📖 **alexellis** / **docker-arm**

Swarm is Broken on Docker CE after 17.05 - no services are scheduled. #14

[New issue]

ⓘ **Open**   **alexellis** opened this issue on Aug 20 · 7 comments

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alexellis commented on Aug 20 · edited   [**Owner**]

Issue:

Docker Swarm is broken in Docker CE 17.07

You cannot schedule ARM containers.

Work needed:

We need to rebuild Docker with the follow PR added to see if it resolves the issue.

[moby/moby#34021](#)

- Git clone moby
- Checkout Moby with the correct 17.07 tag and then run `make` in the moby directory.
- You might want to add a swap file for building too

Update: We've tested the issue on ARMv7 but have to repeat for ARMv6 on a Pi Zero. Bootstrap here - [#19](#)

🏷 **alexellis** added the `save-docker` label on Aug 20

🔖 **alexellis** referenced this issue on Aug 20

How can I help test Docker for RPi? #17   [ⓘ Open]

🏷 **alexellis** added `community-supports-docker` and removed `save-docker` labels on Aug 20

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alexellis commented on Aug 20 · edited   [**Owner**]

Get the change via **@nishanttotla**

```
$ git fetch origin pull/34021/head:dont-set-architecture-constraint
$ git checkout dont-set-architecture-constraint
```

Open a new tux session and make sure you have tuned-up your RPi - [#16](#).

Now invoke a build via `make build`

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alexellis commented on Aug 20   [**Owner**]

Folks you will need a Docker version here to start with, there's 17.06 in the stretch / edge repo - follow instructions here - https://docs.docker.com/engine/installation/linux/docker-ce/debian/

Change stable to edge in the apt command. Follow instructions for `armhf`

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alexellis commented on Aug 20   [**Owner**]

This is as far as I got with `make tgz`

```
Successfully tagged docker-dev:dont-set-architecture-constraint
docker run --rm -i --privileged  -e DOCKER_CROSSPLATFORMS -e BUILD_APT_MIRROR
BUILDFLAGS -e KEEPBUNDLE -e DOCKER_BUILD_ARGS -e
```

Assignees

No one assigned

Labels

`community-supports-docker`

Projects

None yet

Milestone

No milestone

Notifications

2 participants

```
   DOCKER_BUILD_GOGC -e DOCKER_BUILD_PKGS -e DOCKER_BASH_COMPLETION_PATH -e
DOCKER_CLI_PATH -e DOCKER_DEBUG -e DOCKER_EXPERIMENTAL-
e DOCKER_GITCOMMIT -e DOCKER_GRAPHDRIVER -e DOCKER_INCREMENTAL_BINARY -e DOCKER_PORT -e
DOCKER_REMAP_ROOT -e DOCKER_STORAGE_OPTS
-e DOCKER_USERLANDPROXY -e TESTDIRS -e TESTFLAGS -e TIMEOUT -e HTTP_PROXY -e HTTPS_PROXY
-e NO_PROXY -e http_proxy -e https_proxy
 -e no_proxy -v "/home/pi/docker/bundles:/go/src/github.com/docker/docker/bundles" -v
/home/pi/docker/.git:/go/src/github.com/doc
ker/docker/.git -v "dockerdev-go-pkg-cache-gopath:/go/pkg" -v "dockerdev-go-pkg-cache-
goroot-linux_amd64:/usr/local/go/pkg/linux_
amd64" -v "dockerdev-go-pkg-cache-goroot-
linux_amd64_netgo:/usr/local/go/pkg/linux_amd64_netgo"    -t "docker-dev:dont-set-archit
ecture-constraint" hack/make.sh dynbinary binary cross tgz

---> Making bundle: dynbinary (in bundles/17.06.0-dev/dynbinary)
Building: bundles/17.06.0-dev/dynbinary-daemon/dockerd-17.06.0-dev
Created binary: bundles/17.06.0-dev/dynbinary-daemon/dockerd-17.06.0-dev

---> Making bundle: binary (in bundles/17.06.0-dev/binary)
Building: bundles/17.06.0-dev/binary-daemon/dockerd-17.06.0-dev
Created binary: bundles/17.06.0-dev/binary-daemon/dockerd-17.06.0-dev
Copying nested executables into bundles/17.06.0-dev/binary-daemon

---> Making bundle: cross (in bundles/17.06.0-dev/cross)
Created symlinks: bundles/17.06.0-dev/cross/linux/arm/docker-containerd bundles/17.06.0-
dev/cross/linux/arm/docker-containerd-ctr
 bundles/17.06.0-dev/cross/linux/arm/docker-containerd-ctr.md5 bundles/17.06.0-
dev/cross/linux/arm/docker-containerd-ctr.sha256 b
undles/17.06.0-dev/cross/linux/arm/docker-containerd-shim bundles/17.06.0-
dev/cross/linux/arm/docker-containerd-shim.md5 bundles/
17.06.0-dev/cross/linux/arm/docker-containerd-shim.sha256 bundles/17.06.0-
dev/cross/linux/arm/docker-containerd.md5 bundles/17.06
.0-dev/cross/linux/arm/docker-containerd.sha256 bundles/17.06.0-
dev/cross/linux/arm/docker-init bundles/17.06.0-dev/cross/linux/a
rm/docker-init.md5 bundles/17.06.0-dev/cross/linux/arm/docker-init.sha256
bundles/17.06.0-dev/cross/linux/arm/docker-proxy bundle
s/17.06.0-dev/cross/linux/arm/docker-proxy.md5 bundles/17.06.0-
dev/cross/linux/arm/docker-proxy.sha256 bundles/17.06.0-dev/cross/
linux/arm/docker-runc bundles/17.06.0-dev/cross/linux/arm/docker-runc.md5
bundles/17.06.0-dev/cross/linux/arm/docker-runc.sha256b
undles/17.06.0-dev/cross/linux/arm/dockerd bundles/17.06.0-dev/cross/linux/arm/dockerd-
17.06.0-dev bundles/17.06.0-dev/cross/linu
x/arm/dockerd-17.06.0-dev.md5 bundles/17.06.0-dev/cross/linux/arm/dockerd-17.06.0-
dev.sha256
Cross building: bundles/17.06.0-dev/cross/linux/amd64
Building: bundles/17.06.0-dev/cross/linux/amd64/dockerd-17.06.0-dev
daemon/graphdriver/overlay2/overlay.go:24:2: no buildable Go source files in
/go/src/github.com/docker/docker/daemon/graphdriver/
quota
daemon/graphdriver/devmapper/deviceset.go:28:2: no buildable Go source files in
/go/src/github.com/docker/docker/pkg/loopback
daemon/apparmor_default.go:9:2: no buildable Go source files in
/go/src/github.com/docker/docker/vendor/github.com/opencontainers
/runc/libcontainer/apparmor
profiles/seccomp/seccomp.go:13:2: no buildable Go source files in
/go/src/github.com/docker/docker/vendor/github.com/seccomp/libs
eccomp-golang
Makefile:164: recipe for target 'tgz' failed
make: *** [tgz] Error 1
```

alexellis commented on Aug 20   **Owner**

`make deb` with `docker/docker` repo:

```
Created binary: bundles/17.06.0-dev/dynbinary-daemon/dockerd-17.06.0-dev

# ./man/md2man-all.sh runs outside the build container (if at all), since we don't have
go-md2man here
make[1]: Leaving directory '/usr/src/docker'
    debian/rules override_dh_auto_test
make[1]: Entering directory '/usr/src/docker'
./bundles/17.06.0-dev/dynbinary-daemon/dockerd -v
Docker version 17.06.0-dev, build 5fa6df34d
make[1]: Leaving directory '/usr/src/docker'
 debian/rules binary
dh binary --with=bash-completion --with=systemd
    dh_testroot
    dh_prep
    debian/rules override_dh_auto_install
make[1]: Entering directory '/usr/src/docker'
mkdir -p debian/docker-engine/usr/bin
cp -aT "$(readlink -f bundles/17.06.0-dev/dynbinary-daemon/dockerd)" debian/docker-
```

```
engine/usr/bin/dockerd
cp -aT /usr/local/bin/docker-proxy debian/docker-engine/usr/bin/docker-proxy
cp -aT /usr/local/bin/docker-containerd debian/docker-engine/usr/bin/docker-containerd
cp -aT /usr/local/bin/docker-containerd-shim debian/docker-engine/usr/bin/docker-
containerd-shim
cp -aT /usr/local/bin/docker-containerd-ctr debian/docker-engine/usr/bin/docker-
containerd-ctr
cp -aT /usr/local/bin/docker-runc debian/docker-engine/usr/bin/docker-runc
cp -aT /usr/local/bin/docker-init debian/docker-engine/usr/bin/docker-init
mkdir -p debian/docker-engine/usr/lib/docker
make[1]: Leaving directory '/usr/src/docker'
  debian/rules override_dh_install
make[1]: Entering directory '/usr/src/docker'
dh_install
cp: cannot stat 'debian/tmp/contrib/completion/fish/docker.fish': No such file or
directory
dh_install: cp -a debian/tmp/contrib/completion/fish/docker.fish debian/docker-
engine/usr/share/fish/vendor_completions.d// retur
ned exit code 1
debian/rules:46: recipe for target 'override_dh_install' failed
make[1]: Leaving directory '/usr/src/docker'
make[1]: *** [override_dh_install] Error 2
debian/rules:53: recipe for target 'binary' failed
make: *** [binary] Error 2
dpkg-buildpackage: error: debian/rules binary gave error exit status 2
The command '/bin/sh -c dpkg-buildpackage -uc -us -I.git' returned a non-zero code: 2
---> Making bundle: .integration-daemon-stop (in bundles/17.06.0-dev/build-deb)
+++++ cat bundles/17.06.0-dev/build-deb/docker.pid
++++ kill 3812
Makefile:130: recipe for target 'deb' failed
make: *** [deb] Error 1
```

alexellis commented on Aug 21   **Owner**

Using the moby/moby PR and `make binary` I was able to schedule a swarm service:

```
$ sudo systemctl stop docker
$ sudo cp bundles/latest/binary-daemon/* /usr/bin/
$ sudo systemctl start docker
$ docker version                                                            Client:
 Version:      17.06.1-ce
 API version:  1.30
 Go version:   go1.8.3
 Git commit:   874a737
 Built:        Thu Aug 17 23:02:18 2017
 OS/Arch:      linux/arm

 Server:
 Version:      17.06.0-dev
 API version:  1.31 (minimum version 1.12)
 Go version:   go1.8.3
 Git commit:   5fa6df34d
 Built:        Sun Aug 20 14:29:31 2017
 OS/Arch:      linux/arm
 Experimental: false


$ docker service create --env fprocess=/bin/cat --publish 8080:8080
functions/alpine:latest-armhf
$ docker service ls
ID                NAME             MODE            REPLICAS          IMAGE
        PORTS
8ez9gk3dl0ux      eloquent_snyder      replicated          1/1
functions/alpine:latest-armhf   *:8080->8080/tcp


$ curl -4 localhost:8080 -d "test"
test
```

🎉 1

🔖 👤 **alexellis** referenced this issue in **moby/moby** on Aug 21

Clear Architecture field in platform constraint for arm architectures #34021 ⤵ **Merged**

alexellis commented on Aug 21 • edited   **Owner**

You can run this as a test work-load before and after:

```
$ docker swarm init && \
   git clone https://github.com/alexellis/faas && \
   cd faas && \
   ./deploy_stack.armhf.sh
```

The API gateway for FaaS will be on http://ip.address:8080/ find the ip with `ifconfig`

Related blog post to give it a thorough test - https://blog.alexellis.io/your-serverless-raspberry-pi-cluster/

✏️ 👤 **alexellis** changed the title from **Swarm Broken in Build Docker CE 17.07** to **Swarm is Broken on Docker CE after 17.05 - no services are scheduled.** on Aug 21

bassoman commented on Aug 29

Just got my Pi 3 cluster working with your article on setting up a cluster. I too had the issue of not seeing the Replica column show 1/1 properly. Upgraded my manager Pi 3 OS via the following page and it all works great now! Just do the 'Update to Debian 8 (Jessie)' paragraph and it will all start working properly. There seems to be no need to upgrade the worker nodes...

https://github.com/umiddelb/armhf/wiki/Get-Docker-up-and-running-on-the-RaspberryPi-(ARMv6)-in-four-steps-(Wheezy)

Here are the commands:

sudo sed -i 's/wheezy/jessie/' /etc/apt/sources.list
sudo sed -i 's/wheezy/jessie/' /etc/apt/sources.list.d/raspi.list
sudo apt-get update && sudo apt-get -y upgrade # answer 'y' to upcoming questions
sudo apt-get -y dist-upgrade # answer 'y' to upcoming questions
sudo init 6
sudo apt-get -y autoremove
sudo apt-get -y purge $(dpkg -l | awk '/^rc/ { print $2 }')
sudo init 6