

Belimo Digital Ecosystem Driver

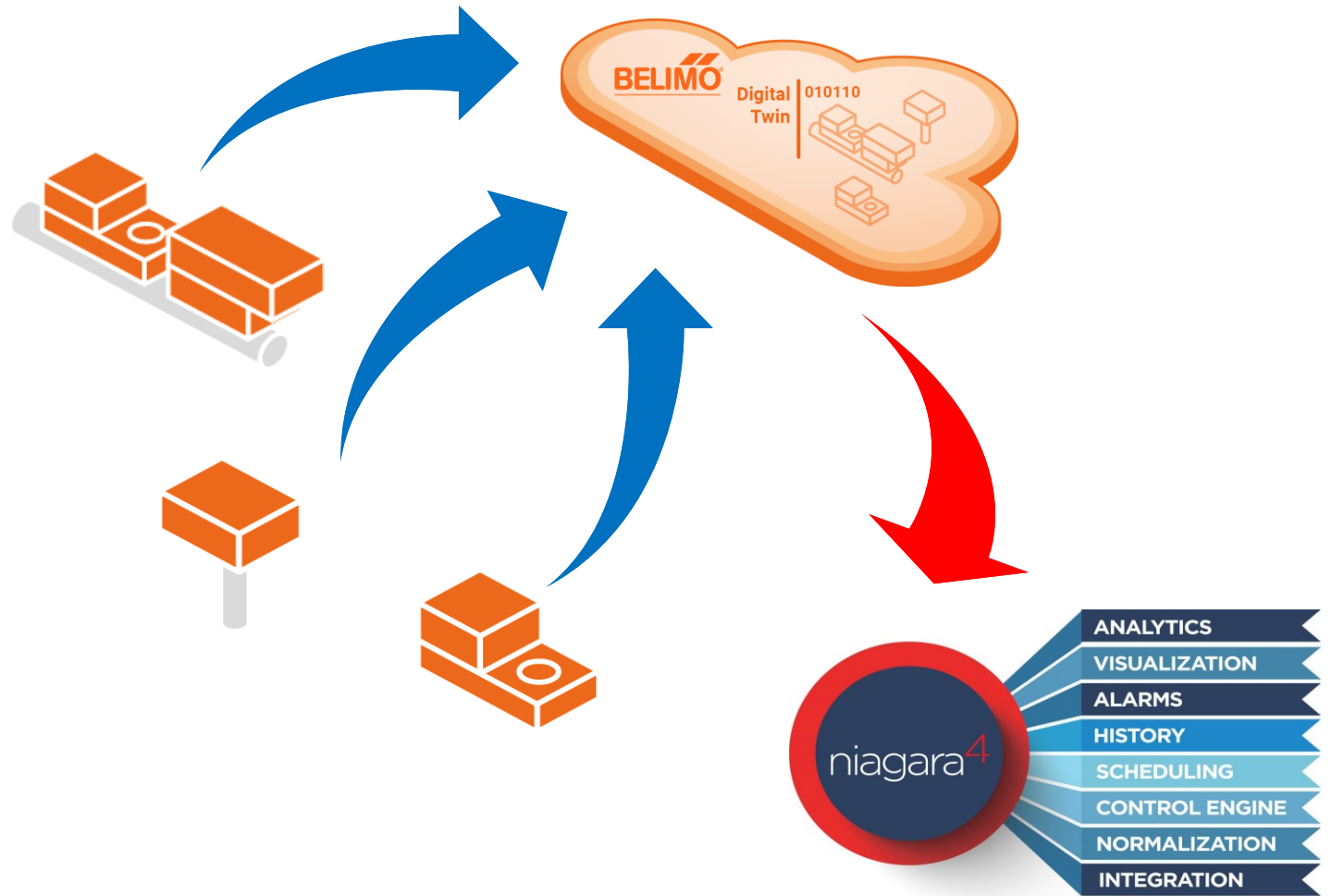
The Niagara Driver for connecting to the Belimo Cloud API

Contents

This is a guided demonstration about installation, activation and use of Belimo driver for Niagara framework.

The driver

The Belimo driver for Niagara framework allows N4 supervisor or Jace 8000 to display your Belimo Energy valve data.



Requirements

- Basic knowledge of Niagara 4 framework
- A Workbench PC installation
- A supervisor licensed installation
- Enough licensed resource points
- An active account on the Belimo Cloud

Installation

Next steps are about installation
of the driver before its use

The jar module

The driver is distributed by INLON for free in basic version.
The module and documentation can be downloaded from

[Niagara Marketplace](#)

niagara marketplace

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Copy into Workbench PC

When receiving updated or new module jar files, you have to copy them to your Workbench PC, as follows.

- Close the Workbench application.
- Copy directly into your `!/modules` directory. This makes the module(s) available in your Workbench environment, and also available to install in other remote platforms (when the installer runs, the module(s) are also copied into your software database, available for installation).

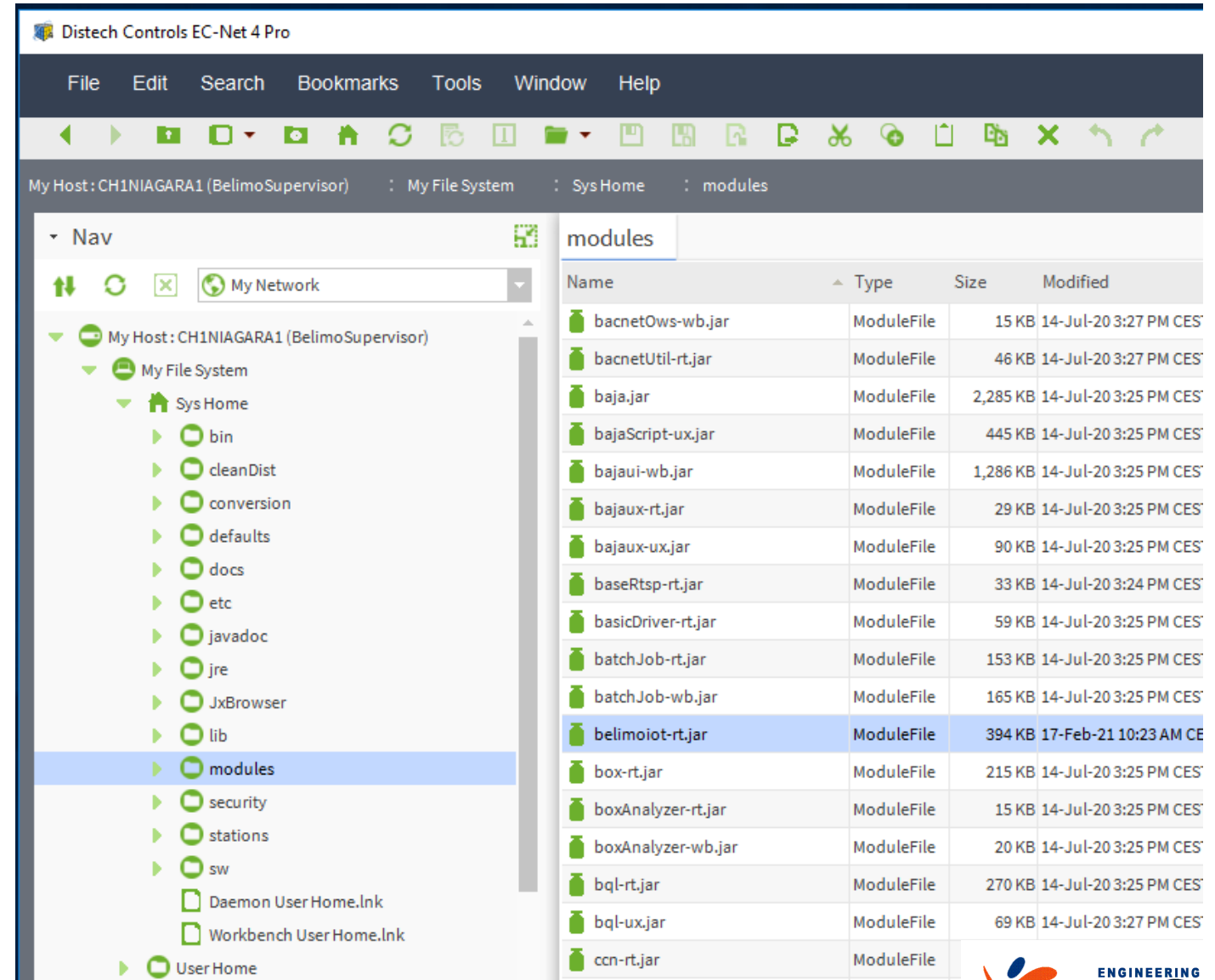
The Niagara modules folder

Take care to copy the module into the right current running version of Niagara platform.

Name	Date modified	Type	Size
batchJob-rt.jar	7/14/2020 3:25 PM	JAR File	154 KB
batchJob-wb.jar	7/14/2020 3:25 PM	JAR File	166 KB
belimoiot-rt.jar	2/17/2021 10:23 AM	JAR File	395 KB
boxAnalyzer-rt.jar	7/14/2020 3:25 PM	JAR File	16 KB
boxAnalyzer-wb.jar	7/14/2020 3:25 PM	JAR File	21 KB
box-rt.jar	7/14/2020 3:25 PM	JAR File	216 KB
bql-rt.jar	7/14/2020 3:25 PM	JAR File	27 KB

Check the presence of module

Open the Workbench application and search for belimoiot-rt module into system module folder.



The screenshot shows the Distech Controls EC-Net 4 Pro application interface. The top menu bar includes File, Edit, Search, Bookmarks, Tools, Window, and Help. The address bar shows the current location: My Host: CH1NIAGARA1 (BelimoSupervisor) : My File System : Sys Home : modules. The left sidebar shows a navigation tree with 'modules' selected. The main area displays a table of modules.

Name	Type	Size	Modified
bacnetOws-wb.jar	ModuleFile	15 KB	14-Jul-20 3:27 PM CES'
bacnetUtil-rt.jar	ModuleFile	46 KB	14-Jul-20 3:27 PM CES'
baja.jar	ModuleFile	2,285 KB	14-Jul-20 3:25 PM CES'
bajaScript-ux.jar	ModuleFile	445 KB	14-Jul-20 3:25 PM CES'
bajai-wb.jar	ModuleFile	1,286 KB	14-Jul-20 3:25 PM CES'
bajaux-rt.jar	ModuleFile	29 KB	14-Jul-20 3:25 PM CES'
bajaux-ux.jar	ModuleFile	90 KB	14-Jul-20 3:25 PM CES'
baseRtsp-rt.jar	ModuleFile	33 KB	14-Jul-20 3:24 PM CES'
basicDriver-rt.jar	ModuleFile	59 KB	14-Jul-20 3:25 PM CES'
batchJob-rt.jar	ModuleFile	153 KB	14-Jul-20 3:25 PM CES'
batchJob-wb.jar	ModuleFile	165 KB	14-Jul-20 3:25 PM CES'
belimoiot-rt.jar	ModuleFile	394 KB	17-Feb-21 10:23 AM CE
box-rt.jar	ModuleFile	215 KB	14-Jul-20 3:25 PM CES'
boxAnalyzer-rt.jar	ModuleFile	15 KB	14-Jul-20 3:25 PM CES'
boxAnalyzer-wb.jar	ModuleFile	20 KB	14-Jul-20 3:25 PM CES'
bql-rt.jar	ModuleFile	270 KB	14-Jul-20 3:25 PM CES'
bql-ux.jar	ModuleFile	69 KB	14-Jul-20 3:27 PM CES'
ccn-rt.jar	ModuleFile		

Module signing advice

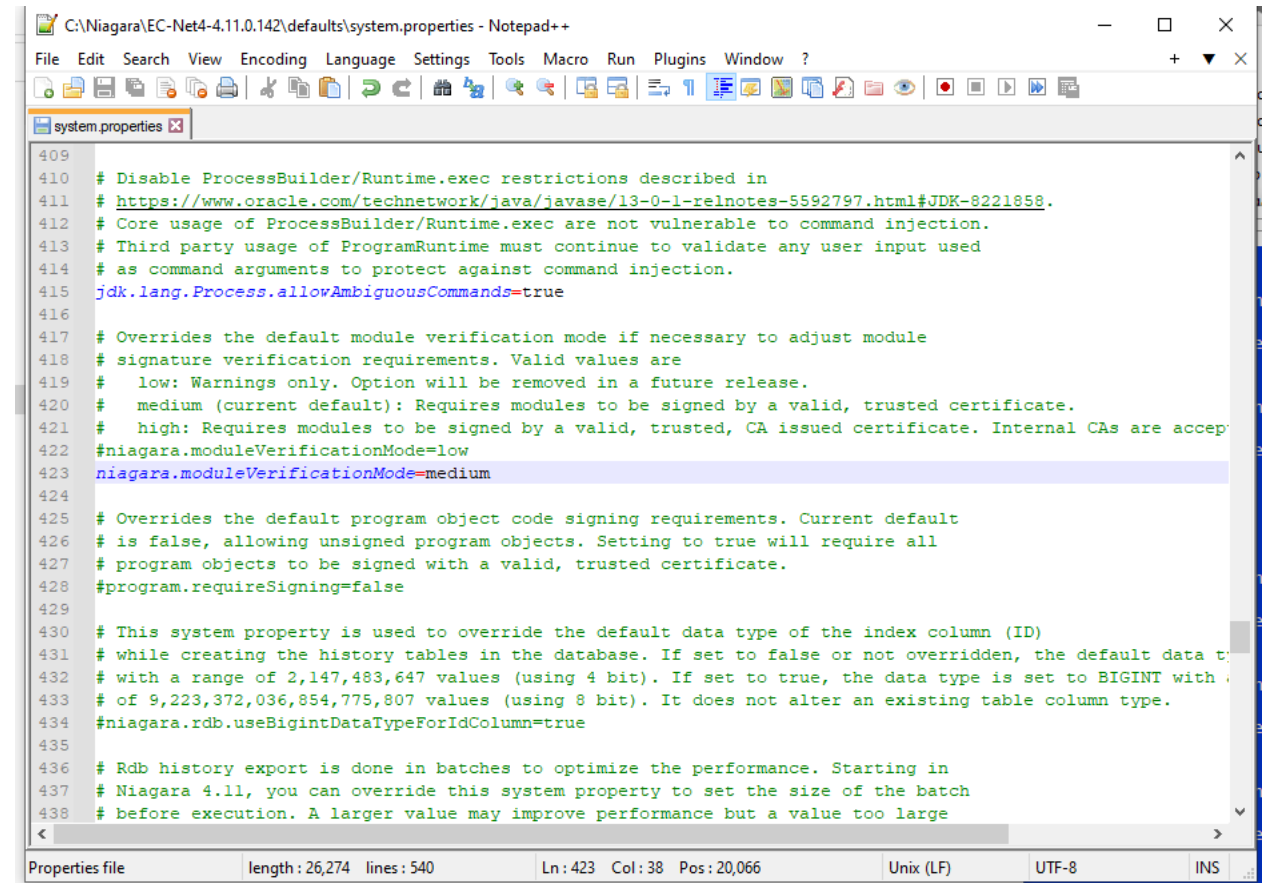
- In Niagara 4.8 and later, there is added support for the signing and verification of third-party modules. Third-party module signing is still optional in most cases, but this will gradually shift to a requirement over the course of the next releases.
- In Niagara 4.8 and later, there are added Workbench tools to support module signing.
- The Jar Signer Tool is useful for non-developers or anyone using an unsigned legacy module. The Jar Signer allows you to “sign” an unsigned *.jar file using a code signing certificate.

Please you can read about module signing here:

<https://docs.Niagara-community.com/bundle/ModuleSigning/page/ExampleConcept-41FE0D3F.html>

Check Workbench module signing level

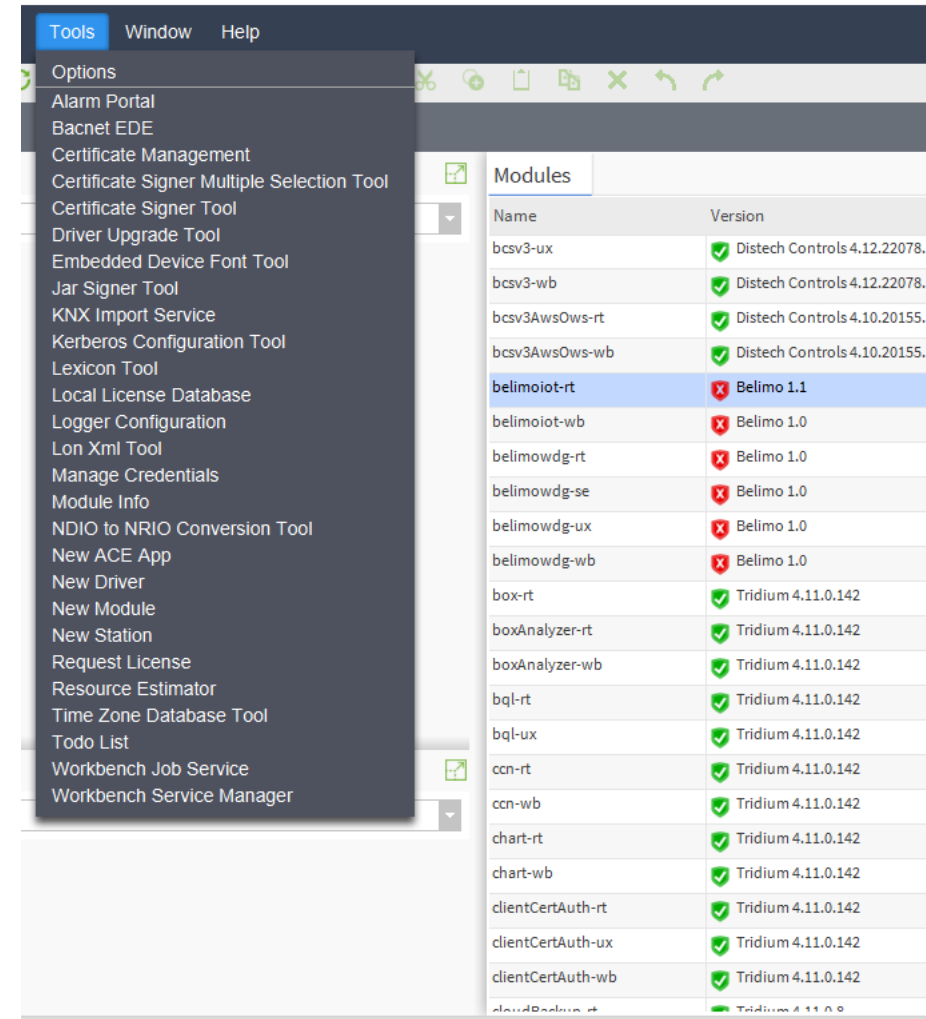
Open the system.properties file of Niagara current version and check what module verification mode is set. Low option is used for development and debugging purposes. Medium level requires external module to be signed.



```
C:\Niagara\EC-Net4-4.11.0.142\defaults\system.properties - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
system.properties
409
410 # Disable ProcessBuilder/Runtime.exec restrictions described in
411 # https://www.oracle.com/technetwork/java/javase/13-0-1-relnotes-5592797.html#JDK-8221858.
412 # Core usage of ProcessBuilder/Runtime.exec are not vulnerable to command injection.
413 # Third party usage of ProgramRuntime must continue to validate any user input used
414 # as command arguments to protect against command injection.
415 jdk.lang.Process.allowAmbiguousCommands=true
416
417 # Overrides the default module verification mode if necessary to adjust module
418 # signature verification requirements. Valid values are
419 # low: Warnings only. Option will be removed in a future release.
420 # medium (current default): Requires modules to be signed by a valid, trusted certificate.
421 # high: Requires modules to be signed by a valid, trusted, CA issued certificate. Internal CAs are accep
422 #niagara.moduleVerificationMode=low
423 niagara.moduleVerificationMode=medium
424
425 # Overrides the default program object code signing requirements. Current default
426 # is false, allowing unsigned program objects. Setting to true will require all
427 # program objects to be signed with a valid, trusted certificate.
428 #program.requireSigning=false
429
430 # This system property is used to override the default data type of the index column (ID)
431 # while creating the history tables in the database. If set to false or not overridden, the default data t
432 # with a range of 2,147,483,647 values (using 4 bit). If set to true, the data type is set to BIGINT with
433 # of 9,223,372,036,854,775,807 values (using 8 bit). It does not alter an existing table column type.
434 #niagara.rdb.useBigintDataTypeForIdColumn=true
435
436 # Rdb history export is done in batches to optimize the performance. Starting in
437 # Niagara 4.11, you can override this system property to set the size of the batch
438 # before execution. A larger value may improve performance but a value too large
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Check module sign

Open the module info tool and according to sign status of belimoiot-rt perform the next operations.



Module sign

If red sign is displayed, module cannot be used. The sign operation requires the to import the certificate locally. Ask for “.pem” file to INLON support.



There are errors that are not acceptable for the current module verification mode.



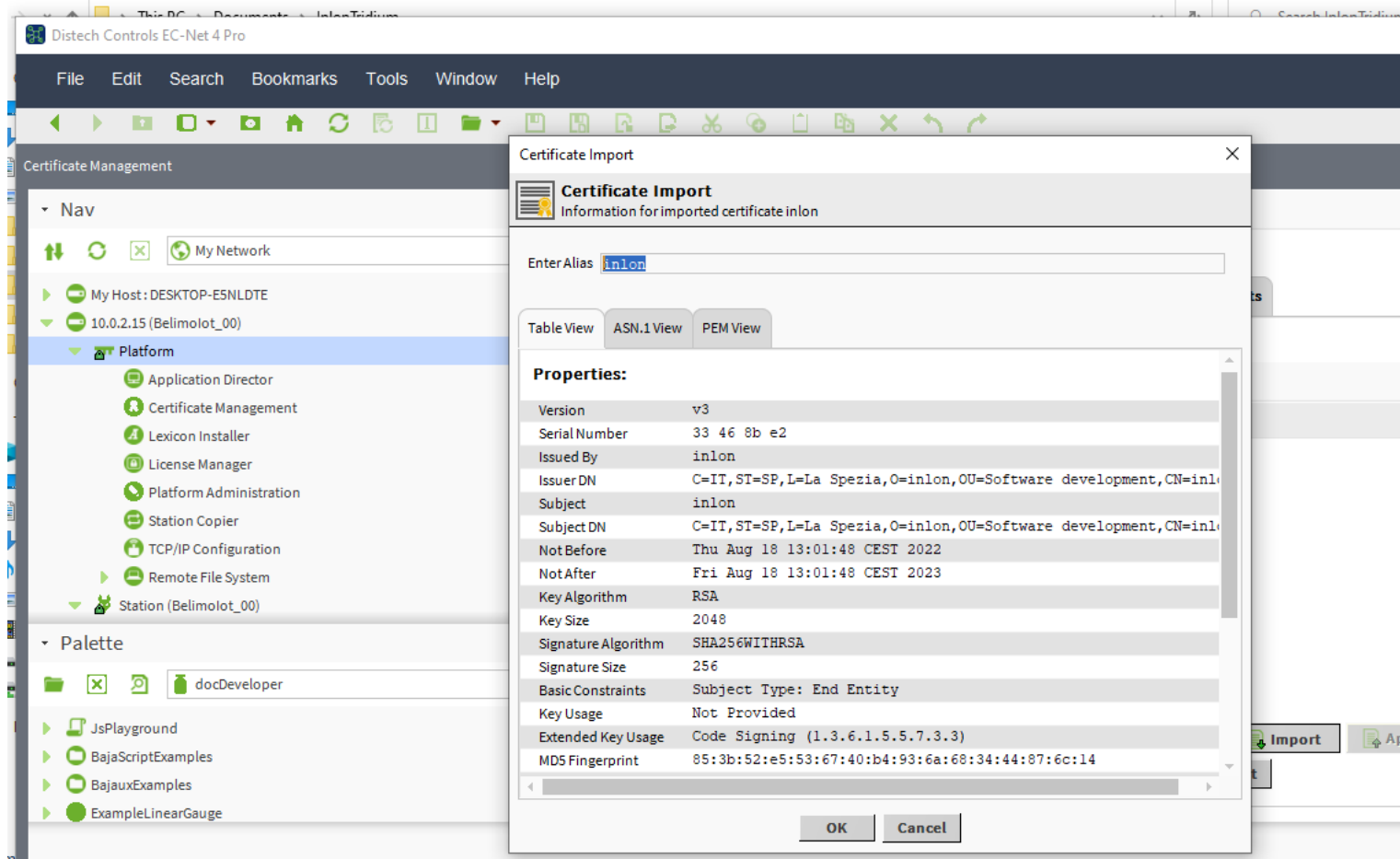
There are warnings, but they are acceptable for the current module verification mode.



Indicates that the module is signed with a Certificate Authority (CA).

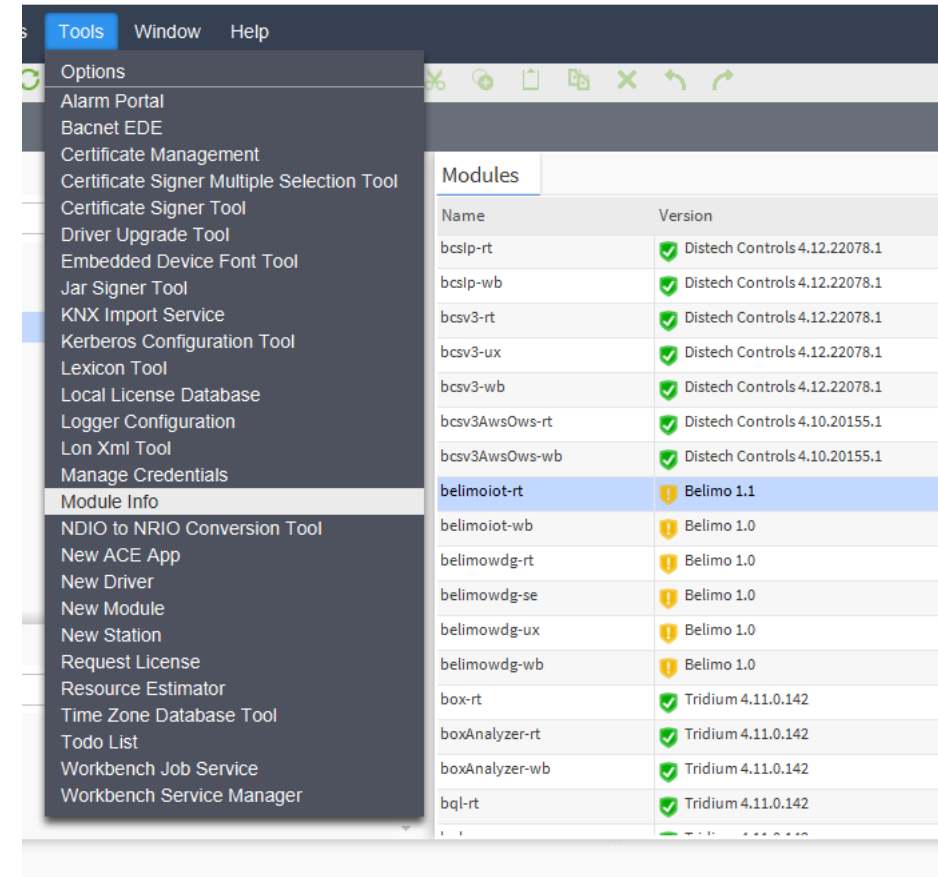
Import certificate to Workbench

Confirm the certificate data clicking ok button.



Check module sign again

Open the module info tool and now the belimoiot-rt is signed and can be used.



Import certificate to Platform

The certificate should be installed on stations too. Select the Platform station Certificate Management and perform same operation like for workbench. The Niagara Help describes deeply all the operations.

The screenshot displays the Distech Controls EC-Net 4 Pro interface. The main window is titled "Certificate Management" and is focused on the "Platform" station (10.0.2.15). The left sidebar shows a navigation tree with "Certificate Management" selected under the "Platform" station. The main content area shows the "Certificate Management for '10.0.2.15'" interface. It includes tabs for "User Key Store", "System Trust Store", "User Trust Store", and "Allowed Hosts". The "User Trust Store" tab is active, displaying a table of certificates. The table has columns for "Alias", "Subject", "Not After", "Key Algorithm", "Key Size", and "Valid". A single certificate is listed with the alias "inlon", subject "inlon", and a validity date of "Fri Aug 18 13:01:48 CEST 2023". Below the table are buttons for "View", "Delete", "Import", "Approve", and "Export".

Alias	Subject	Not After	Key Algorithm	Key Size	Valid
inlon	inlon	Fri Aug 18 13:01:48 CEST 2023			true

Using the module

Next steps require
a running station

Load the palette

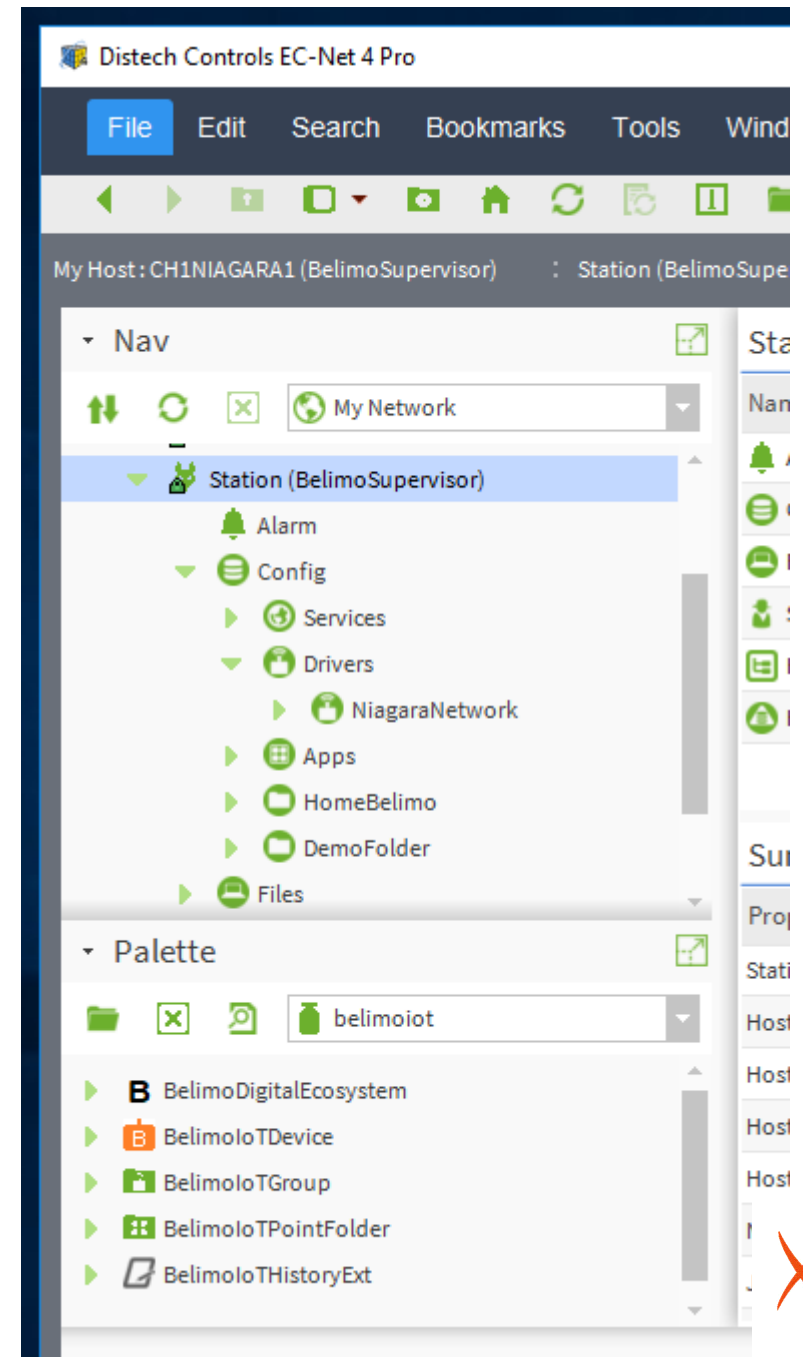
Open the palette view and select the belimoiot one.

The screenshot shows a software interface with a navigation pane on the left and a main window. The navigation pane has a 'Nav' section with 'My Network' and a 'Palette' section with 'kitControl' and 'ControlPalette'. The main window shows a dialog box titled 'Open Palette' with a search filter and a table of modules. The 'belimoiot' module is selected in the table.

Module	Description
bacnetAlarmRouter	Allows re-assignment of alarm classes for Bacnet recv. alarms
bacnetAws	Niagara BACnet AWS Driver
bacnetOws	Niagara BACnet OWS Driver
bacnetUtil	Niagara BACnet Utilities
baja	Niagara Framework
bajau	Niagara User Interface Framework
batchJob	Batch Jobs
belimoiot	Belimo driver to connect cloud resources

The Belimo palette

This is the palette of the Belimo Digital Ecosystem.



Add the driver to network

- Open the running station
- Navigate to Driver Manager
- Drop the 'BelimoDigitalEcosystem' object to Driver Manager

The screenshot displays the Distech Controls EC-Net 4 Pro software interface. The main window is titled "Driver Manager" and shows a table of drivers. The table has columns for Name, Type, Status, Enabled, and Fault Cause. Two drivers are listed: "NiagaraNetwork" and "BelimoDigitalEcosystem".

Name	Type	Status	Enabled	Fault Cause
NiagaraNetwork	Niagara Network	{ok}	true	
BelimoDigitalEcosystem	Belimo Digital Ecosystem	{ok}	true	

The interface also shows a navigation pane on the left with a tree view. The "Drivers" folder is expanded, showing "NiagaraNetwork" and "BelimoDigitalEcosystem". The "BelimoDigitalEcosystem" object is highlighted in blue. Below the navigation pane is a palette with a search box containing "belimoiot" and a list of objects including "BelimoDigitalEcosystem", "BelimoIoTDevice", "BelimoIoTGroup", "BelimoIoTPointFolder", and "BelimoIoTHistoryExt".

Connection established

Status 'ok' means connection to the Belimo Digital Ecosystem has been established successfully. Health indicator can produce more details about connection status.

...rs/BelimoDigitalEcosystem Application Director BelimoDigitalEcos

Property Sheet

BelimoDigitalEcosystem (Belimo Digital Ecosystem)

Status	{ok}
Enabled	<input checked="" type="checkbox"/> true
Fault Cause	
Health	Ok [17-Feb-21 2:05 PM CET]
Down	<input type="checkbox"/> false
Alarm	<input type="checkbox"/> false
Last Ok Time	17-Feb-2021 02:05 PM CET
Last Fail Time	17-Feb-2021 02:03 PM CET
Last Fail Cause	Ecosystem Authorization is missing
Alarm Source Info	Alarm Source Info

Device discovery

- Double click on the BelimoDigitalEcosystem network driver.
- The BelimoIot Device Manager view is showed
- Press the Discover button
- The list of devices is going to be updated according the devices associated to your Belimo account.

The screenshot shows the 'BelimoIot Discovery' interface. At the top, there is a navigation bar with 'Supervisor', 'Config', 'Drivers', and 'BelimoDigitalEcosystem'. Below this, a green checkmark and arrow icon indicate a successful discovery process. The main area is divided into two tabs: 'Discovered' and 'Database'. The 'Discovered' tab is active and displays a table with the following data:

Deviceid	Devicename	Ownerid	Ownername	Projectname
a5690dde-be6f-46fd-983e-e9beb3aa7d00	PublicIoT Actuator V1.02	IA1Q808HY3	ClientAPI Usergroup	TEST
108a36f6-6466-4988-b9b0-a3efd2005c42	EV54_EVNG_Feldtest_22011-30054-022-246	GZSGW1WQER	EnergyValve_Belimo	Project name
ff265b95-ff7b-4d65-952b-f7087862df05	EV53_EVNG_Feldtest_22011-30053-022-246	GZSGW1WQER	EnergyValve_Belimo	Project name
02f4e962-922e-499f-9e31-90210a6e17da	EV52_EVNG_Feldtest_22011-30052-022-246	GZSGW1WQER	EnergyValve_Belimo	Project name
0c5aa95d-509e-4d66-b53c-5e2883b850d1	Heute LD5 670	GZSGW1WQER	EnergyValve_Belimo	Project name
73ffd901-27b6-464a-a37b-2c717c3d36ab	EV4_EVNG_ERGON-TB_A3	GZSGW1WQER	EnergyValve_Belimo	Project name
6f661025-ac12-46e0-9fe3-756fbd183227	EV4_EVNG_Feldtest_IER03	GZSGW1WQER	EnergyValve_Belimo	

Below the 'Discovered' table is a 'Database' tab, which is currently empty. At the bottom of the interface, there is a toolbar with several buttons: 'New Folder', 'New', 'Edit', 'Discover', 'Cancel', and 'Add'. The 'Discover' button is highlighted, indicating it is the active function.

Device add

- Select any device you would like to add then press button Add.

The 'Add' dialog box displays a table of existing devices and a form for adding a new one. The table has the following data:

Name	Type	Status	Deviceid	Devicename
BelimoIoTDevice	Belimo Io T Device	{ok}	ff265b95-ff7b-4d65-952b-f7087862df05	EV53_EVNG_Feldtest_22011-30053-022-246
BelimoIoTDevice1	Belimo Io T Device	{ok}	02f4e962-922e-499f-9e31-90210a6e17da	EV52_EVNG_Feldtest_22011-30052-022-246

The form fields are as follows:

- Name: BelimoIoTDevice
- Type: Belimo Io T Device
- Status: {ok}
- Deviceid: ff265b95-ff7b-4d65-952b-f7087862df05
- Devicename: EV53_EVNG_Feldtest_22011-30053-022-246
- Ownerid: GZSGW1WQER
- Ownername: EnergyValve_Belimo
- Projectname: Project name
- Addresscity: City
- Addresscountry: CH
- Serialnumber: 22011-30053-022-246
- Profileid: energyvalve4/1.2
- Profilename: device.belimo.energy-valve-Version4/1.2
- Profileref: /definitions/dataprofiles/energyvalve4/1








The bottom toolbar contains buttons for: New, Edit, Discover, Cancel, Add, Match, and TagIt. The 'Add' button is highlighted.

Device add





- Added devices are visible on lower list.

Belimoiot Discovery

Discovered

Deviceid	Devicename	O
 a5690dde-be6f-46fd-983e-e9beb3aa7d00	PublicIoT Actuator V1.02	IA
 108a36f6-6466-4988-b9b0-a3efd2005c42	EV54_EVNG_Feldtest_22011-30054-022-246	G2
 ff265b95-ff7b-4d65-952b-f7087862df05	EV53_EVNG_Feldtest_22011-30053-022-246	G2
 02f4e962-922e-499f-9e31-90210a6e17da	EV52_EVNG_Feldtest_22011-30052-022-246	G2
 0c5aa95d-509e-4d66-b53c-5e2883b850d1	Heute LD5 670	G2
 73ffd901-27b6-464a-a37b-2c717c3d36ab	EV4_EVNG_ERGON-TB_A3	G2
 6f661025-ac12-46e0-9fe3-756fbd183227	EV4_EVNG_Feldtest_IER03	G2

Database

Name	Type	Exts	Status	Deviceid	Devic
 BelimoloTDevice	Belimo lo T Device		{ok}	ff265b95-ff7b-4d65-952b-f7087862df05	EV53_
 BelimoloTDevice1	Belimo lo T Device		{ok}	02f4e962-922e-499f-9e31-90210a6e17da	EV52_

Device details

- Go to Nav Tree and double click one device
- A list of information is displayed.
- Status should be 'ok'
- Double click on the Points folder to go to Point Manager.

The screenshot displays the Belimo Digital Ecosystem software interface. On the left is a navigation tree under the heading 'Nav'. The tree structure is as follows:

- My Network
- My Host : CH1NIAGARA1 (BelimoSupervisor)
 - My File System
 - My Modules
 - Platform
 - Station (BelimoSupervisor)
 - Alarm
 - Config
 - Services
 - Drivers
 - NiagaraNetwork
 - BelimoDigitalEcosystem**
 - Ecosystem Config
 - Ecosystem Authorization
 - Ecosystem Resources
 - Monitor
 - Tuning Policies
 - BelimoloTDevice** (highlighted)
 - BelimoloTDevice1

On the right is a 'Property Sheet' for the selected device, 'BelimoloTDevice (Belimo Io T Device)'. The properties are:

Status	{ok}
Enabled	true
Fault Cause	
Health	Fail [null]
Alarm Source Info	Alarm Source Info
Poll Frequency	Normal
Points	Belimo Io T Point D
Last Cloud Read	17-Feb-2021 02:3
Deviceid	ff265b95-ff7b-4c
Devicename	EV53_EVNG_Feldte
Ownerid	GZSGW1WQER
Ownername	EnergyValve_Beli
Projectname	Project name
Addresscity	City
Addresscountry	CH
Serialnumber	22011-30053-022-
Profileid	energyvalve4/1.2
Profilename	device.belimo.er
Profileref	/definitions/dat

Data Points selection

- When the Point Manager view of a selected device is showed you can press the Discovery button.
- A list of available data points is filled.
- Select the points you would like using and press Add.

The screenshot shows the 'Belimo IoT Discovery' interface. At the top, there is a 'Discovered' tab with a table listing various data points. Below this is a 'Database' tab with an empty table structure. At the bottom, there are several action buttons: 'New Folder', 'New', 'Edit', 'Discover', and 'Cancel'.

Pointid	Point Caption	Point Name	Current Value	Description
evcloud.00009	Valve Type (0=2-way EV3, 1=3-way EV3)	ValveType	V0	Valve Type
evcloud.200	Cooling Energy	Cooling_E_J	2.9623251385726845E10	Cooling Ener
evcloud.180	Setpoint DeltaT	SpDeltaT_applied_K	10.0	Applied Setp
evcloud.170	Delta T Limitation Type	DeltaT_Limitation_Write	V2	Delta T Limit
evcloud.190	Delta Temperature	DeltaT_K	24.329999999999984	Delta Tempe
evcloudplus.384	Delta T Manager Active	Active_dT_Manager_total_h	1644.6273239298453	while_DDC_!
evcloud.80	Relative Position	RelPos_Fb	52.49	Relative Pos

Name	Type	Out	Pointid	Can Write
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Data Points added

- Added points are visible on Nav Tree too.

The screenshot displays the Belimo IoT Discovery interface. On the left is a navigation tree for 'My Network' showing a hierarchy from '11NIAGARA1 (BelimoSupervisor)' down to 'BelimoloTDevice', where 'Points' is expanded to show 'SpDeltaT_applied_' and 'DeltaT_K'. The main area is divided into two sections: 'Discovered' and 'Database'.

Discovered

Pointid	Point Caption	Point Name
evcloud.00009	Valve Type (0=2-way EV3, 1=3-way EV3)	ValveType
evcloud.200	Cooling Energy	Cooling_E_J
evcloud.180	Setpoint DeltaT	SpDeltaT_appli
evcloud.170	Delta T Limitation Type	DeltaT_Limitati
evcloud.190	Delta Temperature	DeltaT_K
evcloudplus.384	Delta T Manager Active	Active_dT_Man
evcloud.80	Relative Position	RelPos_Fb

Database

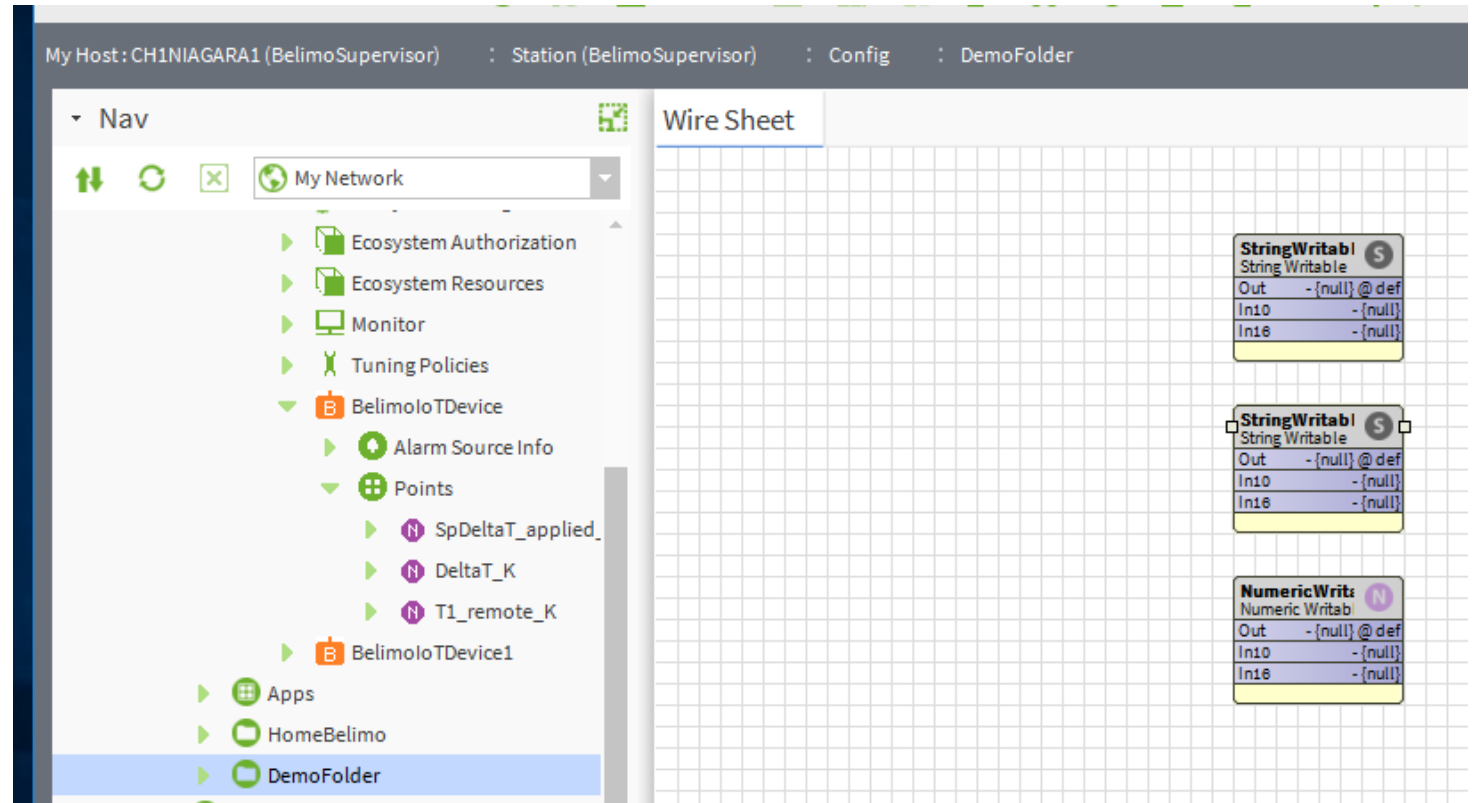
Name	Type	Out	Pointid	Can Write
SpDeltaT_applied_K	B NumericPoint	10.0 {ok}	evcloud.180	false
DeltaT_K	B NumericPoint	25.1 {ok}	evcloud.190	false

Binding

Next steps show how to bind
point value to local variables

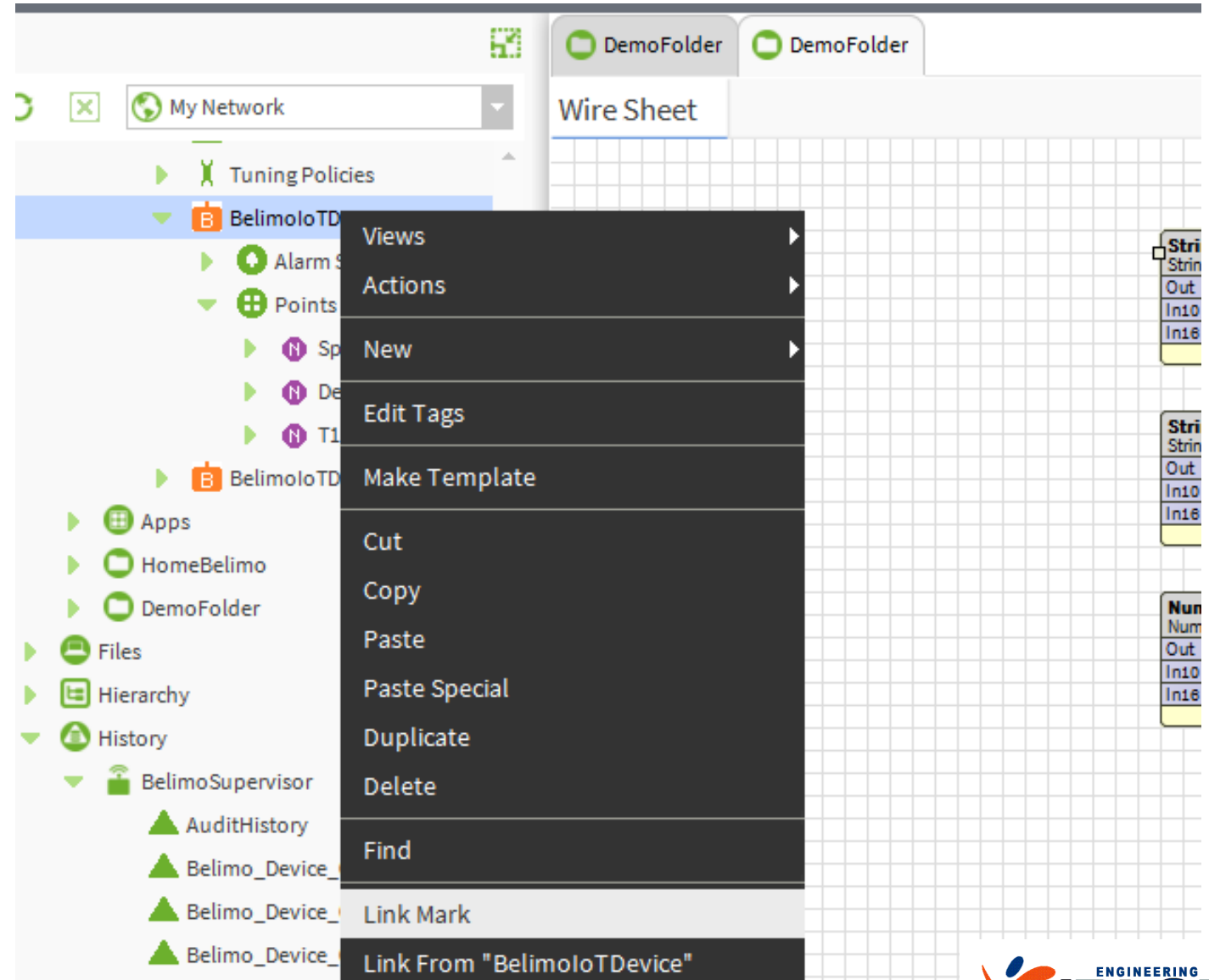
Demo folder sheet

- Create a folder, here for sample purposes is named 'DemoFolder'.
- Open the Sheet view
- Add on the sheet two string writable object
- Add on the sheet on numeric writable object



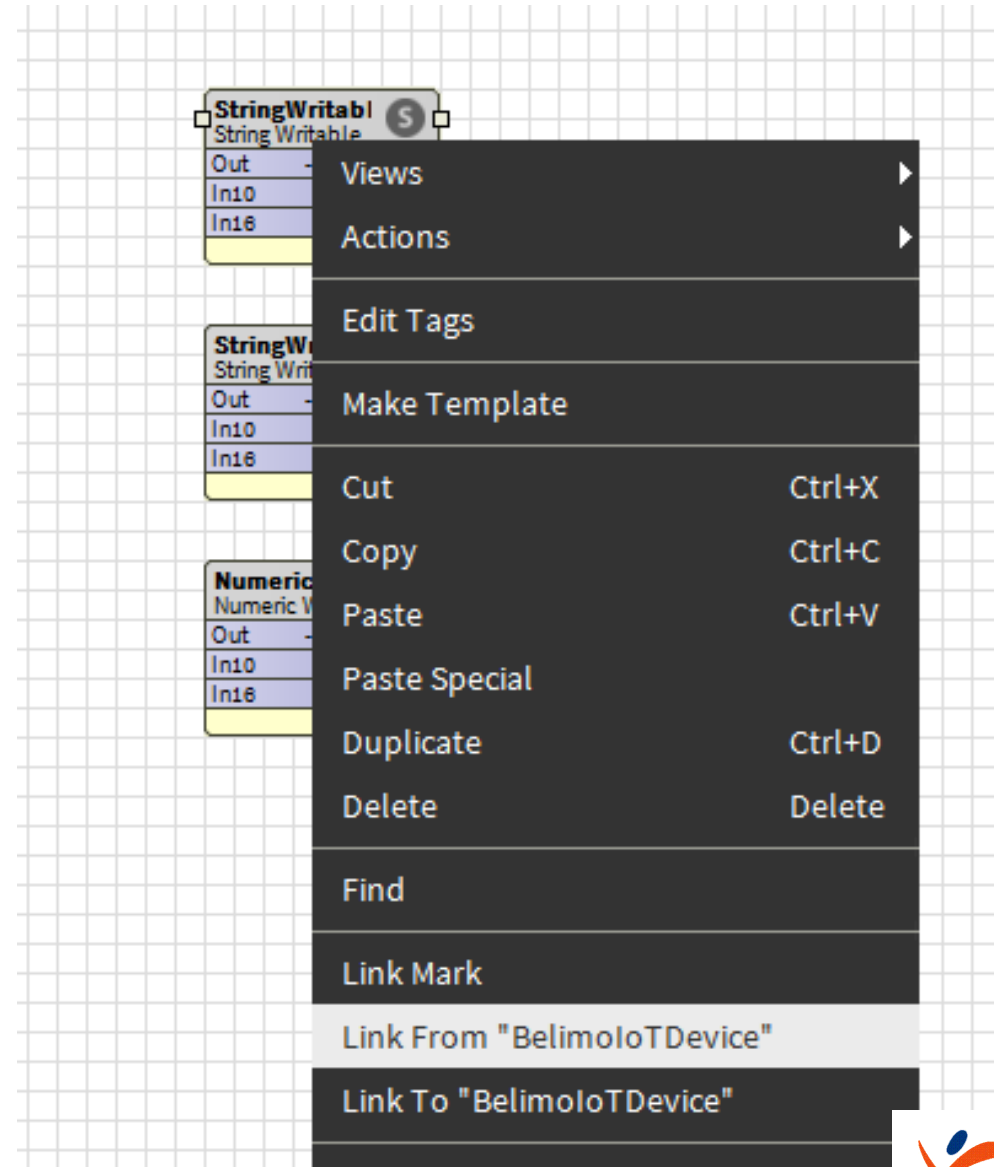
Bind from device

- Select the device and perform Link mark



Bind from device

- Select first string writable object
- Perform a Link from “BelimolotDevice”



Bind from device

- Select source and target of binding as in the example

BelimoloTDevice [Source]

- Status
- Enabled
- Fault Cause
- Health
- Ping
- Poll Frequency
- Last Cloud Read
- Deviceid
- Devicename
- Ownerid
- Ownername
- Projectname
- Addresscity

StringWritable [Target]

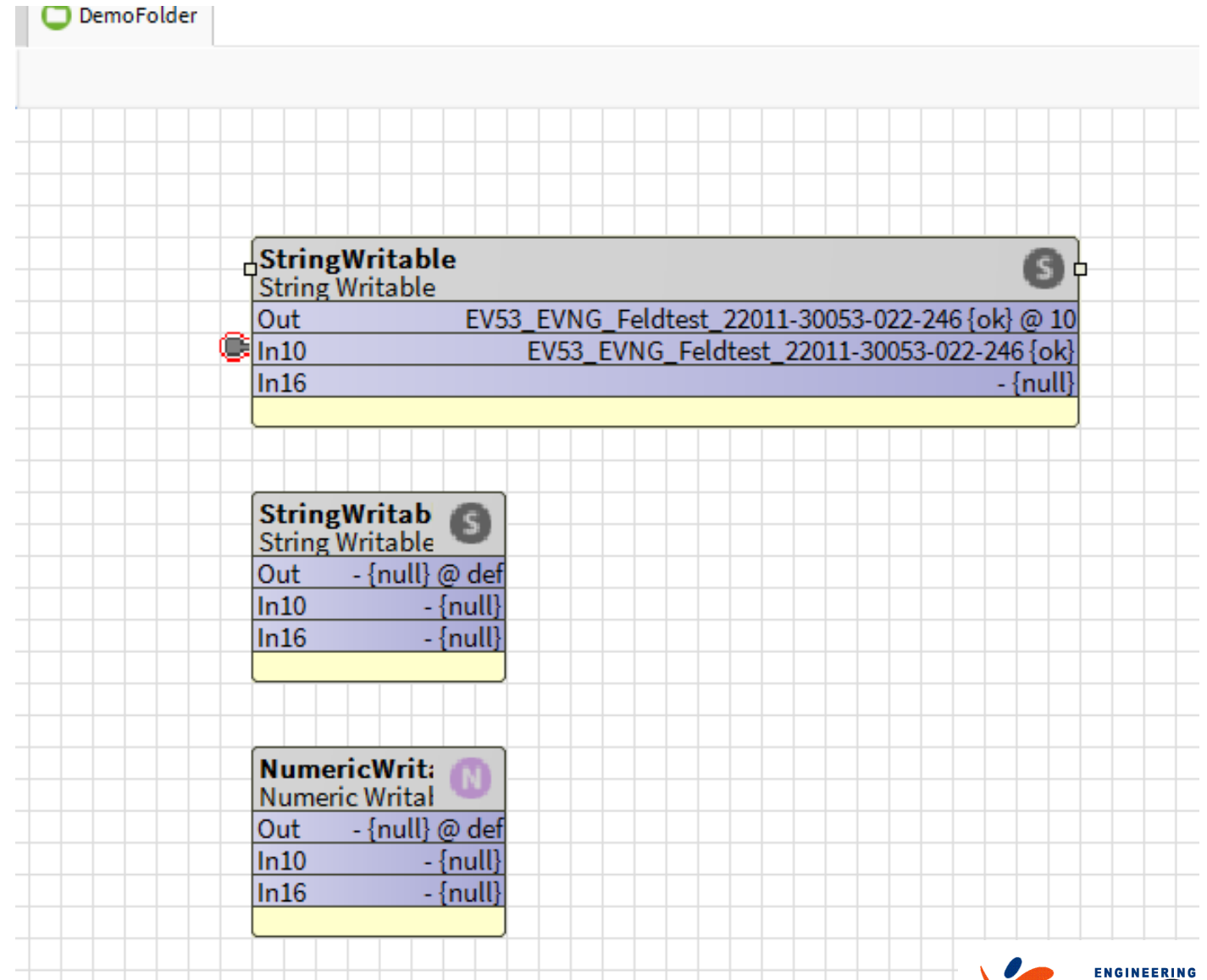
- Facets
- Out
- In1
- In2
- In3
- In4
- In5
- In6
- In7
- In8
- In9
- In10
- In11

Link BelimoloTDevice.devicename -> StringWritable.in10

OK Cancel

Devicename bind

- Now device name is available as variable



Data Point value

- Perform the same operation marking for link a point value out

The screenshot displays the Belimo Digital Ecosystem interface. On the left, a tree view shows the hierarchy: BelimoDigitalEcosystem > BelimoloTDevice > Points > T1_remote_K. The right side shows a 'Link' dialog box with two panels: 'T1_remote_K [Source]' and 'NumericWritable [Target]'. The 'Source' panel lists facets: Out, Description, Point Caption, and Pointid. The 'Target' panel lists facets: Out, In1, In2, In3, In4, In5, In6, In7, In8, In9, In10, and In11. A red box highlights 'Out' in the source and 'In10' in the target. A double-headed arrow indicates the link between them. Below the panels, the text reads 'Link T1_remote_K.out -> NumericWritable.in10'. At the bottom of the dialog are 'OK' and 'Cancel' buttons. A small floating window on the right shows a search bar with '@ 10', a list with '16 {ok}' and '{null}', and a yellow highlight.

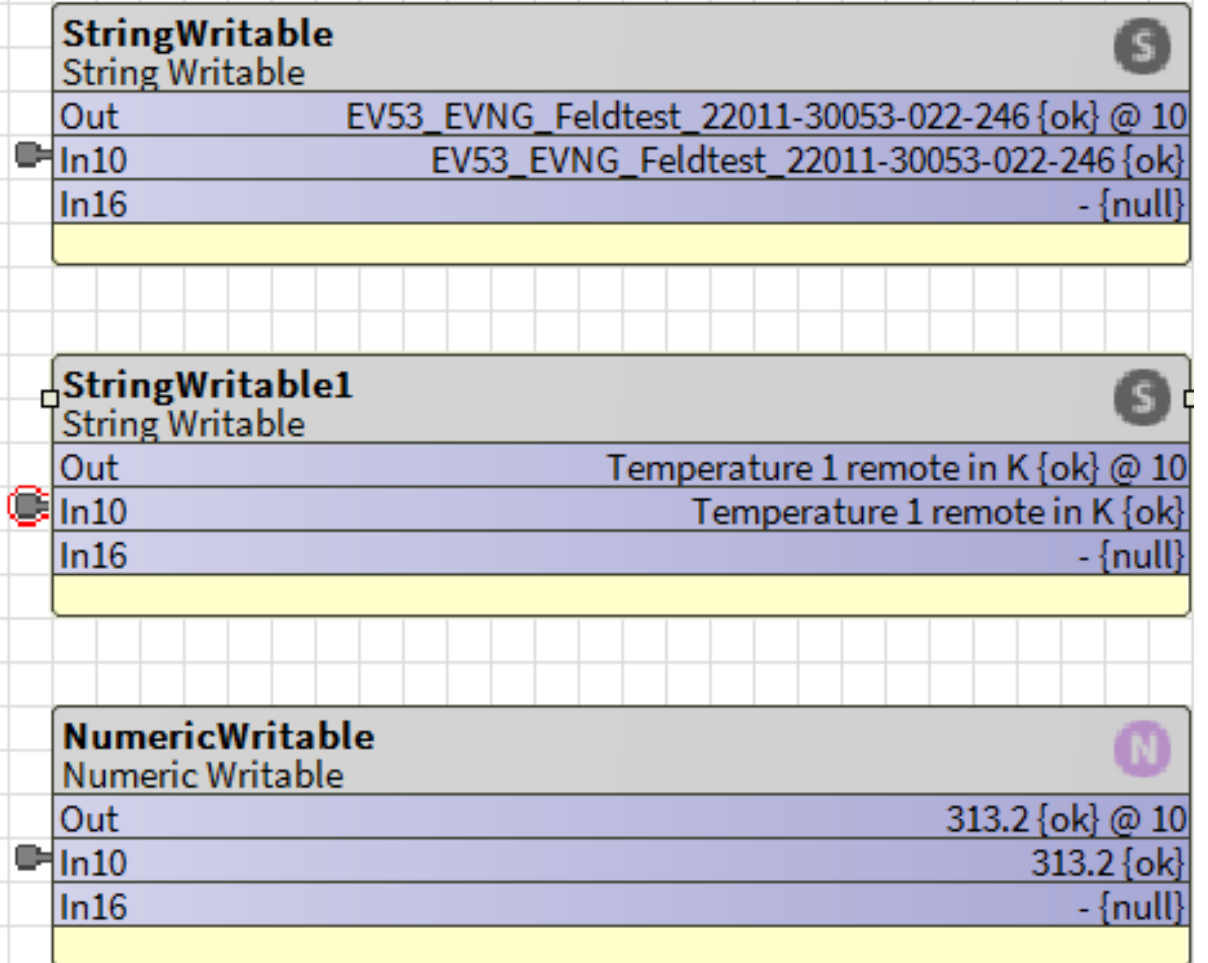
Data Point description

- Perform the same operation marking for link a point description

The screenshot displays the Belimo Digital Ecosystem interface. On the left, a tree view shows the hierarchy of components, with 'T1_remote_K' selected under 'Points'. The main area shows a 'Link' dialog box. The dialog box has two panes: 'T1_remote_K [Source]' and 'StringWritable1 [Target]'. The 'Description' property of the source is linked to the 'In10' property of the target. The dialog box also shows a list of facets for both source and target, with 'In10' highlighted in red. The status bar at the bottom of the dialog box shows 'Link T1_remote_K.description -> StringWritable1.in10'.

Variable bind

- Values and point information can be used to design your own pages



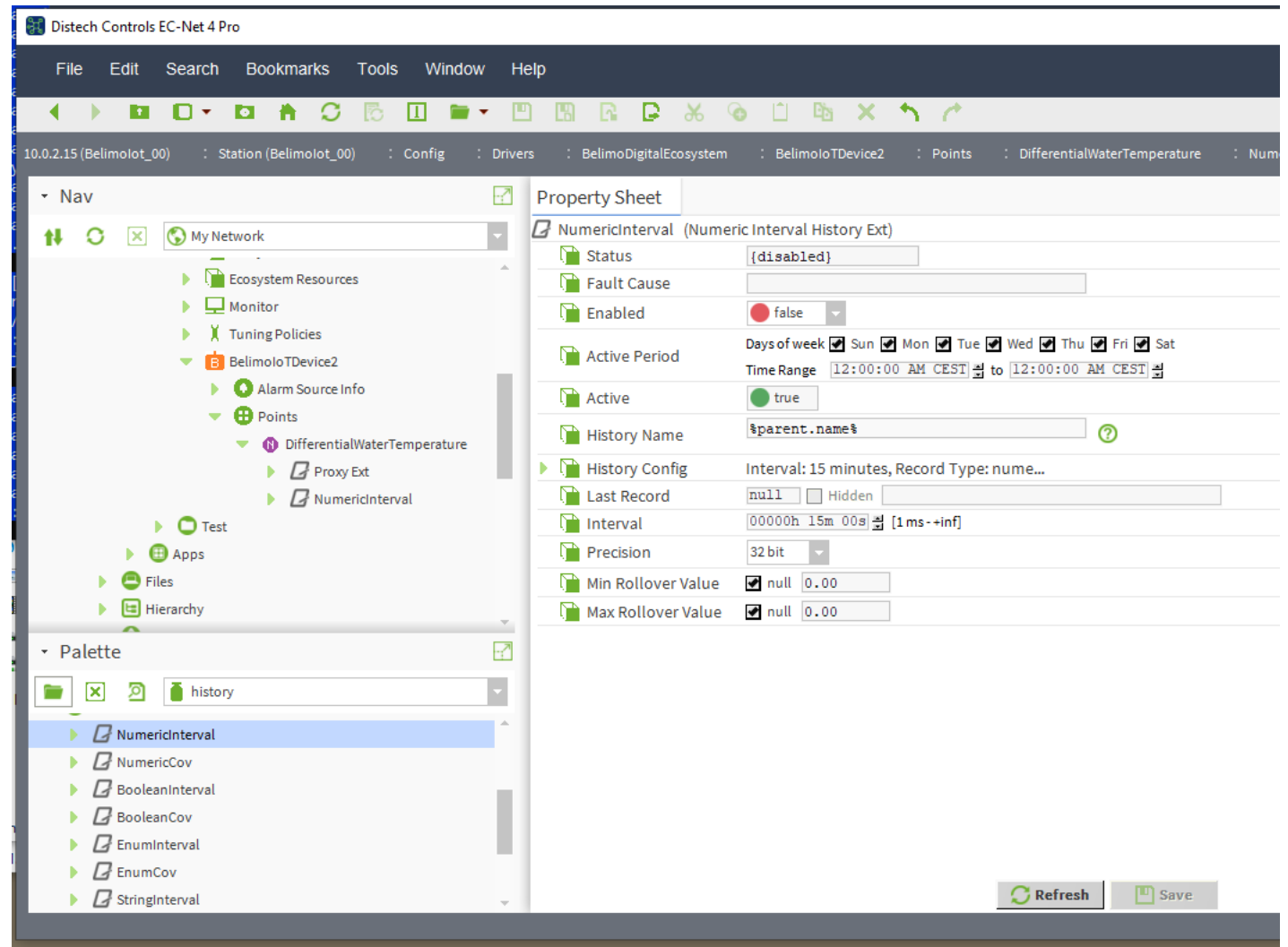
History

Next steps show how to get one point history data from cloud

History extensions

Add a history extension to any point to log historical data, that is, to collect a history. Standard components are found in the Extensions folder of the history palette. The Belimo Ecosystem supply a specific history extension to get history data from cloud.

Standard extensions collect data only if connection with devices is present.



Add Belimo history extension

Belimo history extension allows to read data stored in the cloud. If the connection with cloud has missed, the extension get older data while the connection was missing.

- Select device point and show AX Property Sheet.
- From the palette panel drag and drop the BelimoTHistoryExt into Property Sheet.
- Expand the node just added

Belimo extension can coexist with standard extension.

The screenshot displays the Distech Controls EC-Net 4 Pro software interface. The main window is titled "Distech Controls EC-Net 4 Pro" and features a menu bar with "File", "Edit", "Search", "Bookmarks", "Tools", "Window", and "Help". Below the menu bar is a toolbar with various icons. The interface is divided into several panels:

- Nav Panel:** Shows a tree view of the network structure. The "BelimoTHistoryExt" node is selected under "Points" > "DifferentialWaterTemperature".
- Property Sheet Panel:** Displays the configuration for the "BelimoTHistoryExt" extension. The "Status" is set to "{disabled}", "Enabled" is "false", and "Active" is "true". The "History Name" is "Belimo_C564". The "History Config" is "Interval: irregular, Record Type: numeric...". Other fields include "Id", "Source", "Time Zone", "Record Type", "Capacity", "Full Policy", "Interval", "System Tags", "valueFacets", "Last Record", "Upload From", "Polling Interval", and "Last Upload".
- Palette Panel:** Shows a list of available extensions, including "BelimoTHistoryExt", which is highlighted.

At the bottom right of the Property Sheet, there are "Refresh" and "Save" buttons.

Belimo history extension settings

There are some important settings to apply on the component.

- History Name: the component default is a univocal short identifier. The default value can be substituted with “%parent.name%” like standard extensions.
- Upload From: the default value is the date and time when component has been added. A specific date can be selected to download older data at first activation.
- Polling interval: this is the interval time the component wait before to ask for new data to cloud service.

The screenshot displays the Distech Controls EC-Net 4 Pro software interface. The main window shows a tree view on the left with the component 'BelimoTHistoryExt' selected. The right pane shows the 'Property Sheet' for this component. The settings are as follows:

Property	Value
Status	{disabled}
Fault Cause	
Enabled	false
Active	true
History Name	Belimo_C564
History Config	Interval: irregular, Record Type: numeric...
Id	
Source	
Time Zone	NULL (+0)
Record Type	history / NumericTrendRecord
Capacity	Unlimited
Full Policy	Roll
Interval	irregular
System Tags	
valueFacets	units=null,precision=1,min=-inf,max=+inf
Last Record	null
Upload From	06-Sep-2022 02:12 PM CEST
Polling Interval	00000h 15m 00s [1ms-+inf]
Last Upload	null

History activation

- Enable the history.
- After this operation an history is created.
- Data downloading can require long time before to complete.

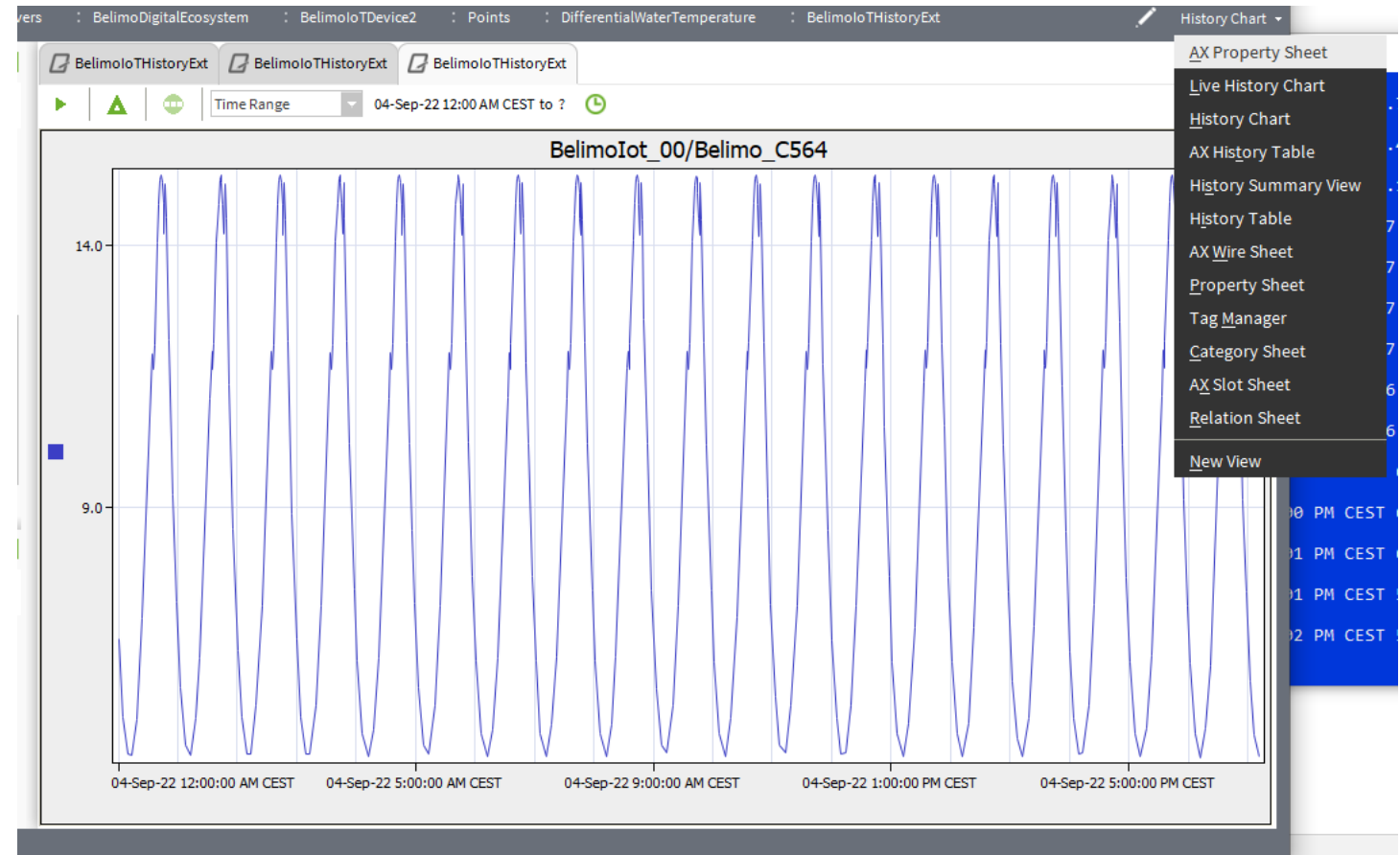
The screenshot displays the Distech Controls EC-Net 4 Pro software interface. The main window is titled "Distech Controls EC-Net 4 Pro" and features a menu bar (File, Edit, Search, Bookmarks, Tools, Window, Help) and a toolbar. The interface is divided into several panes:

- Nav (Navigation):** Shows a tree view of the system hierarchy. The selected path is: My Network > BelimoloTDevice2 > Points > DifferentialWaterTemperature > BelimoloTHistoryExt.
- Property Sheet:** Displays the configuration for the selected "BelimoloTHistoryExt" object. The configuration includes:
 - Status: {ok}
 - Enabled: true
 - Active: true
 - History Name: Belimo_C564
 - History Config: Interval: irregular, Record Type: numeric...
 - Id: /BelimoloT00/Belimo_C564
 - Source: station:|slot:/Drivers/BelimoDigitalEcosystem/Beli:
 - Time Zone: Europe/Berlin (+1/+2)
 - Record Type: history (NumericTrendRecord)
 - Capacity: Unlimited
 - Full Policy: Roll
 - Interval: irregular
 - System Tags: (empty)
 - valueFacets: units=null,precision=1,min=-inf,max=+inf
 - Last Record: 01-Sep-2022 04:53 PM CEST (Hidden 10.55)
 - Upload From: 01-Sep-2022 02:12 PM CEST
 - Polling Interval: 00000h 01m 00s [1 ms - +inf]
 - Last Upload: 06-Sep-2022 02:48 PM CEST
- Palette:** Lists available components for the system, including BelimoDigitalEcosystem, BelimoloTDevice, BelimoloTGroup, BelimoloTPointFolder, and BelimoloTHistoryExt.

At the bottom right of the Property Sheet, there are "Refresh" and "Save" buttons.

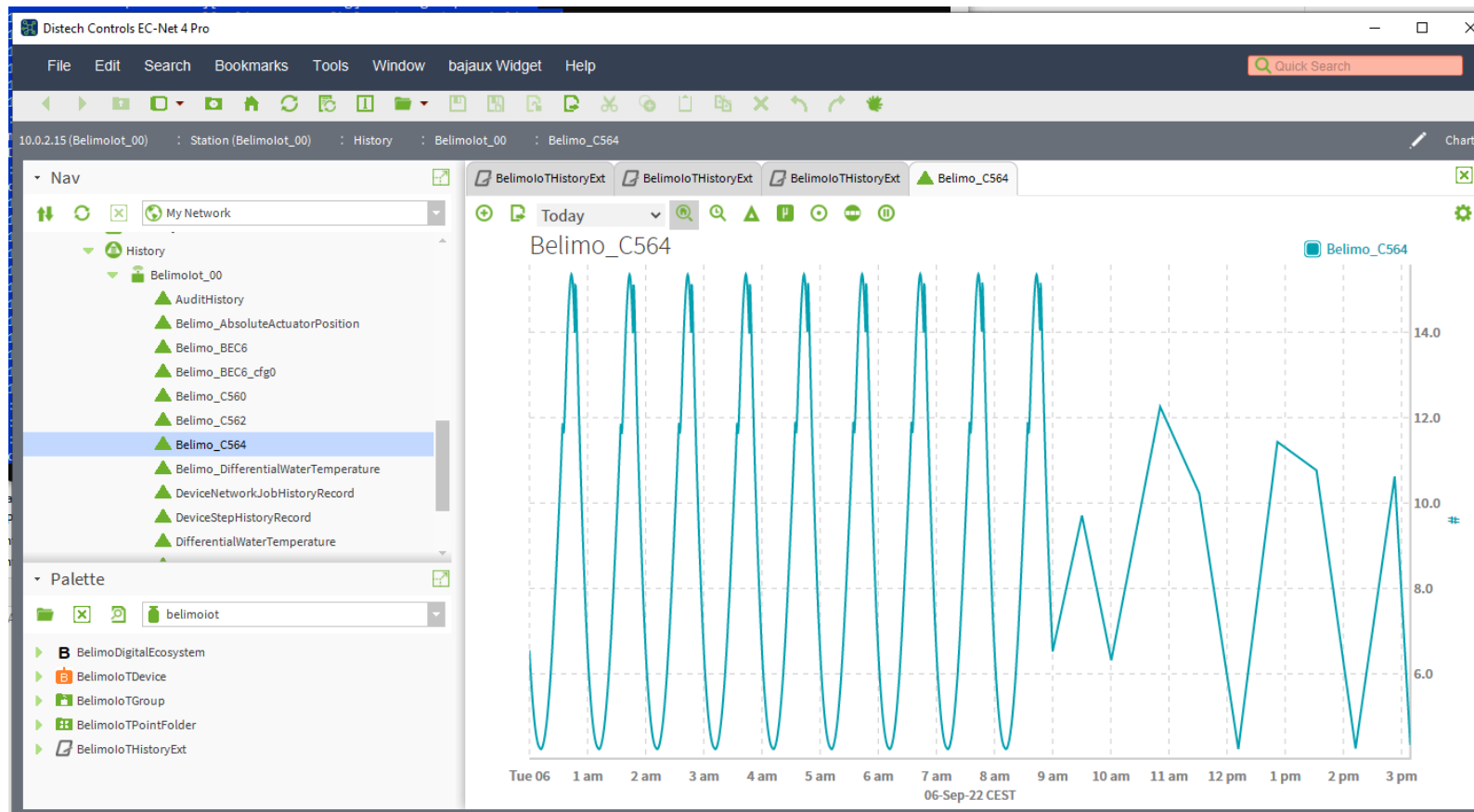
Access to history chart (1)

- Click on right panel History chart



Access to history (2)

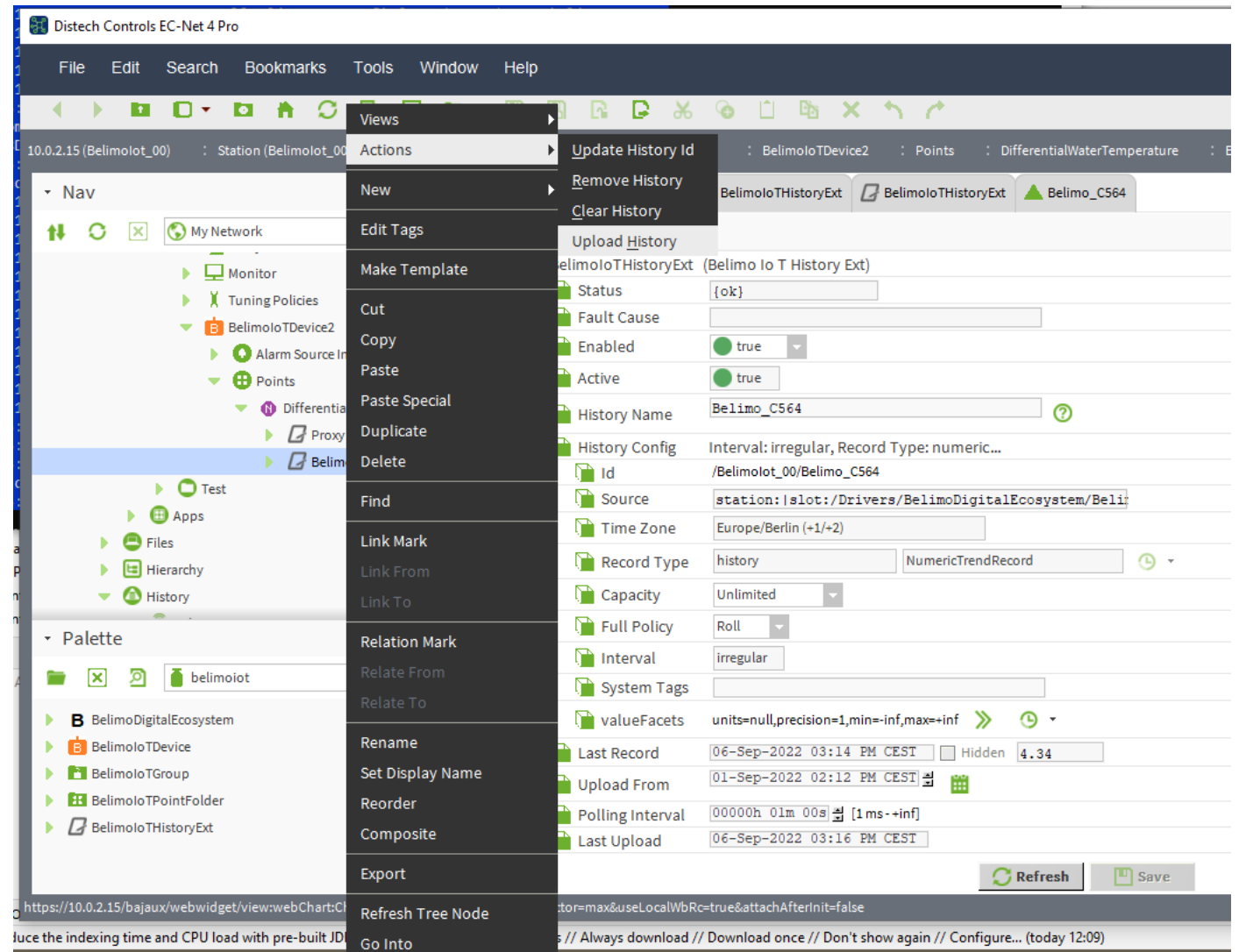
- Navigate to History main folder
- Search the item has the same id of your history point extension
- Double click on the item and a chart view is showed



Belimo History actions

The Belimo history extension has some specific action available.

- Remove History: delete the history database.
- Clear History: remove all data in the history repository.
- Upload History: get data from cloud immediately.



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github.com/inlon-engineering/niagara-belimo-iot

Thanks to:
BELIMO Automation AG

