Docker

Contents

Installation

The Docker package is in the 'Community' repository. See Alpine_Linux_package_management how to add a repository.

```
apk add docker
```

To start the Docker daemon at boot, see Alpine_Linux_Init_System.

```
rc-update add docker boot
service docker start
```

> **Note:** On older version of Alpine Linux with older version of docker you'll also need to disable some kernel security flags in order to build images:

sysctl -w kernel.grsecurity.chroot_deny_chmod=0

sysctl -w kernel.grsecurity.chroot_deny_mknod=0

For more information, have a look at the corresponding Github issue (https://github.com/docker/docker/issues/2030 3).

Anyway, this weakening of security is not necessary to do with Alpine 3.4.x and Docker 1.12 as of August 2016 anymore.

Docker Compose

'docker-compose' is in 'Community' repository since Alpine Linux >= 3.10.

```
apk add docker-compose
```

For older releases, do:

To install docker-compose, first install pip:

```
apk add py-pip python3-dev libffi-dev openssl-dev gcc libc-dev make
pip3 install docker-compose
```

Isolate containers with a user namespace

```
adduser -SDHs /sbin/nologin dockremap
addgroup -S dockremap
echo dockremap:$(cat /etc/passwd|grep dockremap|cut -d: -f3):65536 >> /etc/subuid
echo dockremap:$(cat /etc/passwd|grep dockremap|cut -d: -f4):65536 >> /etc/subgid
```

and add in **/etc/docker/daemon.json**

```
{
      "userns-remap": "dockremap"
}
```

You may also consider these options : '

```
      "experimental": false,
      "live-restore": true,
      "ipv6": false,
      "icc": false,
      "no-new-privileges": false
```

You will find all possible configurations here[1] (https://docs.docker.com/engine/reference/commandline/dockerd/#daemon-configuration-file).

Example: How to install docker from Arch

https://wiki.archlinux.org/index.php/Docker

"WARNING: No {swap,memory} limit support"

You may, probably, encounter this message by executing `docker info`. To correct this situation we have to enable the `cgroup_enable=memory swapaccount=1`

Alpine 3.8

Well I'm not sure it wasn't the case before but for sure with Alpine 3.8 you must config cgroups properly

Warning: This seems *not* to work with Alpine 3.9 and Docker 18.06. Follow the instructions for grub or extlinux below instead.

```
echo "cgroup /sys/fs/cgroup cgroup defaults 0 0" >> /etc/fstab
```

```
cat >> /etc/cgconfig.conf <<EOF
mount {
cpuacct = /cgroup/cpuacct;
memory = /cgroup/memory;
devices = /cgroup/devices;
freezer = /cgroup/freezer;
net_cls = /cgroup/net_cls;
blkio = /cgroup/blkio;
cpuset = /cgroup/cpuset;
cpu = /cgroup/cpu;
}
EOF
```

Grub

Well; if you use Grub it is like any other linux and you just have to add the cgroup condition into `/etc/default/grub`, then upgrade your grub

```
GRUB_CMDLINE_LINUX_DEFAULT="... e=memory swapaccount=1"
```

Extlinux

With Extlinux you also add the cgroup condition but inside `/etc/update-extlinux.conf`

```
default_kernel_opts="... cgroup_enable=memory swapaccount=1"
```

than update the config and reboot

```
update-extlinux
```

How to use docker

The best documentation for how to use Docker and create containers is at the main docker site. Adding anything more to it here would be redundant.

http://docs.docker.com/

if you create an account at docker.com you can browse through other user's images and learn from the syntax in contributor's dockerfiles.

Official Docker image files are denoted by a blue ribon on the website.

See also

- Creating & Hosting an Alpine Linux Package Repository for Docker Packages (https://www.erianna.com/creating-a-alpine-linux-repository/)
- Running Alpine in a Docker Container

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