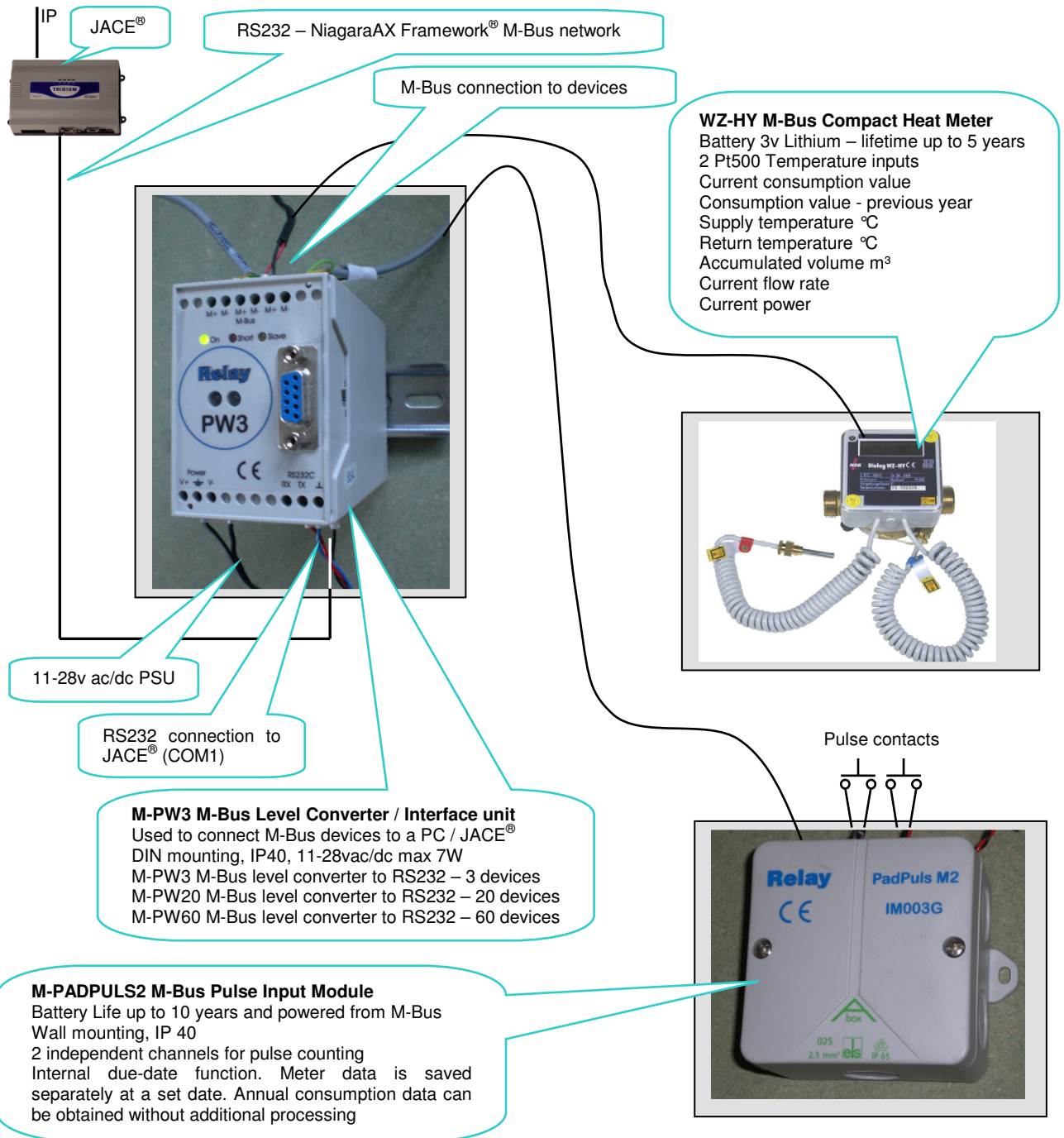


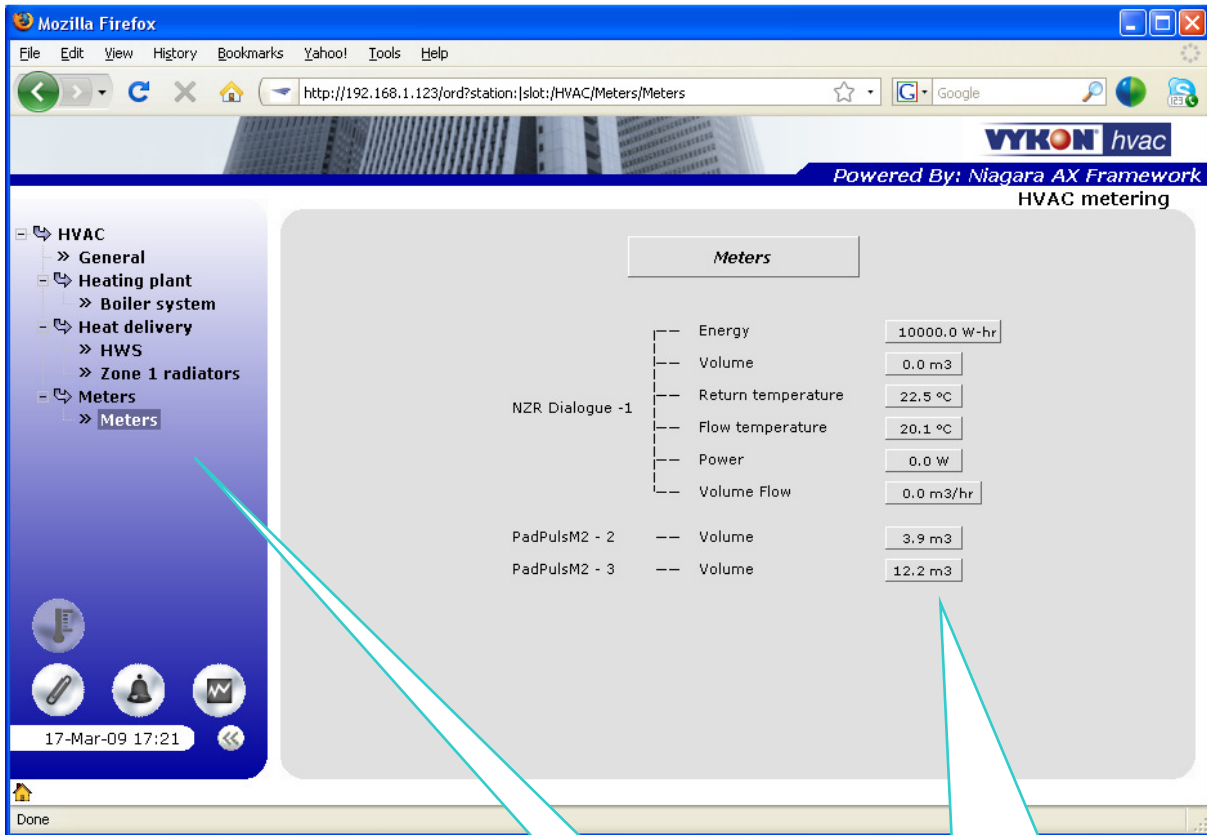
EN-29: Metering with MBus

- Meter data can be included within the Vykon HVAC application easily by adding the appropriate meter driver, devices and points. The graphical user view can be engineered to follow the same look and feel as the other applications by using standard Vykon HVAC graphical widgets. This engineering note explains how some M-Bus meter data can be integrated into a Vykon HVAC station.
- First of all what meters are we using in this example and how are they connected?:



- All the devices in this example are available from SyxthSense (www.syxthsense.com)

- And how do we want the data presented to the user?:

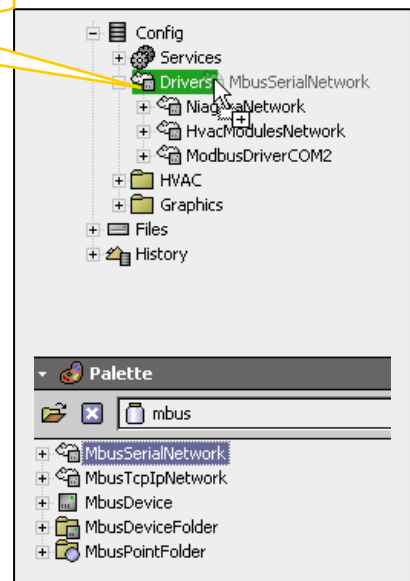


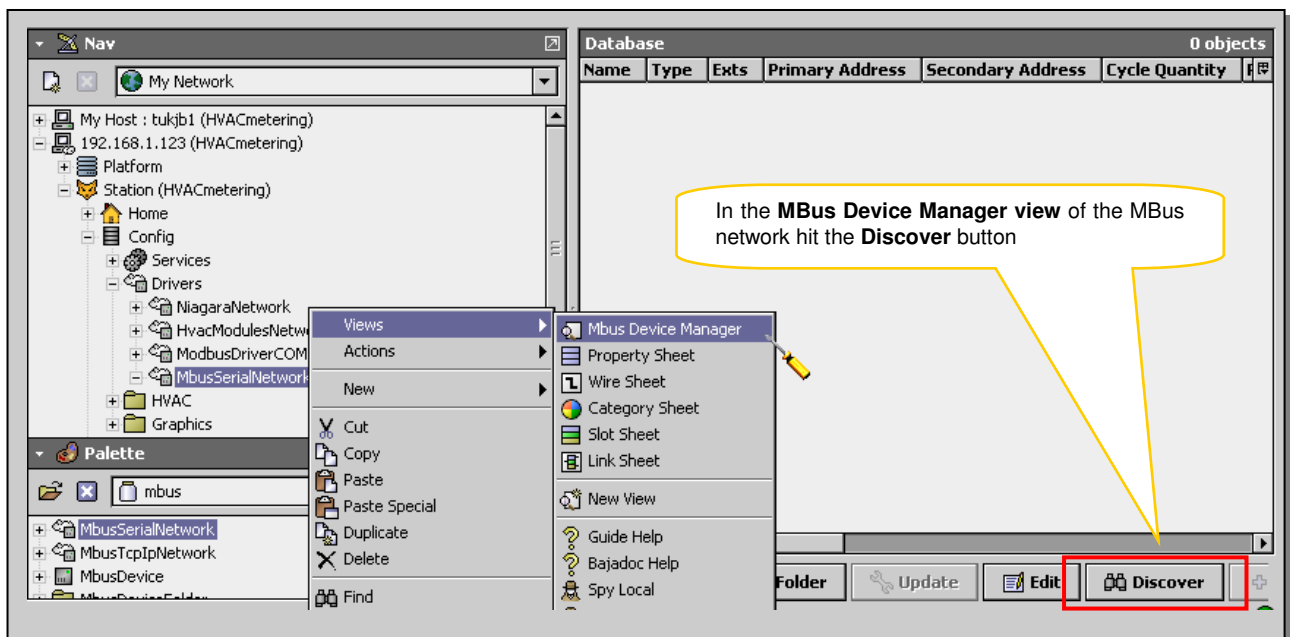
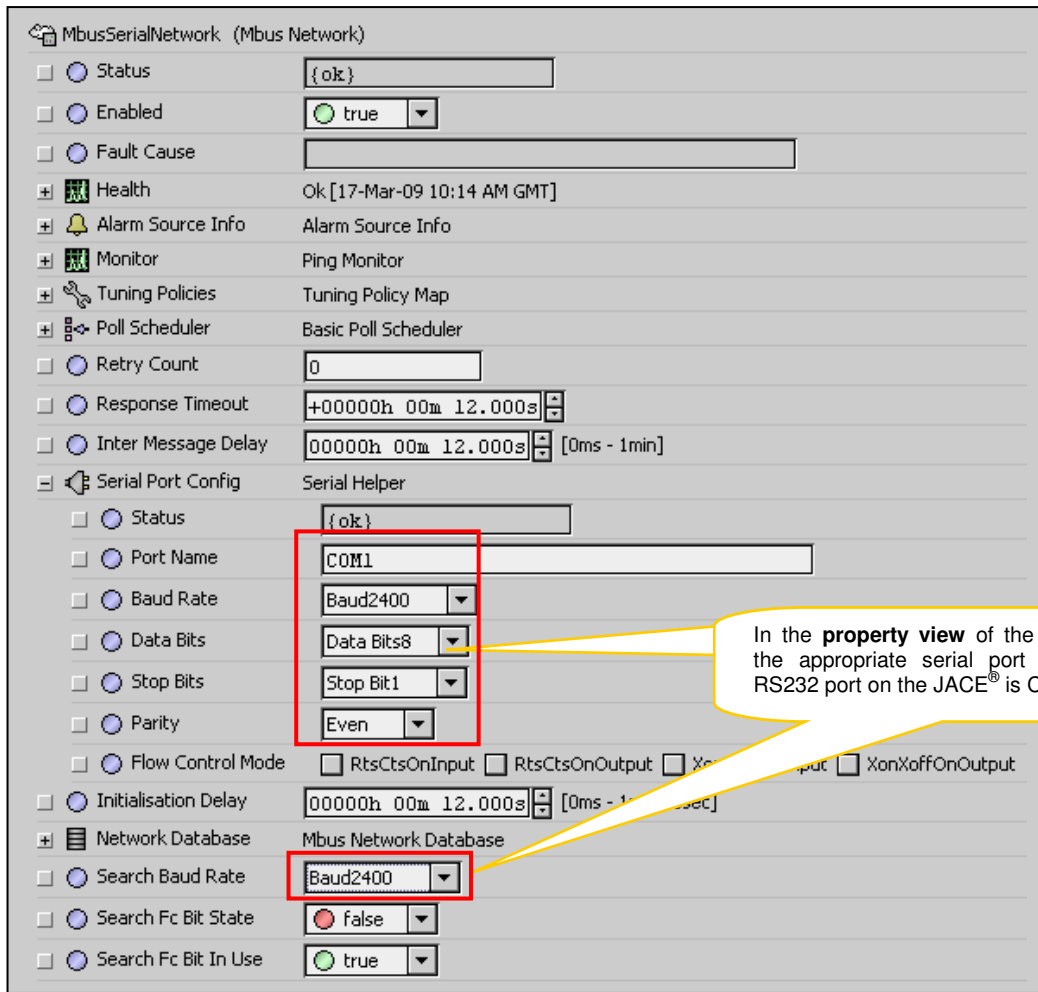
Navigation

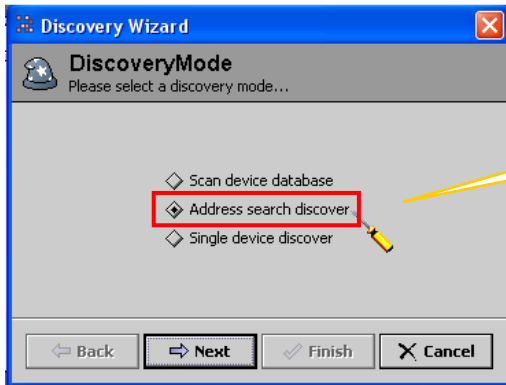
'Look and feel' of Vykon HVAC

- And how do we do it?:

Drag an **MBusSerialNetwork** into the Drivers folder of the station





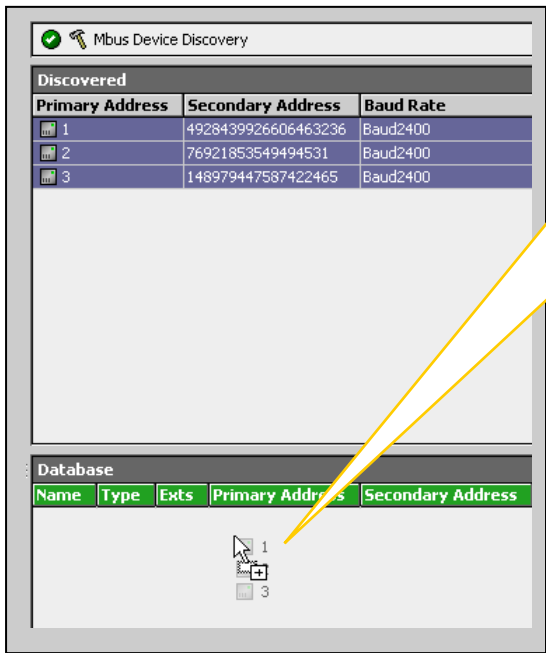


Select the **Address search discover** option in the Discovery Wizard dialogue



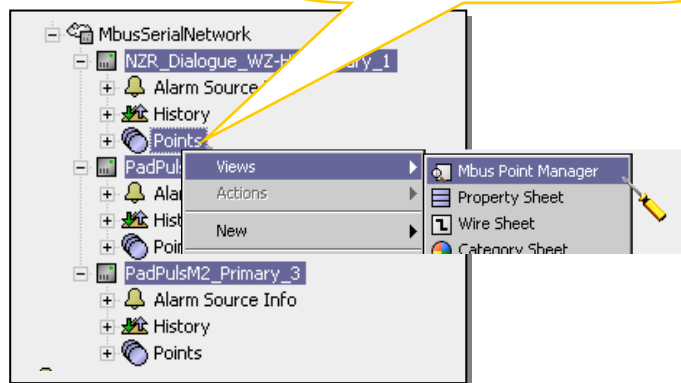
Choose a sensible range in the Discovery Wizard dialogue

Hint:
It can take a considerable time to do the discover so be as precise as possible in your range selection



Drag one or more of your discovered devices into the Database

Rename your devices accordingly and select the **MBus Point Manager** view on the **Points** folder of your first device



Mbus Point Discovery Success >>

Discovered 10 objects

Description	Orthogonal Description	Number Type	Function	Record Number	Cycle Number
Energy	None	Numeric Ip	Instantaneous	1	0
Volume	None	Numeric Ip	Instantaneous	1	0
Return Temperature	None	Numeric Ip	Instantaneous	1	0
Flow Temperature	None	Numeric Ip	Instantaneous	1	0
Temperature Difference	None	Numeric Ip	Instantaneous	1	0
Power	None	Numeric Ip	Instantaneous	1	0
Volume Flow	None	Numeric Ip	Instantaneous	1	0
Energy	None	Numeric Ip	Instantaneous	1	0
Fabrication Number	None	Numeric Ip	Instantaneous	1	0
None	None	Numeric Ip	Instantaneous	1	0

Database 0 objects

Name	Description	Mbus Unit	Out	Orthogonal Description	Function	Record Number	Cycle Number	Fac
Energy								
Volume								
Return Temperature								
Flow Temperature								
Temperature Difference								
Power								
Volume Flow								

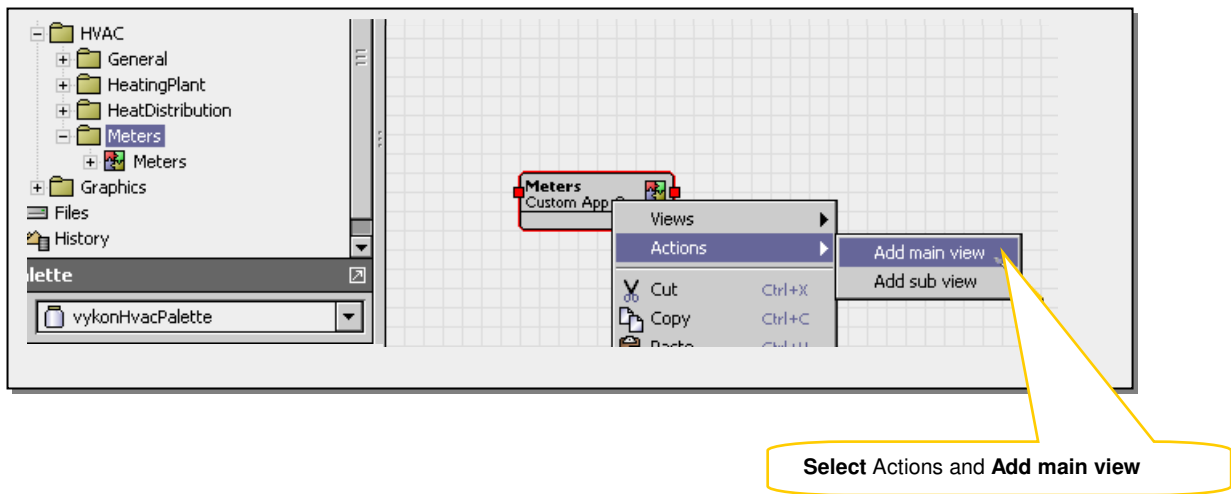
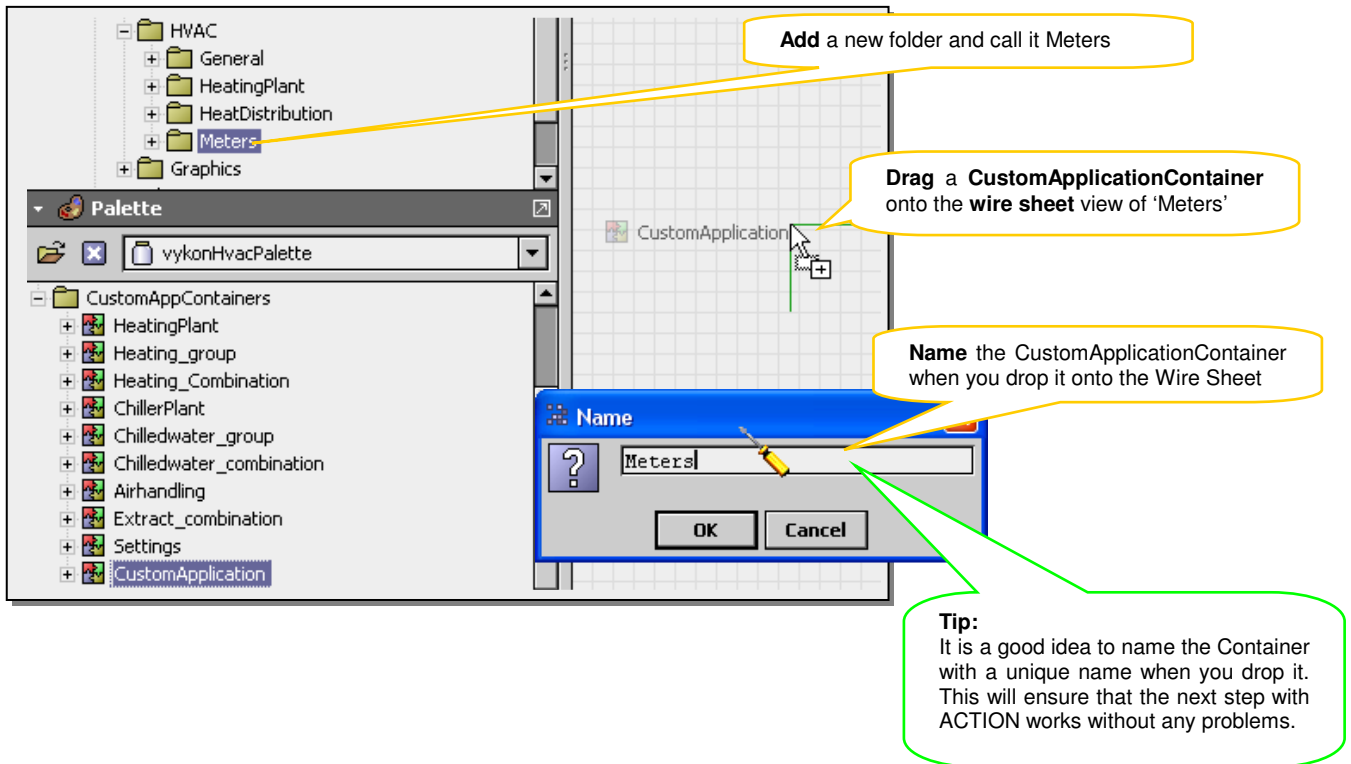
Buttons: New, New Folder, Edit, **Discover**, Add

Database

Name	Description	Mbus Unit	Out
Energy	Energy	Watt Hours	10000 W-hr {ok}
Volume	Volume	Metres Cubed	0 m³ {ok}
Return Temperature	Return Temperature	Celsius	22.51 °C {ok}
Flow Temperature	Flow Temperature	Celsius	20.12 °C {ok}
Temperature Difference	Temperature Difference	Kelvin	-2.39 K {ok}
Power	Power	Watts	0 W {ok}
Volume Flow	Volume Flow	Metres Cubed Per Hour	0.000 m³/hr {ok}

Note:
Your points should move from {Stale} status to {ok} status within a few seconds

Repeat **Point discovery** for your remaining devices



Note:
Using the Action option on the Container automatically creates a PX file under Files...Px...Meters with the name "mainView.px"



Add an **Application name** widget from the vykonHvacPalette – Graphical folder.

Configure the **Value Binding** ord to the **ApplicatieNaam** (Application name) of the CustomApplicationContainer

Set the **X=290/Y=4** layout to position it in the middle of the Canvas

	Value	Units
X	290.0	Abs
Y	4.0	Abs
Width	180.0	Abs
Height	32.0	Abs

Meters

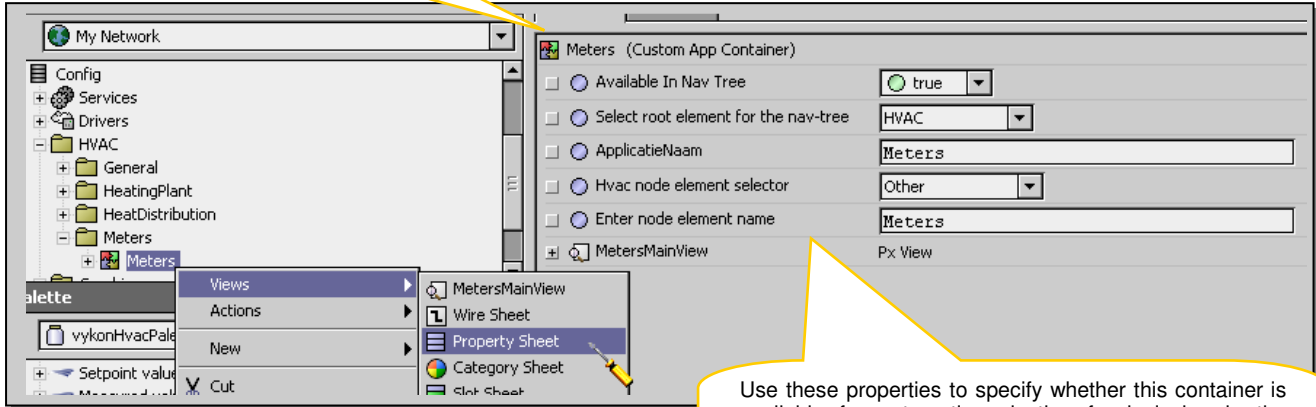
- Energy: 10000.0 W-hr
- Volume: 0.0 m3
- Return temperature: 22.5 °C
- Flow temperature: 20.1 °C
- Power: 0.0 W
- Volume Flow: 0.0 m3/hr
- PadPulsM2 - 2 Volume: 3.9 m3
- PadPulsM2 - 3 Volume: 11.6 m3

Add several **Measured value** widgets from the vykonHvacPalette – Graphical folder

Configure the **Generic editor binding** ord of the Measured value widgets to the **Value** property of each meter point in the Drivers MBus Network

Add several **Item** widgets from the vykonHvacPalette – Graphical folder. Configure each **Text** property accordingly

Select the **Property sheet** view of the **CustomApplicationContainer**

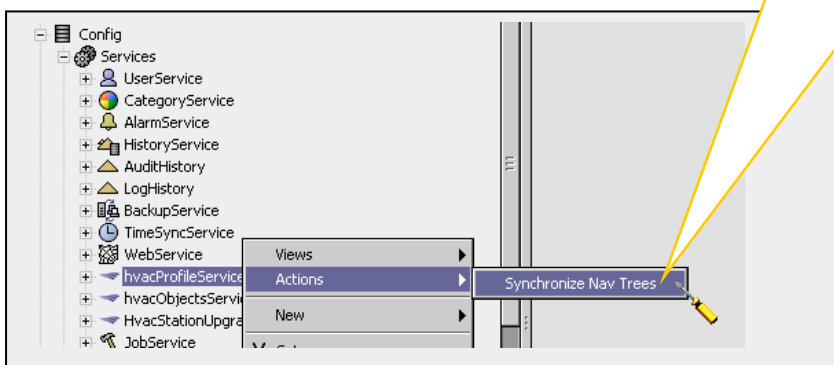


Use these properties to specify whether this container is available for automatic selection for inclusion in the Navigation tree and if so, which root element (HVAC) and which node element (Meters) it is located under in the nav file

Note:
The configuration above will result in a nav.file like this

[-] HVAC	station: slot:;/Graphics/Home
>> General	station: slot:;/HVAC/General/GeneralApp
[-] Heating plant	station: slot:;/Graphics/Home
>> Boiler system	station: slot:;/HVAC/HeatingPlant/Boiler\$20system
[-] Heat delivery	station: slot:;/Graphics/Home
>> HWS	station: slot:;/HVAC/HeatDistribution/HWS
>> Zone 1 radiators	station: slot:;/HVAC/HeatDistribution/Zone\$201\$20radiators
[-] Meters	station: slot:;/Graphics/Home
>> Meters	station: slot:;/HVAC/Meters/Meters

▪ Finally...



You can force a nav.file update by selecting this **Action** from **hvacProfileService**

