binfmt_misc/qemu-user-static misc

hushui 于 2020-07-17 09:37:42 发布 894 收藏 1

分类专栏： Qemu Linux ARM

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121 篇文章 0 订阅

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ARM

36 篇文章 0 订阅

订阅专栏

Install Refer to

Qemu2.x user mode/Ubuntu18 for Chroot/ARM qemu-user-static/CONFIG_BINFMT_MISC/Ubuntu/ARM/Rootfs

https://blog.csdn.net/hushui/article/details/103791704

Qemu4 user mode source build/static for Chroot/ARM rootfs on Ubuntu18

https://blog.csdn.net/hushui/article/details/103806109

```
###  normal build with full Linux system emulation
./configure  --target-list=aarch64-softmmu,arm-softmmu,x86_64-softmmu,i386-softmmu,aarch64-linux-user,arm-l

###  qemu-user-static build for arm/aarch64 only
./configure  --target-list=aarch64-linux-user,arm-linux-user  --enable-debug   --enable-gtk --enable-vnc --
```

On Centos7/RHEL7 qemu-user-static(v4.2) are built from source. (Refer to https://blog.csdn.net/hushui/article/details/103806109)

Note for Centos7/RHEL7 , static lib files are needed!

  yum install gtk2-devel glib2-static
   yum install glibc-static libtool
  yum install zlib-static
  yum install   libstdc++-static
  yum install pcre-static

--disable-guest-agent if Centos misses some pixman static lib

```
[lake@lake_centos7 qemu-4.2.0]$ ./configure --target-list=aarch64-linux-user,arm-linux-user --enable-deb
```

Qemu/static build/old way

```
../configure --disable-bsd-user --disable-guest-agent --disable-strip --disable-werror --disable-gcrypt --d
```

> qemu-arm version 4.2.0

1. Enable/disable by /proc/sys/fs/binfmt_misc/status

[root@lake_centos7 nfs]# ls /proc/sys/fs/binfmt_misc/
register status
[root@lake_centos7 nfs]# cat /proc/sys/fs/binfmt_misc/status
enabled
[root@lake_centos7 nfs]# cat /proc/sys/fs/binfmt_misc/register
cat: /proc/sys/fs/binfmt_misc/register: Invalid argument

Try qemu-aarch64

2.1 qemu-aarch64

[root@lake_centos7 nfs]#

```
echo ":qemu-aarch64:M::\x7fELF\x02\x01\x01\x00\x00\x00\x00\x00\x00\x00\x00\x00\x02\x00\xb7\x00:\xff\xff\xff
```

```
[root@lake_centos7 nfs]# ls -l  /proc/sys/fs/binfmt_misc/
total 0
-rw-r--r-- 1 root root 0 Jul 17 01:33 qemu-aarch64
--w------- 1 root root 0 Jul 17 01:33 register
-rw-r--r-- 1 root root 0 Jul 17 01:32 status
[root@lake_centos7 nfs]# cat  /proc/sys/fs/binfmt_misc/qemu-aarch64
enabled
interpreter /usr/bin/qemu-aarch64
flags:
offset 0
magic 7f454c4602010100000000000000000000200b700
mask ffffffffffffff00fffffffffffffffeffffff
[root@lake_centos7 nfs]#


echo 0 > /proc/sys/fs/binfmt_misc/<name>    # Disable the match
echo 1 > /proc/sys/fs/binfmt_misc/<name>    # Enable the match
echo -1 > /proc/sys/fs/binfmt_misc/<name>   # Delete the match


[root@lake_centos7 nfs]# echo 0 > /proc/sys/fs/binfmt_misc/qemu-aarch64
[root@lake_centos7 nfs]# cat  /proc/sys/fs/binfmt_misc/qemu-aarch64
disabled
interpreter /usr/bin/qemu-aarch64
flags:
offset 0
magic 7f454c4602010100000000000000000000200b700
mask ffffffffffffff00fffffffffffffffeffffff
[root@lake_centos7 nfs]# echo -1  > /proc/sys/fs/binfmt_misc/qemu-aarch64
[root@lake_centos7 nfs]# cat  /proc/sys/fs/binfmt_misc/qemu-aarch64
cat: /proc/sys/fs/binfmt_misc/qemu-aarch64: No such file or directory
[root@lake_centos7 nfs]# ls -l   /proc/sys/fs/binfmt_misc
total 0
--w------- 1 root root 0 Jul 17 01:33 register
-rw-r--r-- 1 root root 0 Jul 17 01:32 status
[root@lake_centos7 nfs]#
```

2.2 qemu-arm

```
[root@lake_centos7 nfs]#
```

```
echo    ':arm:M::\x7fELF\x01\x01\x01\x00\x00\x00\x00\x00\x00\x00\x00\x00\x02\x00\x28\x00:\xff\xff\xff\xff\xf
```

```
[root@lake_centos7 nfs]#
###################  Name
```

echo
':arm:M::\x7fELF\x01\x01\x01\x00\x00\x00\x00\x00\x00\x00\x00\x00\x02\x00\x28\x00:\xff\xff\xff\xff\xff\xff\x00\xff
wrapper:' > /proc/sys/fs/binfmt_misc/register
==>   /proc/sys/fs/binfmt_misc/arm

echo ':qemu-
arm:M::\x7fELF\x01\x01\x01\x00\x00\x00\x00\x00\x00\x00\x00\x00\x02\x00\x28\x00:\xff\xff\xff\xff\xff\xff\x00\xff\
arm:' > /proc/sys/fs/binfmt_misc/register
==>   /proc/sys/fs/binfmt_misc/qemu-arm

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#######################

[root@lake_centos7 nfs]#
[root@lake_centos7 nfs]# cat /proc/sys/fs/binfmt_misc/qemu-arm
enabled
interpreter /usr/bin/qemu-arm
flags:
offset 0
magic 7f454c4601010100000000000000000002002800
mask ffffffffffff00fffffffffffffffffeffffff
[root@lake_centos7 nfs]# sudo echo ":qemu-
aarch64:M::\x7fELF\x02\x01\x01\x00\x00\x00\x00\x00\x00\x00\x00\x00\x02\x00\xb7\x00:\xff\xff\xff\xff\xff\xff\x00
aarch64:" > /proc/sys/fs/binfmt_misc/register
[root@lake_centos7 nfs]# ls -l   /proc/sys/fs/binfmt_misc/
total 0
-rw-r--r-- 1 root root 0 Jul 17 01:38 qemu-aarch64
-rw-r--r-- 1 root root 0 Jul 17 01:37 qemu-arm
--w------- 1 root root 0 Jul 17 01:38 register
-rw-r--r-- 1 root root 0 Jul 17 01:32 status
[root@lake_centos7 nfs]#

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4. Mount Ubuntu ARM ROOTFS on Intel X86_64

Refer to https://blog.csdn.net/hushui/article/details/103791704