

가상화 기술과 컨테이너 기술의 차이점

Container 파일 시스템 (UFS)

Container Image 구조

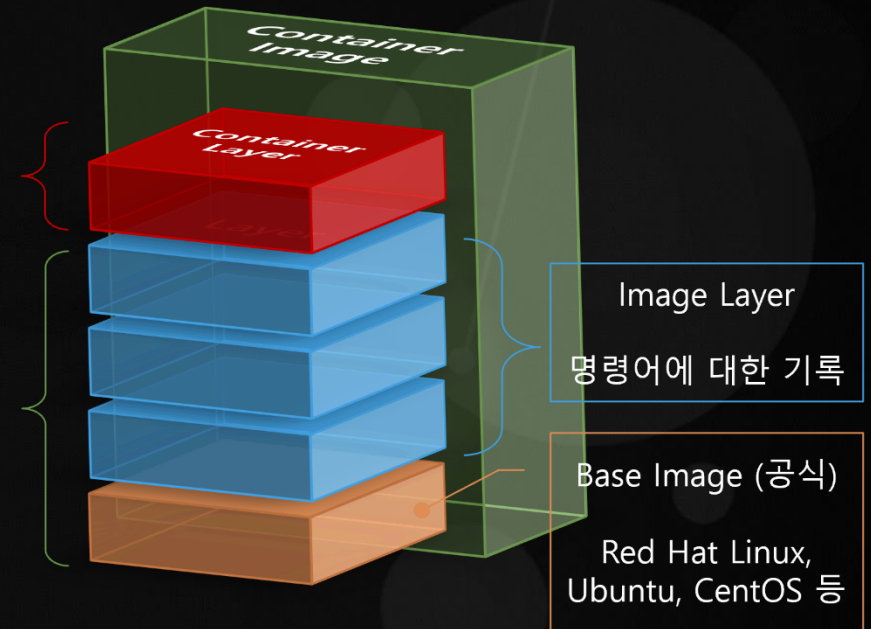
- 컨테이너를 실행할 때 필요한 파일 시스템
 - 이미지 레이어 구조로 파일 내용과 메타 정보를 포함
 - 레이어는 부모와 자식 관계이며, 변경분만 기록
- 공통 레이어는 이미지 간에 공유
 - 디스크 용량을 줄이고 높은 이식성 제공



Container diff

원본 이미지와 컨테이너 레이어간 차이를 확인하는 명령어

읽기전용
(Read Only)

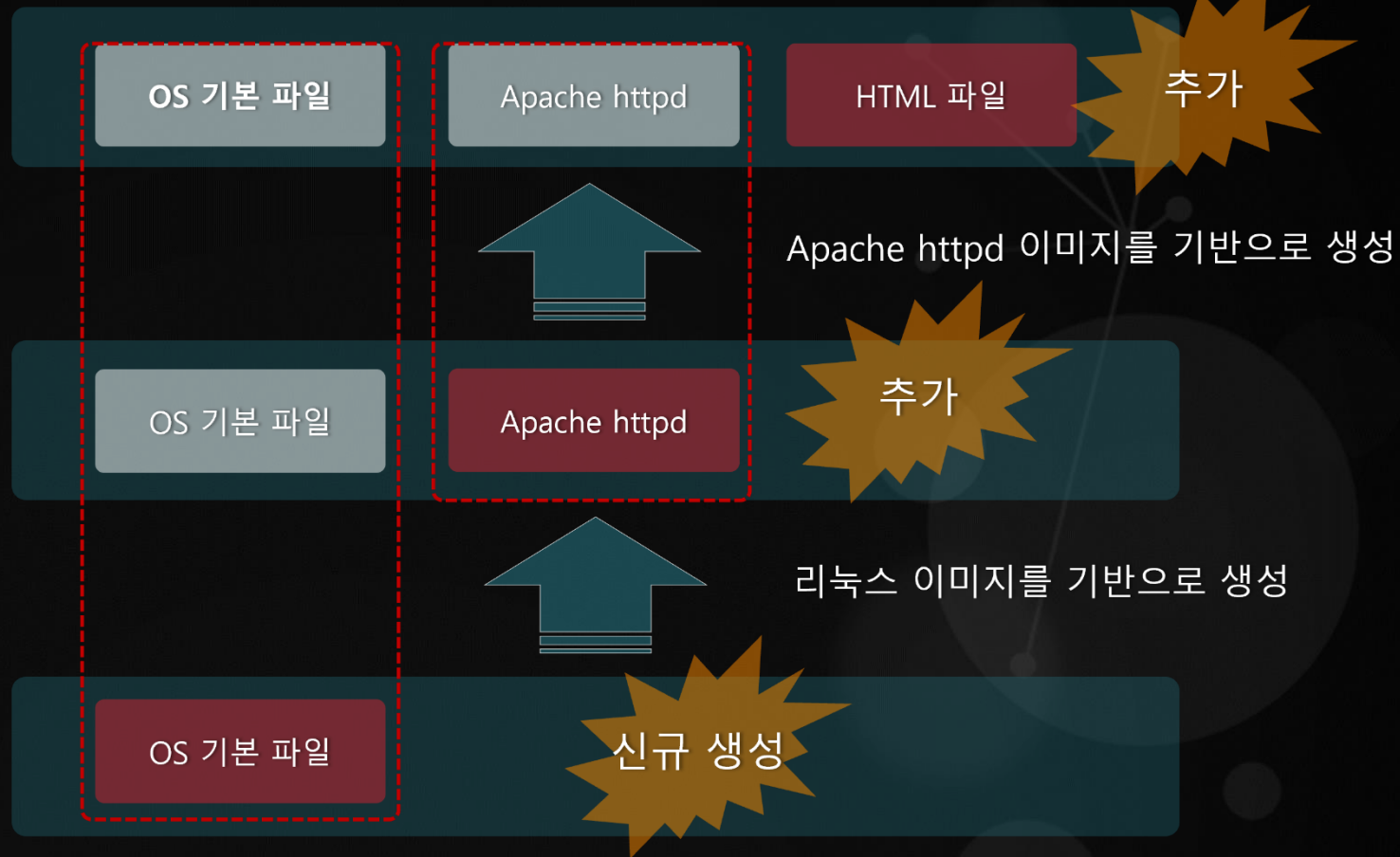


Container 이미지 구조 예시

웹서비스

Apache

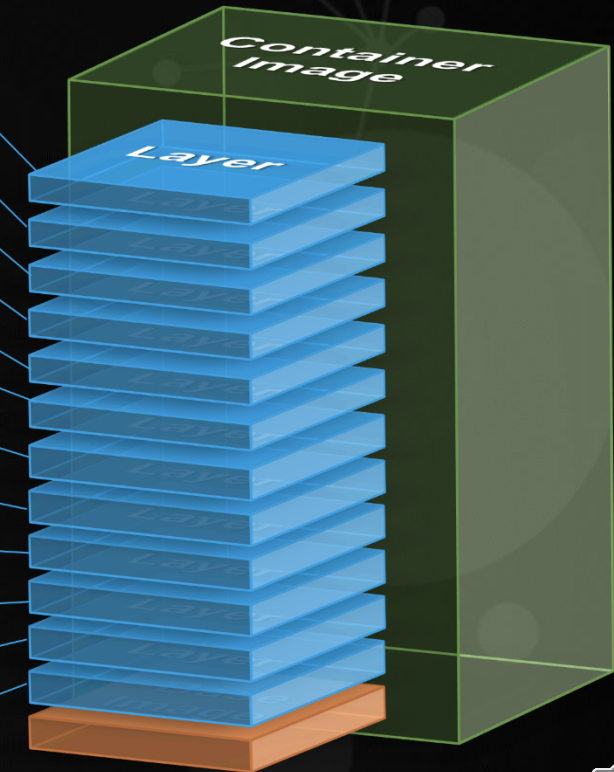
Red Hat
Linux



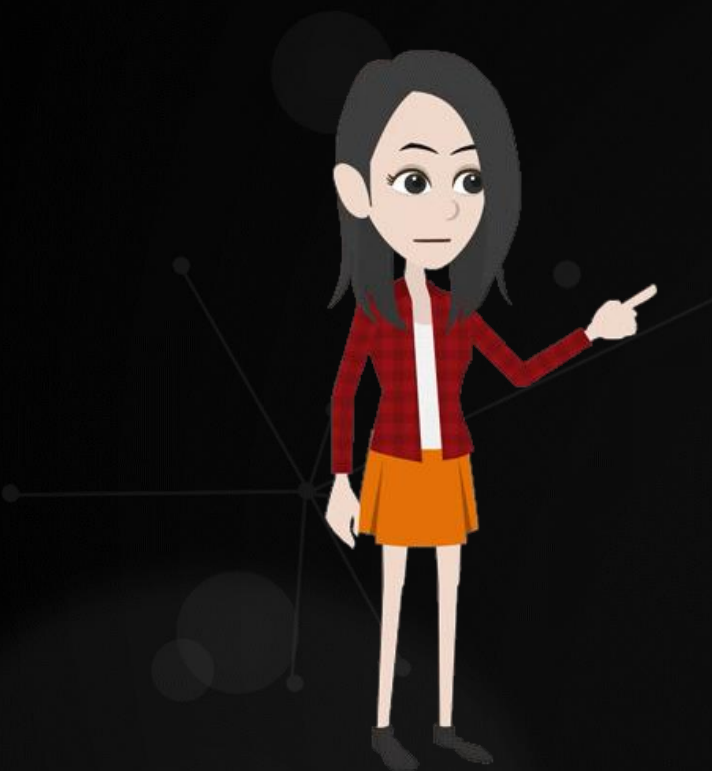
Container Image 상세 구조

- container history <image id / name>

	CREATED	CREATED BY	SIZE
a486da044a3f	10 weeks ago	/bin/sh -c # (nop) CMD ["nginx" "-g" "daemon o	0 B
3cb7f49c6bc4	10 weeks ago	/bin/sh -c # (nop) EXPOSE 443 /tcp 80 /tcp	0 B
42d2189f6cbe	10 weeks ago	/bin/sh -c # (nop) VOLUME [/var/cache/nginx]	0 B
6dda3f3a8c05	10 weeks ago	/bin/sh -c ln -sf /dev/stderr /var/log/nginx/	11 B
9108e25be489	10 weeks ago	/bin/sh -c ln -sf /dev/stdout /var/log/nginx/	11 B
72b67ad0ca	10 weeks ago	/bin/sh -c apt-get update &&	7.695 MB
e7e7a55e9264	10 weeks ago	/bin/sh -c # (nop) ENV NGINX_VERSION=1.9.4-1 ~ j	0 B
97df1ddba09e	3 months ago	/bin/sh -c echo "deb http://nginx.org/package	221 B
5dd2638d10a1	3 months ago	/bin/sh -c apt-key adv --keyserver hkp : // pgp.	1.997 kB
aface2a79f55	3 months ago	/bin/sh -c # (nop) MAINTAINER NGINX Container Mai	0 B
9a61b6b1315e	3 months ago	/bin/sh -c # (nop) CMD ["/bin/bash"]	0 B
902b87aaac9	3 months ago	/bin/sh -c # (nop) ADD file:e1dd18493a216ecd0c	125.2 MB



Container Image에 대한 Layer 정보



MicroBadger e.g. alpine or puppet/puppetserver View image Labels Private registries

erikxiv/subversion ☆

Metadata from image erikxiv/subversion
Last inspected 8 hours ago. Versions ▾

Tags	latest
Created	March 26, 2015 at 06:24 AM
ID	a93805c86295
Maintainer	Erik Larsson <erik.larsson@[hidden]>
Download Size	143.9 MB
Labels	No labels

Layers 27 No matching base image?

```
MAINTAINER Tianon Gravi <admwigg@[hidden]> - mkimage-debootstrap.sh -i  
iproute,iputils-ping,ubuntu-minimal -t precise.tar.xz precise  
http://archive.ubuntu.com/ubuntu/  
63.3 MB ADD precise.tar.xz in /  
MAINTAINER Phusion <info@[hidden]>  
ENV HOME=/root  
92 bytes RUN mkdir /build  
9.5 kB ADD dir:04ed9c3aac607318e8fe5d03e46e9296b548fc359305f34f7a4cd683951a1871 in  
/build  
62.9 MB RUN /build/prepare.sh && /build/system_services.sh && /build/utilities.sh &&  
/build/cleanup.sh  
CMD [/sbin/my_init]  
MAINTAINER Erik Larsson <erik.larsson@[hidden]>  
ENV HOME=/root  
205 bytes RUN rm -rf /etc/service/sshd /etc/my_init.d/00_regen_ssh_host_keys.sh  
CMD [/sbin/my_init]  
231 bytes RUN echo 'deb http://us.archive.ubuntu.com/ubuntu/ precise universe' >>  
/etc/apt/sources.list  
14.8 MB RUN apt-get -y update  
2.8 MB RUN LC_ALL=C DEBIAN_FRONTEND=noninteractive apt-get install -y subversion  
502 bytes RUN apt-get clean && rm -rf /var/lib/apt/lists/* /tmp/* /var/tmp/*  
ENV SVN_REPO_NAME=repos  
EXPOSE 3690/tcp  
133 bytes RUN mkdir /etc/service/svn  
270 bytes ADD file:5d7748c63200147d6b753699b766e698bce5a3f8353969f4bc069f2cd41851c2 in  
/etc/service/svn/run  
272 bytes RUN chmod u+x /etc/service/svn/run  
108 bytes RUN mkdir -p /var/svn  
7.6 kB RUN svnadmin create /var/svn/$SVN_REPO_NAME  
1.1 kB ADD file:72c0f0d81098c9f08221ea7148ef2a0d4cc62fd1ca3918cb96d574b6ed10996c in  
/var/svn/repos/conf/svnserve.conf  
VOLUME [/svn]  
32 bytes VOLUME [/svn]
```

Source: <https://microbadger.com/images/erikxiv/subversion>