

QEMU for Raspberry Pi Ubuntu 16.04 with qemu-system-arm as a deb package 12/7/19

```
https://azeria-labs.com/emulate-raspberry-pi-with-qemu/  
Testing qemu on ws009 for raspberry pi  
vidal@ws009:~$ cd qemu_vms
```

Steps below to prepare the image to boot using qemu. This only needs to be done once to prepare the 2017-04-10-raspbian-jessie.img for qemu.

```
vidal@ws009:~/qemu_vms$ unzip 2017-04-10-raspbian-jessie.zip  
vidal@ws009:~/qemu_vms$ fdisk -l 2017-04-10-raspbian-jessie.img  
Disk 2017-04-10-raspbian-jessie.img: 4 GiB, 4285005824 bytes, 8369152 sectors  
Units: sectors of 1 * 512 = 512 bytes  
Sector size (logical/physical): 512 bytes / 512 bytes  
I/O size (minimum/optimal): 512 bytes / 512 bytes  
Disklabel type: dos  
Disk identifier: 0x402e4a57
```

Device	Boot	Start	End	Sectors	Size	Id	Type
2017-04-10-raspbian-jessie.img1		8192	92159	83968	41M	c	W95 FAT32 (LBA)
2017-04-10-raspbian-jessie.img2		92160	8369151	8276992	4G	83	Linux
92160		47185920					

```
vidal@ws009:~/qemu_vms$ sudo mount -v -o offset=47185920 -t ext4 ~/qemu_vms/2017-04-10-  
raspbian-jessie.img /mnt/raspbian  
[sudo] password for vidal:  
mount: /dev/loop0 mounted on /mnt/raspbian.  
vidal@ws009:~/qemu_vms$ sudo cp /mnt/raspbian/etc/ld.so.preload .  
vidal@ws009:~/qemu_vms$ sudo cp /mnt/raspbian/etc/fstab .  
vidal@ws009:~/qemu_vms$ sudo nano /mnt/raspbian/etc/ld.so.preload
```

```
vidal@ws009:~/qemu_vms$ sudo nano /mnt/raspbian/etc/fstab  
vidal@ws009:~/qemu_vms$ diff fstab /mnt/raspbian/etc/fstab  
2,3c2,3  
< PARTUUID=402e4a57-01 /boot          vfat defaults      0    2  
< PARTUUID=402e4a57-02 /             ext4 defaults,noatime 0    1  
---  
> /dev/sda1 /boot          vfat defaults      0    2  
> /dev/sda2 /             ext4 defaults,noatime 0    1  
vidal@ws009:~/qemu_vms$ sudo umount /mnt/raspbian
```

Command to start the virtual raspberry pi

Note: The yocto sdk qemu fails at startup.

***vidal@ws009:~/qemu_vms\$. /opt/poky/3.0.1/rpi4/environment-setup-cortexa7t2hf-
neon-vfpv4-poky-linux-gnueabi***

```
vidal@ws009:~/qemu_vms$ qemu-system-arm -kernel ~/qemu_vms/qemu-rpi-  
kernel/kernel-qemu-4.4.34-jessie -cpu arm1176 -m 256 -M versatilepb -serial stdio  
-append "root=/dev/sda2 rootfstype=ext4 rw" -hda ~/qemu_vms/2017-04-10-  
raspbian-jessie.img -redir tcp:5022::22 -no-reboot  
qemu-system-arm: -redir: invalid option
```

Removing the -redir tcp:5022::22 boots okay to

Command to start the virtual raspberry pi

```
vidal@ws009:~/qemu_vms$ qemu-system-arm -kernel ~/qemu_vms/qemu-rpi-kernel/kernel-qemu-  
4.4.34-jessie \  
-cpu arm1176 -m 256 -M versatilepb -serial stdio \  
-append "root=/dev/sda2 rootfstype=ext4 rw" -hda ~/qemu_vms/2017-04-10-raspbian-  
jessie.img \  
-redir tcp:5022::22 -no-reboot  
WARNING: Image format was not specified for '/home/vidal/qemu_vms/2017-04-10-raspbian-  
jessie.img' and probing guessed raw.  
Automatically detecting the format is dangerous for raw images, write operations on block 0  
will be restricted.  
Specify the 'raw' format explicitly to remove the restrictions.  
pulseaudio: set_sink_input_volume() failed  
pulseaudio: Reason: Invalid argument  
pulseaudio: set_sink_input_mute() failed  
pulseaudio: Reason: Invalid argument  
Uncompressing Linux... done, booting the kernel.
```



```
See 'systemctl status systemd-modules-load.service' for details.
systemd[1]: Failed to start Load Kernel Modules.
systemd[1]: Unit systemd-modules-load.service entered failed state.
systemd[1]: Time has been changed
[ OK ] Started udev Coldplug all Devices.
systemd[1]: Started udev Coldplug all Devices.
systemd[1]: Mounted Configuration File System.
systemd[1]: Mounted FUSE Control File System.
systemd[1]: Starting Apply Kernel Variables...
        Starting Apply Kernel Variables...
systemd[1]: Starting udev Kernel Device Manager...
        Starting udev Kernel Device Manager...
systemd[1]: Starting Syslog Socket.
[ OK ] Listening on Syslog Socket.
systemd[1]: Listening on Syslog Socket.
systemd[1]: Starting Journal Service...
        Starting Journal Service...
[ OK ] Started Journal Service.
systemd[1]: Started Journal Service.
[ OK ] Started Apply Kernel Variables.
[ OK ] Started udev Kernel Device Manager.
        Starting Copy rules generated while the root was ro...
        Starting LSB: Set preliminary keymap...
[ OK ] Started Copy rules generated while the root was ro.
```

Raspberry Pi at console.

