## **Uploading files to Google Drive** directly from the Terminal (using Curl) An alternative method of pushing data from a computer to the cloud.

Daniel Ellis Sep 14, 2020 · 4 min read ★



Create your project credentials As we are allowing access to our google drive, we want to be able to manage this. This is done by creating a project with user-defined permissions to act as the proxy between our users (in this case us on a different machine) and our account. We start by going to the following page (link below) and

## After this has been done we select the Credentials tab (on the left) and

"create credentials" from the top.

+ CREATE CREDENTIALS

Help me choose

ienlay

Google Cloud Platform lets you build, deploy, and scale

applications, websites, and services on the same infrastructure...

creating a new project.

**Google Cloud Platform** 

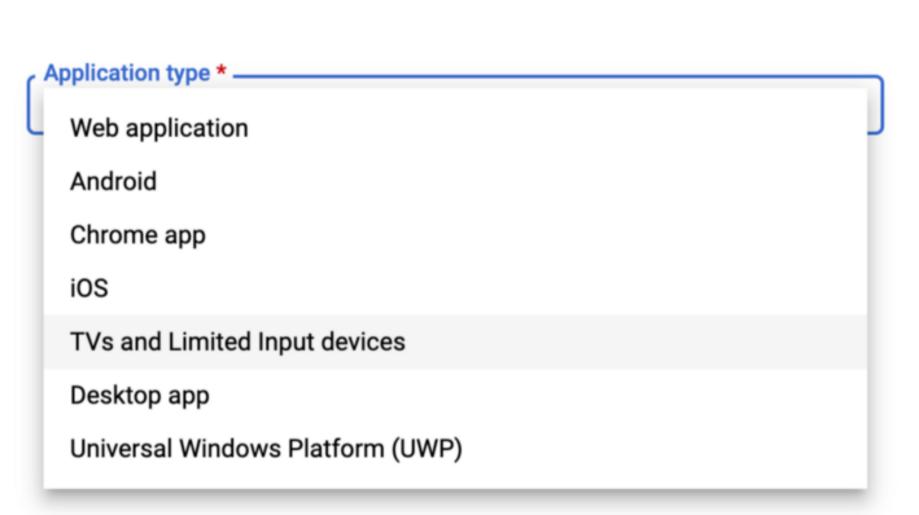
console.developers.google.com

Requests user consent so that your app can access the user's data. Service account Enables server-to-server, app-level authentication using robot accounts

Asks a few questions to help you decide which type of credential to use

ı a

**DELETE** 



Now we need to verify the device To do this we ssh into the machine we wish to upload from and run the following command:

https://oauth2.googleapis.com/device/code

Doing so we get a response in the following format

curl -d "client\_id=

{"device\_code": "<long string>", "user\_code": "xxx-xxx-xxx", "expires\_in": 1800, "interval": 5,

Here we need to visit the URL (<a href="https://www.google.com/device">https://www.google.com/device</a>) and

provide the user code to complete our verification. We now continue to

this make sure to note down the **device code** for the next step.

select our google account and grant the relevant permissions. When doing

<client\_id>&scope=https://www.googleapis.com/auth/drive.file"

```
Get Bearer code
When we start uploading, this is the code we shall need to use to identify
our account. We get it by using the following:
```

curl -d client\_id=<client id> -d client\_secret=<client secret> -d

grant\_type=urn%3Aietf%3Aparams%3Aoauth%3Agrant-type%3Adevice\_code

device\_code=<device code> -d

**Upload files** 

curl -X POST -L \

-F "metadata={name

Wrap it all up in a script

then sends them to google drive.

system.

#!/usr/bin/python

uploadType=multipart"

https://accounts.google.com/o/oauth2/token

"scope": "https://www.googleapis.com/auth/drive.file", "token\_type": "Bearer"

Write down the access\_token as it will be needed in the upload stage.

-H "Authorization: Bearer <enter access token here>" \

:'<our.zip>'};type=application/json;charset=UTF-8" \ -F "file=@<our.zip>; type=application/zip" \

"https://www.googleapis.com/upload/drive/v3/files?

The command we use to upload files is given below

```
The link to do this is given in the error message if this is the case.
Here multipart files are expected to only be a couple of MB in size. However
if you are looking at moving larger files resumable may be better suited (see
https://developers.google.com/drive/api/v3/manage-uploads)
```

Now we know our commands work we can create an executable script to do

all the work for us. Here we can provide a group of files, it zips them up and

following code — remember to add your own personal auth token! Python

It should require no new dependencies provided curl already exists on the

We start by creating a new file with nano curlgoogle; and enter the

2.7 has been chosen as this is still the default python version on older

systems, however the script below should also run for python 3.

Here you may need to enable the app API before being allowed to upload data.

Dan Ellis 2020 import os, sys, json

A quick python script to automate curl->googledrive interfacing

curl. Written for python2.7 (with 3 in mind).

#Owner information goes here!# 

client\_id= '<enter your client id>'

cmd1 = json.loads(os.popen('curl -d

\n\n Then hit Enter to continue.'%cmd1))

client\_secret='<enter your client secret>'

name = 'curldata'

This should require nothing more than the system python version and

```
str(raw_input('(twice)'))
  cmd2 = json.loads(os.popen(('curl -d client_id=%s -d client_secret=%s
  -d device_code=%s -d
  grant_type=urn~~3Aietf~~3Aparams~~3Aoauth~~3Agrant-
  type~~3Adevice_code https://accounts.google.com/o/oauth2/token'%
  (client_id, client_secret, cmd1['device_code'])).replace('~~','%')).rea
  d())
  print(cmd2)
  # zip files
  cmd3 = os.popen('zip -r %s.zip %s'%(name,'
  '.join(sys.argv[1:]))).read
  print(cmd3)
  cmd4 = os.popen('''
  curl -X POST -L \
      -H "Authorization: Bearer %s" \
      -F "metadata={name :\'%s\'};type=application/json;charset=UTF-8"
      -F "file=@%s.zip;type=application/zip" \
      "<a href="https://www.googleapis.com/upload/drive/v3/files?">https://www.googleapis.com/upload/drive/v3/files?</a>
  uploadType=multipart"
      '''%(cmd2["access_token"], name, name)).read()
  print(cmd4)
  print('end')
executable manner:
  ./curlgoogle file1 file2.txt file3.jpg etc...
Conclusions
And there we have it, an easy way to send multiple log files from a headless
machine to a google drive repository, which can be accessed by multiple
```

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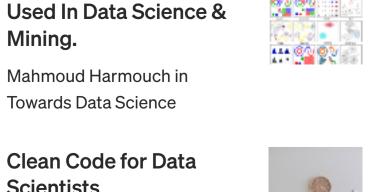
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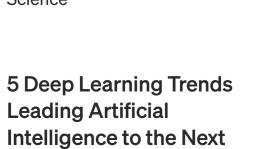
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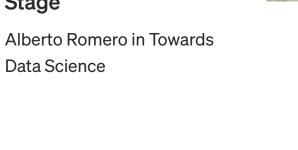






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> In many cases, it may be difficult to send data from a new machine to another. Examples of this include HPC facilities which are hidden behind a login portal but do not allow ssh tunnelling or simple headless machines which only have a few core programs installed. In this article, we look at using cURL (a command-line program for transferring data) to push a zipped file (containing log files) onto our google drive account for further analysis.

Installation Most machines will come with cURL installed (try typing which curl). If this is not the case we can install it with sudo apt install curl # Linux Debian/Ubuntu or brew install curl # Mac Now we have it installed, we can look at creating the credentials needed to send files.

API key Identifies your project using a simple API key to check quota and access OAuth client ID

When asked for the app type, we select TV and other.

Finally, this generates a client id and a client seacret. This is your username and password so copy it somewhere secure.

"verification\_url": "https://www.google.com/device"}

The client id and secret are saved from the first step, and the device code in the *previous section*. The output should be in the format: "access\_token": "....", "expires\_in": 3599, "refresh\_token": "....",

if sys.version[0]=='3':  $raw_input = lambda(x): input(x)$ 

"client\_id=%s&scope=https://www.googleapis.com/auth/drive.file" https://oauth2.googleapis.com/device/code'%client\_id).read())

str(raw\_input('\n Enter %(user\_code)s\n\n at %(verification\_url)s

We then make it executable chmod a+x curlgoogle allowing us to use it in an people for analysis. If you are in need of more information, stack overflow answers by Tanaike and HAKS (amongst others) were particularly helpful in creating this post. Sign up for The Variable By Towards Data Science Every Thursday, the Variable delivers the very best of Towards Data Science: from hands-on tutorials and cutting-edge research to original features you don't want to miss. Take a look. You'll need to sign in or create an account to receive this Get this newsletter newsletter. Google Drive Towards Data Science Terminal

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