

Have you ever wondered how Midjourney's various steps contribute to the final image you see as an end user? Using FFMPEG and `–video`, you can take apart the video generated automatically to examine each frame along the way.

What you need:

Required:

Midjourney access

[FFMPEG](#)

Recommended:

[Real-ESRGAN](#) (portable is used here - note that there is not an installer so you may have to manually prepare your [environment variables](#) to use it properly;
[Windows/Mac/Linux](#))

How to download your video:

Use the `–video` tag when generating an image, then use the `:envelope:` emote to have the bot send you the individual images of that render as well as an in progress video. Since this video is not an embed, you will need to follow the link (which will look something like `https://storage.googleapis.com/dream-machines-output/<job id>/video.mp4`) in a web browser, right click the video, and select the “Save video as...” option from the list.

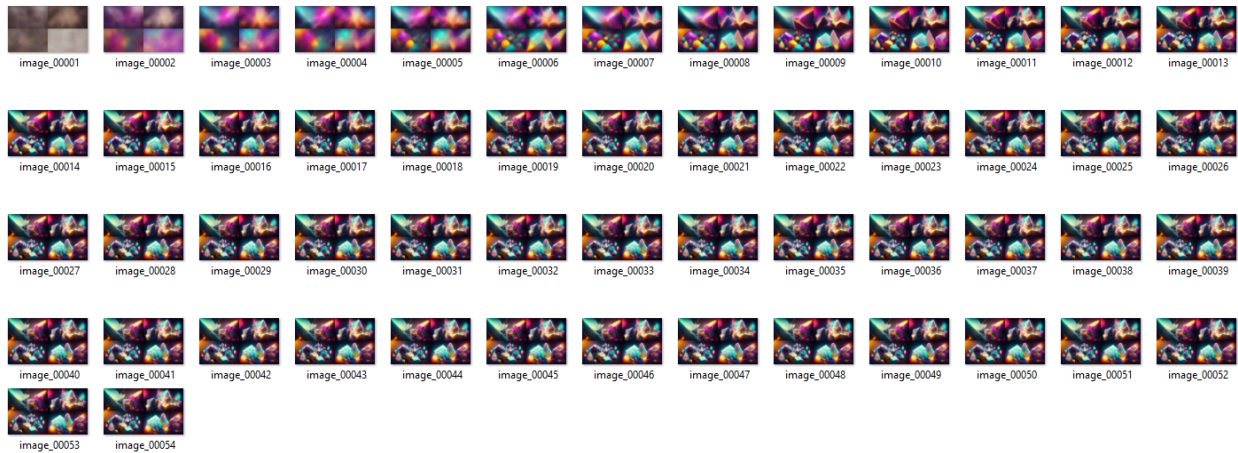
This video works, but is too low resolution for the initial render and you can't access individual frames. Fortunately, with FFMPEG, you can fix both of those problems. Navigate to the folder where you downloaded the command prompt/powershell/terminal/etc. Once you are in the correct directory, you can export the video file. However, FFMPEG does not create folders for frame outputs, so make sure you create folders. I use `tmp_frames` and `out_frames` for my frames folders, which will be reflected below, but you can name these folders anything.

To extract frames, simply run the following in your shell:

```
ffmpeg -i <videoname.ext>1 -qscale:v 1 -qmin 1 -qmax 1 -vsync 0  
tmp_frames/image_%05d.jpg
```

¹ The default filename is usually `video.mp4`.

The output will look like this:



Unfortunately, the resolution on each frame is by default only 512x512 (though, as in the example above, it might be higher if you have an aspect ratio other than 1:1). This means that each image is only 256x256- sufficient for a thumbnail, but rather lacking in size and detail. You can split the grids in any photo editing software.

Optional: Use Real-ESRGAN to upscale the frames.

There's no need to let memes be dreams. Just because your progress steps are grainy and gross doesn't mean they have to *stay* that way. Let's make them large and cool (just like me, except for the cool part) with some upscaling from Real-ESRGAN. If you want to convert them all, you can use the following command:

```
realesrgan-ncnn-vulkan -i tmp_frames -o out_frames -s 22
```

Final step: Making a slower video

Now, we want to use FFmpeg to slow down the video playback. By default, there are extra frames from the rendering process that will make the video drag on longer than it needs to, but you can delete them before doing this step. We'll use the following command:

```
ffmpeg -i out_frames/image_%%05d.jpg -c:v libx264 -filter:v "setpts=24.0*PTS" -pix_fmt yuv420p <output.mp4>
```

This will make a video that plays at one frame per second. You can change the "setpts=X*PTS" value. 24 will make each frame one second, 48 two seconds, 12 half a second, etc.

² This number can be changed to 3 or 4 if you have a strong enough computer- it will increase the processing time if you make it back into a video though.

Extra credit: Crazy Zed's Maniacal .bat Shenanigans (requires Windows or witchcraft)

If you want to just click a button and let everything happen on its own, you can make a .bat file to do the steps automatically. Please note that there is a destructive step- I've tried to make it as safe as possible, but make sure you understand what you're doing. I recommend making sure you put this .bat and all the output folders in places with no other subfolders. Note that the input file is set to "vidin.mp4"- if you want to use a different input name, make sure to change that.

****IF YOU USE THIS, YOU MAY DELETE IMAGES YOU WANT TO KEEP.****

****I TAKE NO RESPONSIBILITY FOR WHAT HAPPENS SHOULD YOU ACCIDENTALLY DELETE SOMETHING.****

(Actually, I just generally don't take responsibility for things, but especially not that.)

Here we go:

```
md tmp_frames
md out_frames
::These commands create the folders you need on the first run, and do nothing afterwards
cd tmp_frames
forfiles /M *.jpg /C "cmd /c echo @file is in danger."
cd ..
cd out_frames
forfiles /M *.jpg /C "cmd /c echo @file is in danger."
cd ..
ECHO "Check the lists above. Any files there will be deleted. Close the window if there are any
files you want to keep."
pause
ECHO "Are you certain?"
pause
cd tmp_frames
forfiles /M *.jpg /C "cmd /c del @file"
cd ..
cd out_frames
forfiles /M *.jpg /C "cmd /c del @file"
cd ..
:: deletes all jpgs in subfolders. MAKE SURE THERE ARE NO OTHER SUBFOLDERS IN THE
FOLDER THIS .BAT IS IN
ffmpeg -i vidin.mp4 -qscale:v 1 -qmin 1 -qmax 1 -vsync 0 tmp_frames/image_%05d.jpg
cd tmp_frames
forfiles /M image_00018.jpg /C "cmd /c del @file"
```

```
forfiles /M image_00019.jpg /C "cmd /c del @file"
forfiles /M image_0002*.jpg /C "cmd /c del @file"
forfiles /M image_0003*.jpg /C "cmd /c del @file"
forfiles /M image_0004*.jpg /C "cmd /c del @file"
forfiles /M image_0005*.jpg /C "cmd /c del @file"
cd ..
```

::Trims up extra frames of the final product so that you don't get a longer than necessary video;
also saves on rendering time for the upscale.

```
realesrgan-ncnn-vulkan -i tmp_frames -o out_frames -n realesr-animevideov3 -s 2 -f jpg
```

::If you have a strong machine, you can change -s to 3 or 4 to get better images.

```
ffmpeg -i out_frames/image_%%05d.jpg -c:v libx264 -filter:v "setpts=24.0*PTS" -pix_fmt  
yuv420p vidout.mp4
```

:: this will make the video render out and play at one frame per second.

Examples:

<https://cdn.discordapp.com/attachments/951197655021797436/994122426881417226/vidout.mp4>

<https://cdn.discordapp.com/attachments/951197655021797436/992881704496808097/vidout.mp4>

<https://cdn.discordapp.com/attachments/951197655021797436/992698312232816720/vidout.mp4>

<https://cdn.discordapp.com/attachments/951197655021797436/992694113134723162/vidout.mp4>

<https://cdn.discordapp.com/attachments/938713143759216720/992125318385115196/vidout.mp4>

<https://cdn.discordapp.com/attachments/938713143759216720/992125318385115196/vidout.mp4>

https://cdn.discordapp.com/attachments/951197655021797436/993762755205136394/crystals_1.mp4

https://cdn.discordapp.com/attachments/938713143759216720/993133872877412432/gem_sample.mp4

Variant vs. the same seed with a reference image of the original:

https://cdn.discordapp.com/attachments/951197655021797436/993435746423816254/variant_command.mp4

https://cdn.discordapp.com/attachments/951197655021797436/993435746750955540/same_seed_high_iw_no_change.mp4

Fast vs. normal rendering:

https://cdn.discordapp.com/attachments/951197655021797436/993435513560240208/city_6778_fast.mp4

https://cdn.discordapp.com/attachments/951197655021797436/993435513904185424/city_6778_normal.mp4

The Alphabet According to Midjourney:

<https://www.youtube.com/watch?v=eZHnKyQ5fWU>