

SPSLiDAR Server Plugin for CloudCompare

User Manual



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1. Introduction

This document introduces the SPSLiDAR Plugin designed for CloudCompare. With this plugin we will be able to upload and download Clouds from a Spslidar Server. Besides, it allows the creation of new Workspaces and Datasets.

The purpose of this document is to explain how to install it and how to use it too.

2. Prerequisites

- CloudCompare V12.2 or upper.
- The Dynamic-link library from LASLibz (LASLibz.dll).
- The Dynamic-link library from SpslidarPlugin (SpslidarPlugin.dll).

3. Installation

1. Install the last version of CloudCompare.
2. Go to the installation folder (C:\Program Files\CloudCompare by default).
3. Copy LASLibz.dll in the root of the installation folder (where CloudCompare.exe is located).
4. Go inside the folder plugins (C:\Program Files\CloudCompare\plugins by default).
5. Copy SpslidarPlugin.dll inside it.
6. Now the plugin is ready to use.

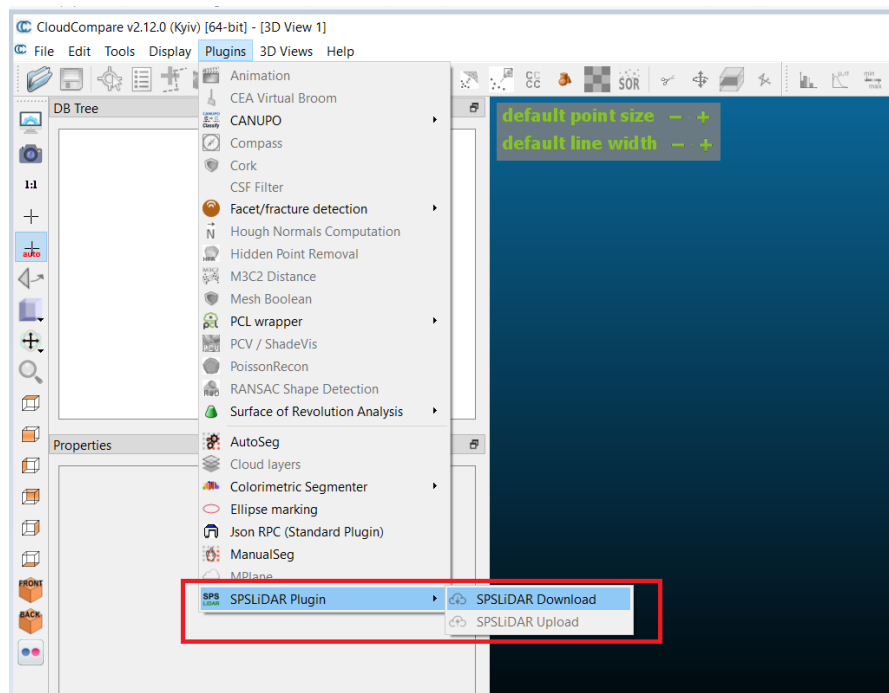
4. Interface

We can access to the plugin's features in two ways:

- In the toolbar:

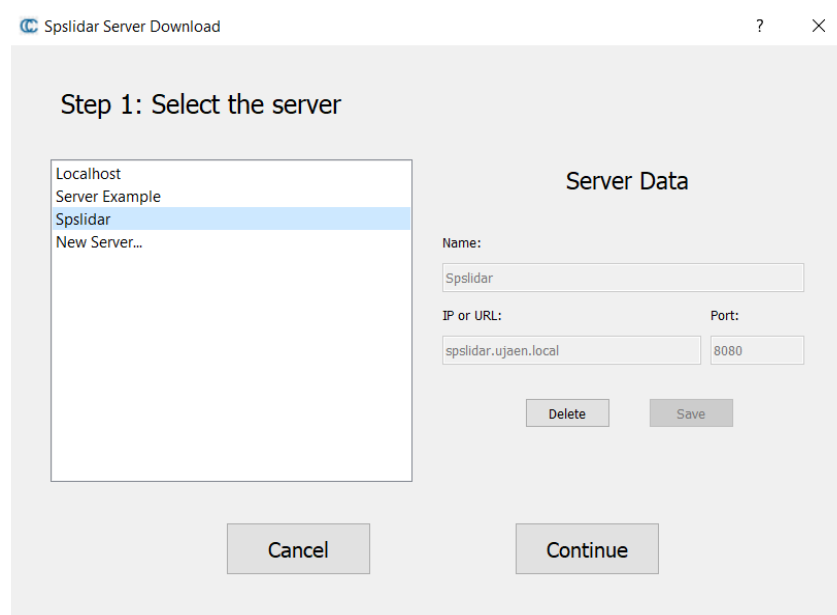


- Inside Plugins' menu:



5. How to download a cloud

1. Click Spslidar Download (this option is always enabled).
2. Choose the server you want to connect to (or create a new one and choose it) and press continue.



3. In the next page, click the Workspace you want to connect.
4. Click the Dataset which you want to download and press the continue button.

Spslidar Server Download ? X

Step 2: Select a Dataset

Workspaces

Tunel de las pedrizas
Ruta de los torreones

Datasets

Dataset1

Back

Continue

5. Now you will be able to see the specification of the Dataset.

Spslidar Server Download ? X

Dataset Specification

Name	Dataset1	Datablock Size	100000
Description	Túnel de las pedrizas	Datablock Format	LAZ
Date Of Acquisition	2007-08-12 00:00:00		

Bounding Box

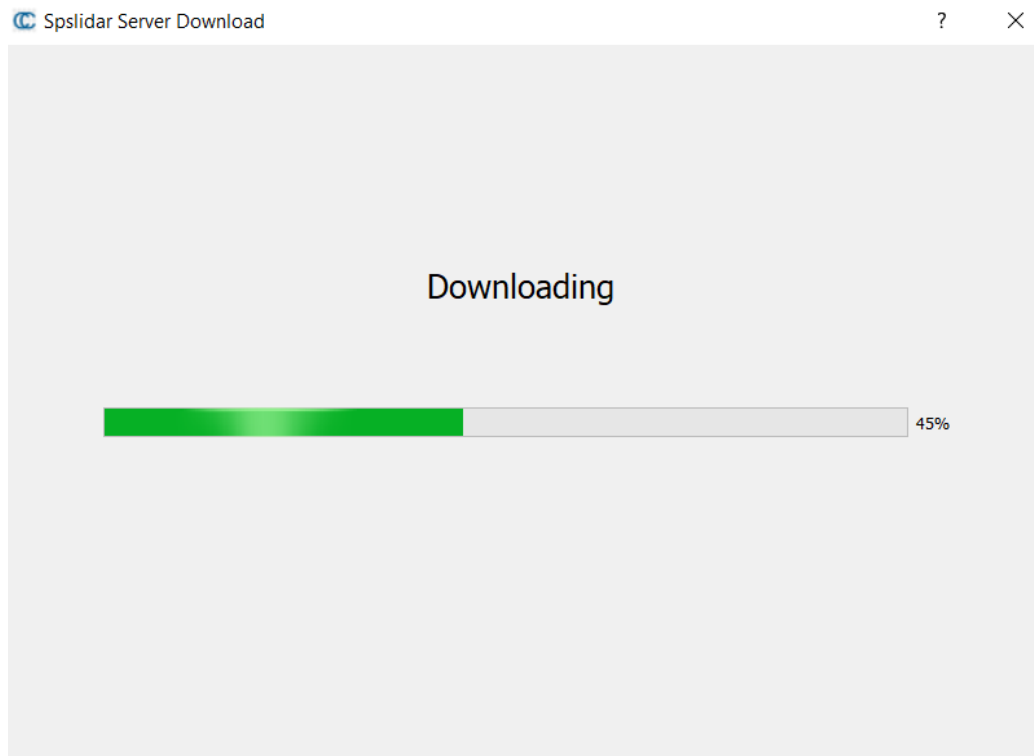
South-West Bottom		North-East Top	
Easting	687344	Easting	687391
Northing	4262420	Northing	4262730
Height	0	Height	0
Zone	16N	Zone	16N

Back

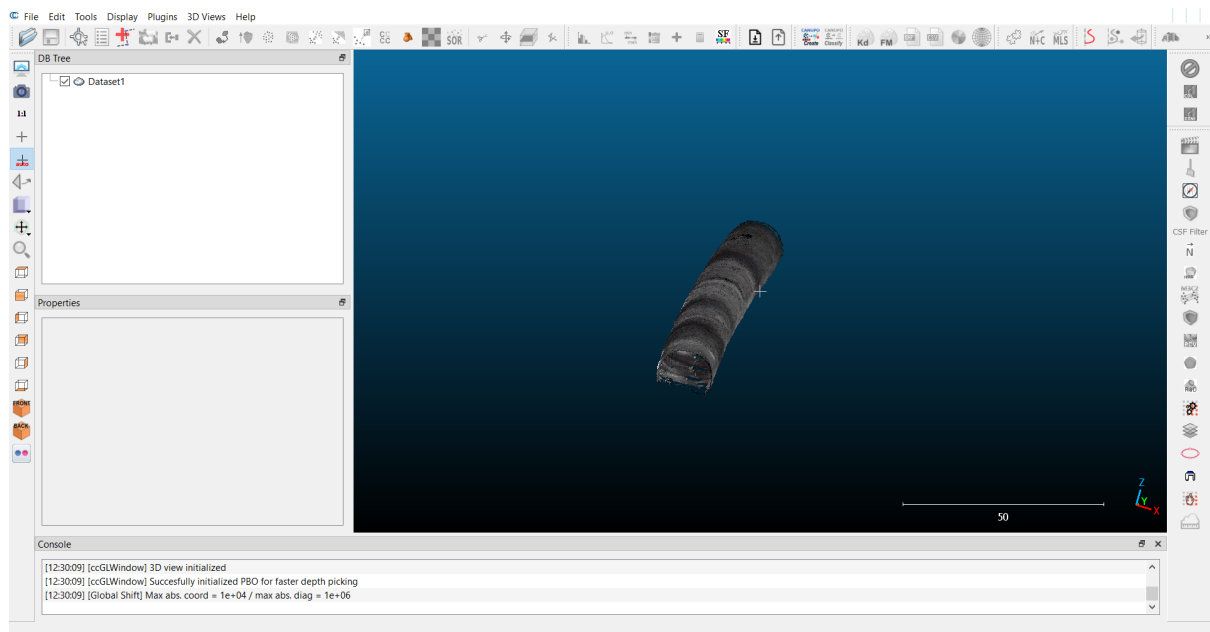
Confirm

6. If everything is correct, press the confirm button.

- Now, CloudCompare will start downloading and processing the Cloud from the Server.

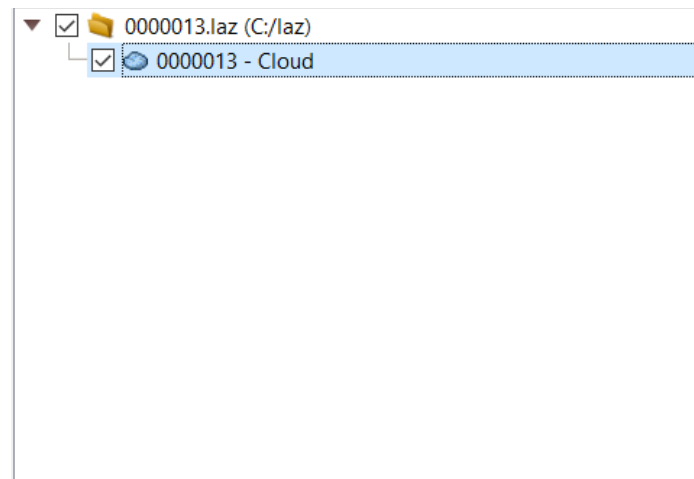


- Wait until the process finishes and finally you will be able to see the cloud in CloudCompare.



6. How to upload a cloud

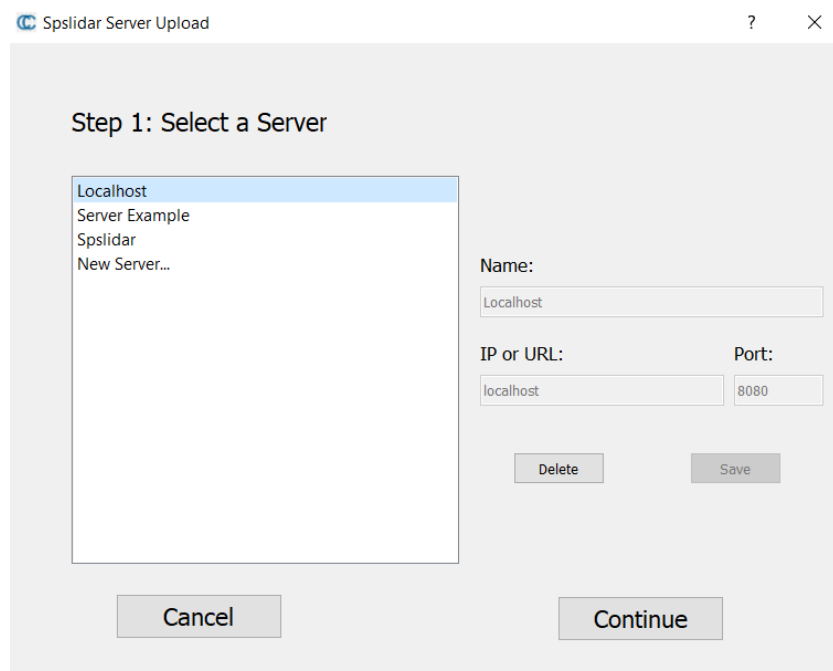
1. Open a Cloud with CloudCompare (can be any format but it is important that the cloud have the Geolocalization coordinates) or download it from the server.
2. Select the clouds which you want to unify. Nevertheless, if we don't select any cloud, we won't be able to click on Spslidar Upload feature.



If the cloud is opened from a file, it is important to only select the members that have the suffix “- Cloud” in the name. If we choose another member different from it, the plugin won't accept it.

If the cloud is downloaded from an Spslidar Sever, there won't be any problem due to it just having the Cloud part.

3. Click Spslidar Upload.
4. Choose the server you want to connect to (or create a new one and choose it) and press continue.



5. Choose a Workspace

- a. If you want to use an existing Workspace, just click on it. The basic information about the Workspace will appear below.

Spslidar Server Upload

Step 2: Select a Dataset

Workspace

Test
New Workspace...

Name: Test

Description: Test

Cell Size: 1000000

Dataset

Test
New Dataset...

Name:

Description:

Datablock size:

Back Confirm

- b. If you want to create a new Workspace, click on “New Workspace...”. A new window will appear, then introduce the data of the Workspace and click the button Confirm. Now do it like you are choosing an existing Workspace.

Spslidar Server Upload

Step 2: Select a Dataset

New Workspace

Name: Jaen

Cell Size (Between 100 and 1000000): 1000000

Description: Test

Cancel Confirm

Test
Jaen
New Work

Name:

Description:

Cell Size:

Back Confirm

6. Choose a Dataset

- a. If you want to use an existing Dataset, just click on it. The basic information about the Workspace will appear below. **It is important that the Dataset is empty, otherwise the upload will fail.**

Spslidar Server Upload

Step 2: Select a Dataset

Workspace	Dataset
Test	Test
Jaen	New Dataset...
New Workspace...	

Name: Jaen Description: Test Cell Size: 1000000

Name: Test Description: Test Datablock size: 100000

Back Confirm

- b. If you want to create a new Dataset, click on “New Dataset...”. A new window will appear, then introduce the data of the Dataset (the Bounding Box’s information will be automatically filled) and click the button Confirm. Now do it like you are choosing an existing Dataset.

Spslidar Server Upload

New Dataset

Dataset Specification

Name: Test Description: Test

Datablock Size: 100000

Datablock Format: LAZ

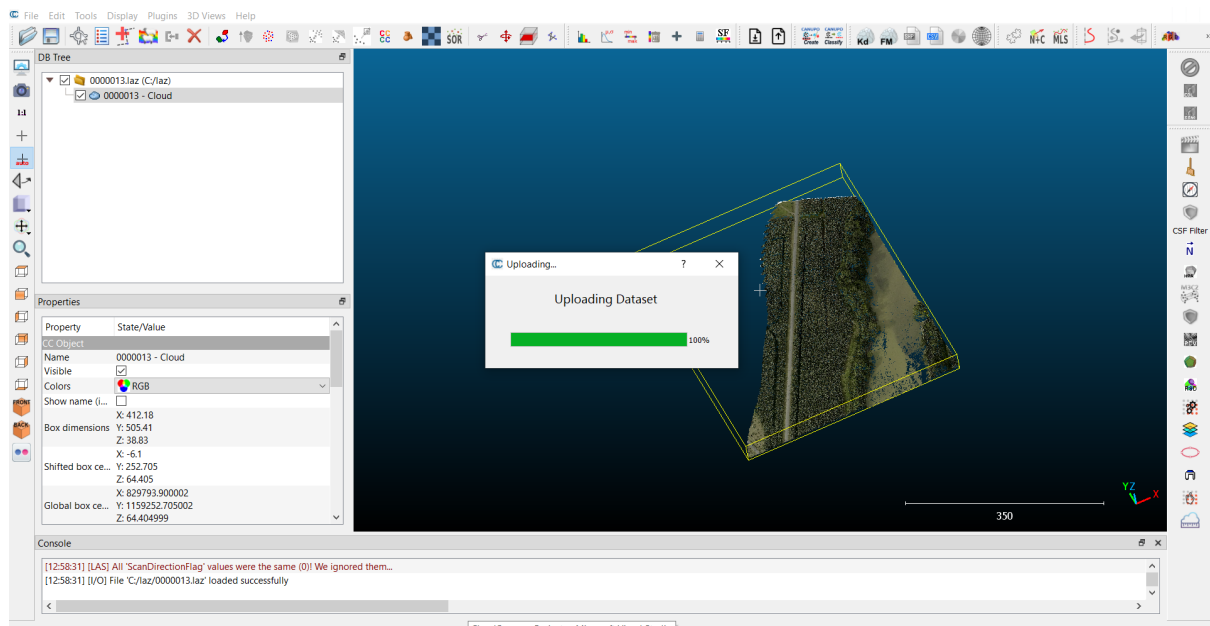
Date of Acquisition: 22/04/2022

Bounding Box

South-West Bottom		North-East Top	
Easting:	829588	Easting:	830000
Northing:	1.159e+06	Northing:	1.15951e+06
Height:	44.99	Height:	83.82
Zone:	16N	Zone:	16N

Cancel Confirm

7. If everything is correct, click the confirm button and CloudCompare will start uploading and processing the cloud.



8. If a confirmation window appears, it means that everything has gone perfectly and now we can download our cloud from the server.

