# Install Qemu on Ubuntu 20.04

**$ qemu-system-x86\_64 --version**

Command 'qemu-system-x86\_64' not found, …

**$ $?**

127: command not found

**$ sudo apt-get update -y**

[sudo] password for laurent:

Hit:1 http://fr.archive.ubuntu.com/ubuntu focal InRelease

…

**$ sudo apt install -y qemu qemu-utils qemu-kvm**

…

The following NEW packages will be installed:

cpu-checker ibverbs-providers ipxe-qemu ipxe-qemu-256k-compat-efi-roms libaio1 libcacard0 libfdt1 libibverbs1

libiscsi7 libpmem1 librados2 librbd1 librdmacm1 libslirp0 libspice-server1 libusbredirparser1 libvirglrenderer1

msr-tools ovmf qemu-block-extra qemu-kvm qemu-system-common qemu-system-data qemu-system-gui qemu-system-x86

qemu-utils seabios sharutils

0 upgraded, 28 newly installed, 0 to remove and 189 not upgraded.

Need to get 19,7 MB of archives.

After this operation, 82,6 MB of additional disk space will be used.

Do you want to continue? [Y/n] y …

Processing triggers for man-db (2.9.1-1) ...

**$ kvm-ok**

INFO: /dev/kvm exists

KVM acceleration can be used

**$ qemu-system-x86\_64 --version**

QEMU emulator version 4.2.1 (Debian 1:4.2-3ubuntu6.19)

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**$ $?**

0: command not found

# Create user ssh key

**$ ls ~/.ssh/id\_rsa**

**$ ssh-keygen**

Generating public/private rsa key pair.

Enter file in which to save the key (/home/laurent/.ssh/id\_rsa):

Enter passphrase (empty for no passphrase):

Enter same passphrase again:

Your identification has been saved in /home/laurent/.ssh/id\_rsa

Your public key has been saved in /home/laurent/.ssh/id\_rsa.pub

The key fingerprint is:

SHA256:Um9X7e2VaLP/EFSqqMrm9o9ZAVocB1NmJCXADVlAnhA laurent@ubuntu-XPS-8700

# Start an Ubuntu cloud VM

**$ mkdir vm**

**$ cd vm**

**$ wget https://cloud-images.ubuntu.com/minimal/releases/focal/release-20220201/ubuntu-20.04-minimal-cloudimg-amd64.img**

Connecting to cloud-images.ubuntu.com (cloud-images.ubuntu.com)|2001:67c:1360:8001::34|:443... connected.

HTTP request sent, awaiting response... 200 OK

Length: 258473984 (246M)

Saving to: ‘ubuntu-20.04-minimal-cloudimg-amd64.img’

**$ cat > metadata.yaml <<EOF**

**instance-id: iid-wordslab**

**local-hostname: wordslab**

**EOF**

**$ cat > user-data.yaml <<EOF**

**#cloud-config**

**ssh\_authorized\_keys:**

**- $(cat ~/.ssh/id\_rsa.pub)**

**EOF**

**$ sudo apt-get install -y cloud-image-utils**

The following NEW packages will be installed:

cloud-image-utils

0 upgraded, 1 newly installed, 0 to remove and 189 not upgraded.

Need to get 16,9 kB of archives.

After this operation, 62,5 kB of additional disk space will be used**.**

**$ cloud-localds seed.img user-data.yaml metadata.yaml**

**$ qemu-system-x86\_64 \**

**-machine accel=kvm,type=q35 \**

**-cpu host \**

**-m 8G \**

**-nographic \**

**-device virtio-net-pci,netdev=net0 \**

**-netdev user,id=net0,hostfwd=tcp::2222-:22 \**

**-drive if=virtio,format=qcow2,file=ubuntu-20.04-minimal-cloudimg-amd64.img \**

**-drive if=virtio,format=raw,file=seed.img**

…

**$ ssh -o "StrictHostKeyChecking no" -p 2222** [**ubuntu@0.0.0.0**](mailto:ubuntu@0.0.0.0)

Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.4.0-1054-kvm x86\_64)

…

See "man sudo\_root" for details.

ubuntu@wordslab:~$

**$ cat /proc/cpuinfo**

model name : Intel(R) Core(TM) i7-4790 CPU @ 3.60GHz

cpu MHz : 3591.680

cache size : 16384 KB

physical id : 0

siblings : 1

core id : 0

cpu cores : 1