Centos7安装Docker

docker版本列表

请点击此链接获得最新docker版本

linux直连地址

docker下载

1. **在线命令执行脚本-方式一**

   自动安装Docker(需要外网环境)

   ```
   curl -fsSL https://get.docker.com | bash -s docker --mirror Aliyun
   ```

2. **docker安装包下载-方式二**

   ```
   # 离线下载:https://download.docker.com/linux/static/stable/x86_64/
   # github镜像地址: https://kgithub.com/docker/compose/releases
   # 在线下载(推荐):
   curl -L https://download.docker.com/linux/static/stable/x86_64/docker-20.10.7.tgz > docker-20.10.7.tgz
   ```

3. **docker-compose软件包下载**

   ```
   # 离线下载地址:https://github.com/docker/compose/releases
   # 在线下载(推荐):
   curl -L https://get.daocloud.io/docker/compose/releases/download/1.29.2/docker-compose-`uname -s`-`uname -m` > /usr/local/bin/docker-compose
   # 赋予执行权限:
   chmod +x /usr/local/bin/docker-compose
   ```

docker安装

```
#1.下载好安装包或使用xshell将已下载好的docker安装包及docker-compose安装包复制到centos7服务器上;需要参考操作系统的初始化配置,如:关闭防火墙
# 重远程电脑拷贝数据
scp root@172.16.33.149:/opt/docker/docker-20.10.0.tgz .
#2.解压docker文件
tar -zxvf docker-20.10.9.tgz
#3.将解压后的docker文件拷贝到/usr/bin/
mv docker/* /usr/bin/ && rm -rf docker
#4.注册docker服务文件;并且复制对应的内容到下面的文件内;请看下面文件
vi /etc/systemd/system/docker.service
#5.增加可执行权限
chmod 777 /etc/systemd/system/docker.service
#6.根据需要设置镜像仓库
mkdir /etc/docker && vi /etc/docker/daemon.json
#添加以下内容;可以设置镜像源;需要重启;如若网段和目前网段冲突,请添加自定义网段: "bip": "192.168.0.1/24"
```

```
{
 "registry-mirrors":
["https://sxfj1832.mirror.aliyuncs.com","https://gcr.azk8s.cn",
"https://docker.mirrors.ustc.edu.cn", "http://hub-mirror.c.163.com",
"https://registry.docker-cn.com"],
 "dns":["172.16.33.147", "8.8.8.8", "114.114.114.114"],
 "insecure-registries":["172.16.33.148:5000"],
 "hosts":["unix:///var/run/docker.sock","tcp://0.0.0.0:2375"]
}
#7.重新加载配置文件
systemctl daemon-reload
#8.启动docker服务;注意需要root权限启动才能正常,否则engine服务会启动不了;
systemctl start docker
#9.设置开机自启,根据需要选择
systemctl enable docker.service
#10.清空回收站
rm -rf /root/.local/share/Trash/files
# centos8下需要先关闭linux内核,否则报错
setenforce 0
# 解除tcp连接数据限制
# 编辑vi /etc/security/limits.conf
# 编辑完成后重启服务器
* soft nofile 65536      # open files  (-n)
* hard nofile 65536

* soft nproc 65565
* hard nproc 65565       # max user processes   (-u)
```

docker.service配置文件

```
# 复制以下内容到docker.service文件;
[Unit]
Description=Docker Application Container Engine
Documentation=https://docs.docker.com
After=network-online.target firewalld.service
Wants=network-online.target

[Service]
Type=notify
# the default is not to use systemd for cgroups because the delegate issues
still
# exists and systemd currently does not support the cgroup feature set
required
# for containers run by docker,下面execstart不要添加与后面daemon.json冲突的内容,
否则导致docker无法启动;-H为暴露远程docker api接口
ExecStart=/usr/bin/dockerd --selinux-enabled=false
ExecReload=/bin/kill -s HUP $MAINPID
# Having non-zero Limit*s causes performance problems due to accounting
overhead
# in the kernel. We recommend using cgroups to do container-local
accounting.
LimitNOFILE=infinity
LimitNPROC=infinity
LimitCORE=infinity
# Uncomment TasksMax if your systemd version supports it.
# Only systemd 226 and above support this version.
#TasksMax=infinity
TimeoutStartSec=0
# set delegate yes so that systemd does not reset the cgroups of docker containers
Delegate=yes
# kill only the docker process, not all processes in the cgroup
KillMode=process
# restart the docker process if it exits prematurely
Restart=on-failure
StartLimitBurst=3
StartLimitInterval=60s

[Install]
WantedBy=multi-user.target
```

将用户加入docker组

```
# 非root用户使用docker，可以将用户加入docker组，避免每次执行都需要加上sudo语句。
# 将$USER改为当前用户名称
# 注：执行后需要注销退出重新登录生效。
sudo groupadd docker
sudo usermod -aG docker $USER
sudo service docker restart
```

docker0网关配置

设置docker0默认网段,避免与院内ip网段冲突(如果院内网段为172段)

```
#route 查看网段信息
#(如果有dns服务,也可在此文件配置dns服务器 "dns":[];或者下载镜像的源: "registry-mirrors":[])
#vi /etc/docker/daemon.json（这里没有这个文件的话，自行创建）
{
    "bip":"192.168.0.1/24"
}
#重启docker
systemctl daemon-reload && systemctl restart docker

# 暂时用上的配置的内容:
{
 "registry-mirrors":
["https://sxfj1832.mirror.aliyuncs.com","https://gcr.azk8s.cn",
"https://docker.mirrors.ustc.edu.cn", "http://hub-mirror.c.163.com",
"https://registry.docker-cn.com"],
 "bip": "192.168.0.1/24",
 "dns":["172.16.33.147", "8.8.8.8", "114.114.114.114"],
 "insecure-registries":["172.16.33.140:5000"]
}

# ifconfig virbr0 down
# brctl delbr virbr0   //删除网桥
```

部署registry简易镜像仓库(建议使用)

```
#1.其它docker配置镜像源
vi /etc/docker/daemon.json
#2.添加以下内容;
echo '{ "insecure-registries":["172.16.33.140:5000"] }' > /etc/docker/daemon.json
#3.加载配置文件
systemctl daemon-reload
#4.重启docker生效
systemctl restart docker
#docker配置镜像源也是解决如下的问题的方法:
# Error response from daemon: Get https://172.16.33.140:5000/v2/: http: server gave HTTP response to HTTPS client
```

registry镜像常用命令

```
# 镜像拉取
docker pull registry
# 运行容器
docker run -d -p 5000:5000 --name registry registry:latest
#获取所有类别
http://localhost:5000/v2/_catalog
#获取镜像所有标签
http://localhost:5000/v2/rhapsody/tags/list
#打标签
docker tag rhapsody:v6.5.0.210315_beta localhost:5000/rhapsody:v6.5.0.210315_beta
#推送镜像到仓库
docker push localhost:5000/rhapsody:v6.5.0.210315_beta

# 非本机镜像拉取
docker pull 172.16.33.140:5000/rhapsody:v6.5.0.210315_beta
# 非本机镜像推送
docker push 172.16.33.140:5000/rhapsody:v6.5.0.210315_beta
```

卸载docker

```
1)卸载Docker安装包
yum remove docker*
2)清空/var/lib/docker/目录的内容(这一步必须做)
rm -rf /var/lib/docker/

# 查找docker所在文件夹
whereis docker

rm -rf /etc/docker
rm -rf /run/docker
rm -rf /var/lib/dockershim
rm -rf /var/lib/docker
rm -rf /usr/bin/docker
```

其它

```
# docker数据位置
/var/lib/docker
# damon.json配置文件路径
/etc/docker/
# 通过启动二进制文件形式启动docker,便于查找无法通过docker.service启动出现的问题
dockerd
```

docker的数据卷备份还原

备份

```
# docker数据卷备份
# 前提有容器esb-rhapsody-dev,并且有需要备份的文件夹:/home/rhapsody/rhapsody/rhapsody-
engine-6/rhapsody/data
docker run --volumes-from esb-rhapsody-dev -v /d/tmp/backup:/backup centos:7 tar
cvf /backup/backup.tar /home/rhapsody/rhapsody/rhapsody-engine-6/rhapsody/data
```

还原

```
# 还原
# 如果要恢复数据到一个容器，首先创建一个带有数据卷的容器 esb_rhapsody_test
docker create -v data_rhapsody_test:/home/rhapsody/rhapsody/rhapsody-engine-
6/rhapsody/data -p 8444:8444 -p 3401:3401 -p 4301:4301 --name esb_rhapsody_test
liaozhiming/rhapsody:6.7.0.211025_beta
# 如果要恢复数据到一个容器，首先创建一个带有数据卷的容器 esb_rhapsody_test;
# 容器一次性运行,运行完后移除
docker run -ti --rm --volumes-from esb_rhapsody_test -v /d/tmp/backup:/backup
busybox:latest tar xvf /backup/backup.tar
```

启动一个centos系统

```
docker run --privileged=true -d -ti --name centos-test centos:8.4.2105
/usr/sbin/init
```