# Pointfuse V3.4 Quick Start

Pointfuse quickly and accurately converts point clouds into intelligent mesh models with selectable surfaces for classification. You can directly upload models to Autodesk BIM 360 or export to multiple formats for the next stage of your workflow in other applications.

> ✎ Pointfuse runs on a physical PC; you cannot run it on a virtual machine, or on a Mac.
> You **can** use Pointfuse via desktop sharing, but Remote Desktop is **not** supported. TeamViewer is the suggested alternative.
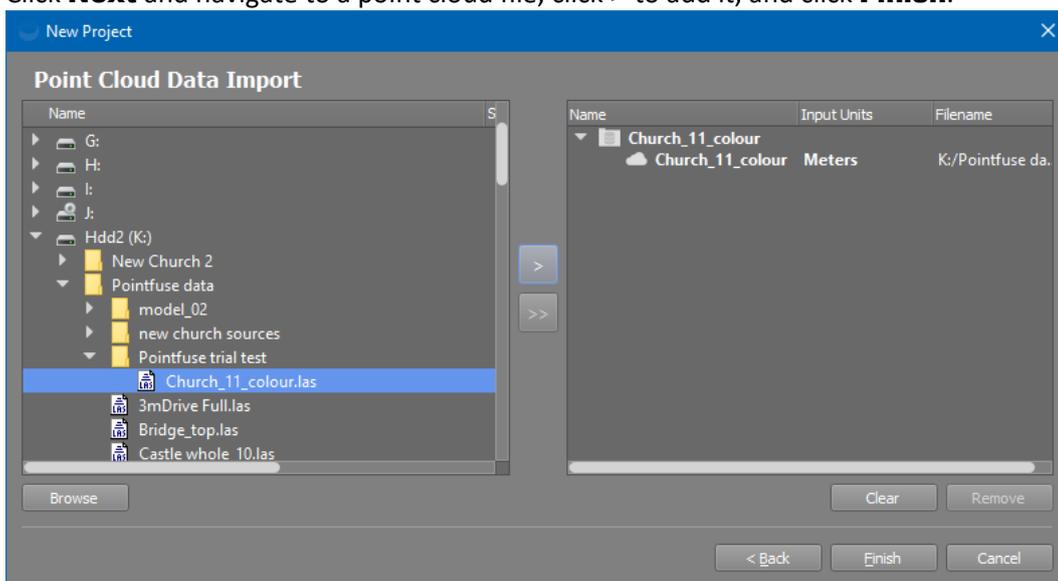
Load a Point Cloud

1. Download and open Pointfuse.

2. On the initial dialog, select **Create New Project**.
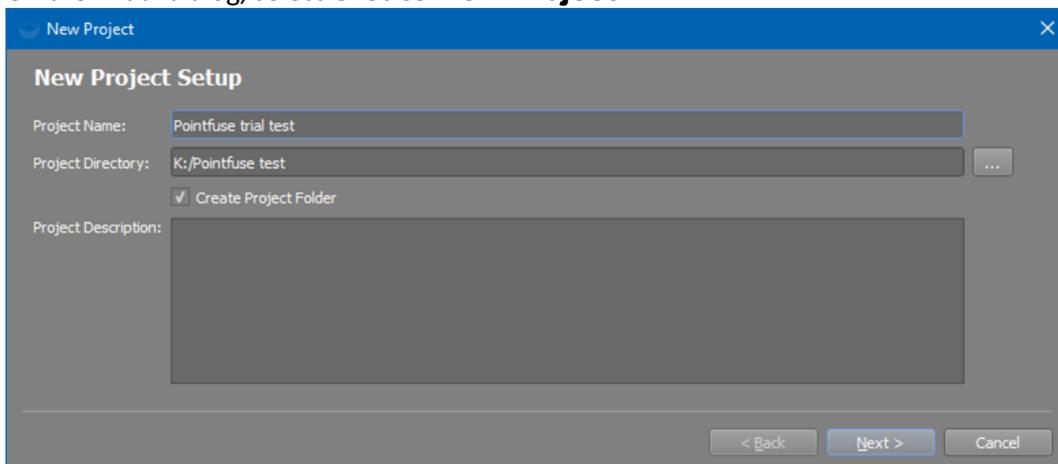
- **Optional**: Specify a custom **Project Name**, **Directory**, and **Description**.

3. Click **Next** and navigate to a point cloud file, click **>** to add it, and click **Finish**.

- **Optional**: If you want an intelligent mesh model created from only part of the point cloud:

    a. In the Project Explorer on the left of the main Pointfuse window, double click the point cloud file. It will be displayed in the main workspace.

    b. Use the **Crop** tool to create a new, smaller point cloud.

    c. Select the new, cropped point cloud in the Project Explorer (no need to display it).

Convert to an Intelligent Mesh Model

4. Press **Z** or click **Generate Surfaces** .
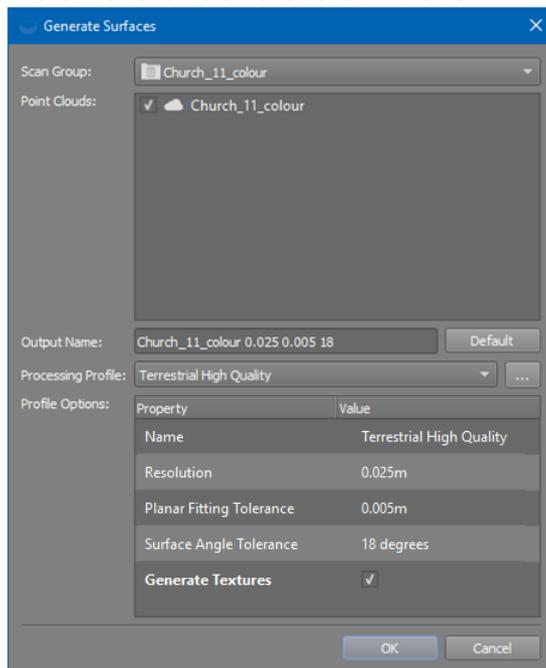
- **Optional**:

    - Specify a custom **Output Name**.

    - Select a different **Processing Profile** with different **Resolution** and **Tolerances**.

    - If the point cloud has RGB or intensity data, you can select **Generate Textures** to include that data in the mesh model. This may increase processing time.

5. Click **OK** to create the mesh model.

6. In the Project Explorer, double click the mesh model's name to display it in the main workspace.

7. You can zoom and pan the model, crop the model, and generate floor plans, ortho images, and high resolution snapshots. You can also make measurements.

8. Either press and hold **Ctrl** or click **Selection Mode** [icon] and choose **Append**. Each surface you click, or that is fully contained in a drag select, is added to the selection and shown in the highlight color. For example, with just a few clicks, you can select all the main pipes, then zoom in and click or drag select to add the rest of them.
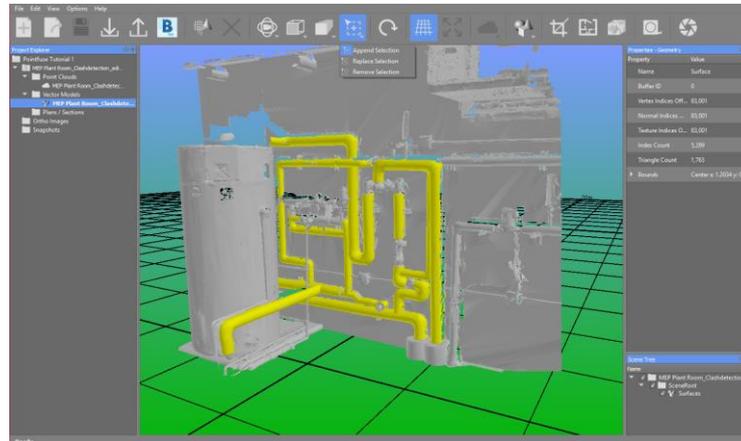
9. Deselect by clicking again, or switch to **Replace** or **Remove** mode from the Selection Mode dropdown, or by pressing **Alt** or **Shift** respectively.

10. Right click and select either **Move Geometries** or **Merge Geometries**.

    - **Move** puts them in a folder together, but keeps them as individually selectable surfaces.

    - **Merge** permanently combines into a single surface: clicking on any part selects all of it.

11. Select a parent folder, then **Add Group** to add a new destination folder.

12. Select that folder, then **Add Geometry** to move or merge the surfaces into it.

13. Select the surfaces in the folder, click **OK** to close the dialog, then **Save** [icon] on the toolbar.

14. Show and hide groups of surfaces by ticking and unticking in the Scene Tree at the bottom right.

15. In the Properties window, you can color-code each group of surfaces to develop a clearer visualization of your data, without losing RGB or intensity data.
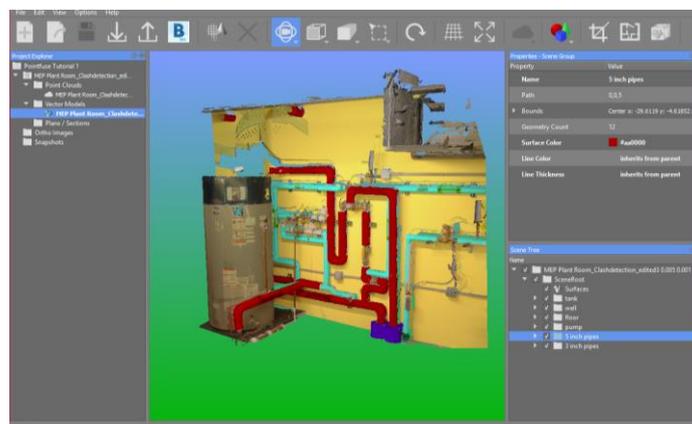
Export Selected Surfaces of Mesh Model

It is quick and easy to export whole models or selected surfaces for the next stage of your workflow, in Autodesk, Teckla Structures, Revit, or ArchiCAD, for example.

✎ The trial version of Pointfuse limits you to three exports, whether to Autodesk BIM 360 or your PC. After that, you need to buy a license to use Pointfuse.

Export to Autodesk BIM 360

If you've selected and classified surfaces, the classification hierarchy will be uploaded with the model.

Prerequisites

- An Autodesk BIM 360 account with admin rights. Add Pointfuse as a custom app, as explained in the Autodesk article To Add Apps & Integrations. You will also need the Forge Client ID for Pointfuse: nk6uRHfPNJmlXvLuYxjn1A9GFwWdDlDE

- A full Pointfuse license or Pointfuse trial with at least one of the three permitted exports remaining.

16. To upload the whole model, or selected surfaces, to Autodesk, select **BIM 360 Export** .

   a. Sign in to your Autodesk account.

   b. When prompted, give Pointfuse access to your account to see your files.
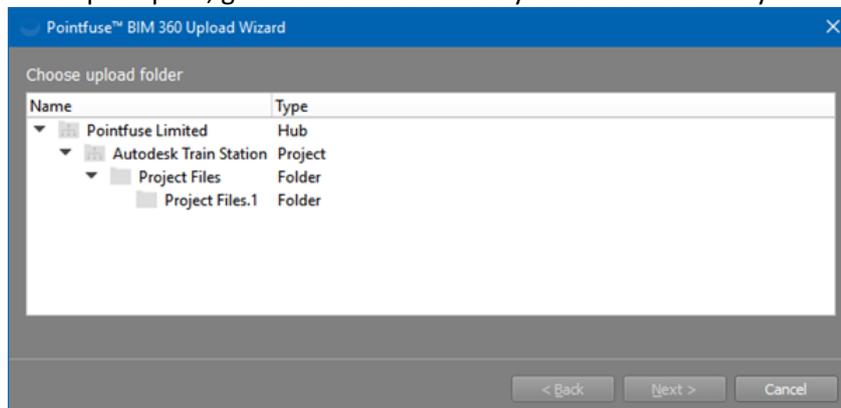
   c. Select the folder you want to upload to. Click **Next**, which opens the upload wizard.
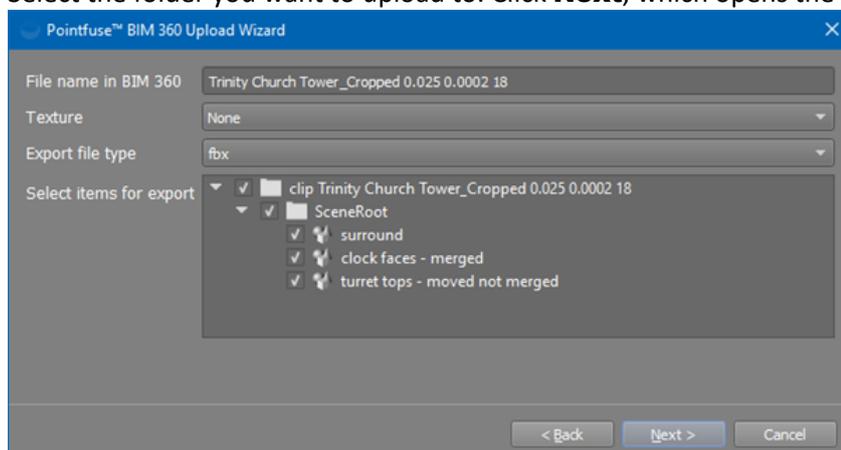
d.   Select the **File name**, whether to include a **Texture**, and the **Export file type**.

e.   By default, all surface geometries are ticked. Untick any you don't want in the export.

f.   Click **Next** to upload the model.

g.   When done, select **Show file in BIM 360** to view it in your default browser.
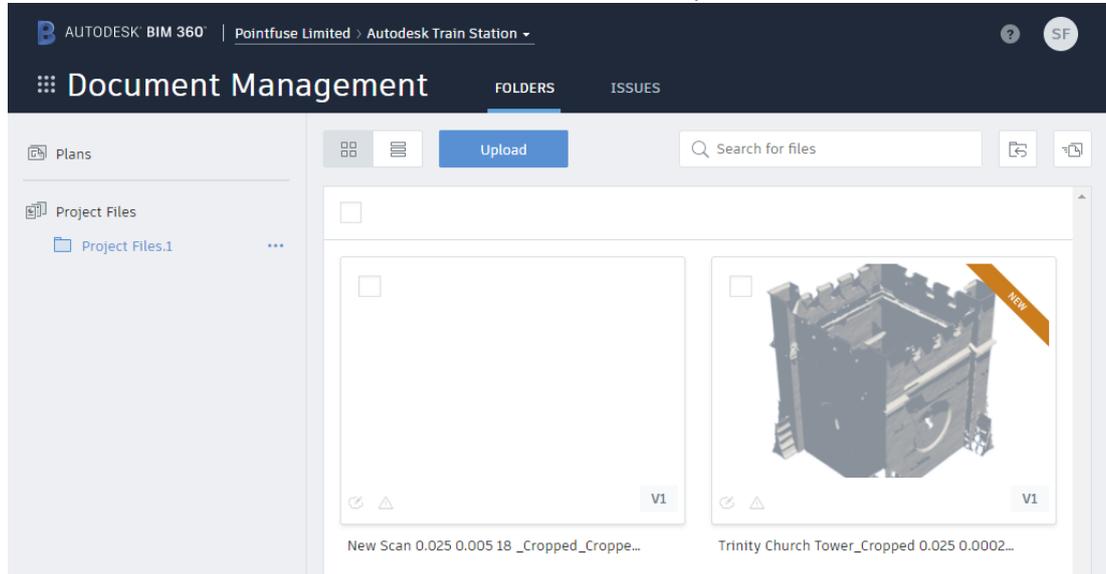
h.   In the browser, functions include: preview (including markup), download, move, copy, rename, lock, share, and delete.

Export to File on Your Computer

✎   The trial version of Pointfuse limits you to three exports, whether to Autodesk BIM 360 or your PC. After that, you need to buy a license to use Pointfuse.

17. Select **Export** 🔼.

18. In the dialog, choose a **File Name** and click the Browse button to select an export format: DAE, DXF (the default), FBX, IFC, NWC, OBJ, SKP, or STL.

   If you've selected and classified surfaces, FBX and IFC retain the classification hierarchy.

19. If exporting to OBJ, DAE or FBX, you can include RGB or intensity texture in the export.

20. Choose whether to convert the whole model or selected surfaces.

21. Click **OK** to create the export file. You can open it in a CAD or similar program, but not in Pointfuse