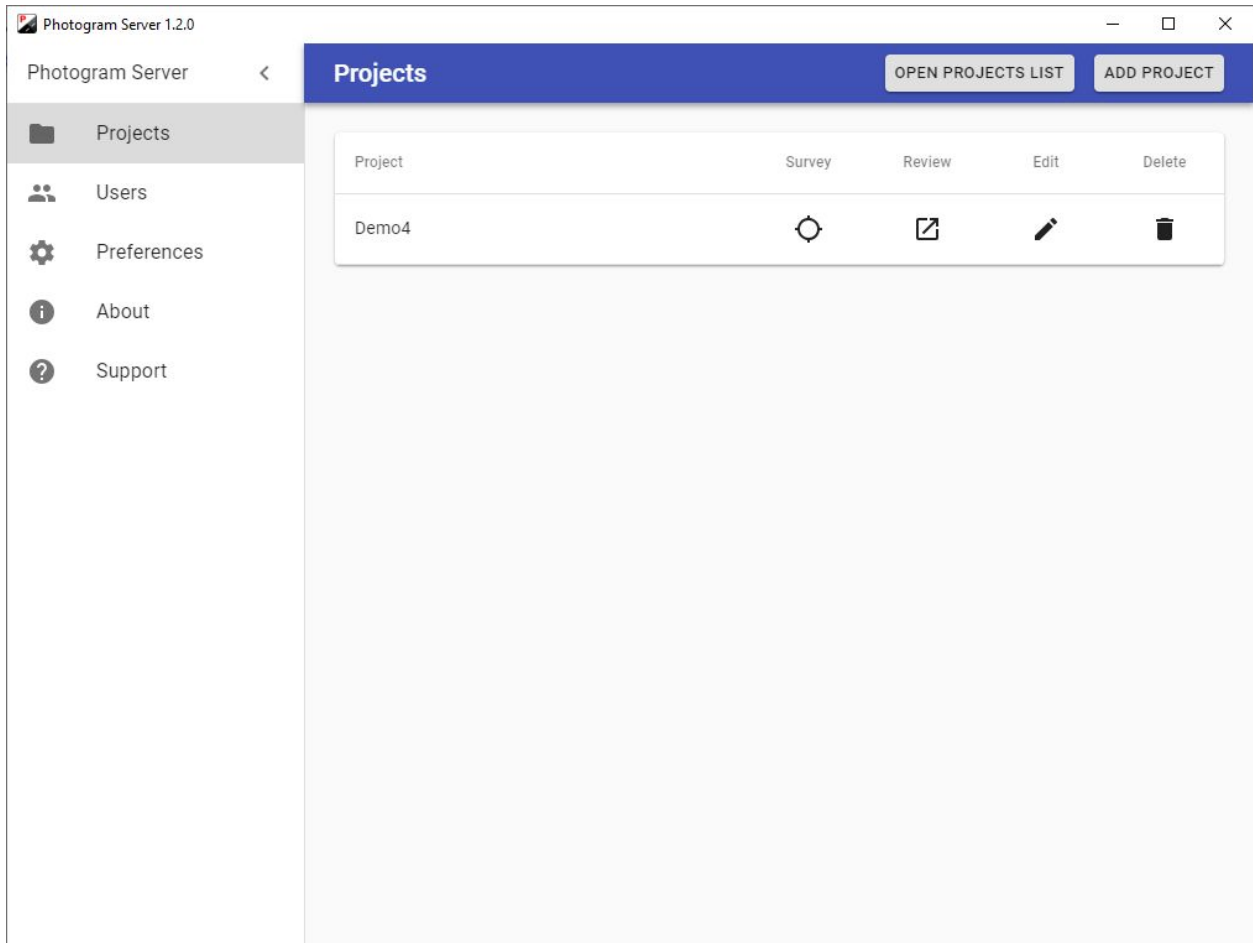




Photogram Online Server

Manual
for release 1.2.1



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Overview

Photogram Online is a client/server application to measure any object visible in your streetviews.

It is using photogrammetry to measure:

- The coordinates of points: Latitude, Longitude, Altitude.
- The distance between two points, in the same streetview.
- The size of rectangles formed by four points, in the same streetview.

Many users can work with the same data at the same time.
Using their browser to access your Photogram Online Server.
In their office or remotely by Internet.

There is no need to copy any data to the users PC or to install any programs.

Measurement can be made, saved and exported. Individually or all at once.

Photogram Online is meant for closed user groups.
User accounts must be created.
Access to projects must be granted to the users.

Manuals

This manual is meant for the administrator of the Photogram Online Server.

The newest release is available here:

<http://updates.applied-streetview.com/photogram-server/newest.php?file=manual>

The manual for the end-users for the Photogram Online Client (browser):

<http://updates.applied-streetview.com/photogram-server/newest.php?file=manual-client>

Administrator tasks

First task is to create at least one **Admin** user account.
To be named Admin, Admin-02, Admin-03 etc.

Admins should have access to all projects. This is needed to check and set the **Survey** and **Review** functionality for existing and newly added project.
There are no other differences to end-user accounts.

The Photogram Server program itself has no password protection. Anyone with access to the Server or PC has total control.

Typical administrator tasks are:

- Add new users.
- Set what projects a user can access.
Default setting:
Newly added users have no access to projects.
Email the projects list address to a new user.
E.g. **photogram.yourcompany.com/projects** or **192.168.1.28:12035/projects**
- Tell the new user how to get support.
- Add new projects.
Default setting:
No one has access to newly added projects.
- Answer users support requests.
- Maintain the server and network for space, performance and security.

Hardware Requirements

- Windows Server 2016 or 2019 or a Windows 10 PC
- Fast internet access.
- Additionally for the **On-the-fly** mode:
A NVIDIA graphics card with a minimum compute capability of 5.2 and minimum 4GB VRAM is required. More info at <https://en.wikipedia.org/wiki/CUDA>.
We recommend the NVIDIA RTX 2060 graphics card.
- For the **serve** mode:
No NVIDIA graphics card is needed. Projects must be fully processed with the Creator program.

Operation Modes

On-the-fly mode

A project is configured only with **Creator 3**. But no streetviews are created.

Streetviews are rendered on-the fly by Photogram Online.

Streetviews are cached to be reused.

A NVIDIA graphics card with a minimum compute capability of 5.2 is required.

More info at <https://en.wikipedia.org/wiki/CUDA>.

We recommend the NVIDIA RTX 2060 graphics card.

CUDA 10.0 is required.

<https://developer.nvidia.com/cuda-10.0-download-archive>

Serve mode

A project is configured **and processed** with **Creator 3**.

This might need some time for large projects.

The streetviews are served only by Photogram Online.

No graphics card is needed by the Photogram Online Server.

Platforms

PC

A Windows 10 PC.

Access the Photogram Server with a browser from other PCs in your office.

Hint:

You even can run both the server and the client on the same PC. It would be the smallest possible set-up.

Server

Windows Server 2016 or 2019

Install it on your own server hardware.

Google Cloud


1. Go to <https://console.cloud.google.com/compute/instances>
2. Click on **CREATE INSTANCE**
3. In **Machine type** click **customize**
4. Set **Cores** to 8 and **Memory** to 8 GB
5. **Serve mode**: At least 1 vCPU and 4 GB RAM.
6. **On-the-fly mode**: In the **GPUs** section set **Number of GPUs** to 1 and **GPU type** to NVIDIA Tesla P100 or V100. V100 is about 80% faster for creating streetview tiles.
7. Click on **Boot disk** and select Windows Server 2019 Datacenter. Then set **Boot disk type** to SSD persistent disk.
8. Click **Create**

Machine type

Customize to select cores, memory and GPUs.

[Basic view](#)

Cores

 8 vCPU 1 - 96

Memory

 8 GB 7.2 - 52

Extend memory [?](#)

CPU platform [?](#)

Automatic [▼](#)

GPUs

The number of GPU dies is linked to the number of CPU cores and memory selected for this instance. For this machine type, you can select no fewer than 1 GPU die.
[Learn more](#)

Number of GPUs [▼](#) 1 **GPU type** [▼](#) NVIDIA Tesla P100


i Machines with GPUs can't migrate on host maintenance

[Choosing a machine type](#) [↗](#)

Container [?](#)

Deploy a container image to this VM instance. [Learn more](#)

Boot disk [?](#)

 New 50 GB SSD persistent disk
Image
Windows Server 2019 Datacenter [Change](#)

After connecting to the instance:

1. Download and install [CUDA 10](#)
2. Download and install [Photogram Online](#)
3. Exclude the **in** and **out** Creator 3 folders from Windows Security.
<https://support.microsoft.com/en-us/help/4028485/windows-10-add-an-exclusion-to-windows-security>

Amazon EC2

1. Go to e.g. <https://eu-central-1.console.aws.amazon.com/ec2>
2. Click on **Launch Instance**
3. Step 1: Choose an Amazon Machine Image (AMI): Choose **Microsoft Windows Server 2019 Base**
4. Step 2, **Serve mode**: At least 1 vCPU and 4 GB RAM.
5. Step 2, **On-the-fly mode**: Choose an Instance Type: Choose **p3.2xlarge** - 1 x V100 GPU.
6. **Review and Launch**

After connecting to the instance:

1. Download and install [CUDA 10](#)
2. Download and install [Photogram Online](#)
3. Exclude the **in** and **out** Creator 3 folders from Windows Security.
<https://support.microsoft.com/en-us/help/4028485/windows-10-add-an-exclusion-to-windows-security>

Microsoft Azure

1. Go to e.g.
<https://portal.azure.com/#blade/HubsExtension/Resources/resourceType/Microsoft.Compute%2FVirtualMachines>
2. Click on **Add**
3. Image: **Windows Server 2019 Datacenter**
4. Size, **Serve mode**: At least 1 vCPU and 4 GB RAM.
5. Size, **On-the-fly mode**: Standard NV6
6. **Review + create**

After connecting to the instance:

1. Download and install [CUDA 10](#)
2. Download and install [Photogram Online](#)
3. Exclude the **in** and **out** Creator 3 folders from Windows Security.
<https://support.microsoft.com/en-us/help/4028485/windows-10-add-an-exclusion-to-windows-security>

Workflow

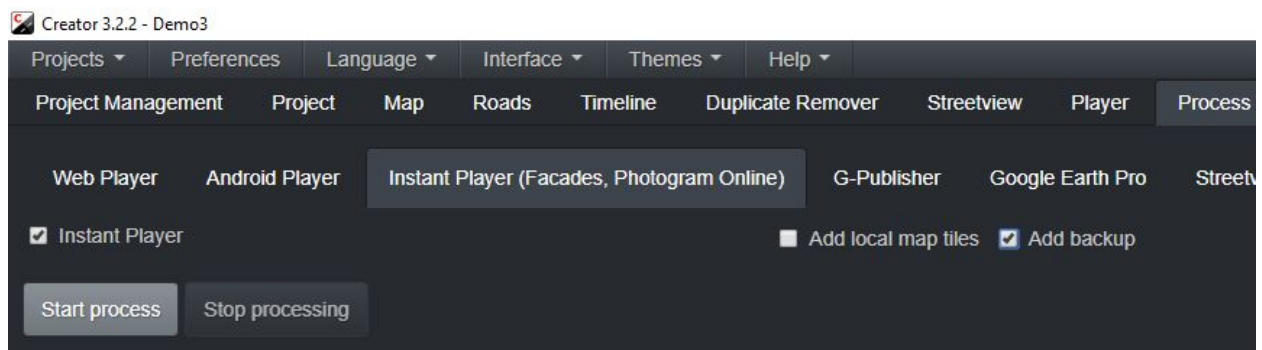
On-the-fly mode

A project must be configured only with **Creator 3.2.0** or above.
No need to process any images.

All existing projects can be exported for Photogram Online without any additional work.
No streetviews are created. Creating the Photogram Online configuration is very fast.

Set the options as shown in this

Process -> Instant Player (Facades, **Photogram Online**)
screenshot:



Click the **Start process** button.

Serve mode

A project must be configured, and the streetview-tiles must be created with **Creator 3.2.0** or above.

All existing projects can be exported for the Photogram Online without any additional work.

Streetviews are created. This might need some time.

Click

Interface -> Advanced,

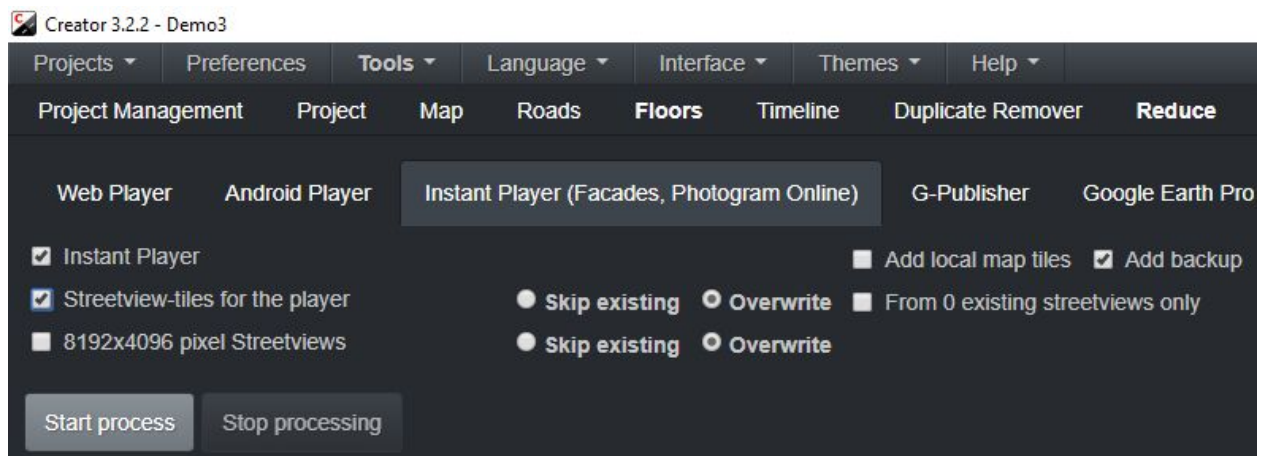
then

Process -> Instant Player(Facades, **Photogram Online**)

Set the options as shown in this

Process -> Instant Player(Facades, **Photogram Online**)

screenshot:

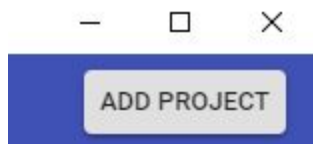


Click the **Start process** button.

Projects

Open the **Photogram Online Server** program.

New



Click **Add project** to add a new project. It must be processed for the **Instant Player**.

Project folder

CHOOSE FOLDER



Project name





Allow all users to access this project

By default nobody has access to the project.

Tick the **Allow all users to access this project** option to grant everyone access, or leave it unticked and on the [Users - Edit](#) page enable access just for specific users.

Pick the project and then click **Save**.

Manage

Project	Review	Survey	Edit	Delete
Demo3				

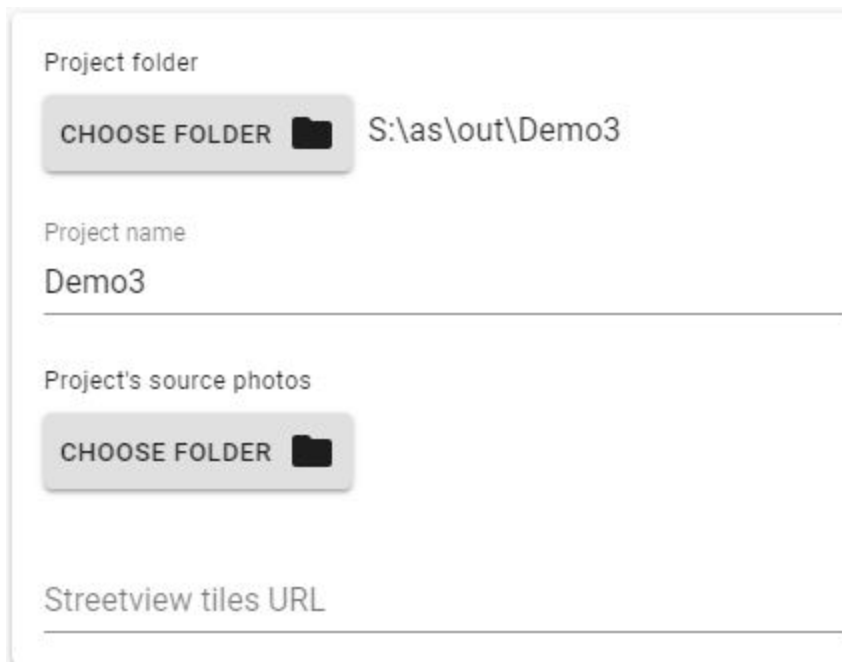
Survey

Opens the Photogram Online client URL in a new browser tab.

Review

Opens the player URL in a new browser tab.

Edit



The screenshot shows a form with four sections:

- Project folder:** A button labeled "CHOOSE FOLDER" with a folder icon, followed by the text "S:\as\out\Demo3".
- Project name:** A text input field containing "Demo3".
- Project's source photos:** A button labeled "CHOOSE FOLDER" with a folder icon.
- Streetview tiles URL:** An empty text input field.

Edit project specific preferences:

- Project folder - Photogram Server enabled Creator-project folder
- Project name - Project name
- Projects source photos - Set the path to the folder with the source images of the project. Is needed when Photogram Online runs on a different PC than Creator 3.
- Streetview tiles URL - Update this field to the URL of the 3rd party server that has all the processed tiles. Use this to serve streetview tiles from a CDN.
Example: //aplsv.s3.amazonaws.com/Demo3

Delete

Delete the selected project from Photogram Server. **No files are deleted.**

Open Projects list



This is the start point for all end-users. Provide it to the users.

The link looks like this:

photogram.yourcompany.com/projects or **192.168.1.28:12035/projects**

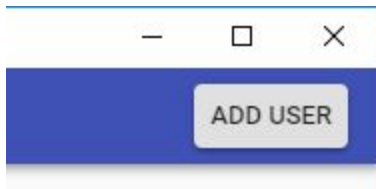
Each user will only see the projects access has been granted for.

Click the **Open Projects list** button in the top right corner, this will open a new Browser window with the list of all the projects.

Users

Only registered users have access to the Photogram Online server.

New



Click **Add user** to add a new user.

Username

Test

Full name

Tom Tester

Email

tom2@gmail.com

Password

Confirm password

Enable Statistics access

Allowed projects

All Demo4

Fill in the fields and click **Save** in the top right corner.

By default a user does not have access to any of the projects.

Either select **All** in the **Allowed projects** section to allow user access to all currently available projects, or pick specific project(s) from the list.

Enable authentication for 'Review'

<input type="checkbox"/> Enable authentication for Review		
Username	Full name	Email
test	Tom Tester	tom2@gmail.com

If enabled users using the **Review** page must authenticate first.

If not activated all users can access the **Review** functionality for projects they have access to.

Authentication is always active for **Survey**. It can not be switched off.

Sign in

http://192.168.1.101:12035

Your connection to this site is not private

Username



Password

Sign in

Cancel

The authentication popup will be displayed when accessing a project in the browser.

Edit

<input type="checkbox"/> Enable authentication for Review				Users: 1/3	
Username	Full name	Email	Edit	Delete	
test	Tom Tester	tom2@gmail.com			

Delete

Delete the selected user from the Photogram Server.

Edit a users data:

- Username
- Full name
- Email
- Password
- Enable Statistics access - Enable access to /photogram/statistics page.
- Allowed projects - Specify which projects the user can access. By default a user has no access at all.

Username

Test

Full name

Tom Tester

Email

tom2@gmail.com

Password

Confirm password



Enable Statistics access

Allowed projects



All



Demo4

Preferences

Language

Change the language. English, German and Romanian are supported.

URL IP address

Internet address to use when creating the player URL. By default Photogram Server will try to auto detect your LAN interface IP address and use it. Change this setting only in case a different interface IP address should be used.

Display projects list when accessing /projects URL

For easy access provide a list of all available projects to the viewers.
Uses only can see projects they have been granted access to.

If this option is disabled a 403 HTTP Forbidden error message will be returned when accessing the **/projects** URL.

After generating the streetview delete it's sources.

After a streetview is generated it's source images in the projects input folder will be deleted. This keeps the amount of data to about the same on the server. No matter how many streetviews are processed on-the-fly when viewed.

WARNING:

Make sure you have a backup of your sources!

Support

Please update first.

Support is provided for the newest Photogram Online release only.

Maybe your problem has already been solved?

Check

<http://www.applied-streetview.com/programs/photogram-online/>

for a new release.

Contact

Support is available in English.

Helpdesk: support.applied-streetview.com

E-Mail: support@applied-streetview.com

Skype ID: applied-streetview

Phone: +49 6103 - 372 7494

Consulting

We are available for hire for consulting, custom development and integration.

Please contact:

E-Mail: jan.martin@applied-streetview.com

Skype ID: applied-streetview

Phone: +49 6103 - 372 7494