

aarch64 - Porting #3199

Support aarch64

2022-03-06 12:52 AM - gap

Status: open	% Done: 0%
Priority: discussion	
Assignee: oaken-source	
Category:	
Description What is the current status of the aarch64 port? There are no aarch64 packages; are armv7h (aarch32) packages compatible with aarch64? What would it take to make aarch64 supported fully?	

History

#1 - 2022-03-11 11:17 AM - bill-auger

- Priority changed from bug to discussion

yes they are compatible - the install guide explains the details

https://wiki.parabola.nu/ARM_Installation_Guide#64bit_ARM

#2 - 2022-03-11 03:20 PM - gap

What needs to be done to make Parabola have aarch64 package repos?

The Install Guide solution of using aarch32 packages on an aarch64 system is far from ideal.

#3 - 2022-03-11 05:42 PM - oaken-source

- Assignee set to oaken-source

I'm working on a version of aarch64 parabola based off of aarch64 archlinuxarm.

What needs to be done is import an initial set of repository packages, and rebuild all of [libre] (that is not of arch any, those can be imported as well)

I need to do a first evaluation of the amount of effort that is necessary for this, but it is much more reasonable than for example the work needed for a riscv or ppc64le port.

#4 - 2022-03-11 06:13 PM - gap

Awesome!

I have a Raspberry Pi 3 Model B V1.2 from before I found out about libre software which unfortunately needs a blob to even boot.

I could test aarch64 Parabola on it with the reverse-engineered libre firmware: <https://github.com/librerpi/rpi-open-firmware> although the project already stalled once and doesn't seem to have particularly good support yet.

Guix already packages this project, but I'd rather avoid Guix because it's not 100% libre; it allows proprietary works in its repos.

Please tell me if I could be of help.

#5 - 2023-10-30 03:39 AM - avalos

I'm running Arch Linux ARM virtualized in my Mac Mini M2, in order to help port Parabola packages to aarch64. I built and installed your-freedom, but it appears that it didn't conflict with any package from base and base-devel. However, bill-auger told me to run this command to list the packages in the blacklist that your-freedom couldn't conflict:

```
LANG=C pacman -Qi $ (cut -d: -f1 /usr/share/doc/your-freedom/blacklist.txt) 2> /dev/null | grep Name
```

And this is the output:

```
Name      : archlinuxarm-keyring
Name      : archlinux-keyring
Name      : base
Name      : cdrtools
Name      : filesystem
Name      : licenses
Name      : linux-api-headers
```

```
Name      : linux-firmware
Name      : linux-firmware-whence
Name      : linux-aarch64
Name      : pacman-mirrorlist
Name      : pacman
Name      : systemd-libs
Name      : systemd
Name      : systemd-sysvcompat
```

#6 - 2023-10-30 04:13 AM - bill-auger

right, your-freedom can not conflict with any package which gets replaced in libre by a package with the identical name - all such packages must replaces=() itself for migrations from arch - that list of packages are those which would need to be packaged specifically for aarch64, in order that libretools can create aarch64 chroots - some may need to be cross-compiled for the parabola repos first (o/c you could build them natively on archarm, to get started) - from there, the rest of the packages can be built with libretools - luckily, that is a relatively short list; and several of them are trivial to build 'any' packages

'linux-aarch64' and probably several other kernels will need to be added to the blacklist

there are a few more to add to that list for non-systemd support (openrc, udev, elogind, your-init-freedom, etc); but it would be a great leap forward if only to get a complete systemd librechroot - only a small few packages must be built in a non-systemd chroot

#7 - 2023-12-21 09:16 PM - bill-auger

just to note, there is a small blind-spot called non-systemd - artix supports only x86_64 - luckily those changes usually translate to other arches without troubles - but just in case, there is a fork of artix which maintains aarch64-specific non-systemd recipes based on artix and archarm recipes <https://armitixlinux.org/>