

Batch convert using workflow_media_converter example

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The Goal

convert several 1080 h.265 (hevc) HDR (yuv420p10le) iPhone recorded video files to h.264 (avc) SDR to share with older devices using nextcloud

Solution #1 Software encoding

Nextcloud Personal Settings Media Conversion

Media conversion

You may create conversion batches to convert existing media based on a set of rules.

Convert all files in this folder

Choose Folder

/Studio/Legion/2022-01-03_NY_Party/Video

☐ Convert media in sub-folders

Find source files with this extension/format

.mov (QuickTime / MOV)

Store converted output in this extension/format

.mp4 (MP4 (MPEG-4 Part 14))

Additional FFmpeg flags (optional, leave blank to use defaults)

ffmpeg -threads 8 -i {input} -vf zscale=t=linear:npl=550,format=gbrpf32le,tonemap=tonemap=mobius:desat=0,zscale=p=bt709:t=bt709:m=bt709

After the source file has been converted:

Move source file to specific folder

Choose Folder

/Studio/Legion/2022-01-03_NY_Party/Video

After the output is ready:

Store output in source folder

If the output file exists:

Add new file with a number added to its name

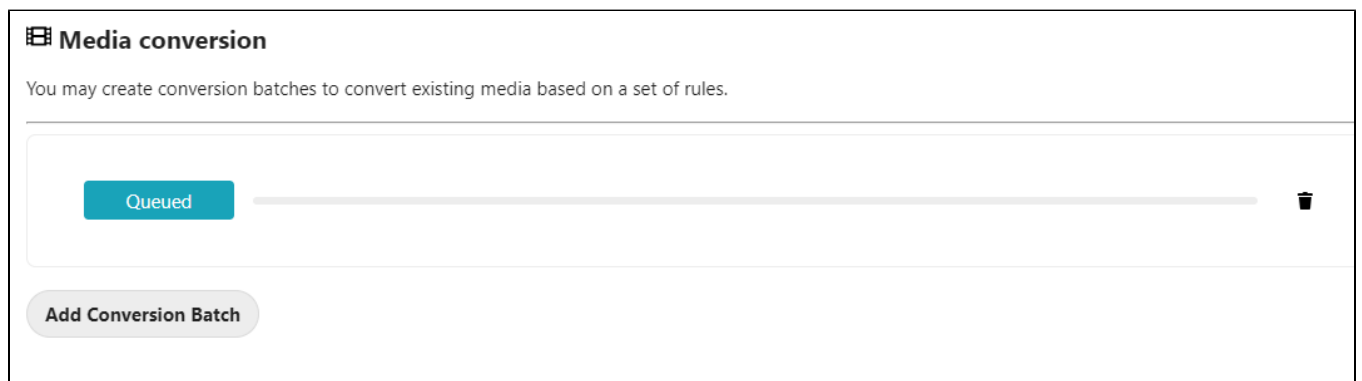
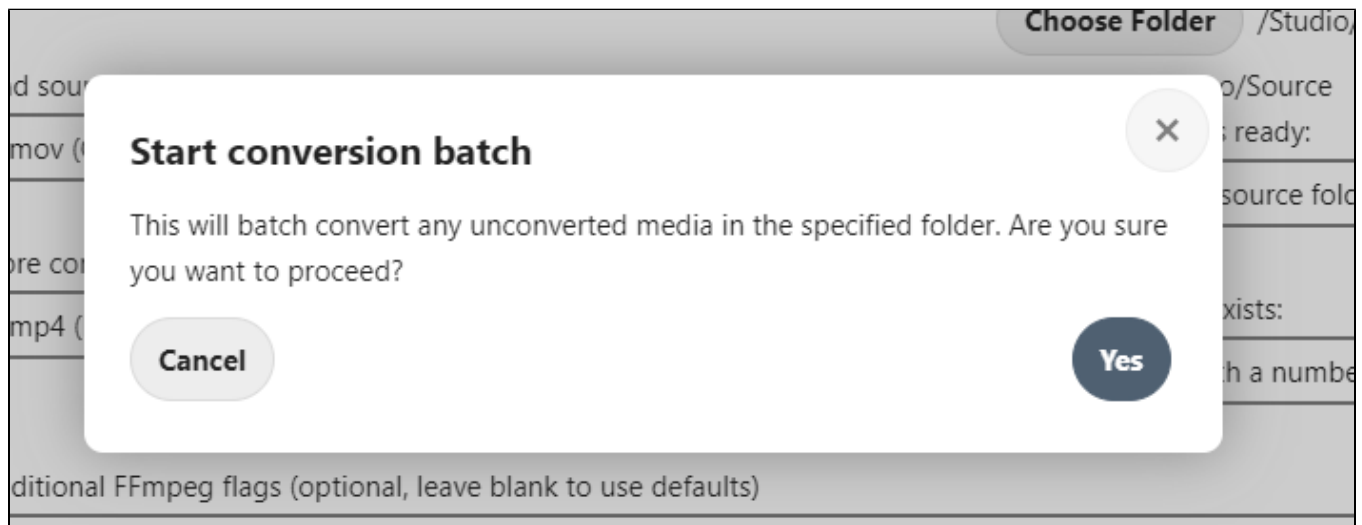
Save

Add Conversion Batch

Additional ffmpeg flags (output file options)

```
-movflags use_metadata_tags -map_metadata 0 -vf zscale=t=linear:npl=550,format=gbpf32le,tonemap=tonemap=mobius:desat=0,zscale=p=bt709:t=bt709:m=bt709:r=tv,format=yuv420p -vcodec libx264 -preset VerySlow -strict -2
```

```
root@server3:~# ps -ef |grep ffmpeg
www-data 429600 429599 99 15:35 ?        01:08:50 ffmpeg -threads 8 -i /tmp/oc_tmp_MXix50-.MOV -movflags
use_metadata_tags -map_metadata 0 -vf zscale=t=linear:npl=550,format=gbpf32le,tonemap=tonemap=mobius:desat=0,
zscale=p=bt709:t=bt709:m=bt709:r=tv,format=yuv420p -vcodec libx264 -preset VerySlow -strict -2 /tmp
/oc_tmp_KzK7Z7-.mp4
www-data 430706 430705 99 15:40 ?        00:24:40 ffmpeg -threads 8 -i /tmp/oc_tmp_KzK7Z7-.MOV -movflags
use_metadata_tags -map_metadata 0 -vf zscale=t=linear:npl=550,format=gbpf32le,tonemap=tonemap=mobius:desat=0,
zscale=p=bt709:t=bt709:m=bt709:r=tv,format=yuv420p -vcodec libx264 -preset VerySlow -strict -2 /tmp
/oc_tmp_KzK7Z7-.mp4
```



queue will start execution after next cron run (in about 5 minutes)

Media conversion

You may create conversion batches to convert existing media based on a set of rules.

Converting


Converted: 2

Total: 12



Add Conversion Batch


Today

 "remote user" moved **IMG_8032.MOV** to **Source**



+ **IMG_8032.mp4** was created in a public folder




 "remote user" moved **IMG_8031.MOV** to **Source**



+ **IMG_8031.mp4** was created in a public folder



 "remote user" moved **IMG_8019.MOV** to **Source**



+ **IMG_8019.mp4** was created in a public folder



Solution #2 Intel hardware encoding

 Since 1.10.3

Media conversion

You may create conversion batches to convert existing media based on a set of rules.

Convert all files in this folder

Choose Folder

/Studio/Another/2024-04-09_4Men_Zoriana

☐ Convert media in sub-folders

Find source files with this extension/format

.mov (QuickTime / MOV)

Store converted output in this extension/format

.mp4 (MP4 (MPEG-4 Part 14))

Additional FFmpeg flags

Input flags

-init_hw_device qsv

Output flags

-movflags +faststart -movflags use_metadata_tags -ma...

fmpeg -threads 5 -init_hw_device qsv -i {input} -movflags +faststart -movflags use_metadata_tags -map_metadata 0 -c:a copy...

Save

After the source file has been converted:

Move source file to specific folder

Choose Folder

/Studio/Another/2024-04-09_4Men_Zoriana/Video_HDR

After the output is ready:

Store output in source folder

If the output file exists:

Add new file with a number added to its name

Input file options (ffmpeg 5)

```
-init_hw_device qsv
```

Output file options (ffmpeg 5)

```
-movflags +faststart -movflags use_metadata_tags -map_metadata 0 -c:a copy -c:v h264_qsv -profile:v high -global_quality 24 -level 41 -sn -filter_complex format=nv12
```

input options (draft ffmpeg 6)

```
-c:v hevc -y
```

output options (draft ffmpeg 6)

```
-movflags +faststart -movflags use_metadata_tags -map_metadata 0 -c:a copy -c:v h264_qsv -profile:v high -global_quality 24 -level 41 -sn -filter_complex format=nv12
```

use vaapi

input options

```
-y -init_hw_device vaapi=va:/dev/dri/renderD128 -filter_hw_device va -hwaccel vaapi -hwaccel_output_format vaapi
```

output options

```
-map_metadata -1 -map_chapters -1 -threads 0 -map 0:0 -map 0:1 -map -0:s -codec:v:0 h264_vaapi -rc_mode VBR -b:v 4000000 -maxrate 5000000 -bufsize 28542590 -vf "setparams=color_primaries=bt709:color_trc=bt709:colorspace=bt709,scale_vaapi=format=nv12:extra_hw_frames=24" -codec:a:0 copy
```

Workarounds for workflow_media_converter 1.9.3

Workaround for Select Folder button that is not work

in Nextcloud 28.0.2 (docker) + [Automated media conversion 1.9.3](#)

```
cp -R custom_apps/workflow_media_converter apps/workflow_media_converter
chown www-data:www-data -R apps/workflow_media_converter
```

Fix options issues

in Nextcloud 28.0.2 (docker) + [Automated media conversion 1.9.3](#)

<https://github.com/cwilby/nextcloud-workflow-media-converter/issues/413>

/var/www/nextcloud/apps/workflow_media_converter/lib/BackgroundJobs/ConvertMediaJob.php

```
-$command = "ffmpeg -threads $threads {$additionalConversionFlags} -i {$this->tempSourcePath} {$this->tempOutputPath}"
+$command = "ffmpeg -threads $threads -i {$this->tempSourcePath} {$additionalConversionFlags} {$this->tempOutputPath}"
```

Workaround for FFmpeg output options is not needed anymore in 1.10.3 (it is now an **Output file option**)

Workarounds for workflow_media_converter 1.10.3

The Workaround of Choose Folder button does not work

```
cp -R custom_apps/workflow_media_converter apps/workflow_media_converter
chown www-data:www-data -R apps/workflow_media_converter
cp /var/www/html/apps/workflow_media_converter/js/*.js /var/www/html/apps/workflow_media_converter/
```

for this HW acceleration needs to be enabled first see [video encoding HW acceleration for nextcloud in docker](#)

Workarounds for FFmpeg 6

#1 Downgrade (and use old options)

Errors examples

use FFmpeg 4/5 QSV options with FFmpeg 6 cause errors like

```
[AVHWDDeviceContext @ 0x55ecb03e8e40] VAAPI driver: Intel iHD driver for Intel(R) Gen Graphics - 23.1.1 ().
[AVHWDDeviceContext @ 0x55ecb03e8e40] Driver not found in known nonstandard list, using standard behaviour.
[AVHWDDeviceContext @ 0x55ecb03e8940] Use Intel(R) oneVPL to create MFX session, API version is 2.9, the
required implementation version is 1.3
[AVHWDDeviceContext @ 0x55ecb03e8940] Error creating a MFX session: -9.
Device creation failed: -1313558101.
Failed to set value '/dev/dri/renderD128' for option 'qsv_device': Unknown error occurred
Error parsing global options: Unknown error occurred
```

ffmpeg version downgrade

```
#fix for ffmpeg6 incopatibility with qsv by rollback to ffmpeg 5
apt remove ffmpeg
apt install ffmpeg=7:5.1.4-0+deb12u1
```

```
[AVHWDDeviceContext @ 0x55e6b3aff000] VAAPI driver: Intel iHD driver for Intel(R) Gen Graphics - 23.1.1 ().
[AVHWDDeviceContext @ 0x55e6b3aff000] Driver not found in known nonstandard list, using standard behaviour.
[AVHWDDeviceContext @ 0x55e6b3afeb00] Initialize MFX session: API version is 1.35, implementation version is 1.35
Applying option filter_complex (create a complex filtergraph) with argument format=nv12.
Successfully parsed a group of options.
Parsing a group of options: input url /tmp/oc_tmp_rDl1i2-.MOV.
Successfully parsed a group of options.
Opening an input file: /tmp/oc_tmp_rDl1i2-.MOV.
```

#2 Findout new options that works with ffmpeg 6

tbd