

Docker learnings

Learnings from using Docker after 3 years

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This talk is not about Kubernetes or Docker Swarm

You shouldn't run your container as
root

How to build smaller images

Cleanup up your Docker with prune

- Remove dangling images with `docker image prune`
- Remove stopped containers with `docker container prune`
- Same for network and volume or all in once with `docker system prune`
- Autoremove a container after it's stopped with `docker --rm...`

Using a UI in the browser or terminal

Use portainer locally without a password

```
alias portainer="docker run --rm -d  
-p 9000:9000  
--name=portainer  
-v /var/run/docker.sock:/var/run/docker.sock  
portainer/portainer --no-auth"
```

Hint: call it in an anonymus browser session

Use sen as terminal ui to inspect the layers of your images

```
alias sen="docker run --rm --name=sen  
-v /var/run/docker.sock:/run/docker.sock  
-ti -e TERM tomastomecek/sen"
```

```
scratch  
→ fa5be2806d4c /bin/sh -c #(nop) MAINTAINER The CentOS Project <cloud-ops@centos.org>  
↳ 2bf4902415e3 /bin/sh -c #(nop) ADD file:c0989f72baa665000706f3a870a88fb4075ac62b77d79b148f7  
↳ 86bcb57631bd /bin/sh -c #(nop) LABEL name=CentOS Base Image vendor=CentOS license=GPLv2 l  
↳ c8a648134623 /bin/sh -c #(nop) CMD ["/bin/bash"]  
↳ 979d3e7d4dc7 /bin/sh -c #(nop) MAINTAINER Pavel Raiskup <praiskup@redhat.com>  
↳ d41e6e6bdfd8 /bin/sh -c #(nop) ENV container=docker  
↳ 235218c0d071 /bin/sh -c #(nop) LABEL INSTALL=docker run -t -i --rm --privileged :  
↳ 3f8341e3ed1b /bin/sh -c yum -y install postgresql-server && yum -y reinsta  
↳ 51ce5a01237d /bin/sh -c #(nop) ADD dir:1543912f127caa2263603d5f3ff11fdddfde4  
↳ 1efd5268689e /bin/sh -c systemctl disable getty.service console-getty.serv  
↳ 9efdb56ef4ec /bin/sh -c #(nop) VOLUME [/var/lib/pgsql/data]  
↳ 9100f952927c /bin/sh -c #(nop) EXPOSE 5432/tcp  
↳ 578145a76f11 /bin/sh -c #(nop) USER [postgres]  
↳ 55c64acbaef1 /bin/sh -c #(nop) ENTRYPOINT &{["/usr/bin/container-e  
↳ 9e6c06b57ed7 docker.io/praiskup/postgresql:latest /bin/sh -c #(nop)  
→ 6888fc827a3f /bin/sh -c #(nop) MAINTAINER Patrick Uiterwijk <puiterwijk@gmail.com>  
↳ 9bdb5101e5fc docker.io/fedora:23 /bin/sh -c #(nop) ADD file:bc5e5cdd4c4d1cac6f05788cf50  
→ 95612a3264fc  
↳ c23bf6e72b30 docker.io/rhel7/rsyslog:latest  
↳ ba3ffbc37ab docker.io/rhel7/sadcc:latest  
#0 [MJ Listing #1 LT
```

Use ctop for monitoring your local containers

- github ctop

| cTop - 10:04:15 AEDT 20 containers | | | | | | |
|------------------------------------|--------------|-----|-----------|--------------|--|--|
| NAME | CID | CPU | MEM | NET RX/TX | | |
| ultimate_jennifer | 9eb1e9a6cb91 | 45% | 136M / 2G | 1K / 2K | | |
| luminous_lady | cf754eb3aa09 | 42% | 134M / 2G | 2K / 1K | | |
| top_notch | 7b5fd634a980 | 36% | 164M / 2G | 2K / 2K | | |
| neat_roulette | 0677c5437698 | 20% | 59M / 2G | 667B / 698B | | |
| exquisite_jackpot | 72372078a320 | 16% | 65M / 2G | 786B / 780B | | |
| ace_void | 292db4fa7c5c | 15% | 59M / 2G | 753B / 706B | | |
| neat_multiple | 5f8e5928be03 | 13% | 51M / 2G | 1020B / 800B | | |
| peachy_sakura | 70bd0664ff8c | 12% | 53M / 2G | 710B / 749B | | |
| legendary_korath | 23a40fbbalcb | 11% | 58M / 2G | 792B / 854B | | |
| astounding_nikita | 93de62c2b03f | - | - | - | | |
| cats_pajamas | ec19826bd862 | - | - | - | | |
| fantabulous_titane... | 8e23ebb7e05f | - | - | - | | |
| grand_bebop | c3a231ea8f49 | - | - | - | | |
| impressive_sentine... | e154df51f8e6 | - | - | - | | |

Keep an eye on your logfiles

How to grep the logs

```
docker logs {container} | grep {term}
```

This will not work as expected

How to grep the logs

```
docker logs {container} | grep {term}
```

This will not work as expected

```
docker logs {container} 2>&1 | grep {term}
```

The reason why it's not working in the way you would expect is, that docker is not logging to stdout. Instead it's logging the stderr. So you have to redirect stderr to stdout before you can pipe it to grep.

To delete all log files, you can use the following command

```
find /var/lib/docker/containers/  
-type f -name "*.log" -delete
```

Thank you!