Docker Installieren

Da ich für opsi einen Docker Container nutzen möchte, installiere ich zuerst Docker. Dazu muss ich zuerst Docker dem apt hinzufügen.
apt-get update
apt-get install ca-certificates curl
install -m 0755 -d /etc/apt/keyrings
curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
sudo chmod a+r /etc/apt/keyrings/docker.asc
echo \
"deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc]
https://download.docker.com/linux/ubuntu \
$(. /etc/os-release && echo "${UBUNTU_CODENAME:-$VERSION_CODENAME}") stable" | \
tee /etc/apt/sources.list.d/docker.list > /dev/null
apt-get update

```
root@Yukikaze:~# apt-get update
apt-get install ca-certificates curl
install -m 0755 -d /etc/apt/keyrings
curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
sudo chmod a+r /etc/apt/keyrings/docker.asc
echo \
"deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \
$(. /etc/os-release && echo "${UBUNTU_CODENAME:-$VERSION_CODENAME}") stable" | \
tee /etc/apt/sources.list.d/docker.list > /dev/null
apt-get update
Hit:1 http://archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://archive.ubuntu.com/ubuntu jammy-security InRelease
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
ca-certificates is already the newest version (20240203~22.04.1).
curl is already the newest version (7.81.0-1ubuntu1.20).
0 upgraded, 0 newly installed, 0 to remove and 5 not upgraded.
Hit:1 http://archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://archive.ubuntu.com/ubuntu jammy-security InRelease
Get:4 https://download.docker.com/linux/ubuntu jammy InRelease [48.8 kB]
Get:5 https://download.docker.com/linux/ubuntu jammy/stable amd64 Packages [48.8 kB]
Fetched 97.6 kB in 1s (191 kB/s)
Reading package lists... Done
root@Yukikaze:~#
```

Docker selbst installieren
apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin

```
root@Yukikaze:~# apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  dbus-user-session docker-ce-rootless-extras git git-man libcurl3-gnutls liberror-perl libgdbm-compat4 libltdl7 libperl5.34 libslirp0 patch perl
  perl-modules-5.34 pigz slirp4netns
Suggested packages:
  cgroupfs-mount | cgroup-lite git-daemon-run | git-daemon-sysvinit git-doc git-email git-gui gitk gitweb git-cvs git-mediawiki git-svn diffutils-doc
  perl-doc libterm-readline-gnu-perl | libterm-readline-perl-perl make libtap-harness-archive-perl
The following NEW packages will be installed:
  containerd.io dbus-user-session docker-buildx-plugin docker-ce docker-ce-cli docker-ce-rootless-extras docker-compose-plugin git git-man libcurl3-gnutls
  liberror-perl libgdbm-compat4 libltdl7 libperl5.34 libslirp0 patch perl perl-modules-5.34 pigz slirp4netns
0 upgraded, 20 newly installed, 0 to remove and 5 not upgraded.
Need to get 133 MB of archives.
After this operation, 510 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

Nun teste ich, ob Docker einwandfrei läuft, dazu versuche ich Alpine zu starten
docker run --rm -it alpine

```
root@Yukikaze:~# docker run --rm -it alpine
Unable to find image 'alpine:latest' locally
latest: Pulling from library/alpine
f18232174bc9: Pull complete
Digest: sha256:a8560b36e8b8210634f77d9f7f9efd7ffa463e380b75e2e74aff4511df3ef88c
Status: Downloaded newer image for alpine:latest
docker: Error response from daemon: AppArmor enabled on system but the docker-default profile could not be loaded: running '/usr/sbin/apparmor_parser -Kr /var/lib/docke
r/tmp/docker-default269373107' failed with output: apparmor_parser: Unable to replace "docker-default".  Permission denied; attempted to load a profile while confined?

error: exit status 243

Run 'docker run --help' for more information
root@Yukikaze:~#
```

Damit ich Alpine erfolgreich installieren kann, muss ich noch die Konfigurationsdatei des Containers ändern. Also füge ich der folgenden Datei auf dem Host folgendes hinzu und starte den Container neu
/etc/pve/lxc/<ID>.conf

lxc.cgroup.devices.allow: a
lxc.cap.drop:
lxc.apparmor.profile: unconfined
features: nesting=1,keyctl=1

```
  GNU nano 7.2                                          /etc/pve/lxc/101.conf
arch: amd64
cores: 2
features: nesting=1,keyctl=1
hostname: Yukikaze
memory: 2048
nameserver: 192.168.2.7
net0: name=eth0,bridge=vmbr0,firewall=1,hwaddr=BC:24:11:F2:A4:7D,ip=dhcp,ip6=dhcp,type=veth
ostype: ubuntu
rootfs: local:101/vm-101-disk-1.raw,size=30G
searchdomain: sotoba.de
swap: 2048
lxc.cgroup.devices.allow: a
lxc.cap.drop:
lxc.apparmor.profile: unconfined
```

Nach dem Neustart des Containers kann ich nun Alpine ausführen

```
root@Yukikaze:~# docker run --rm -it alpine
Unable to find image 'alpine:latest' locally
latest: Pulling from library/alpine
f18232174bc9: Pull complete
Digest: sha256:a8560b36e8b8210634f77d9f7f9efd7ffa463e380b75e2e74aff4511df3ef88c
Status: Downloaded newer image for alpine:latest
/ #
```