Docker Engine - Breakout session

Arnaud Porterie, eng. manager Michael Crosby, chief maintainer

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- Engine quick facts
- What's new in Docker Engine 1.7.0
- What's coming next
 - Demo!
- Q&A





Engine quick facts What's the Docker Engine?



Engine quick facts

- Central piece of the Docker platform
 - Docker daemon + docker CLI
- Engine by the numbers
 - 963 contributors
 - 71 pull requests on average merged each week
- <u>https://github.com/docker/docker/</u>

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What's new in Engine 1.7.0 A tour of the major new features



Experimental binary

- A new flavor of the Docker engine
 - Built and distributed nightly
 - Bleeding edge features: we want your feedback!
- First experimental features
 - New networking model
 - Network plugins
 - Volume plugins
- <u>https://experimental.docker.com</u>



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Network stack

- Introducing libnetwork
 - Whole new API (Container Networking Model)
- A much needed technical effort
 - Solid ground for better **default** batteries
 - Single extension point for **alternative** batteries
- https://github.com/docker/libnetwork/





Better network performance

- docker -d --userland-proxy=false
 - Huge performance improvement for port publishing
- Not the default
 - Relies on <u>Hairpinning</u>
 - Introduced in 2.6.32, still an issue on some distros



And many more!

- ZFS storage driver
- docker build --cpu-quota ...
- docker build https://github.com/x/y#branch
- docker exec -u|--user

...





What's next



Better tooling

...

- Community wants choices
 - Push/pull without Docker (and vice-versa)
 - Containers without the daemon
- Objective: spin-out runtime, builder, trust, ...



Security

- Trusted image distribution
- User namespaces
- Syscall filtering with seccomp
 - Already supported by libcontainer
- Engine security profiles
 - Simple way to express security constraints
 - Single file for capabilities, AppArmor, seccomp, ...



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Networks & volumes management

- Top-level network concept
 - Already in experimental
 - \$ docker network create --driver d net1
 - \$ docker run --publish-service=svc.net1 my image
- Similar top-level volume concept
 - Currently in design
 - \$ docker volume create --driver d vol1
 - \$ docker run -v vol1 my_image



Demo time!







Thank you

Arnaud Porterie / @icecrime Michael Crosby / @crosbymichael

