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APPLICATION EXAMPLE

Control Module Engineering with the SIMATIC PCS 7 PAA

SIMATIC PCS 7 Plant Automation Accelerator V3.3

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1. Introduction

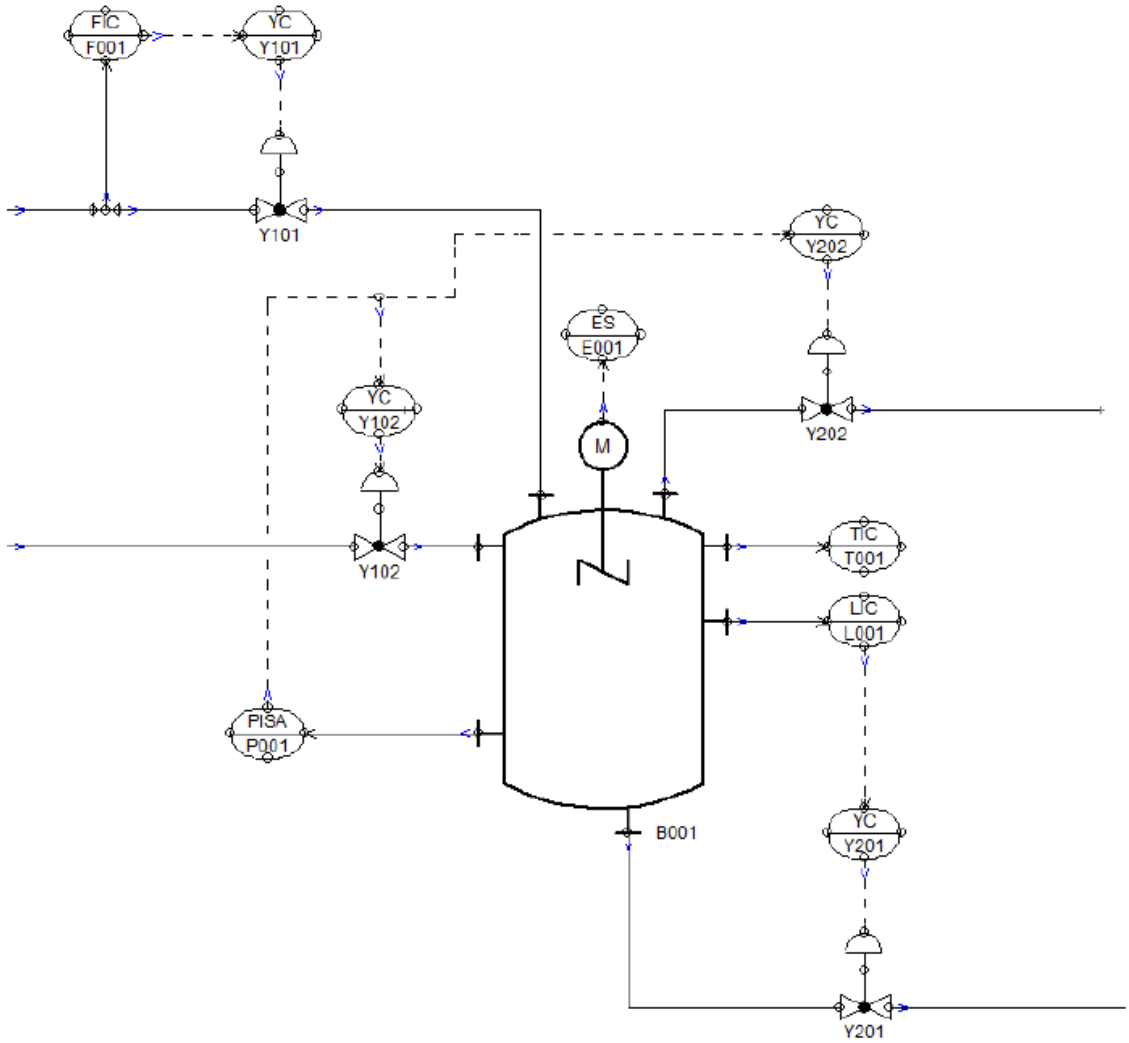
1.1. Example project

The zip file "109742154_files_cmt_v3_3.zip" contains a preconfigured PCS 7-project and a preconfigured SIMATIC PCS 7 Plant Automation Accelerator-project:

- BPCM_MP.zip (PCS 7 project)
- Database (PAA database)
- CM_Import.xml

With these preconfigured project data you can use PAA to carry out your automation engineering and learn about the advantages and functions of the system.

The following reactor planning can serve as an example:



Then import into PAA the individual control module types (CMTs) already present in SIMATIC PCS 7. The CMTs correspond to the components of the reactor model (valve, motor, measuring transducer, controller, etc.).

Based on these data and the reactor planning, you carry out your automation engineering for the reactor example in PAA. The following points are explained:

- Creating variants of the CMTs
- Create a DCS structure
- Mass data engineering via queries and Excel import
- Creating interconnections
- Logic diagram
- etc.

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You will then be shown how to export and automatically generate the data created in the PAA to SIMATIC PCS 7.

Furthermore, you will be shown how to match the data between PAA and SIMIATIC PCS 7 in order to keep the plant documentation and data always up-to-date and synchronous.

NOTICE The present application example is for illustrative purposes only and is not a fully worked out solution that can be implemented in your plant.

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1.2. Components used

The following hardware and software components were used to create this application example:

Component	Quantity	Article number	Note
SIMATIC PCS 7 V9.1 SP2	1	6ES7658-...68-....	
SIMATIC PCS 7 Plant Automation Accelerator V3.3	1	Please get in touch for this with your local sales partner. http://w3.siemens.com/aspa_app/	

This application example consists of the following components:

Component	File name	Note
PAA database	Database_CMT.zip	This file contains a preconfigured PAA database (incl. project)
PCS 7-project	BPCM_MP.zip	This file contains the first version of a preconfigured PCS 7-project with preconfigured Control Module Types (CMTs).
CMT data	CM_Import	CMT Import file
Application example documentation	109742154_PAA_cmt_docu_v3_3_en.pdf	This document

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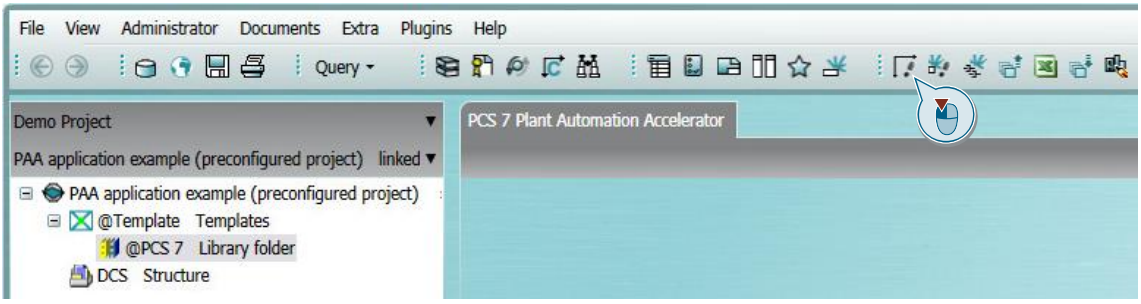
2. Preparation of project data

2.1. Importing from PCS 7 to PAA

This section describes how to import types from a PCS 7 master data library to PAA.

Procedure

1. In the PAA menu bar, click on the button "Import / Export PCS 7" .



2. Open the "Import" tab in the "Import / Export PCS 7" dialog.
3. Select the "PCS 7-project" option
4. Select the PCS 7 sample project.
5. In the "Filter" directory, select the "CM types" and "Enumerations" option boxes and deselect the remaining option fields.
6. Select option "DCS".

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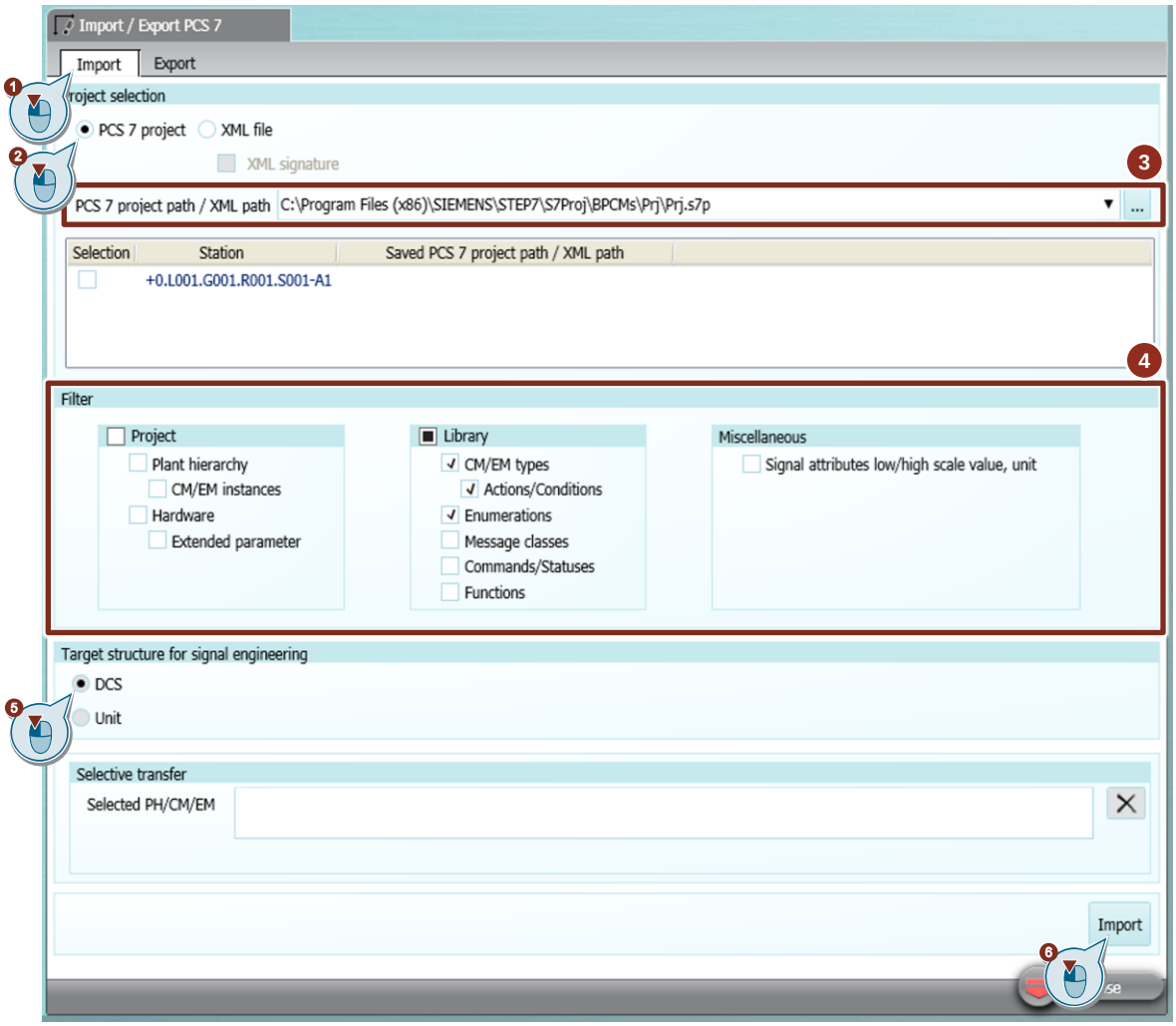
7. Click the button "Import".



PAA then automatically checks for differences between the PCS 7-project and the PAA-project.

The dialog "Data transfer - Generate/import" opens.

The result of the comparison is displayed in this window.

All objects in the overview window are highlighted in green.
This means that this data is only available in the PCS 7-project.

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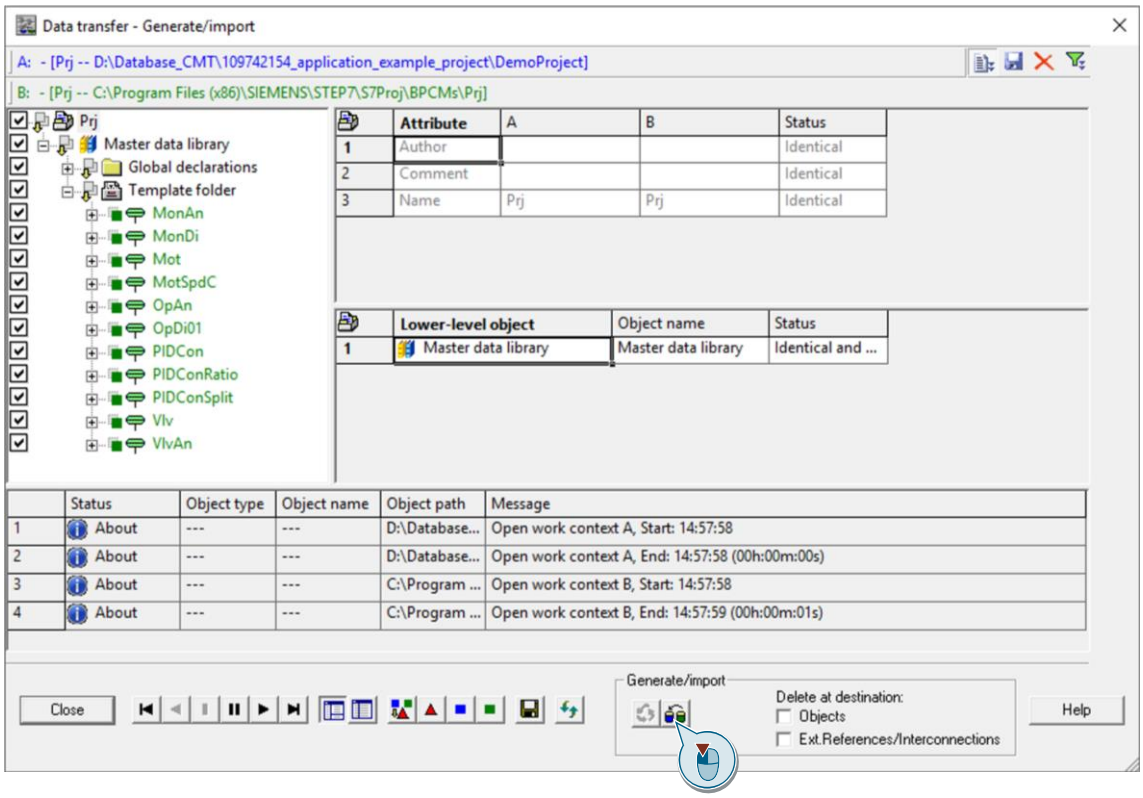
8. Click on the  button to start the import from PCS 7 to PAA.



NOTE The  button is only enabled if differences are found between the PAA and the PCS 7-projects.

NOTE Activate the "Delete in destination" function if you want to delete the data in the PAA-project that are no longer current.

Example:

You have already imported individual control module types and a hardware configuration in the PAA-project. Subsequently, delete an individual control module type in the master data library and change the name of the PROFINET master system in the HW configuration.

- With the function "Delete in destination", the new name of the PROFINET master system is adopted during import and the old single control module type is removed from the PAA-project.
- Without the function "Delete in destination" an additional PROFINET master system is created and the data of the already existing PROFIBUS master system is retained in PAA.

The "Data transfer" dialog opens.
The data have been transferred to PAA.

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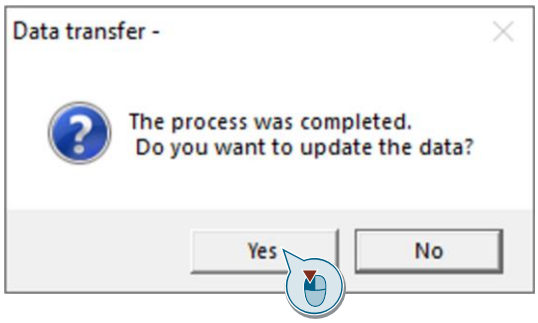
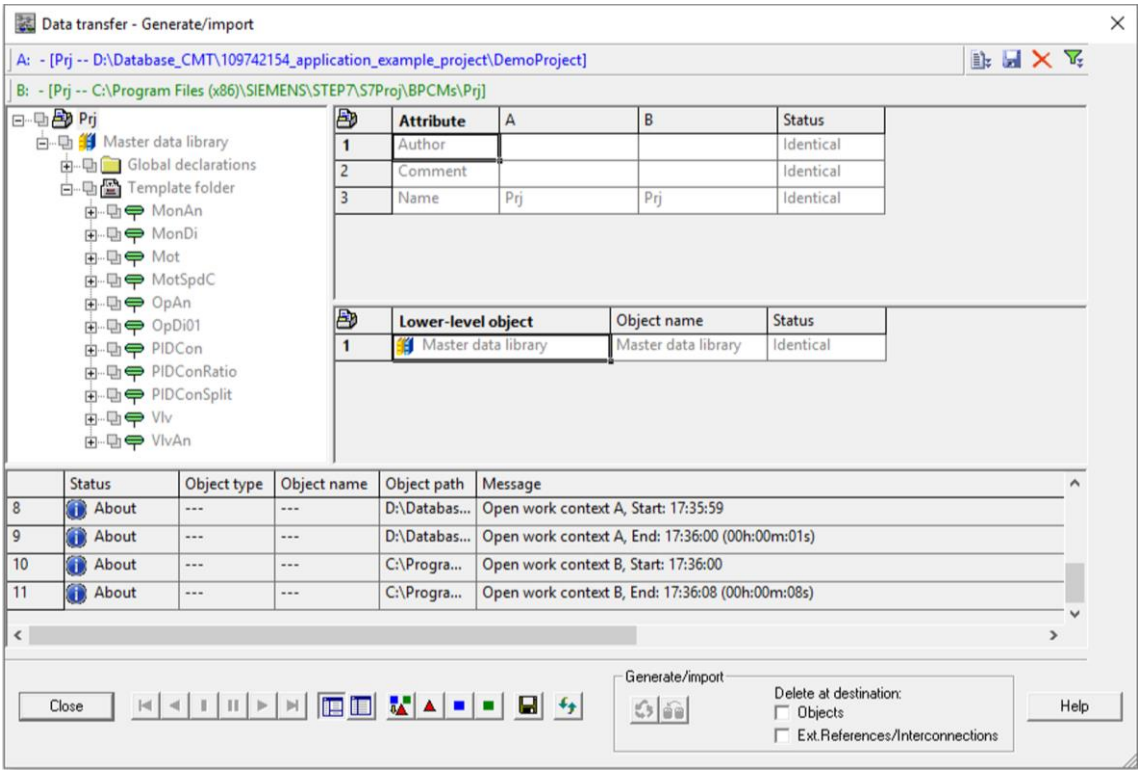
9. Click on the "Yes" button in the window to repeat the comparison between the PAA-project and the PCS 7-project.



The projects are compared with each other again.

In the overview field, the objects are no longer displayed in green, but in gray. This means that the current data of the PCS 7-project is identical to that of the PAA-project.

10. Click on the "Close" button to close the import dialog.



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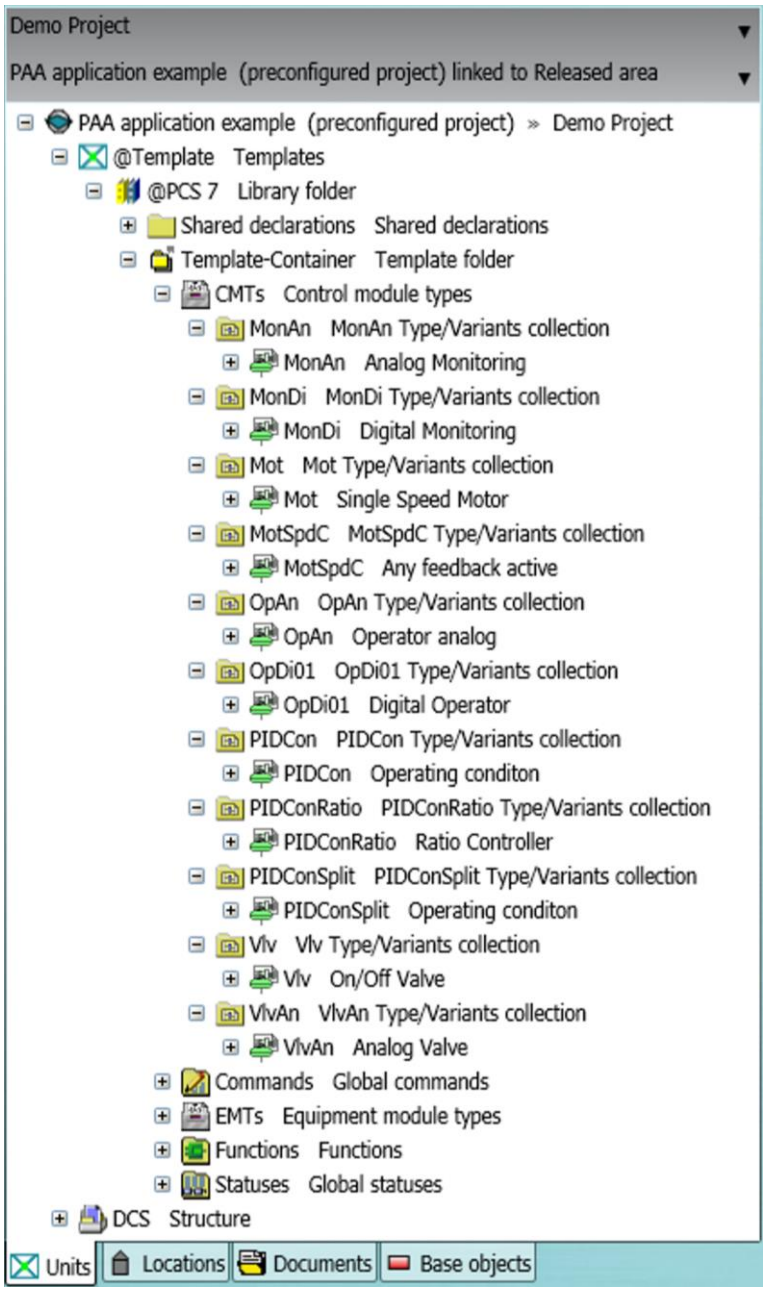
The imported CMTs were stored in the PAA-project in the "Units" view under the "@Templates > @PCS 7 > Template Container > CMTs" node.



11. Click on the "Save" button in the PAA menu bar to save the changes.

Result

You have imported the CMTs and the enumerations from the PCS 7-project into the PAA-project and can now use the data in PAA.

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3. Engineering

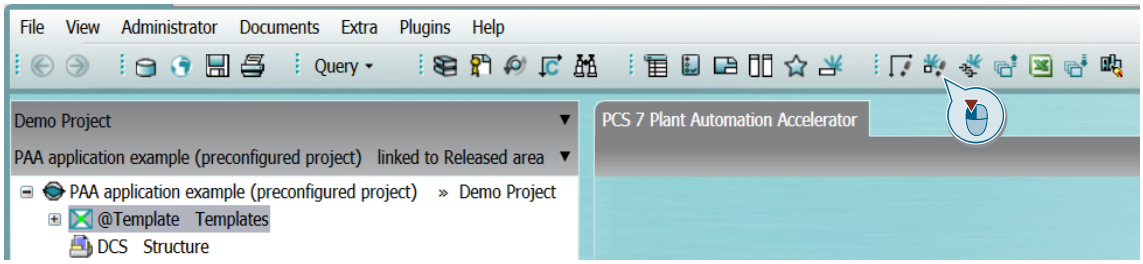
3.1. Creating variants

This section describes how to create variants of individual control module types (CMTs) in PAA with the "Type configurator".

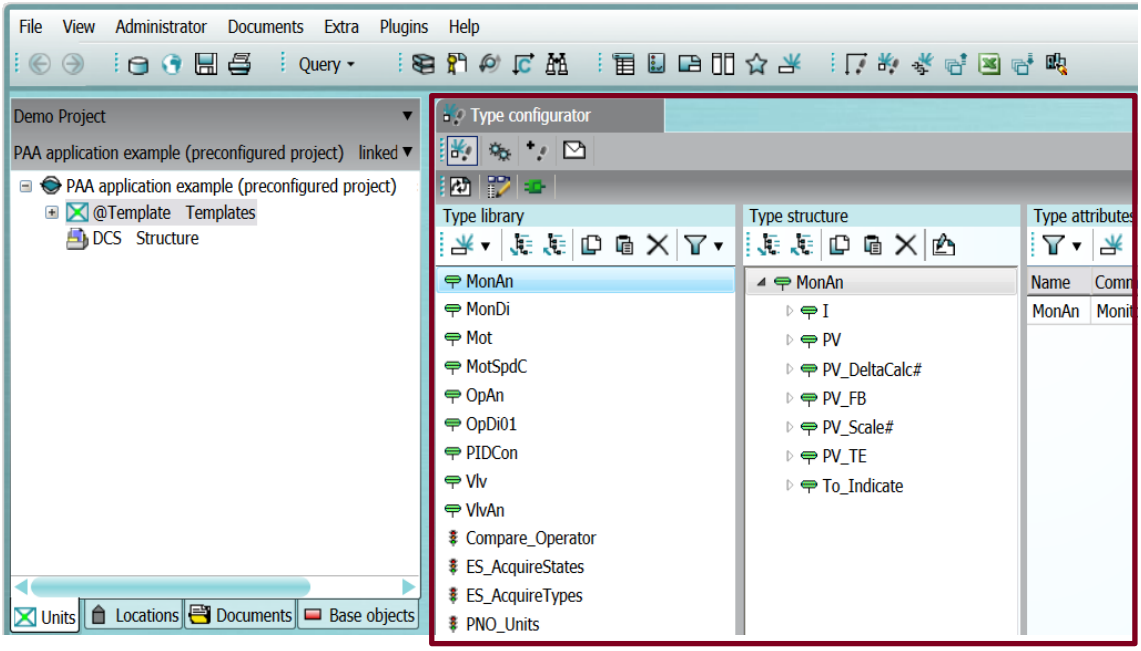
Use the "Type Configurator" to create a variant of each of the CMTs:

- "MonAn"
- "Mot"
- "VlvAn"

1. To do this use the PAA Menu bar to open the "Type configurator"
2. Click the button: "Type configurator" .



The "Type configurator" opens in the PAA workspace.



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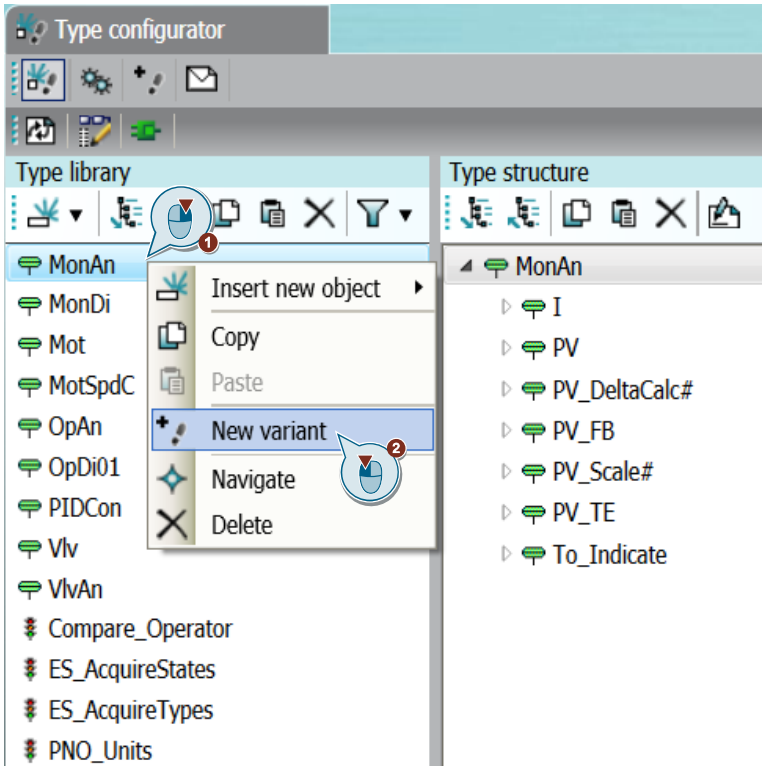
"MonAn"

Create the variant "MonAn#DeltaCalc" from the CMT "MonAn".

1. Open the corresponding context menu with a right click on the CMT "MonAn".
2. Click on the entry "New Variant" to create a new variant of the type.



3. The new variant "MonAnVar1" is created in the column "Type library".
4. Select the variant "MonAnVar1".

NOTE

The type and variant are marked with an "x" symbol.

The "x" symbol means that the type and its variant do not yet have any differences. Only if you deactivate individual elements in the "Type structure" column will the symbol no longer be displayed.

In the "Type structure" column, all the elements of the type are displayed.

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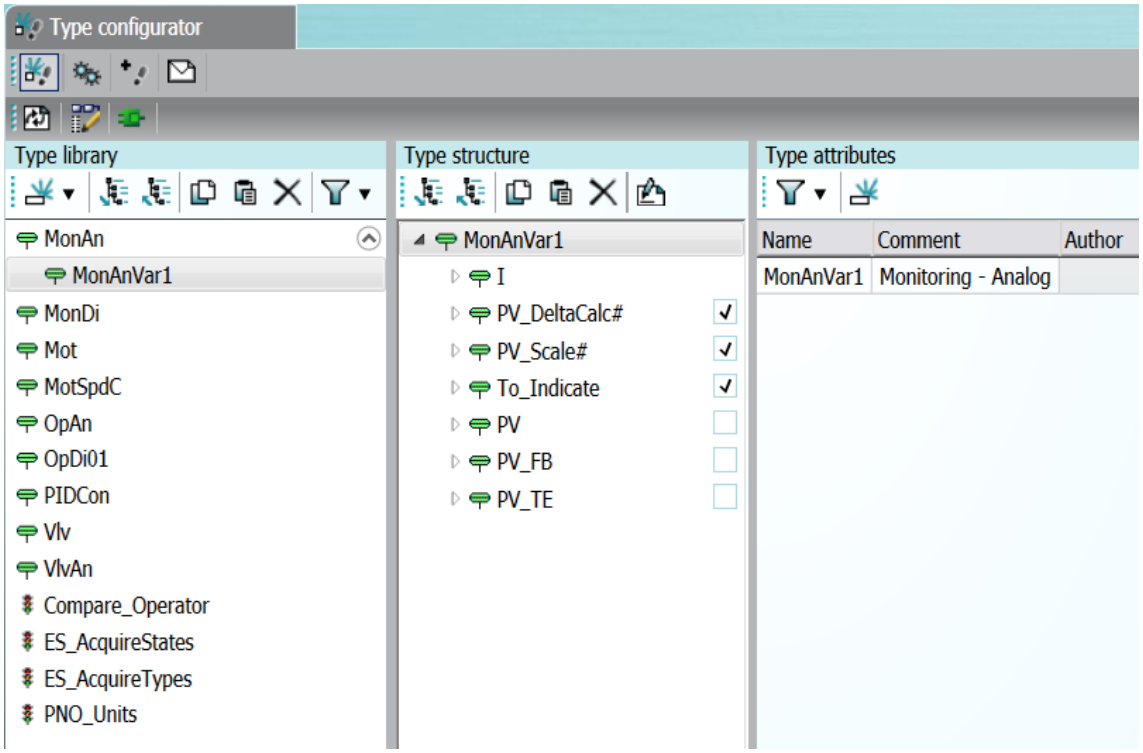
The variant of the type "MonAn" should only contain the blocks "PV_DeltaCalc#", "PV_Scale#" and "To_Indicate".

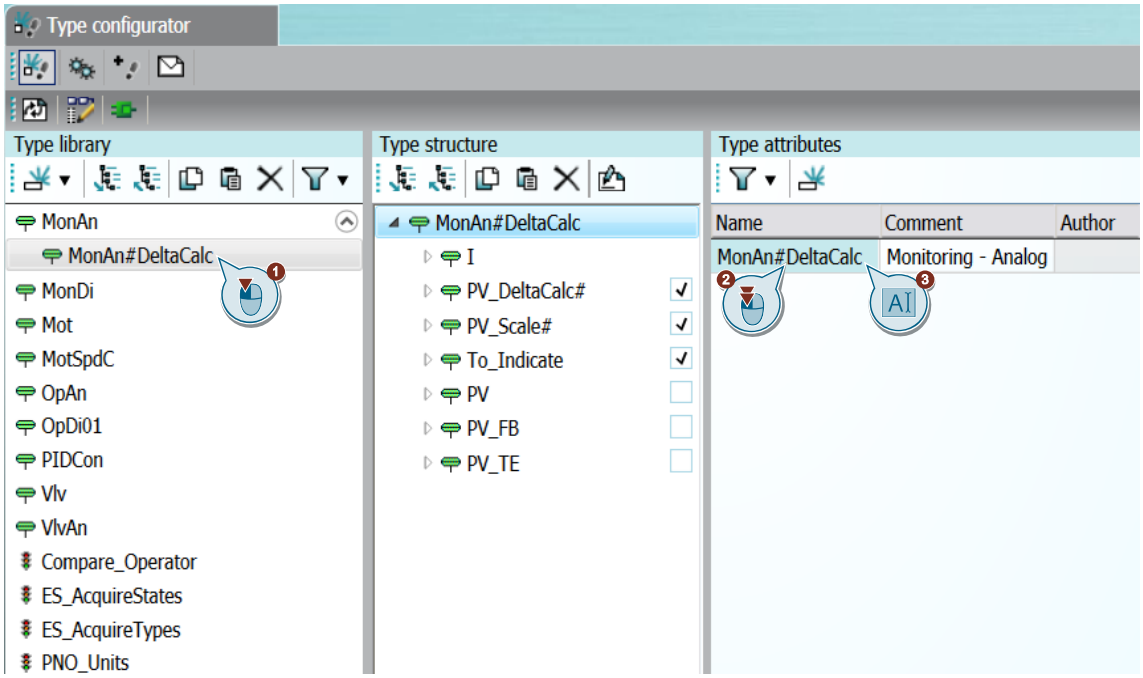
5. Deactivate the remaining modules via the corresponding option fields
   The deactivated modules are then displayed last in the column. Furthermore, the "x" symbol is no longer displayed because there are now differences between the type and the corresponding variant.



Change the name of the variant to "MonAn#DeltaCalc".

NOTE The name of the type and the variant must not be identical. In the best case, assign the name so that there is a reference to the functionality.

6. Select the variant "MonAnVar1" in the column "Type library"
   In the "Type attributes" column the associated attributes of the variant are displayed now.
7. Double-click the name of the variant in the "Name" column and change it to "MonAn_DeltaCalc#".



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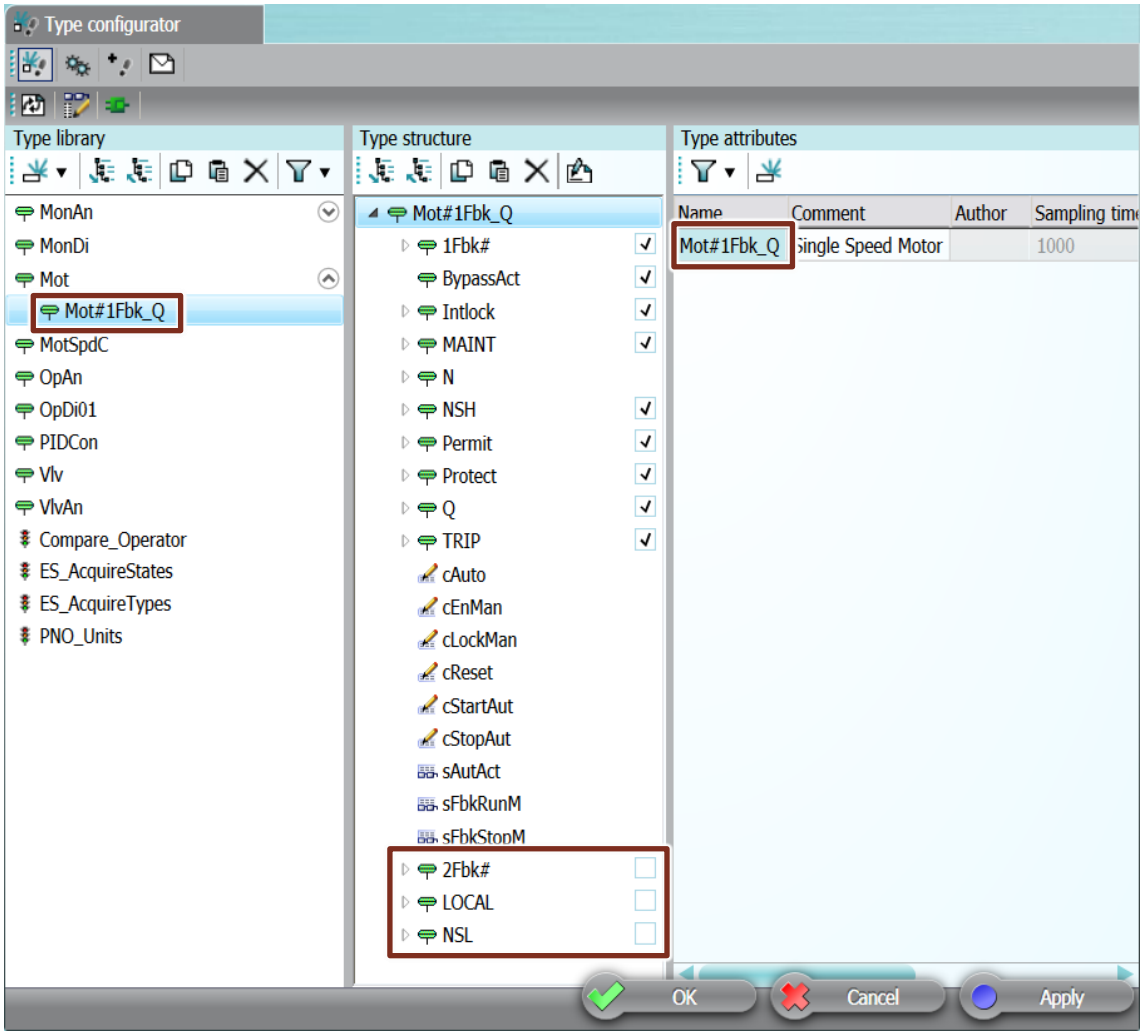
"Mot"

Create the variant "Mot#1Fbk_Q" of the CMT "Mot".

To do this, proceed as follows:

1. Create a new variant for the CMT "Mot".
2. Deactivate the blocks in the variant:
   - "2Fbk#"
   - "LOCAL"
   - "NSL"
3. Change the name of the variant to "Mot#Fbk_Q".



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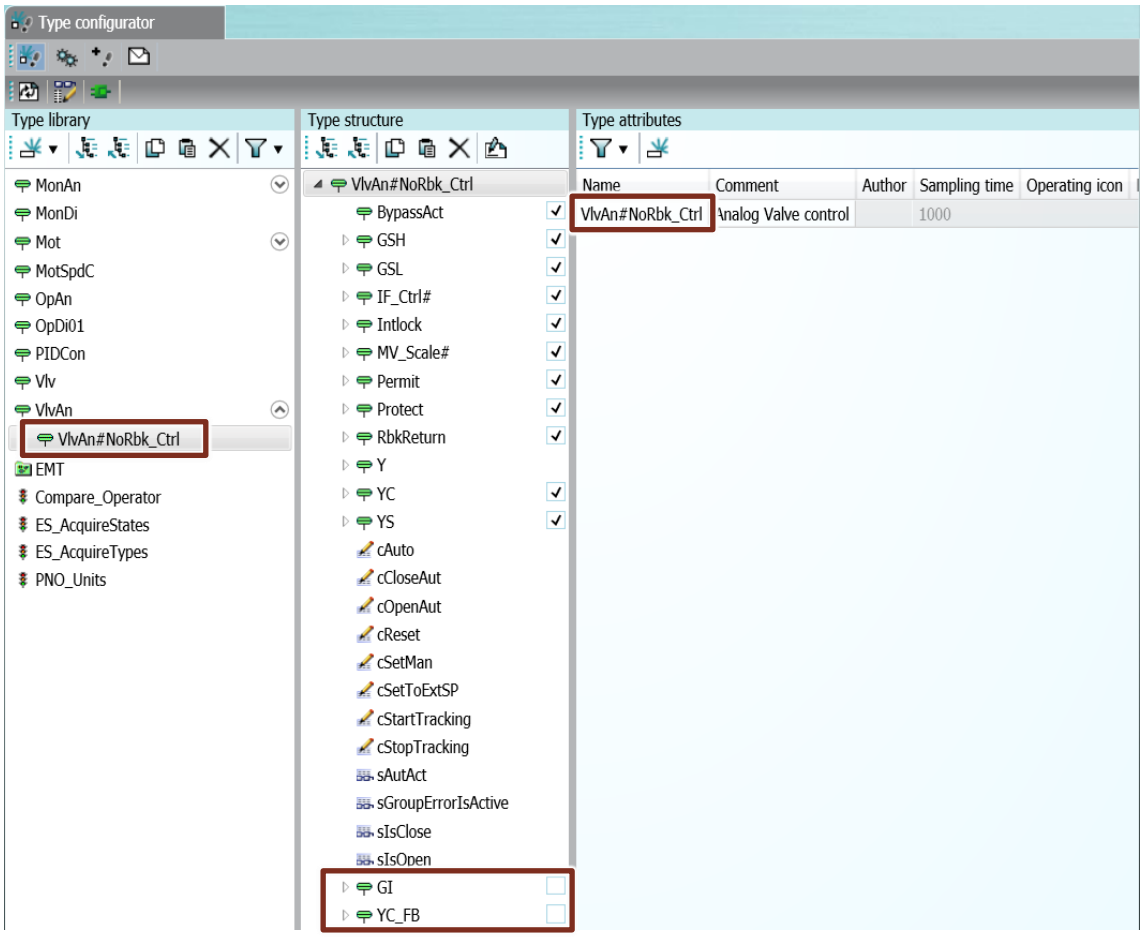
"VlvAn"

Create the variant "VlvAn#NoRbk_Ctrl" from the CMT "VlvAn".

To do this, proceed as follows:

1. Create a new variant for the CMT "VlvAn".
2. Deactivate the blocks in the variant:
   - "GI"
   - "YC_FB"
3. Change the name of the variant to "VlvAn#NoRbk_Ctrl".



4. Then, click on the "Apply" and "OK" buttons to apply your changes and close the dialog.

The variants of the three types were created in the "@Template > @PCS 7 > Template Container > CMTs" node like the previously imported CMTs in the "Unit" view.

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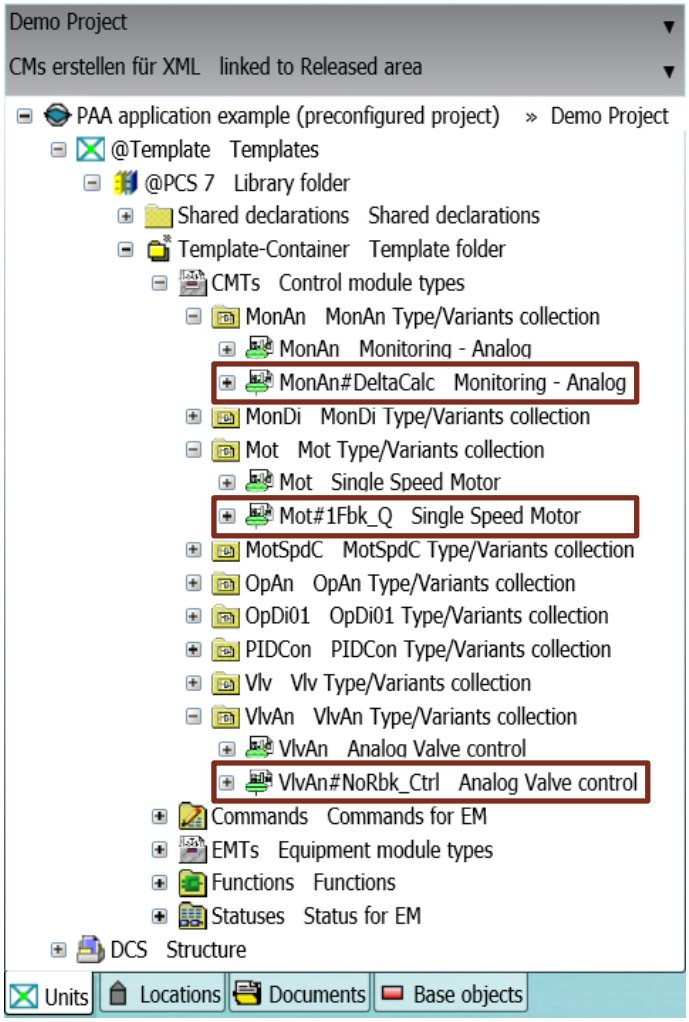

Result

You have created a variant of the previously imported CMTs "MonAn", "Mot" and "VlvAn" with the "Type configurator".

You have deactivated individual modules that you do not need for the variant.

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3.2. Create DCS structure with CMs and assign it to the AS

This section describes how to create a DCS structure in PAA and derive the respective CMs from the imported CMTs.

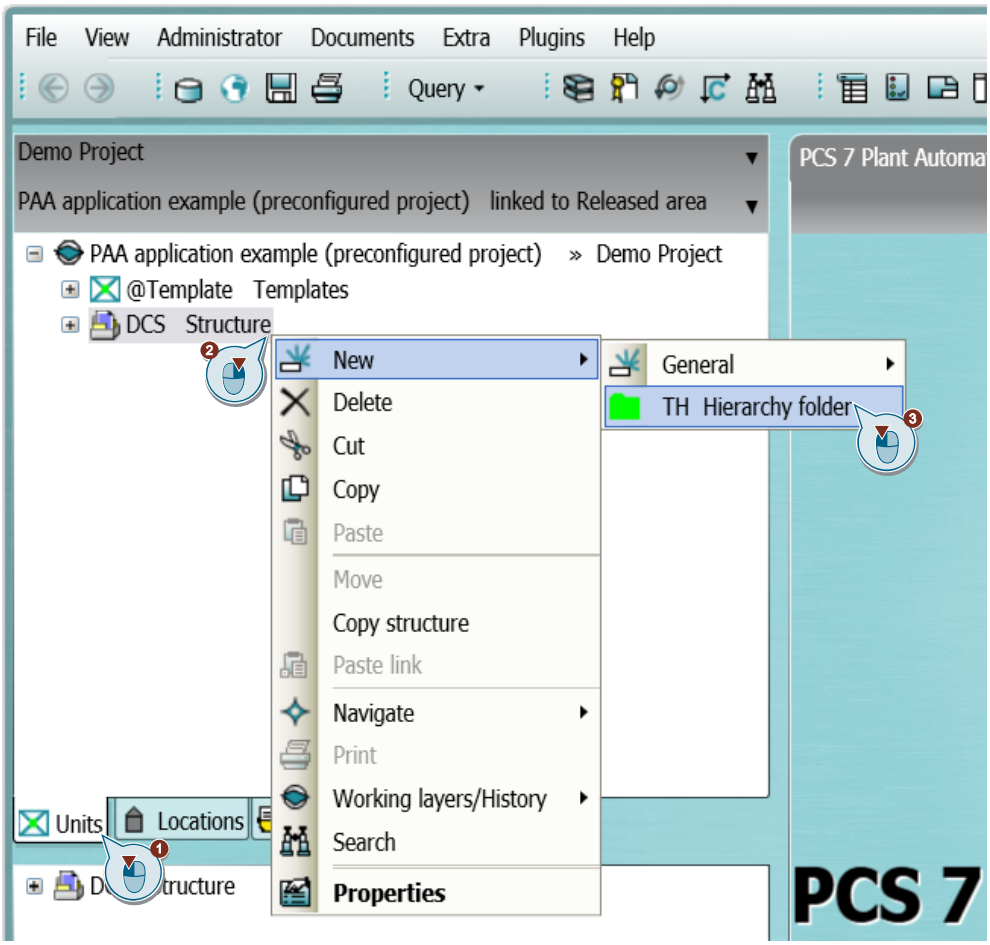
It also describes how to assign an AS to TH folders.

3.2.1. Create a DCS structure

This section describes how to create a DCS structure in PAA.

In the case of the sample project, create an example DCS structure in the "Units" view.

1. Open the view "Units".
2. Right-click on the "DCS Structure" folder to open the corresponding context menu.
3. Create a new hierarchy folder here.
   To do this, click on the entry "New > TH Hierarchy folder".



Change the name of the folder.

4. To do this, open the associated properties by double-clicking on them.
5. In the "Name" field, change the name to "Plant".

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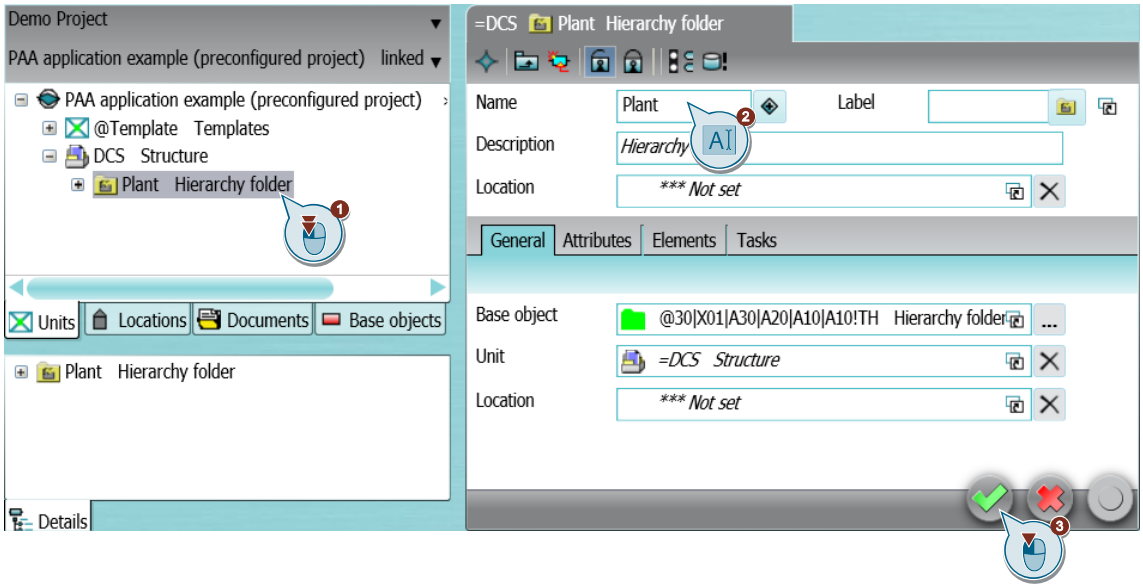
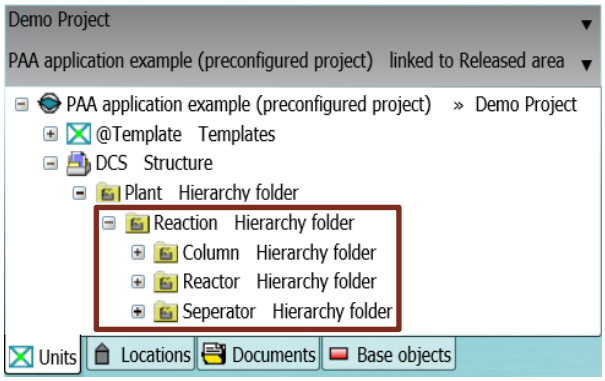
6. Then click on the "OK" button to adopt the changes.



Create the following structure in the same way:

- "Plant"
  - "Reaction"
    - "Column"
    - "Reactor"
    - "Separator"



NOTE The hierarchy can be built up to a maximum of eight levels.
After the eighth level the command in the context menu is grayed out.

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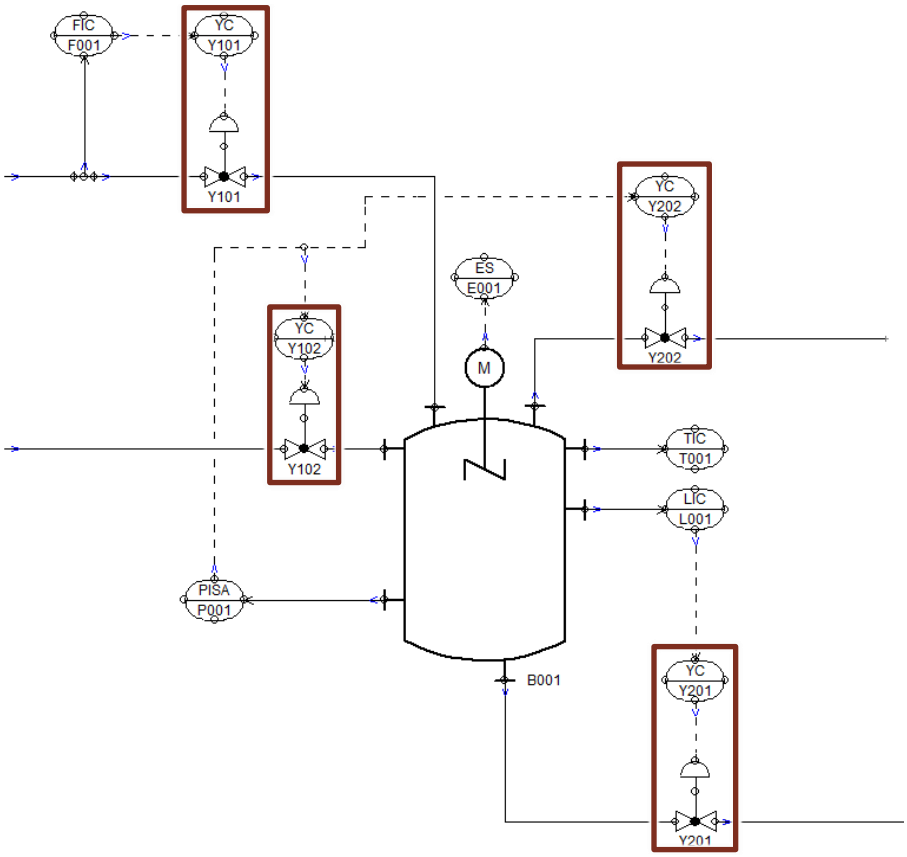
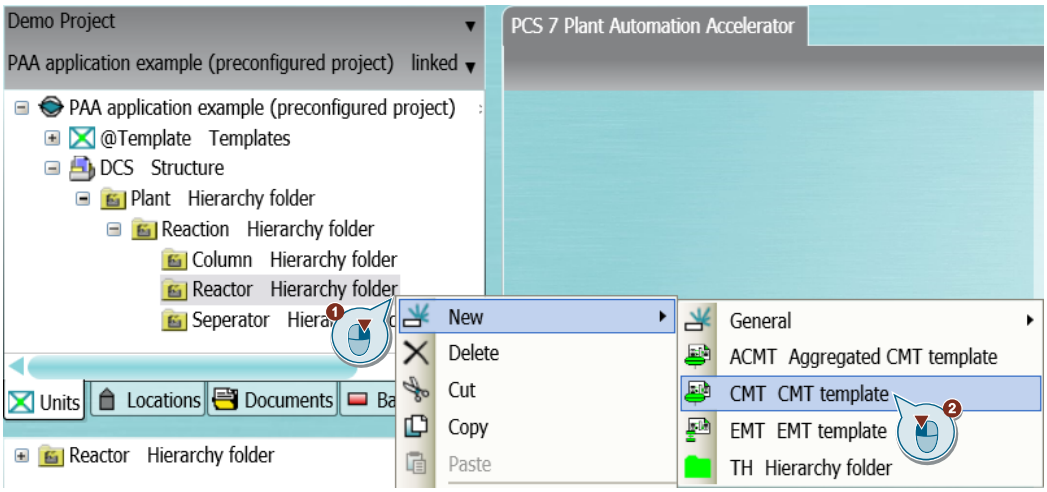
3.2.2. Creating CMs in the DCS structure

This section shows you how to create CMs in the DCS structure of PAA.

On the basis of the plant structure, create the following example CMs.



1. Open the corresponding context menu by right-clicking on the "Reactor" hierarchy folder.
2. Click on the entry "New > CMT CMT template".



3. Double click on the created CM object to open its properties, and proceed to name the CM as follows.
   - "Name": "Y101"
   - "Description": "Analog inlet valve"

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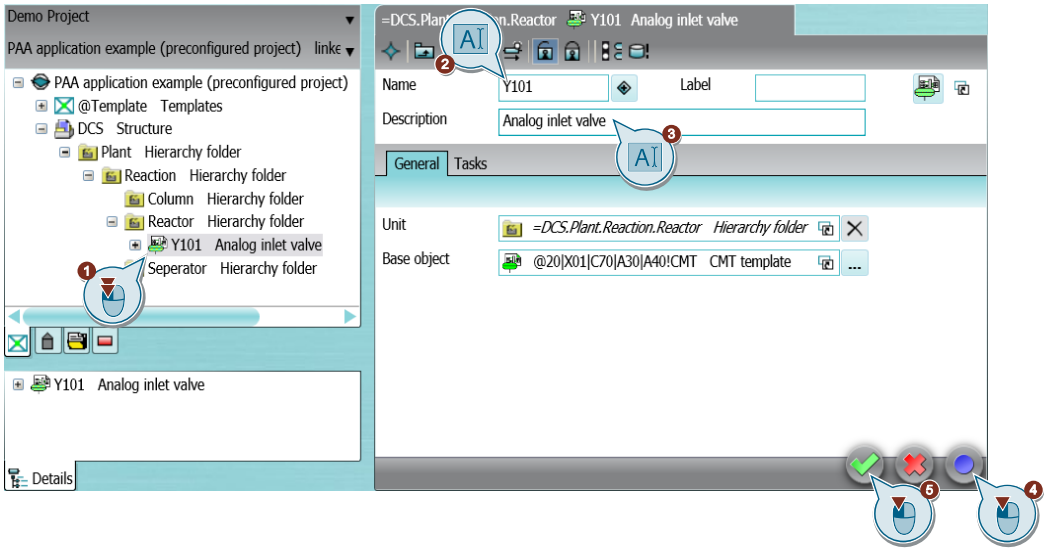
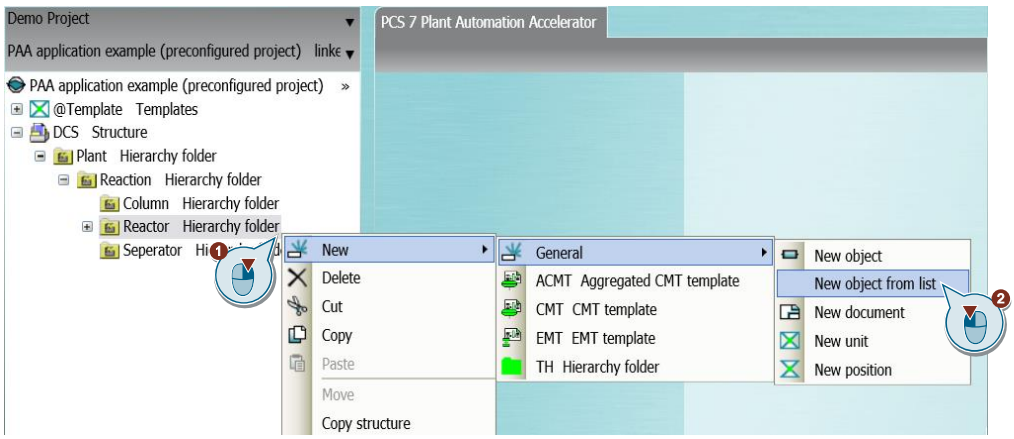
4. Click on the "Apply" and "OK" buttons to save the change and to close the properties dialog.



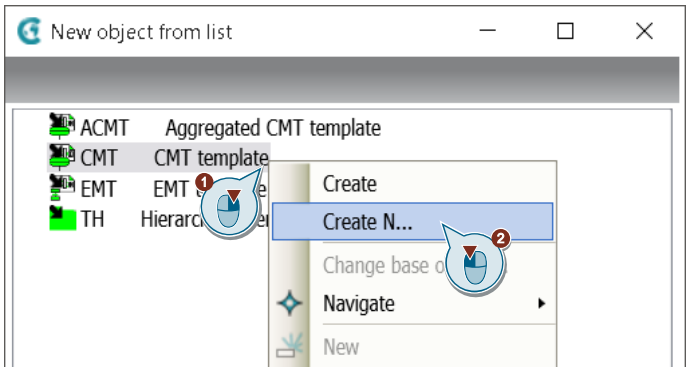
You can also create multiple CM objects.

In the example project, create three more CM objects under the "Reactor" folder.

5. Open the corresponding context menu by right-clicking on the "Reactor" hierarchy folder.
6. Click on the entry "New > General > New object from list".



7. Right-click on the "CMT CMT template" object to open the corresponding context menu.
8. Click on the entry "Create N..."



9. In the "Quantity" field, enter the number of CM objects you wish to create under the TH folder "Reactor". In the case of the sample project, enter "3" here and then click on the "Create" button.

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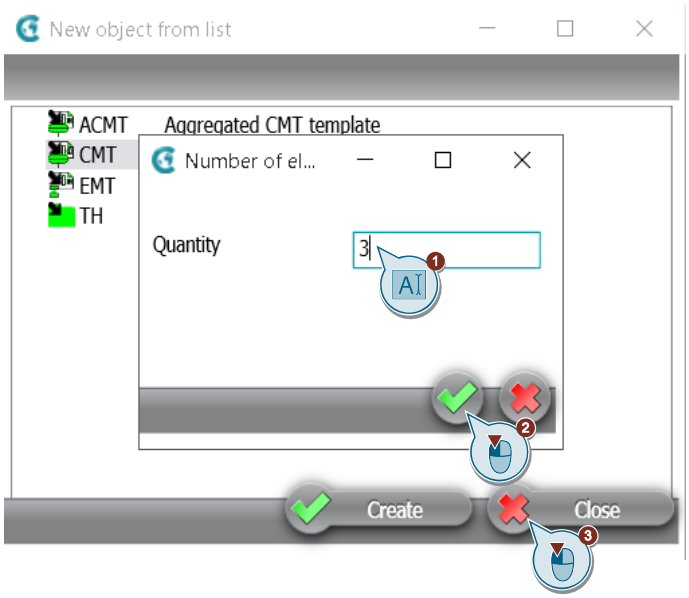
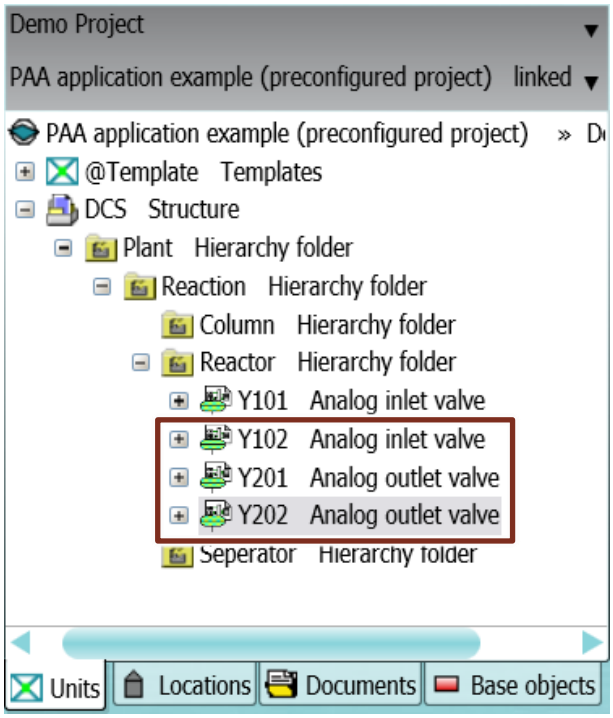
10. In the "New object from list" window, click "Close".



11. Change the naming and description of the three created CMs as follows:

- "Y102" - "Analog inlet valve".
- "Y201" - "Analog outlet valve".
- "Y202" - "Analog outlet valve".



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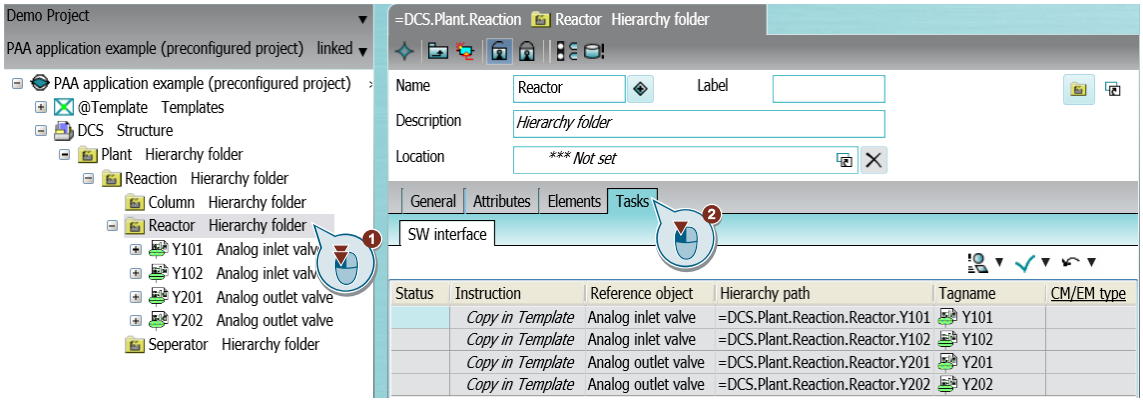
3.2.3. Assigning the appropriate CMTs to the CMs

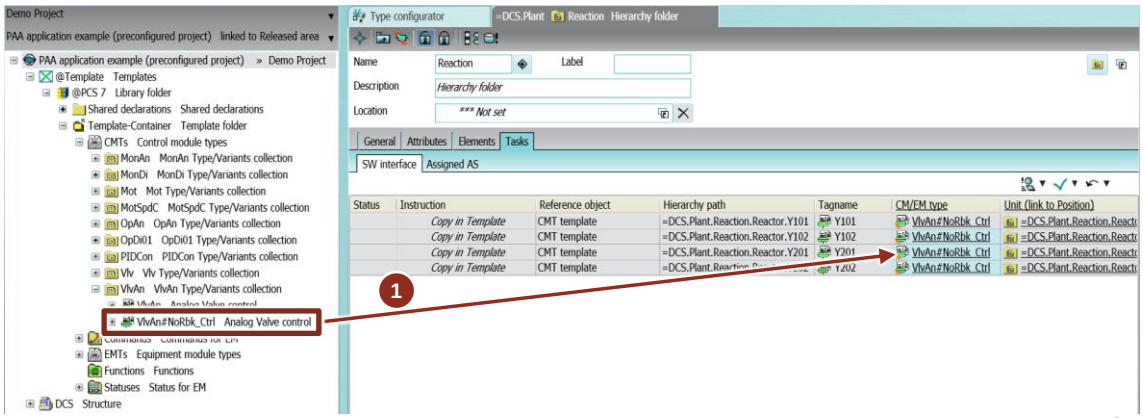
This section shows you how to assign the associated CMTs to the CM templates you created earlier.

1. To do this, double-click on the "Reactor" folder to open the corresponding properties.
2. Open the "Tasks" tab.
   In the "SW interface" tab, all the CMs of the "Reactor" TH folder are displayed.

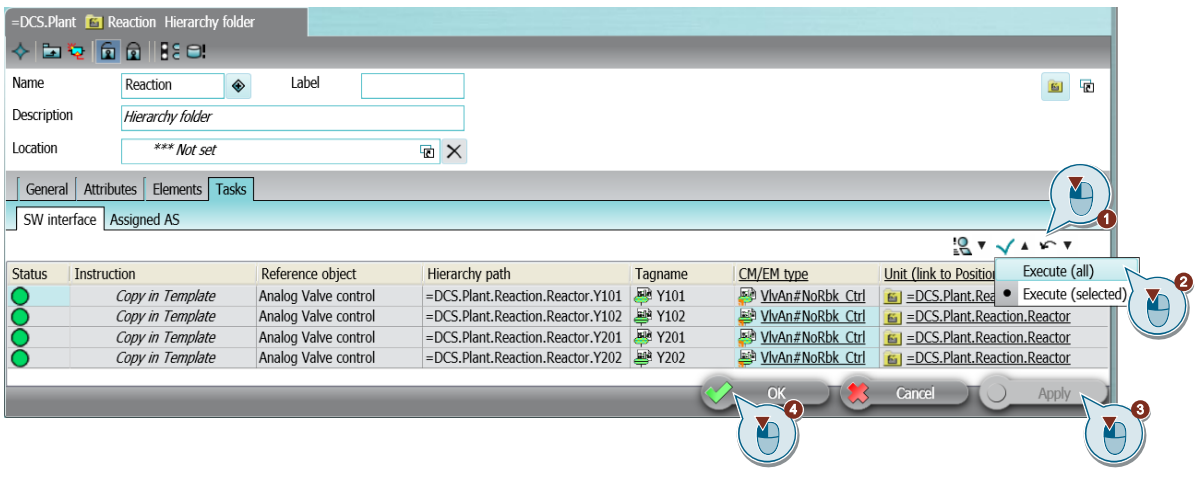


In the column "CM/EM type" you can now assign the corresponding CMTs to the CMs by Drag & Drop.
The CMs in the example project should be based on the CMT "VlvAn#FB_Ctrl".

3. To do this, navigate in the "Units" view to the CMT templates: "@Template > @PCS 7 > Template Container > CMTs".
4. Open the subordinate CMT objects of the folder "VlvAn".
   Under this you will find the CMT "VlvAn#FB_Ctrl".
5. Hold down <Shift> and in the SW interface tab, click in the first and then the last field of the CM/EM type column.
6. Drag and drop the CMT " VlvAn#FB_Ctrl" onto the marked fields.



7. To activate the assignment, open the associated drop-down list by clicking on the button ▼ in the icon ✓ ▼ and click on the "Execute (all)" entry.
   The assignments are implemented and their status is checked.
   If the execution is error-free, the status color changes to green.
8. Then click on the "Apply" and "OK" buttons to apply the changes and to close the drop-down dialog.



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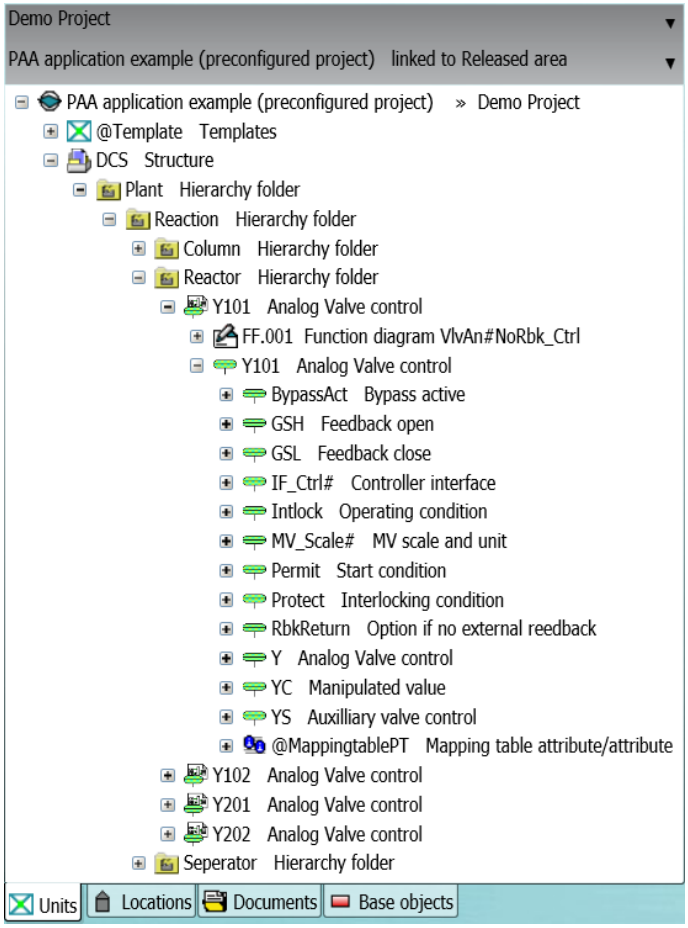
With the execution of the assignment, the signals, parameters and messages of the corresponding type were automatically created under the CMs.



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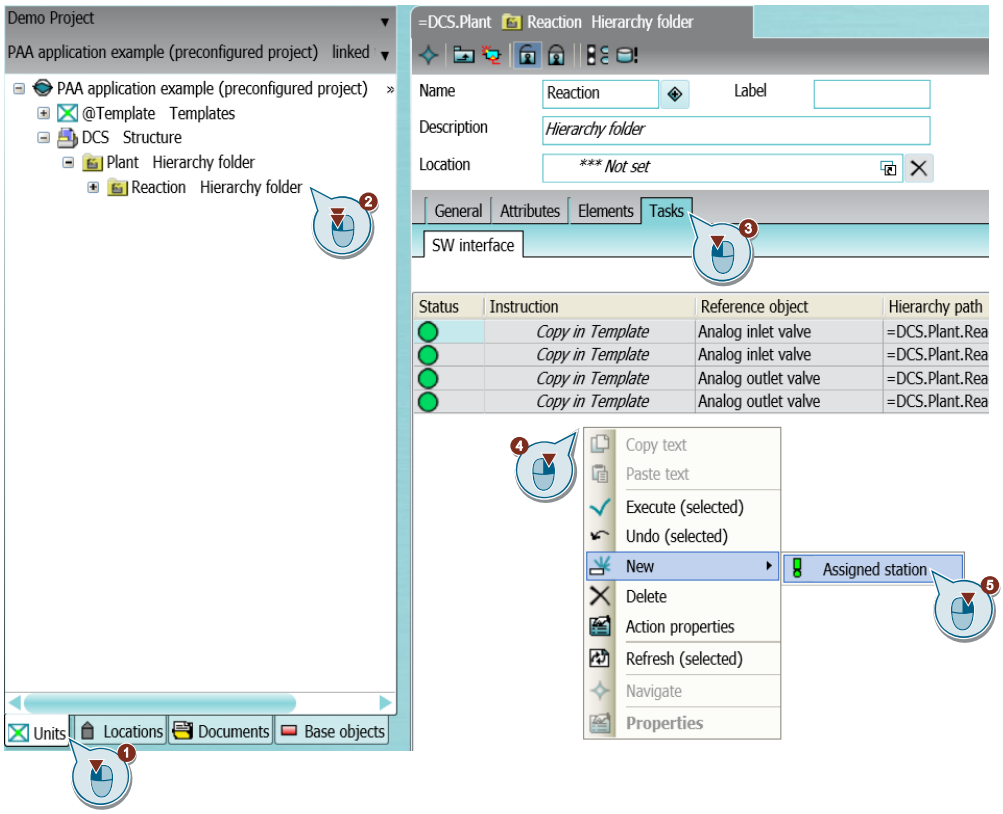
3.2.4. Assigning a DCS structure to an AS

This section shows you how to assign a TH folder to an AS. This is necessary so that PCS 7 can load the data into the correct AS target system after the data exchange.

In the example project you had previously created an AS Station ("A1 AS410-2H").
Assign it to the "Reaction" TH folder.

1. Open the view "Units".
2. Double-click on the TH folder "Reaction" to open the corresponding properties.
3. Open the tab:
   "Tasks > SW interface"
4. Right-click in the free area of the tab to open the corresponding context menu.
5. Create a new task here.
   Click on the entry: "New > Assigned station"



A new tab, "Assigned AS" is created.

6. Open the "Locations" view.

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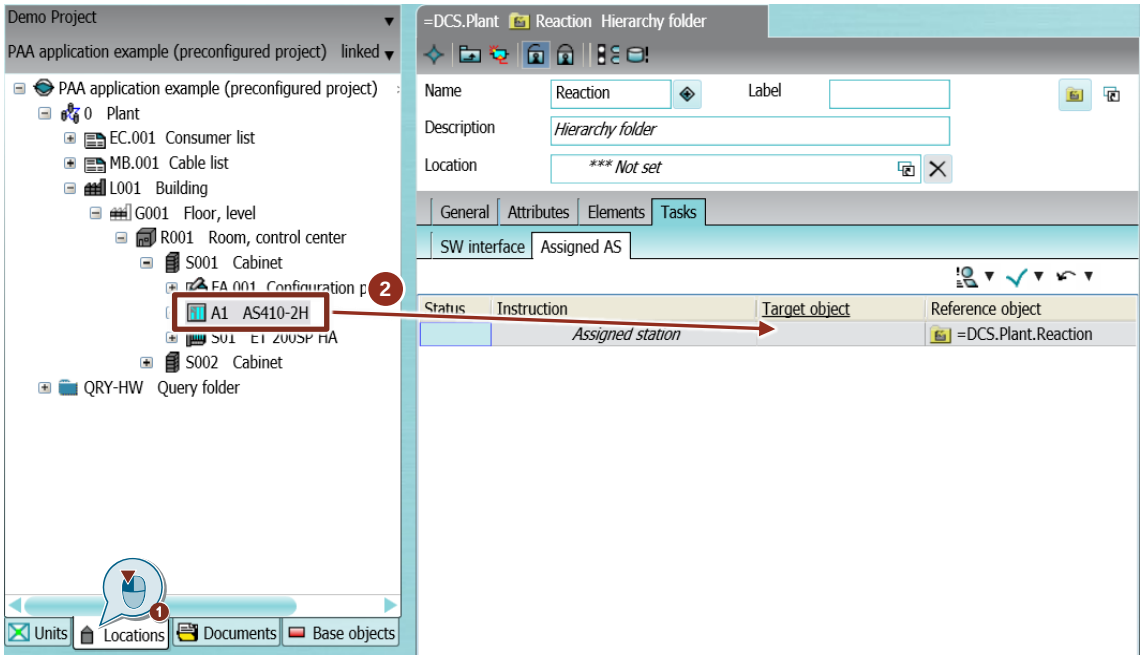
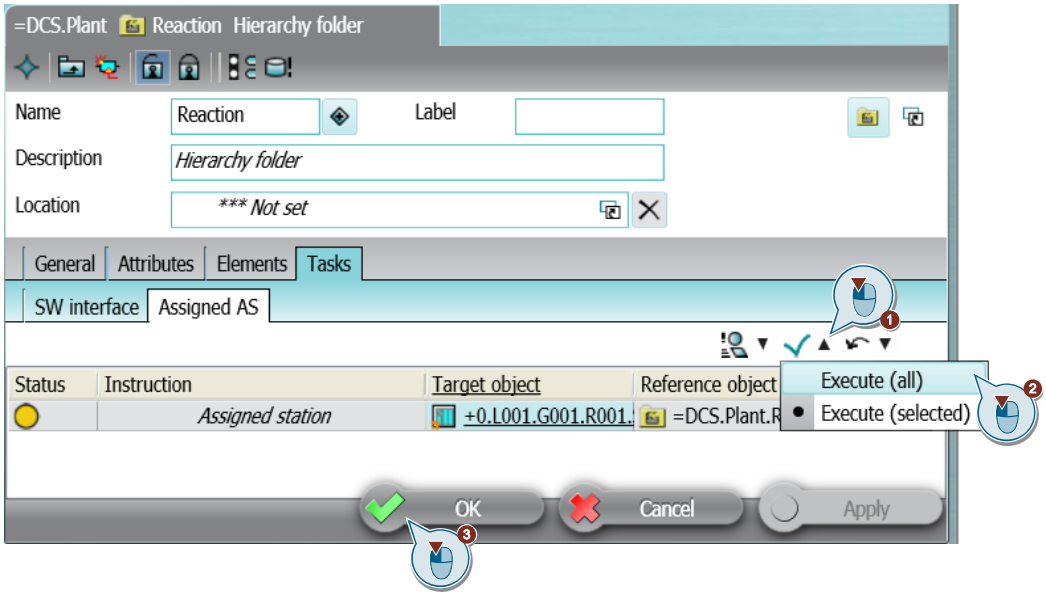
7. Drag and drop the AS "A1 AS410-2H" into the "Target object" field.



Enable the assignment.

8. To activate the assignment, open the associated drop-down list by clicking on the button ▼ in the icon ✓ ▼ and click on the "Execute (all)" entry.
9. Then click on the "OK" button to apply the changes and to close the properties dialog.



Result

You have created a DCS structure in PAA, created CM templates in the DCS structure, and assigned them to the corresponding CMTs.

You have also defined that the AS "A1 AS410-2H" is assigned to the TH folder "Reaction".

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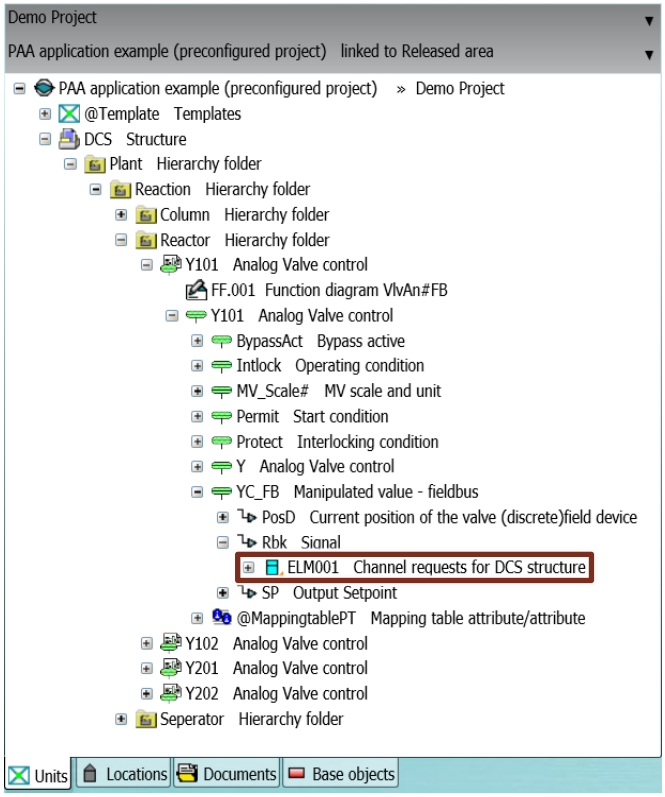
3.3. Assigning multiple signals to the hardware

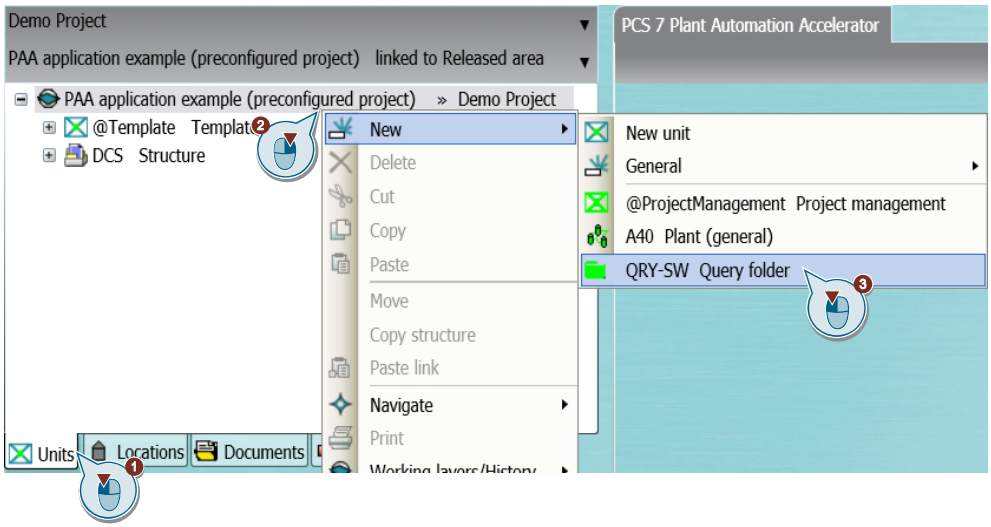
By assigning the CMTs to the CMs, channel requirements were automatically created for the signal objects of the CMs.



Assign one channel (address) to each of these I/O modules.

This section describes in detail how to proceed and how to make the multiple assignments in the example project.

1. Open the "Units" view in PAA.
2. Right-click on the "PAA application example (preconfigured project)" project node to open the corresponding context menu.
3. Use this to create the folder "QRY-SW Query folder"
   "New > QRY-SW Query folder".



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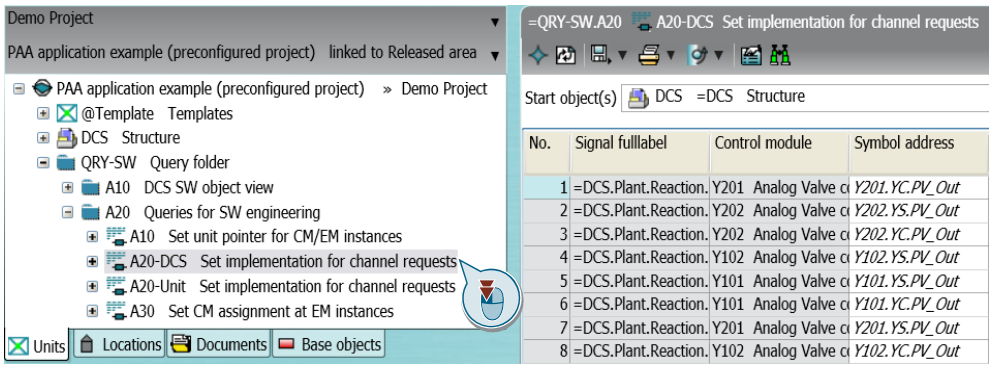
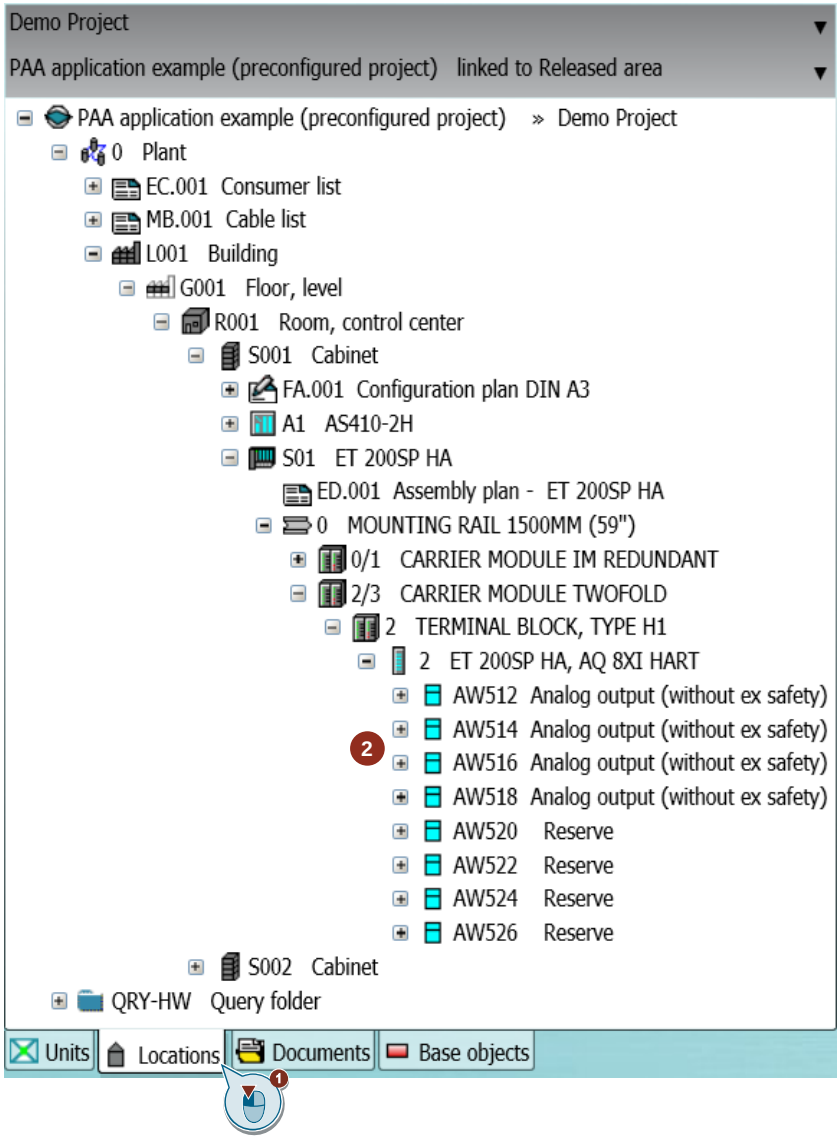
4. Open the query "A20-DCS Set implementation for channel requests" with a double click.
   The "DCS Structure" folder is stored by default in the "Start object(s)" field. This will display all the channel requests under the object.



With the query you can quickly and easily assign the corresponding inputs and outputs of the analog and digital components to the channel requirements from the "Locations" view.

5. Open the "Locations" view.
6. Navigate to the "ET 200SP HA" and open the subordinate objects of the I/O module here.



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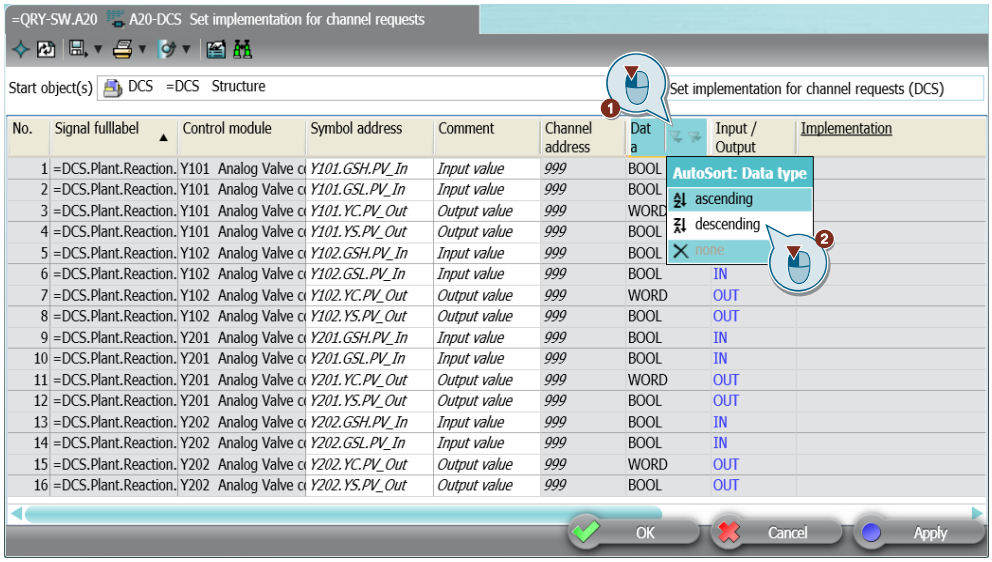
7. Sort the column "Data type" in "descending" order.



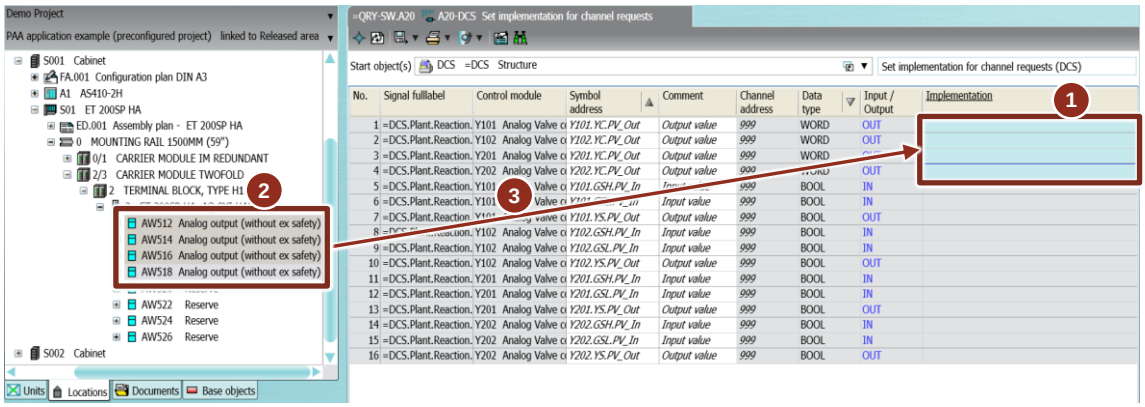
8. Sort the column "Input/ Output" "descending" and "symbol address" "ascending".
9. In the "Implementation" column, select the fields that have the value "OUT" in the "Input / Output" column.

NOTE

For fast selecting:

1. Click on the first field of the column.
2. Hold down <Shift> and click on another field in the column.
   This selects all the fields between the two.

10. Select four analog inputs of the analog output module and drag & drop them onto the selected fields in the "Implementation" column of the query.



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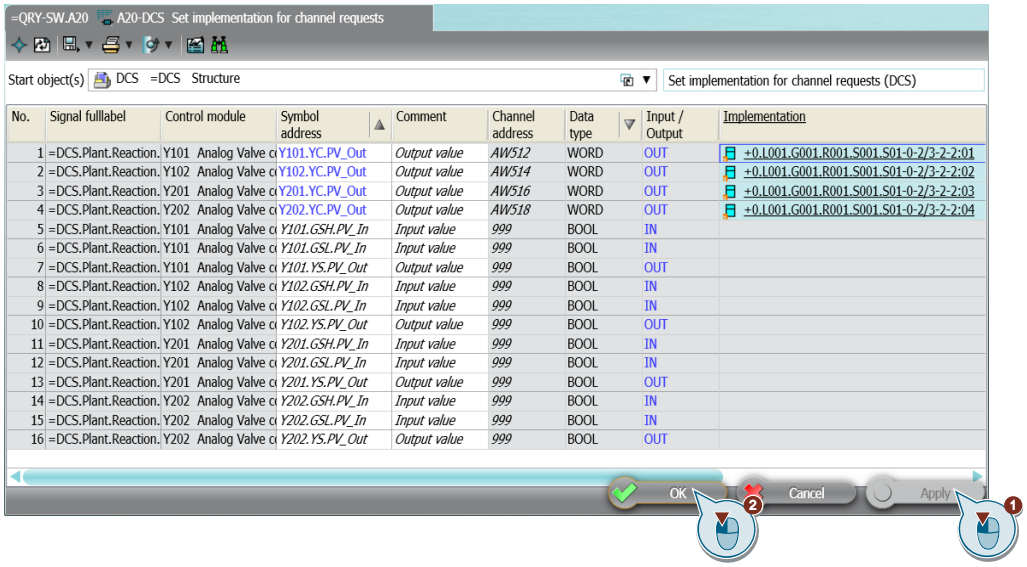
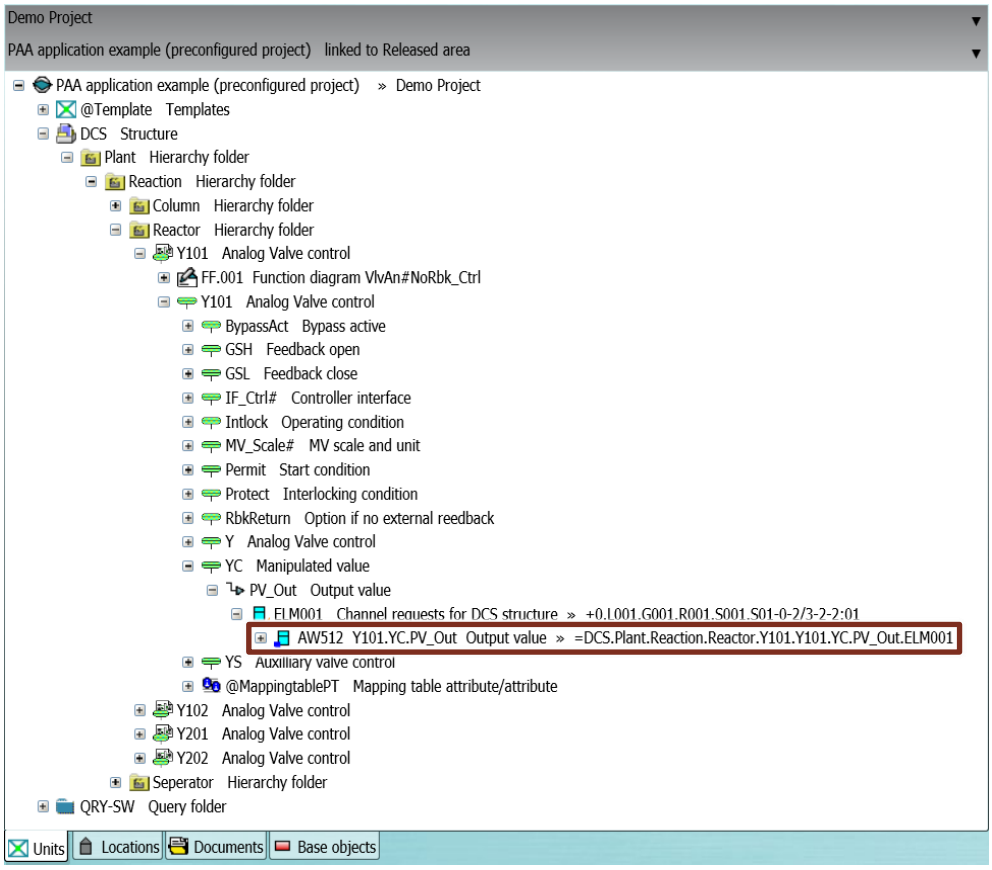
11. Click on the "Apply" and "OK" buttons to save the changes and to close the query.



Result

You have thus assigned masses of channel requirements to the respective inputs and outputs of the IO components.

After you have implemented all the channel requests, a pointer is displayed in the signal planner next to the channel for each of the respective DP slaves.



After implementation, the channels for the components in the "Locations" view look like this:

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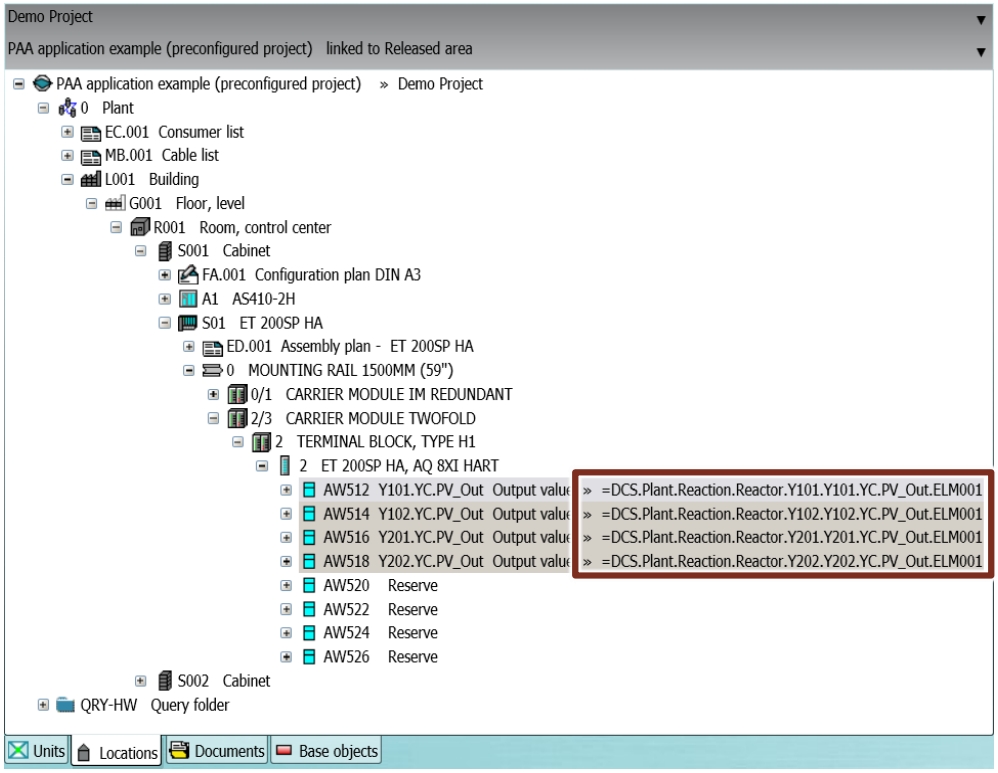

© Siemens 2024

3.4. Use "Excel Import"

With the "Excel Import" function, data is imported into PAA and automatically created in large quantities.

The following data can be created *en masse* with the function:

- Plant hierarchy
- CMs
- Signals (connections)
- Hardware

NOTE A detailed description of the Excel import can be found in the FAQ. "How do you import the technological hierarchy, measuring points (CMs) and hardware into the SIMATIC PCS 7 Plant Automation Accelerator (PAA) using Excel Import?".

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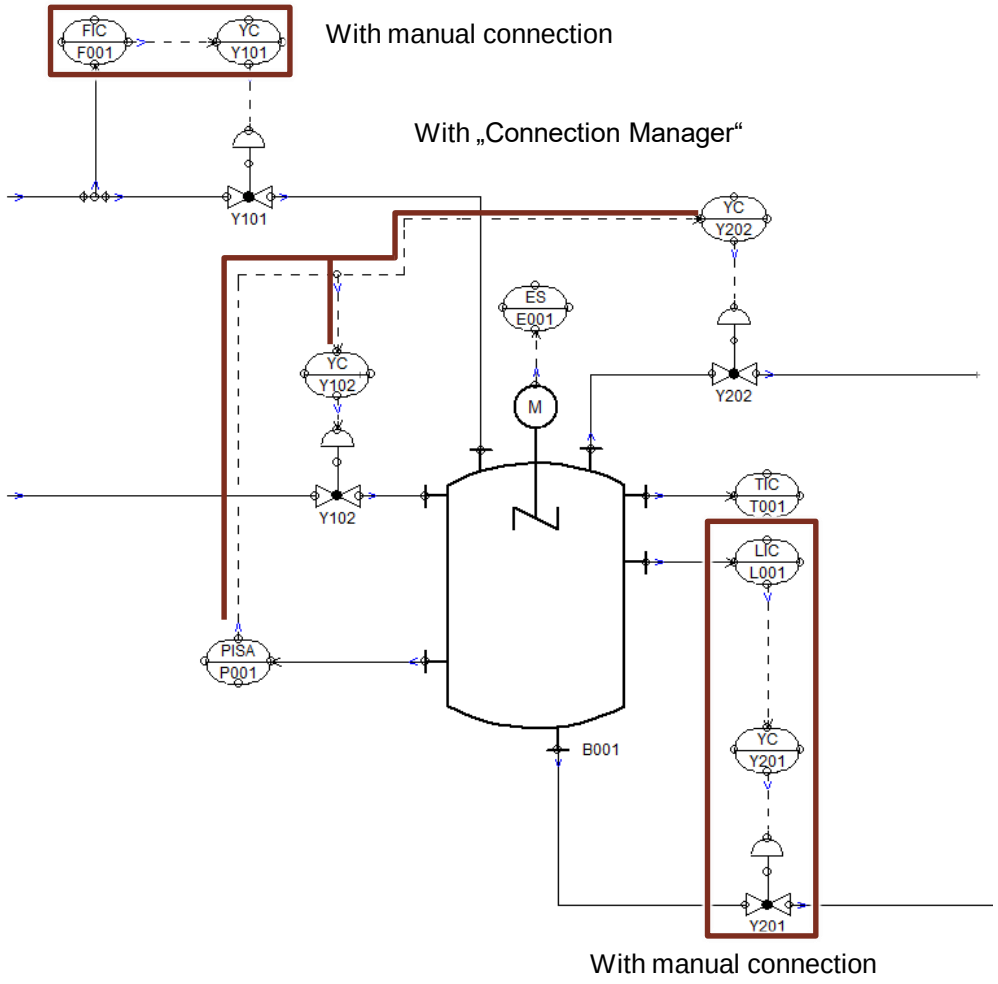
3.5. Interconnections between CMs (parameter interconnections)

This section describes how to create connections between CMs in PAA.

There are two options for this:

- Right-click for manual connection
- "Connection Manager".

In the case of the example project, create the following connections:



Import the CMs "F001", "P001" and "L001".

1. Open the "Import/Export PCS 7" dialog
2. Open the "Import" tab.
3. Select option "XML file"
4. Select the supplied XML file "CM_Import".
   The filters are then automatically selected.

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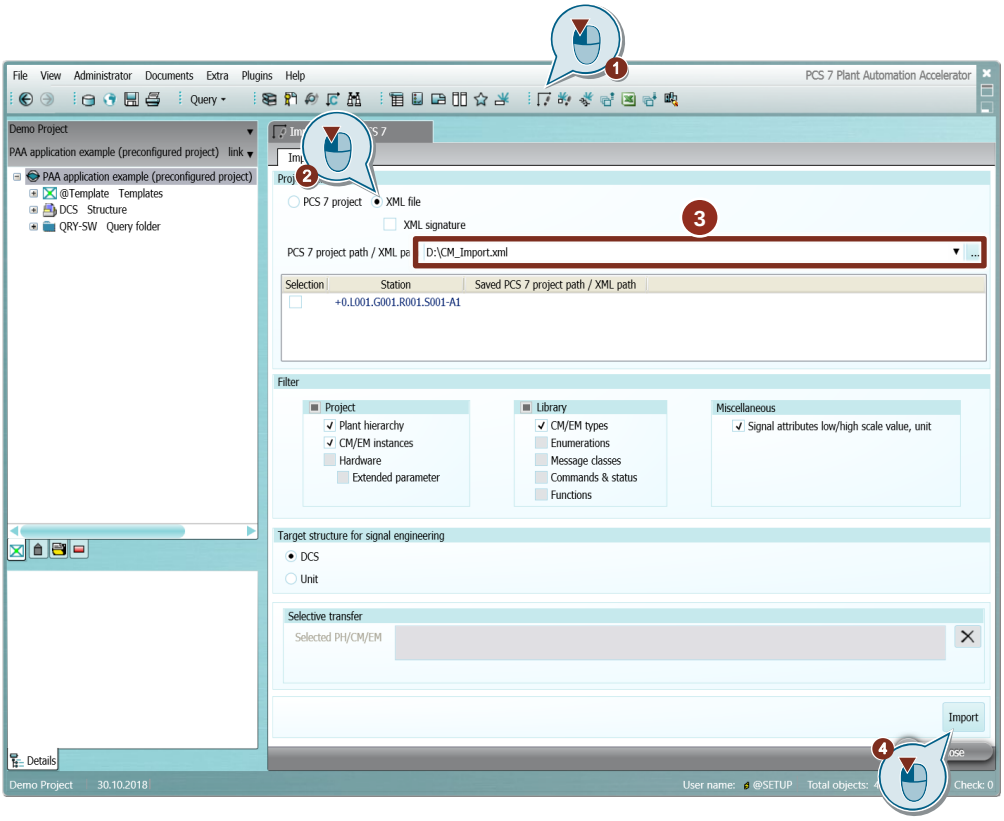
5. Click on "Import".



6. In the "Data transfer - Generate/Import" window, click the button , to start the import from the XML file to PAA.

NOTE Further information on importing data to PAA can be found in chapter 2.1.

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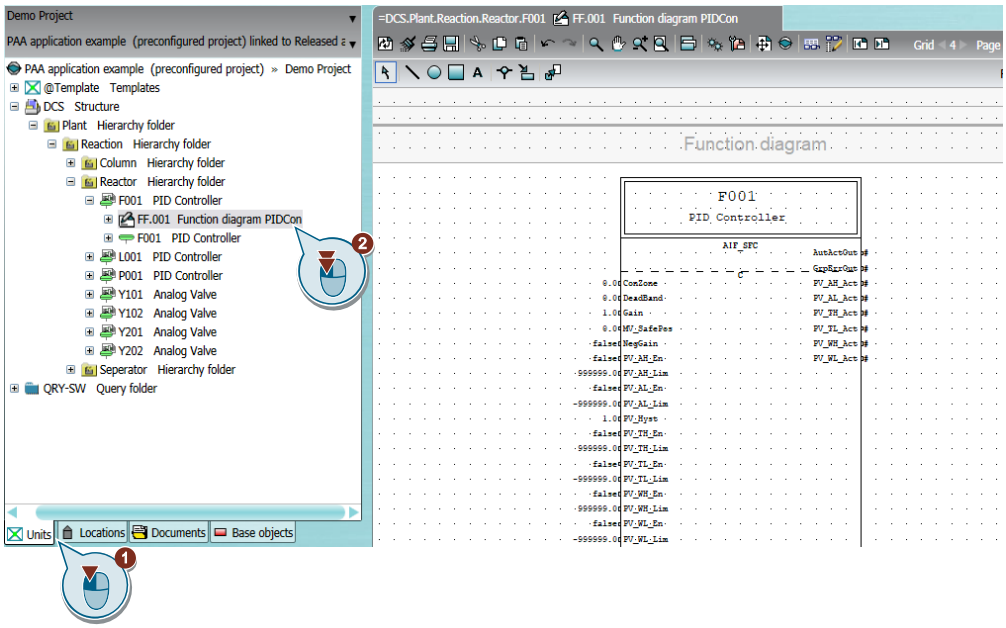
3.5.1. Manual interconnection

This section describes how to create connections between CMs in PAA (via right mouse button) manually.

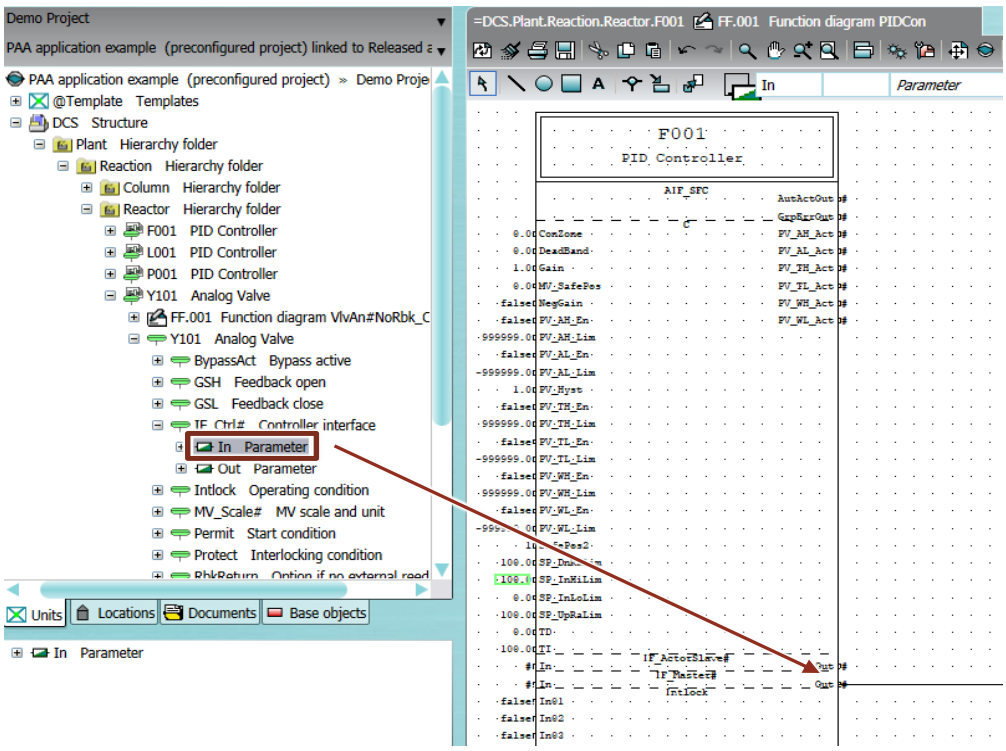
In the example project, the connections between the CM "F001" (flow measurement) and the valve "Y101" are to be created.

In addition, you should create connections between the CM "L001" (level measurement) and the valve "Y201".

1. To do this, open the "Units" view.
2. Navigate to the "F001" CM and open the subordinate objects.
3. Double-click to open the respective "Function diagram".
   This shows the logic of the CM.
   All the in- and outputs of the CM present in the technological connections are displayed here.
   Furthermore, the following are displayed on the connections to the hardware or other CMS.



4. Navigate to CM "Y101" and open the subordinate objects.
5. Open the subordinate objects of the "IF_Ctrl#" module.
6. Drag and drop the "In" input onto the "Out" output of the "To_Indicate" block on the open "Function diagram".



You have now created a connection between the CMs.

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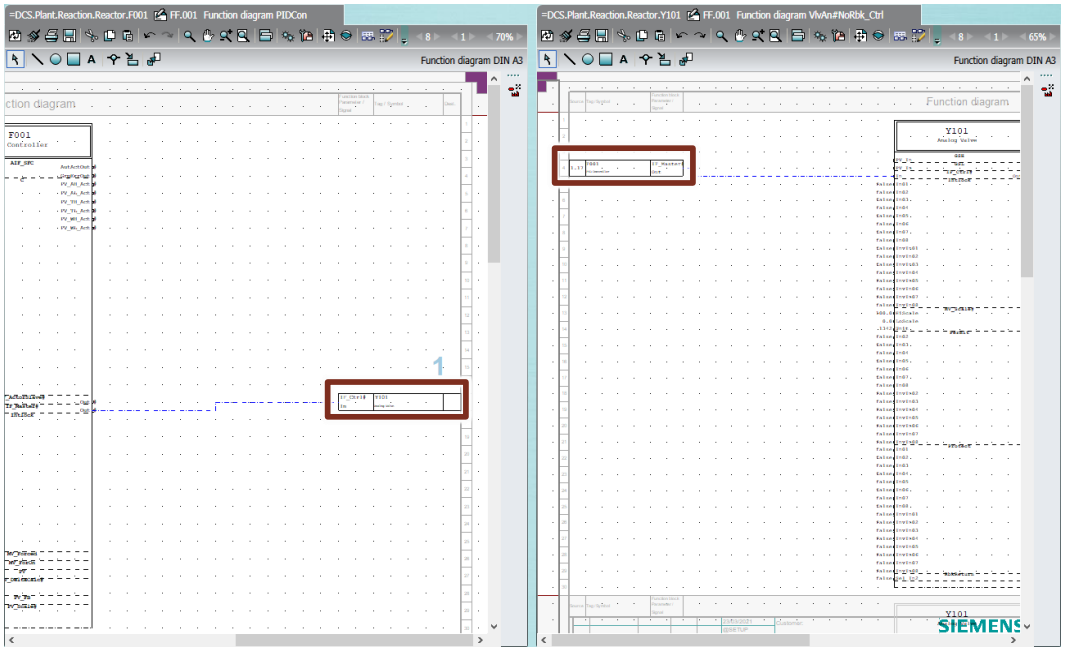
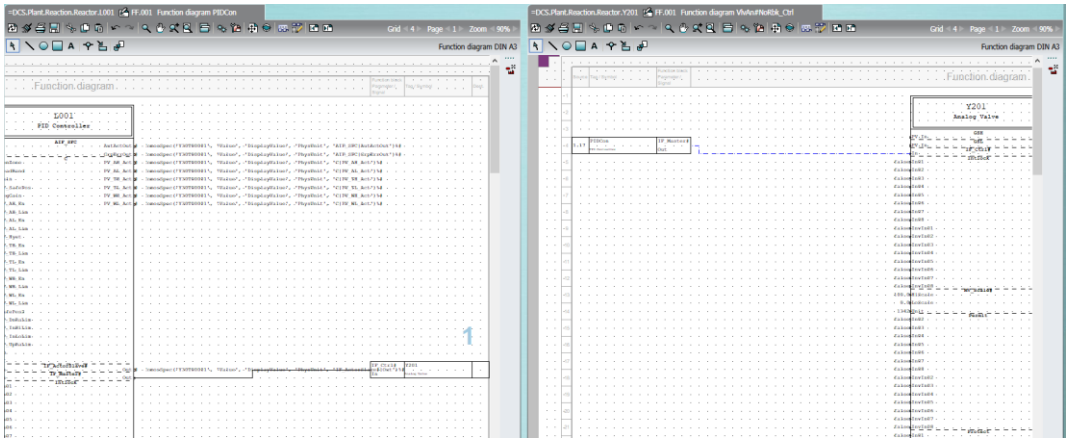
This is represented by a connection flag.



7. Save the changes and close the function diagrams.
8. Connect the same connections of the "L001" and "Y201" CMs to each other.



9. Save the changes and close the function diagrams.

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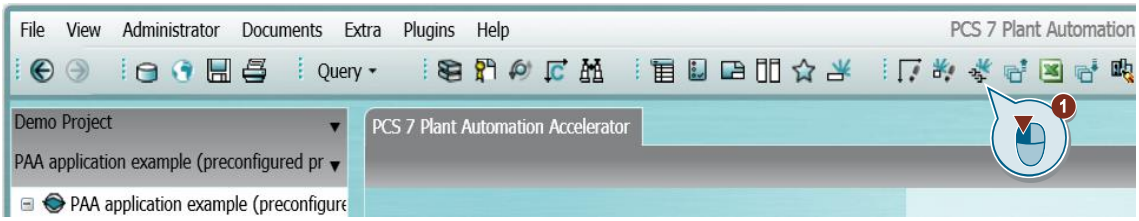
3.5.2. Interconnections via Connection Manager

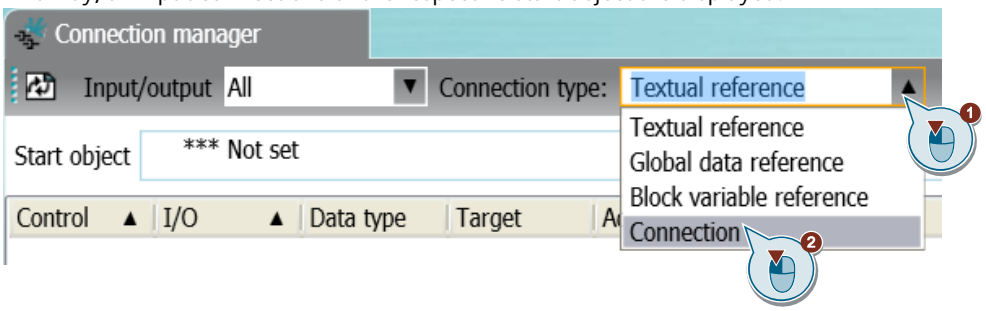
This section shows how to use the plug-in "Connection Manager" to create your connections.

In the example project, use the "Connection Manager" to create connections between the CM "P001" (the pressure gauge) and the CMs "Y102" and "Y202".

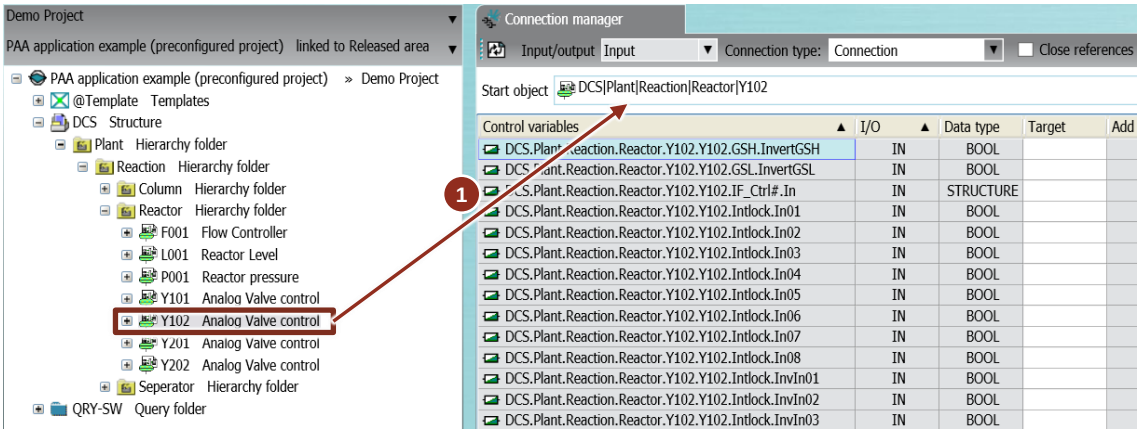
1. To do this, open the plug-in "Connection Manager" via the PAA menu bar.
   Click on the "Connection Manager" button:



2. Change the "Connection Type" from "Textual reference" to "Connection".
   This way, all input connections of the respective start object are displayed.



3. Navigate to CM "Y102" in the "Units" view.
4. Drag and drop the CM "P001" into the field "Start object" of the "Connection manager".
   Now all the inputs of the "Y102" CM are shown.



5. In the "Units" view, navigate to CM "P001" and open the subordinate objects.
6. Open the subordinate objects of the "To_Indicate" block.

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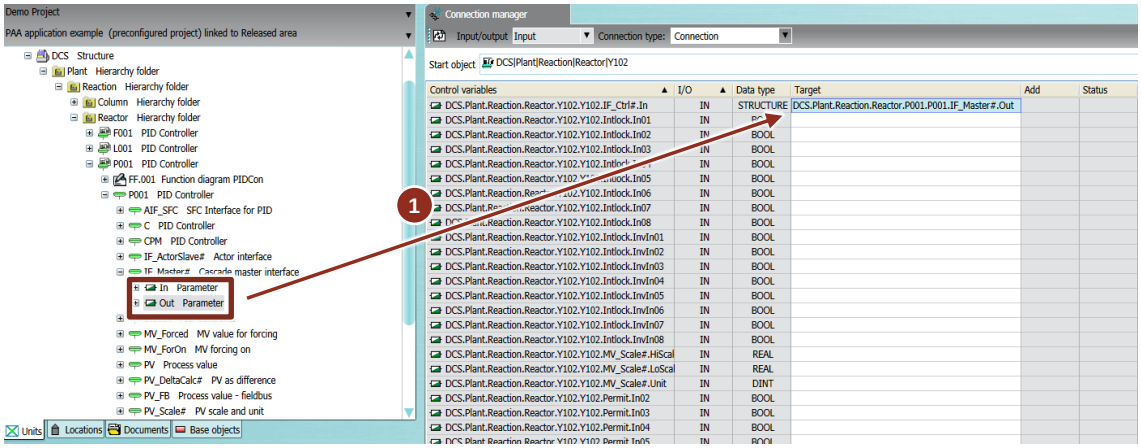
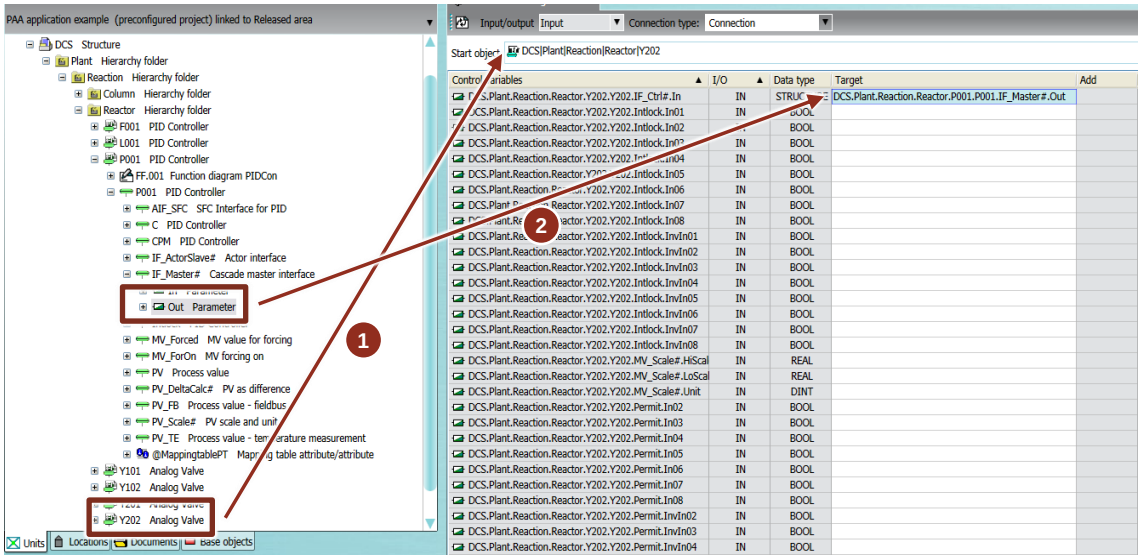
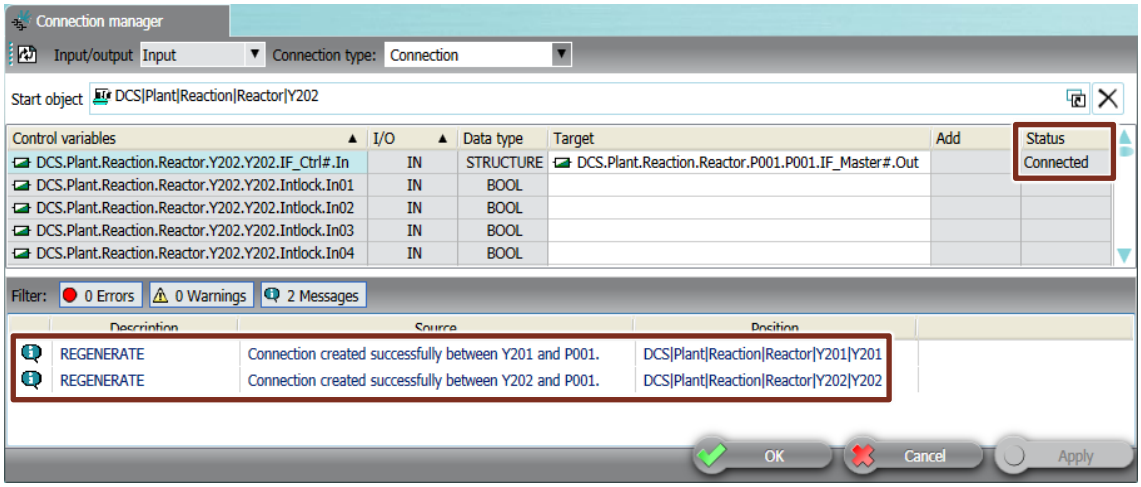
7. Drag and drop the "Out" output into the "Target" field of input "Y102.IF_Ctrl#.In".



8. Navigate to the CM "Y202" and drag & drop it into the field "Start object" of the "Connection manager".
9. In the "Units" view, navigate to CM "P001" and open the subordinate objects.
10. Open the subordinate objects of the "To_Indicate" block.
11. Drag and drop the "Out" output into the "Target" field of input "Y202.IF_Ctrl#.In".



12. In the "Connection Manager", click on the "Apply" button in order to generate.
    During the process, a log is generated and displayed and the connections are created in the logic diagrams.
    Once the connections have been carried out, they are designated as connected.



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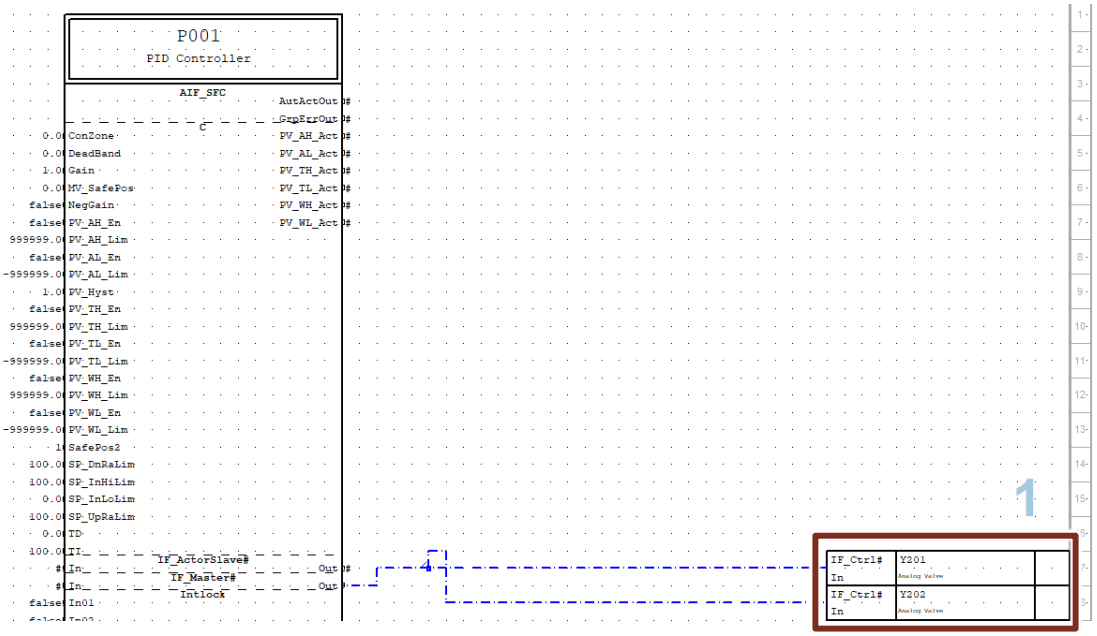
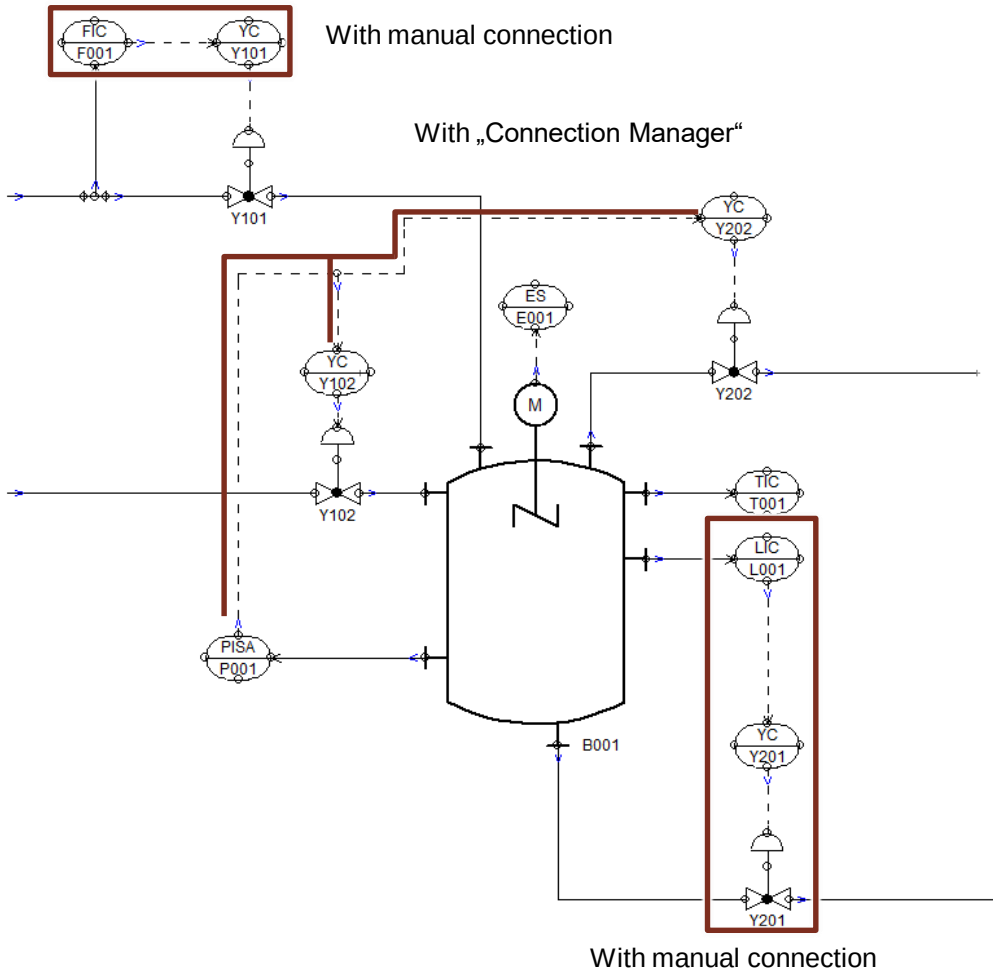
The connections are created automatically in the function diagrams and are correspondingly designated.



13. Click on the "Save" button in the PAA menu bar to save the changes.
14. Close the "Connection manager" and the logic diagrams.

Result

You have become acquainted with different possibilities of connection creation in PAA and thus created the following connections between the CMs.



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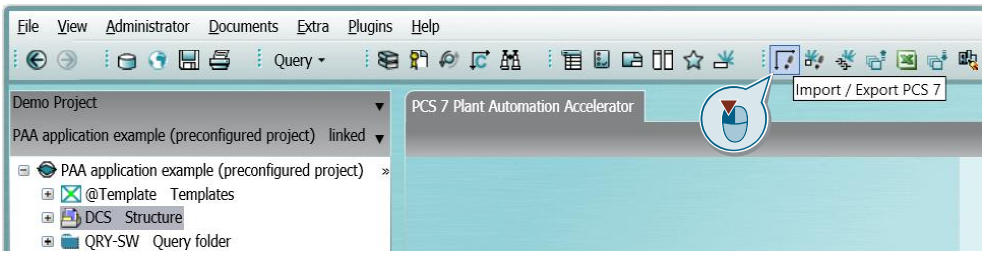
3.6. Exporting from PAA to PCS 7

This section describes how to export the PAA-project data to SIMATIC PCS 7 so that the following data is automatically generated in the PCS 7-project:

- Plant hierarchy
- Control modules
- Equipment modules
- Hardware components
- Interconnections

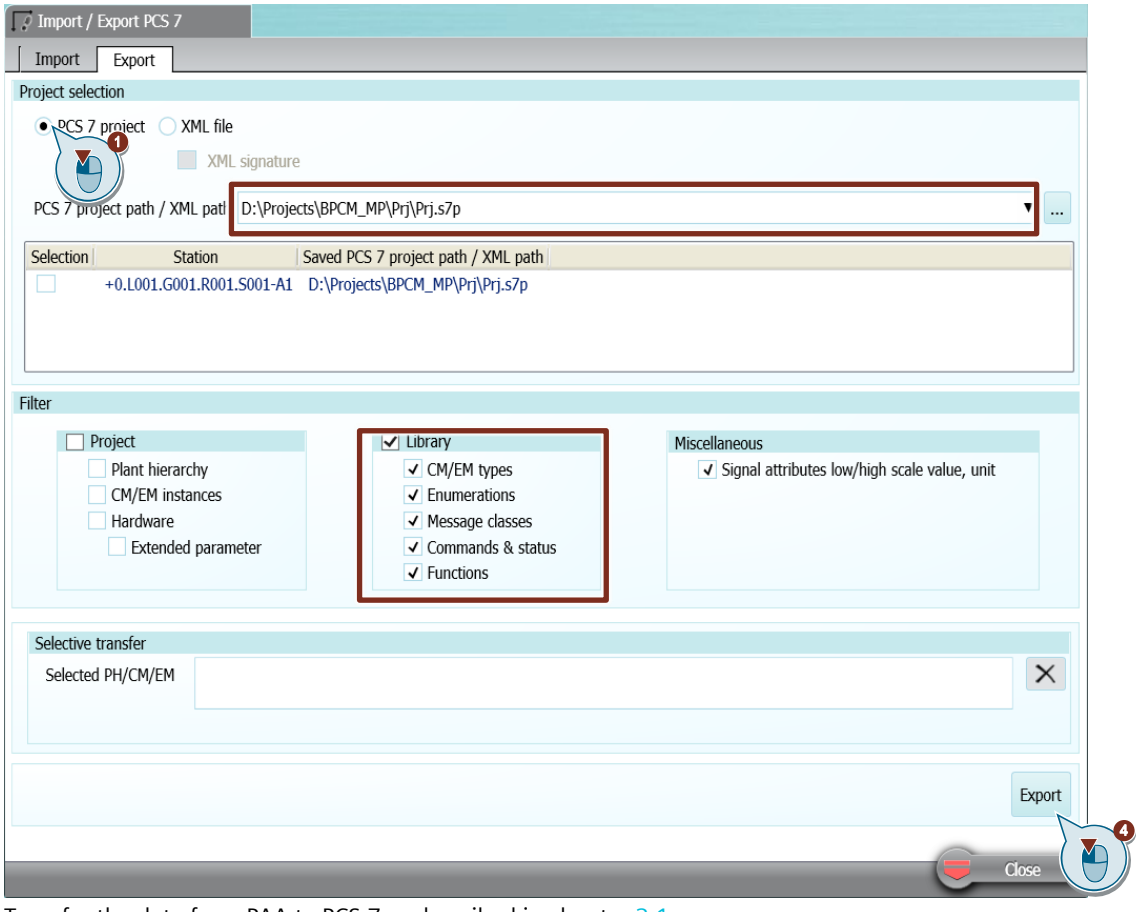
First transfer the library data from PAA to PCS 7.

1. To do this, in the PAA menu bar click on the "Import/Export PCS 7" .



The "Import/Export PCS 7" dialog opens.

2. Open the "Export" tab.
3. Set the export window as follows:
   - Select the PCS 7-project
   - "PCS 7-project path": Select the supplied PCS 7-project
   - "Filter": Deactivate all selection boxes under "Project" and activate all selection boxes under "Library"
4. Click "Export".
   PAA then automatically checks for differences between the PCS 7-project and the PAA-project and displays them clearly.



5. Transfer the data from PAA to PCS 7 as described in chapter 2.1.

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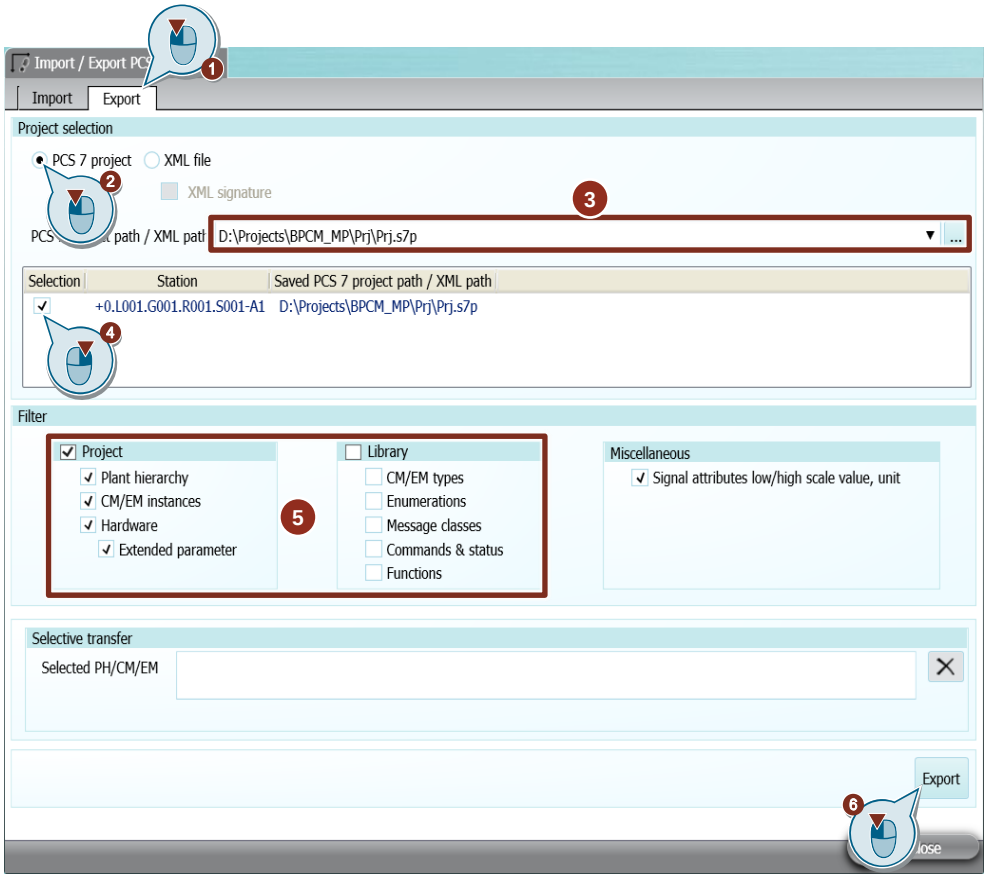
6. Importing from PCS 7 to PAA.
7. In the next step, transfer the remaining data from PAA to PCS 7.
8. Select the check box for Station "A1".
   In the "Filter" directory you can state which data are to be exported and which are to be created.
   In the case of the sample project, activate all the option boxes under Project:
9. Click on the "Export" button.
   PAA then automatically checks for differences between the PCS 7-project and the PAA-project and displays them clearly.



Result

The data from the PAA-project have been successfully exported into, and automatically generated in the PCS 7-project.

The following data have been created:

- Plant hierarchy
- CMs
- Versions
- Hardware (AS, ET 200SP HA, I/O components)
- Interconnections

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3.7. Change management / Data comparison

This section describes how to compare changes between projects.

In the case of the application example, make changes in the PCS 7-project and compare the changed data with the PAA-project.

Also make exemplary changes in the PAA-project and compare them with the PCS 7-project.

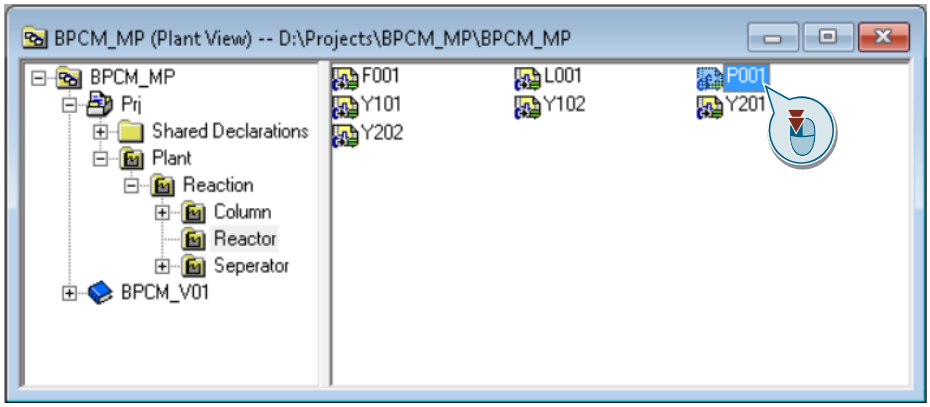
3.7.1. Changing PCS 7-project data and comparing them with PAA

This section describes how to synchronize the changes in the PCS 7-project with the PAA-project.

On the one hand, you must change CM "P001" parameter values, and on the other hand you should create a standard function in PCS 7, which you can then use in PAA to create locking logic.

Changing parameter values

1. Open the CM "P001" in the PCS 7-project with a double click.



2. Change the following parameter values in block "I":

Parameter input	New value
"PV_AH_Li"	15
"PV_WH_Li"	12
"PV_AL_Li"	3
"PV_AL_Li"	1

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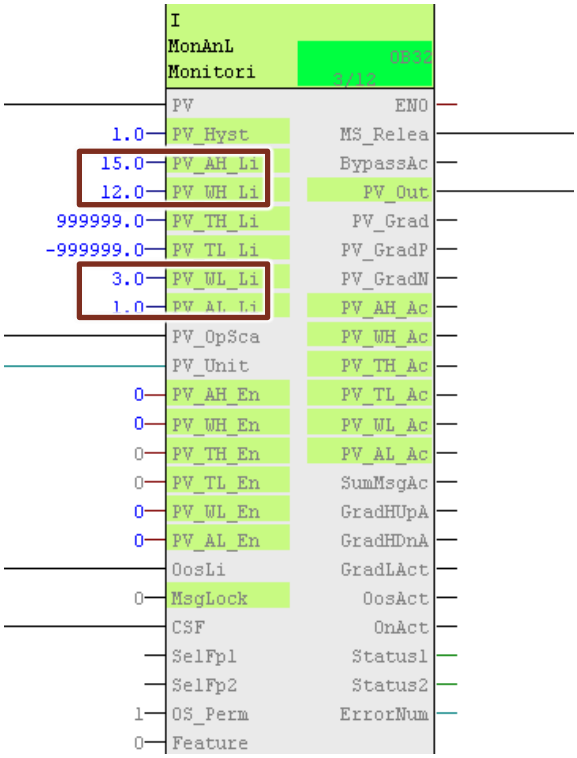
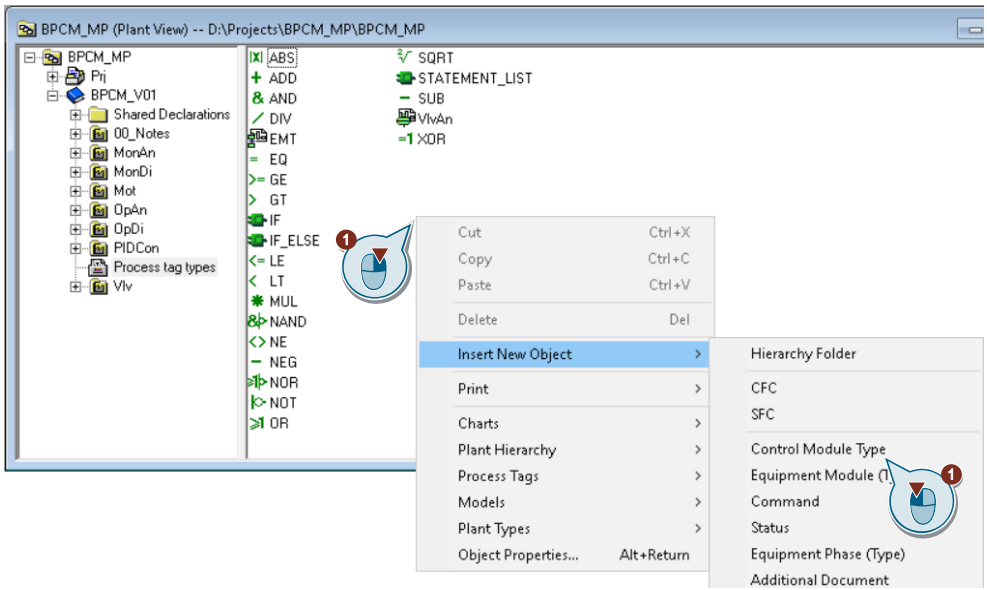


Close the CM.

Creating Standard function

1. In the "Plant View" of the PCS 7-project, navigate to the "Process tag types" folder.
   Create a new CMT in the "Process tag types" folder.
2. To do this, right-click in the folder to open the corresponding context menu and click on the entry:
   "Insert New object > Control Module Type".



3. Rename the CMT to "Timer1".

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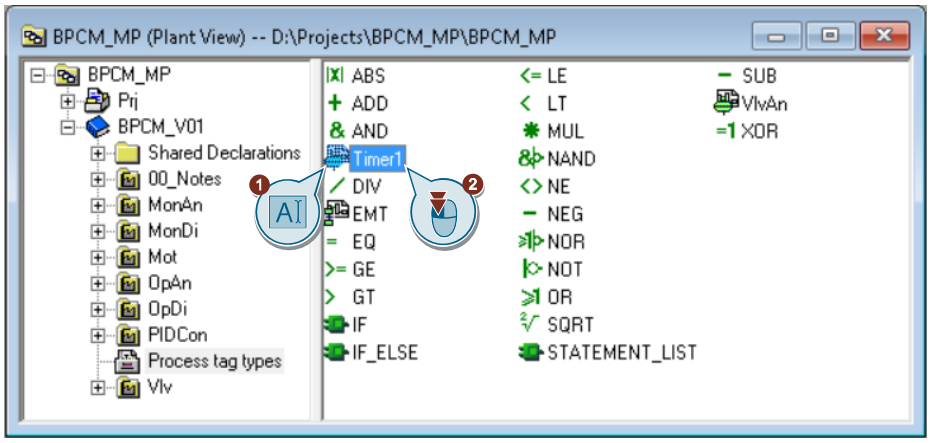
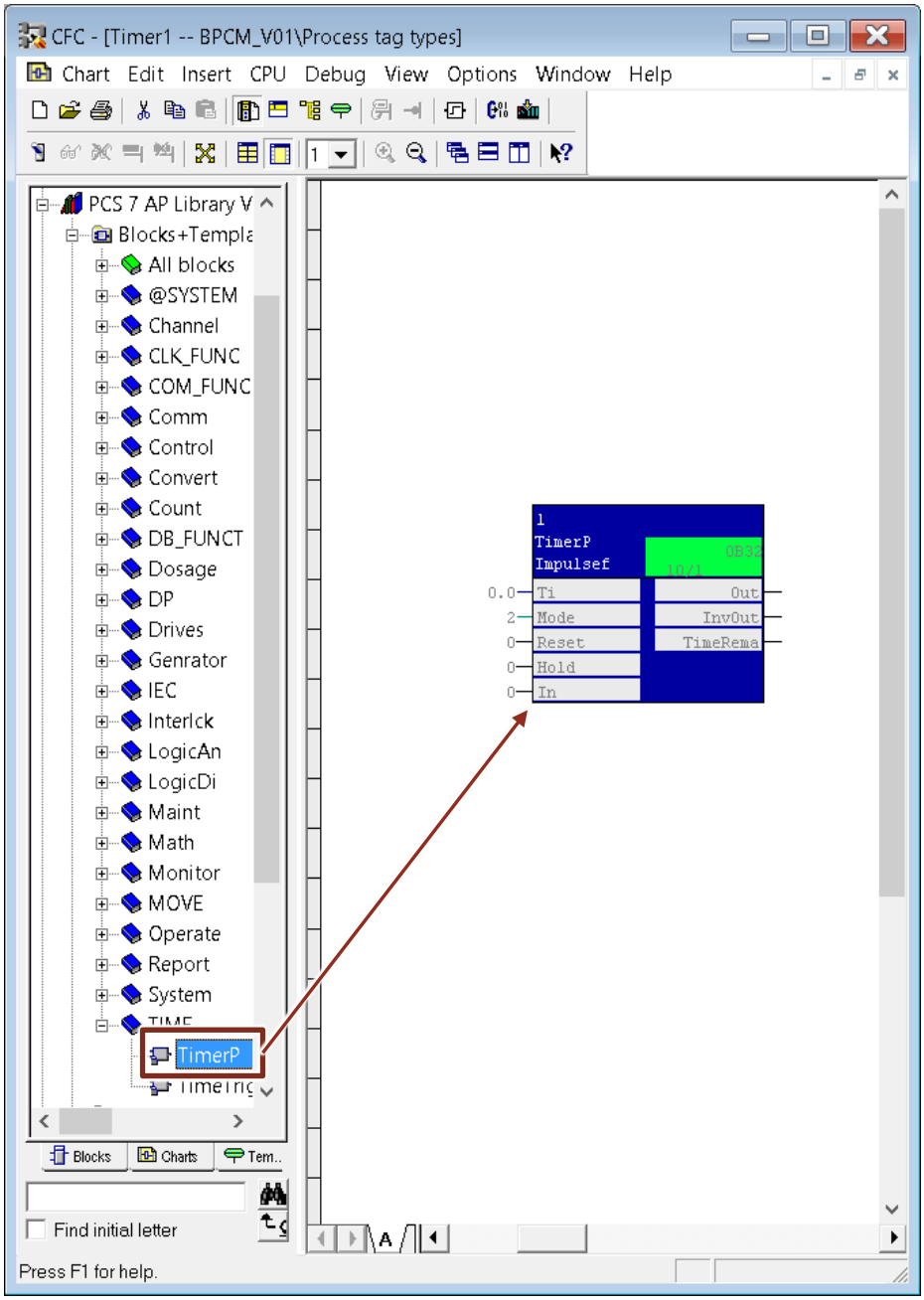
4. Open the "Timer1" CMT with a double click.



5. Drag and drop the "TimeP" block from the "PCS 7 AP Library V91" onto the plan.



6. Click on the "Technological Connections" button in the menu bar of the CFC Editor.
   The "Technological Connections" window opens.
   Here you can define and configure the CMT connections.
   In the chart the module has the name "1". Change the name in accordance with the name of the CMT.

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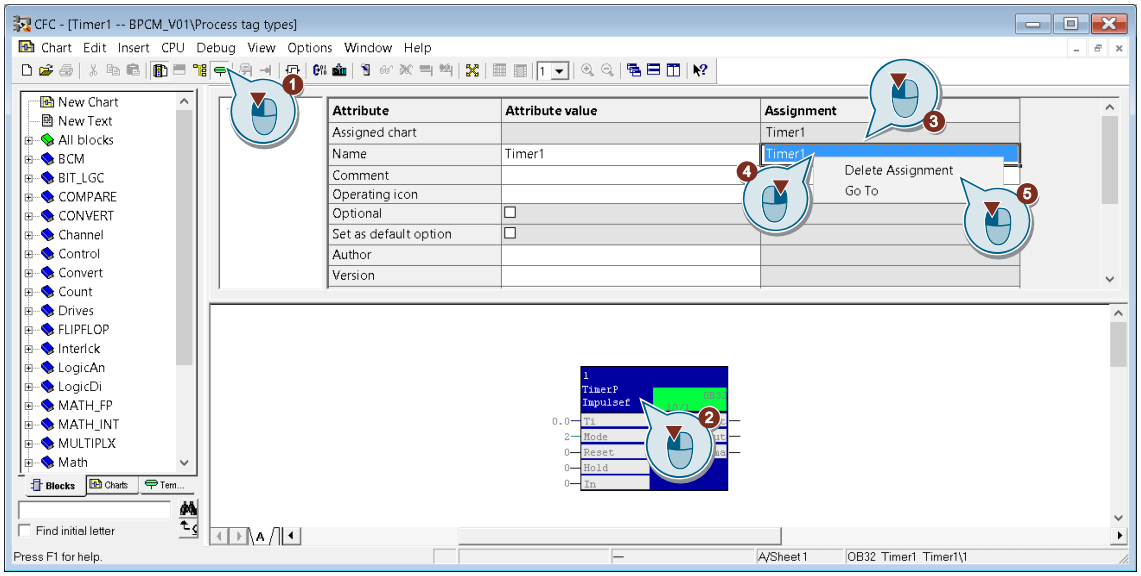
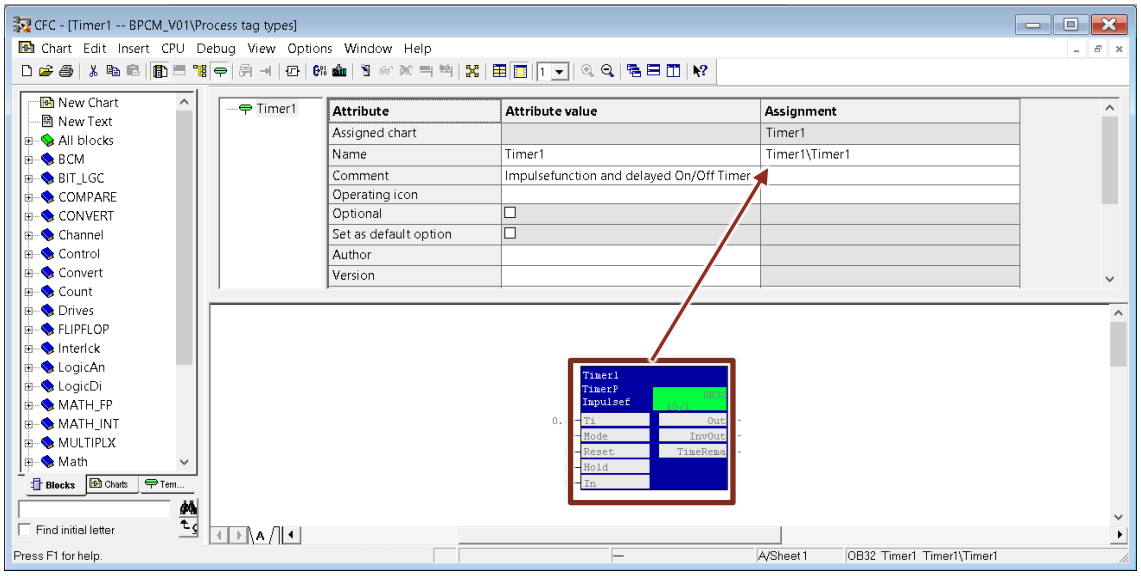
7. To do this, select the "Timer1" object in the "Technological connections".
   The associated attributes (with their attribute values and assignments) of the object are displayed in the attributes area of the technological connections.
8. Delete the preset entry from the field for name assignment.
9. To do this select the field with a click.
10. Right-click on the associated context menu to open it and then click on the entry "Delete Assignment".



11. Select the module in the chart and drag & drop it into the field for the name assignment of the object "Timer1".
    This way you have defined that the module name depends on the name of the CMT.
12. Press<F5> to update the data in the chart.



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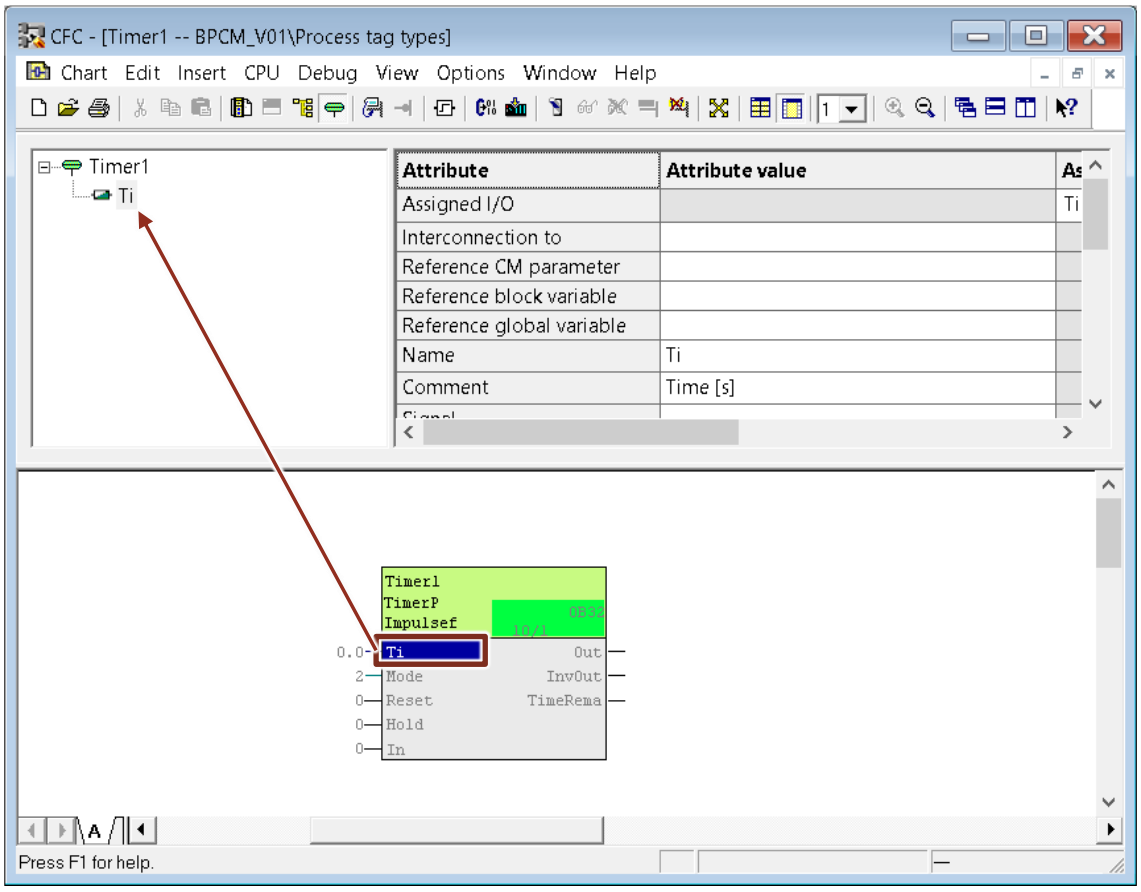
13. Select the "Ti" input of the "Timer1" module and drag and drop it to the "Timer1" object in the "Technical Connections". This way a new input/control element is created.



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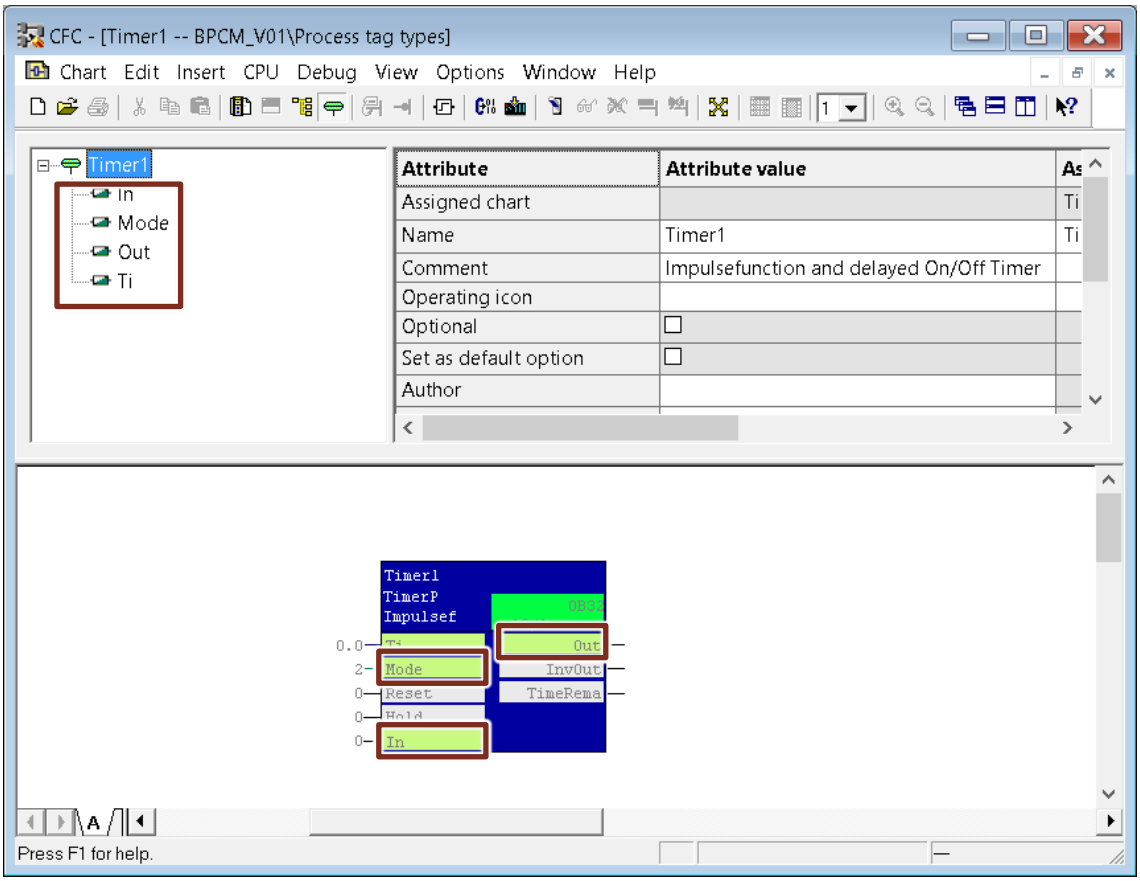
14. Create further connections for the CMT in the same way in the "Technological connections" under the block object "Timer1":

    - "Mode"
    - "In"
    - "Out"



If the in- and outputs are saved in the technological connections, these in and outputs are highlighted in green at the module.

Now define the CMT as standard function.

15. To do this, select the "Timer1" object in the technological connections.
16. Click on the attribute "Function" to activate it.
    You have thus defined the CMT as standard function
17. Press <F5> on your keyboard to update the data.

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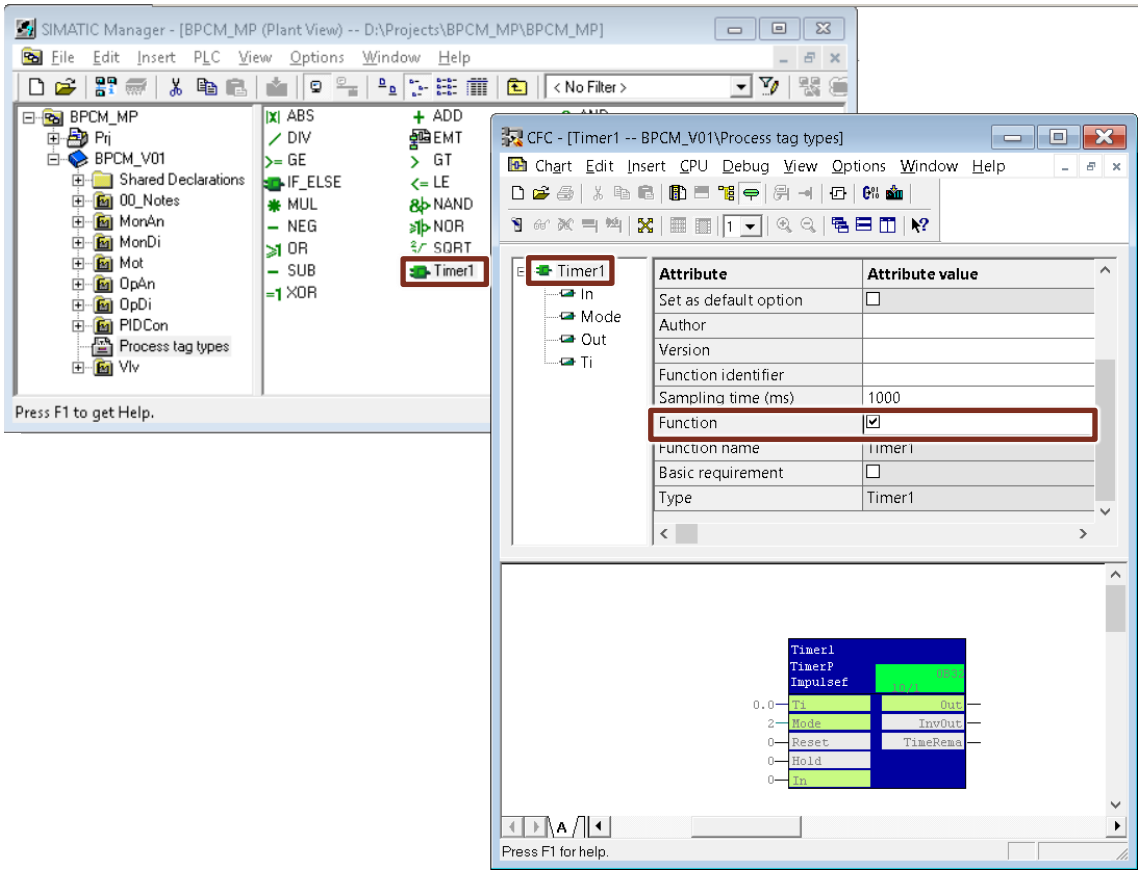
The Control Module Type (CMT) icon changes to allow you to distinguish control module types from standard functions.



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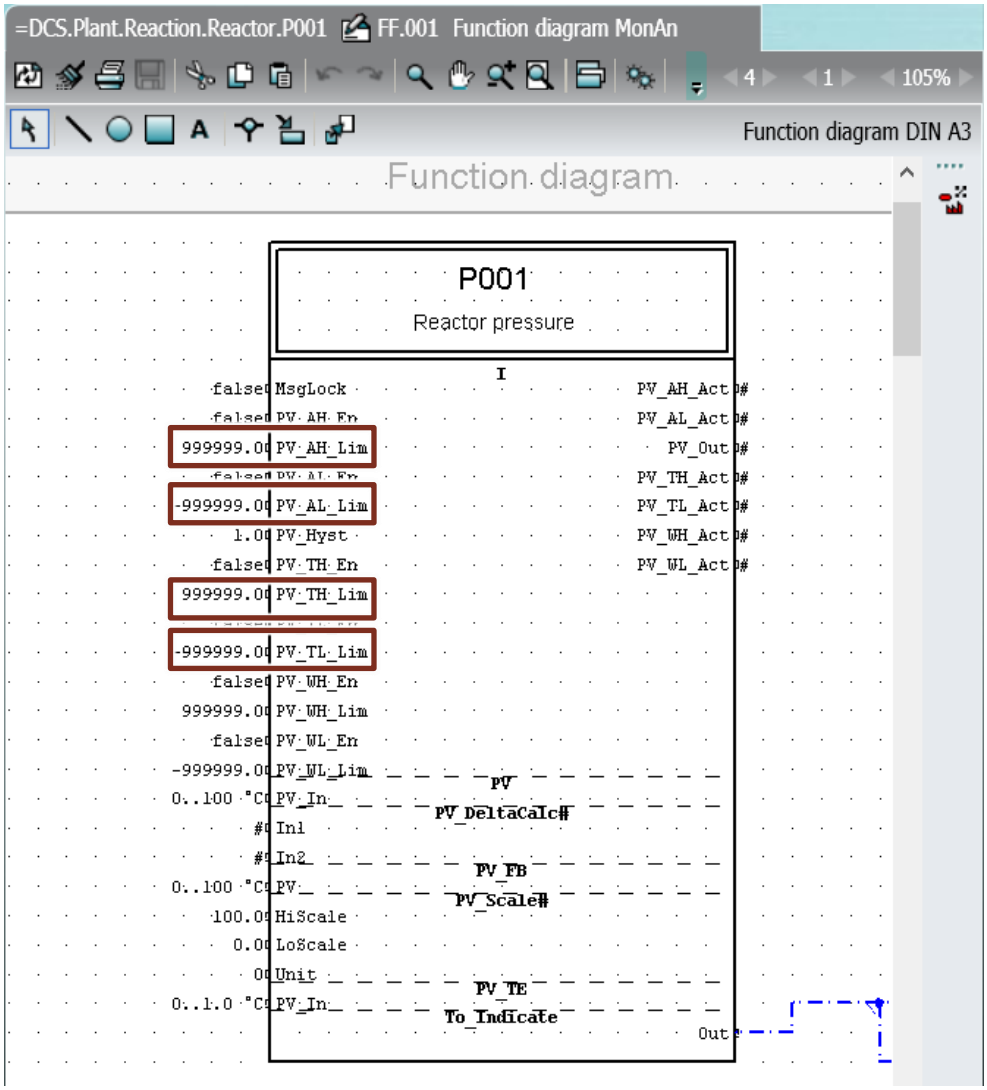
Comparison with PAA

1. Open the view "Units" in the PAA-project.
2. Navigate to "P001" CM.
3. Open the corresponding logic diagram with a double click ("Function diagram").
   Here you can see that the block's old parameter values are still present at the inputs. You should now synchronize and accept these with the PCS 7-project.



4. Close the logic diagram ("Function diagram").
5. For the matching, open the "Import / Export PCS 7" dialog.
   Click on the button "Import / Export PCS 7" in the PAA menu bar .
6. Open the "Import" tab.
7. Select the "PCS 7-project" option.
8. Select the PCS 7 sample project.
9. In the "Filter" directory, activate the following check boxes

   - "Plant hierarchy"
   - "CM instances"
   - "Hardware"
   - "Extended parameter"
   - "Functions"
   - "Signal attributes low/high scale value, unit"

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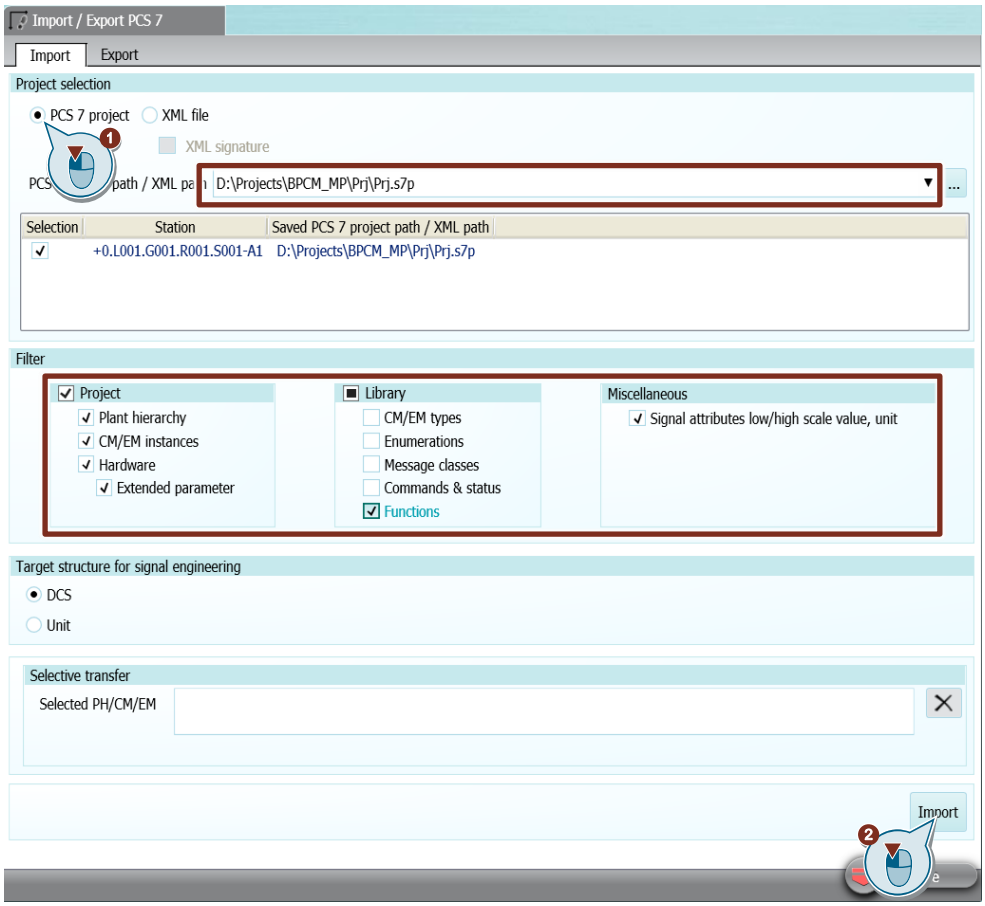
10. Click on "Import".

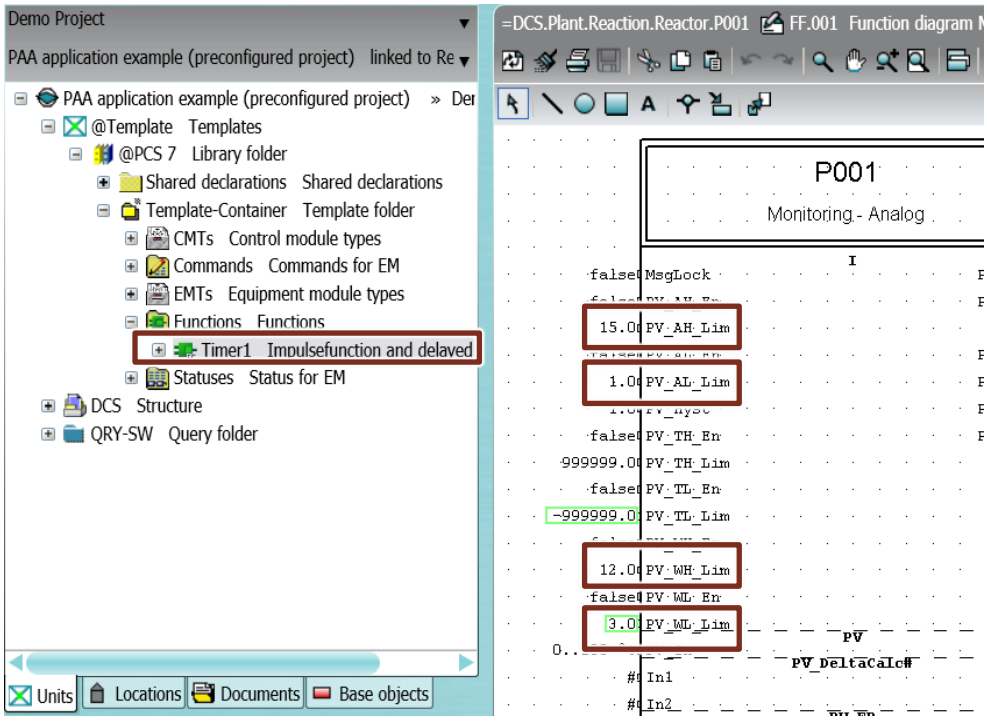


11. Click on the button to start the data matching.

Result

The imported standard function was stored in the PAA-project in the "Units" view under the "@Template > @PCS 7 > Template Container > Functions" node.

In addition, the changed parameter values of the CM "P001" were transferred to the PAA-project and automatically updated at the corresponding point.



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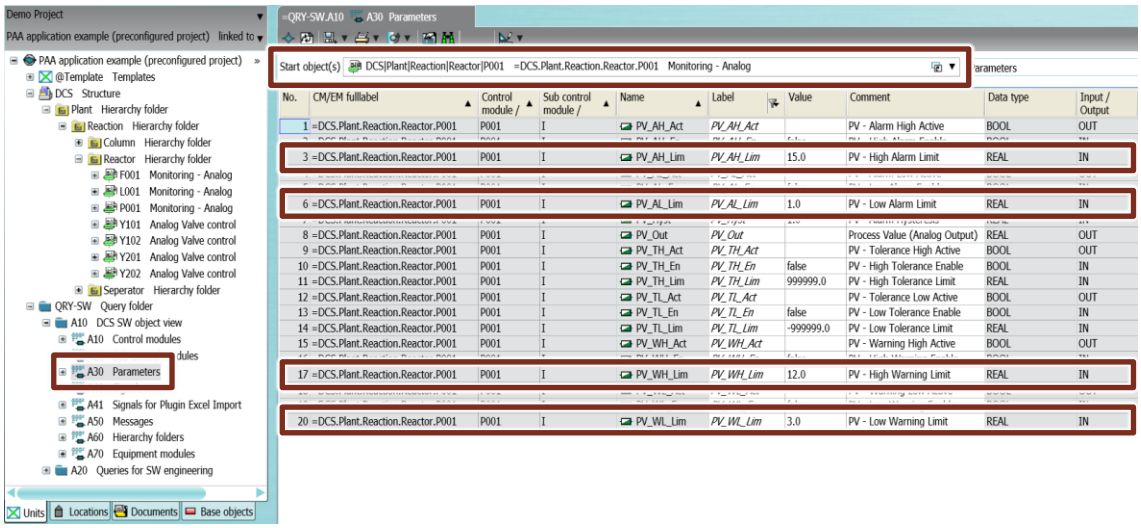
You can also display and change the parameters by parameter in a list. The PAA query "A30 Parameter" is available for this purpose. This displays all parameters below the start object, and can be filtered and adjusted.



So you have learned how to synchronize changes from the PCS 7-project with the PAA-project so that both projects are identical again.

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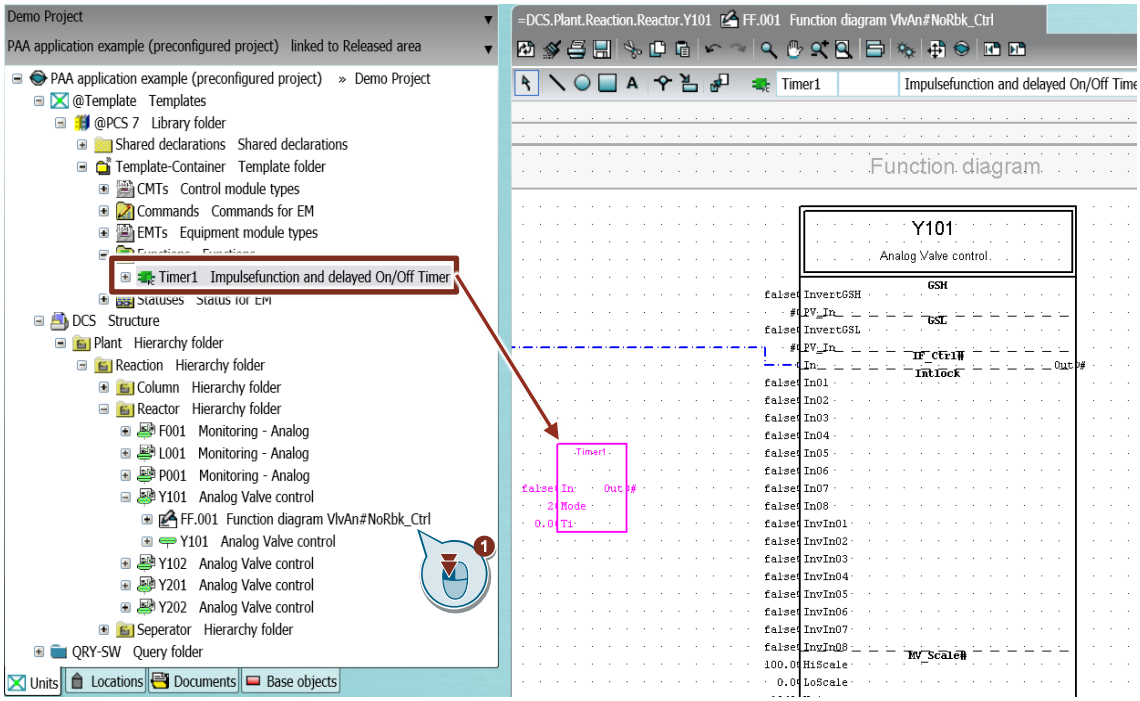
3.7.2. Creating an interlock system in PAA and matching with PCS 7

This section describes how to synchronize/accept changes in the PAA-project with the PCS 7-project.

In the PAA sample project, create a locking logic in the logic diagram ("Function diagram") of the CM "Y101" and then transfer it to the PCS 7-project so that both projects are identical again.

Creating an interlock system in PAA

1. Open the view "Units" in the PAA-project.
2. Navigate to the "Y101" CM.
3. Open the corresponding logic diagram ("Function diagram") with a double click.
4. In the function diagram create an example interlock system that does the following:
   - If the pressure gauge "P001" gives an alarm that the pressure in the reactor is too high, the valve "Y101" should be closed.
   - To ensure that the signal was not just a short peak, the previously created standard function "Timer1" is used. Only when the signal is present for a while is it passed on to the input of the interlock module of the CM "Y101" and the valve "Y101" is closed.
5. To do this, drag and drop the standard function "Timer1" onto the function diagram of the "Y101" CM.



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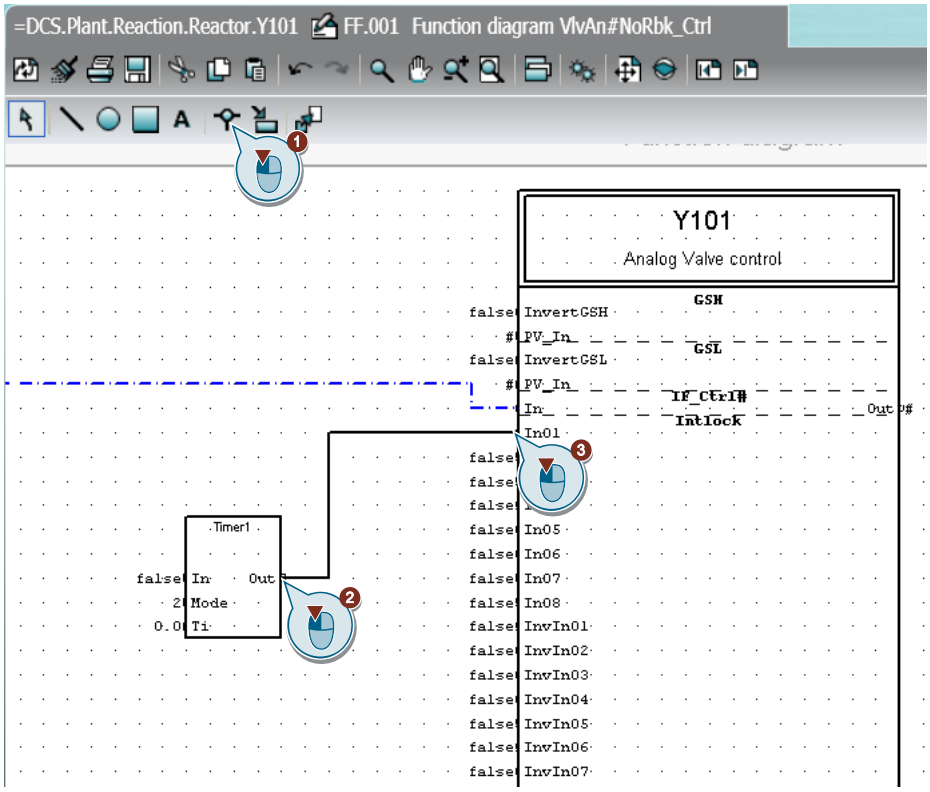
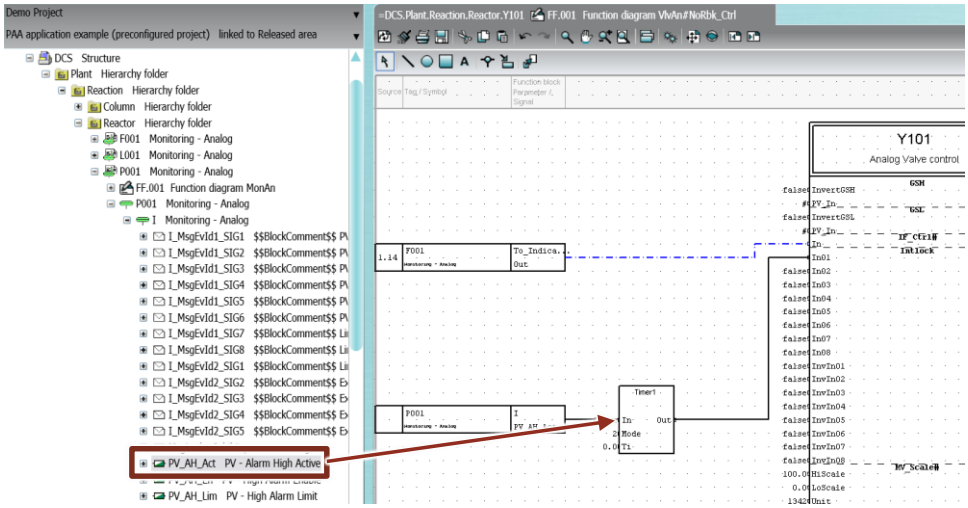
6. Connect the "Out" output of the "Timer1" module to the "In01" input of the "Y101" module's "Interlock" block field.



7. Now create the following connection:

Output			Input		
CM	**Block**	**Connection**	**CM**	**Block**	**Connection**
P001	I	PV_AH_Act	Y101	Timer1	In

Setting the connections is described in the section 3.5.1 in detail.



8. Click on the "Save" button in the PAA menu bar to save the changes.
9. Close the function diagrams.

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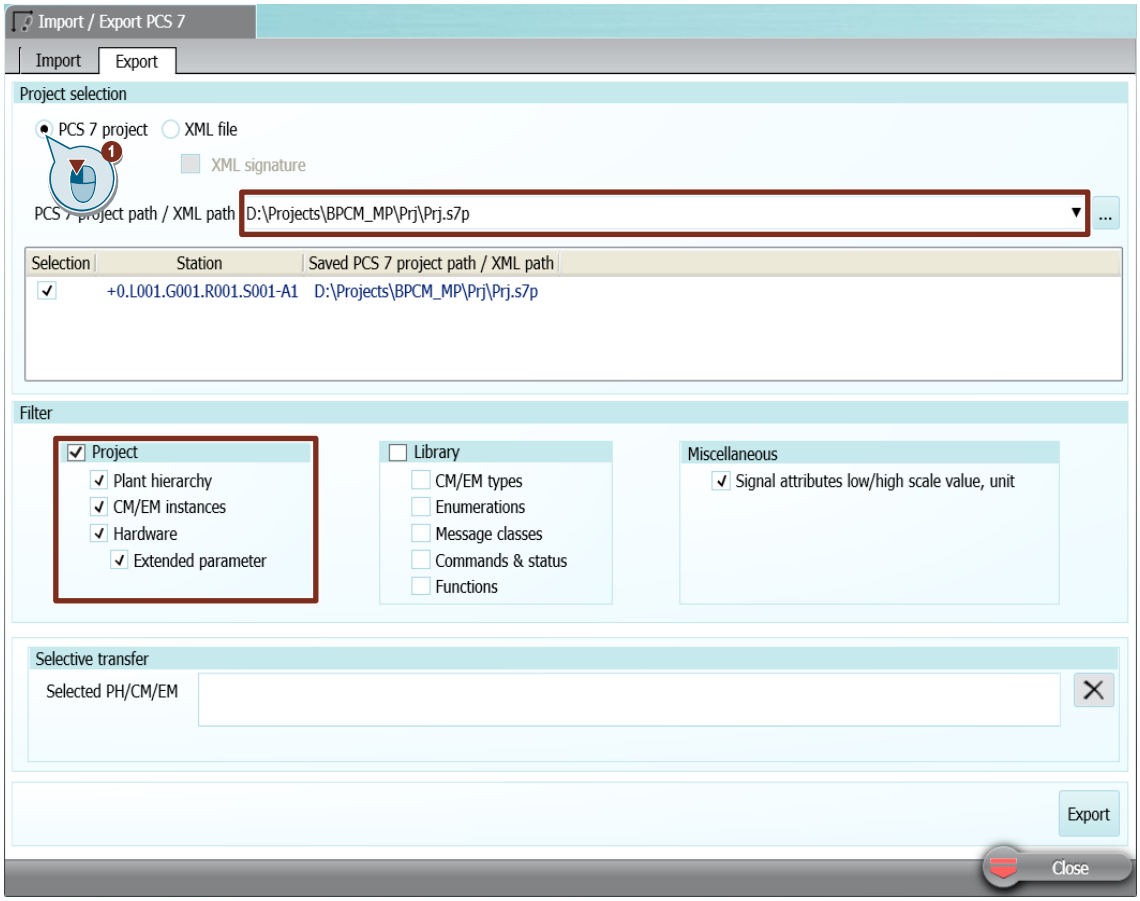
Matching with SIMATIC PCS 7

Transfer the changed project data to the PCS 7-project.

1. Click on the "Import/Export PCS 7" button in the PAA menu bar .
2. Open the "Export" tab.
3. Select the "PCS 7-project" option.
4. Select the PCS 7 sample project.
5. In the "Filter" directory you can state which data are to be exported and which are to be created. In the case of the example project, activate the following check boxes:
   - Activate all option boxes under "Project",
   - Deactivate all option boxes under "Library".
6. Click on the "Export" button, to transfer the modified data to PCS 7.



7. Click on the button, to start the export to PCS 7.
8. Click on the "Save" button in the PAA menu bar and close the "Import / Export PCS 7" dialog.

Result

The data from the PAA-project have been successfully exported into, and automatically generated in the PCS 7-project.

The following data have been created:

- Updated CM "P001" and "Y101" with standard function
- Connection between CM "P001" and "Y101".

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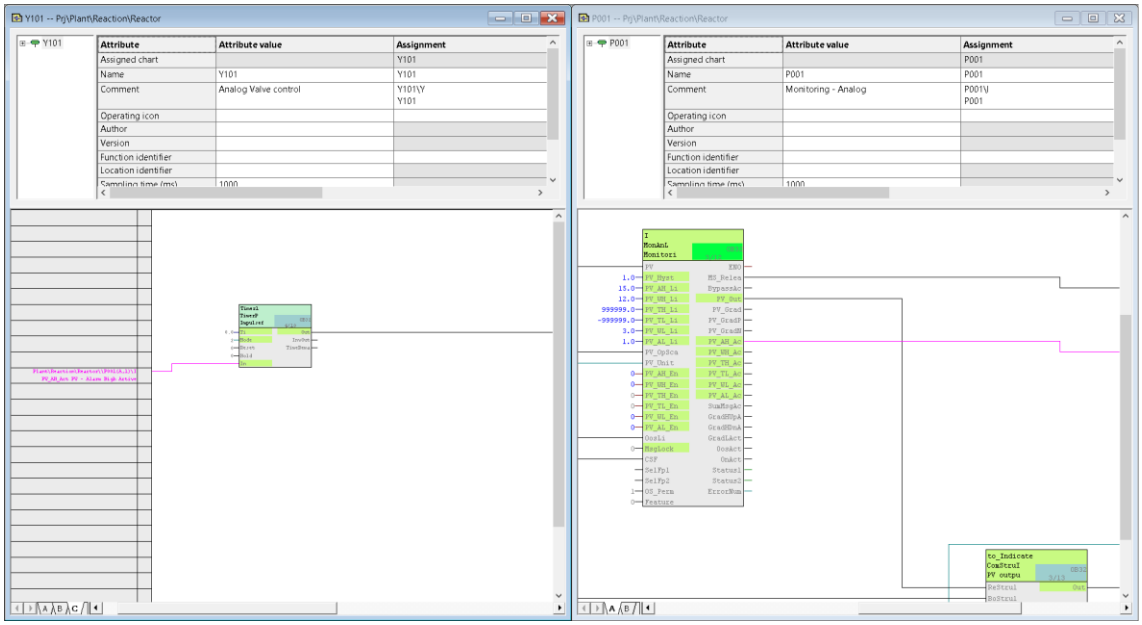

You have learned how to synchronize changes from the PAA-project with the PCS 7-project so that both projects are identical again.

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4. Appendix

4.1. Service and support

SiePortal

The integrated platform for product selection, purchasing and support - and connection of Industry Mall and Online support. The SiePortal home page replaces the previous home pages of the Industry Mall and the Online Support Portal (SIOS) and combines them.

- Products & Services
  In Products & Services, you can find all our offerings as previously available in Mall Catalog.
- Support
  In Support, you can find all information helpful for resolving technical issues with our products.
- mySieportal
  mySiePortal collects all your personal data and processes, from your account to current orders, service requests and more. You can only see the full range of functions here after you have logged in.

You can access SiePortal via this address: sieportal.siemens.com

Technical Support

The Technical Support of Siemens Industry provides you fast and competent support regarding all technical queries with numerous tailor-made offers – ranging from basic support to individual support contracts.
Please send queries to Technical Support via Web form: support.industry.siemens.com/cs/my/src

SITRAIN – Digital Industry Academy

We support you with our globally available training courses for industry with practical experience, innovative learning methods and a concept that's tailored to the customer's specific needs.
For more information on our offered trainings and courses, as well as their locations and dates, refer to our web page: siemens.com/sitrain

Industry Online Support app

You will receive optimum support wherever you are with the "Industry Online Support" app. The app is available for iOS and Android:

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4.2. Links and literature

Subject area	Link / description
Siemens Industry Online Support	https://support.industry.siemens.com
Download page for this entry	https://support.industry.siemens.com/cs/ww/en/view/109742154
COMOS Product page	https://www.siemens.com/global/en/products/automation/industry-software/plant-engineering-software-comos.html
SIMATIC PCS 7 Product page	https://www.siemens.com/global/en/products/automation/process-control/simatic-pcs-7.html
COMOS topic page	https://support.industry.siemens.com/cs/ww/en/view/109739837
SIMATIC PCS 7 topic page	https://support.industry.siemens.com/cs/ww/en/view/63481413
SIMATIC Plant Automation Accelerator topic page	https://support.industry.siemens.com/cs/ww/en/view/109767120
Application Example: Controlled plant engineering from the outset with COMOS FEED	https://support.industry.siemens.com/cs/ww/en/view/109480737 Become acquainted with the basic functions and benefits of COMOS FEED and go through a complete standard workflow to generate all the relevant data for the bidding phase and to create the foundations for the basic and detail engineering phase.
Application Example: Fast and easy generation of Piping and Instrumentation Diagrams with COMOS P&ID using a practical example	https://support.industry.siemens.com/cs/ww/en/view/109480739 Learn about the basic functions and benefits of COMOS P&ID. This application example guides you through a standard workflow to map process engineering, pipe engineering and measurement and control engineering (MSR) procedures.
Application Example: Integrated Engineering with COMOS and SIMATIC PCS 7 using a practical example	https://support.industry.siemens.com/cs/ww/en/view/70922226 Learn about the basic functions and benefits of COMOS in conjunction with SIMATIC PCS 7. The application example takes you through a standard workflow. Based on the example, you will be shown how you can exchange data between the two systems.
Application example: Control Module (CM) Technology-Efficient Engineering in SIMATIC PCS 7	https://support.industry.siemens.com/cs/ww/en/view/109475748 The Control Module (CM) technology is used not only to optimize engineering efforts but also to enable a standardized structure of the automation program while quickly adapting to future requirements

4.3. Change documentation

Version	Date	Modifications
V1.0	08/2017	First version
V2.0	12/2018	Second version
V3.0	07/2021	Third version
V3.3	06/2024	Upgrade to SIMATIC PCS 7 PAA V3.3 and SIMATIC PCS 7 V9.1 SP2

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