Linux: Fedora- Client

here are some basics for setting up Fedora. Actual Version: 43

Useful Docs also: https://github.com/devangshekhawat/Fedora-43-Post-Install-Guide

Graphics

Basic codecs

Out of the Box there are not all multimedia codecs installed which are needed to decode propietary formats.

To use h264 and vlc, you need to:

```
sudo dnf config-manager setopt fedora-cisco-openh264.enabled=1
sudo dnf install vlc
sudo dnf install python-vlc
```

Interfaces

There are different Hardware/Software Interfaces that are important for Video acceleration in 2D and 3D.

From https://wiki.archlinux.org/title/Hardware_video_acceleration :

Hardware video acceleration makes it possible for the video card to decode/encode video, thus offloading the CPU and saving power.

There are several ways to achieve this on Linux:

- Video Acceleration API (VA-API) is a specification and open source library to provide both hardware accelerated video encoding and decoding, developed by Intel.
- Video Decode and Presentation API for Unix (VDPAU) is an open source library and API to offload portions of the video decoding process and video post-processing to the GPU video-hardware, developed by NVIDIA.

- Advanced Media Framework SDK (AMF) is an open source framework which allows „Optimal“ access to AMD GPUs for multimedia processing, developed by AMD.
- NVDEC/NVENC - NVIDIA's proprietary APIs for hardware video acceleration, used by NVIDIA GPUs from Fermi onwards.
- Vulkan Video is an extension of the Vulkan graphics API designed to support hardware-accelerated video encoding and decoding.

For comprehensive overview of driver and application support see #Comparison tables.

VA-API

This is the most used Interface for video acceleration and decoding itself. The example here is a very old card still supported by AMDGPU:

```
root@pc-000700080009:~# vainfo
Trying display: wayland
Trying display: x11
libva info: VA-API version 1.22.0
libva info: User environment variable requested driver 'radeonsi'
libva info: Trying to open /usr/lib64/dri-nonfree/radeonsi_drv_video.so
libva info: Trying to open /usr/lib64/dri-freeworld/radeonsi_drv_video.so
libva info: Found init function __vaDriverInit_1_22
libva info: va_openDriver() returns 0
vainfo: VA-API version: 1.22 (libva 2.22.0)
vainfo: Driver version: Mesa Gallium driver 25.3.6 for AMD CAICOS (DRM 2.51.0 / 6.19.11-200.fc43.x86_64, LLVM 21.1.8)
vainfo: Supported profile and entrypoints
      VAProfileMPEG2Simple            : VAEntrypointVLD
      VAProfileMPEG2Main              : VAEntrypointVLD
      VAProfileVC1Simple              : VAEntrypointVLD
      VAProfileVC1Main                : VAEntrypointVLD
      VAProfileVC1Advanced            : VAEntrypointVLD
      VAProfileH264ConstrainedBaseline: VAEntrypointVLD
      VAProfileH264Main               : VAEntrypointVLD
      VAProfileH264High               : VAEntrypointVLD
      VAProfileH264High10             : VAEntrypointVLD
      VAProfileNone                   : VAEntrypointVideoProc
```

Please check to use the right driver (see beneath), and not maybe r600, which would be the first matching driver, if the environment LIBVA_DRIVER_NAME had not

been set.

VDPAU

Basically a good way, to put load from the cpu to gpu. But:

The Mesa-Project, which is the base-project for all desktops and many programs that did support the interface, now does not any more, which is why that interface from Mesa will die:

```
https://forums.gentoo.org/viewtopic.php?t=1177112

Post by grknight » Wed Mar 18, 2026 12:48 pm
Oh, so mesa removed VDPAU support with version 25.3.0

Now anything that depended on it should be removed. Please disable all vdpau on your system.

Edit: Try vaapi instead system-wide. Mesa should provide a vaapi driver for radeonsi
```

To still be able to unload rendering to GPU, you ma y use the LIBVDPAU-VA-GL (https://github.com/i-rinat/libvdpau-va-gl). This Library will offer VDPAU by using VA-API and OpenGL.

See beaneath for setup.

Vulkan

This is the actual framework for using 3d graphics in Linux. It will be the best supported Interface in the Future.

To tes, use:

```
vulkaninfo | grep VK_KHR_video_
```

For AMD

```
dnf install https://download1.rpmfusion.org/free/fedora/rpmfusion-free-release-$(rpm -E %fedora).noarch.rpm
dnf install libavcodec-freeworld --allowerasing
dnf install https://download1.rpmfusion.org/nonfree/fedora/rpmfusion-nonfree-release-$(rpm -E %fedora).noarch.rpm
dnf install mesa-va-drivers-freeworld --allowerasing
dnf install libvdpau-va-gl
```

By default, most Linux deliver radeon- driver, which is open source and stable, but lacks important features.

For AMD, one should switch to AMDGPU if possible (supported card by that driver).

To do so:

```
root@pc-000700080009:~# sudo nano /etc/default/grub
```

Add to GRUB_CMDLINE_LINUX the following Parameters:

```
radeon.si_support=0 amdgpu.si_support=1 radeon.cik_support=0 amdgpu.cik_support=1
```

and update Grub:

```
root@pc-000700080009:~# sudo grub2-mkconfig -o /boot/grub2/grub.cfg
```

Blacklist radeon - this is needed for Vulkan ro work properly:

```
root@pc-000700080009:~# echo "blacklist radeon"> /etc/modprobe.d/blacklist-radeon.conf
```

Reboot. lsmod should than not show radeon any more.

Environment: to make the Interfaces using the Driver

```
root@pc-000700080009:~# nano /etc/environment
```

and put the lines in it:

```
LIBVA_DRIVER_NAME=radeonsi
# 10.04.2026 No support from mesa for VDPAU any more, use libvdpau-va-gl
VDPAU_DRIVER=va_gl
```

Hint: Also the driver is changed to **AMDGPU**, you need to set **radeonsi** as value for LIBVA there!

VDPAU will work via VA-API:

```
root@pc-000700080009:~# export VDPAU_DRIVER=va_gl
root@pc-000700080009:~# vdpauinfo
display: :0   screen: 0
libva info: VA-API version 1.22.0
libva info: User environment variable requested driver 'radeonsi'
libva info: Trying to open /usr/lib64/dri-nonfree/radeonsi_drv_video.so
libva info: Trying to open /usr/lib64/dri-freeworld/radeonsi_drv_video.so
libva info: Found init function __vaDriverInit_1_22
libva info: va_openDriver() returns 0
API version: 1
Information string: OpenGL/VAAPI backend for VDPAU
```

Do not install / use

- **libva-vdpau-driver**

This would be the other way round (use VA-API via VDPAU Driver!)

Intel

```
dnf install https://download1.rpmfusion.org/free/fedora/rpmfusion-free-release-$(rpm -E %fedora).noarch.rpm
dnf install libavcodec-freeworld --allowerasing
dnf install https://download1.rpmfusion.org/nonfree/fedora/rpmfusion-nonfree-release-$(rpm -E %fedora).noarch.rpm
dnf install intel-media-driver --allowerasing
```

Environment: to make the Interfaces using the Driver

```
root@pc-000700080009:~# nano /etc/environment
```

and put the lines in it:

```
LIBVA_DRIVER_NAME=intel
VDPAU_DRIVER=intel
```

NVIDIA

to say it like a wise man did: fuck you nvidia

Fragmentation/Snapshotting

If you like BTRF because of its powerful Features and Snapshots, you need to set up BTRFs Assistant.

Annoying Plasmoids

like weather and such:

```
sudo dnf remove kdeplasma-addons
```

Akonadi

i don't like those tools. Make your machine slow by scanning files and such... so remove it:

```
sudo dnf remove akonadi-server
```