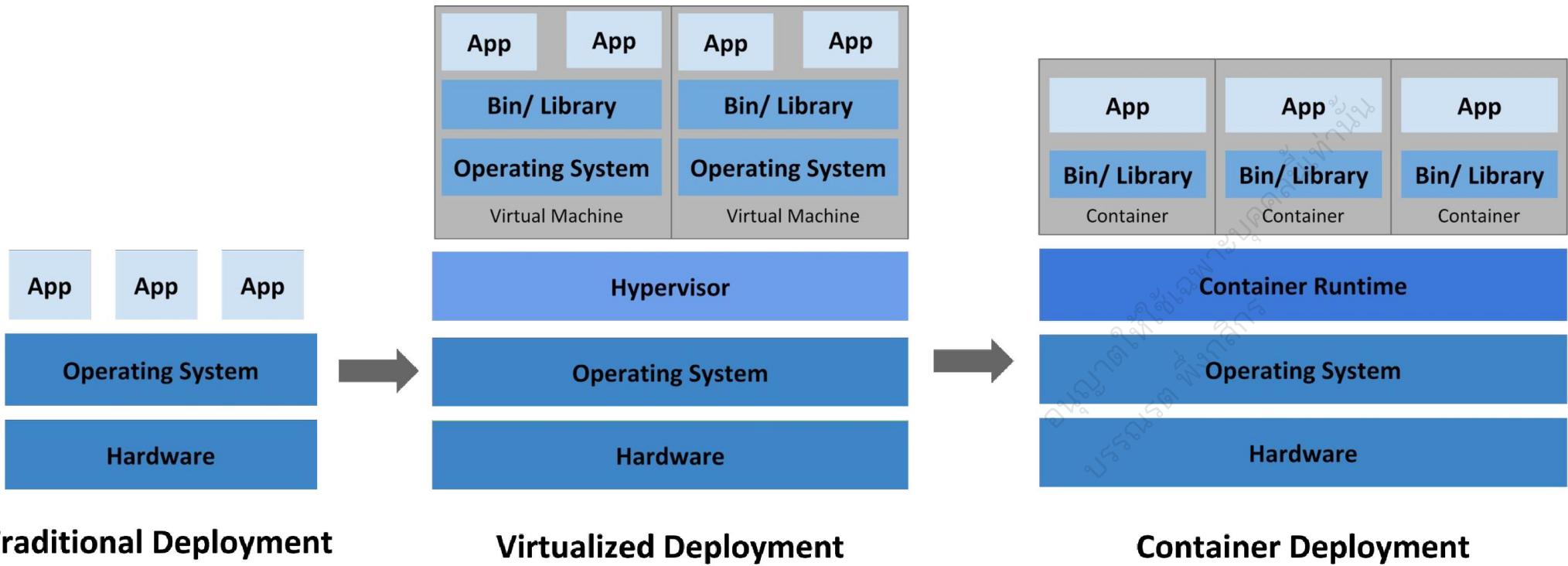
- **Theory**
 - What is Docker?
 - Docker Image
 - Docker Container
 - Build, Ship, Run
 - Dockerfile
 - Docker Compose
- **Workshop**
 - Basic Docker Commands
 - Basic Operation
 - Expose Port
 - Utilities Commands
 - Build Ratings Service run on Container

What is Docker?

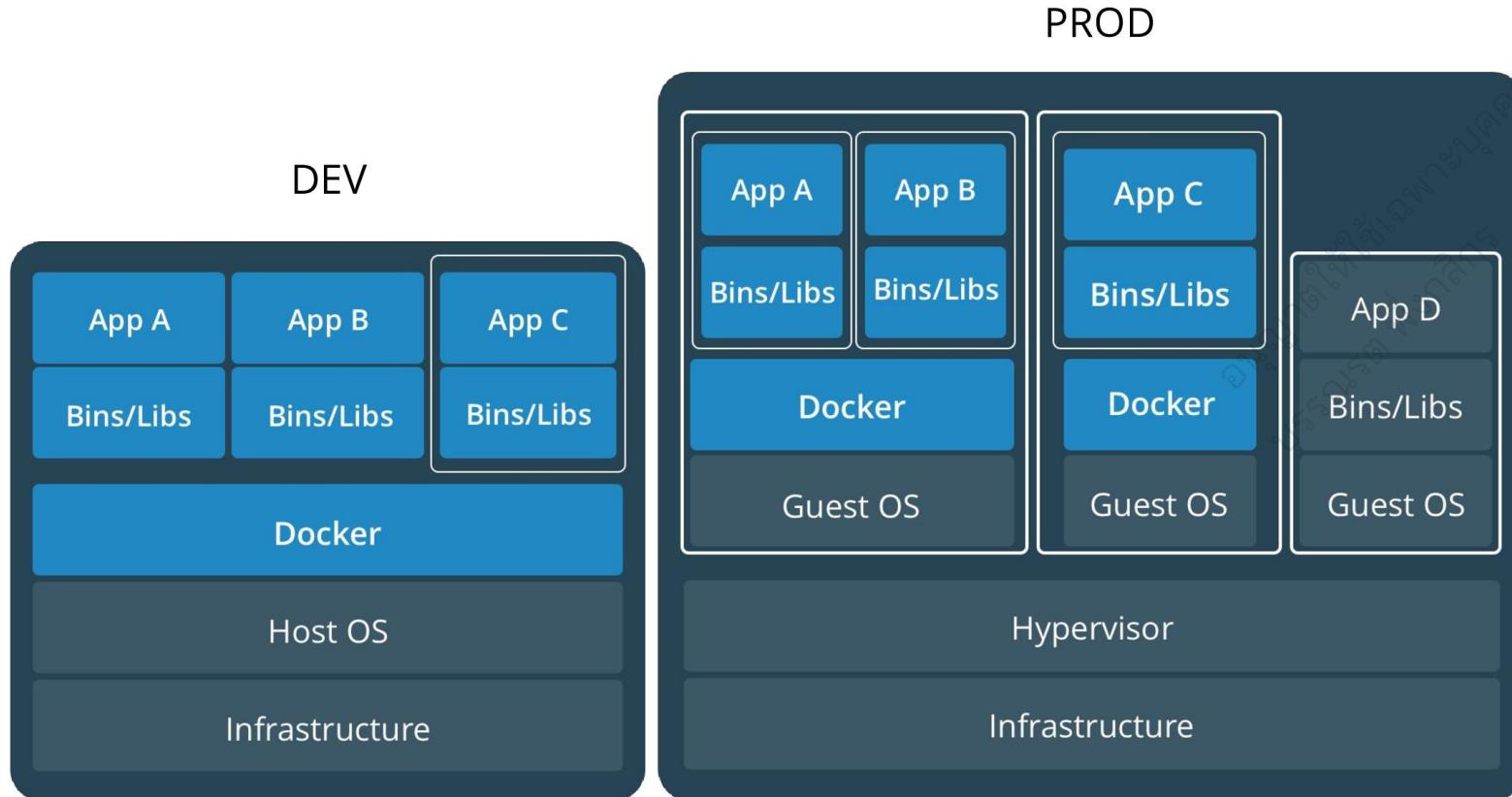
Intro to



Docker Container



VM and Container together



Where Docker can run

Native



ubuntu



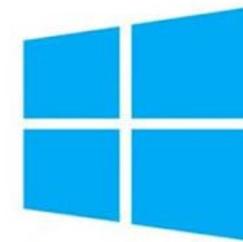
debian



Windows Server 2016

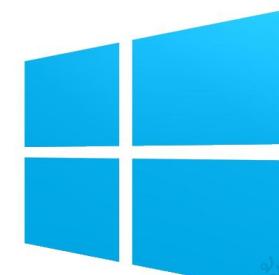


Core OS



Windows Server 2019

VM





Docker Concept



Image

The basis of a Docker container. The content at rest.



Container

The image when it is 'running.' The standard unit for app service



Engine

The software that executes commands for containers. Networking and volumes are part of Engine. Can be clustered together.



Registry

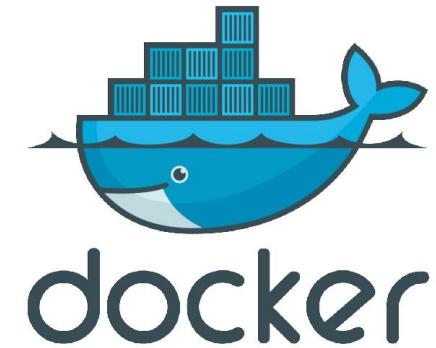
Stores, distributes and manages Docker images

Docker Image

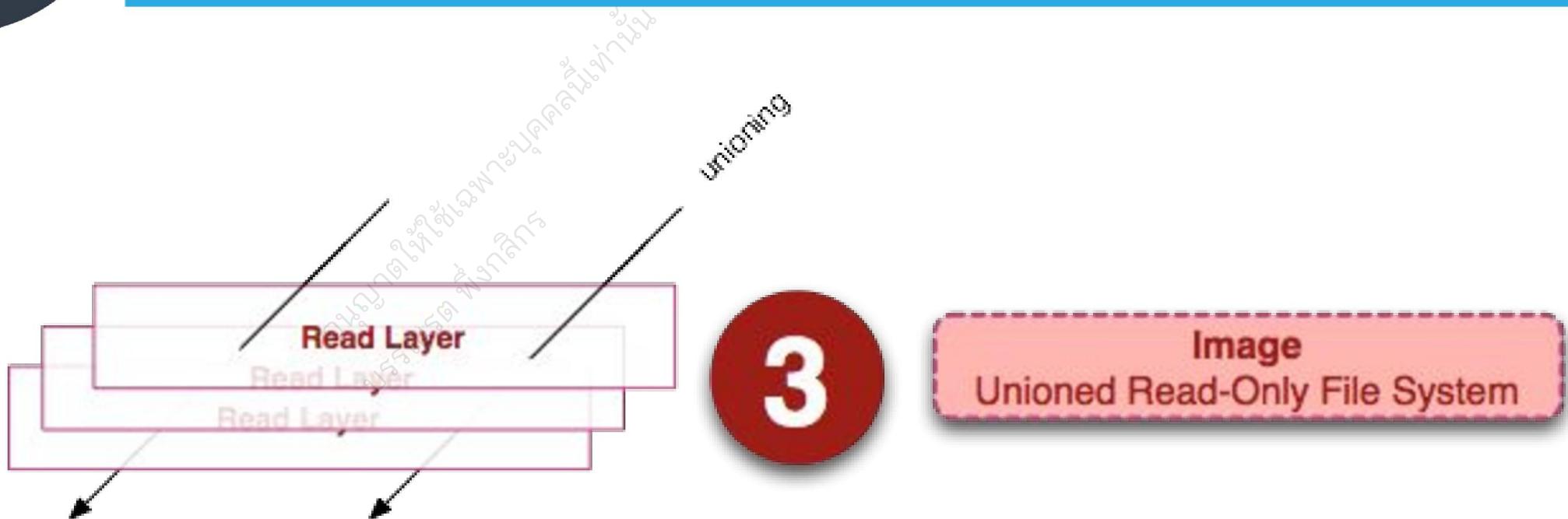
Intro to Docker

อนุญาตให้ใช้สิ่งที่
บรรณาธิการอนุญาต
ในหัวข้อ

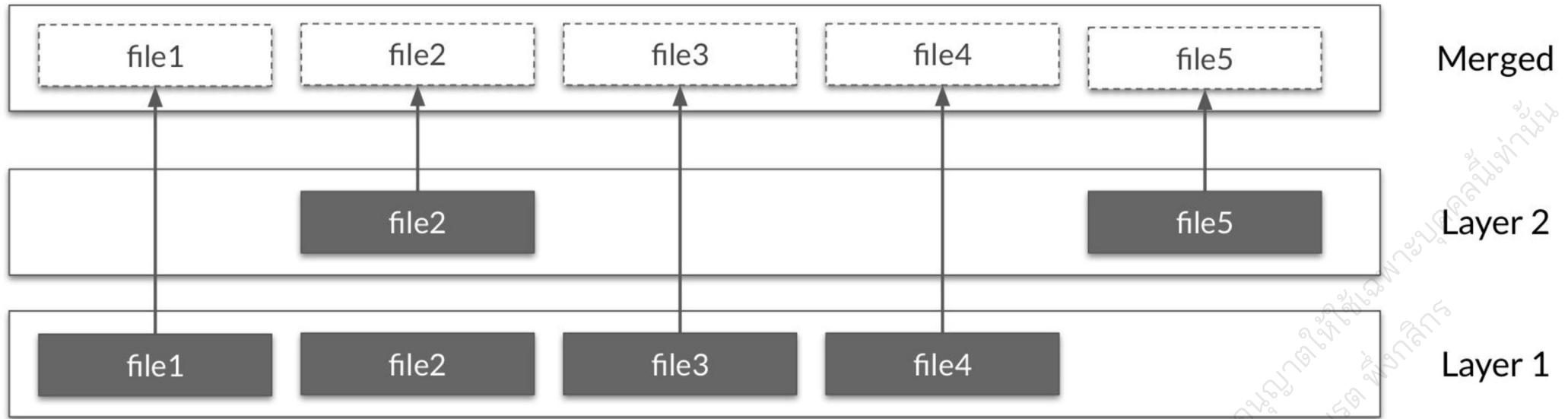
Intro to



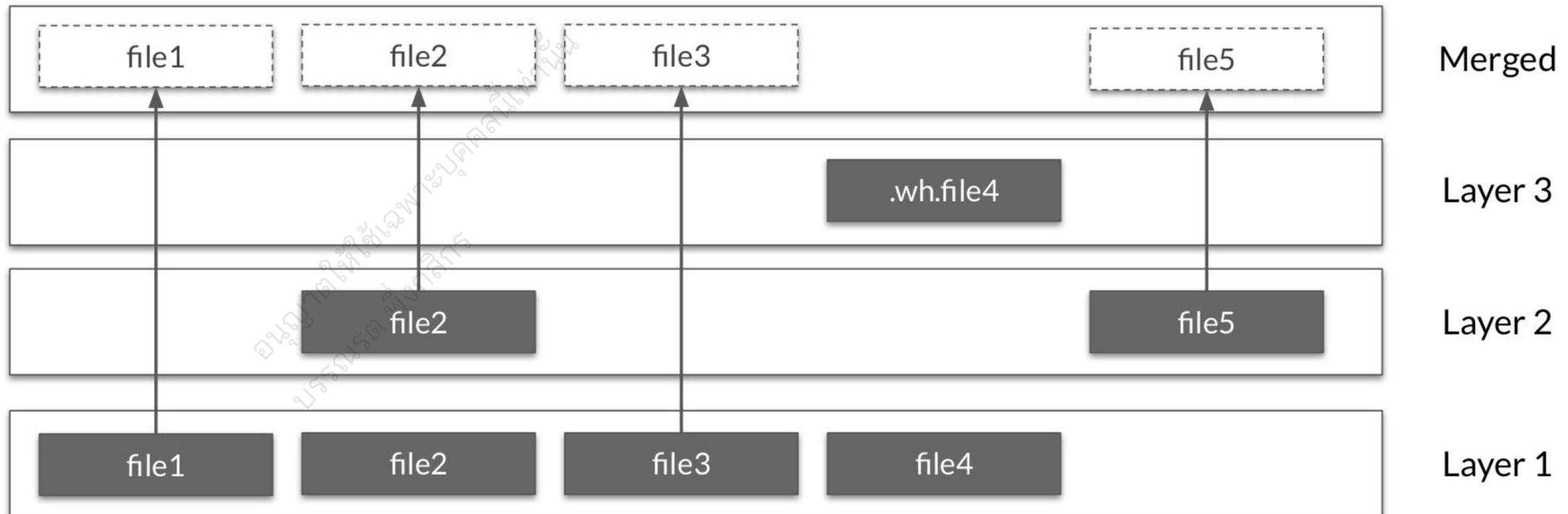
Docker Image



Docker Image Layer (1)

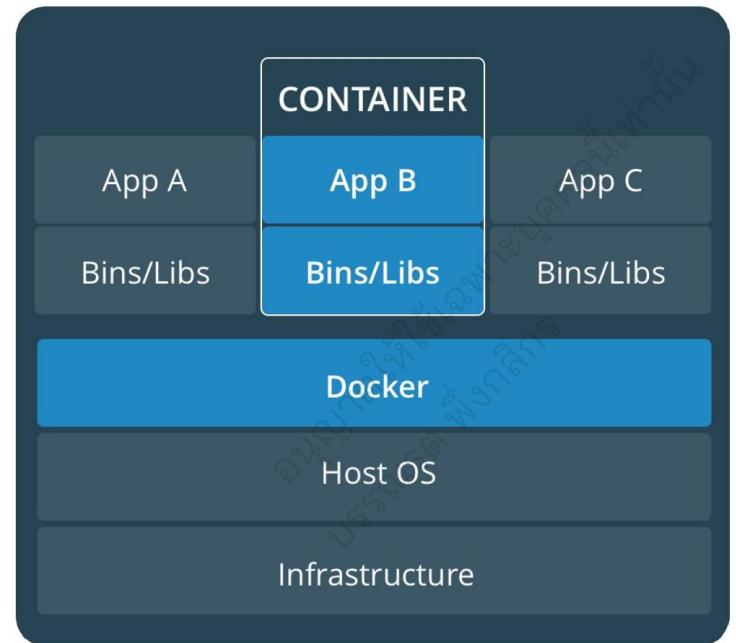


Docker Image Layer (2)



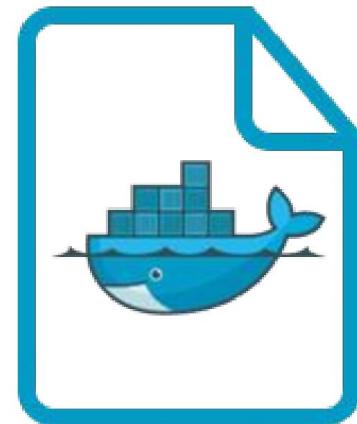
What is in Docker Image

- **Base OS** (Ubuntu, CentOS, Alpine)
- **System Packages** (APT, YUM)
- **Library Dependencies** (PIP, NPM, Composer)
- **Configuration**
- **Source Code**



Dockerfile

- Dockerfile is instructions to build Docker Image
 - How to run commands
 - Add files or directories
 - Create environment variables
 - What process to run when launching container
- Result from building Dockerfile is Docker Image



Dockerfile



Sample Dockerfile

```
FROM node:14.14.0-alpine3.12
COPY . /nodejs/
WORKDIR /nodejs
RUN npm install
ENV VERSION 1.0
EXPOSE 8081
CMD ["node", "/nodejs/main.js"]
```

OS + System Packages

Source Code

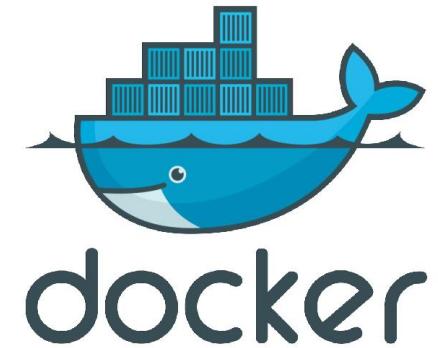
Library Dependencies

Configuration

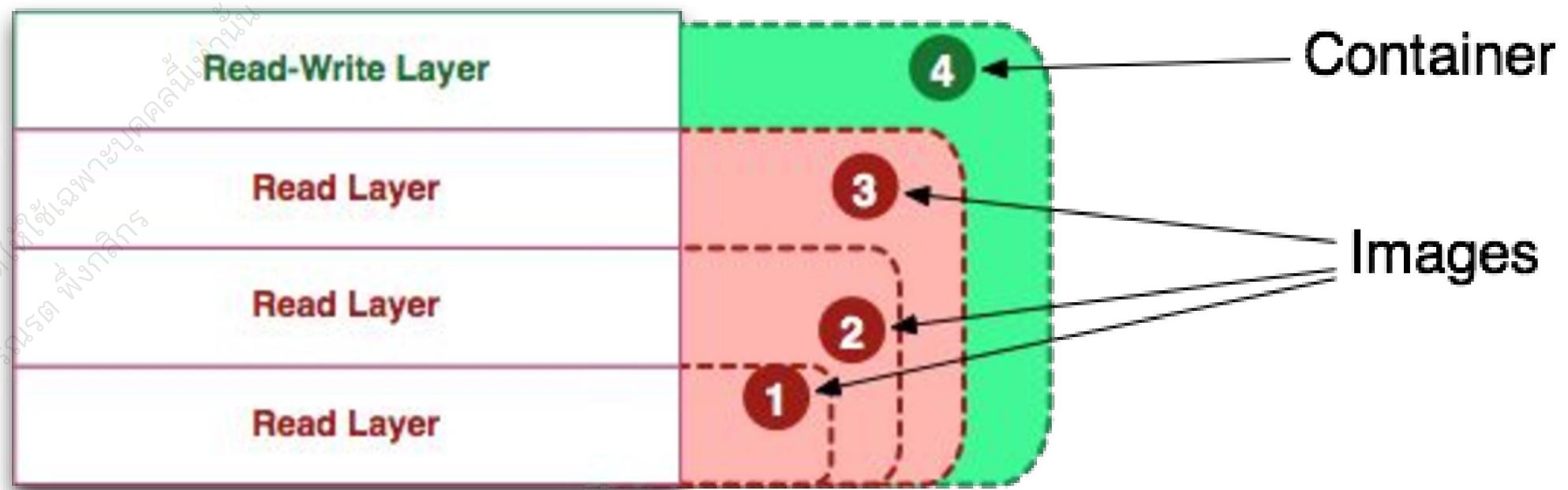
The diagram illustrates the components of a Dockerfile. It shows seven Dockerfile instructions on the left, each connected by a blue arrow pointing to its corresponding category on the right. The categories are color-coded: OS + System Packages (red), Source Code (red), Library Dependencies (red), and Configuration (red). A large, faint watermark in the center of the diagram reads 'อนุญาตให้ใช้สิ่งพัฒนาโดย
การบูรณาจุณลักษณ์'.

Docker Container

Intro to

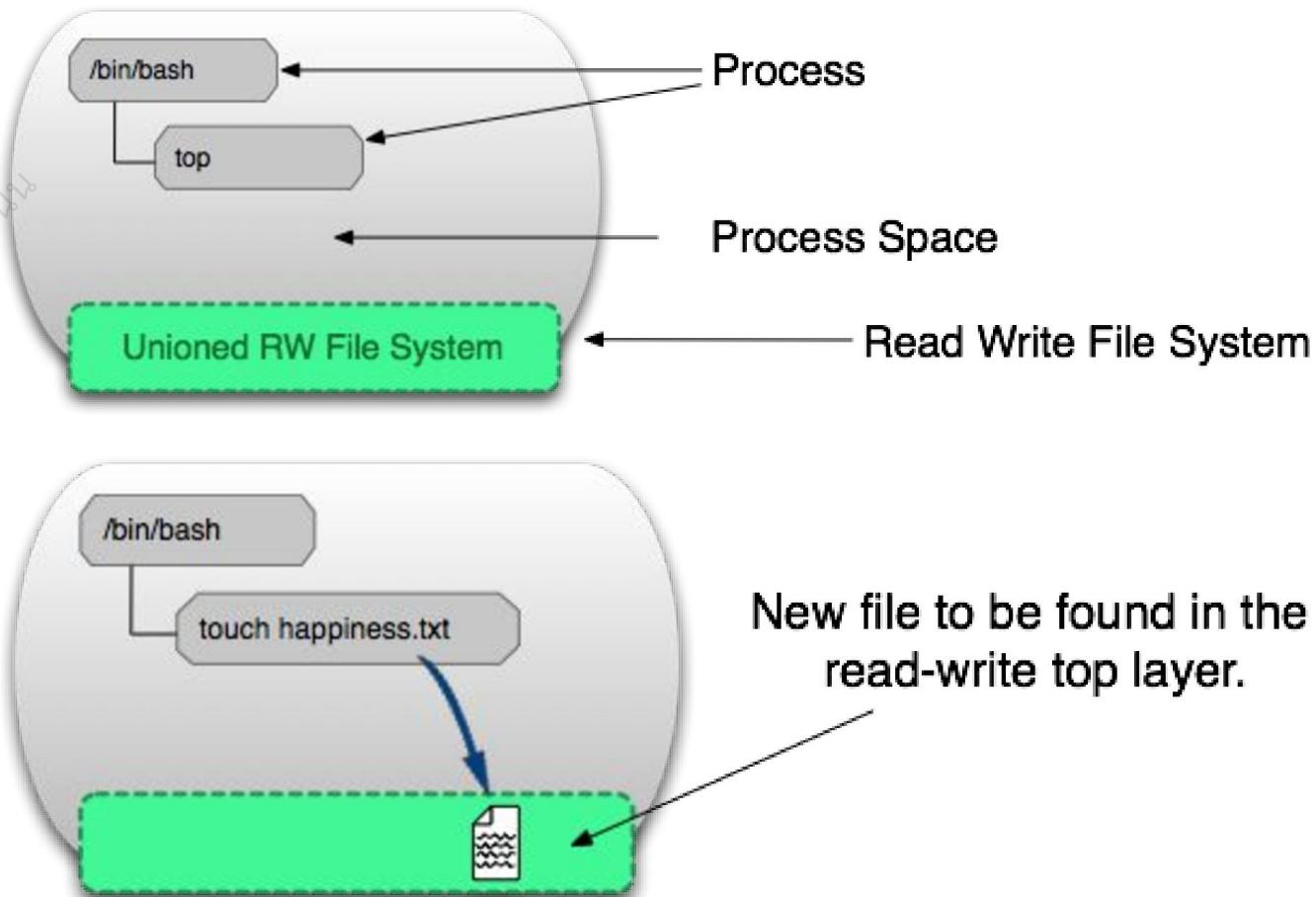


Docker Container



Running Container

ระบบไฟล์ภายใน Docker
บรรจุในไฟล์ที่เรียกว่า container image

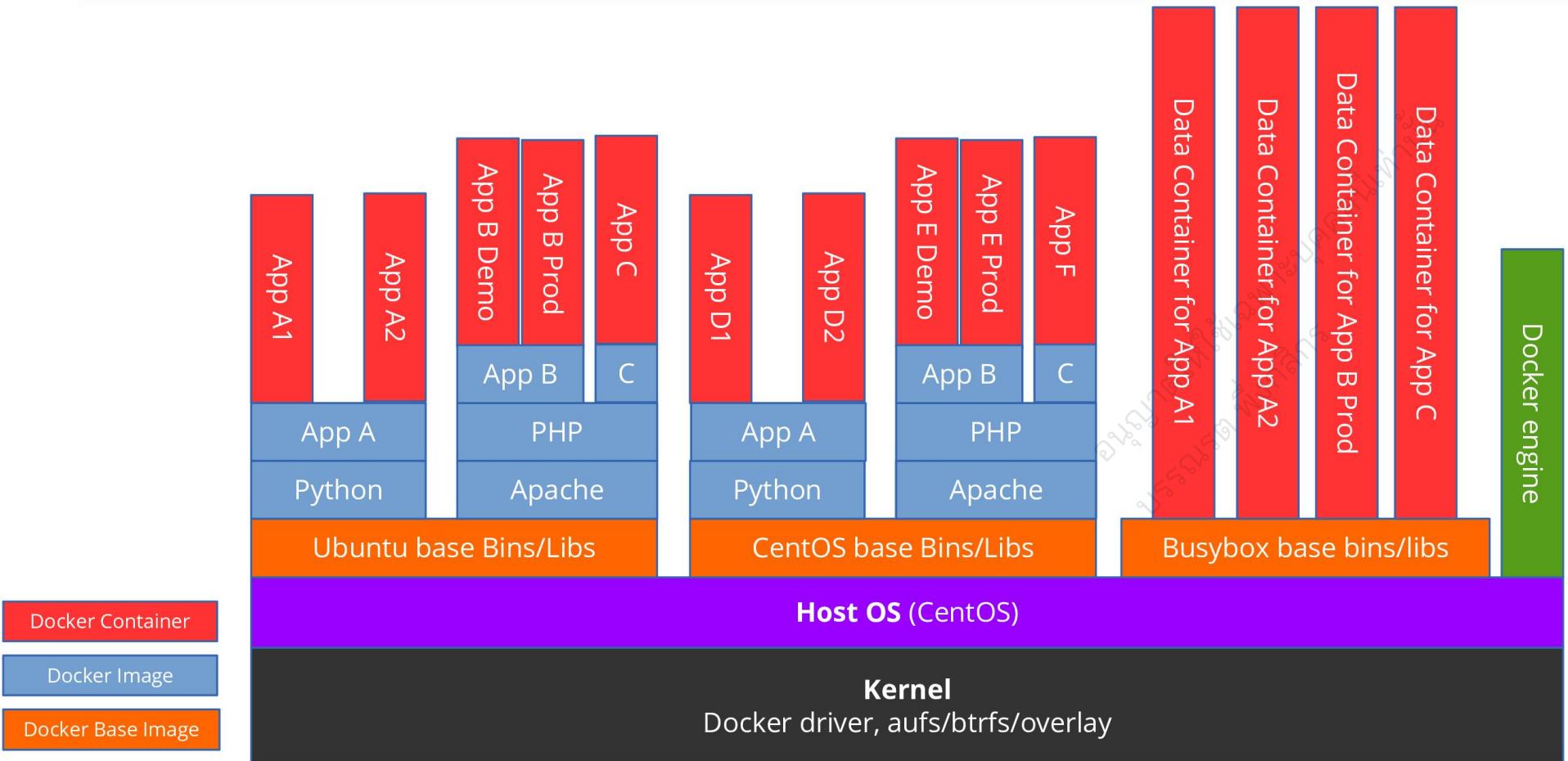




Docker Image vs Container

Docker Image is a **class**
Docker Container is a **instance of class**

ผู้สอน: ดร. นพดล ภู่ว่องไว
ผู้ช่วยสอน: ดร. นพดล ภู่ว่องไว

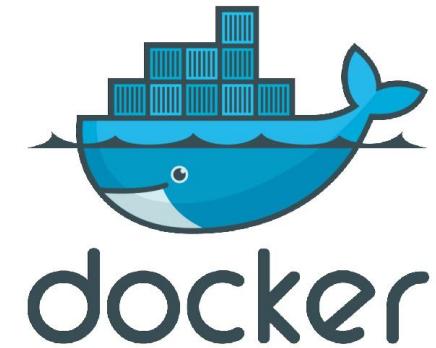


Build, Ship, Run

อนุสาวรีย์ชัยสมรภูมิ
บรรจุภณฑ์ พกพา

Intro to Docker

Intro to



Docker Registry

- Docker Registry is the store for Docker Image
- Docker Hub is public Docker Registry like Github
- Using Docker client to push and pull Docker Image from Docker Registry
- You can create your own Private Docker Registry

முனையாலை
பிரச்சனை போன்ற முனையாலை



Docker Hub

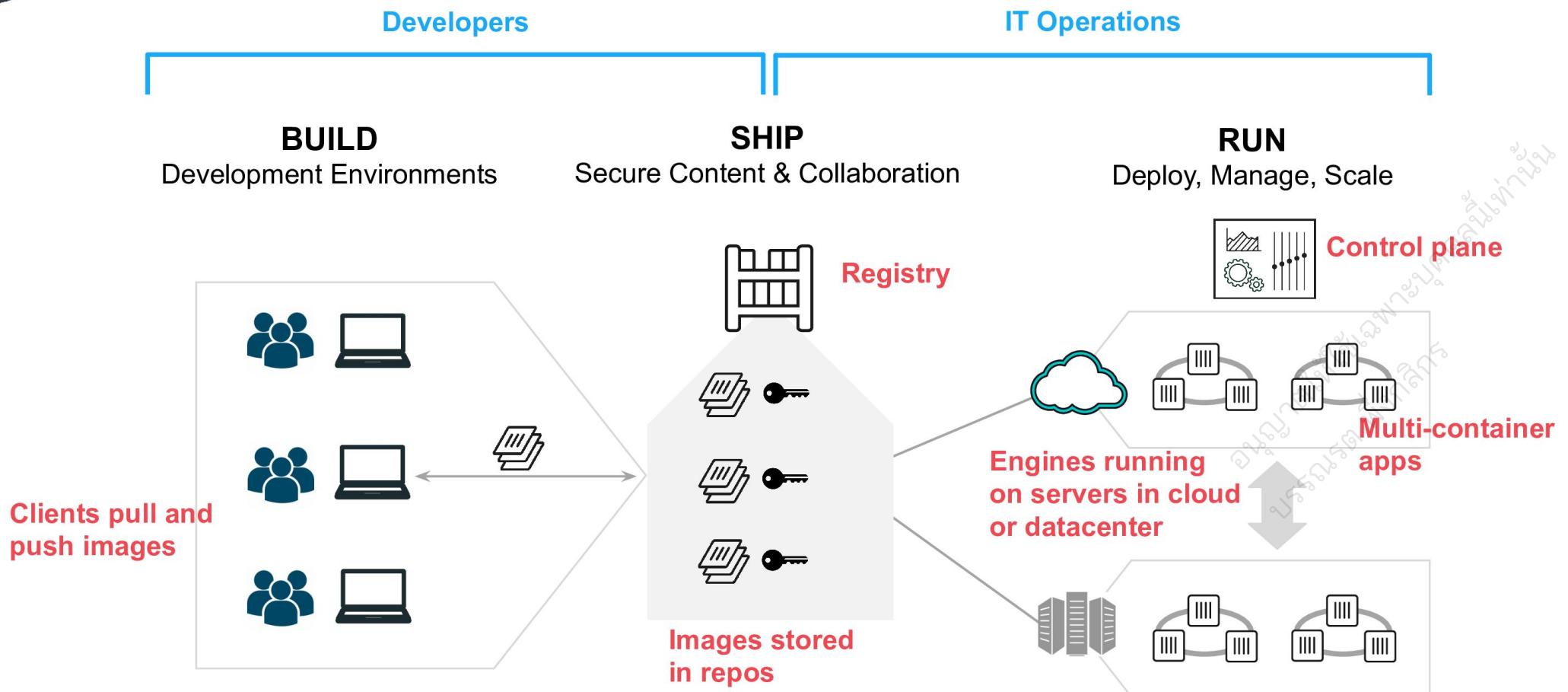
The screenshot shows the Docker Hub homepage. At the top is a blue header bar with the Docker Hub logo, a search bar containing "Search for great content (e.g., mysql)", and navigation links for "Explore", "Repositories", "Organizations", "Get Help", and a user account icon. Below the header is a navigation bar with links for "Docker EE", "Docker CE", "Containers" (which is highlighted in blue), and "Plugins".

The main content area features a sidebar on the left with "Filters" and three sections: "Docker Certified" (with a checkbox for "Docker Certified"), "Images" (with checkboxes for "Verified Publisher" and "Official Images"), and "Categories" (listing various options like Analytics, Application Frameworks, etc.).

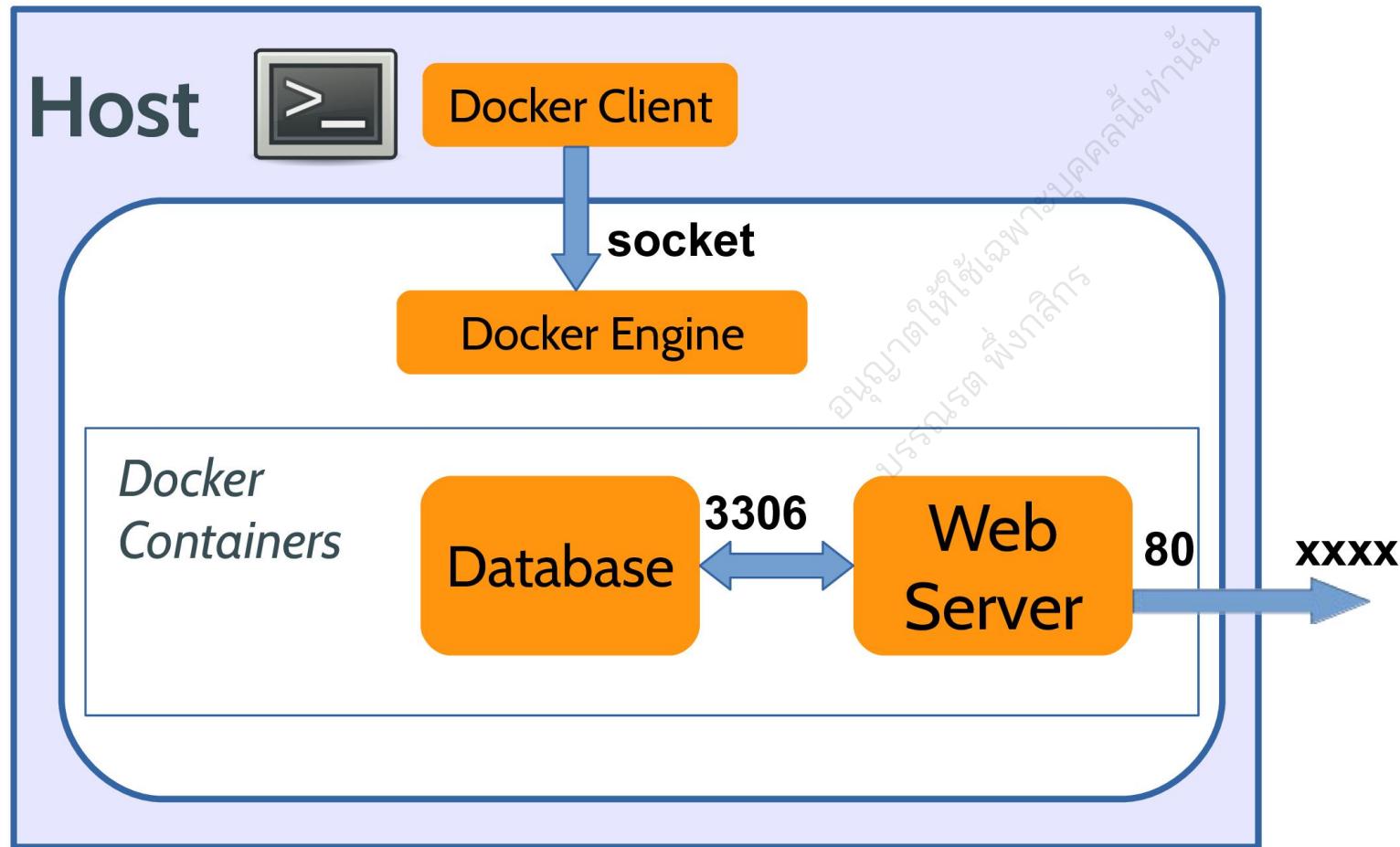
The main content area displays three repository cards:

- couchbase**: Updated 34 minutes ago. Description: Couchbase Server is a NoSQL document database with a distributed architecture. Tags: Container, Linux, x86-64, Storage, Application Frameworks. Status: OFFICIAL IMAGE. Metrics: 10M+ Downloads, 502 Stars.
- IBM Db2**: By IBM • Updated 5 months ago. Description: Full feature, free version for non-production environments. Ideal for developers. Tags: Container, Docker Certified, Linux, x86-64, IBM POWER, IBM Z, Analytics, Databases. Status: VERIFIED PUBLISHER.
- IBM Security Access Manager**: By IBM • Updated a month ago. Description: IBM Security Access Manager deploys a simplified access management solution for enterprises to defend from threat vuln... Tags: Container, Docker Certified, Linux, x86-64, Security, Application Infrastructure. Status: VERIFIED PUBLISHER.

Docker and DevOps



Docker Architecture

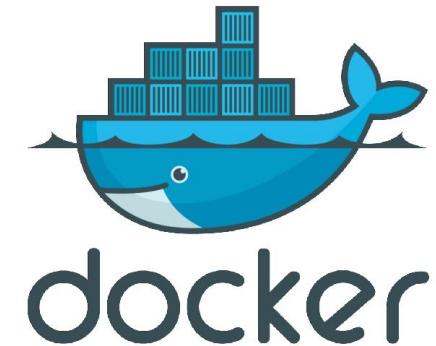


Docker Workshop

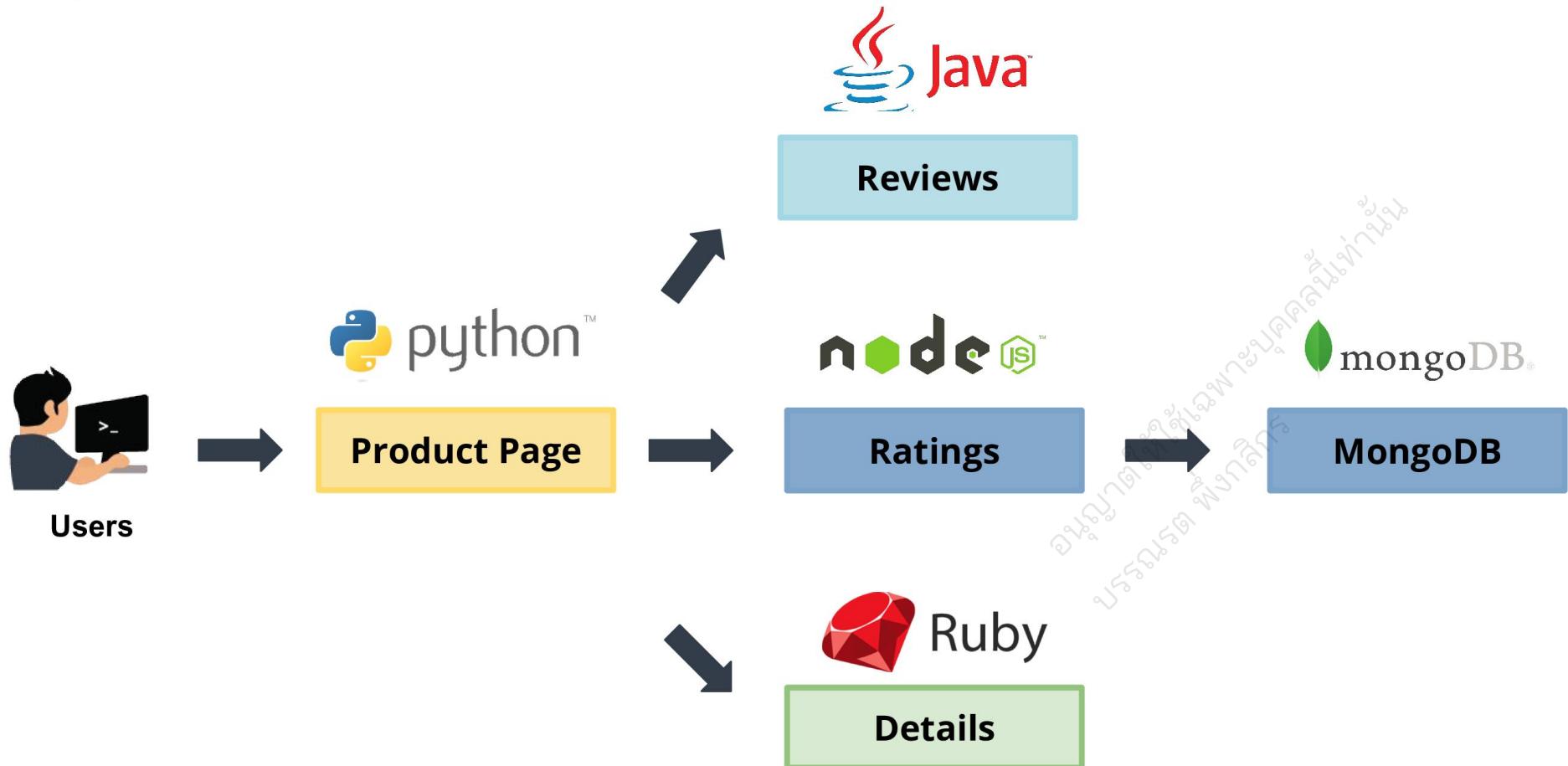
อบรม Docker สำหรับผู้เริ่มต้น
บรรยาย พนกาน

Intro to Docker

Intro to



Bookinfo Application Overview



Bookinfo Product Page



Summary: Wikipedia Summary: The Comedy of Errors is one of William Shakespeare's early plays. It is his shortest and one of his most farcical comedies, with a major part of the humour coming from slapstick and mistaken identity, in addition to puns and word play.

Book Details

Type: paperback
Pages: 200
Publisher: PublisherA
Language: English
ISBN-10: 1234567890
ISBN-13: 123-1234567890

Book Reviews

An extremely entertaining play by Shakespeare. The slapstick humour is refreshing!

— Reviewer1
★★★★★

Absolutely fun and entertaining. The play lacks thematic depth when compared to other plays by Shakespeare.

— Reviewer2
★★★★★

Details

Ratings

Reviews

Bookinfo Services Information

Services	Pages	Paths
Product Page	Health Check	<i>GET /health</i>
	Main Page	<i>GET /productpage</i>
Reviews	Health Check	<i>GET /health</i>
	Get Reviews API	<i>GET /reviews/[productid]</i>
Ratings	Health Check	<i>GET /health</i>
	Get Ratings API	<i>GET /ratings/[productid]</i>
Details	Health Check	<i>GET /health</i>
	Get Details API	<i>GET /details/[productid]</i>



Skoolio

นรุณ
อนุบาลในชีวิต
การเรียนรู้
บรรจุในสิ่งที่ดีที่สุด