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Youtube-dl Tutorial With Examples For Beginners -**OSTechNix**

por sk : 21-26 minutes : 26/6/2019

En este tutorial completo de Youtube-dl, aprenderemos qué es Youtube-dl y la lista de los comandos de Youtube-dl más utilizados con ejemplos para descargar transmisiones de audio y video de Internet en sistemas operativos Linux.

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¿Qué es Youtube-dl?

Youtube-dl es la aplicación de descarga de YouTube de línea de comando más popular. Youtube-dl puede descargar una sola pista o la lista de reproducción completa de una sola vez.

Youtube-dl no es solo para descargar videos de Youtube, sino también de muchos otros sitios web. Puede ver la lista completa de sitios admitidos aquí.

Es un programa gratuito y de código abierto escrito en Python . Es compatible con GNU/Linux, Mac OS X y Microsoft Windows.

1. Instalar Youtube-dl en Linux

Youtube-dl can be installed in many ways. Let us them all.

1.1. The officially recommended way to install Youtube-dl

The officially recommended way to install Youtube-dl is just download it, save it in your \$PATH, make it executable and start using it right away.

\$ sudo curl -L https://yt-dl.org/downloads/latest/youtube-dl -o
/usr/local/bin/youtube-dl

If you don't have curl, use wget instead:

- \$ sudo wget https://yt-dl.org/downloads/latest/youtube-dl -0
 /usr/local/bin/youtube-dl
- \$ sudo chmod a+rx /usr/local/bin/youtube-dl

1.2. Install Youtube-dl using Pip

Alternatively, you can install it using Pip as shown below.

\$ sudo -H pip install --upgrade youtube-dl

1.3. Install Youtube-dl using package manager

Youtube-dl is also available in the official repositories of some Linux distributions.

To install Youtube-dl in Alpine Linux, run:

\$ sudo apk add youtube-dl

Install Youtube-dl in Arch Linux, EndeavourOS, Manjaro Linux using command:

\$ sudo pacman -S youtube-dl

On Debian, Ubuntu, Linux mint, Pop_OS!:

\$ sudo apt install youtube-dl

On Fedora:

\$ sudo dnf install youtube-dl

On openSUSE:

\$ sudo zypper install youtube-dl

1.4. Install FFmpeg on Linux

Youtube-dl depends on **FFmpeg** to download 720p videos from YouTube and convert videos to other formats. To install FFmpeg on Linux, refer the following guide.

· How to install FFmpeg on Linux

1.5. Update Youtube-dl

If you've manually installed Youtube-dl using curl or wget, run the following command to update it:

\$ sudo youtube-dl -U

If you installed it using pip, do:

\$ sudo pip install -U youtube-dl

Those who installed Youtube-dl using the distribution's package manager, just use the appropriate update command. For example, on Arch Linux, you can update Youtube-dl by simply running the following command:

\$ sudo pacman -Syu

On Debian, Ubuntu:

\$ sudo apt update

Now, let us see some examples to learn to use Youtube-dl.

Here, I have compiled most commonly used Youtube-dl commands to download a video or playlist from YouTube.

2.1. Download video or playlist

To download a video or the entire playlist from YouTube, just mention the URL like below:

\$ youtube-dl https://www.youtube.com/watch?v=7E-cwdnsiow

If you want to download video or playlist with a custom name of your choice, the command would be:

```
youtube-dl
                   - 0
                         'abdul
                                   kalam
                                            inspirational
                                                             speech'
https://www.youtube.com/watch?v=7E-cwdnsiow
```

Replace "abdul kalam inspirational speech" with your own name.

Do you want to save the video in some other location? Use -o flag followed by the target location like below.

youtube-dl '~/Downloads/abdul kalam - 0 speech' https://www.youtube.com/watch?v=7E-cwdnsiow

Here I am downloading the video to the **Downloads** directory.

```
[youtube] 7E-cwdnsiow: Downloading webpage
[download] Destination: /home/sk/Downloads/abdul kalam speech.f271
[download] 100% of 111.86MiB in 01:00
[download] Destination: /home/sk/Downloads/abdul kalam speech.f251
[download] 100% of 6.12MiB in 00:03
[ffmpeg] Merging formats into "/home/sk/Downloads/abdul kalam
speech.webm"
Deleting original file /home/sk/Downloads/abdul kalam speech.f271
(pass -k to keep)
Deleting original file /home/sk/Downloads/abdul kalam speech.f251
```

You can also include additional details, such as the title, the uploader name (channel name) and upload date etc., in the file name by using the following command:

```
(playlist)s.%(ext)s' https://www.youtube.com/watch?v=7E-cwdnsiow
```

2.2. Download multiple videos

(pass -k to keep)

Sometimes, you might want to download multiple videos from or any other site. If so, just mention the URL of the videos with space-separated like below:

```
$ youtube-dl <url1> <url2>
```

Alternatively, you can put them all in a text file and pass it to Youtube-dl as an argument like below

```
$ youtube-dl -a url.txt
```

This command will download all videos mentioned in the url.txt file.

2.3. Download audio-only from a video

Youtube-dl allows us to download audio only from a YouTube video. If you ever been in a situation to download only the audio, run:

```
$ youtube-dl -x https://www.youtube.com/watch?v=7E-cwdnsiow
```

By default, Youtube-dl will save the audio in **0gg** (opus) format.

If you prefer to download any other formats, for example mp3, run:

```
$ youtube-dl -x --audio-format mp3 https://www.youtube.com/watch?
v=7E-cwdnsiow
```

This command will download the audio from the given video/playlist, convert it to an MP3 and save it in the current directory. Please note that you should install either ffmpeg or avconv to convert the file to mp3 format.

2.4. Download video with description, metadata, annotations, subtitles and thumbnail

To download a video along with its other details such as description, metadata, annotations, subtitles, and thumbnail etc., use the following command:

```
youtube-dl --write-description --write-info-json
annotations
                       --write-sub
                                               --write-thumbnail
https://www.youtube.com/watch?v=7E-cwdnsiow
```

2.5. List all available formats of video or playlist

To list all available formats that a video or playlist is available in, use the following command:

\$ youtube-dl --list-formats https://www.youtube.com/watch?v=7Ecwdnsiow

Or.

\$ youtube-dl -F https://www.youtube.com/watch?v=7E-cwdnsiow

Sample output:

```
| Sk@sk|: \sigma | + | |
| Sk@sk|: \sigma | 5 | youtube - dl - f https://www.youtube.com/watch?v=7E-cwdnsiow |
| youtube | 7E-cwdnsiow: Downloading webpage |
| youtube | Youtube | Youtube | Youtube |
| youtube | Youtube | Youtube | Youtube |
| youtube | Youtube | Youtube |
| youtube | Youtube | Youtube | Youtube |
| youtube | Youtube | Youtube | Youtube |
| youtube | Youtube | Youtube | Youtube |
| youtube | Youtube | Youtube | Youtube |
| youtube |
```

List all available formats of a YouTube video using youtube-dl

As you can see in the above screenshot, Youtube-dl lists all available formats of the given video. From left to right, it displays the video format code, extension and resolution note of the respective video. This can be helpful when you want to download a video at a specific quality or format.

2.6. Display the size of YouTube videos

To retrieve the file size of a video, use -F flag.

\$ youtube-dl -F https://www.youtube.com/watch?v=7E-cwdnsiow

You will see the file size at the end of each file.

Sample output:

```
[youtube] 7E-cwdnsiow: Downloading webpage
[info] Available formats for 7E-cwdnsiow:
format code extension resolution note
249
                webm
                            audio only tiny
                                                51k , opus @ 50k
(48000Hz), 2.56MiB
250
                             audio only tiny
                                                68k , opus @ 70k
                webm
(48000Hz), 3.23MiB
140
                m4a
                               audio only tiny
                                                 128k , m4a_dash
container, mp4a.40.2@128k (44100Hz), 7.59MiB
                             audio only tiny
251
                webm
                                               137k , opus @160k
(48000Hz), 6.12MiB
160
               mp4
                            192×144
                                        144p
                                               52k , avc1.4d400c,
30fps, video only, 1.71MiB
278
              webm
                        192×144
                                     144p
                                           73k , webm container,
vp9, 30fps, video only, 3.73MiB
133
                            320x240
                                               89k , avc1.4d400d,
               mp4
                                        240p
30fps, video only, 3.12MiB
242
             webm
                        320x240
                                   240p 135k , vp9, 30fps, video
only, 6.06MiB
134
               mp4
                            480x360
                                        360p 215k , avcl.4d401e,
30fps, video only, 7.53MiB
243
             webm
                        480x360
                                   360p 242k , vp9, 30fps, video
only, 10.39MiB
135
                            640x480
                                        480p
                                              382k , avc1.4d401e,
               mp4
30fps, video only, 14.13MiB
244
                        640x480
                                   480p
                                        390k , vp9, 30fps, video
             webm
only, 16.44MiB
136
                                        720p 737k , avc1.4d401f,
               mp4
                            960x720
30fps, video only, 26.99MiB
247
                                   720p 770k , vp9, 30fps, video
             webm
                        960x720
```

```
only, 31.12MiB
                          1440x1080 1080p 1391k , avc1.640028,
             mp4
137
30fps, video only, 46.50MiB
           webm
                   1440x1080 1080p 1421k , vp9, 30fps, video
248
only, 52.19MiB
271
           webm
                     1920x1440 1440p 3462k , vp9, 30fps, video
only, 111.86MiB
                                     360p 360k , avc1.42001E,
18
             mp4
                          480x360
mp4a.40.2@ 96k (44100Hz), 21.55MiB
                          960x720
                                     720p 578k , avc1.64001F,
              mn4
mp4a.40.2@192k (44100Hz) (best)
```

2.7. Download videos in certain quality and/or format

By default, Youtube-dl will download the best available quality video, However, it is also possible to download a video or playlist at a specific quality or format.

YouTube is capable of downloading videos in the following qualities:

- best Select the best quality format of the given file with video and audio.
- · worst Select the worst quality format (both video and audio).
- bestvideo Select the best quality video-only format (e.g. DASH video). Please note that it may not be available.
- worstvideo Select the worst quality video-only format. May not be available.
- bestaudio Select the best quality audio only-format. May not be available.
- worstaudio Select the worst quality audio only-format. May not be available.

For example, if you want to download best quality format (both audio and video), just use the following command:

\$ youtube-dl -f best https://www.youtube.com/watch?v=7E-cwdnsiow

Similarly, to download audio-only with best quality:

\$ youtube-dl -f bestaudio https://www.youtube.com/watch?v=7Ecwdnsiow

To download worst quality video-only format, use the following command:

\$ youtube-dl -f worstvideo https://www.youtube.com/watch?v=7Ecwdnsiow

You can also combine different format options like below.

\$ youtube-dl -f bestvideo+bestaudio https://www.youtube.com/watch? v=7E-cwdnsiow

The above command will download best quality video-only and best quality audio-only formats and merge them together with ffmpeg or avconv. Make sure you have installed any one of these tools on your system.

If you don't want to merge, replace + (plus) operator with , (comma) like below:

youtube-dl 'bestvideo,bestaudio' https://www.youtube.com/watch?v=7E-cwdnsiow -o '%(title)s.f% (format id)s.%(ext)s'

This command will download best quality video and best quality audio and will not mix them. In this case, you will get two files, one is audio and another is video. In this example, an output template (-o option) is recommended as bestvideo and bestaudio may have the same file name.

We can even download a video or playlist at a specific quality with **specific resolution**.

For instance, the following command will download the best quality video in 480 pixel resolution (less than or equal to 480p).

\$ youtube-dl -f "best[height<=480]" https://www.youtube.com/watch?</pre>

Like already said, we can group the format selectors to get a specific quality video. The following command will download best format available(both audio and video) but no better than 480p.

```
voutube-dl
                                                                   - f
'bestvideo[height<=480]+bestaudio/best[height<=480]'
```

https://www.youtube.com/watch?v=7E-cwdnsiow

2.8. Download videos using format code

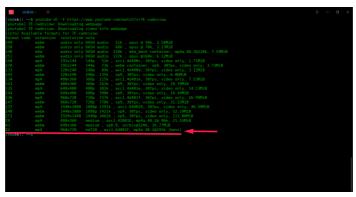
All videos have format codes which we can use to download a video at specific quality.

To find the format code, just list the available formats using any one of the following commands:

\$ youtube-dl --list-formats https://www.youtube.com/watch?v=7Ecwdnsiow

0

\$ youtube-dl -F https://www.youtube.com/watch?v=7E-cwdnsiow



List all available formats with youtube-dl

As you can see in the above screenshot, all format codes of the given video are listed in the first column. The best quality format is given at the end (the format code is **22**). So, the command to download best quality format is:

\$ youtube-dl -f 22 https://www.youtube.com/watch?v=7E-cwdnsiow

Some videos may not have the same formats available while you download videos from playlist. In such cases, you can specify multiple format codes in any preferred order of your choice. Take a look at the following example:

\$ youtube-dl -f 22/17/18 <playlist_url>

As per the above example, Youtube-dl will download the videos in format 22 if it is available.

If the format 22 is not available, it will then download format 17 if it is available.

If both 22 and 17 formats are not available, it will finally try to download format 18.

If none of the specified formats are available, Youtube-dl will complain that no suitable formats are available for download.

Please note that that slash is left-associative, i.e. formats on the left hand side are preferred.

2.9. Download videos by file extension

Download video(s) in your preferred format, say for example MP4, just run:

\$ youtube-dl --format mp4 https://www.youtube.com/watch?v=7Ecwdnsiow

Or,

\$ youtube-dl -f mp4 https://www.youtube.com/watch?v=7E-cwdnsiow

Like I already mentioned in the previous section, some videos may not available in your preferred formats. In such cases, Youtube-dl will download any other best available formats

For instance, the following command will download best quality MP4 format file. If MP4 format is not available, then it will download any other best available format.

\$ youtube-dl -f
'bestvideo[ext=mp4]+bestaudio[ext=m4a]/best[ext=mp4]/best'
https://www.youtube.com/watch?v=7E-cwdnsiow

If you want to download them with custom filename, do:

'%(title)s.f%(format id)s.%(ext)s' - f mp4 - 0 https://www.youtube.com/watch?v=7E-cwdnsiow

2.10. Set size limit for videos

When you download multiple videos from a playlist, you might want to download videos within a certain size only.

For example, this command will not download any videos smaller than the given size, say 100MB

```
$ youtube-dl --min-filesize 100M <playlist_url>
```

If you don't want to download videos larger than the given size, do:

```
$ youtube-dl --max-filesize 100M <playlist_url>
```

We can also combine format selection operators to download certain size videos.

The following command will download best video-only format but not bigger than 100 MB.

```
youtube-dl
                                              'best[filesize<100M]'
https://www.youtube.com/watch?v=7E-cwdnsiow
```

2.11. Download videos by date-wise

Youtube-dl allows us to filter and download video or playlist by their upload date. This will be very helpful when you want to download videos from a playlist that contains 100s of videos.

For instance, to download videos uploaded at an exact date, for example October 01, 2018, the command would be:

```
$ youtube-dl --date 20181001 <URL>
```

Download videos uploaded on or before a specific date:

```
$ youtube-dl --datebefore 20180101 <URL>
```

Download videos uploaded on or after a specific date:

```
$ youtube-dl --dateafter 20180101 <URL>
```

Download only the videos uploaded in the last 6 months:

```
$ youtube-dl --dateafter now-6months <URL>
```

To download videos between a specific date, for example January 01, 2018 to January 01, 2019, use the following command:

```
$ youtube-dl --dateafter 20180101 --datebefore 20190101 <URL>
```

2.12. Download specific videos from playlist

This is yet another useful feature of Youtube-dl. It allows us to download a specific song(s) from a playlist that contains 100s of songs.

For example, to download the 10th file from a playlist, run:

```
$ youtube-dl --playlist-items 10 <playlist_url>
```

You can also download and convert the file to other format at the same time. For the the following command will download the 1st file from the playlist and convert it to .mp3

```
youtube-dl
                --playlist-items 1
                                    -x --audio-format
<playlist_url>
```

Similarly, to download multiple random files, just specify indices of the videos in the playlist separated by commas like below::

```
$ youtube-dl --playlist-items 2,3,7,10 <playlist url>
```

You can also specify the range of songs. To download a video playlist starting from a certain video, say 10, to end:

```
$ youtube-dl --playlist-start 10 <playlist url>
```

To download only the files starting from 2nd to 5th in a playlist, use:

```
$ youtube-dl --playlist-start 2 --playlist-end 5 <playlist_url>
```

2.13. Download only videos suitable for specific age

This is another notable feature of Youtube-dl. It allows us to download only videos suitable for the given age.

Say for example, to download all "Let's Play" videos that aren't marked "NSFW" or agerestricted for 7 year-olds from a playlist, run:

```
$ youtube-dl --match-title "let's play" --age-limit 7 --reject-
title "nsfw" <playlist url>
```

2.14. Set download speed limit

You can use -r option to limit the speed. For example, the following command will limit the speed to 50K.

```
$ youtube-dl -r 50K <URL>
```

Note that speed is specified in bytes per second.

2.15. Resume downloads

By default, youtube-dl will automatically resume the download where you left it off. If it is doesn't resume the download for any reason, just force the resume of partially downloaded files with -c, --continue flag:

```
$ youtube-dl -c <URL>
```

2.16. Display Youtube-dl help

Youtube-dl has a lot more options. I guess these examples are just enough to use Youtube-dl to download videos from online. For more details, refer Youtube-dl help section

```
$ youtube-dl --help
```

3. Youtube-dl Troubleshooting

Here are some common errors that you might encounter from time to time. Most errors will get fixed themselves after updating the youtube-dl to its most recent version.

However, a few errors like below will not get fixed even if you're using an updated voutube-dl version.

3.1. Fix "Unable to download video data: HTTP Error 403: Forbidden"

When downloading videos from YouTube, sometimes you will get an error like below.

ERROR: unable to download video data: HTTP Error 403: Forbidden

To fix this error, refer the following guide.

· How To Fix "Unable to download video data: HTTP Error 403: Forbidden" Error

3.2. WARNING: Requested formats are incompatible for merge and will be merged into mkv

This is another common error. When you download a video, you will get an error like

[youtube] _XEgknKEBws: Downloading webpage

WARNING: Requested formats are incompatible for merge and will be merged into mkv.

ERROR: unable to open for writing: [Errno 36] File name too long:

'\xe0\xae\xa8\xe0\xaf\x8b\xe0\xae\xaf\xe0\xaf\x8d

 $\xe0\xae\x87\xe0\xae\xaf\xe0\xae\xb1\xe0\xaf\x80\xae\x95\xe0\xaf\x88$

\xe0\xae\xae\xae\xbe\xe0\xae\xae\x95\xe0\xae\xae\xe0\xaf\x8d $\xe0\xae\xe0\xae\xe0\xae\xe0\xae\xe0\xaf\x87$

\xe0\xae\xa4\xe0\xae\xaf\xe0\xae\xbe\xe0\xae\xb0\xe0\xae\xbf\xe0\xaa\xe0\xaf\x8d\xe0\xae\

 $\xe0\xae\xa4\xe0\xaf\x80\xe0\xae\xaa\xe0\xae\xbe$

_XEgknKEBws.f136.mp4.part'

This is actually not a problem but an expected behavior for youtube-dl.

By default, youtube-dl will download the highest quality audio and the highest quality video streams available and then join them into a compatible container like mkv, mp4 etc.

If these audio and video streams doesn't fit well in an mp4 container, youtube-dl will then pack them in mkv container and display the above warning message.

In such cases, you can ignore the mkv warning and download the best quality video and the best quality audio but only in an mp4 container by explicitly mentioning the desired best quality audio and video formats like below:

youtube-dl - f 'bestvideo[ext=mp4]+bestaudio[ext=m4a]' https://youtu.be/_XEgknKEBws

3.3. ERROR: unable to open for writing: [Errno 36] File name too long

When you try to download a YouTube video that has long name, you will probably get this

[youtube] _XEgknKEBws: Downloading webpage

ERROR: unable to open for writing: [Errno 36] File name too long:

 $'\xe0\xae\xa8\xe0\xaf\x8b\xe0\xae\xaf\xe0\xaf\x8d$

\xe0\xae\x9a\xe0\xae\x95\xe0\xaf\x8d\xe0\xae\xa4\xe0\xae\xbf\xe0\xaf\x88

 $\xe0\xae\x85\xe0\xae\x95\xe0\xae\x95\xe0\xae\xbf\xe0$

 $\xe0\xae\x87\xe0\xae\xaf\xe0\xae\xb1\xe0\xaf\x80\xae\x95\xe0\xaf\x88$

\xe0\xae\xaa\xe0\xae\xbe\xe0\xae\xa9\xe0\xae\x95\xe0\xae\xae\xe0\xaf\x8d

 $\xe0\xae\xa4\xe0\xaf\x80\xe0\xae\xae\xbe$

_XEgknKEBws.f136.mp4.part

To fix this error, simply download the video with shorter name of your choice with "-o" flag like below:

youtube-dl -f 'bestvideo[ext=mp4]+bestaudio[ext=m4a]' video.mp4 https://youtu.be/_XEgknKEBws

Conclusion

In my opinion, Youtube-dl is undoubtedly one of the best downloader to download audio. video from online. You can use Youtube-dl to download audio and video from hundreds of websites.

I will keep updating this Youtube-dl tutorial when I came across a new Youtube-dl tip. Bookmark and keep visiting it once in a while.

If you think some important tip is missing, please let me know in the comment section below. I will check and update this guide accordingly.

Resources:

- · Youtube-dl website
- https://jonlabelle.com/snippets/view/shell/youtube-dl-command