📖 alexellis / **docker-arm**

Tune-up/checking for building Docker #16

New issue

ⓘ Open   **alexellis** opened this issue on Aug 20 · 5 comments

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alexellis commented on Aug 20 • edited   **Owner**

- Add `gpu_mem=16` to /boot/config.txt

- Create swap - increasing "RAM" by 1GB

```
$ sudo fallocate -l 1g /swap && \
  sudo mkswap /swap && \
  sudo chmod 0600 /swap
```

Run this command on each boot, or add to /etc/fstab

```
$ sudo swapon /swap
```

Install `screen` or `tmux` :

```
$ sudo apt update && sudo apt install -qy tmux
```

- Edit your hostname via `raspi-config`

- Run the kernel check:

```
$ sudo modprobe configs && \
    gunzip -c /proc/config.gz > ~/kernel.config && \
    curl -sSL https://raw.githubusercontent.com/docker/docker/master/contrib/check-
config.sh | bash
```

- Optional: upgrade kernel via `rpi-update`

rpi-update is a package available via `apt` :

```
sudo apt update && sudo apt install -qy rpi-update
sudo rpi-update
```

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

✏️ **alexellis** changed the title from **Tune for building Docker** to **Tune-up/checking for building Docker** 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   **Owner**

Stock stretch kernel:

```
$ uname -a
Linux stretch-1 4.9.41-v7+ #1023 SMP Tue Aug 8 16:00:15 BST 2017 armv7l GNU/Linux
```

Assignees
No one assigned

Labels
community-supports-docker

Projects
None yet

Milestone
No milestone

Notifications

3 participants

This is required, someone needs to raise an issue with Raspberry Pi Linux repo.

https://github.com/raspberrypi/linux

```
    – "ipvlan":
        – CONFIG_IPVLAN: missing
```?

  Other output:

info: reading kernel config from /proc/config.gz ...

Generally Necessary:

- cgroup hierarchy: properly mounted [/sys/fs/cgroup]
- CONFIG_NAMESPACES: enabled
- CONFIG_NET_NS: enabled
- CONFIG_PID_NS: enabled
- CONFIG_IPC_NS: enabled
- CONFIG_UTS_NS: enabled
- CONFIG_CGROUPS: enabled
- CONFIG_CGROUP_CPUACCT: enabled
- CONFIG_CGROUP_DEVICE: enabled
- CONFIG_CGROUP_FREEZER: enabled
- CONFIG_CGROUP_SCHED: enabled
- CONFIG_CPUSETS: enabled
- CONFIG_MEMCG: enabled
- CONFIG_KEYS: enabled
- CONFIG_VETH: enabled (as module)
- CONFIG_BRIDGE: enabled (as module)
- CONFIG_BRIDGE_NETFILTER: enabled (as module)
- CONFIG_NF_NAT_IPV4: enabled (as module)
- CONFIG_IP_NF_FILTER: enabled (as module)
- CONFIG_IP_NF_TARGET_MASQUERADE: enabled (as module)
- CONFIG_NETFILTER_XT_MATCH_ADDRTYPE: enabled (as module)
- CONFIG_NETFILTER_XT_MATCH_CONNTRACK: enabled (as module)
- CONFIG_NETFILTER_XT_MATCH_IPVS: enabled (as module)
- CONFIG_IP_NF_NAT: enabled (as module)
- CONFIG_NF_NAT: enabled (as module)
- CONFIG_NF_NAT_NEEDED: enabled
- CONFIG_POSIX_MQUEUE: enabled

Optional Features:

- CONFIG_USER_NS: enabled
- CONFIG_SECCOMP: enabled
- CONFIG_CGROUP_PIDS: missing
- CONFIG_MEMCG_SWAP: missing
- CONFIG_MEMCG_SWAP_ENABLED: missing
- CONFIG_BLK_CGROUP: enabled
- CONFIG_BLK_DEV_THROTTLING: enabled
- CONFIG_IOSCHED_CFQ: enabled
- CONFIG_CFQ_GROUP_IOSCHED: enabled
- CONFIG_CGROUP_PERF: missing
- CONFIG_CGROUP_HUGETLB: missing
- CONFIG_NET_CLS_CGROUP: enabled (as module)
- CONFIG_CGROUP_NET_PRIO: missing
- CONFIG_CFS_BANDWIDTH: missing
- CONFIG_FAIR_GROUP_SCHED: enabled
- CONFIG_RT_GROUP_SCHED: missing
- CONFIG_IP_VS: enabled (as module)
- CONFIG_IP_VS_NFCT: enabled
- CONFIG_IP_VS_RR: enabled (as module)

- CONFIG_EXT4_FS: enabled
- CONFIG_EXT4_FS_POSIX_ACL: enabled
- CONFIG_EXT4_FS_SECURITY: enabled
- Network Drivers:
  - "overlay":
    - CONFIG_VXLAN: enabled (as module)
      Optional (for encrypted networks):
      - CONFIG_CRYPTO: enabled
      - CONFIG_CRYPTO_AEAD: enabled (as module)
      - CONFIG_CRYPTO_GCM: enabled (as module)
      - CONFIG_CRYPTO_SEQIV: enabled (as module)
      - CONFIG_CRYPTO_GHASH: enabled (as module)
      - CONFIG_XFRM: enabled
      - CONFIG_XFRM_USER: enabled
      - CONFIG_XFRM_ALGO: enabled
      - CONFIG_INET_ESP: enabled (as module)
      - CONFIG_INET_XFRM_MODE_TRANSPORT: enabled (as module)
  - "ipvlan":
    - CONFIG_IPVLAN: missing
  - "macvlan":
    - CONFIG_MACVLAN: enabled (as module)
    - CONFIG_DUMMY: enabled (as module)
  - "ftp,tftp client in container":
    - CONFIG_NF_NAT_FTP: enabled (as module)
    - CONFIG_NF_CONNTRACK_FTP: enabled (as module)
    - CONFIG_NF_NAT_TFTP: enabled (as module)
    - CONFIG_NF_CONNTRACK_TFTP: enabled (as module)
- Storage Drivers:
  - "aufs":
    - CONFIG_AUFS_FS: missing
  - "btrfs":
    - CONFIG_BTRFS_FS: enabled (as module)
    - CONFIG_BTRFS_FS_POSIX_ACL: enabled
  - "devicemapper":
    - CONFIG_BLK_DEV_DM: enabled (as module)
    - CONFIG_DM_THIN_PROVISIONING: enabled (as module)
  - "overlay":
    - CONFIG_OVERLAY_FS: enabled (as module)
  - "zfs":
    - /dev/zfs: missing
    - zfs command: missing
    - zpool command: missing

Limits:

- /proc/sys/kernel/keys/root_maxkeys: 1000000

🔖 This was referenced on Aug 20

Adding IPVLAN module to config raspberrypi/linux#2085   ⑂ Open

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

dduportal commented on Aug 20

Hello!

The docker installation is no longer working for 17.05 on raspbian:

```
curl -sSL get.docker.com |
```

runs into

```
+ sh -c sleep 3; apt-get update; apt-get install -y -q docker-engine
Hit:1 http://mirrordirector.raspbian.org/raspbian stretch InRelease
Hit:2 http://archive.raspberrypi.org/debian stretch InRelease
Ign:3 https://apt.dockerproject.org/repo raspbian-stretch InRelease
Ign:4 https://apt.dockerproject.org/repo raspbian-stretch Release
Ign:5 https://apt.dockerproject.org/repo raspbian-stretch/main armhf Packages
Ign:6 https://apt.dockerproject.org/repo raspbian-stretch/main all Packages
Ign:7 https://apt.dockerproject.org/repo raspbian-stretch/main Translation-en
Ign:8 https://apt.dockerproject.org/repo raspbian-stretch/main Translation-en_GB
Ign:5 https://apt.dockerproject.org/repo raspbian-stretch/main armhf Packages
Ign:6 https://apt.dockerproject.org/repo raspbian-stretch/main all Packages
Ign:7 https://apt.dockerproject.org/repo raspbian-stretch/main Translation-en
Ign:8 https://apt.dockerproject.org/repo raspbian-stretch/main Translation-en_GB
Ign:5 https://apt.dockerproject.org/repo raspbian-stretch/main armhf Packages
Ign:6 https://apt.dockerproject.org/repo raspbian-stretch/main all Packages
Ign:7 https://apt.dockerproject.org/repo raspbian-stretch/main Translation-en
Ign:8 https://apt.dockerproject.org/repo raspbian-stretch/main Translation-en_GB
Ign:5 https://apt.dockerproject.org/repo raspbian-stretch/main armhf Packages
Ign:6 https://apt.dockerproject.org/repo raspbian-stretch/main all Packages
Ign:7 https://apt.dockerproject.org/repo raspbian-stretch/main Translation-en
Ign:8 https://apt.dockerproject.org/repo raspbian-stretch/main Translation-en_GB
Ign:5 https://apt.dockerproject.org/repo raspbian-stretch/main armhf Packages
Ign:6 https://apt.dockerproject.org/repo raspbian-stretch/main all Packages
Ign:7 https://apt.dockerproject.org/repo raspbian-stretch/main Translation-en
Ign:8 https://apt.dockerproject.org/repo raspbian-stretch/main Translation-en_GB
Err:5 https://apt.dockerproject.org/repo raspbian-stretch/main armhf Packages
  403  Forbidden
Ign:6 https://apt.dockerproject.org/repo raspbian-stretch/main all Packages
Ign:7 https://apt.dockerproject.org/repo raspbian-stretch/main Translation-en
Ign:8 https://apt.dockerproject.org/repo raspbian-stretch/main Translation-en_GB
Reading package lists... Done
W: The repository 'https://apt.dockerproject.org/repo raspbian-stretch Release' does not ha
N: Data from such a repository can't be authenticated and is therefore potentially dangerou
N: See apt-secure(8) manpage for repository creation and user configuration details.
E: Failed to fetch https://apt.dockerproject.org/repo/dists/raspbian-stretch/main/binary-ar
E: Some index files failed to download. They have been ignored, or old ones used instead.
Reading package lists...
Building dependency tree...
Reading state information...
E: Unable to locate package docker-engine
```

dduportal commented on Aug 21 • edited

For anyone helping here, this shell scripts helps to launch the docker-ce build:

```bash
#!/bin/bash

set -eux


# Less Video Memory
echo 'gpu_mem=16' | tee -a /boot/config.txt

# 1 Gb of swap
SWAPFILE=/swap
rm -rf "${SWAPFILE}"
fallocate -l 1g "${SWAPFILE}"
chmod 0600 "${SWAPFILE}"
mkswap "${SWAPFILE}"
swapon "${SWAPFILE}"
sed -i '/\/swap/d' /etc/fstab
echo "${SWAPFILE} none swap sw 0 0" | tee -a /etc/fstab
mount -a
free -m

# Update, Upgrade and install base packages
apt-get update
apt-get upgrade -qy
apt-get dist-upgrade -qy
apt-get install -qy tmux screen git curl vim rpi-update \
  docker.io aufs-tools btrfs-tools debootstrap lxc rinse zfs-fuse

## Not Working for now
# curl -sSL get.docker.com | sh

# Set hostname
if [ "$(grep crc32 /proc/cpuinfo  | wc -l)" -eq 0 ]
then
  echo 'pi2' | tee /etc/hostname
else
  echo 'pi3' | tee /etc/hostname
```

```
  fi

  # Kernel config
  modprobe configs
  gunzip -c /proc/config.gz > ~/kernel.config
  curl -sSL https://raw.githubusercontent.com/docker/docker/master/contrib/check-config.sh |
  uname -a

  reboot now
```

🔖   👤 **alexellis** referenced this issue on Aug 21

Guide: ARMv6 (RPi Zero) bootstrap Jessie or Stretch #19   ⊙ Open

thyrlian commented on Aug 29 • edited

HW:
Raspberry Pi 2

OS:
Raspbian Stretch with Desktop (2017-08-16)
Linux raspberrypi 4.9.41-v7+ #1023 SMP Tue Aug 8 16:00:15 BST 2017 armv7l GNU/Linux

Results:

```
  info: reading kernel config from /proc/config.gz ...

  Generally Necessary:
  - cgroup hierarchy: properly mounted [/sys/fs/cgroup]
  - CONFIG_NAMESPACES: enabled
  - CONFIG_NET_NS: enabled
  - CONFIG_PID_NS: enabled
  - CONFIG_IPC_NS: enabled
  - CONFIG_UTS_NS: enabled
  - CONFIG_CGROUPS: enabled
  - CONFIG_CGROUP_CPUACCT: enabled
  - CONFIG_CGROUP_DEVICE: enabled
  - CONFIG_CGROUP_FREEZER: enabled
  - CONFIG_CGROUP_SCHED: enabled
  - CONFIG_CPUSETS: enabled
  - CONFIG_MEMCG: enabled
  - CONFIG_KEYS: enabled
  - CONFIG_VETH: enabled (as module)
  - CONFIG_BRIDGE: enabled (as module)
  - CONFIG_BRIDGE_NETFILTER: enabled (as module)
  - CONFIG_NF_NAT_IPV4: enabled (as module)
  - CONFIG_IP_NF_FILTER: enabled (as module)
  - CONFIG_IP_NF_TARGET_MASQUERADE: enabled (as module)
  - CONFIG_NETFILTER_XT_MATCH_ADDRTYPE: enabled (as module)
  - CONFIG_NETFILTER_XT_MATCH_CONNTRACK: enabled (as module)
  - CONFIG_NETFILTER_XT_MATCH_IPVS: enabled (as module)
  - CONFIG_IP_NF_NAT: enabled (as module)
  - CONFIG_NF_NAT: enabled (as module)
  - CONFIG_NF_NAT_NEEDED: enabled
  - CONFIG_POSIX_MQUEUE: enabled

  Optional Features:
  - CONFIG_USER_NS: enabled
  - CONFIG_SECCOMP: enabled
  - CONFIG_CGROUP_PIDS: missing
  - CONFIG_MEMCG_SWAP: missing
  - CONFIG_MEMCG_SWAP_ENABLED: missing
  - CONFIG_BLK_CGROUP: enabled
  - CONFIG_BLK_DEV_THROTTLING: enabled
  - CONFIG_IOSCHED_CFQ: enabled
  - CONFIG_CFQ_GROUP_IOSCHED: enabled
  - CONFIG_CGROUP_PERF: missing
  - CONFIG_CGROUP_HUGETLB: missing
  - CONFIG_NET_CLS_CGROUP: enabled (as module)
  - CONFIG_CGROUP_NET_PRIO: missing
  - CONFIG_CFS_BANDWIDTH: missing
  - CONFIG_FAIR_GROUP_SCHED: enabled
  - CONFIG_RT_GROUP_SCHED: missing
  - CONFIG_IP_VS: enabled (as module)
  - CONFIG_IP_VS_NFCT: enabled
  - CONFIG_IP_VS_RR: enabled (as module)
  - CONFIG_EXT4_FS: enabled
  - CONFIG_EXT4_FS_POSIX_ACL: enabled
  - CONFIG_EXT4_FS_SECURITY: enabled
  - Network Drivers:
    - "overlay":
```

```
    – CONFIG_VXLAN: enabled (as module)
      Optional (for encrypted networks):
      – CONFIG_CRYPTO: enabled
      – CONFIG_CRYPTO_AEAD: enabled (as module)
      – CONFIG_CRYPTO_GCM: enabled (as module)
      – CONFIG_CRYPTO_SEQIV: enabled (as module)
      – CONFIG_CRYPTO_GHASH: enabled (as module)
      – CONFIG_XFRM: enabled
      – CONFIG_XFRM_USER: enabled
      – CONFIG_XFRM_ALGO: enabled
      – CONFIG_INET_ESP: enabled (as module)
      – CONFIG_INET_XFRM_MODE_TRANSPORT: enabled (as module)
   – "ipvlan":
      – CONFIG_IPVLAN: missing
   – "macvlan":
      – CONFIG_MACVLAN: enabled (as module)
      – CONFIG_DUMMY: enabled (as module)
   – "ftp,tftp client in container":
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   – "btrfs":
      – CONFIG_BTRFS_FS: enabled (as module)
      – CONFIG_BTRFS_FS_POSIX_ACL: enabled
   – "devicemapper":
      – CONFIG_BLK_DEV_DM: enabled (as module)
      – CONFIG_DM_THIN_PROVISIONING: enabled (as module)
   – "overlay":
      – CONFIG_OVERLAY_FS: enabled (as module)
   – "zfs":
      – /dev/zfs: missing
      – zfs command: missing
      – zpool command: missing

 Limits:
 – /proc/sys/kernel/keys/root_maxkeys: 1000000
```

I compared my results with the results from **@alexellis**, there is no difference.

alexellis commented on Aug 29   **Owner**

Pinging yet again on the RPi Linux kernel issue - raspberrypi/linux#2085