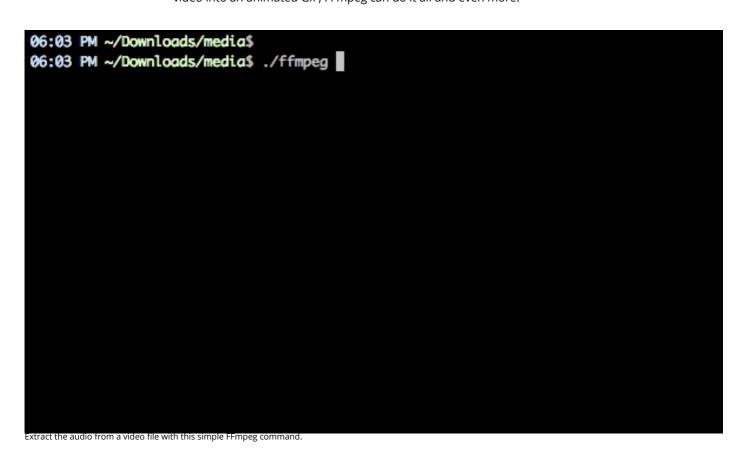*(/)*

tech à la carte

Useful FFmpeg Commands

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Fmpeg is an extremely powerful and versatile command line tool for converting audio and video files. It is free and available for Windows, Mac and Linux machines. Whether you want to join two video files, extract the audio component from a video file, convert your video into an animated GIF, FFmpeg can do it all and even more.

```
06:03 PM ~/Downloads/media$
06:03 PM ~/Downloads/media$ ./ffmpeg ▮
```

Extract the audio from a video file with this simple FFmpeg command.

USEFUL FFMPEG COMMANDS

FFmpeg supports all popular audio and video formats. Or you can running the command *./ffmpeg -formats* to get a list of every format that is supported by your FFmpeg installation. If you are just getting started, here are some commands that will give you good idea of the capabilities of this tool.

1. CUT VIDEO FILE INTO A SMALLER CLIP

You can use the time offset parameter (-ss) to specify the start time stamp in HH:MM:SS.ms format while the -t parameter is for specifying the actual duration of the clip in seconds.

```
ffmpeg -i input.mp4 -ss 00:00:50.0 -codec copy -t 20 output.mp4
```

2. SPLIT A VIDEO INTO MULTIPLE PARTS

If you want to split a large video into multiple smaller clips without re-encoding, ffmpeg can help. This command will split the source video into 2 parts – one ending at 50s from the start and the other beginning at 50s and ending at the end of the input video.

```
ffmpeg -i video.mp4 -t 00:00:50 -c copy small-1.mp4 -ss 00:00:50 -codec copy small-2.mp4
```

3. CONVERT VIDEO FROM ONE FORMAT TO ANOTHER

You can use the -vcodec parameter to specify the encoding format to be used for the output video. Encoding a video takes time but you can speed up the process by forcing a preset though it would degrade the quality of the output video.

```
ffmpeg -i youtube.flv -c:v libx264 filename.mp4
```

```
ffmpeg -i video.wmv -c:v libx264 -preset ultrafast video.mp4
```

4. JOIN (CONCATENATE) VIDEO FILES

If you have multiple audio or video files encoded with the same codecs, you can join them into a single file using FFmpeg. Create a input file with a list of all source files (https://ffmpeg.org/trac/ffmpeg/wiki/How%20to%20concatenate%20%28join,%20merge%29%20media% that you wish to concatenate and then run this command.

```
ffmpeg -f concat -i file-list.txt -c copy output.mp4
```

5. MUTE A VIDEO (REMOVE THE AUDIO COMPONENT)

Use the -an parameter to disable the audio portion of a video stream.

```
ffmpeg -i video.mp4 -an mute-video.mp4
```

6. EXTRACT THE AUDIO FROM VIDEO

The -vn switch extracts the audio portion from a video and we are using the -ab switch to save the audio as a 256kbps MP3 audio file.

```
ffmpeg -i video.mp4 -vn -ab 256 audio.mp3
```

7. CONVERT A VIDEO INTO ANIMATED GIF

FFmpeg is an excellent tool for converting videos into animated GIFs
(https://www.labnol.org/software/video-demo-with-animated-gif/28095/)
and the quality isn't bad either. Use the scale filter to specify the width of
the GIF, the -t parameter specific the duration while -r specifies the frame
rate (fps).

```
ffmpeg -i video.mp4 -vf scale=500:-1 -t 10 -r 10 image.gif
```

8. EXTRACT IMAGE FRAMES FROM A VIDEO

This command will extract the video frame at the 15s mark and saves it as
a 800px wide JPEG image. You can also use the -s switch (like -s 400×300)
to specify the exact dimensions of the image file though it will probably
create a stretched image if the image size doesn't follow the aspect ratio
of the original video file.

```
ffmpeg -ss 00:00:15 -i video.mp4 -vf scale=800:-1 -vframes 1 image.jpg
```

9. CONVERT VIDEO INTO IMAGES

You can use FFmpeg to automatically extract image frames
(https://www.labnol.org/software/extract-image-frames-from-
video/18137/) from a video every 'n' seconds and the images are saved in
a sequence. This command saves image frame after every 4 seconds.

```
ffmpeg -i movie.mp4 -r 0.25 frames_%04d.png
```

10. MERGE AN AUDIO AND VIDEO FILE

You can also specify the -shortest switch to finish the encoding when the
shortest clip ends.

```
ffmpeg -i video.mp4 -i audio.mp3 -c:v copy -c:a aac -strict experimental output.mp4
```

```
ffmpeg -i video.mp4 -i audio.mp3 -c:v copy -c:a aac -strict experimental -shortest output.mp4
```

11. RESIZE A VIDEO

Use the size (-s) switch with ffmpeg to resize a video while maintaining the
aspect ratio.

```
ffmpeg -i input.mp4 -s 480x320 -c:a copy output.mp4
```

12. CREATE VIDEO SLIDESHOW FROM IMAGES

This command creates a video slideshow (https://www.labnol.org/internet/street-view-time-lapse/20504/) using a series of images that are named as img001.png, img002.png, etc. Each image will have a duration of 5 seconds (-r 1/5).

```
ffmpeg -r 1/5 -i img%03d.png -c:v libx264 -r 30 -pix_fmt yuv420p slideshow.mp4
```

13. ADD A POSTER IMAGE TO AUDIO

You can add a cover image to an audio file and the length of the output video will be the same as that of the input audio stream. This may come handy for uploading MP3s to YouTube.

```
ffmpeg -loop 1 -i image.jpg -i audio.mp3 -c:v libx264 -c:a aac -strict experimental -b:a 192k -shortest output.mp4
```

14. CONVERT A SINGLE IMAGE INTO A VIDEO

Use the -t parameter to specify the duration of the video.

```
ffmpeg -loop 1 -i image.png -c:v libx264 -t 30 -pix_fmt yuv420p video.mp4
```

15. ADD SUBTITLES TO A MOVIE

This will take the subtitles from the .srt file. FFmpeg can decode most common subtitle formats.

```
ffmpeg -i movie.mp4 -i subtitles.srt -map 0 -map 1 -c copy -c:v libx264 -crf 23 -preset veryfast output.mkv
```

16. CROP AN AUDIO FILE

This will create a 30 second audio file starting at 90 seconds from the original audio file without transcoding.

```
ffmpeg -ss 00:01:30 -t 30 -acodec copy -i inputfile.mp3 outputfile.mp3
```

17. CHANGE THE AUDIO VOLUME

You can use the volume filter to alter the volume of a media file using FFmpeg. This command will half the volume of the audio file.

```
ffmpeg -i input.wav -af 'volume=0.5' output.wav
```

18. ROTATE A VIDEO

This command will rotate a video clip (https://www.labnol.org/software/tutorials/rotate-video-vertical-clips-90-degrees-virtualdub/2657/) 90° clockwise. You can set transpose to 2 to rotate the video 90° anti-clockwise.

```
ffmpeg -i input.mp4 -filter:v 'transpose=1' rotated-video.mp4
```

This will rotate the video 180° counter-clockwise.

```
ffmpeg -i input.mp4 -filter:v 'transpose=2,transpose=2' rotated-video.mp4
```

19. SPEED UP OR SLOW DOWN THE VIDEO

You can change the speed of your video using the setpts (set presentation time stamp) filter of FFmpeg. This command will make the video 8x (1/8) faster or use setpts=4*PTS to make the video 4x slower.

```
ffmpeg -i input.mp4 -filter:v "setpts=0.125*PTS" output.mp4
```

20. SPEED UP OR SLOW DOWN THE AUDIO

For changing the speed of audio, use the atempo audio filter. This command will double the speed of audio. You can use any value between 0.5 and 2.0 for audio.

```
ffmpeg -i input.mkv -filter:a "atempo=2.0" -vn output.mkv
```

Stack Exchange has a good overview (http://blog.superuser.com/2012/02/24/ffmpeg-the-ultimate-video-and-audio-manipulation-tool/) to get you started with FFmpeg. You should also check out the official documentation at ffmpeg.org (http://ffmpeg.org/ffmpeg.html) or the wiki at trac.ffmpeg.org (https://trac.ffmpeg.org/wiki) to know about all the possible things you can do with FFmpeg.

Also see: Essential Linux Commands (https://www.labnol.org/software/linux-commands/19028/)

TUTORIALS (/) **AUDIO** (https://www.labnol.org/tag/audio/) **VIDEO EDITING** (https://www.labnol.org/tag/video-editing/)

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How to Convert Movie Scenes into Animated GIFs

ttps://www.labnol.org/software/video-as-animated-gif/18160/)

How to Extract Image Frames from a Video File

ttps://www.labnol.org/software/extract-image-frames-from-video/18137/)

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