alpine linux

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Intro

- initial release at 2006

- independent and non-commercial

- general purpose
  - embedded (network) devices
  - servers and containers
  - desktops (Xfce 4)

- platforms: x86, x86_64, ARMhf, AArch64*

* in edge and upcoming release

Alpine's motto

Small. Simple. Secure.

for power users

Small and lightweight

- Busybox userland (instead of GNU)

- musl libc (instead of glibc)

- apk-tools (instead of pacman, dnf, apt, …)

- OpenRC

- mdev (instead of udev)

- LibreSSL (in upcoming v3.5)

- *…but you can install coreutils, eudev*

Small

- Base installation in chroot (container)
  - **8 MiB / 260 files**
  - 16 packages (only 6 third-party projects)
- Base installation on virtual server
  - 53 MiB / 1 222 files
  - 26 packages
- Base installation on metal server
  - 302 MiB / 4 686 files (*a lot* of kernel modules…)
  - 27 packages

Secure

- designed with security in mind

- kernel with grsecurity/PaX

- binaries compiled as PIE with stack smashing protection

- **no** ~~system~~ *security* ***d***isaster running as PID 1…*

* https://www.agwa.name/blog/post/how_to_crash_systemd_in_one_tweet

Releases

- two stable releases per year

- security fixes for stable releases

  - 2 years for main repository

  - 6 months for community repository

- rolling edge branch

Packages

- main – **2 027 aports***

- community – **766 aports***

- testing – 816 aports*

* in edge on 2016-10-07, without subpackages

Who uses it anyway…?

Official **Docker** images*…

…so quite a lot people.

But many also in *real* containers,

servers, embedded devices, desktops…

* https://www.brianchristner.io/docker-is-moving-to-alpine-linux/

Install in *a second* into chroot

```
$ wget -O- $REPO_URI/x86_64/apk-tools-static….apk \
    | tar -xz

$ ./sbin/apk.static -p ./alpine -U --initdb \
--allow-untrusted -X $REPO_URI add alpine-base

# mount -t proc none ./alpine/proc

# mount --rbind /sys ./alpine/sys

# mount --rbind /dev ./alpine/dev

# chroot ./alpine
```

!! Just for demonstration, it's not secure; always verify signatures !!

Try alpine Linux

on vpsFree.cz

Useful links

- https://alpinelinux.org/

- https://pkgs.alpinelinux.org/

- https://github.com/alpinelinux/aports/

- https://github.com/jirutka/aports/

- http://www.etalabs.net/compare_libcs.html