Hyper-V (VHDX) → KVM (QCOW2) Ubuntu Migration Playbook

This document provides a concise, repeatable procedure for migrating Ubuntu virtual machines from Microsoft Hyper-V (Gen2 / UEFI) to KVM/libvirt on Ubuntu Server.

Host Prerequisites

```
sudo apt update
sudo apt install -y qemu-kvm libvirt-daemon-system libvirt-clients virtinst qemu-utils
libguestfs-tools ovmf
sudo systemctl enable --now libvirtd
```

Convert VHDX to QCOW2

```
qemu-img check -r all source.vhdx
qemu-img convert -p -O qcow2 source.vhdx vm.qcow2
```

Inspect Disk Layout

```
virt-filesystems -a vm.qcow2 --all --long -h
```

Create VM (Import Mode)

```
virt-install --import \
--name vm-name \
--memory 4096 \
--vcpus 2 \
--cpu host \
--disk path=/srv/vms/vm.qcow2,format=qcow2,bus=virtio \
--os-variant ubuntu22.04 \
--network network=default,model=virtio \
--graphics none
```

Fix Firmware (UEFI / OVMF)

```
<os>
<type arch='x86_64' machine='pc-q35-7.2'>hvm</type>
<loader readonly='yes' type='pflash'>/usr/share/OVMF/OVMF_CODE_4M.fd</loader>
<nvram>/var/lib/libvirt/qemu/nvram/vm-name_VARS.fd</nvram>
</os>
```

GRUB Repair via Live ISO

```
mount /dev/ubuntu-vg/ubuntu-lv /mnt
mount /dev/vda2 /mnt/boot
mount /dev/vda1 /mnt/boot/efi
mount --bind /dev /mnt/dev
mount --bind /proc /mnt/proc
```

```
mount --bind /sys /mnt/sys
chroot /mnt
mount -t efivarfs efivarfs /sys/firmware/efi/efivars
grub-install --target=x86_64-efi --efi-directory=/boot/efi --bootloader-id=ubuntu
--recheck
update-grub
```

Networking Fix (Netplan)

```
ip link
sudo nano /etc/netplan/*.yaml
network:
version: 2
ethernets:
enp1s0:
dhcp4: true
sudo netplan apply
```

Finalize

```
sudo systemctl enable serial-getty@ttyS0.service
sudo apt install -y qemu-guest-agent openssh-server
sudo systemctl enable --now qemu-guest-agent ssh
```