Proxmox Setup Questions

1- Inital Admin - Helper Scripts

Post Install

- Correct sources,
- Update packages
- Kill subscription nag
  Processor Microcode
- Add microcode
  Netdata
- Add Netdata agent and add to Lab
  Kernal Clean
- kernel clean
- kernel pin - Available but not used currently - there is also a "kernel pin" but i don't really understand it, but from what i gather you pin in enterprise to prevent surprises - not critical in a homelab, but now that i'm setting up and learning infrastructure as code - i might start pinning dokcer images for eample, so maybe i should start?)

Helper Script

pve-post-install

https://community-scripts.github.io/ProxmoxVE/scripts?id=post-pve-install

```
bash -c "$(curl -fsSL https://raw.githubusercontent.com/community-scripts/ProxmoxVE/main/tools/pve/post-pve-install.sh)"
```

Processor Microcode

https://community-scripts.github.io/ProxmoxVE/scripts?id=microcode

```
bash -c "$(curl -fsSL https://raw.githubusercontent.com/community-scripts/ProxmoxVE/main/tools/pve/microcode.sh)"
```

Proxmox VE Netdata

https://community-scripts.github.io/ProxmoxVE/scripts?id=netdata

```
bash -c "$(curl -fsSL https://raw.githubusercontent.com/community-scripts/ProxmoxVE/main/tools/addon/netdata.sh)"
```

Location of config file

```
/etc/netdata/netdata.conf
```

PVE Kernel Clean

https://community-scripts.github.io/ProxmoxVE/scripts?id=kernel-clean

```
bash -c "$(curl -fsSL https://raw.githubusercontent.com/community-scripts/ProxmoxVE/main/tools/pve/kernel-clean.sh)"
```

PVE Host Backup - Needs more thought

https://community-scripts.github.io/ProxmoxVE/scripts?id=host-backup

```
bash -c "$(curl -fsSL https://raw.githubusercontent.com/community-scripts/ProxmoxVE/main/tools/pve/host-backup.sh)"
```

11 Things Article from TechnoTim

IOMMU (PCI Passthrough)
You'll first want to be sure that Vt-d / IOMMU is enabled in your BIOS before continuing.

If see "No IOMMU detected, please activate it.See Documentation for further information." It means that IOMMU is not enabled in your BIOS or that it has not been enabled in Proxmox yet. If you're seeing this and you've enabled it in your BIOS, you can enable it in Proxmox below.

Checking your boot manager
Enabling PCI passthrough depends on your boot manager. You can check to see which one you are using by running

```
efibootmgr -v
```

If it returns an errors, it's running in Legacy/BIOS with GRUB, skip to GRUB section

if it returns something like this, it's running system-boot, skip to system-d section section

```
Boot0002* proxmox   HD(2,GPT,b0f10348-020c-4bd6-b002-
```

```
dc80edcf1899,0x800,0x100000)/File(\EFI\proxmox\shimx64.efi)
```

if it returns something like this.

```
Boot0006 * Linux Boot Manager [...] File(EFI\systemd\systemd-bootx64.efi)
GRUB
```

If you're using GRUB, use the following commands:

```
nano /etc/default/grub
```

add `iommu=pt` to `GRUB_CMDLINE_LINUX_DEFAULT` like so:

```
GRUB_CMDLINE_LINUX_DEFAULT="quiet intel_iommu=on iommu=pt"`
If you aren't using an intel processor, remove intel_iommu=on`
```

system-boot
If you're using system-boot use the following commands.

```
nano /etc/kernel/cmdline
```

add `intel_iommu=on iommu=pt` to the end of this line without line breaks

```
root=ZFS=rpool/ROOT/pve-1 boot=zfs intel_iommu=on iommu=pt
```

If you aren't using an intel processor, remove intel_iommu=on

run

```
pve-efiboot-tool refresh
```

then reboot

reboot
VFIO modules
Edit `/etc/modules`

```

vfio
vfio_iommu_type1
vfio_pci
```

```
vfio_virqfd
```

```
update-initramfs -u -k all
```

then reboot

reboot

NVIDIA
If you're planning on using an NVIDIA card, I've found this helps prevent some apps like GPUz from crashing on the VM.

```
echo "options kvm ignore_msrs=1 report_ignored_msrs=0" >
/etc/modprobe.d/kvm.conf
```

Digital Spoaceport - NVIDIA drivers and LXC conectivity

https://digitalspaceport.com/how-to-setup-vllm-local-ai-homelab-ai-server-beginners-guides/

I want playbooks that can check the proxmox node for Nvidia GPUs

If they have nvidia GPUs, I want them to do what is done in the Digital Spaceport Article above

We DO NOT need to set up ollama and open-webui, but I do want to install strivers and make them available to the LXCs the way the guide does here

In an ideal world, as a part of this driver install and setup, it would also set up a small ttest LXC and mount it to make sure that everything is working