

Gaming on openSUSE Tumbleweed – Full Setup Cheat Sheet

This cheat sheet includes all commands, repos, environment variables, and tips for both Nvidia and AMD Radeon setups on openSUSE Tumbleweed. Verified and ordered logically for a clean setup.

Nvidia Setup

1. Blacklist Nouveau

Edit `/etc/default/grub` and append:

```
rd.driver.blacklist=nouveau
```

Create `/etc/modprobe.d/50-blacklist-nouveau.conf`:

```
blacklist nouveau
options nouveau modeset=0
```

Regenerate initramfs and update grub:

```
sudo dracut -f
sudo grub2-mkconfig -o /boot/grub2/grub.cfg
```

2. Add Repositories

```
sudo zypper addrepo https://download.nvidia.com/opensuse/tumbleweed
Nvidia-TW
sudo zypper addrepo
https://ftp.gwdg.de/pub/linux/misc/packman/suse/openSUSE_Tumbleweed
Pacman
sudo zypper refresh
```

3. Install Drivers

```
sudo zypper in --details --recommended dkms suse-prime nvidia-video-G06
nvidia-gl-G06 nvidia-common-G06 nvidia-compute-G06
nvidia-compute-utils-G06 nvidia-settings gamemode
sudo zypper dup --details
```

4. User Groups

```
sudo usermod -aG video,render,wheel $USER
```

5. Enable Nvidia

```
sudo prime-select nvidia
sudo prime-select boot nvidia
sudo prime-select next-boot nvidia
```

6. Verify

```
nvidia-smi
```

7. Nvidia Environment Variables

```
__NV_PRIME_RENDER_OFFLOAD=1
__VK_LAYER_NV_optimus=NVIDIA_only
__GLX_VENDOR_LIBRARY_NAME=nvidia
QT_QPA_PLATFORM=xcb
CUDA_VISIBLE_DEVICES=0
__GL_THREADED_OPTIMIZATIONS=1
__GL_SYNC_TO_VBLANK=0
__GL_ALLOW_UNOFFICIAL_PROTOCOL=1
```

```
__NV_PRIME_RENDER_OFFLOAD_PROVIDER=NVIDIA-G0
KDE_FULL_SESSION=1
XDG_CURRENT_DESKTOP=KDE
XDG_SESSION_TYPE=x11
```

AMD Radeon Setup

1. System Update

```
sudo zypper dup --details
```

2. Add Repositories

```
sudo zypper addrepo
https://ftp.gwdg.de/pub/linux/misc/packman/suse/openSUSE_Tumbleweed
Pacman
sudo zypper addrepo https://download.opensuse.org/repositories/devel:/lan
guages:/perl/openSUSE_Tumbleweed devel_languages_perl
sudo zypper addrepo
https://download.opensuse.org/repositories/Education/openSUSE_Tumbleweed
Education
sudo zypper addrepo https://download.opensuse.org/repositories/science:/G
PU:/ROCm/openSUSE_Tumbleweed science_GPU_ROCm
sudo zypper addrepo https://download.opensuse.org/repositories/science:/G
PU:/ROCm:/Work/openSUSE_Tumbleweed science_GPU_ROCm_Work
sudo zypper addrepo
https://download.opensuse.org/repositories/science/openSUSE_Tumbleweed
science
sudo zypper refresh
```

3. Install ROCm & Tools

```
sudo zypper in --details --recommends rocm rocm-hip rocm-smi rocm-openc1
rocminfo amdgpu_top
```

4. Udev Rules

Create **/etc/udev/rules.d/70-amdgpu.rules**:

```
KERNEL=="kfd", MODE="0660", GROUP=="video"
SUBSYSTEM=="drm", KERNEL=="renderD*", MODE="0660"
```

Create **/etc/udev/rules.d/70-kfd.rules**:

```
SUBSYSTEM=="kfd", KERNEL=="kfd", TAG+="uaccess", GROUP="video"
```

5. User Groups

```
sudo usermod -aG video,render,wheel $USER
```

6. Reboot and Verify

```
sudo systemctl reboot
amdgpu_top --single
```

7. Install Steam & Tools

```
sudo zypper in --details --recommends steam gamescope gamemode mangohud
vkbasalt libvulkan1 vulkan-tools Mesa-dri Mesa-libGL1 Mesa-libGL1-32bit
libvulkan1-32bit Mesa-dri-32bit libdrm_amdgpu1 libdrm_amdgpu1-32bit
```

8. Steam Desktop Fix (KDE)

Edit **~/local/share/applications/steam.desktop** Exec line:

```
Exec=env RADV_PERFTEST=aco STEAM_FORCE_DESKTOP_UI=1 mesa_glxthread=true
```

```
PROTON_ENABLE_FS_SYNC=1 /usr/bin/steam %U
```

9. AMD Environment Variables

```
AMD_VULKAN_ICD=RADV  
RADV_PERFTTEST=aco  
MESA_SHADER_CACHE_MAX_SIZE=12G  
MESA_SHADER_CACHE_DIR=$HOME/.cache/mesa_shader_cache  
MESA_GLTHREAD=true  
STEAM_FORCE_DESKTOP_UI=1  
mesa_glthread=true  
PROTON_ENABLE_FS_SYNC=1
```

Optional: SCX Scheduler

Install SCX schedulers for better CPU scheduling and latency:

```
sudo zypper install scx
```

Tumbleweed loads the Flash scheduler by default, giving better gaming responsiveness. For more details, watch my video 'Boost Your Linux Game Speed with This Easy Trick!'