

# 一、注入插件支持

在x86服务器上注入qemu

```
docker run --rm --privileged multiarch/qemu-user-static:register --reset
```

```
1 [root@ops ~]# docker run --rm --privileged multiarch/qemu-user-static:register --reset
2 Unable to find image 'multiarch/qemu-user-static:register' locally
3 register: Pulling from multiarch/qemu-user-static
4 ee153a04d683: Pull complete
5 84cc22363d00: Pull complete
6 96aa3d7b9b30: Pull complete
7 8d669bf48302: Pull complete
8 Digest: sha256:c77eb2da3597aa370f07ef970e2e0adf155172eb9d3c40e43d97aa43ee
f6b0c9
9 Status: Downloaded newer image for multiarch/qemu-user-static:register
10 Setting /usr/bin/qemu-alpha-static as binfmt interpreter for alpha
11 Setting /usr/bin/qemu-arm-static as binfmt interpreter for arm
12 Setting /usr/bin/qemu-armeb-static as binfmt interpreter for armb
13 Setting /usr/bin/qemu-sparc32plus-static as binfmt interpreter for sparc
32plus
14 Setting /usr/bin/qemu-ppc-static as binfmt interpreter for ppc
15 Setting /usr/bin/qemu-ppc64-static as binfmt interpreter for ppc64
16 Setting /usr/bin/qemu-ppc64le-static as binfmt interpreter for ppc64le
17 Setting /usr/bin/qemu-m68k-static as binfmt interpreter for m68k
18 Setting /usr/bin/qemu-mips-static as binfmt interpreter for mips
19 Setting /usr/bin/qemu-mipsel-static as binfmt interpreter for mipsel
20 Setting /usr/bin/qemu-mipsn32-static as binfmt interpreter for mipsn32
21 Setting /usr/bin/qemu-mipsn32el-static as binfmt interpreter for mipsn32
el
22 Setting /usr/bin/qemu-mips64-static as binfmt interpreter for mips64
23 Setting /usr/bin/qemu-mips64el-static as binfmt interpreter for mips64el
24 Setting /usr/bin/qemu-sh4-static as binfmt interpreter for sh4
25 Setting /usr/bin/qemu-sh4eb-static as binfmt interpreter for sh4eb
26 Setting /usr/bin/qemu-s390x-static as binfmt interpreter for s390x
27 Setting /usr/bin/qemu-aarch64-static as binfmt interpreter for aarch64
28 Setting /usr/bin/qemu-aarch64_be-static as binfmt interpreter for aarch6
4_be
29 Setting /usr/bin/qemu-hppa-static as binfmt interpreter for hppa
30 Setting /usr/bin/qemu-riscv32-static as binfmt interpreter for riscv32
```

```
31 Setting /usr/bin/qemu-riscv64-static as binfmt interpreter for riscv64
32 Setting /usr/bin/qemu-xtensa-static as binfmt interpreter for xtensa
33 Setting /usr/bin/qemu-xtensaeb-static as binfmt interpreter for xtensaeb
34 Setting /usr/bin/qemu-microblaze-static as binfmt interpreter for microblaze
35 Setting /usr/bin/qemu-microblazeel-static as binfmt interpreter for microblazeel
36 Setting /usr/bin/qemu-or1k-static as binfmt interpreter for or1k
```

## 二、运行，有两种方法

### 方法1

下载qemu的二进制文件

<https://github.com/multiarch/qemu-user-static/releases>

multiarchbot released this on 2 Sep · 2 commits to master since this release

**qemu-\*-static @ 4.1.0-1**

▼ Assets 110

 <a href="#">qemu-aarch64_be-static</a>	4.38 MB
 <a href="#">qemu-aarch64_be-static.tar.gz</a>	1.58 MB
 <a href="#">qemu-aarch64-static</a>	4.37 MB
 <a href="#">qemu-aarch64-static.tar.gz</a>	1.58 MB
 <a href="#">qemu-alpha-static</a>	3.26 MB
 <a href="#">qemu-alpha-static.tar.gz</a>	1.21 MB
 <a href="#">qemu-armeb-static</a>	3.8 MB

放到x86的服务器上，比如/bin/qemu-aarch64-static

运行程序

`docker run -d -v /bin/qemu-aarch64-static:/usr/bin/qemu-aarch64-static docker.dm-ai.cn/arm64/node:10.16.3-tx2 sleep 100`

一定要加-v挂载到容器。

```

[root@jenkins ~]#
[root@jenkins ~]# docker run -d docker.dm-ai.cn/arm64/node:10.16.3-tx2 sleep 100
eb018d7663aef369d305f1bd8111c5e1fb5f1f7919378165d85556ff1daaf63e
[root@jenkins ~]# docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS             PORTS             NAMES
[root@jenkins ~]#
[root@jenkins ~]# docker run -d -v /bin/qemu-aarch64-static:/usr/bin/qemu-aarch64-static docker.dm-ai.cn/arm64/node:10.16.3-tx2 sleep 100
102a4b554815786cfe514cad3b3aa33096599e27562b3916af118481aba030a
[root@jenkins ~]#
[root@jenkins ~]# docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS             PORTS             NAMES
102a4b554815786cfe514cad3b3aa33096599e27562b3916af118481aba030a  docker.dm-ai.cn/arm64/node:10.16.3-tx2  "docker-entrypoint.s..."  2 seconds ago      Up 2 seconds      ports              amazing_feynman
[root@jenkins ~]#
[root@jenkins ~]# uname -a
Linux jenkins 3.10.0-862.el7.x86_64 #1 SMP Fri Apr 20 16:44:24 UTC 2018 x86_64 x86_64 GNU/Linux
[root@jenkins ~]#
[root@jenkins ~]# docker exec -it 102a4b554815 sh
# # uname -a
Linux 102a4b554815 3.10.0-862.el7.x86_64 #1 SMP Fri Apr 20 16:44:24 UTC 2018 aarch64 GNU/Linux
#

```

## 方法2

可以将qemu-aarch64-static注入镜像中：

Dockerfile可以这样如下形式：

FROM multiarch/qemu-user-static:x86\_64-aarch64 as qemu

FROM arm64v8/ubuntu

COPY --from=qemu /usr/bin/qemu-aarch64-static /usr/bin

docker build . -t arm64v8/ubuntu:qemu

docker run -it arm64v8/ubuntu:qemu sh

参考文档：<https://github.com/multiarch/qemu-user-static>

未来可以使用docker的新功能，直接打包支持arm架构的镜像，  
参考：

<https://yq.aliyun.com/articles/712584>

<https://github.com/docker/buildx>