

APRIL 2024



Pmass Manual

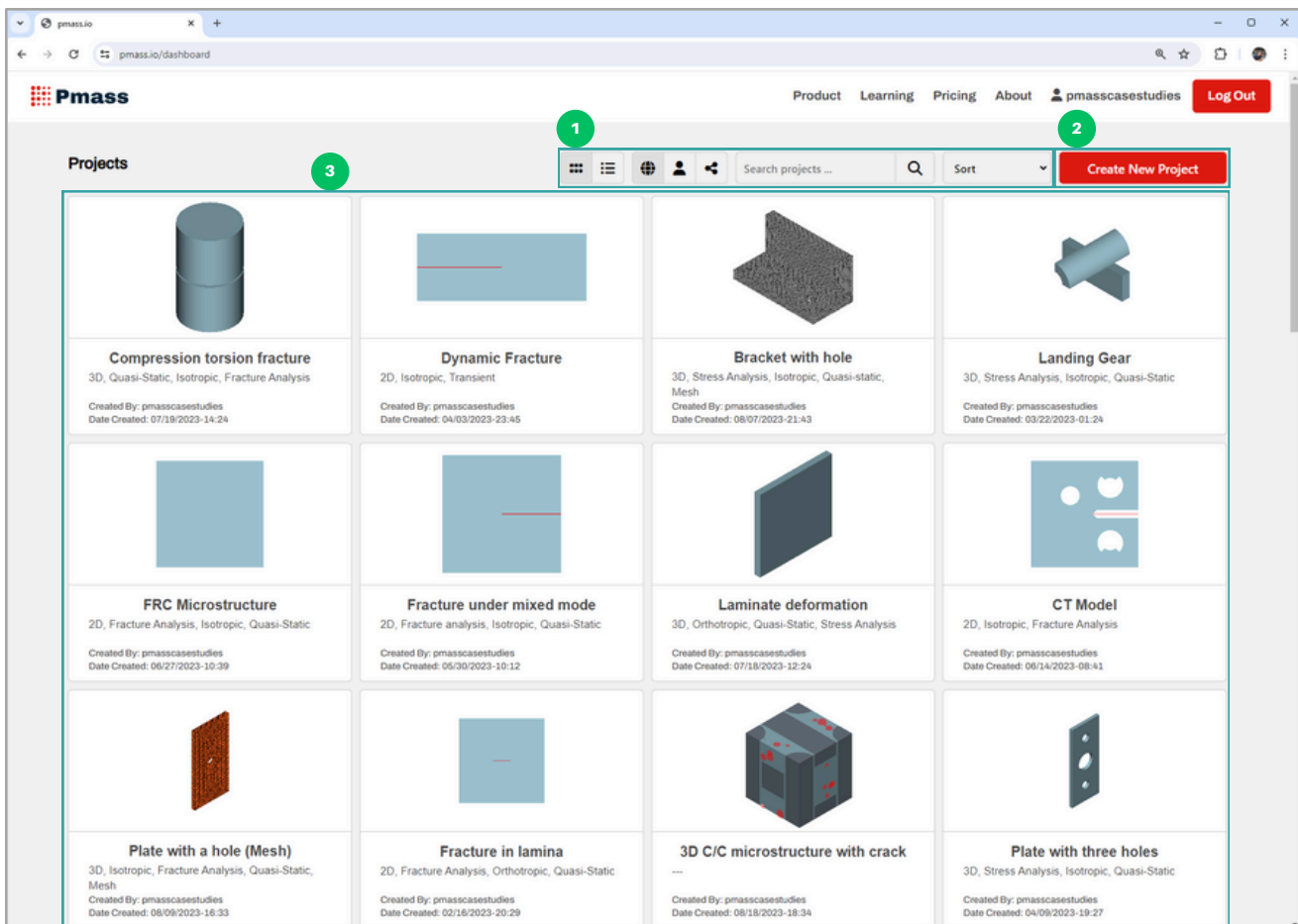
Dashboard

www.pmass.io

Dashboard

The **Dashboard** serves as your personal landing page when you log into your Pmass account, offering a central hub for managing your simulation projects. Here's a breakdown of the key components of the Dashboard:

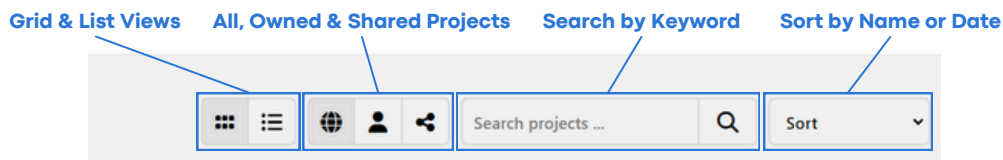
- 1. Dashboard Manage Bar:** This section typically includes tools and settings for filtering, sorting, and searching among your projects. It helps you navigate and manage your projects efficiently, ensuring you can quickly find what you need.
- 2. "Create New Project" Button:** Prominently displayed, this button allows you to start new projects with ease. Clicking this button usually leads you to a setup wizard or a page where you can specify the details of your new project, including name, parameters, and any initial settings.
- 3. Project Cards:** Each project card represents an individual project. These cards display essential information about each project, such as the project name, status, and the date created. They may also provide quick access to project actions like edit, delete, or share.



Dashboard Manage Bar

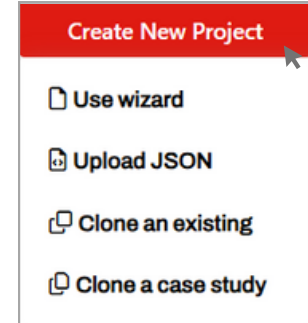
The **Dashboard Manage Bar** on your Pmass Dashboard page is equipped with several tools designed to help you organize and manage your projects more effectively. Here's a detailed look at the functionalities provided:

- 1. Grid and List View:** This feature allows you to toggle between a grid layout and a list layout for displaying your projects. The grid view offers a visual snapshot of each project, while the list view provides a more detailed textual overview, making it easier to browse based on your preference.
- 2. Display Options:** You can filter the projects displayed based on their association with you:
 - **All Projects:** Shows every project accessible to you on the dashboard.
 - **Owned Projects:** Filters to display only the projects that you have created or are the primary owner of.
 - **Shared with You:** Shows projects that other users have shared with you, giving you access to collaborate or view.
- 3. Search Bar:** This tool enables you to quickly find projects by typing keywords related to the project's name or description. It's particularly useful when you're looking for specific projects among a large number or when you remember only a part of a project's details.
- 4. Sort:** This function allows you to organize your projects either by name or by the date they were created. Sorting by name arranges projects alphabetically, while sorting by date can help you see the most recent projects first or track older projects.



Create a New Project

To create a new simulation project in Pmass, hover over 'Create New Project' on the Dashboard. This will trigger a dropdown menu that presents four options for initiating a new project. On the dropdown menu, four options are available to create a new project. Click on your chosen option and one of the following dialog boxes appears:



Use Wizard

This option is ideal for starting a completely new project without any predefined settings. This creates a new blank project, which enables you to set up everything from scratch using project's workbench page. After creating the project, you can then proceed to use the Model Builder on the project's workbench to add materials, shapes, loadings, and set solution parameters as needed.

Project Name: Enter a unique name that clearly identifies your project.

Description or Keywords: Provide a brief description or keywords that will help you and others understand the purpose and scope of the project.

Analysis Type: Choose the type of analysis you intend to perform. Options might include Stress Analysis for studying the stresses and deformations in materials, or Fracture Analysis for examining the propagation of cracks.

Solver: Select the solver that best fits the nature of your analysis:

- **Quasi-Static:** Suitable for problems where loads are applied slowly and the dynamic effects can be ignored.
- **Transient:** Best for analyzing the response of structures over time under dynamic conditions.
- **Hybrid:** Combines features of both quasi-static and transient solvers for complex scenarios.

Dimension: Specify whether the project is in 2D or 3D, depending on the nature of your analysis and the detail required.

Once all the information is filled in and you've reviewed it for accuracy, click on the "Create Project" button to finalize the creation of your new project.

Use JSON

Using a JSON file to create a new project in Pmass streamlines the process, especially when you have complex configurations that involve a detailed list of materials, shapes, loading conditions, and solution parameters. Here's how you can create a project by uploading a JSON file:

Select "Upload JSON" Option: From the 'Create New Project' dropdown on the Dashboard, select the "Upload JSON" option. This choice is designed for users who want to import a complete project setup via a JSON file.

Prepare JSON File: Before proceeding, ensure your JSON file is properly formatted according to Pmass standards. It should include all necessary data about materials, shapes, loading conditions, and solution parameters. For guidance on how to create a valid Pmass JSON file, refer to the Pmass Documentation.

Fill Out the Form: Similar to other project creation methods, you'll need to provide basic information about your project:

- **Project Name:** Give your project a clear, identifiable name.
- **Description or Keywords:** Add a brief description or keywords to help summarize the project's focus and facilitate easier searching and organization.
- **Analysis Type:** Choose the type of analysis you plan to conduct—either Stress Analysis for evaluating stress and deformation or Fracture Analysis for examining crack behavior.
- **Solver:** Select the appropriate solver for your analysis:
 - **Quasi-Static:** Ideal for scenarios where loads are applied slowly enough that dynamic effects are negligible.
 - **Transient:** Suitable for analyses where the response to time-dependent loads is critical.
 - **Hybrid:** A combination of quasi-static and transient features, useful for more complex analyses.

The screenshot shows a web form titled "New Project: Upload JSON". It has the following fields and controls:

- Project Name:** A text input field with a placeholder "Project Name".
- Description:** A larger text area with a placeholder "Project Description".
- Analysis Type:** A dropdown menu with "Analysis Type" selected.
- Solver:** A dropdown menu with "Solver" selected.
- Upload JSON:** A section containing a "Choose File" button and the text "No file chosen".
- Buttons:** "Cancel" and "Create Project" buttons at the bottom right.

Upload JSON File: Use the file upload interface to locate and select the JSON file you have prepared.

After filling out the form and uploading your JSON file, click on the "Create Project" button to initiate the project creation process.

Clone a project

Cloning an existing project or a case study in Pmass is a convenient way to create a new project based on the setup of another project that is either owned by you, shared with you, or provided as a validation case by Pmass’s admin account. Here’s how to clone a project:

Select Cloning Option: On the Dashboard under 'Create New Project', choose the option to clone an existing project or a case study.

Enter Project Details:

- **Project Name:** Provide a new name for the project to distinguish it from the original.
- **Description or Keywords:** Add a brief description or relevant keywords that will help identify and differentiate the new project.
- **Analysis Type:** Select the type of analysis you intend to perform with the new project. You can choose between Stress Analysis and Fracture Analysis depending on your requirements.
- **Solver:** Choose the solver that will best suit the analysis:
 - **Quasi-Static:** For simulations where dynamic effects are negligible.
 - **Transient:** For time-dependent analyses.
 - **Hybrid:** For a combination of both static and dynamic analyses.

Choose a Project to Clone:

- From the list provided, select the project you wish to clone. This list will include projects you own, projects shared with you, or standard case studies provided by Pmass.

New Project: Clone an existing

Project Name

Description

Analysis Type

Solver

Choose a Project

New Project: Clone a case study

Project Name

Description

Analysis Type

Solver

Choose a Project

Note: The dimension of the project (2D or 3D) cannot be changed during cloning. Ensure that the original project’s dimensions are suitable for your new analysis needs. Once all fields are filled and you have selected the project to clone, click on the “Create Project” button. This will create a new project with the same setup as the original but with the new name, description, and any other project-specific settings you have entered.

Project Card

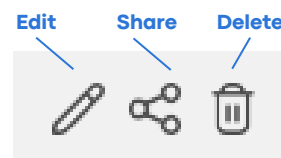
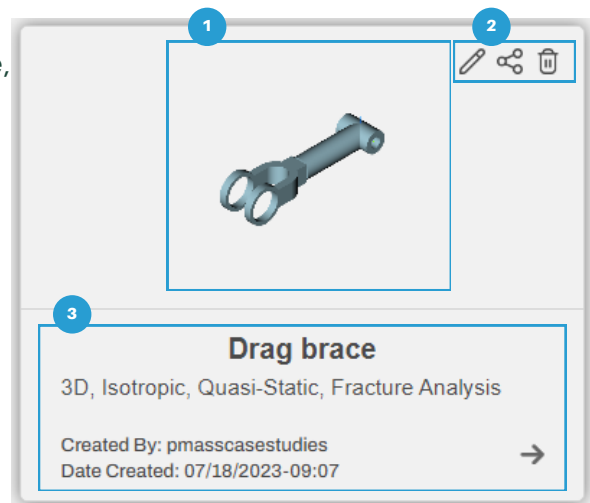
The Dashboard in Pmass displays a list of projects available to the user, with each project represented by a project card. After successfully creating a new project, the system automatically redirects you to the Dashboard page, where a new card for the newly created project will appear.

Each project card includes three main sections:

Project Image: Displays an image of the project's geometries in their last modified state, making it easier to identify and locate specific projects among all those listed on the Dashboard.

Setting Buttons:

- **Edit:** Allows you to edit the project's name, description, analysis type, and solver. Clicking on the Edit button brings up a dialog box where these elements can be modified.
- **Share:** Enables sharing of the project with a teammate or the Pmass admin account. By clicking the Share button, you can select a teammate's username, set the permission level, and finalize sharing through the Share button in the dialog box.
- **Delete:** Available if you are the owner or have been granted deletion rights for the project. A confirmation dialog box appears to verify your decision before permanently deleting the project. For Basic Accounts, be aware that deleted projects cannot be recovered.



Project Info Box: Contains basic information about the project such as the project name, keywords, owner, and date created.

Navigating to the Project's Workbench: To access the project's workbench, simply click on the project card. This will take you directly to where you can view and modify further details of the project, add simulations, and more.