Working With Libraries

The Library Concept

Libraries are code repositories that are useful to organize your development project into re-usable pieces that can be used in multiple services. They contain predefined classes, interfaces, operations and parameters you can use during modeling by simple drag & drop.
Libraries are developed with the Builder. The Designer comes with a standard library which already provides all necessary **Base Types** and base type operations.

Using libraries has several advantages for developers:

- You can provide additional data types and operations via libraries.
- You can reuse implementations you have already developed with the Builder.
- You can use libraries for modularization:
  - Implementations can be recycled in various processes via libraries.
  - Multiple developers can contribute to the same process implementation by working on different libraries.
- You can add features to the Designer, for example access to backend systems, via libraries.
- You can use different versions of the same library as the library administration supports versioning.

Library Usage in Designer

In the Designer, you can create your own libraries, see page Creating a Library for details. If you want to use the libraries in a Designer service, you have to upload them to a namespace. This is done in the **Libraries** section of the Designer administration. The uploaded libraries are then available in all services created in this namespace. Since PAS 23.1.1 it is also possible to share a library with all users on your PAS installation. Refer to Sharing Designer Content for details.
How to upload your libraries to the Designer is explained in detail on page Administrating Libraries.

Once a library has been uploaded, you can add it to any service created in this namespace. To do so, open the service, click the Assets button and use the Asset Drawer to add them or go to the **Libraries** folder in the **Service** panel and use its context menu.

Go to page Adding Libraries for detailed information on how to add a library to a service. Refer to chapter Modeling Execution for further information about the usage of libraries during modeling.

On this Page:

Related Pages:

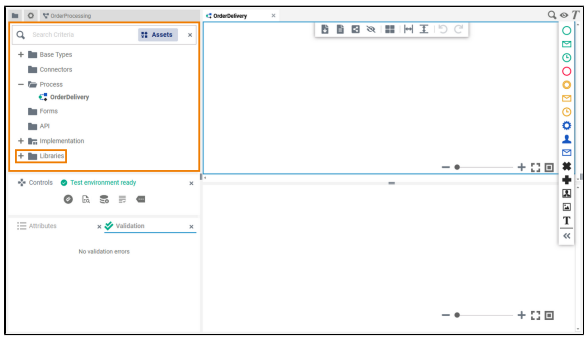
- Adding Libraries
- Updating Libraries
- Removing Libraries
- Sharing Designer Content
  - Publishing Assets
- PAS Designer Administration
  - Administrating Libraries
- PAS Designer Developer Guide
  - Developing and Using Libraries
  - Creating a Library
  - Using a Library

Related Documentation:

- BRIDGE
  - BUILDER User's Guide

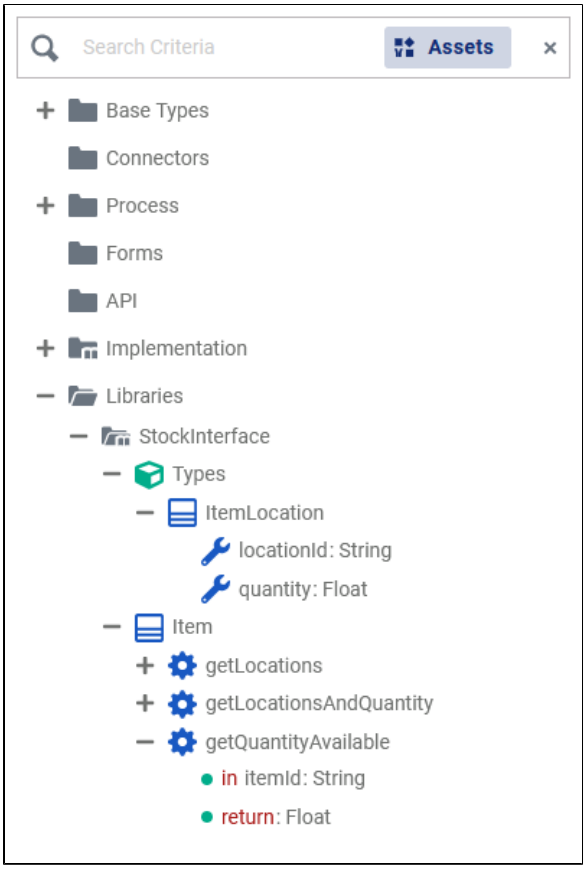
The Service Panel

The libraries you have added to a service reside in the **Service** panel.



If you use the panel preset of the BPMN editor, the **Service** panel is displayed in the upper left corner of the editor.

Refer to Customizing Editors and Panels for detailed information about panel management in general.



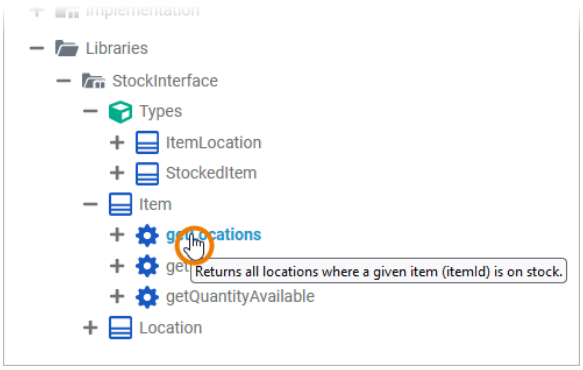
The **Service** panel gives you direct access to all libraries of your service, and thus to all of your predefined classes, interfaces, operations and parameters.

Open menu **Libraries** in the Designer administration to upload your own libraries.

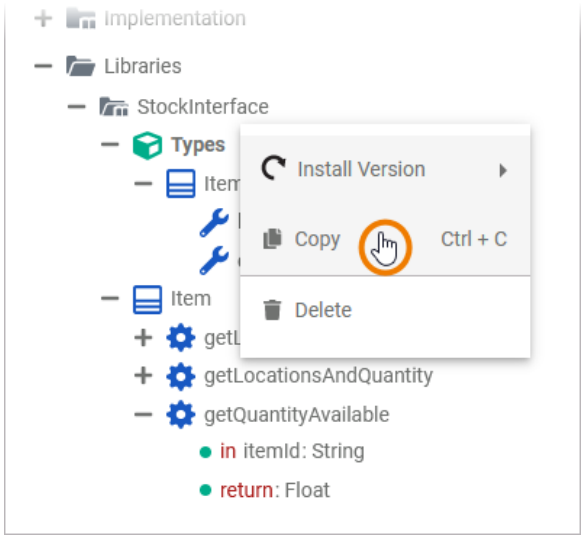
A library can contain the following elements:

Icon	Name
	Package
	Class
	Property
	Interface
	Operation
	Parameter

To expand an element in the tree, click on +.
Use − if you want to collapse a tree below an element.

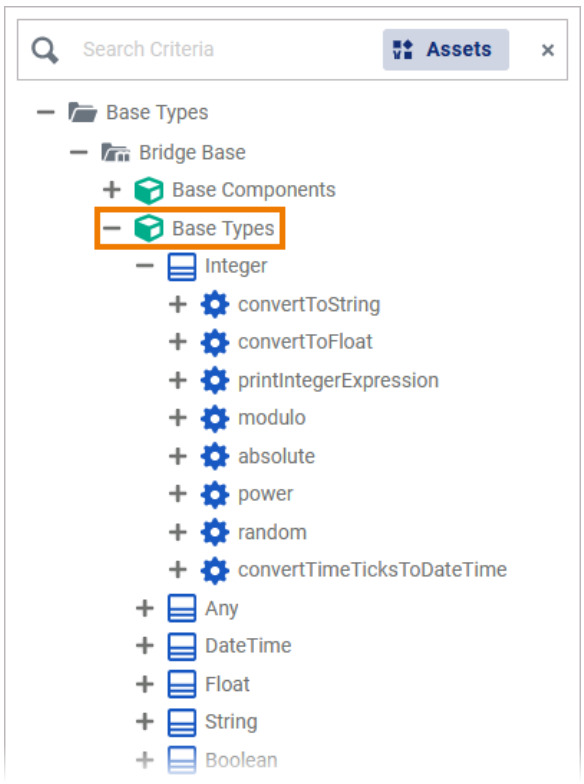


Each library element can have a documentation. Hover your mouse on an element in the libraries folder to see if documentation is available. The documentation is displayed as a tooltip.



You can also copy & paste content from a library to the data model of your service: packages, classes, properties, operations and parameters - including their subelements. The implementation of a copied operation, however, will be empty.

In addition to imported libraries with predefined data types, you can use the provided **Base Types**, or you can create your own data model.



The Designer provides all necessary base types in a **Bridge Base** standard library. This library is available in all services and cannot be removed. It contains the following xUML base types:

- **Any**
- **Blob**
- **Boolean**
- **DateTime**
- **Float**
- **Integer**
- **String**

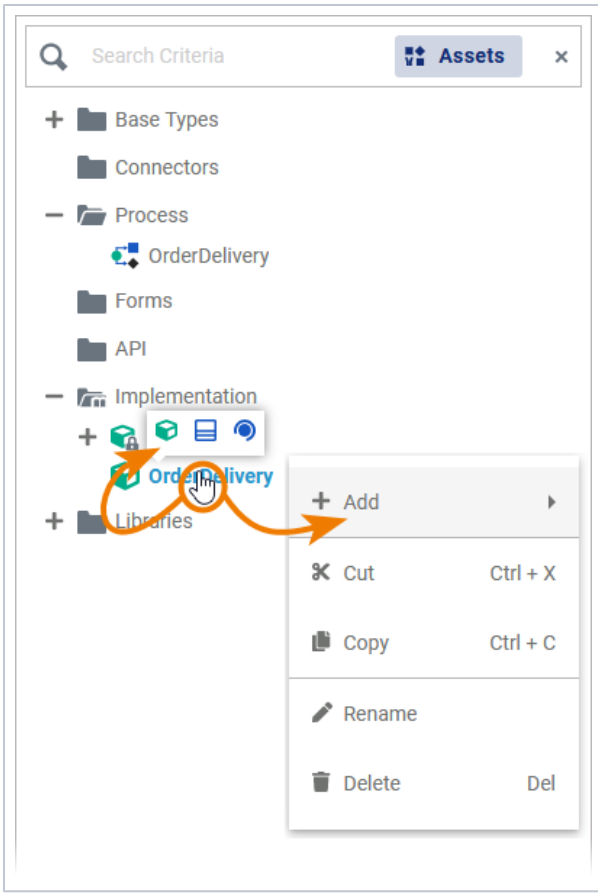
Most of these base types are only able to hold one single piece of information, like text in a string, true or false in a boolean, or binary data in a blob.

Refer to Available Base Types for more information on the xUML base types.

If you want to associate several bits of information, you have to define a complex type that combines a number of independent base types and possibly other complex types. Such complex types are modeled as classes. To use your own types, you can

- define your own data structures in the **Implementation** folder
- provide them via a library.

How to upload your own libraries is explained on Designer Administration > Libraries.



You can also define your own data types in folder **Implementation**. You can add your own packages, classes, interfaces, operations, properties and parameters.

Go to page Modeling Data Structures for more detailed information on how to work on your own data model and to page Modeling Data Mapping for further explanations on how to define mappings between data types.

Go to chapter Developing and Using Libraries to find out how to create your own libraries in the Designer.