

METRIS X

FH CAMPUS 02 Automatisierungstechnik

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Inhaltsangabe

- Entwicklung
- Metris X Controller
- Eigenschaften

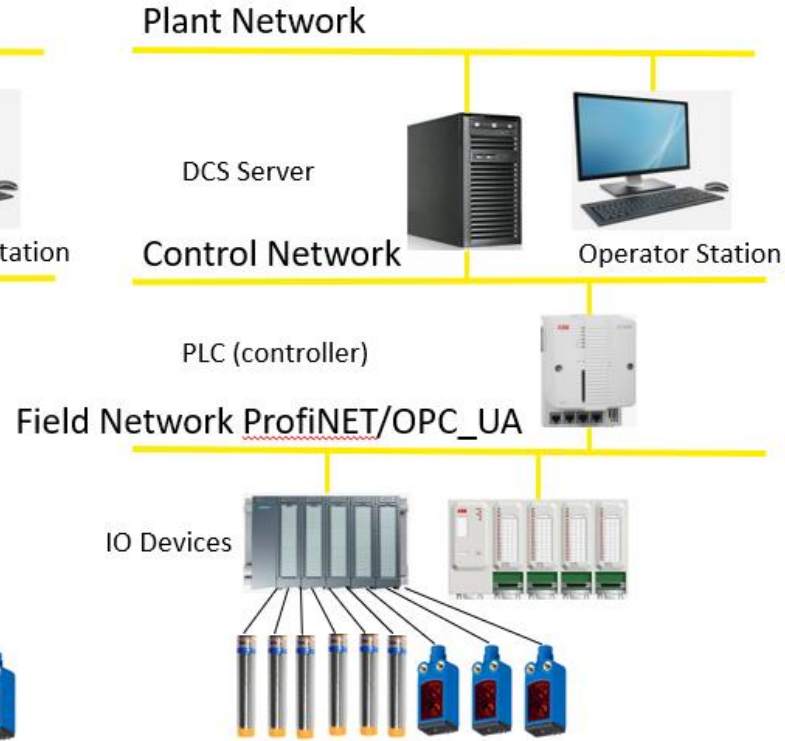
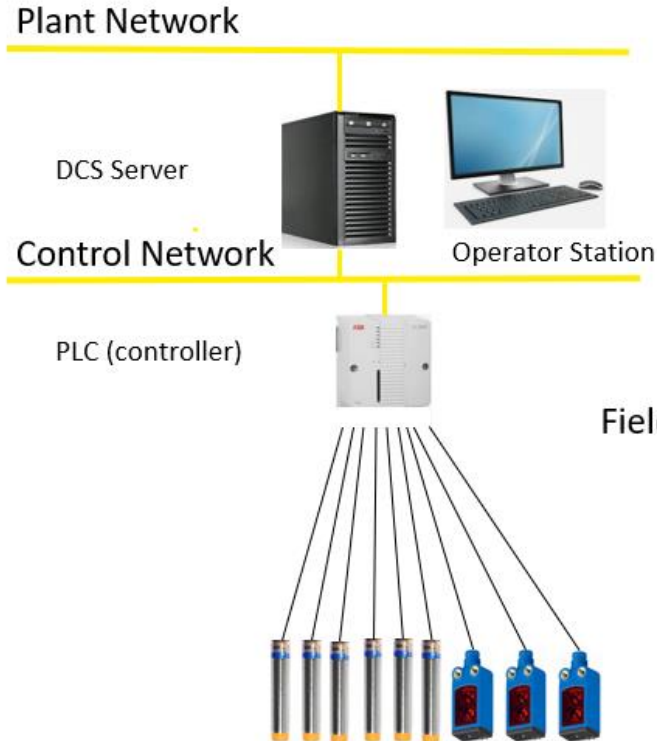
- Programmoberfläche
- Beispiel: Tank Level

Metris X – Entwicklung

Andritz DCS (Distributed Control System)

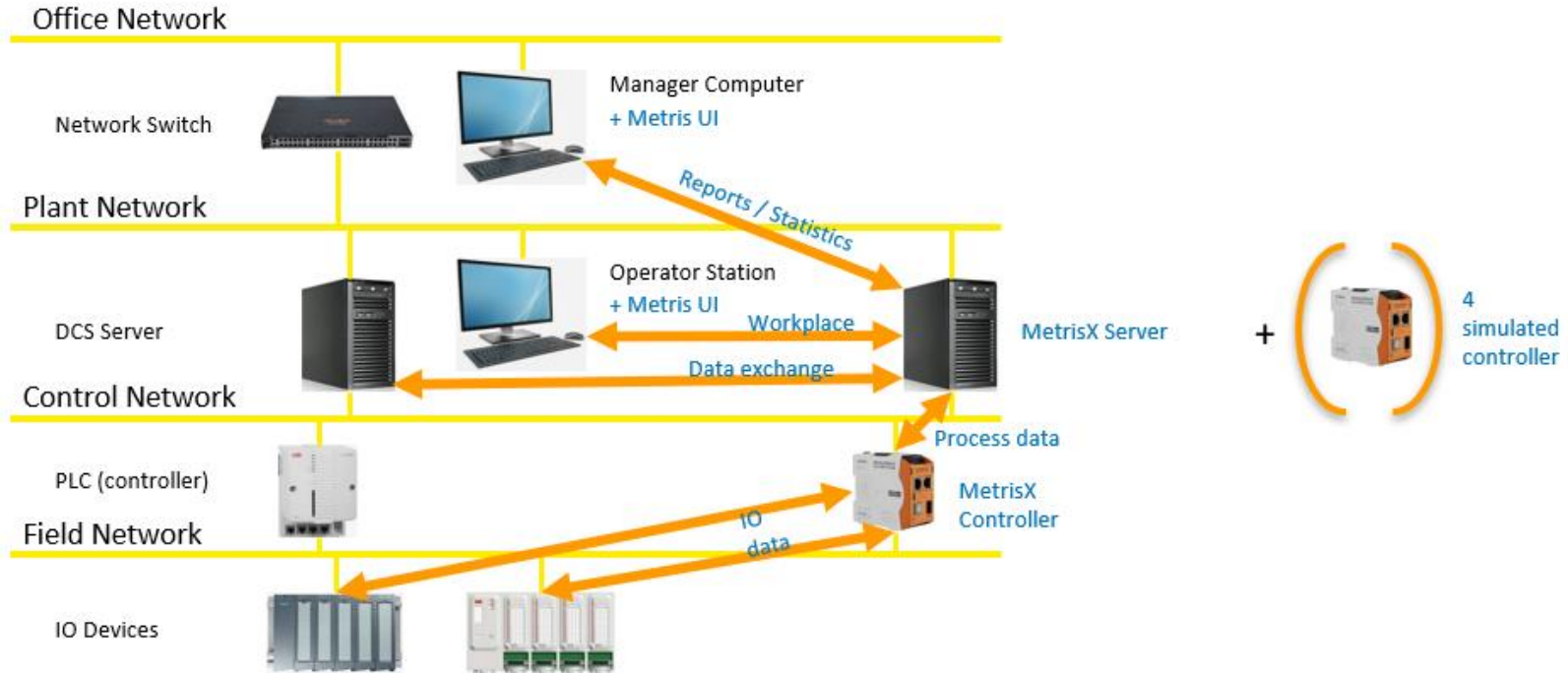
- Brasilianische Firma startet Metris X zu entwickeln
- SPS und Runtime seit 2 Jahren in der Entwicklung
- Anlage mit 2000 Anschlüssen
- Nicht für Sicherheitsanwendungen zertifiziert
- Für ganz MetrisX sind ca. 30 Personen zuständig

Controller



Plant Automation & Metris X

MetrisX components and integration

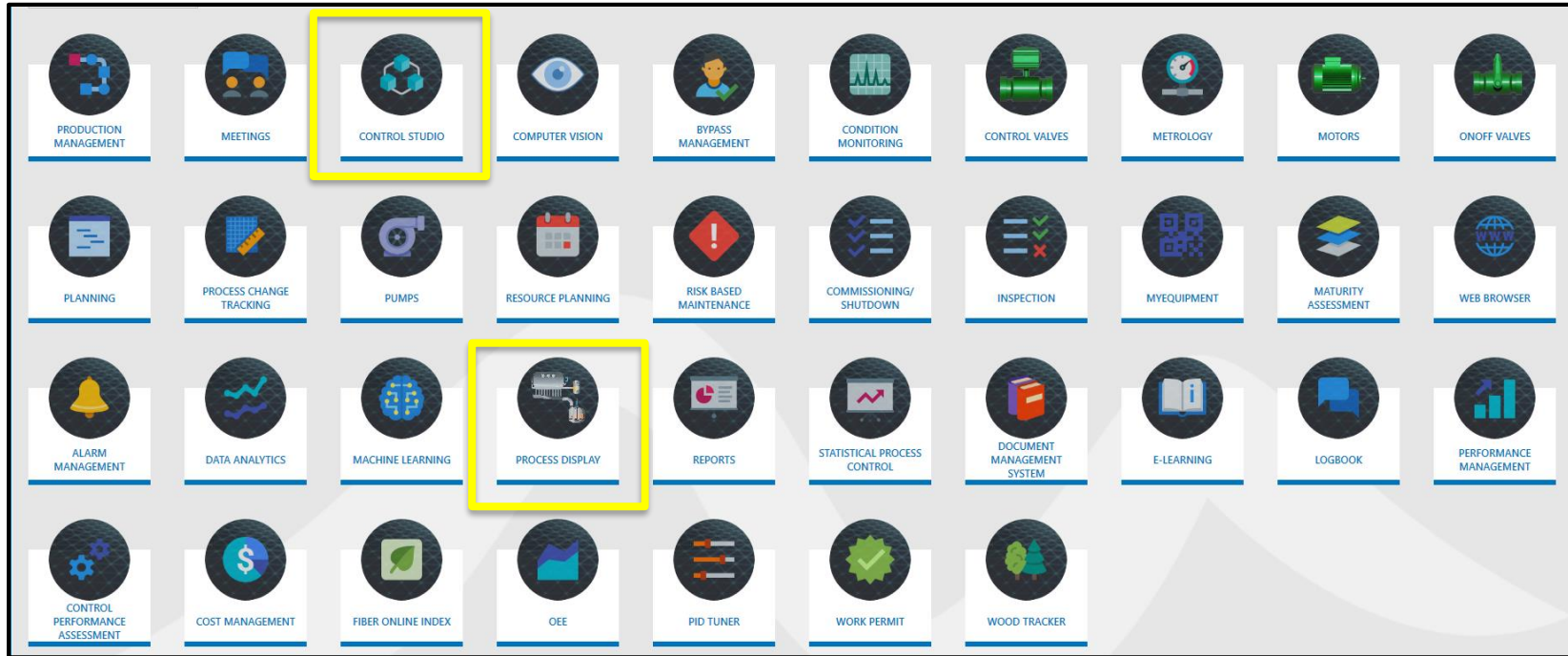


Metris X - Andritz DCS

- Unabhängig von Herstellern
- Von der Maschine zur Fabrik
- Grafische Funktionssprache
- Fernzugriff
- Chatbot

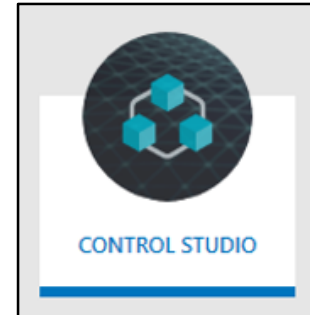


Metris X - Apps



Metris X - Apps Control Studio

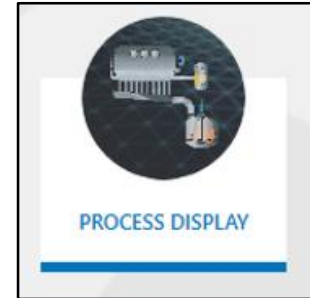
- Input- und Output Variablen
- Prozesslogik definieren
- Prozesswerte einstellen und simulieren



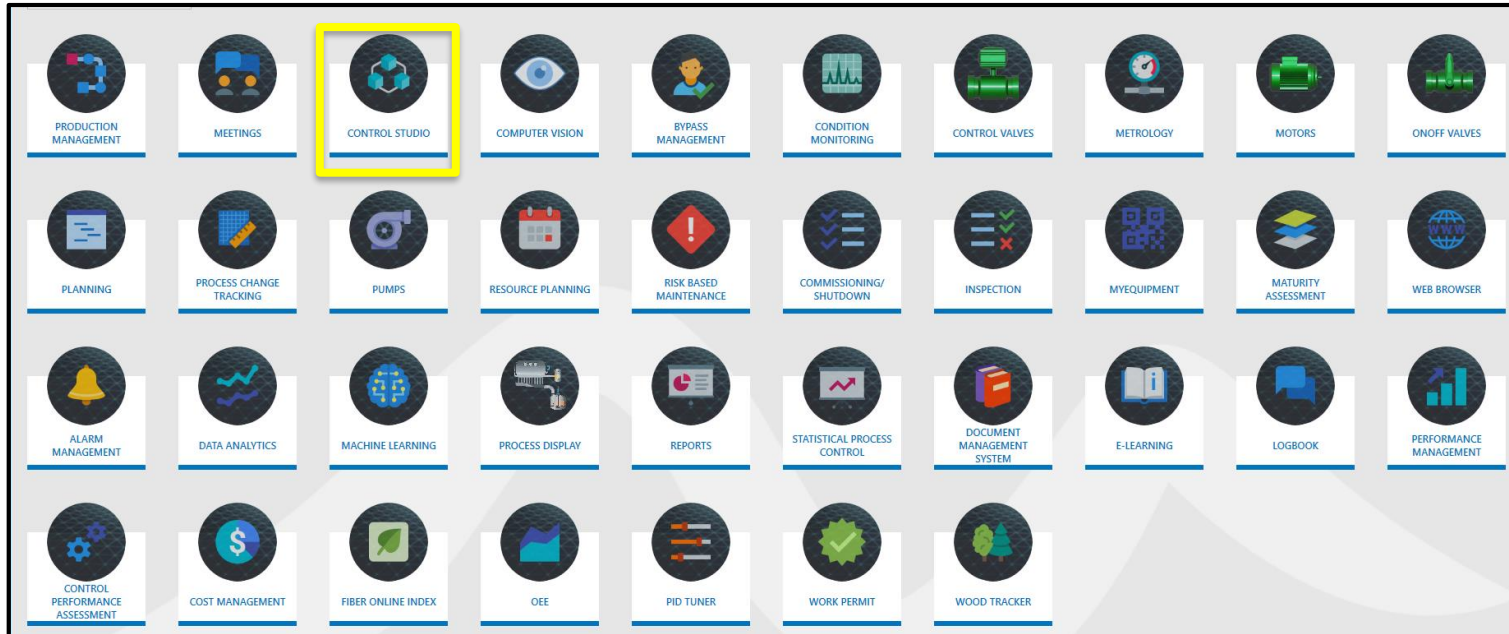
Metris X - Apps

Process Display

- Visualisieren
- „Alarms and Events“
- Inbetriebnahme

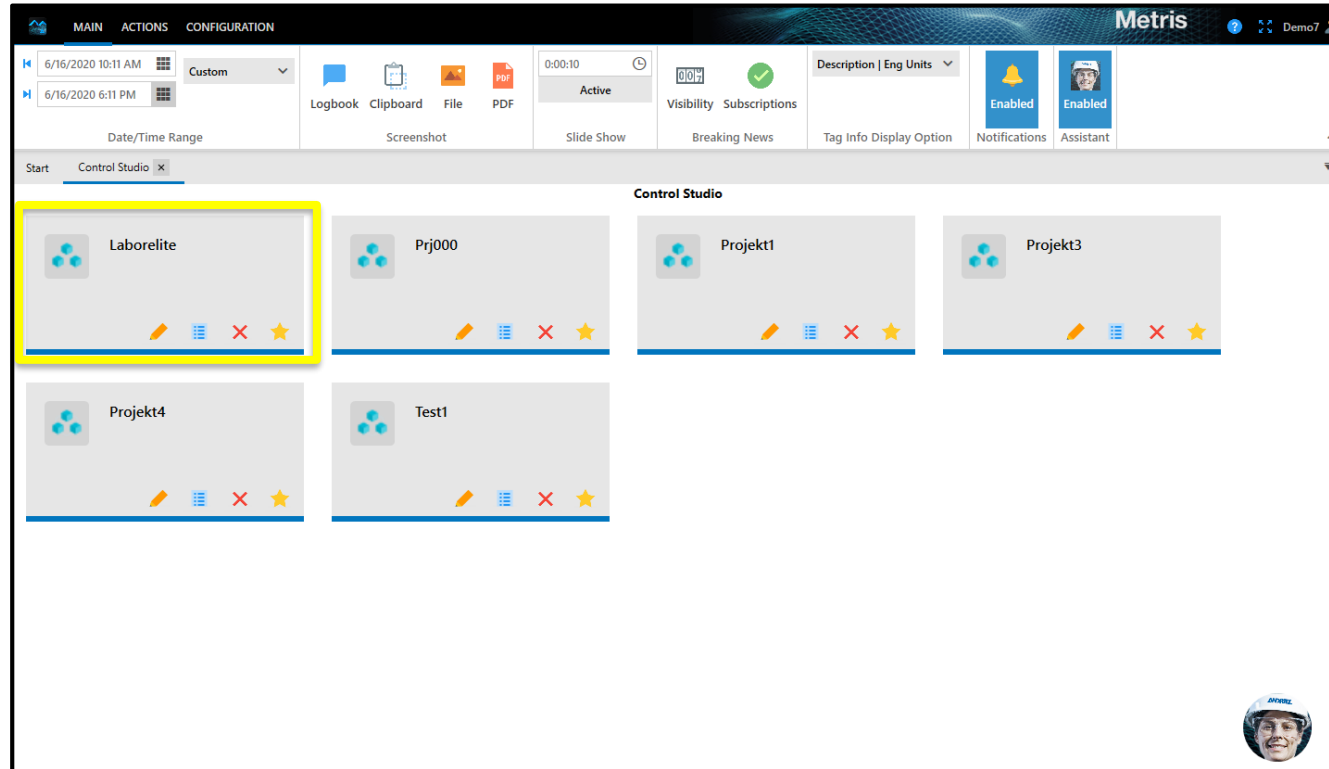


Apps

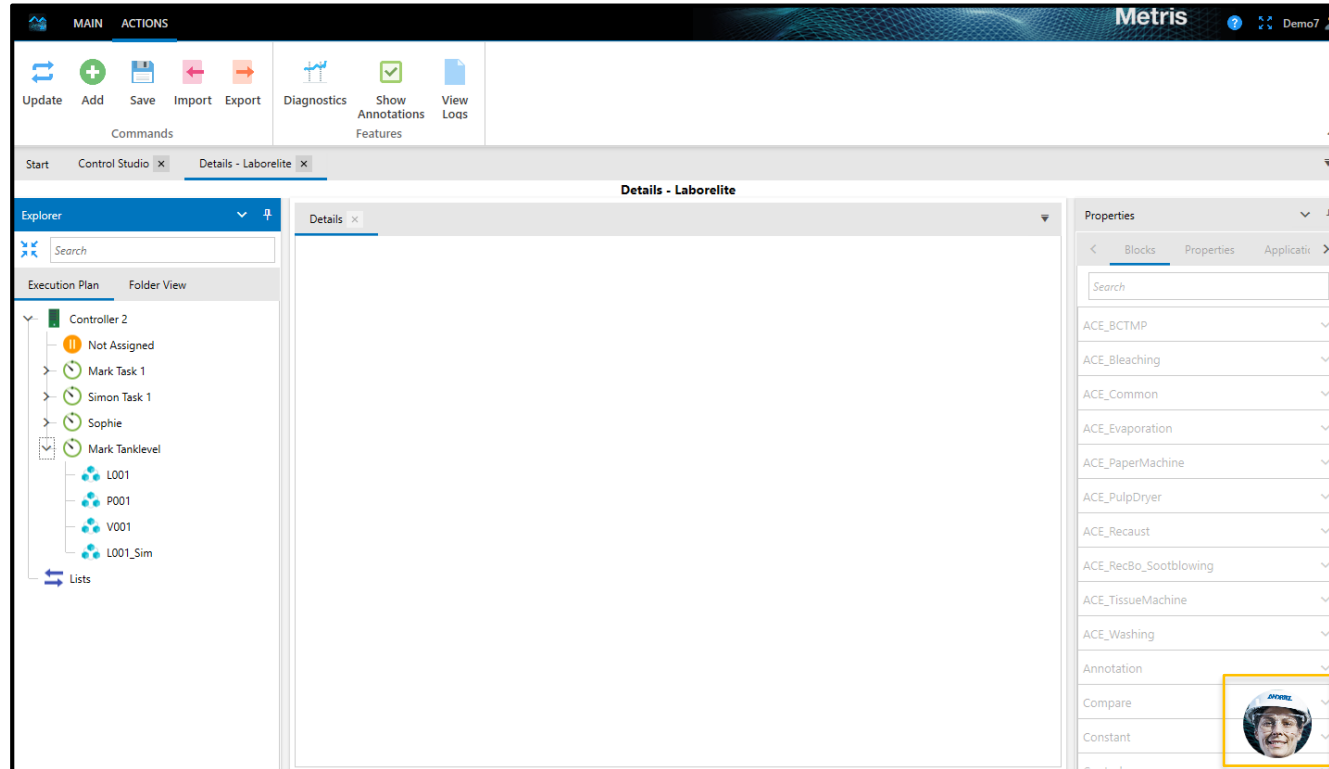


Control Studio

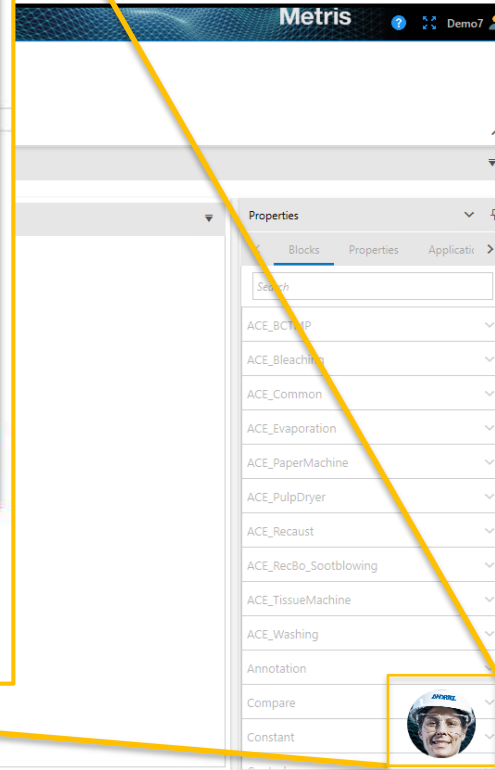
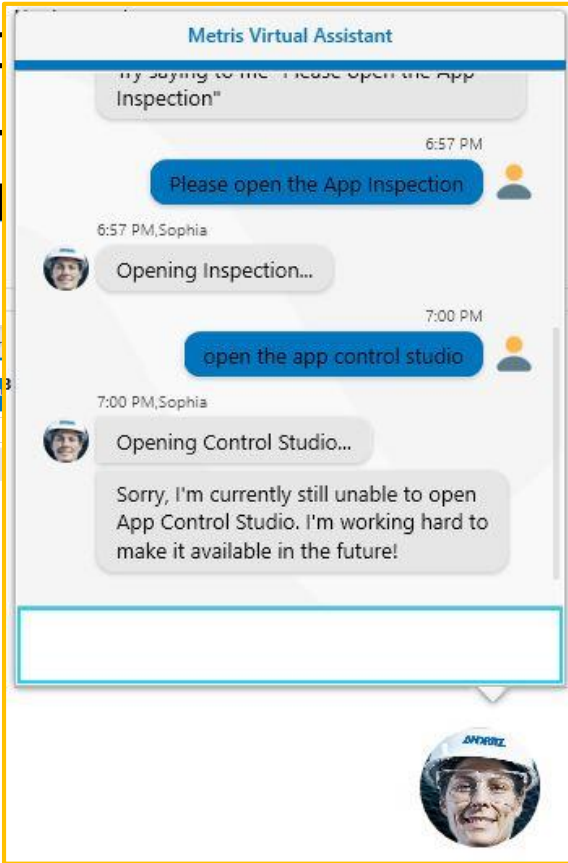
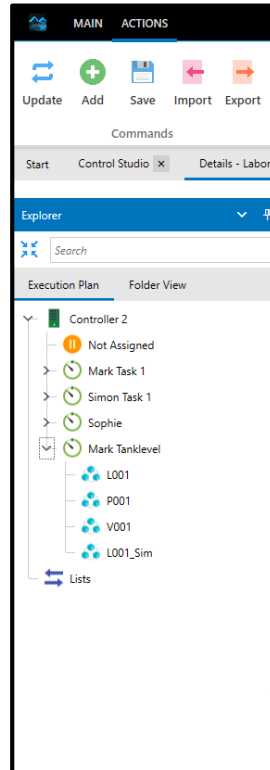
Projekterstellung



Benutzeroberfläche Sophia - Hilfefunktion

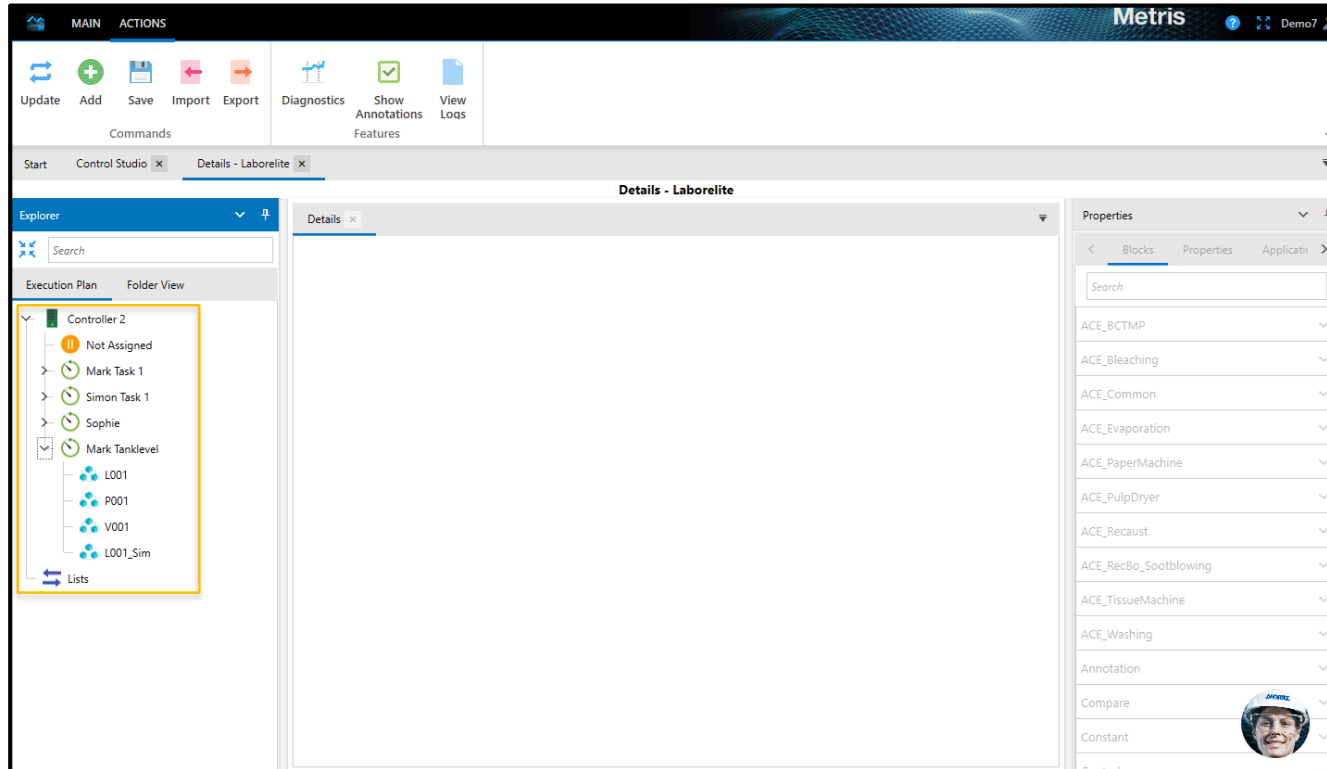


Benutzer Sophia - H



Benutzeroberfläche

Execution Plan

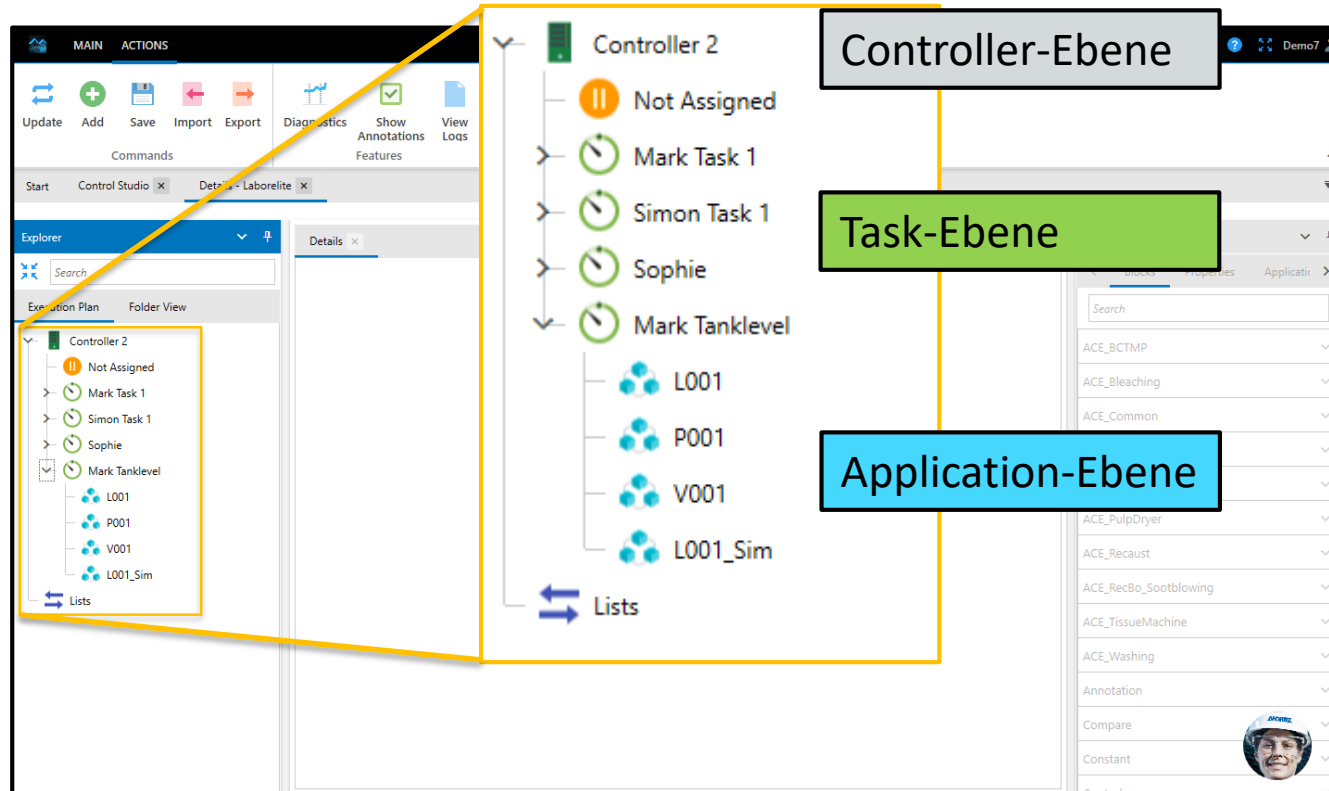


Benutzeroberfläche

Execution Plan

The screenshot displays the MetrisX software interface, which is divided into several panels. The top panel shows the 'MAIN' and 'ACTIONS' tabs. Below this is a toolbar with icons for 'Update', 'Add', 'Save', 'Import', 'Export', 'Diagnostics', 'Show Annotations', and 'View Logs'. The 'Start' button is also visible. The 'Execution Plan' panel on the left shows a tree structure under 'Controller 2' with the following items: 'Not Assigned', 'Mark Task 1', 'Simon Task 1', 'Sophie', and 'Mark Tanklevel'. The 'Mark Tanklevel' item is expanded, showing a sub-tree with 'L001', 'P001', 'V001', and 'L001_Sim'. The 'Properties' panel on the right shows a list of properties, including 'ACE_BCTMP', 'ACE_Bleaching', 'ACE_Common', 'ACE_Evaporation', 'ACE_PaperMachine', 'ACE_PulpDryer', 'ACE_Recaust', 'ACE_RecBo_Sootblowing', 'ACE_TissueMachine', 'ACE_Washing', 'Annotation', 'Compare', and 'Constant'. A small circular profile picture of a person is visible in the bottom right corner of the Properties panel.

Benutzeroberfläche Execution Plan

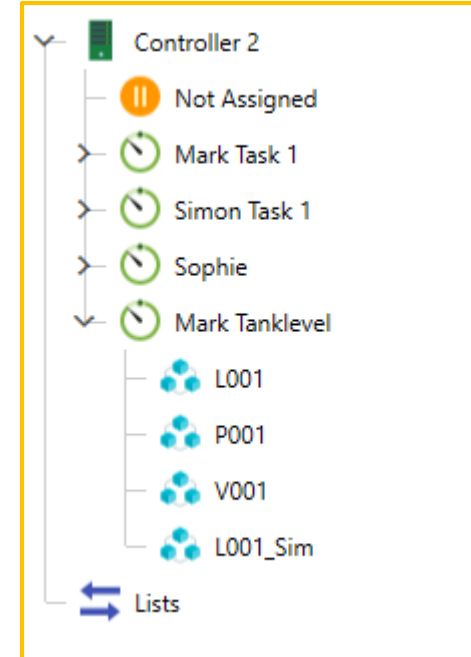


Beispiel: Tanklevel Aufgabe

Die Füllhöhe eines mit Flüssigkeit gefüllten Tanks soll mit einem Ventil und einer Pumpe so geregelt werden, dass sie einen definierten Bereich, im Automatikbetrieb, nicht über- oder unterschreitet.

Beispiel: Tanklevel Applications

- L001 - Tank-Bausteine
- P001 - Pumpen-Bausteine
- V001 - Ventil-Bausteine
- L001_Sim - Simulations-Bausteine



Update

Add

Save

Import

Export

Diagnosics

Show Annotations

View Logs

StartControl Studio xDetails - Laborelite x

Explorer

Execution PlanFolder View

Controller 2

- Not Assigned
- Mark Task 1
- Simon Task 1
- Sophie
- Mark Tanklevel
 - L001
 - P001
 - V001
 - L001_Sim

Lists

Details - Laborelite

Details xL001 x

Inputs

L001_PV

XDoubleInserter #1

- 0 In
- 192 Out
- Status

L001 ASigin #2

- 0 PV
- qSbsPV
- False Reset
- 0 Filter
- False Init
- 50 HiHiLim
- 50 HiLim
- 40 LoLim
- 10 LoLoLim
- 90 HiHiAlmLim
- 0 HiHiAlmDel
- False HiHiAlmDis
- 70 HiAlmLim
- 0 HiAlmDel
- False HiAlmDis
- 30 LoAlmLim
- 0 LoAlmDel
- False LoAlmDis
- 10 LoLoAlmLim
- 0 LoLoAlmDel
- False LoLoAlmDis
- 0 Hyst
- True EnAlarm

Outputs

L001_HH

L001_H

L001_L

L001_LL

Properties

BlocksPropertiesApplicati

Search

xDCSDrivers

xDCSGeneric

ASigin

ASigOut

BSig

Logic4In

Logic8In

Mot1D

Mot1F

Mot2D

Mot2F

PIDv2

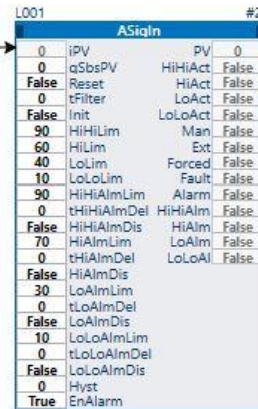
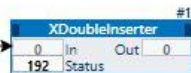
Seq2Dir

VivCtrlM

VivShOffM

VivShOffP

L001_IPV



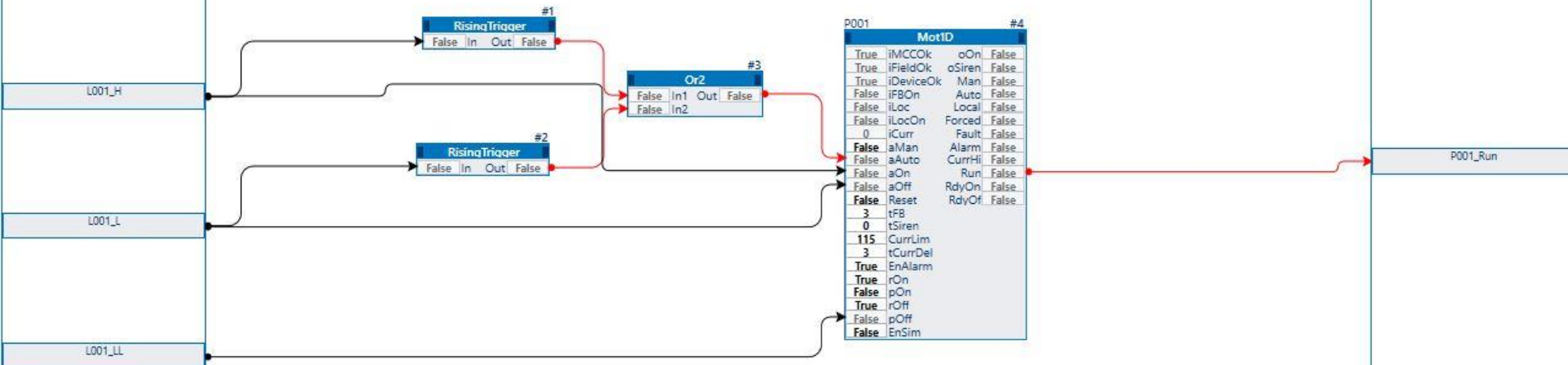
L001_HH

L001_H

L001_L

L001_LL

Beispiel: Tanklevel
L001 - Tank-Bausteine



Beispiel: Tanklevel

P001 - Pumpen-Bausteine

L001_HH

V001 #1

VlvShOffP		
False	iLSOpn	oOpn
False	iLSCls	oCls
False	iLoc	oSiren
False	iLocOpn	Man
False	iLocCls	Auto
False	aMan	Local
False	aAuto	Forced
False	aOpn	Fault
False	aCls	Alarm
False	Reset	Opene
5	tLS	Closed
False	NoLS	RdyOp
0	tSiren	RdyCls
True	EnAlarm	
True	rOpn	
False	pOpn	
True	rCls	
False	pCls	
False	EnSim	

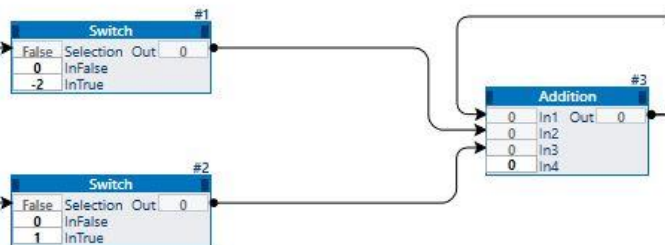
V001_Opened

V001_Closed

Beispiel: Tanklevel
V001 - Ventil-Bausteine

P001_Run

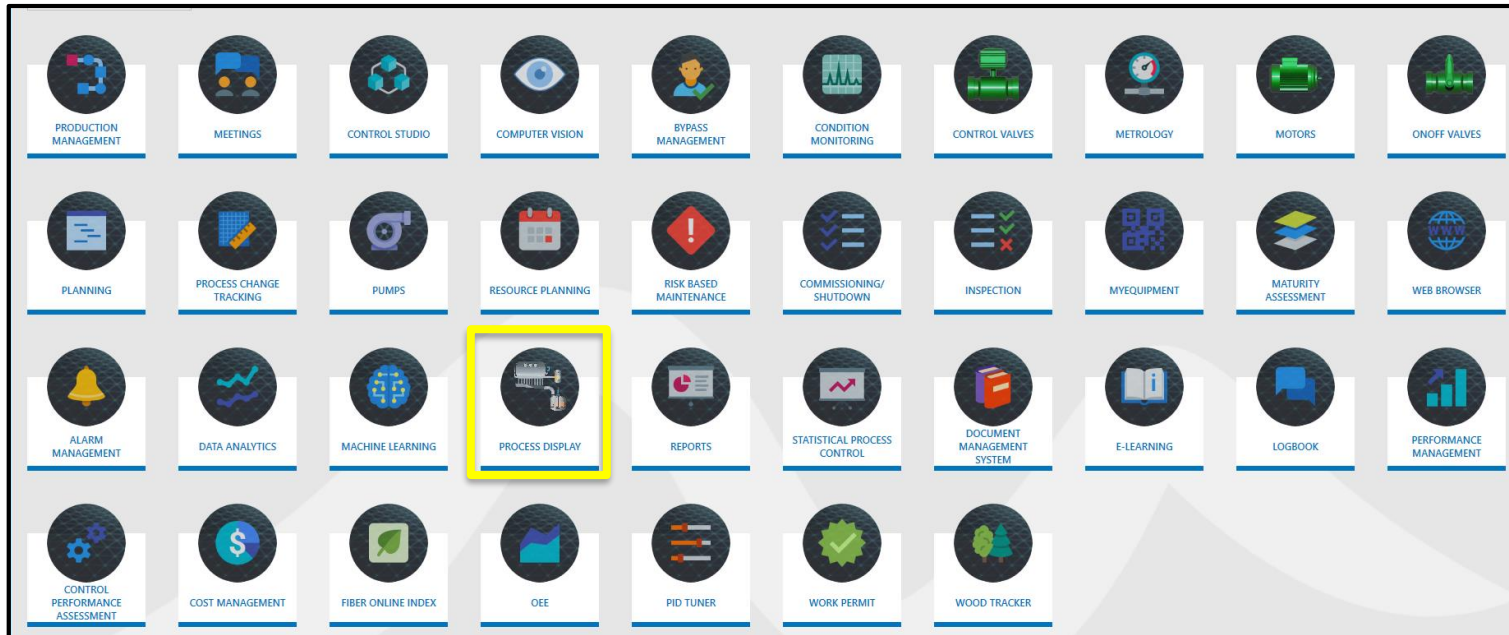
V001_Opened



L001_JPV

Beispiel: Tanklevel
L001_Sim - Simulations-Bausteine

Beispiel: Tanklevel Apps



MAIN ACTIONS FORMAT SETTINGS

Update Save Paste Cut Delete Copy Path Connector Pencil Tools Export to Image Import Image Export Import

Start Control Studio x Details - Laborelite x Process Display x Process Display Studio x Project2-Display2 Viewer x

Project2-Display2 Viewer

Beispiel: Tanklevel Process Display Viewer

Toolbox

MetrisX Objects V1

AnalogIn BinaryIn ManualLoadIn

Motor1Dir Motor2Dir OnOffValve

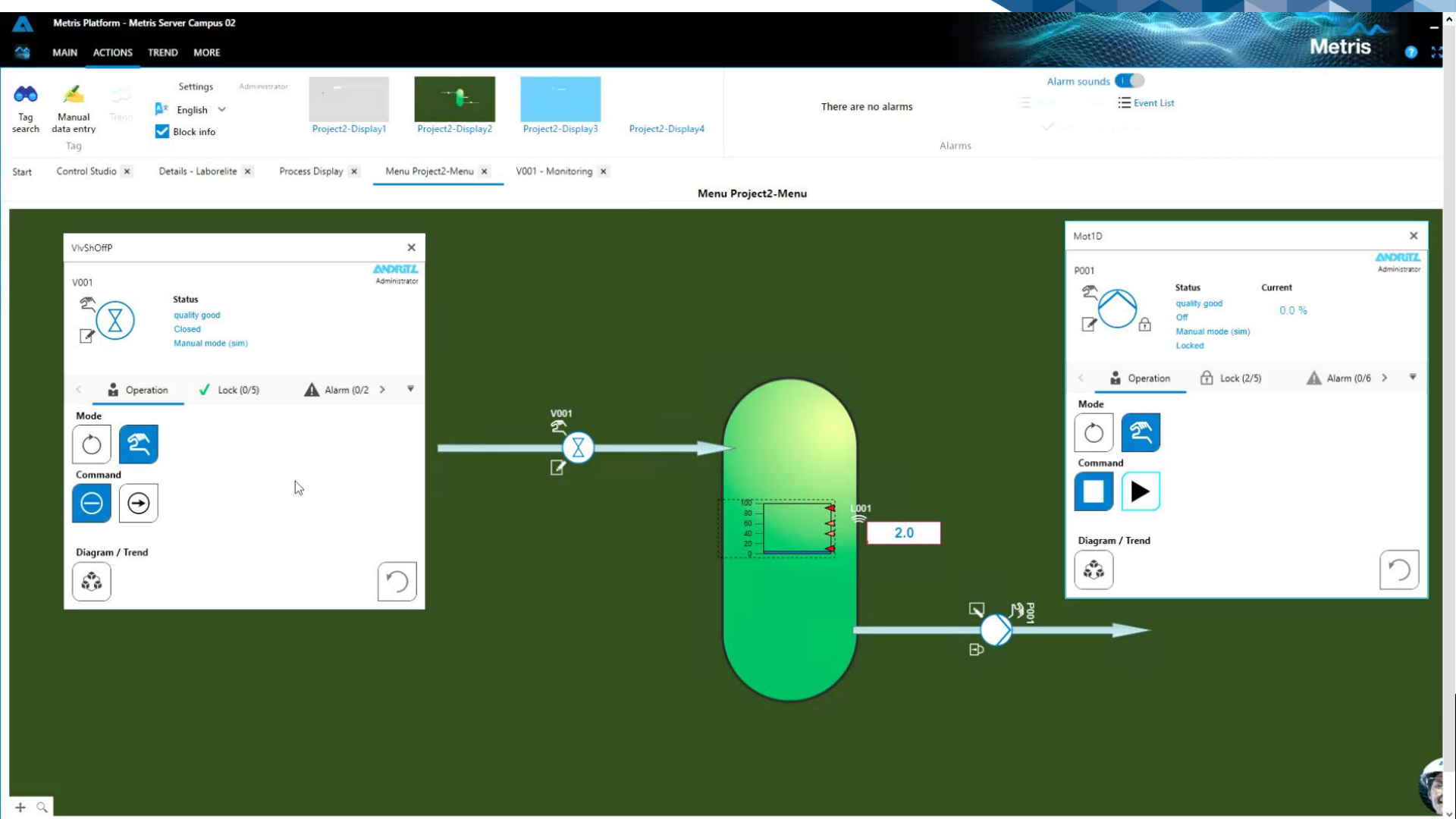
PID Interlock MpcMiso

SetBooleanPulse SetBooleanToggle

SetDouble SetInteger

View Galleries

Toolbox Properties



Vielen Dank für Ihre
Aufmerksamkeit

Ein Danke allein macht nicht satt.