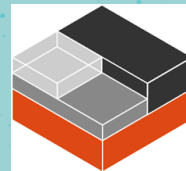




Docker

Shinyoung Joo

bit1010@live.com



Docker?



Container

Containerization



CNCF Cloud Native Interactive Landscape



The cloud native landscape (png, pdf), serverless landscape (png, pdf), and member landscape (png, pdf) are dynamically generated below. Please open a pull request to correct any issues. Greyed logos are not open source.
Last Updated: 2023-02-03T09:57:50.

You are viewing 15 cards with a total of 98,515 stars, market cap of \$2.6T and funding of \$15.9M.

Landscape


Card Mode

Members

Serverless

Wasm


Runtime - Container Runtime (15)



containerd ★ 13,094
Cloud Native Computing Foundation (CNCF)
Funding: \$3M




cri-o ★ 4,387
Cloud Native Computing Foundation (CNCF)
Funding: \$3M




Firecracker ★ 20,568
Amazon Web Services
MCep: \$1.2T




gVisor ★ 13,446
Google
MCep: \$1.4T



INCLAVARE ★ 525
Inclavare Containers
Cloud Native Computing Foundation (CNCF)
Funding: \$3M




iSulad ★ 302
OpenAtom Foundation




Kata Containers ★ 2,110
Open Infrastructure Foundation




Lima ★ 10,589
Cloud Native Computing Foundation (CNCF)
Funding: \$3M




Ixd ★ 3,668
Canonical
Funding: \$12.8M




rkt ★ 8,845
Cloud Native Computing Foundation (CNCF)
Funding: \$3M




runc ★ 9,962
Open Container Initiative (OCI)



Singularity ★ 2,406
Sylabs



SmartOS ★ 1,484
MNX Solutions



Sysbox ★ 1,816
Neptybox
Funding: \$125K



WasmEdge Runtime ★ 5,313
Cloud Native Computing Foundation (CNCF)
Funding: \$3M

<https://landscape.cncf.io/card-mode?category=container-runtime&grouping=category>

Reset Filters

Grouping

Category

Sort By

Alphabetical (a to z)

Category

Container Runtime

Project

Any

License

Any

Organization

Any

Headquarters

Any

Company Type

Any

Industry

Any

Download as CSV

Example filters

Cards by age

Open source landscape

Member cards

Cards by stars

Cards from China

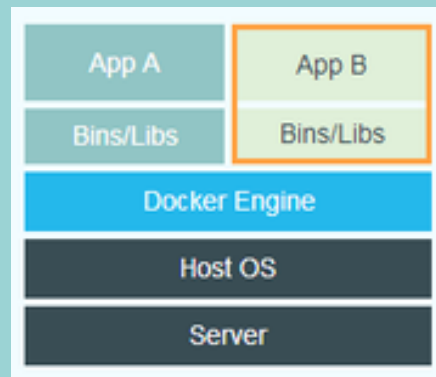
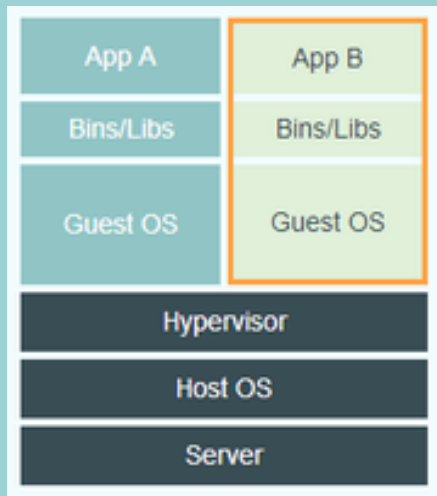
Certified K8s/KCSP/KTP

Cards by MCep/Funding

Cards without

bestpractices.dev

Container vs Virtual Machines



Hypervisor



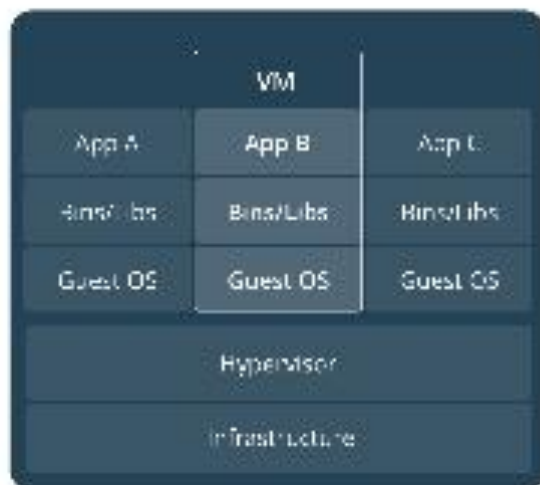
vmware



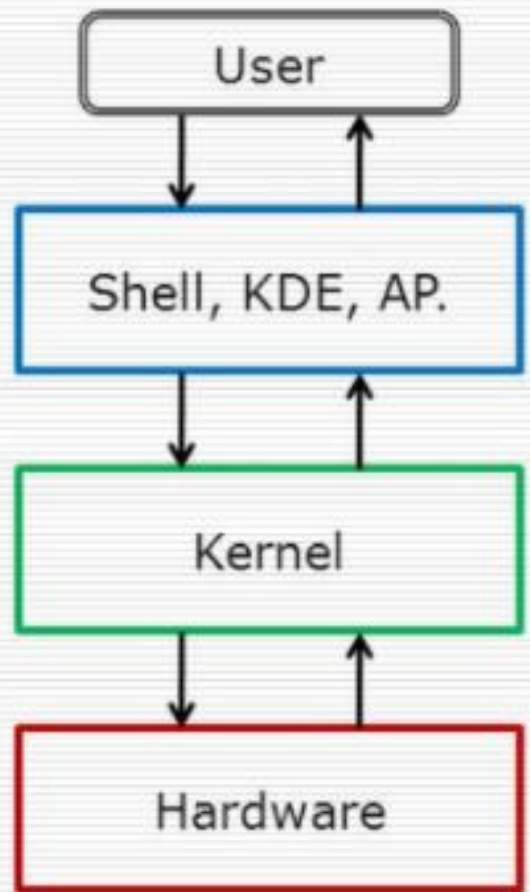
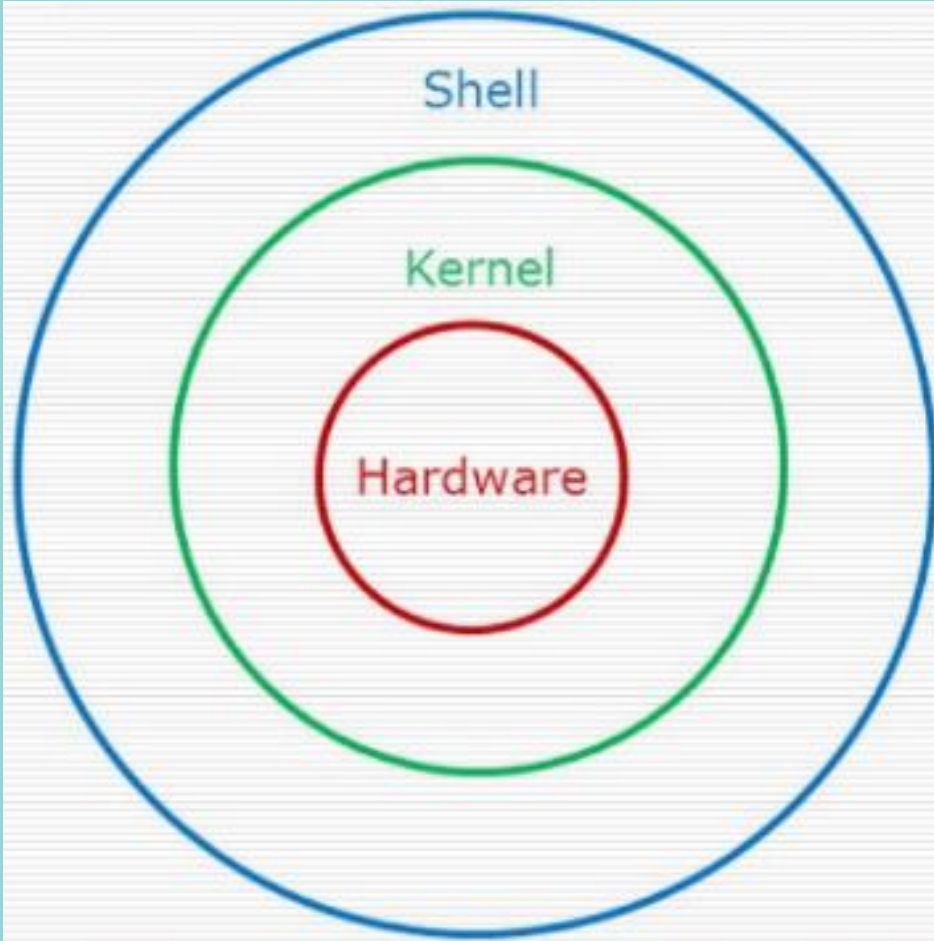
Cloud VM

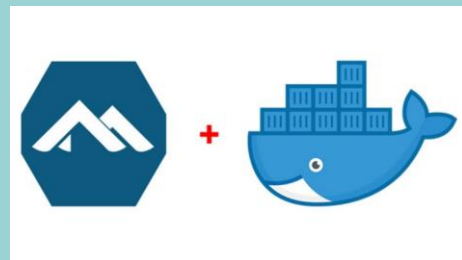


VM .vs. Container



- Virtualization은 단일 시스템에서 **여러 OS**가 동시에 실행
- Container는 **동일한 OS** 커널을 공유하며 시스템의 나머지 부분으로 **프로세스를 격리**
- 기존 가상화 기반으로 많이 사용되는 OS 전체 가상화 방식이 아닌, **하나의 OS 커널 위에** 각각의 개별 프로세스와 그에 따른 **환경을 격리화 시키는 방식**이다. OS 가상화 보다 오버헤드가 적고, 성능 손실이 적음.





Small. Simple. Secure.

Alpine Linux is a security-oriented, lightweight Linux distribution based on musl/libc and busybox.

Build once, Run Anywhere

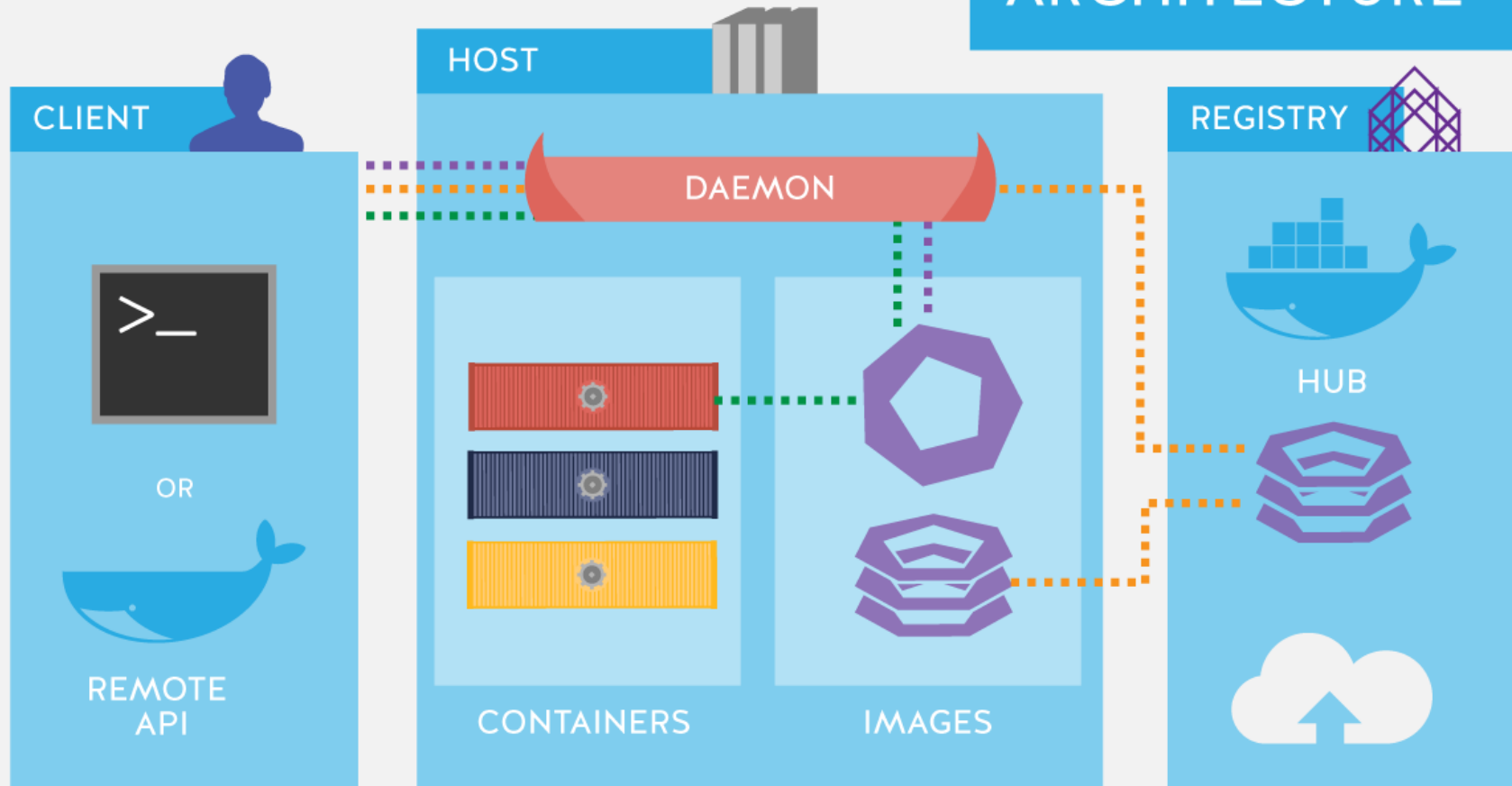


BUILD

PULL

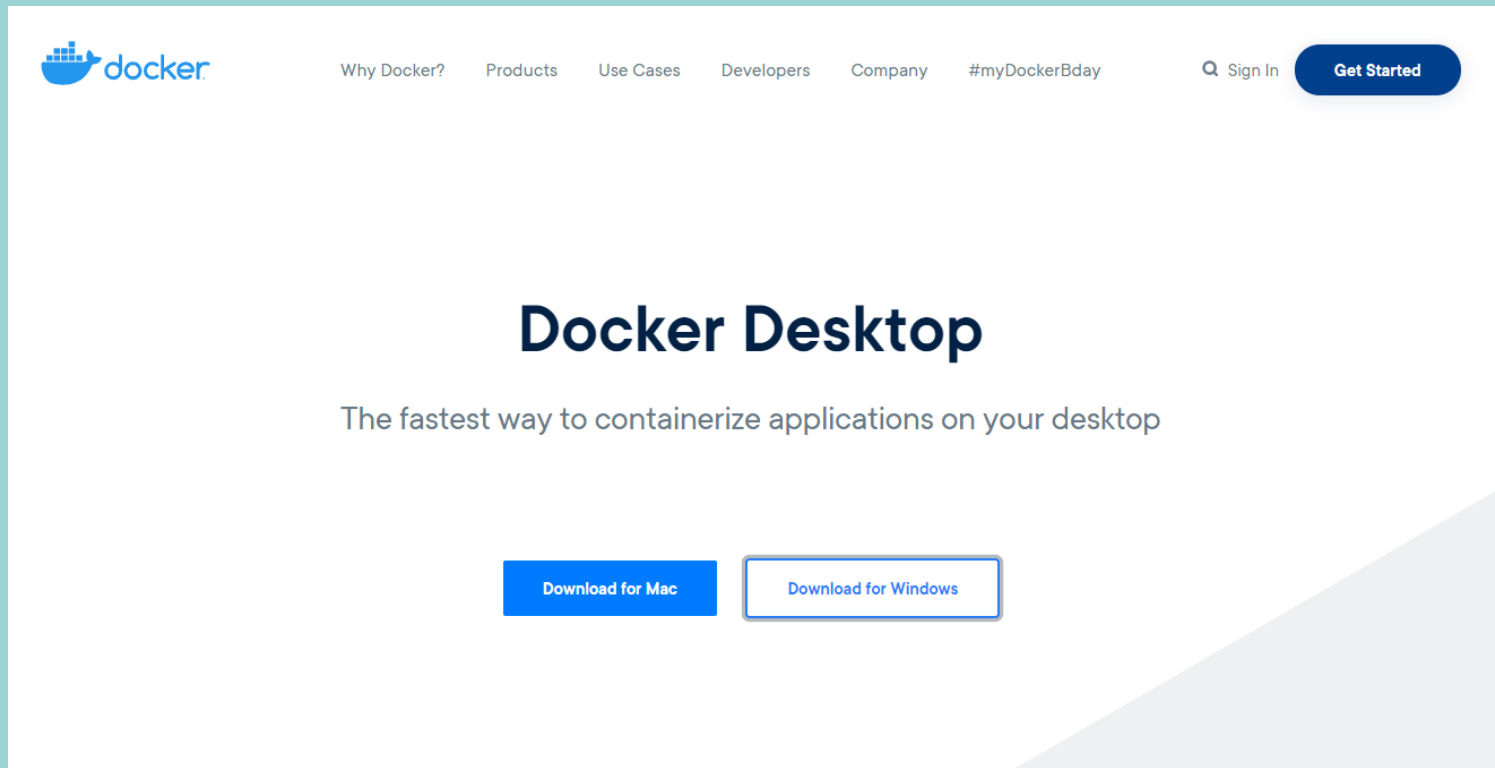
RUN

DOCKER ARCHITECTURE



도커 데스크탑 설치

<https://www.docker.com/products/docker-desktop>





Containers



Images



Volumes

Dev Environments BETA

Extensions



Add Extensions

Containers

[Give feedback](#)

A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. [Learn more](#)



Run a Sample Container

Try running a container: Copy and paste this command into your terminal and then come back

```
docker run -d -p 80:80 docker/getting-started
```

[Explore more in the Docker Docs](#)

Guides



Redis



An open-source in-memory key-value store that functions as a data structure server.








NGINX



An open-source web server, reverse proxy, load balancer and HTTP cache.









 Containers Images Volumes Dev Environments BETAExtensions ⋮ Add Extensions

Containers [Give feedback](#)

A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. [Learn more](#)

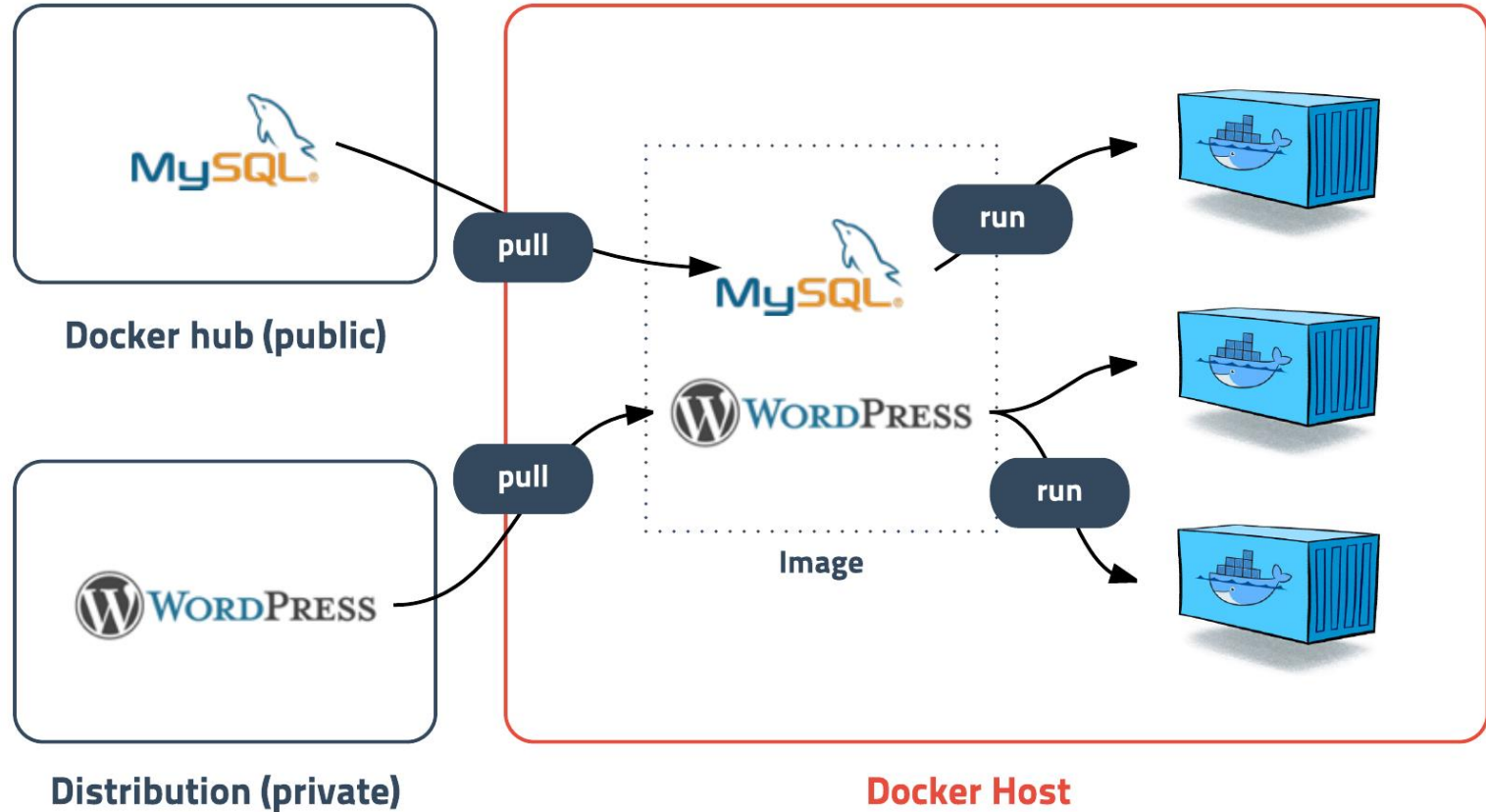
☐ Only show running containers

<input type="checkbox"/>	Name	Image	Status	Port(s)	Started	Actions
<input type="checkbox"/>	 pensive_bhaskara 88db5fd76529 	docker/getting-started	Running	80:80 	55 seconds ago  	

Showing 1 items



Docker Registry





CNCF Cloud Native Interactive Landscape



The cloud native landscape (png, pdf), serverless landscape (png, pdf), and member landscape (png, pdf) are dynamically generated below. Please open a pull request to correct any issues. Greyed logos are not open source.
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You are viewing 13 cards with a total of 38,166 stars, market cap of \$5.1T and funding of \$3M.

- Reset Filters
- Grouping
- Category
- Sort By
- Alphabetical (a to z)
- Category
- Container Registry
- Project
- Any
- License
- Any
- Organization
- Any
- Headquarters
- Any
- Company Type
- Any
- Industry
- Any
- Download as CSV

- Landscape
- Card Mode
- Members
- Serverless
- Wasm

Provisioning - Container Registry (13)

 Alibaba Cloud Container Registry Alibaba Cloud Container Registry (ACR) Alibaba Cloud MCap: \$287.2B	 Amazon ECR Amazon Elastic Container Registry (ECR) Amazon Web Services MCap: \$1.2T	 Azure Registry Azure Registry Microsoft MCap: \$2T	 DISTRIBUTION Distribution Cloud Native Computing Foundation (CNCF) ★ 7,239 Funding: \$3M	 Dragonfly Dragonfly Cloud Native Computing Foundation (CNCF) ★ 989 Funding: \$3M	 Google Container Registry Google Container Registry Google MCap: \$1.4T
 HARBOR Harbor Cloud Native Computing Foundation (CNCF) ★ 19,290 Funding: \$3M	 IBM Cloud Container Registry IBM Cloud Container Registry IBM MCap: \$122.2B	 JFrog Artifactory JFrog Artifactory JFrog MCap: \$2.8B	 Kraken Kraken Uber ★ 5,306 MCap: \$65.9B	 Portus Portus SUSE ★ 2,982 MCap: \$3.4B	 QUAY Quay Red Hat ★ 2,109 MCap: \$122.2B
 zot zot Cloud Native Computing Foundation (CNCF) ★ 251 Funding: \$3M					

- Example filters
- Cards by age
 - Open source landscape
 - Member cards
 - Cards by stars
 - Cards from China
 - Certified K8s/KCSP/KTP
 - Cards by MCap/Funding
 - Cards without
 - bestpractices.dev

<https://landscape.cncf.io/card-mode?category=container-registry&grouping=category>



node ☆

Docker Official Images

Node.js is a JavaScript-based platform for server-side and networking applications.

1B+

Container Linux ARM x86-64 IBM Z ARM 64 386 PowerPC 64 LE Application Infrastructure

Official Image

Description

Reviews

Tags

https://hub.docker.com/_/node

Linux - IBM Z (latest)

Copy and paste to pull this image

`docker pull node`

[View Available Tags](#)

02

Supported tags and respective Dockerfile links

- 13.10.1-stretch, 13.10-stretch, 13-stretch, stretch, 13.10.1, 13.10, 13, latest
- 13.10.1-stretch-slim, 13.10-stretch-slim, 13-stretch-slim, stretch-slim, 13.10.1-slim, 13.10-slim, 13-slim, slim
- 13.10.1-buster, 13.10-buster, 13-buster, buster
- 13.10.1-buster-slim, 13.10-buster-slim, 13-buster-slim, buster-slim

```
C:\Users\User>docker pull node
Using default tag: latest
latest: Pulling from library/node
56da78ce36e9: Pull complete
fbfe0f13ac45: Pull complete
6254ff6d0e60: Pull complete
e0e1e13bd9f6: Pull complete
b86b38b40a24: Pull complete
e357e1a6c1b2: Pull complete
f388b7dd520c: Pull complete
fd75ebfa3fbd: Pull complete
e71a5faa678a: Pull complete
Digest: sha256:c9f3ef4453d9f528c7e35261ad68935867ab524f9f735c457141dc8efb3dfd14
Status: Downloaded newer image for node:latest
docker.io/library/node:latest
```

```
C:\Users\User>docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
webapplication1	dev	98f75e65d5b8	4 days ago	207MB
mcr.microsoft.com/dotnet/core/aspnet	3.1-buster-slim	c819eb4381e7	6 days ago	207MB
node	latest	c31fbefb964cc	6 days ago	943MB
docker/desktop-storage-provisioner	v1.0	605a0f683b7b	4 weeks ago	33.1MB
azul/zulu-openjdk-alpine	latest	8252ff1ea1a4	2 months ago	155MB
k8s.gcr.io/kube-apiserver	v1.15.5	e534b1952a0d	5 months ago	207MB
k8s.gcr.io/kube-proxy	v1.15.5	cbd7f21fec99	5 months ago	82.4MB
k8s.gcr.io/kube-controller-manager	v1.15.5	1399a72fa1a9	5 months ago	159MB
k8s.gcr.io/kube-scheduler	v1.15.5	fab2dded59dd	5 months ago	81.1MB
docker/kube-compose-controller	v0.4.23	a8c3d87a58e7	10 months ago	35.3MB
docker/kube-compose-api-server	v0.4.23	f3591b2cb223	10 months ago	49.9MB
k8s.gcr.io/coredns	1.3.1	eb516548c180	14 months ago	40.3MB
k8s.gcr.io/etcd	3.3.10	2c4adeb21b4f	16 months ago	258MB
k8s.gcr.io/pause	3.1	da86e6ba6ca1	2 years ago	742kB

VM Image



Download VDI images for **VirtualBox**:

- Android x86
- Antergos - (Discontinued)
- antiX
- Arch Linux
- BackBox
- BlackLab Linux - (Discontinued)
- Bodhi
- BunsenLabs
- Calculate Linux
- CentOS

이미지 선택

가타 항목

내 이미지

공유 이미지

커뮤니티 이미지(미리 보기)

Marketplace

모두

최근에 만들어짐

프라이빗 제품

범주

컴퓨팅 (1600)

웹 (971)

관리 도구 (950)

개발자 도구 (820)

보안 (592)

분석 (530)

선택

Microsoft Windows 7

Microsoft

Virtual Machine

Microsoft Windows 7 Desktop Virtual Machine Images

선택

Ubuntu Server 22.04 LTS

Canonical

Virtual Machine

Linux For The Cloud

선택

Ubuntu Server 18.04 LTS

Canonical

Virtual Machine

Linux For The Cloud

선택

Red Hat Enterprise Linux

Red Hat Inc

Virtual Machine

Red Hat Enterprise Linux Pay-As-You-Go Images. This offer contains all images, including Gen 2.

선택

CentOS-based

Rogue Wave Software (formerly Cognosys)

Virtual Machine

This distribution of Linux is based on CentOS and is provided by Rogue Wave Software.

선택

CentOS 8.3 Free

Cognosys

Virtual Machine

Ready to use CentOS 8.3

선택

Windows multi-session + Microsoft 365 Apps

Microsoft

Virtual Machine

Windows Enterprise multi-session Virtual Machine image

선택

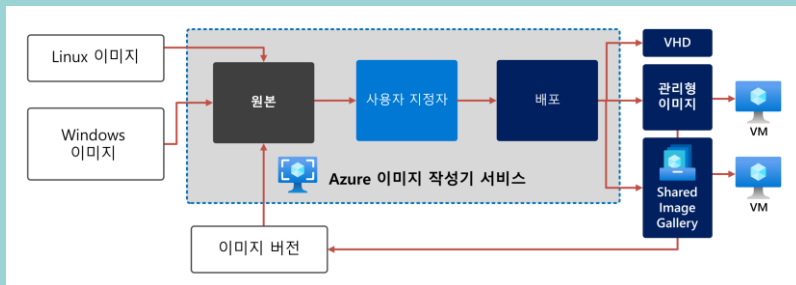
Visual Studio 2022

Microsoft

Virtual Machine

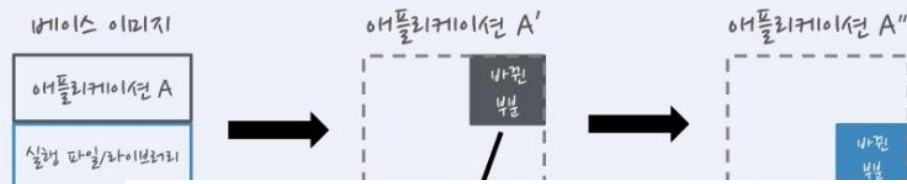
Visual Studio images for Azure

선택



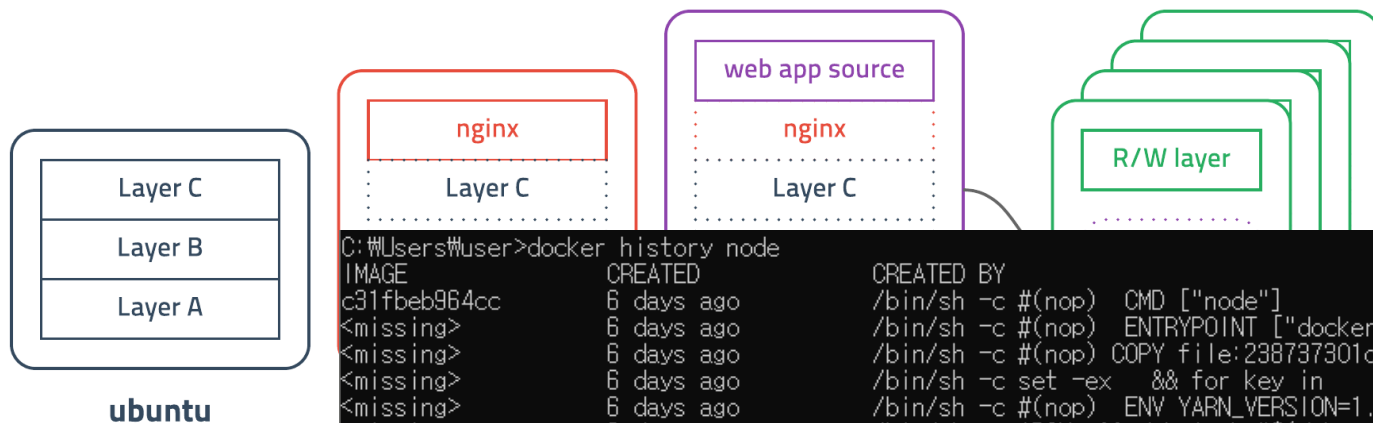
도커의 이미지 처리 방식

도커 이미지와 컨테이너



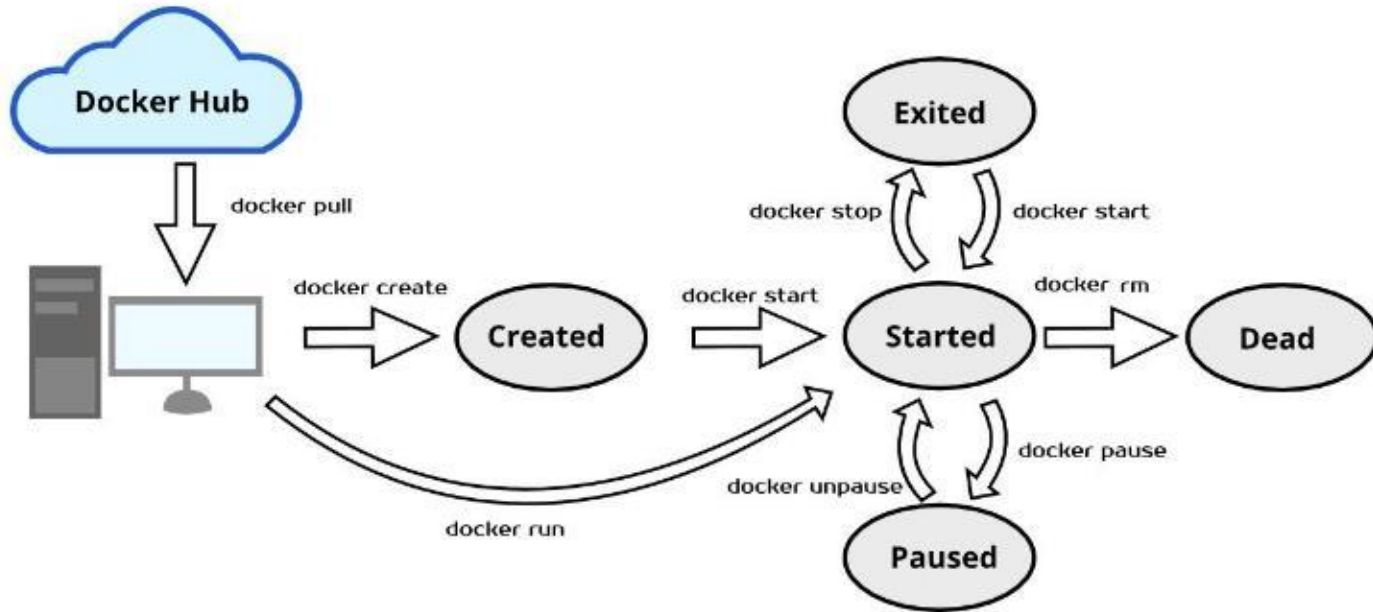
애플리케이션 + 변경!

도커는 베이스 컨테이너로

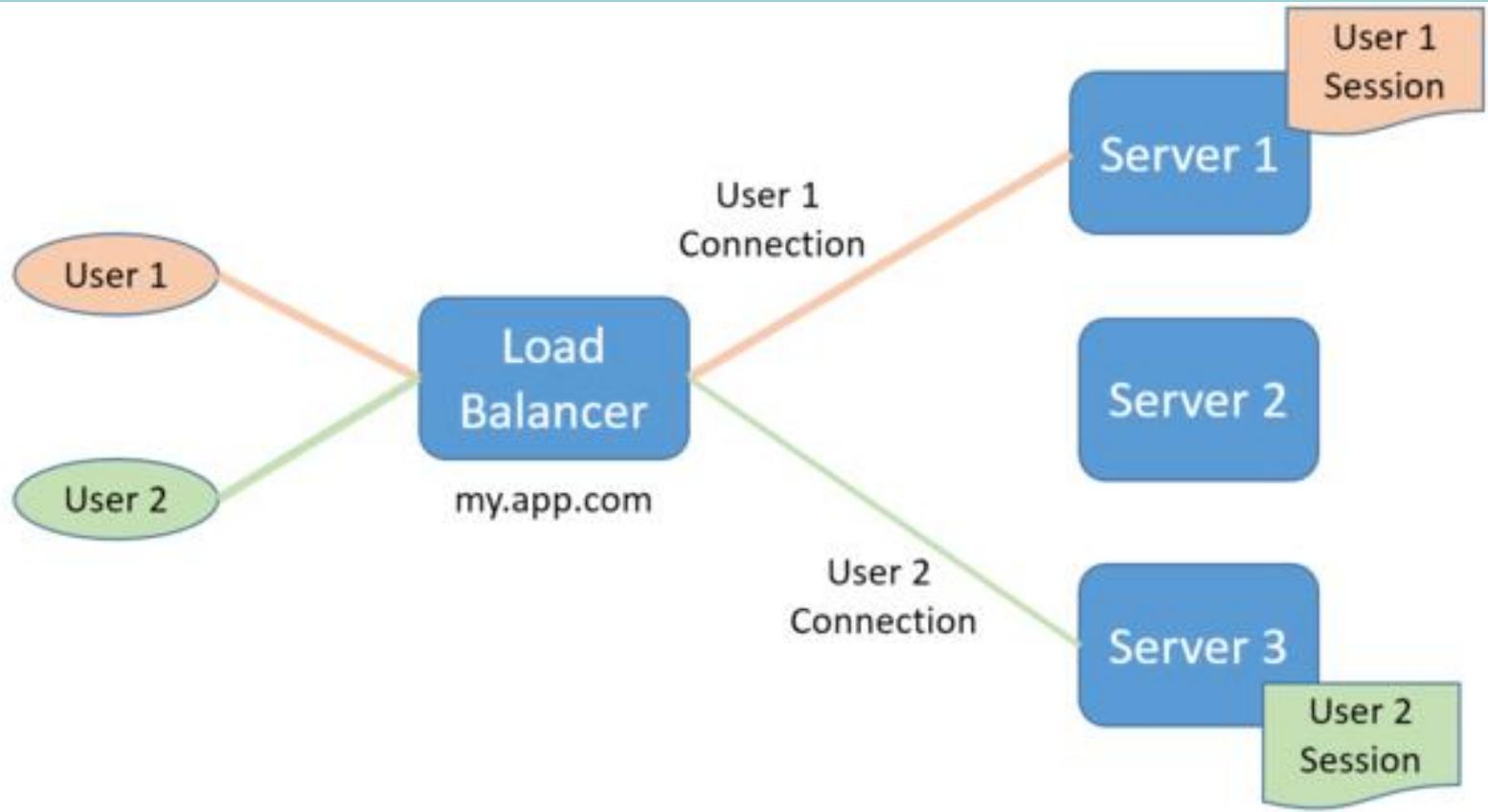


```
C:\Users\User>docker history node
IMAGE          CREATED          CREATED BY                                      SIZE
c31fbef964cc   6 days ago      /bin/sh -c #(nop) CMD ["node"]                0B
<missing>      6 days ago      /bin/sh -c #(nop) ENTRYPOINT ["docker-entryp... 0B
<missing>      6 days ago      /bin/sh -c #(nop) COPY file:238737301d473041... 116B
<missing>      6 days ago      /bin/sh -c set -ex && for key in 6A010...      7.75MB
<missing>      6 days ago      /bin/sh -c #(nop) ENV YARN_VERSION=1.22.4      0B
<missing>      6 days ago      /bin/sh -c ARCH= && dpkgArch="$(dpkg --print... 100MB
<missing>      6 days ago      /bin/sh -c #(nop) ENV NODE_VERSION=13.12.0    0B
<missing>      6 days ago      /bin/sh -c groupadd --gid 1000 node && user... 333kB
<missing>      6 days ago      /bin/sh -c set -ex; apt-get update; apt-get... 562MB
<missing>      6 days ago      /bin/sh -c apt-get update && apt-get install... 142MB
<missing>      6 days ago      /bin/sh -c set -ex; if ! command -v gpg > /... 7.81MB
<missing>      6 days ago      /bin/sh -c apt-get update && apt-get install... 23.3MB
<missing>      6 days ago      /bin/sh -c #(nop) CMD ["bash"]                0B
<missing>      6 days ago      /bin/sh -c #(nop) ADD file:774b5e2033bb42ad9... 101MB
```

Container Lifecycle



Container Stateless



Docker Host

