Downloading and Extracting LIDAR ZIP Files from PASDA (Python Script)

Summary: These instructions use a combination of 1) Google Chrome Batch Link Downloader Extension and 2) a python script to make downloading and extracting a large number of LIDAR data (zip files) from the PASDA FTP site (ftp://ftp.pasda.psu.edu/pub/pasda/) fast and easy.

System Requirements: Python 2.7

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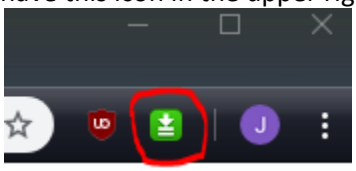
INSTRUCTIONS:

1. Copy the included python script at the bottom of this PDF and paste it into a blank Notepad document and save it as a '.py' file (ex: **ExtractZipFiles.py**) somewhere on your local computer (ex: C:\Scripts)

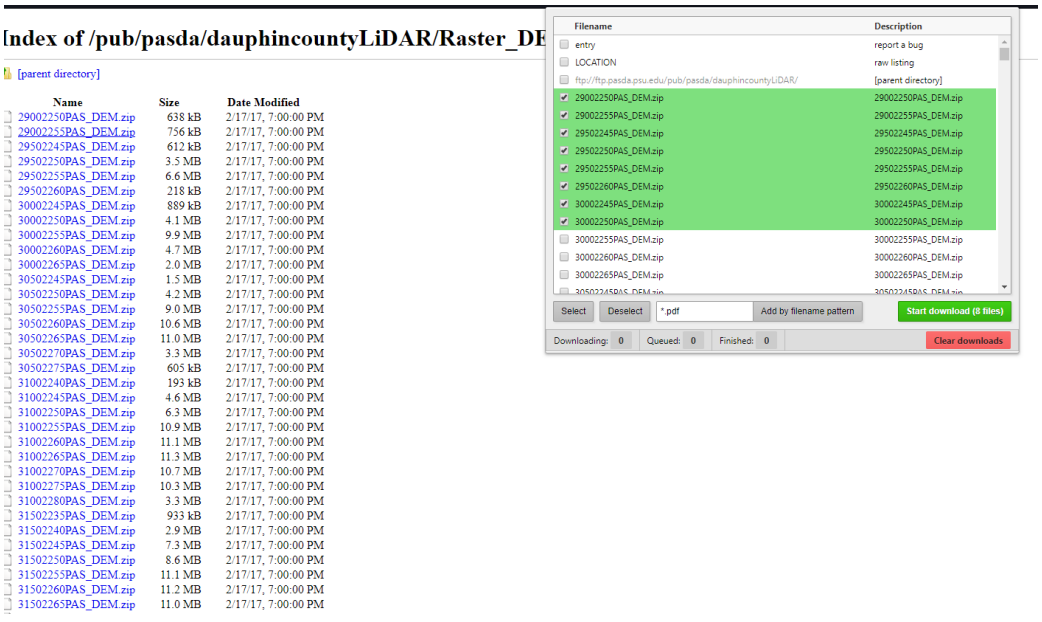
2. Install the "batch-link-downloader" (Google Chrome extension) to facilitate easy downloading of LiDAR (zip) files:
   a. https://chrome.google.com/webstore/detail/batch-link-downloader/aiahkbnnpafepcgnhhecilboebmmolnn

3. Add the extension to chrome, you will now have this icon in the upper right corner:



4. Navigate to the page where all the zip files are listed for download (ex: ftp://ftp.pasda.psu.edu/pub/pasda/dauphincountyLiDAR/Raster_DEM/)

5. Click on the batch link downloader icon, select the LiDAR zip files that you want, then click the Start Download button:

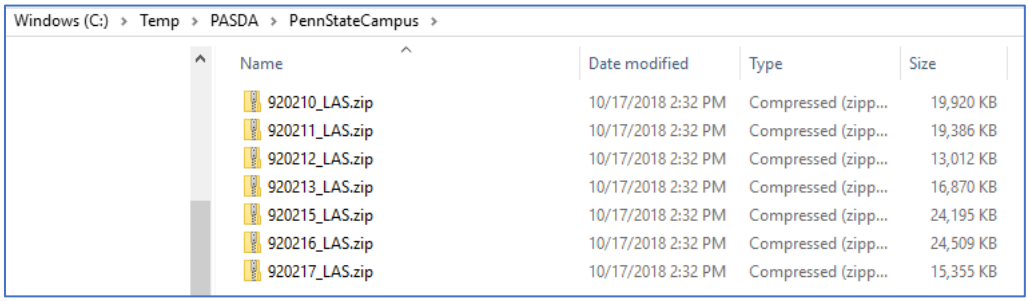


Index of /pub/pasda/dauphincountyLiDAR/Raster_DE

[parent directory]

Name	Size	Date Modified
29002250PAS_DEM.zip	638 kB	2/17/17, 7:00:00 PM
29002255PAS_DEM.zip	756 kB	2/17/17, 7:00:00 PM
29502245PAS_DEM.zip	612 kB	2/17/17, 7:00:00 PM
29502250PAS_DEM.zip	3.5 MB	2/17/17, 7:00:00 PM
29502255PAS_DEM.zip	6.6 MB	2/17/17, 7:00:00 PM
29502260PAS_DEM.zip	218 kB	2/17/17, 7:00:00 PM
30002245PAS_DEM.zip	889 kB	2/17/17, 7:00:00 PM
30002250PAS_DEM.zip	4.1 MB	2/17/17, 7:00:00 PM
30002255PAS_DEM.zip	9.9 MB	2/17/17, 7:00:00 PM
30002260PAS_DEM.zip	4.7 MB	2/17/17, 7:00:00 PM
30002265PAS_DEM.zip	2.0 MB	2/17/17, 7:00:00 PM
30502245PAS_DEM.zip	1.5 MB	2/17/17, 7:00:00 PM
30502250PAS_DEM.zip	4.2 MB	2/17/17, 7:00:00 PM
30502255PAS_DEM.zip	9.0 MB	2/17/17, 7:00:00 PM
30502260PAS_DEM.zip	10.6 MB	2/17/17, 7:00:00 PM
30502265PAS_DEM.zip	11.0 MB	2/17/17, 7:00:00 PM
30502270PAS_DEM.zip	3.3 MB	2/17/17, 7:00:00 PM
30502275PAS_DEM.zip	605 kB	2/17/17, 7:00:00 PM
31002240PAS_DEM.zip	193 kB	2/17/17, 7:00:00 PM
31002245PAS_DEM.zip	4.6 MB	2/17/17, 7:00:00 PM
31002250PAS_DEM.zip	6.3 MB	2/17/17, 7:00:00 PM
31002255PAS_DEM.zip	10.9 MB	2/17/17, 7:00:00 PM
31002260PAS_DEM.zip	11.1 MB	2/17/17, 7:00:00 PM
31002265PAS_DEM.zip	11.3 MB	2/17/17, 7:00:00 PM
31002270PAS_DEM.zip	10.7 MB	2/17/17, 7:00:00 PM
31002275PAS_DEM.zip	10.3 MB	2/17/17, 7:00:00 PM
31002280PAS_DEM.zip	3.3 MB	2/17/17, 7:00:00 PM
31502235PAS_DEM.zip	933 kB	2/17/17, 7:00:00 PM
31502240PAS_DEM.zip	2.9 MB	2/17/17, 7:00:00 PM
31502245PAS_DEM.zip	7.3 MB	2/17/17, 7:00:00 PM
31502250PAS_DEM.zip	8.6 MB	2/17/17, 7:00:00 PM
31502255PAS_DEM.zip	11.1 MB	2/17/17, 7:00:00 PM
31502260PAS_DEM.zip	11.2 MB	2/17/17, 7:00:00 PM
31502265PAS_DEM.zip	11.0 MB	2/17/17, 7:00:00 PM

6. The zip files will be downloaded into your "Downloads" folder on your C-Drive. Move these zip files into a new folder so they are the only zip files in that directory. The python script will extract the contents of ANY zip file in the directory and remove/delete the original zip files after extracting. Therefore, make sure there are no other files in the directory that you've moved the LiDAR zip files into.



7. Right click the saved '.py' file you created in step 1 and open it for editing in Notepad, Python IDE, or another IDE of your choosing.

   Change the "**dir_name**" path to the directory where your zip files are located:

```
dir_name = r"C:\Temp\PASDA\PennStateCampus"  # Folder where the zip files are located
```

   Change the "**new_dir**" path to the directory where you want the zip files extracted to:

```
new_dir = r"C:\Temp\PASDA\PennStateCampus\Extract"  # Folder where extracted files will go
```

   Save and then close the script.

8. Run the '.py' file you just edited in python.exe (both 32 or 64 bit should work). The black python window appears and automatically closes when the script is finished. The contents of the zip files should now be extracted in the folder you specified, and the original zip files deleted. It may take several hours to complete if you are downloading a large amount of LiDAR data for a large area.

The script:

```
import os, zipfile

dir_name = r"C:\Users\username\folder\folder"   # folder where zip files are located
new_dir = r"\\servername\folder\folder"         # folder where extracted files will go
extension = ".zip"

for item in os.listdir(dir_name):
   if item.endswith(extension):
      file_name = os.path.abspath(item)
      zip_ref = zipfile.ZipFile(file_name)
      zip_ref.extractall(new_dir)
      zip_ref.close()
      os.remove(file_name)
```