GPU passthrough

> Ici on va configurer une carte graphique qui sera utilisable par une **VM**.
>
> Lien utile

On Modifie le grub

`vim /etc/default/grub`

```
# on ajoute cette ligne amd proc: amd_iommu=on intel proc: intel_iommu=on
GRUB_CMDLINE_LINUX_DEFAULT="quiet amd_iommu=on iommu=pt
pcie_acs_override=downstream,multifunction nofb nomodeset video=vesafb:off,efifb:off"
```

Mise à jours du grub et verif virtualisation actif

```
update-grub && proxmox-boot-tool refresh \
&& dmesg | grep -e DMAR -e IOMMU
```

Ajout des modules

```
echo "nvidia" >> /etc/modules \
&& echo "nvidia_uvm" >> /etc/modules \
&& echo "vfio" >> /etc/modules \
&& echo "vfio_iommu_type1" >> /etc/modules \
&& echo "vfio_pci" >> /etc/modules \
&& echo "vfio_virqfd" >> /etc/modules && cat /etc/modules \
```

```
&& dmesg | grep 'remapping' \
&& echo "options vfio_iommu_type1 allow_unsafe_interrupts=1" >
/etc/modprobe.d/iommu_unsafe_interrupts.conf \
&& echo "options kvm ignore_msrs=1" > /etc/modprobe.d/kvm.conf && find
/sys/kernel/iommu_groups/ -type l
```

On repère la GPU

```
lspci -v && lspci -nnv | grep VGA
# Résultat
[07:00.0 VGA compatible controller [0300]: NVIDIA Corporation GP108 [GeForce GT 1030]
[10de:1d01] (rev a1) (prog-if 00 [VGA controller])]
```

installation de la rom NVIDIA

```
cd /sys/bus/pci/devices/ \
&&  cd 0000:07:00.0 && echo 1 > rom \
&&  cd /usr/share/kvm/ \
&&  wget https://www.techpowerup.com/vgabios/192498/MSI.GT1030.2048.170413.rom \
&& mv MSI.GT1030.2048.170413.rom GT1030.rom

ls && cd /sys/bus/pci/devices/0000:07:00.0 \
&& chmod 777 rom \
&& cat rom > /usr/share/kvm/GT1030.rom
```

Blacklist des GPU

> “ Unable to load the kernel module 'nvidia.ko
> Nvidia drivers on Proxmox

```
echo "blacklist vga16fb" >> /etc/modprobe.d/blacklist.conf \
&& echo "blacklist nouveau" >> /etc/modprobe.d/blacklist.conf \
&& echo "blacklist rivafb" >> /etc/modprobe.d/blacklist.conf \
&& echo "blacklist nvidiafb" >> /etc/modprobe.d/blacklist.conf \
&& echo "blacklist rivatv" >> /etc/modprobe.d/blacklist.conf && cat
/etc/modprobe.d/blacklist.conf

ls /usr/src/

lcpci -k
ls /etc/modprobe.d/
touch /etc/modprobe.d/nvidia-installer-disable.conf \
&& echo "blacklist nouveau" >> /etc/modprobe.d/nvidia-installer-disable.conf \
&& echo "options nouveau modeset=0" >> /etc/modprobe.d/nvidia-installer-disable.conf \
&& echo "blacklist vfio-pci" >> /etc/modprobe.d/nvidia-installer-disable.conf \
&& cat /etc/modprobe.d/nvidia-installer-disable.conf
&& mv /etc/modprobe.d/pve-blacklist.conf /etc/modprobe.d/pve-blacklist.conf.disable \
&& update-initramfs -u && proxmox-boot-tool refresh && reboot
```

Téléchargement de driver nvidia

```
wget https://fr.download.nvidia.com/XFree86/Linux-x86_64/515.48.07/NVIDIA-Linux-x86_64-
515.48.07.run \
&& chmod -x NVIDIA-Linux-x86_64-515.48.07.run \
&& chmod 777 NVIDIA-Linux-x86_64-515.48.07.run \
ls /sys/bus/pci/devices/
echo "0000:07:00.0" > /sys/bus/pci/devices/0000:07:00.0/driver/unbind \
&& ./NVIDIA-Linux-x86_64-510.73.05.run --kernel-source-path /usr/src/linux-headers-5.15.35-1-
pve \
&& proxmox-boot-tool refresh && update-initramfs -u

apt update && apt upgrade -y && apt dist-upgrade -y && apt autoremove -y && apt purge && apt
autoclean
```

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