How to save YouTube videos on Linux

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Have you ever found interesting videos on YouTube, and wanted to download and save them on your hard drive (for offline access or archiving purpose)? There is a handy open-source Linux tool that does exactly that: download YouTube videos.

A tool called `youtube-dl` is a command-line program written in Python that downloads videos from various online video sharing sites, including YouTube, DailyMotion, Vimeo, etc. Since the tool is written in Python, it can run on any platform that has Python interpreter (in particular, Python version 2.6, 2.7, or 3.3+). A binary for Windows platform is also available.

Here is a guide on **how to download and save YouTube videos by using `youtube-dl`**.

First install `youtube-dl` on your Linux system.

To install `youtube-dl` on Debian:

```
 $ sudo apt-get install python-dev python-pip gcc
$ sudo pip install --upgrade youtube_dl
```

To install `youtube-dl` on Ubuntu or Linux Mint:

```
 $ sudo apt-get install youtube-dl
```

To install `youtube-dl` on CentOS or RHEL, first [set up EPEL repository](#) on your system, and then run:

```
 $ sudo yum install youtube-dl
```

To install `youtube-dl` on Fedora, simply run:

```
 $ sudo yum install youtube-dl
```

Instead of using a package manager, you can also download `youtube-dl` Python code directly from its website, and use it.

Once you have installed `youtube-dl`, it is straightforward to download a YouTube video. You just need to pass a YouTube video link to `youtube-dl`. It will go ahead and fetch the video and store it as mp4/flv format.

```
$ youtube-dl http://www.youtube.com/watch?v=ykp8fxHWcVo
```

```
  [youtube] Setting language  [youtube] ykp8fxHWcVo: Downloading video webpage
 [youtube] ykp8fxHWcVo: Downloading video info webpage  [youtube] ykp8fxHWcVo:
Extracting video information  [download] Destination: ykp8fxHWcVo.mp4  [downloa
d]   3.5% of 56.72M at  367.13k/s ETA 02:32^C
```

Resume Interrupted Downloads of YouTube Videos

The `youtube-dl` tool supports resuming interrupted downloads. If `youtube-dl` is killed (for example by Ctrl-C or due to loss of Internet connectivity) in the middle of download, you can simply re-run it with the same YouTube video url. It will automatically resume the unfinished download, as long as a partial download is present in the current directory.

Download YouTube Videos in Multiple Formats

Most of YouTube videos nowadays are available in multiple resolutions and formats in order to support various devices and Internet connections. The `youtube-dl` tool actually allows you to choose a specific resolution and format when downloading YouTube videos.

Since different YouTube videos may have different resolutions ready, you first need to check available video formats of a given YouTube video. For that, run `youtube-dl` with "-F" option. It will show you a list of available formats.

```
$ youtube-dl -F http://www.youtube.com/watch?v=BlXaGWbFVKY
```

```
  [youtube] Setting language  [youtube] BlXaGWbFVKY: Downloading video webpage
 [youtube] BlXaGWbFVKY: Downloading video info webpage  [youtube] BlXaGWbFVKY:
Extracting video information  Available formats:  37     :      mp4    [1080
x1920]  46     :      webm   [1080x1920]  22     :      mp4    [720x1280]
  45     :      webm   [720x1280]  35     :      flv    [480x854]  44
   :      webm   [480x854]  34     :      flv    [360x640]  18     :
  mp4    [360x640]  43     :      webm   [360x640]  5     :        flv
```

```
[240x400]  17        :         mp4     [144x176]
```

Now among the available video formats, choose one that you like:

 $ youtube-dl -f 17 http://www.youtube.com/watch?v=BlXaGWbFVKY

Download YouTube Videos in a Batch

If you want to download multiple YouTube videos in one shot, all you have to do is to prepare a text file that contains urls of all the videos. Then run `youtube-dl` with "-a" option.

 $ cat video.list

```
  http://www.youtube.com/watch?v=BlXaGWbFVKY  http://www.youtube.com/watch?v=6R
hd4JqEY2Y  . . . .
```

 $ youtube-dl -a video.list

Extract Audio (MP3) From YouTube Videos

If you would like to extract audio from YouTube video and save it as a MP3 file, you can do the following.

First, install FFmpeg on your system.

Then use the following command to save the audio of YouTube video as a separate MP3 file. `youtube-dl` will use `FFmpeg` to perform audio extraction.

 $ youtube-dl http://www.youtube.com/watch?v=BlXaGWbFVKY --extract-audio --audio-format mp3

Define Default Options of Youtube-dl

You can put commonly used options (e.g., --extract-audio --audio-format mp3) in `youtube-dl`'s configuration file, which is located at either **/etc/youtube-dl.conf** (system-wide) or **~/.config/youtube-dl.conf** (per-user), in which case those options become "default" arguments that you do

not have to specify explicitly from the command line.