



Saia PCD[®] Supervisor V4.14

Configuration Manual

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0.1 Document History

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Version	Published	Changes	Comments
ENG01	2017-09-05	whole document	- New document
ENG01	2017-09-26	whole document	- Corrections
ENG02	2019-06-26	whole document	- Changements from Supervisor V1.1 to V1.2
		Chapt. 6.6.5	- new subchapter: "Easy Templating Simple Objects"
	2019-08-12	Chapt. 3.13	- new subchapter: "Setting up Google 2 factor authentication"
		Chapt. A.3	- "Software-Versions" added
	2019-08-15	Chapt. 3.13	- Small corrections
ENG03	2019-08-16	whole document	- Changements from Supervisor V1.2 to V2.0
		Chapt. A.2	- "Related documents" added
		Chapt. A.7	- "List of known issues" added
ENG04	2019-08-20	Chapt. 6.3.6	- "Enhanced PG5 Import Wizard" added
		Chapt. 6.6.7	- "New Px / responsiv elements" added
		Chapt. 7.4	- "HTML 5 Enhancements" added
		Chapt. 7.4.1	- "New reporting functions" added
		Chapt. 7.5	- "Cloud connector" added
		Chapt. 7.6	- "Bulk deploy" added
		Chapt. 7.7	- "VykonPro modules" added
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		Chapt. A.6	- "What will come with version V2.1" added
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	2020-02-20	Chapt. 6.3.1	- "Duplicated physical device" added
	2020-02-17	Chapt. 6.3.8	- "Important import information..." added
	2020-02-21	Chapt. 6.3.9	- "Addition to the standard import" added
			- "System consequences for duplicated CPU names" added
	2020-02-17	Chapt. A.7	- "What will come with version V3.0" added
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ENG09	2021-11-30	SBC 4.10	- Updates as per latest SBC 4.10 version. - What is in V4.10 new" added. - List of Known defects with SBC4.10 is updated.
ENG10	2022-02-02	SBC 4.11	- Updates as per latest SBC 4.11 version. - What is in V4.11 new" added. - List of Known defects with SBC4.11 is updated.

Trademarks

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Technical changes are subject to the state of technology.

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1 About this Manual

Saia PCD® Supervisor is a supervisor tool for Saia PCD devices. It is based on the powerful Niagara V4.14 software framework and uses the Saia PCD® S-Bus over Ethernet.

This manual describes how to install Saia PCD® Supervisor and configure the SaiaIP-Network to allow Saia PCD devices data to be made accessible to the Niagara framework.

It consists of the following main sections:

[2 About Saia PCD® Supervisor](#)

This section gives an introduction to basic system principles and the Saia PCD® Supervisor user interface.

[3 Securing Saia PCD® Supervisor](#)

This section provides guidance on security issues to be considered when installing and using Saia PCD Supervisor.

[4 Installing Saia PCD® Supervisor](#)

This section describes how to install Saia PCD® Supervisor

[5 Licensing Saia PCD® Supervisor](#)

This section describes how to obtain and install Saia PCD® Supervisor license files.

[6 Creating/Engineering a project](#)

This section describes the process of engineering Saia PCD® Supervisor.

[6.1 Initial Setup](#)

This section covers the procedures that must be followed to get Saia PCD® Supervisor ready for use.

[6.2 Manual creation of datapoints](#)

This section covers the process to create communicated datapoints manually.

[6.3 Using the "Saia PG5 Data Import Wizard"](#)

This section covers the process to import the datapoints from the PG5 project using the Saia PCD Data Import Wizard.

[6.4 General functions](#)

This section describes general function can be used inside of the Saia PCD Supervisor. For example how to configure Saia PCD® Supervisor to control schedules times in the Saia Burgess Controls system.

[6.5 Connect to 3rd Party Systems](#)

This section covers the process to import the datapoints and communicate with third party Devices. For example BACnet devices.

[6.6 Creating Schematics \(Operator Views\)](#)

This section gives basic guidance on creating dynamic operator views that enable end users to navigate and access the system.

[6.7 Set Up for Saia PCD® Supervisor Users](#)

This section describes how to configure users in Saia PCD® Supervisor to ensure each user only has access to the appropriate information.

[6.8 Backup & Restore](#)

This section describes how to backup/restore the Saia PCD® Supervisor configuration.

[7 Using Saia PCD® Supervisor](#)

This section covers general day-to-day operating procedures aimed at end users.



It is assumed that you understand how to use Niagara V4.14. For further information you should refer to the Niagara documentation which is installed during the Saia PCD® Supervisor installation. It can be accessed from the Saia PCD® Supervisor Help menu.

1.1 Conventions Used in this Manual

There are numerous items and instructions in this manual, the conventions below are designed to make it quick and easy to find and understand the information.

1

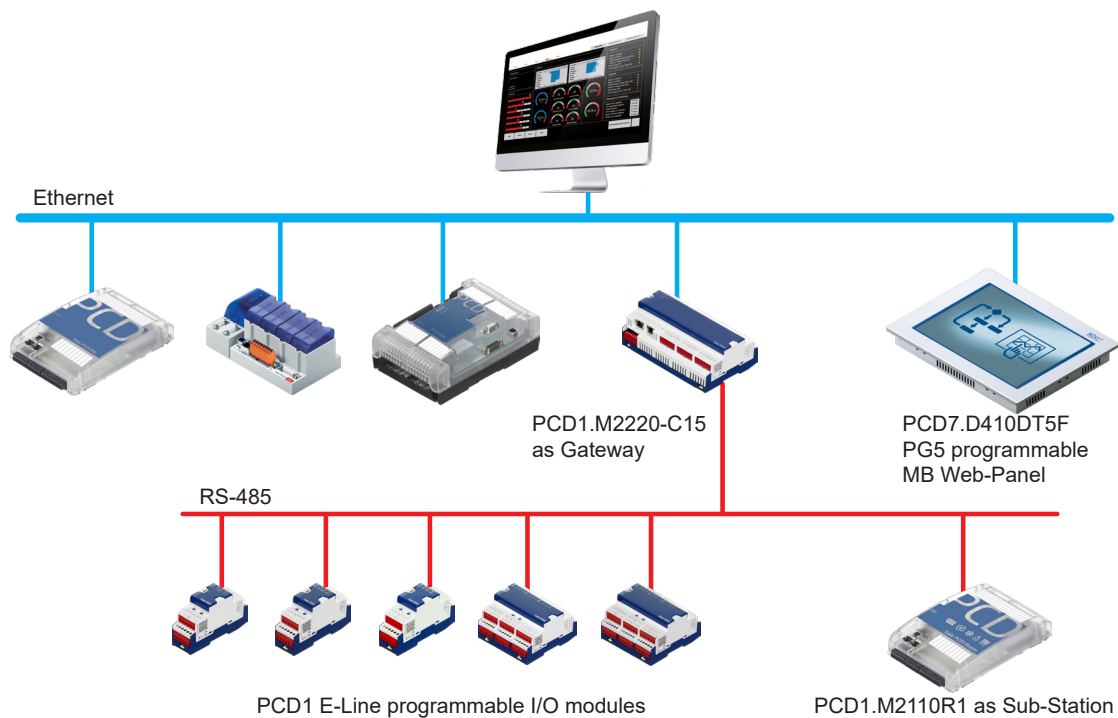
- Menu commands are in **bold** type.
- Buttons, and options in dialogue box that you need to select are in **bold** type.
- The names of text boxes and dialogue boxes are in **bold** type.
- Key combinations that you should press appear in normal type. If joined with a plus sign (+), press and hold the first key while you press the remaining one(s). For example CTRL+S indicates holding down the control key while pressing S.

2 About Saia PCD® Supervisor

Saia PCD® Supervisor is a supervisor tool for Saia PCD Control Systems. It is based on the powerful Niagara V4.14 software framework. This section describes the key features of Saia PCD® Supervisor and its user interface, and introduces some of the terminology used.

Using the supplied SaiaIPNetwork (SBC Communication Driver), Saia PCD® Supervisor can connect to multiple Saia PCD devices and access device data in order to monitor or adjust the operation. System data is held within a database and is accessible in raw format or presented in specially-designed graphical pages known as schematics or Operator Views (PX view).

Saia PCD® Supervisor connects to the Saia PCD devices network over Ethernet. This gives access to the Saia PCD devices on the associated LAN (Local Area Network) and through S-Bus Gateway functionality serial networked devices.



Ethernet communication to PCD's and on PCD's over RS-485 which are connected behind a gateway.

2.1 Saia PCD® Supervisor Architecture

2.1.1 Platform

In computing, a platform describes some sort of hardware architecture or software framework (including application frameworks), that allows software to run. Typical platforms include a computer's architecture, operating system, programming languages and related runtime libraries or graphical user interface

The Platform is the topmost level of configuration and may be compared to the control panel on a PC. In this area of Saia PCD® Supervisor where you can set up:

- Communications
- Install Licenses
- Find fault issues
- Start / Stop stations
- Copy stations
- Backup stations
- Handling certificates
- Handling Lexicons for multilingual projects
- Checking the TCP/IP configuration of the Host computer
- Accessing Remote File system

Access to the Platform requires the user to login, using the same credentials required to login to the Windows PC. In case of some modification Passphrase is also needed.

2.1.2 Station

Software running on a Niagara platform that is the main unit of server processing in the Niagara architecture. A station runs the components of the Niagara framework and provides the access to view and control these components via the Workbench or web browser. Think of the station as the application built by the engineer to integrate the data and design a user interface.

The Station manages communications with the Saia Burgess Controls system(s) and acts as a 'container' for all other configuration settings and functions. These include:

Services	such as alarm listening and monitoring and the Saia PG5 Data Import Wizard
Drivers	for managing access to data in the Saia Burgess Controls system(s) and other systems.
Files	schematic/Operator Views used to present system information on remote client devices
..	many other services are possible

Access to the Station settings requires the user to login (different to platform login). Initial system configuration is achieved using a default admin/engineering user account which is set up when the Station is created. Once configuration is complete further accounts can be added that grant different users specific access rights according their role (see [6.7 Set Up Saia PCD Supervisor Users](#)).

2.1.3 Platform Daemon

A program that is executed as service in the background.

In an other way it is compact executable program that enables a user to access platform tools through the Workbench. The Platform Daemon enables to run the stations on the local PC.

2.1.4 SBCIpNetwork driver

The SBCIpNetwork driver defines the communication settings to a Saia Burgess Controls system and provides access to data held in its controllers and devices, including:

Points	Input, Output, Register, Flag, Timer, Counter, DataBlock and text Block.
Histories	values logged in HD log modules.
Alarms	for monitoring alarm messages generated within the Saia Burgess Controls system.

2.1.5 Other Drivers (open points)

The Saia PCD® Supervisor is based on the Tridium Niagara V4.14 framework. Therefore it supports a wide range of additional drivers, suitable for interfacing with other manufacturer's building automation systems and products. This enables the monitoring and control of these systems to be fully integrated with the management of a Saia Burgess Controls system within a common supervisor.

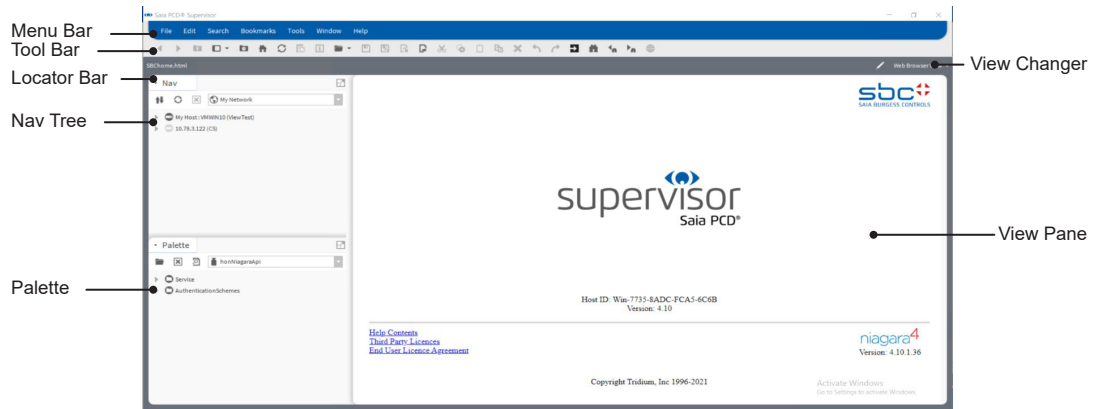
Support for other drivers requires one or more additional open driver packs. For details of order codes and point counts refer to the Saia PCD® Supervisor Data Sheet (34-001-08_DS_Saia-PCD-Supervisor).

- such an open driver can be: BACnet, Modbus etc.

2.2 User Interface Application (Host PC)

This section introduces the main features of the Saia PCD® Supervisor user interface.

2



2.2.1 Nav Tree (navigation panel)

The Nav tree (or navigation panel) provides navigation around the elements, folders and files in Saia PCD® Supervisor. It is configurable under “user” by “user”. Once configured, you can view devices and points in a Saia Burgess Controls system.

For help on using the Nav tree, refer to chapter [7.2.2.2 Nav Tree](#).

2.2.2 Palettes

It is a collection (or library) of components in a hierarchical view that can be copied and pasted where needed – Wire Sheet, Property Sheet, Px View or Palette side bar.

Palettes are useful when configuring certain elements in the system. There are many Palettes available, but the most commonly used in Saia PCD® Supervisor are:

- Alarm for configuring Alarm handling
- Schedule for configuring Time Schedules
- History for configuring Histories (Plots)
- kitControl for creating control logic in Saia PCD® Supervisor
- bajai for configuring Graphics and accessing default images
- kitPx for configuring Graphics and accessing default images
- kitHVAC for configuring Graphics and accessing default images
- kitPxN4Svg for configuring Graphics and accessing default images
- WebChart for configuring Graphics and accessing default images
- SBCTOfflineEngineering service to import easily resources of a Saia PCD device from PG5 project
- sbc for devices and points
- sbclconGallery for images to build user screens
- honBACnetUtilities for getting detailed information of BACnet points.

For help on opening and closing Palettes, refer to chapter [7.2.2.3 Palettes](#)

2.2.3 Locator Bar

There is a fundamental navigation model in the Workbench which is similar to the URL navigation used in the Web browsers.

When the URL is changed the URL referenced content is shown in the browser. A remembered history of the URLs is allowing back & forward navigation.

The ORD (Object Resolution Descriptor) is the universal identification system of Niagara and it is used throughout the Niagara framework. It unifies and standardizes access to all information. And it is designed to combine different naming systems into a single string.

The **ORD** can be:

absolute	station: slot:/Drivers/SBC\$20Systems/SBCIpNetwork_Demo/Device1/ points/Heating1/Outside/Temperature/PhysVal"
relative	slot:Outside/Temperature/PhysVal"

The locator bar provides similar functionality to the Nav tree. As you navigate around the file system the locator bar will update to show the current location and view. It shows the **ORD** (Object Resolution Descriptor)

For help on using the locator bar, refer to chapter [7.2.2.4 Locator Bar](#)

2.2.4 View Pane & View Changer

The view pane is the principle work space for Saia PCD® Supervisor. When you first run Saia PCD® Supervisor it will display the home page (shown above). As you navigate through the system and select different items in the Nav tree, the view pane will change to show different information or configuration pages.

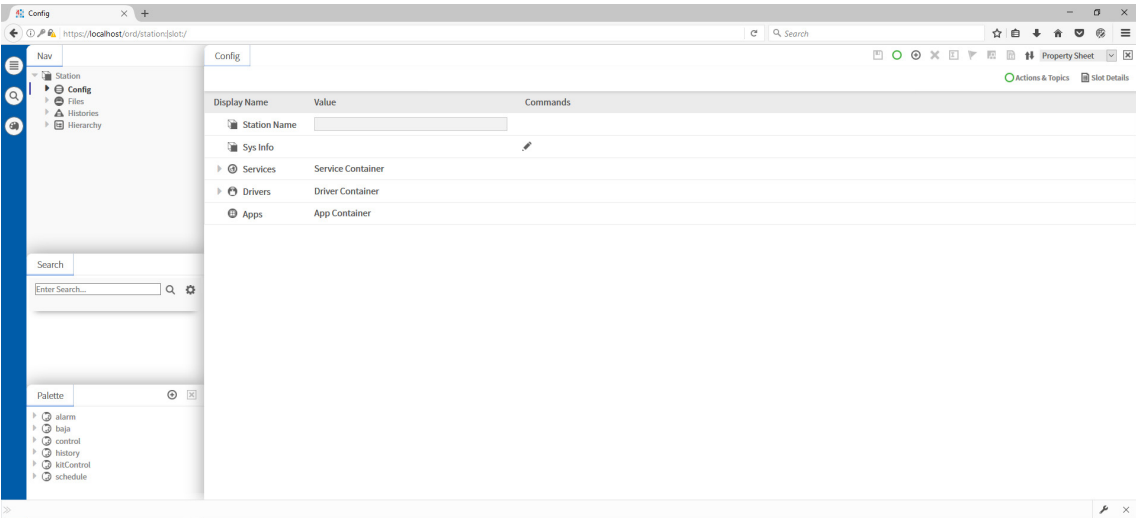
Some elements may provide more than one type of view. For help on selecting the required view, refer to chapter [7.2.2.5 View Pane & View Changer](#)

2.2.5 Client Devices

Saia PCD® Supervisor can be accessed via web clients while an IP connection is possible between the client device and the PC running Saia PCD® Supervisor.

2

Once accessed Saia PCD® Supervisor via Web client, it provides a similar user experience to the user as when it is accessed on the main PC depending on the device being used to access. The Web Server - Client connection can use JAVA or HTML5.



3 Securing Saia PCD® Supervisor

3.1 Introduction

The purpose of this section is to provide the information necessary for those involved in the installation and maintenance of a product or system to understand the requirements for configuring and managing the security of the product or system.



General Security Best Practice for Saia Burgess Controls IP Based Product manuals „26-776_Manual_TCP-IP-Ethernet“ and „26-867_Manual_TCP-IP-Enhancements“.

Both documents are available from the Saia Burgess Controls support web site www.sbc-support.com.

3

3.2 Disaster Recovery Planning

It is a documented process or set of procedures to recover and protect a business IT infrastructure in the event of a disaster. Such a plan, specifies procedures an organization is to follow in the event of a disaster.

When developing the disaster recovery plan ensure that it includes ALL data required to restore system operation, including:

- Configuration files for platform(s) and station(s)
- Database objects
- License and certificate files
- Station Backup
- Station Copies

See book 27-651 chapter [6.8 Backup & Restore](#) for details.

3.3 Physical and Environmental Considerations

The PC running Saia PCD® Supervisor should, where possible, be secured against unauthorised physical access.

3.4 Security Updates and Service Packs

Ensure the PC running Saia PCD® Supervisor and any client devices have the latest operating system updates installed, and the latest version of Saia PCD® Supervisor is being used.

Saia Burgess Controls software is tested against the latest service packs and updates applicable at the time of release. For significant operating system and Java updates / service packs, please check the Saia Burgess Controls support web site www.sbc-support.com for any compatibility issues.

3.5 Virus Protection

Ensure the PC running Saia PCD® Supervisor and any client devices are running virus protection software, and the virus definitions are kept up-to-date.

Some virus protection software may have an adverse impact on the performance of Saia PCD® Supervisor. In such cases request that the Saia PCD® Supervisor directory be excluded from on-access scan.

Further details can be found on the Saia Burgess Controls support web site www.sbc-support.com.

3.6 Network Planning and Security

It is recommended that the Ethernet network used by the Building Management System (BMS) is separated from the normal office network using an air gap (separated wiring and devices or layer 3 switches or virtual private network (VPN)). Physical access to the Ethernet network infrastructure must be restricted. You must also ensure that the installation complies with your company's IT policy.

The use of a firewall and Intrusion Detection System (IDS) from a reputable provider of security products is recommended for any Saia PCD® Supervisor installation. Follow best practice for the products chosen as well as any corporate IT policy where the installation is made. Lock down the products to the particular port you've configured for Saia PCD® Supervisor HTTPS and HTTP.

Always follow the guidelines PDF-Documents:

- manual..... 26-776_Manual_TCP-IP-Ethernet
- manual..... 26-867_Manual_TCP-IP-Enhancements.
- manual..... 26-620_Manual_Security-Rules
- manual..... Niagara^{AX} Hardening Guide
- instruction 30-002_Internet-Security-Instructions_SBC
- instruction for using VPN router .. 30-004_VPN-Router

You must also take steps to ensure the security of any other networks connected to Saia PCD® Supervisor (e.g. BACnet).

3.7 Virtual Environments

Follow best practice for the products chosen as well as any corporate IT policy where the installation is made.

3.8 Securing Wireless Devices

If a wireless network is being used it must be secured according to your company's IT policy.

3.9 System Monitoring

For any Saia PCD® Supervisor installation, especially when connected to the internet, Saia Burgess Controls recommends the use of an Intrusion Detection System (IDS) from a reputable provider of security products. Follow best practice for the products chosen as well as any corporate IT policy where the installation is made.

Saia PCD® Supervisor logs (Audit History) changes made to its own configuration and adjustments to the Saia Burgess Controls control system. Many IDS and firewall products offer a complete solution for recording all the traffic coming in and out of the Saia PCD® Supervisor PC, providing users with the ability to record all activity at the lowest level.

3.10 Securing Access to the Operating System

Ensure the PC running the Saia PCD® Supervisor and any PCs used for Saia PCD® Supervisor clients are secured according to your company's IT policy.

3.11 Access Control

All Saia PCD® Supervisor files should be protected from read and write access by people and software not authorized. Saia Burgess Controls recommends following best practice for securing system objects, such as files, and using access control appropriately.

If Windows users are granted access to the filing system location of the Saia PCD® Supervisor project then it is possible for them to inadvertently (or deliberately) open, delete or edit any of the configuration and data files of independently of their Saia PCD® Supervisor workgroup settings.

3.12 Securing Saia PCD® Supervisor

The Saia PCD® Supervisor software should be configured during installation and operation following best practice. Follow the installation procedure as described in this manual. In addition, refer to the Niagara 4 help system and Niagara 4 security guidelines.

3

3.12.1 Default Admin User of a Station

Initial system configuration is achieved using a default admin/engineering user account which is set up with a strong password when a Station is created.

3.12.2 Passphrase



The passphrase, specified during the Saia PCD® Supervisor installation process, protects sensitive data on any station that you create and will be required if the Saia PCD® Supervisor station is to be moved to another PC e.g. moved to the site PC, or restored after a PC failure.

3.12.3 Set up Other Users for the Station

Once configuration is complete (using the default admin user) further user accounts must be added that grant different users specific access rights according to their role. Saia PCD® Supervisor enforces the use of strong passwords.

For further details, see book 27-651 [chapter 7 Using Saia PCD® Supervisor](#)

3.13 Setting up Google 2 factor authentication

The Google Authentication Scheme is a two-factor authentication mechanism that requires the user to enter their password as well as a single-use token when logging in to a station. This protects a user's account even if their password is compromised.

This authentication scheme relies on TOTP (Time-based One Time Password) and the Google Authenticator app on the user's mobile device to generate and verify single-use authentication tokens. Google authentication is time based, so there is no dependency on network communication between the user's mobile device, the Station, or external Servers. Since the authenticator is time based, the time in the station and time in the phone must stay relatively in sync. The app provides a buffer of plus or minus 1.5 minutes to account for clock skew.

3

Prerequisites:

- The user's mobile phone requires the Google Authentication app.
- You are working in Workbench.
- The user exists in the station database.

Perform the following steps:

1. Open the GAuth palette and add the **GoogleAuthenticationScheme** to the **Services > Authenticationservice** node in the Nav tree.
2. Right-click **Userservice**, and double-click the user in the table.
The Edit view for the user opens.
3. Configure the *Authentication Scheme Name* property to *GoogleAuthenticationScheme* and click **Save**.
4. Click the button next to *secret Key* under the user's authenticator and follow the prompts.
5. To complete the configuration, click **Save**.
Depending upon the view you are using, you may have to open the user again or refresh after saving.

3.14 Saia PCD® Supervisor Security Check List

- ☐ Latest version of Saia PCD® Supervisor is being used.
- ☐ Saia PCD® Supervisor installation files, configuration files (including station back-up), certificates and licenses are included in disaster recovery plan.
- ☐ The PC running Saia PCD® Supervisor should, where possible, be secured against unauthorized physical access.
- ☐ The Ethernet network (and any other networks) that the PC is connected to is secured, e.g. by the use of firewalls and intrusion detection systems.
- ☐ The PC is running the latest version of the Windows operating system, with all updates and service packs.
- ☐ The PC is running virus protection software.
- ☐ Appropriate user accounts are set up on PC and access to files is restricted to only those who are authorized.
- ☐ Saia PCD® Supervisor is configured to use HTTPS using a certificate from a trusted Certificate Authority.
- ☐ Saia PCD® Supervisor users are configured as required.
- ☐ Ensure Saia PCD® Supervisor is configured to backup data regularly to a secure location as per your company's backup policy.

3.15 General Data Protection Regulation (GDPR)

The General Data Protection Regulation (EU) 2016/679 (GDPR) is a regulation in EU law on data protection and privacy for all individual citizens of the European Union (EU) and the European Economic Area (EEA). It also addresses the transfer of personal data outside the EU and EEA areas. The GDPR contains provisions and requirements related to the processing of personal data of individuals (data subjects) inside the EEA, and applies to any enterprise established in the EEA or (regardless of its location and the data subjects' citizenship) that is processing the personal information of data subjects inside the EEA.

3

Under the terms of the GDPR personal data includes any information that may be used to identify an individual. This includes (but is not limited to):

- user names,
- passwords,
- phone numbers,
- email addresses,
- work or residential addresses.

Any such information entered into Saia PCD® Supervisor is encrypted and stored on the PC where the Saia PCD® Supervisor application is installed on a customer's premises. Neither Honeywell or Saia Burgess Controls have any involvement with the storage and/or processing of personal data within Saia PCD® Supervisor.

Responsibility for compliance with the requirements of the GDPR lies fully with the system integrator or system administrator and, as such, they must ensure that adequate technical and organisational systems are in place to:

- obtain explicit consent from each data subject for personal data to be stored, used and/or processed,
- allow individuals to have access to their personal data in order to verify accuracy,
- allow individuals to withdraw their consent at any time and to have their personal data to be permanently erased,
- maintain the security and integrity of data storage and access at all times,
- report any breaches of data security (that may affect user privacy) to the relevant authority within 72 hours of the breach occurring.

4 Installing Saia PCD® Supervisor

This section describes how Saia PCD® Supervisor should be installed to ensure that it operates correctly. The following steps are required to install Saia PCD® Supervisor:

[4.1 Installation Requirements](#)

[4.2 Obtaining the Saia PCD® Supervisor Software](#)

[4.3 Installing the Saia PCD® Supervisor Software](#)

[4.4 Installing the Platform Daemon](#)

[4.5 Configuring the Windows Firewall](#)

4.1 Installation Requirements

Before installing, or upgrading, ensure that the PC meets the system requirements. Refer to the Saia PCD® Supervisor Data Sheet (34-001_DS_Saia-PCD-Supervisor).

The PC on which Saia PCD® Supervisor is to be installed must have TCP/IP access to the Saia Burgess Controls network.

4.2 Obtaining the Saia PCD® Supervisor Software

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Navigate to the Saia Burgess Controls Technical Support web site at <http://www.sbc-support.com> --> Software / Saia PCD® Supervisor

4.3 Installing the Saia PCD® Supervisor Software

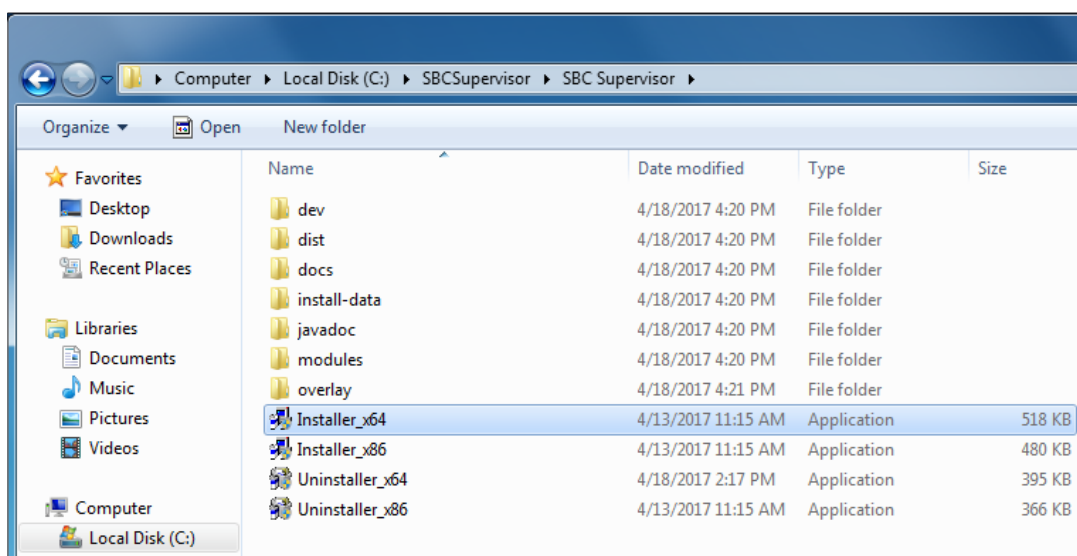
1. Log in to the PC as someone with Administrator rights.



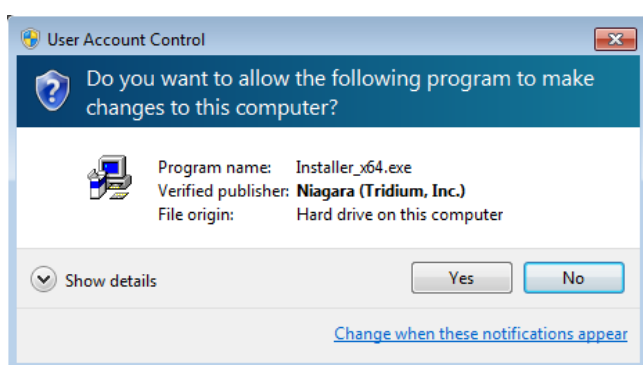
It is recommended that you close all other programs before installing Saia PCD® Supervisor. However, do not close any virus protection software.

2. Presently the installer works from the local hard drive only. Therefore the installer must be copied to a local folder first (e.g. C:\Temp)
3. Run 'Installer_x86.exe' (for 32-bit operating systems) or 'Installer_x64.exe' (for 64-bit operating systems), and wait for the first installation screen to appear.

4

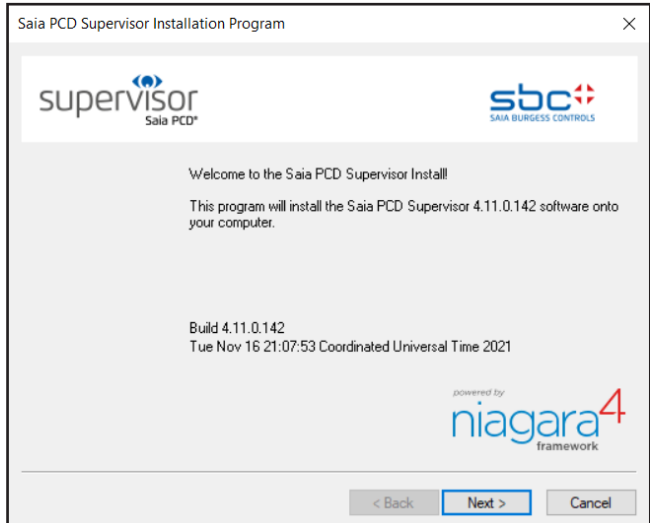


4. Follow the on-screen instructions

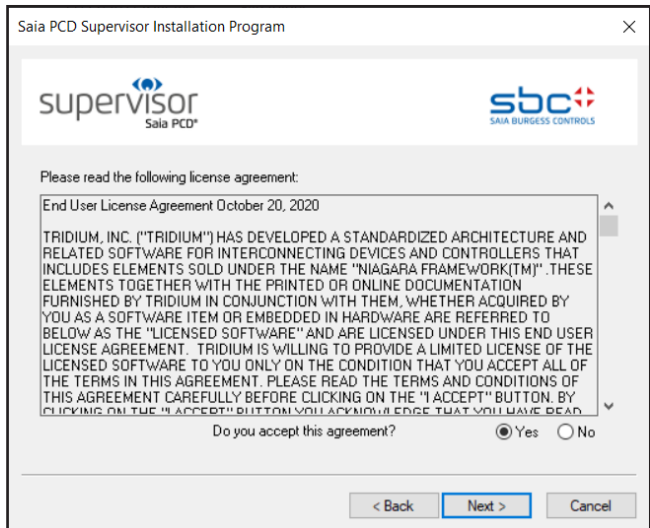


Installing the Software

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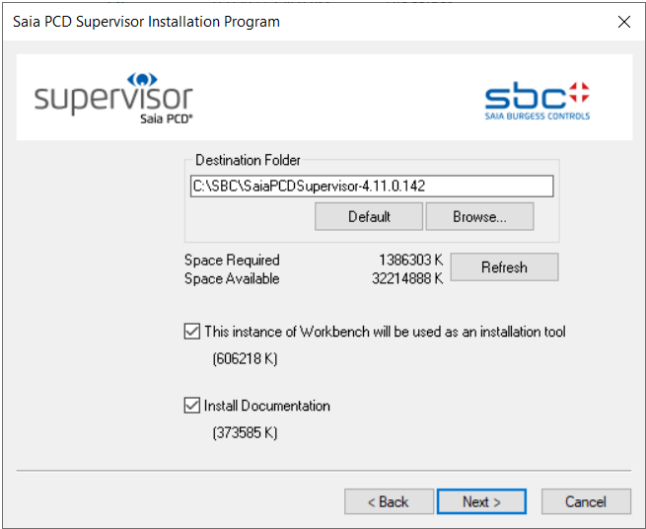
Read and accept the license agreement.



5. Change the destination folder (if required). The default path is "C:\SBC\SaiaPCDSupervisor".

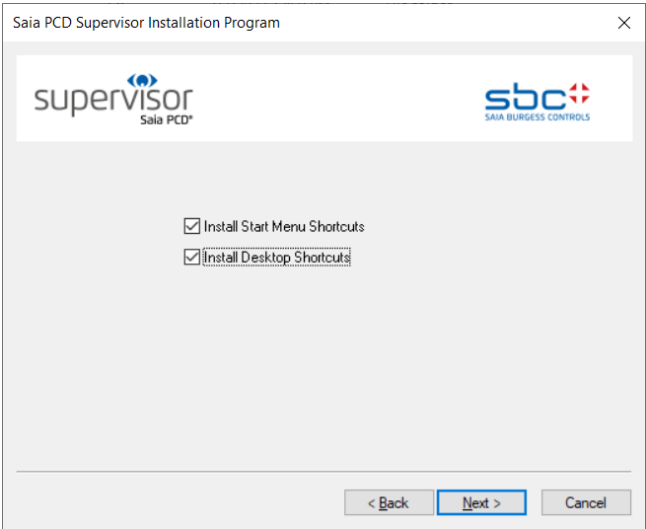


If you enter a new path it must not contain spaces

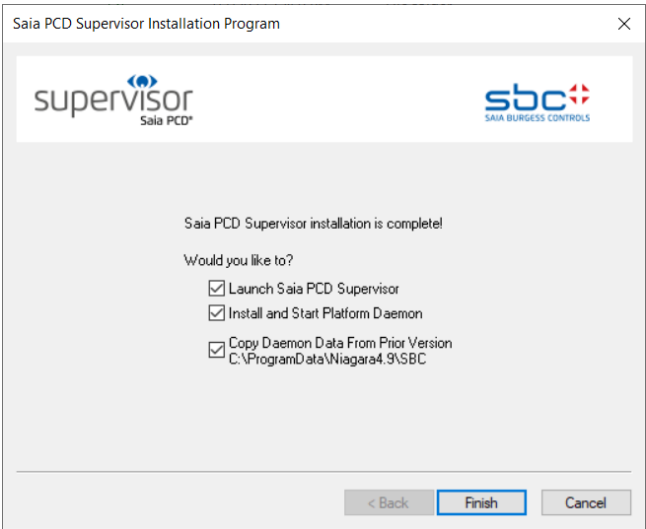


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6. Add shortcuts to the Start Menu and Desktop.



7. Once the installation is complete the following screen is displayed.

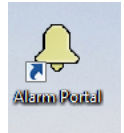
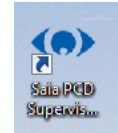


Installing the Platform Daemon



During the installation you will be prompted to create a passphrase which ensures sensitive data on any station that you create is protected. Ensure that you remember it and keep it safe as it will be required to move the configured Saia PCD® Supervisor to another PC.

Leave all three check-box checked and click the Finish button. Then the software is installed and two icons are placed to the Desktop



4

4.4 Installing the Platform Daemon

If there are other instances of Saia PCD® Supervisor (or Niagara) on the same PC then the Platform Daemon must be installed. This will typically be set up during the installation process. It can also be installed and run manually.

1. Click **Start** and choose **All Programs**.
2. Navigate to the **Saia PCD Supervisor** folder.
3. Click **Install Platform Daemon**.

After a few seconds a command window should briefly appear with the following message:

```
Install Platform Daemon
installdaemon: Niagara service successfully installed.
```

To check if the Platform Daemon is already running go to

Windows Control Panel → Administrative Tools → Services →
Niagara Services running



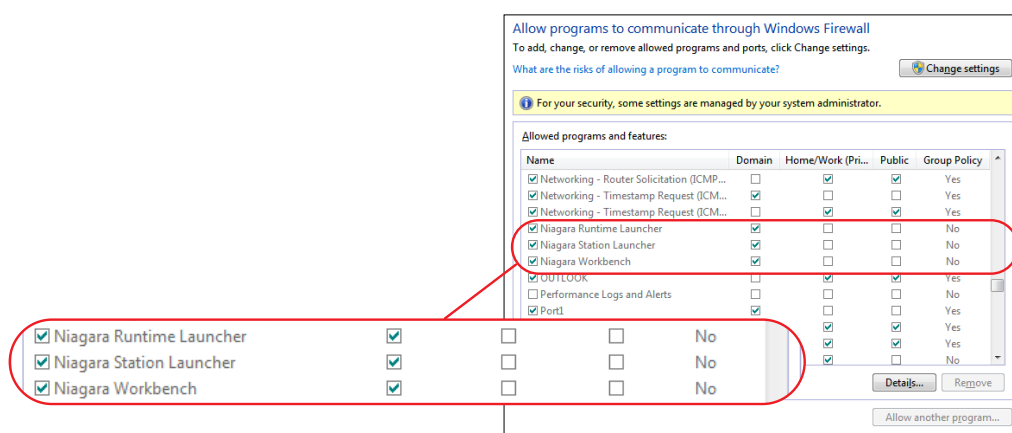
The running Niagara service can block communication ports depending on what type of communication is configured.

4.5 Configuring the Windows Firewall

You may need to configure the Windows Firewall to allow Saia PCD® Supervisor to communicate correctly.

To configure the Windows Firewall

1. Open the Windows Firewall.
 - In Windows 10 or 8, type 'Windows Firewall' in the Search box
 - In Windows 7, click the Windows Start button, type 'Windows Firewall' in the Search box.
 - Click Windows Firewall from the list of search results.
2. Click **Allow a program or feature through Windows Firewall**. The **Allowed programs and features list** is displayed.



3. Scroll down the list and check that entries exist for Niagara Runtime Launcher, Niagara Station Launcher, and Niagara Workbench for your Saia PCD® Supervisor installation folder. If these programs do not appear in the list you will need to add them (see procedure below).



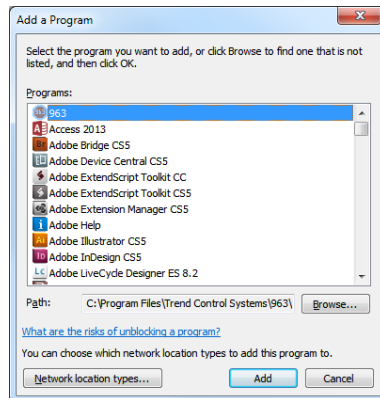
Each installed instance of Niagara requires its own entries in the Firewall settings.

4. If you need to change any settings click **Change settings** and edit the checkboxes as required.

Configuring the Windows Firewall

To add programs to the firewall:

1. Open the **Allowed programs and features list** as described above.
2. Click **Change settings**.
3. Click **Allow another program**. The **Add a Program** dialogue box is displayed.



4. Click **Browse** and navigate to the **Saia Burgess Controls Control Systems | Saia PCD Supervisor | bin** folder.
5. Double click the program to be added.
6. To add Niagara Runtime Launcher select **nre.exe**
7. To add Niagara Station Launcher select **station.exe**
8. To add Niagara Workbench select **wb_w.exe**
9. The program will appear highlighted in the **Add a Program** dialogue box. Click **Add** to add the program to the firewall list. The dialogue box will close.
10. Repeat steps 3 through 6 to add the other programs.

5 Licensing Saia PCD® Supervisor

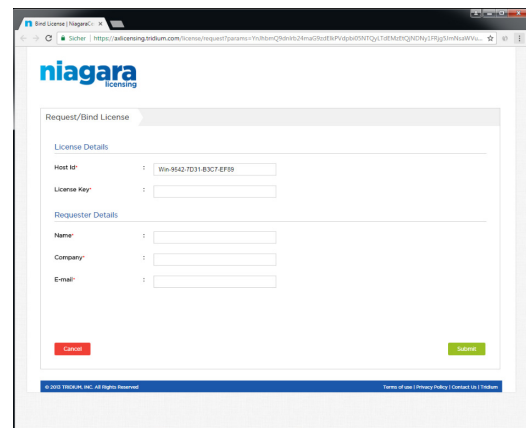
Before Saia PCD® Supervisor can be used, it must be licensed. The license will allow you to run the application on a single PC.

5.1 Obtain a Saia PCD® Supervisor License and Certificate

When an unlicensed installation of Saia PCD® Supervisor is run you will be prompted to email certain details to Saia Burgess Controls in order for them to provide the relevant license and certificate files.

To obtain a license:

1. Launch the Saia PCD® Supervisor application, e.g. from the **Start** menu point to **All Programs > Saia Burgess Controls Systems > Saia PCD® Supervisor** and then click Saia PCD® Supervisor. The **Request License** dialogue box is displayed. The pop up pictures shows you the so called Host ID of the computer. The Host ID is strictly connected to that hardware of the PC. If the hardware is changed a new license must be obtained.



2. Email the requested information (list what is required....) to your local sales office including the email address you would like the license files sent to.
3. Click **Exit to close the dialogue box**.

The Order Management Team will process your request, and email the license and certificate files to the specified email address.

5.2 Install the Saia PCD® Supervisor License

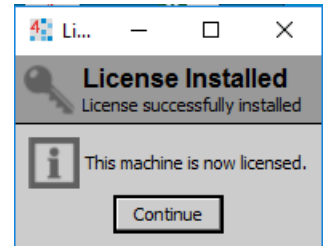
Your Saia PCD® Supervisor license is mailed to you as a ZIP file containing a number of license and certificate files which need to be installed on the PC containing Saia PCD® Supervisor, this can be done in two ways:

[5.2.1 Automatic Licensing](#)

[5.2.2 Manual Licensing](#)

5.2.1 Automatic Licensing

Saia PCD® Supervisor can be licensed automatically via the global license server providing the PC has internet access. If this is the case when Saia PCD® Supervisor is run after your license request has been processed it will automatically be licensed and the files copied to the required folder.



5

5.2.2 Manual Licensing

To install the license and certificate files:

1. Copy the 'Licenses.zip' file to the PC hard disc.
2. Extract all the files from 'Licenses.zip' to an empty folder. The folder should now contain six files.
3. Copy the three '.license' files to the "C:\SBC\SaiaPCDSupervisor\security\licenses" folder.
4. Copy the three '.certificate' files to the "C:\SBC\SaiaPCDSupervisor\security\certificates" folder.
5. You will now be able to launch the Saia PCD® Supervisor (Workbench) application.

5.3 Updating a License

If you purchase a license upgrade, e.g. for additional points, you will be emailed the updated license files as a ZIP file containing a number of license and certificate files and it will be necessary to upgrade the Saia PCD® Supervisor license. If the Saia PCD® Supervisor PC is connected to the internet this should happen automatically - see chapter [5.2.1 Automatic Licensing](#), alternatively the files can be copied manually - see chapter [5.2.2 Manual Licensing](#).

6 Creating/Engineering a project (application, site, ..)

Building a site within Saia PCD® Supervisor involves creating a database that reflects the structure, devices and points within the associated Saia Burgess Controls system. In the Saia Burgess Control System mainly the S-Bus communication protocol is used. However it is possible to use third party communication protocols depending on the used license. A **Point** in the Saia PCD® Supervisor represents a value or state of an item in the Control System (e.g. a point represents a value or state of a symbol from the PCD controller).

For example:

“Outside_Air_Temperature_Sensor_Value” is the point name in the Saia PCD® Supervisor, but it is actually communicated as “Register 100” from the proper PCD device.

The communication connection is based on **Media type** and **Media address** (“Register 100”) not on the symbol name.

There are two methods to build up the point database within Saia PCD® Supervisor:

- Manual creation of data points
- Using Saia PG5 data import wizard

You can use either one or both methods to build up your point database, according to your requirements.



It is the best practice to only add the points required for use in the Saia PCD® Supervisor. Adding unwanted points will increase the memory usage and affect the remaining license count. Keep in mind that the points for HDLogs are imported to get it working properly.

Go to ..

[6.1 Initial Setup](#)

[6.2 Manual creation of data points](#)

[6.3 Using the “Saia PG5 Data Import Wizard”](#)

[6.4 General functions](#)

[6.5 Connect to 3rd Party Systems](#)

[6.6 Creating Schematics \(Operator Views\)](#)

[6.7 Set Up Saia PCD® Supervisor Users](#)

[6.8 Backup & Restore](#)

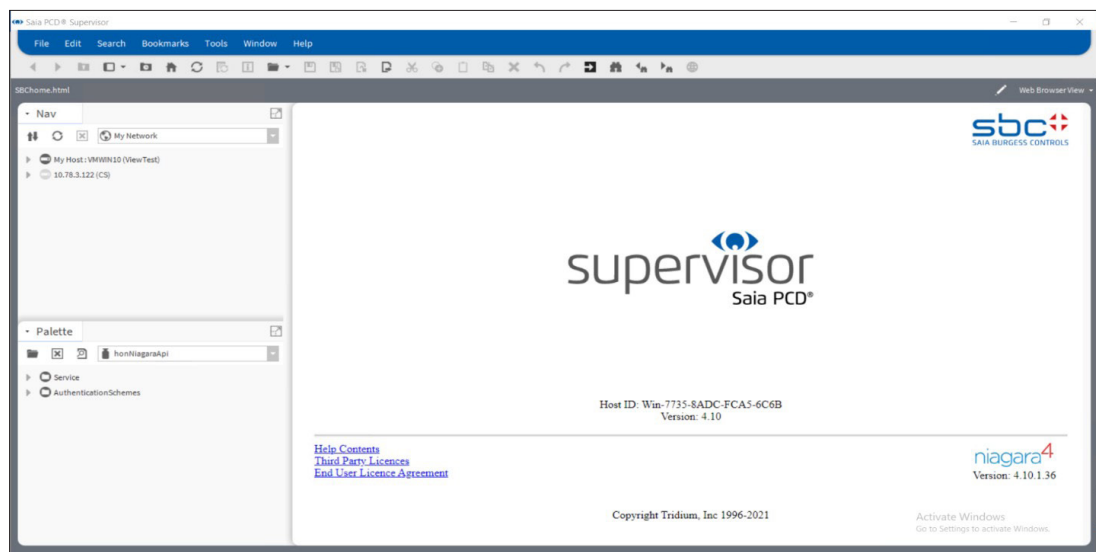
6.1 Initial Setup

When Saia PCD® Supervisor is run for the first time you will need to work through an initial setup procedure which involves the following steps:

6.1.1 Launch the Saia PCD® Supervisor Application

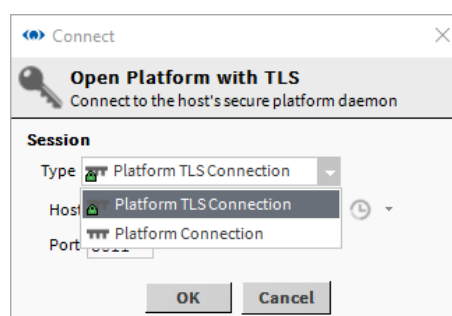
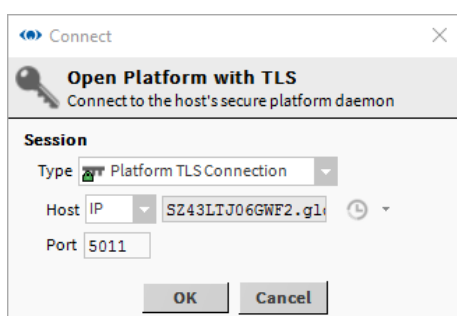
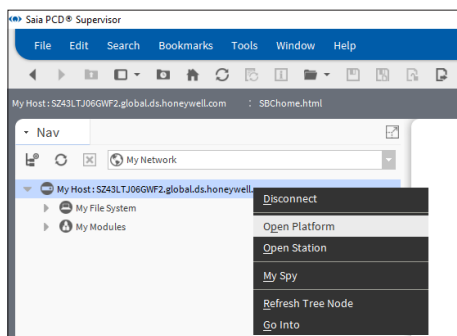
1. Click Windows **Start** button and choose **All Programs**.
2. Navigate to the **Saia PCD® Supervisor** and open it.
3. Click Saia PCD® Supervisor. The Saia PCD® Supervisor application window will be opened. This program is called as Workbench in relation of Niagara N4 environment. (It can happen that the start of the program takes a bit more time, please be patient.)

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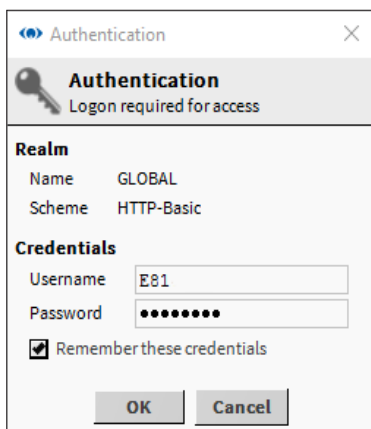


6.1.2 Open the Platform

1. In the **Nav** tree of the Saia PCD® Supervisor tree right-click on **MyHost** and choose **Open Platform**. The **Connect** dialogue box is displayed.



2. In the **Type** box select **Platform TLS Connection**. Leave other settings at their default values.
3. Click **OK**. The **Authentication** dialogue box is displayed.



If a 'Cannot display page' error appears, ensure that the Platform Daemon has been installed.

See chapter ["4.4 Installing the Platform Daemon"](#)

Initial Setup

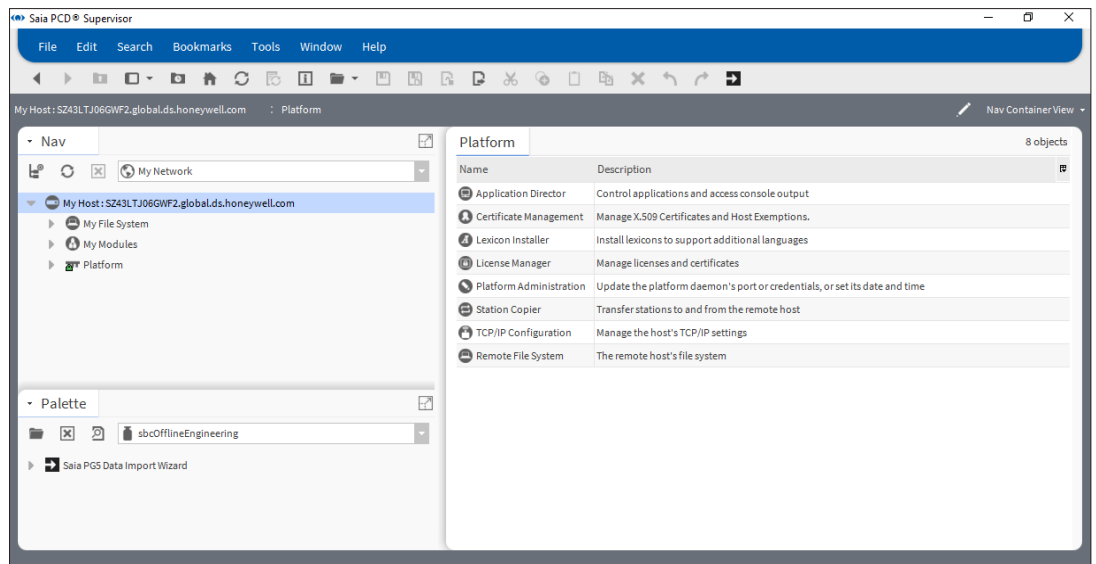
4. Enter the **Username** and **Password** that you would normally use to login to the Windows PC.



For security it is recommended that the Remember these credentials box is left unchecked.

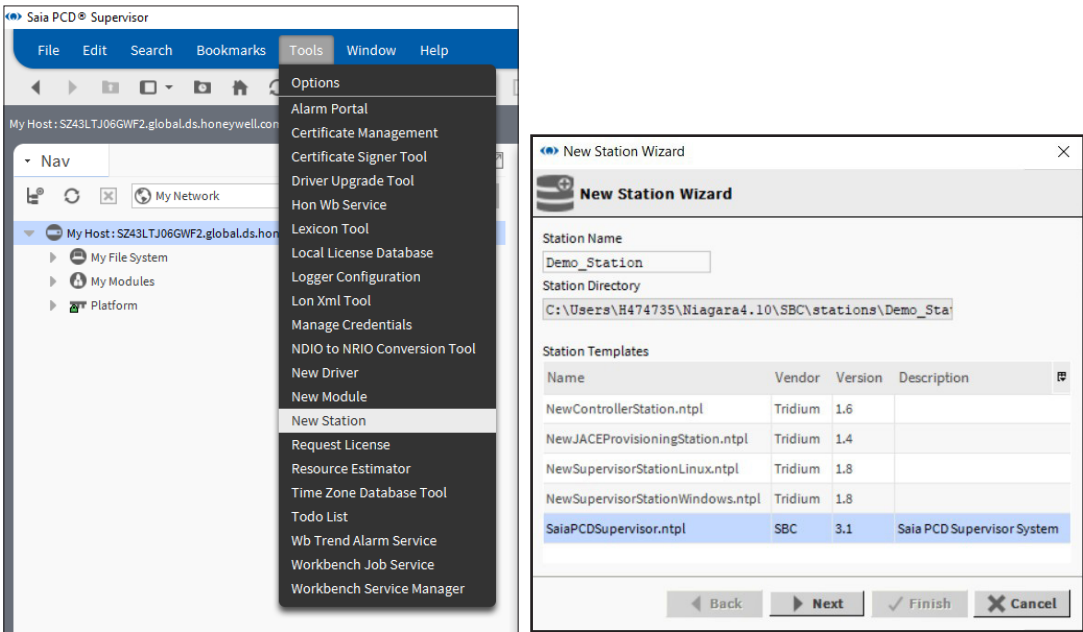
5. Click OK.
A “Platform” item will now appear in the Nav tree and various platform objects will appear in the view pane.

6



6.1.3 Create a New Station

- 1. From the Tools menu select New Station. The **New Station Wizard** is displayed.

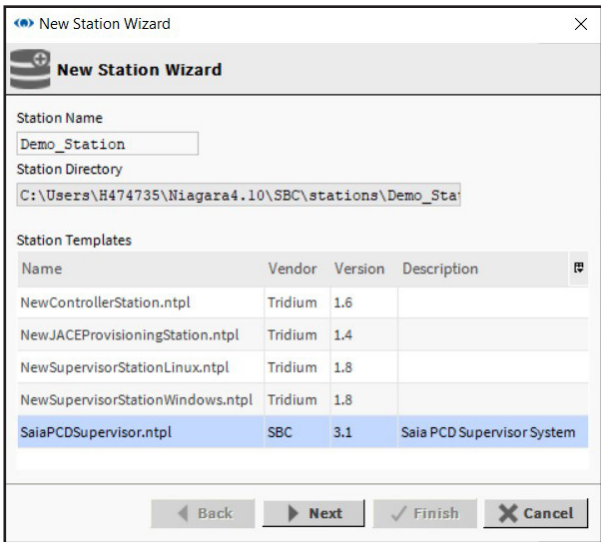


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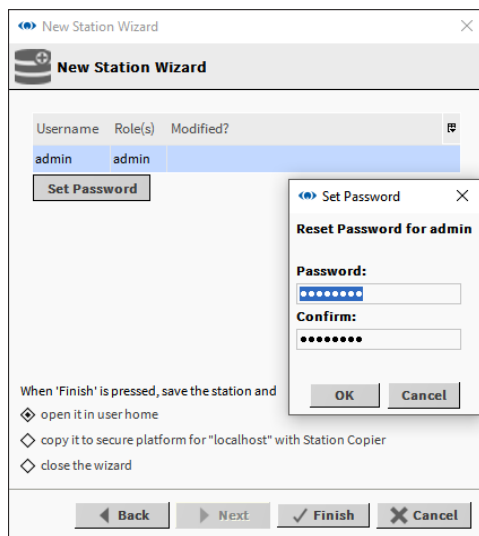
- 2. Under Station Templates click SaiaPCDSupervisor.ntpl to highlight it.
- 3. Type a suitable name in the Station Name box.



If a station already exists with that name you will be prompted to delete the existing station or you can go back and specify an other name for your new Station. You must select Yes to proceed.



4. Click Next.



6

5. Type a password in the Password for admin User box.



The password must have a minimum of 10 characters and include at least one capital letter, one lowercase letter and one numeral (digit).

As example:

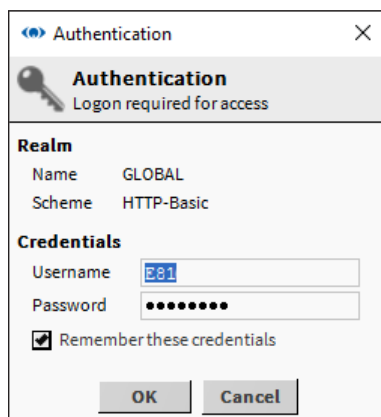
username: admin
password: Manager123 (it can be later changed)

Retype the password in the Confirm Password for admin User box.



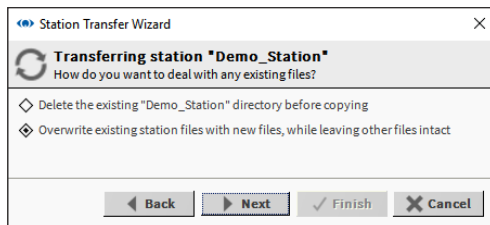
This password is for the 'admin' and should be reserved for engineers. It grants access to everywhere and to everything inside of a Station.

6. Select the copy it to secure platform for "localhost" with Station Copier option.
7. Click Finish.
8. If you have not already logged in to the Platform the Authentication dialogue box is displayed, go to step 10



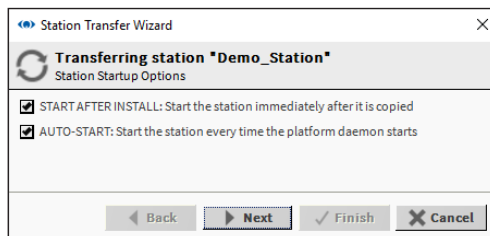
If you have already logged into the Platform, go to step 11.

9. Enter your Username and Password (login credentials of the PC) and click OK.
10. If a station with the same name already exists, you will first be prompted how to proceed.



11. Specify the required option.
12. Click Next. A dialogue box enabling you to specify the start-up options is displayed.

6



13. Select the required start-up options.

START AFTER INSTALL

Select this option if you want to start the station as soon as it has copied (recommended).

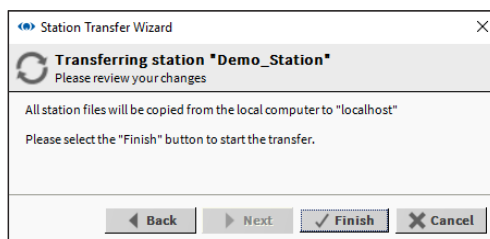
AUTO-START

Select this option if you want the station to be started when the PC is restarted (recommended).



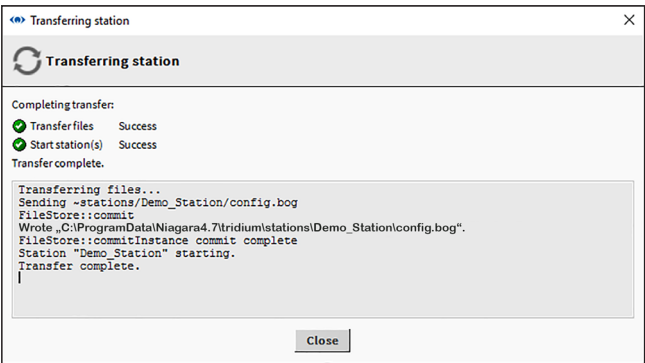
When developing several Supervisors other stations will need to be stopped.

14. Click Next.



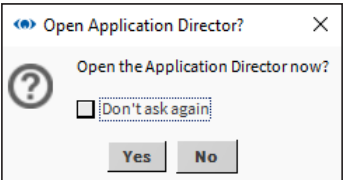
Initial Setup

15. Click Finish. A progress update is displayed.

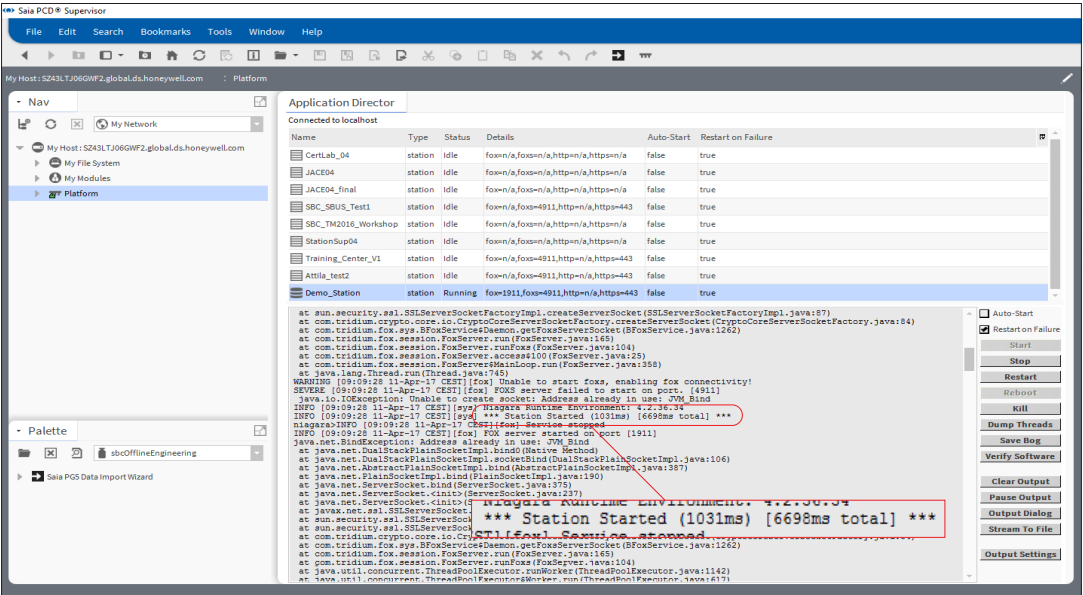


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16. When the process is complete, click Close. The Open Application Director dialogue box is displayed.

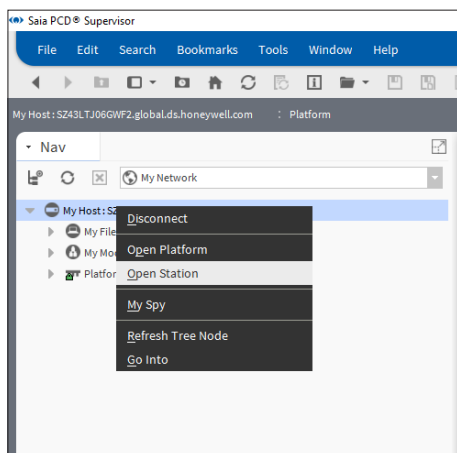


17. Click Yes. The Application Director is displayed. Check that a 'Station Started' message is shown.



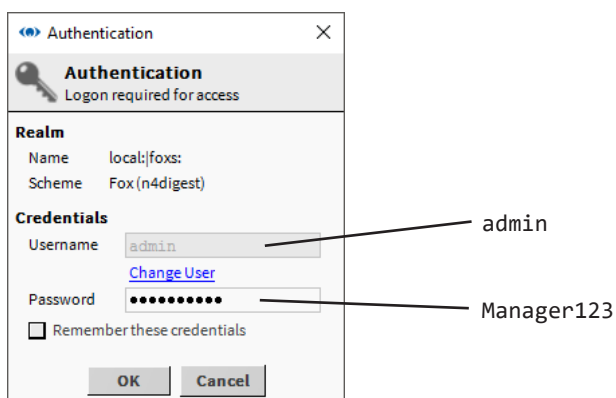
6.1.4 Open the Station

1. In the **Nav** tree right-click on **MyHost** and select **Open Station**. The **Connect** dialogue box is displayed.



6

2. In the **Type** box select **Station TLS Connection**. Leave other settings unchanged.
3. Click **OK**.
The **Authentication** dialogue box is displayed with the default 'admin' user selected.



4. Type the appropriate password in the **Password** box (i.e. the password specified when the Station was created).



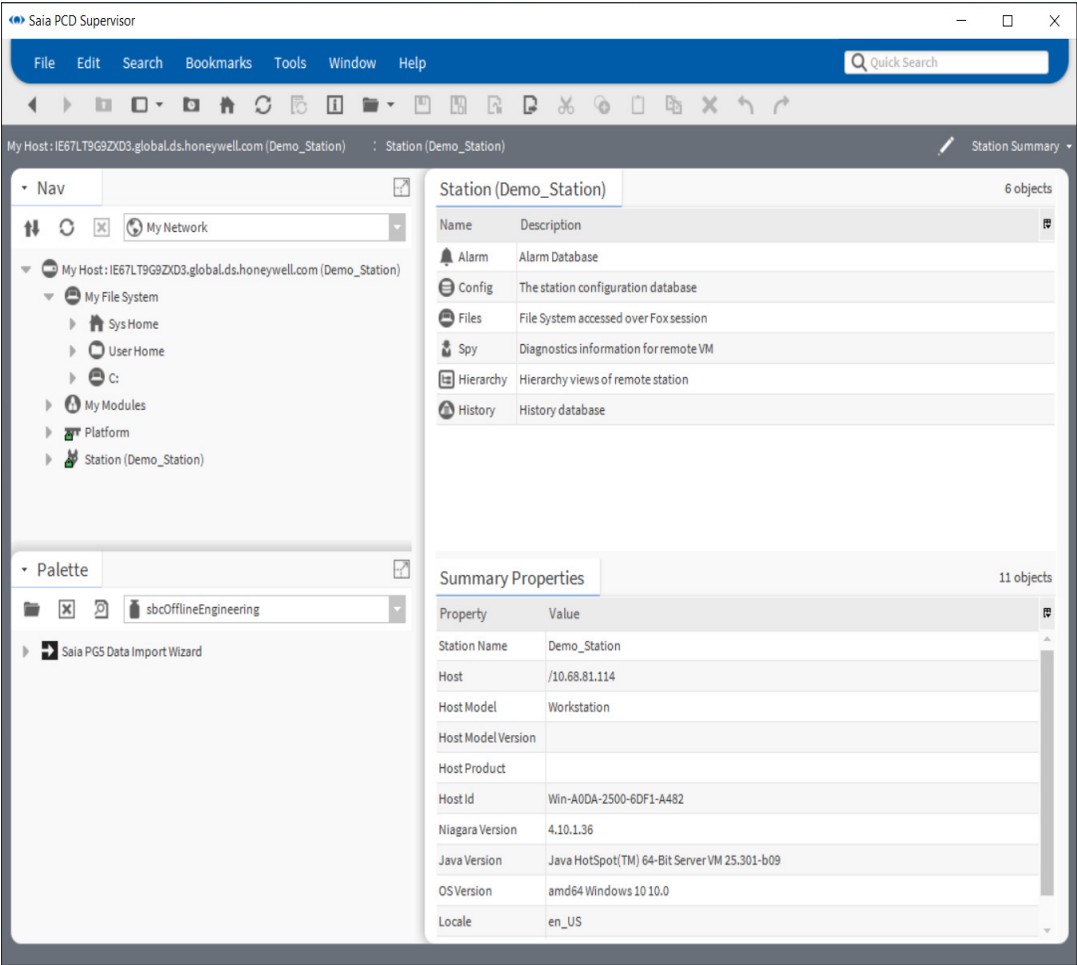
For security it is recommended that the Remember these credentials box is left unchecked.

5. Click **OK**

Initial Setup

6. After a short delay, the chosen station name will appear in the **Nav** tree and the view pane will show a summary of Station parameters (Station Summary view):

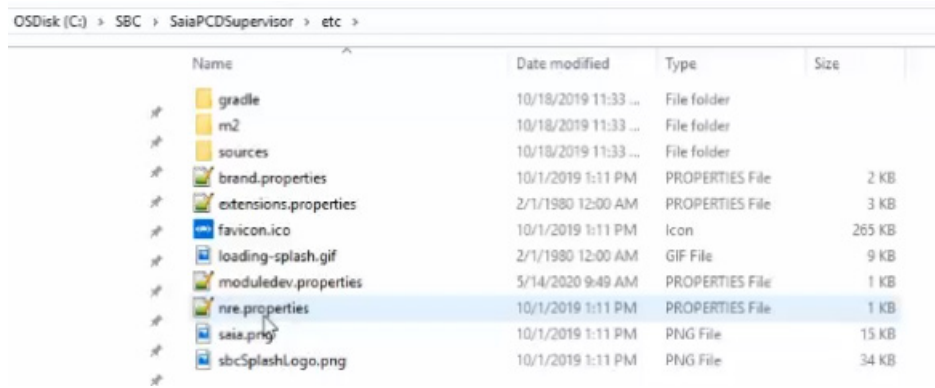
6



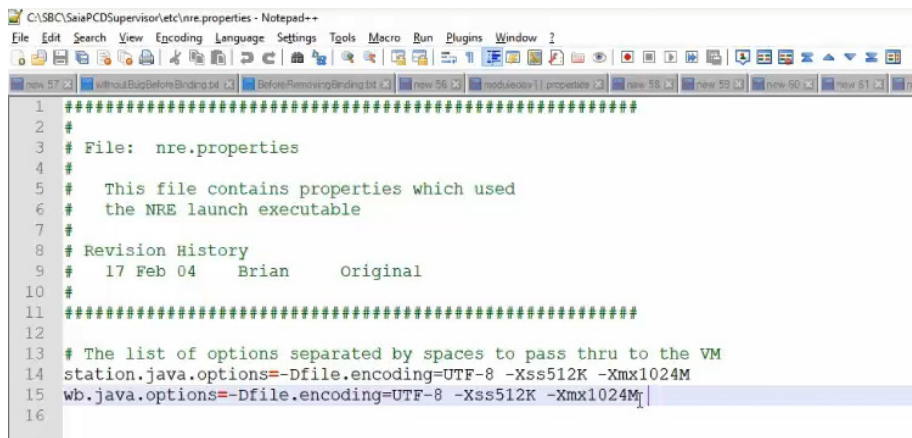
6.1.5 Increase the memory space assigned to Workbench and station

In order to obtain enhanced performance and handle multiple devices, user need to increase the reserved memory space assigned to the Workbench and station.

1. Go to the installer location.
2. Open the **SaiaPCDSupervisor** folder and then open the **etc** folder.



3. Open **nre.properties** file.



4. Update the memory space reserved for the Station in the second last line to **station.java.options=-Dfile.encoding=UTF-8 -Xss1024K -Xmx2048M**.
5. Update the memory space reserved for the Workbench in last line to **wb.java.options=-Dfile.encoding=UTF-8 -Xss1024K -Xmx2048M**.

6.2 Manual creation of data points

This chapter describes the manual creation of the point database.

The following steps are needed to create the data point:

1. Add a Saia Burgess Controls Driver (it is named as “sbc” in the Palette)
2. Configure the driver
3. Add device(s) manually (mainly PCD or other S-Bus communicating devices)
4. Add the required points to the database. Take care of the conversion. Building automation mainly using integer numbers multiplied with factor 10 in the PCD controller. While Saia PCD® Supervisor is using normalized floating point.
5. Check (or modify if necessary) the speed of the communication of the point

6

This is a tedious process with the possibility to make mistakes easily. However it is advantageous for every System Integrator to understand the process.

It makes sense to arrange a PCD controller - connected to Saia PCD® Supervisor - with a simple user program to follow up the explanation.

The user program can be for example a simple PCD device with media mapped PCD3.S100 Workshop Simulator Unit. (Who does not understand this sentence please go through the SBC PG5 User Manual or better to take part of a Basic SBC PG5 workshop.)

Important: The communication connection is based on “Media type” + “Media Address” (e.g. Register 100). Best practice is to use explicit addressing (so called “hard addressing”) in the PCD controller. Dynamic addressing can be also used (makes no so much sense) but the System Integrator must understand, that the dynamically allocated addresses in the PG5 can be any time overwritten by the PG5 programming tool.



From SBC V3.0 onwards, the default Data Point View changes from Hon BACnet View (Web application View) to Hon Data Point View (UX/HTML5). Different views still can be selected by choice.

6.2.1 Add a Saia Burgess Controls driver (SBCIpNetwork)

We need to define at least one SBCIpNetwork for S-Bus over Ethernet communicated devices. Under the SBCIpNetwork driver many PCD devices can be configured to communicate with. It is possible to define other SBCIpNetwork networks in order to distribute the PCD devices better and decrease the load of each SBCIpNetwork.

The Saia Burgess Controls Driver controls the communications and flow of data to and from the PCD devices.

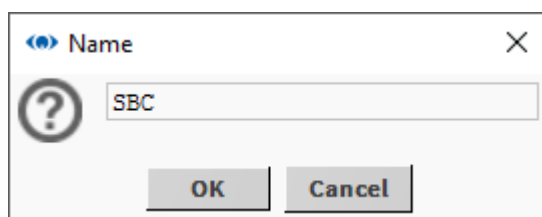
It is possible to communicate with serial S-Bus networked devices using the SBC S-Bus gateway function in the PCD controllers.



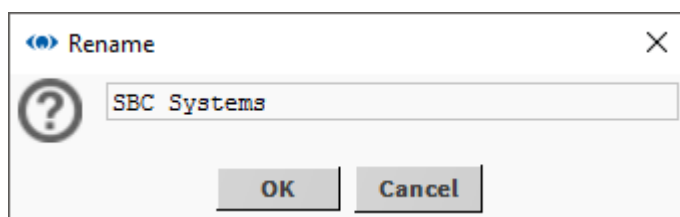
On larger sites it may speed up data transfer to utilise two or more separate SBC S-Bus drivers (SBCIpNetwork)

6.2.1.2 Create a folder for Saia Burgess Controls Driver

1. In the Nav tree open the Station folder.
2. Open the Config folder.
3. Right-click on Drivers and select New > Folder. The Name dialogue box is displayed.

**6**

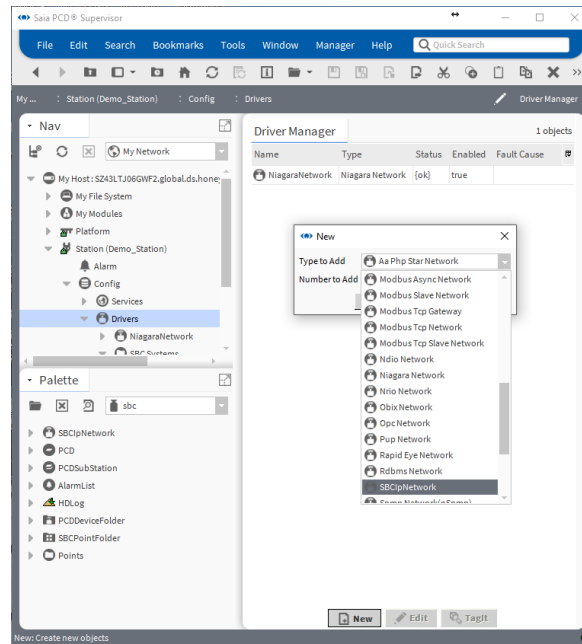
4. Type SBC and click OK. The new folder will appear in the Nav tree.
5. Right-click the SBC folder and select Rename. The Rename dialogue box is displayed.



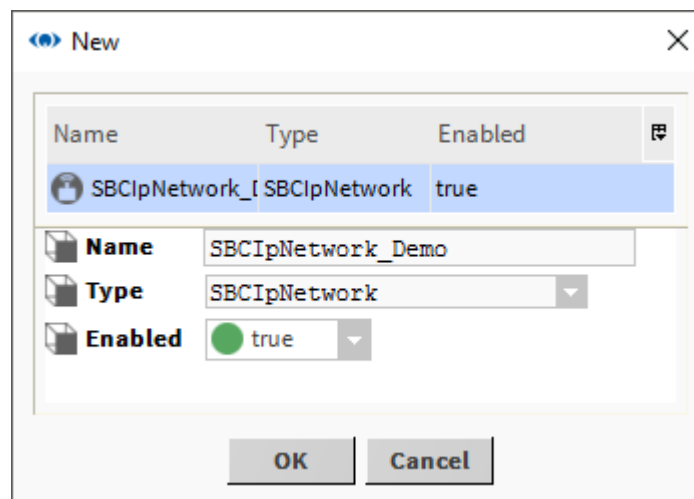
6. Type SBC Systems and click OK.

6.2.1.3 Add the Saia Burgess Controls Driver

1. In the Nav tree open the Station folder.
2. Open the Config folder.
3. Double click on Drivers. The view pane will show a list of installed Drivers (Driver Manager).
4. Click on the New button. The New dialogue box is displayed.

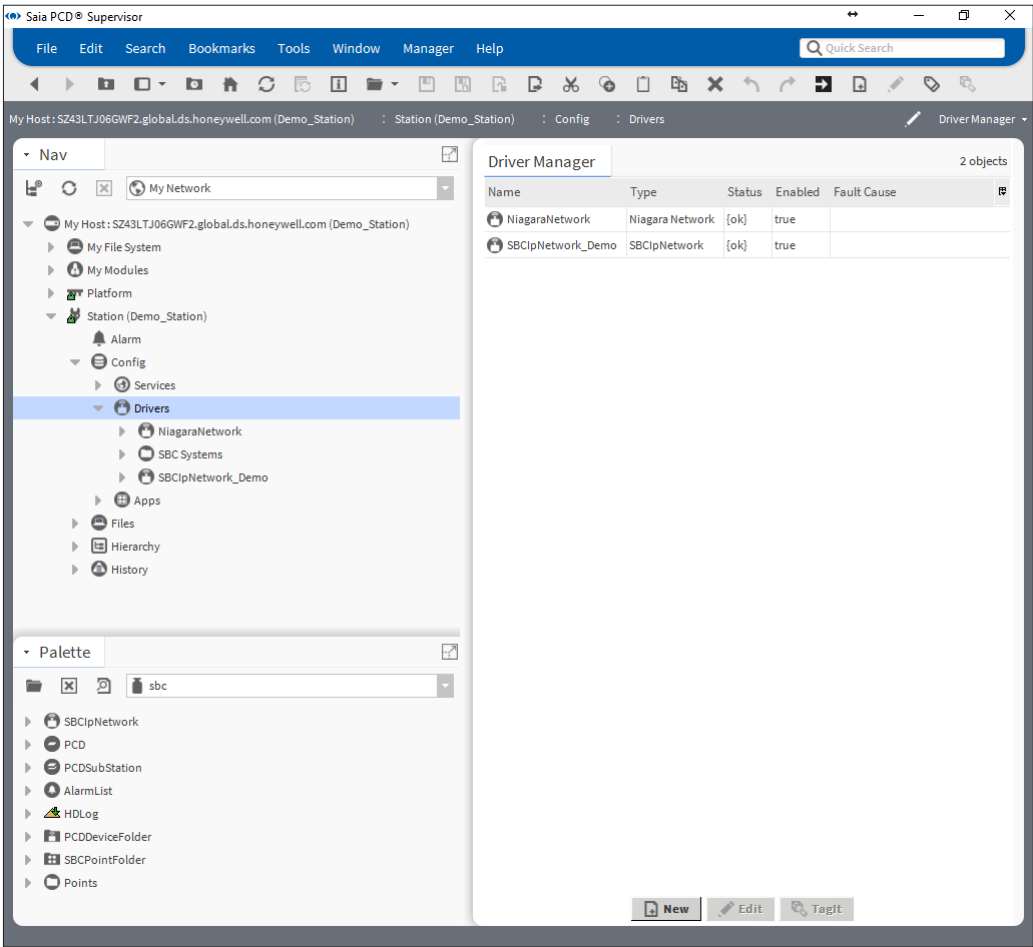


5. In the Type to Add box select '**SBCIpNetwork**'.
6. Click OK. The following dialogue box is displayed



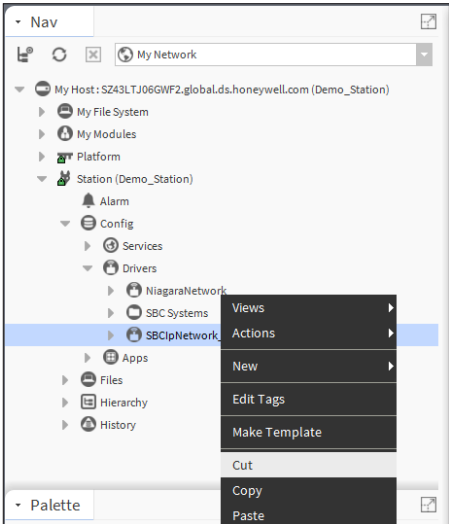
Do not rename the SBCIpNetwork if you are using or want to use the Saia PG5 Import Wizard.

7. Click OK. The Driver Manager will now show the Saia Burgess Controls driver.

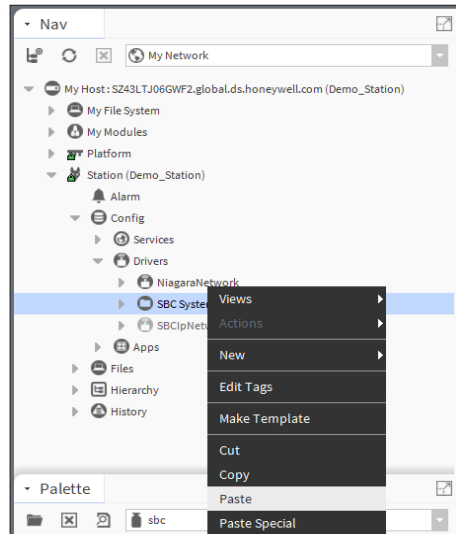


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8. Right-click the driver and select Cut.



9. In the Nav tree, right-click the **SBC Systems** folder and select Paste.



6



It is possible to create folder to the points to make nicer structure. However when the Saia PG5 Data Import Wizard is used the default SBCIpNetwork folder is generated. This folder can be renamed. The next import then will be done to the renamed folder. The target folder of the import can not be freely chosen.

10. In the Nav tree, right-click to the SBCIpNetwork_Demo in the SBC Systems folder.
11. You now need to configure the communications of (each - if you have many) Saia Burgess Controls Driver.

6.2.1.4 Duplicated physical device

During import of a PG 5 project for each physical Saia PCD® controller device one device note will be added in the Saia PCD® Supervisor below the SBCIpNetwork Network driver.

It is possible to have the same physical Saia PCD® controller device duplicated below the imported SBCIpNetwork driver network or to have the same physical device used in different SBCIpNetwork drivers on the Saia PCD® Supervisor station.

For constellations to have one physical Saia PCD® controller device present several times below SBCIpNetwork drivers in the Saia PCD® Supervisor you should not exceed 5 instances on the Saia PCD® Supervisor per physical Saia PCD® controller device.

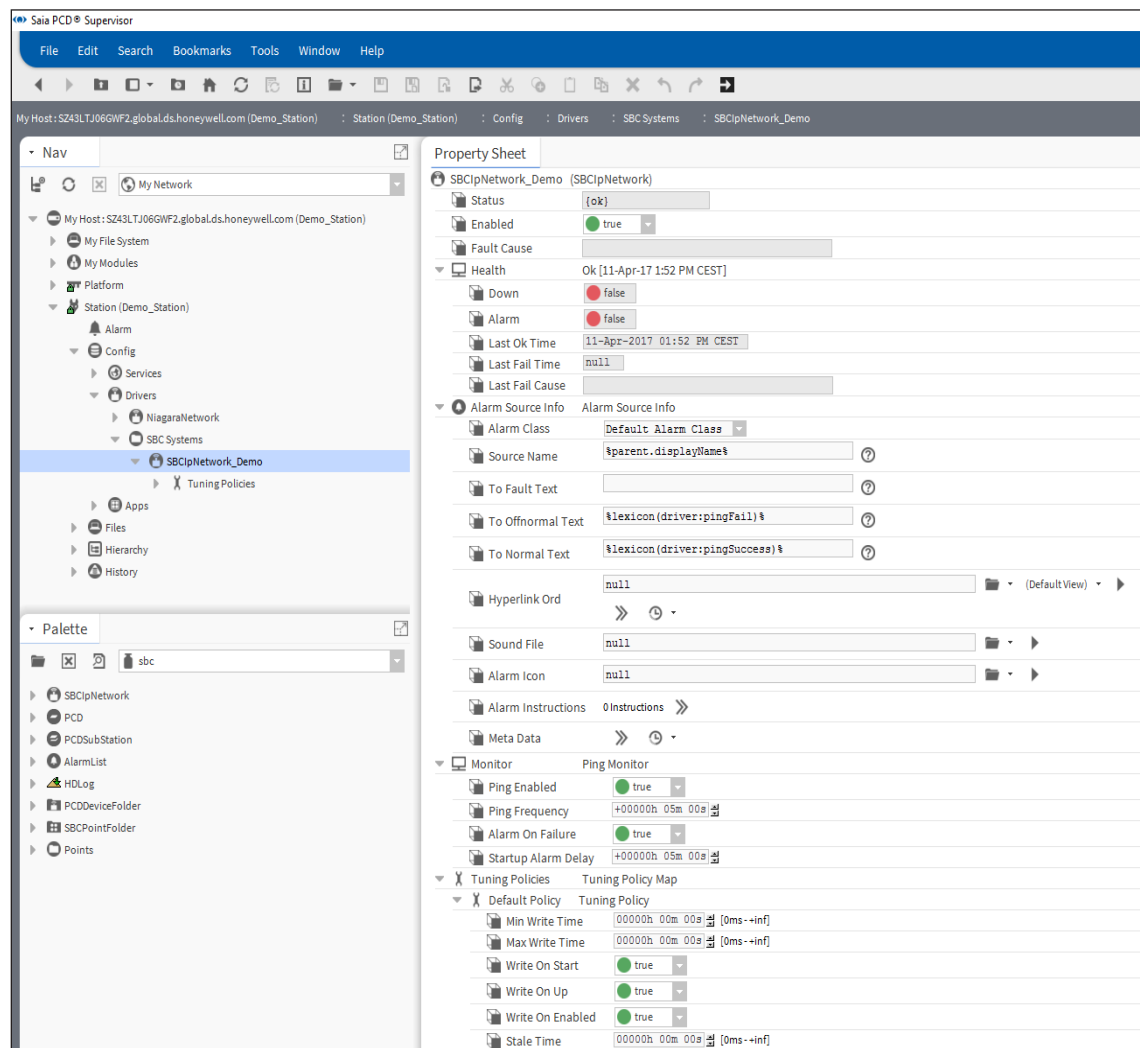
6.2.2 Configure the Saia Burgess Controls Driver(s)

Saia PCD® Supervisor connects to the Saia Burgess Controller network (Ethernet networked PCD devices) using S-Bus over Ethernet communication. It is necessary to configure Saia PCD® Supervisor with the IP Address (or hostname) and the S-Bus station address of the device to communicate with. Inside of the PCD device the Media can be addressed by specifying the type and memory slot.

At this point it is recommended to have a Saia PCD® device (a controller with the correct application running inside, with the correct Ethernet parameters set in the PCD and also in the PC) connected to the Saia PCD® Supervisor.

In the Nav tree right-click on the Saia Burgess Controls driver (e.g. SBCIpNetwork_Demo) and choose Views > AX Property Sheet. The view pane will show a list of driver properties:

6



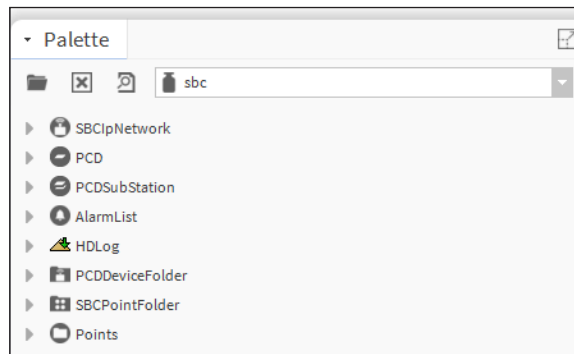
Basically the default parameters are good for starting.

The driver must be enabled. Status must be OK. It can happen that the status at the beginning is “down” it will be “ok” right after the communication is established with the SBC Device.

6.2.3 Adding Device to the Saia Burgess Controls Driver(s)

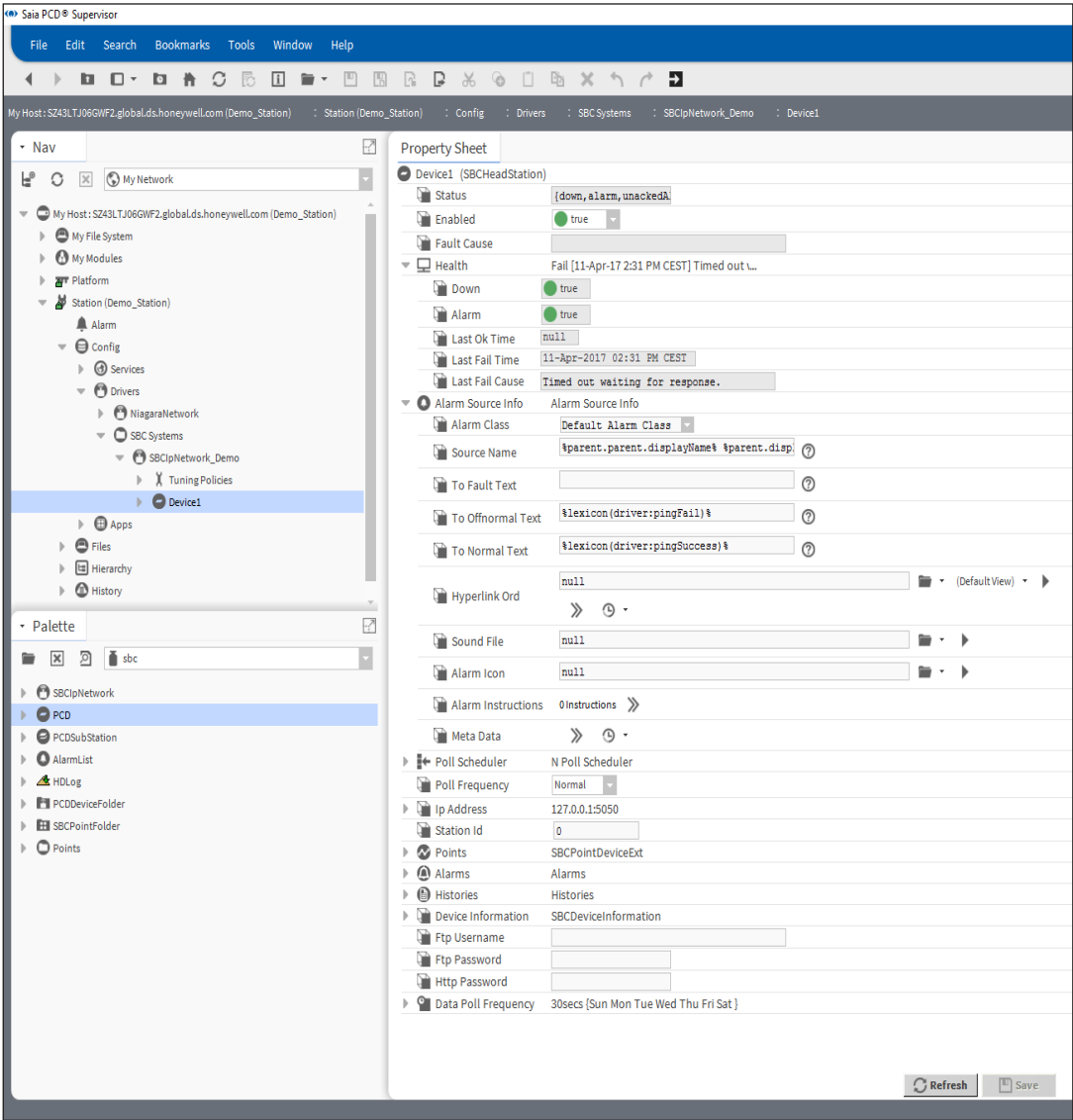
Each physical networked SBC controller needs at least one PCD (device) added to the Saia Burgess Controls Driver (SBCIpNetwork_Demo) with unique name.

1. Open the Palette sidebar if it not yet opened.
Menu bar → Window menu → Sidebars → Palette
2. Open the “sbc” palette.



3. Copy PCD from palette. Right click to PCD and select copy.
4. Right mouse click to the driver “SBCIpNetwork_Demo” and paste it.
5. Name it as Device1 (- or CPU1 - or respectively to the app running in the device e.g. AHU1 as Air Handling Unit 1).

6. Double click to the Device 1 will bring up the following screen.



6

7. Setup the IP address and the S-Bus Station ID of the Device 1
The Device1 must be enabled.
Keep the default parameters in.

6

Property Sheet

Device1 (SBCHeadStation)

Status {down,alarm,unackedA}

Enabled ☒ true

Fault Cause

Health Fail [11-Apr-17 2:36 PM CEST] Timed out v...

Down ☒ true

Alarm ☒ true

Last Ok Time null

Last Fail Time 11-Apr-2017 02:36 PM CEST

Last Fail Cause Timed out waiting for response.

Alarm Source Info Alarm Source Info

Alarm Class Default Alarm Class

Source Name \$parent.parent.displayName\$ \$parent.disp

To Fault Text

To Offnormal Text \$lexicon(driver:pingFail)\$

To Normal Text \$lexicon(driver:pingSuccess)\$

Hyperlink Ord null (Default View)

Sound File null

Alarm Icon null

Alarm Instructions 0 Instructions

Meta Data

Poll Scheduler N Poll Scheduler

Poll Frequency Normal

Ip Address 127.0.0.1:5050

Ip Address 172.23.13.19

Port ☐ unspecified 5050 [-1-65536]

Station Id 19

Points SBCPointDeviceExt

Alarms Alarms

Histories Histories

Device Information SBCDeviceInformation

Ftp Username

Ftp Password

Http Password

Data Poll Frequency 30secs {Sun Mon Tue Wed Thu Fri Sat}

Refresh Save



The FTP credentials and HTTP password need to be manually configured here. If these credentials are missing, then the HDLog and Alarm data retrieval are not working.

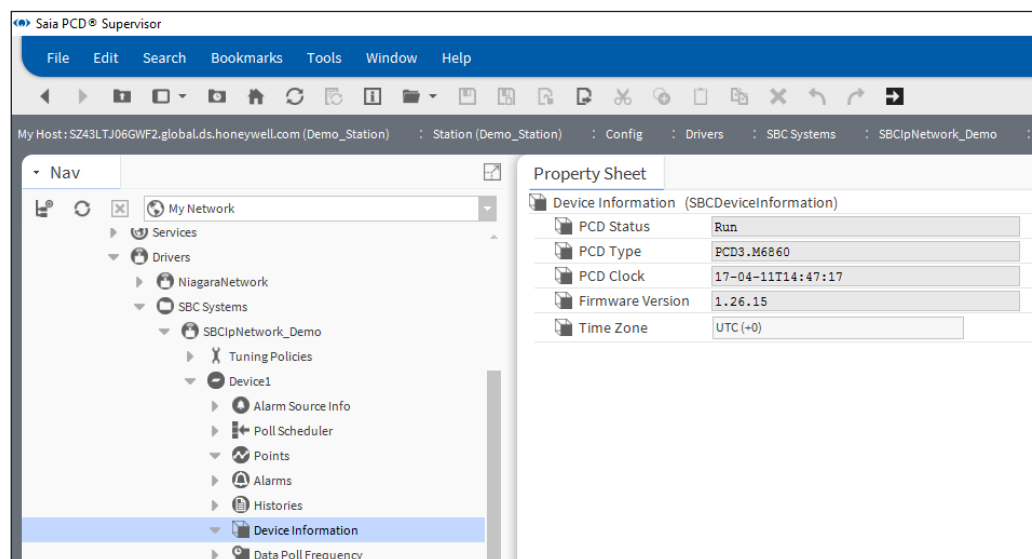
The status can be OK or Down. When it is OK the communication is well established. When it is down it can happen that the initial telegrams were not correct answered (wrong IP or S-Bus station number). Check and correct - if needed - the settings. Save the settings. Press the Refresh button at the bottom of the page.

Disable the Device and save the settings. Enable the Device and save the settings. These actions are initiating telegrams which must be answered by the Device. Navigate to the Device Information. This will surely initiate telegrams to be sent

in order to get back the basic information of the connected Device. After that the “Status” of the Device must be OK. If not the parameter settings is not correct, or the Device is not correctly connected to the network. Try to ping the Device (keep in mind that the Windows firewall can block the ping). Step by step check of the settings in the SBC Device and also in the Saia PCD® Supervisor is needed.

Last step is to restart the Platform Daemon,

See chapter [4.4 Installing the Platform Daemon](#)



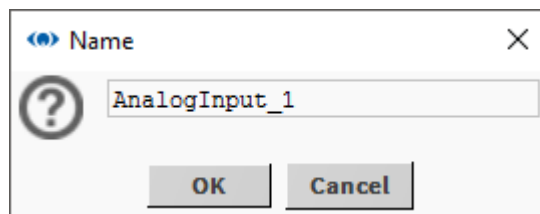
6.2.4 Add Points to the Device to get the data from the PCD

First of all it is not possible to “Discover” the points from the PCD device.

The points must be added manually.

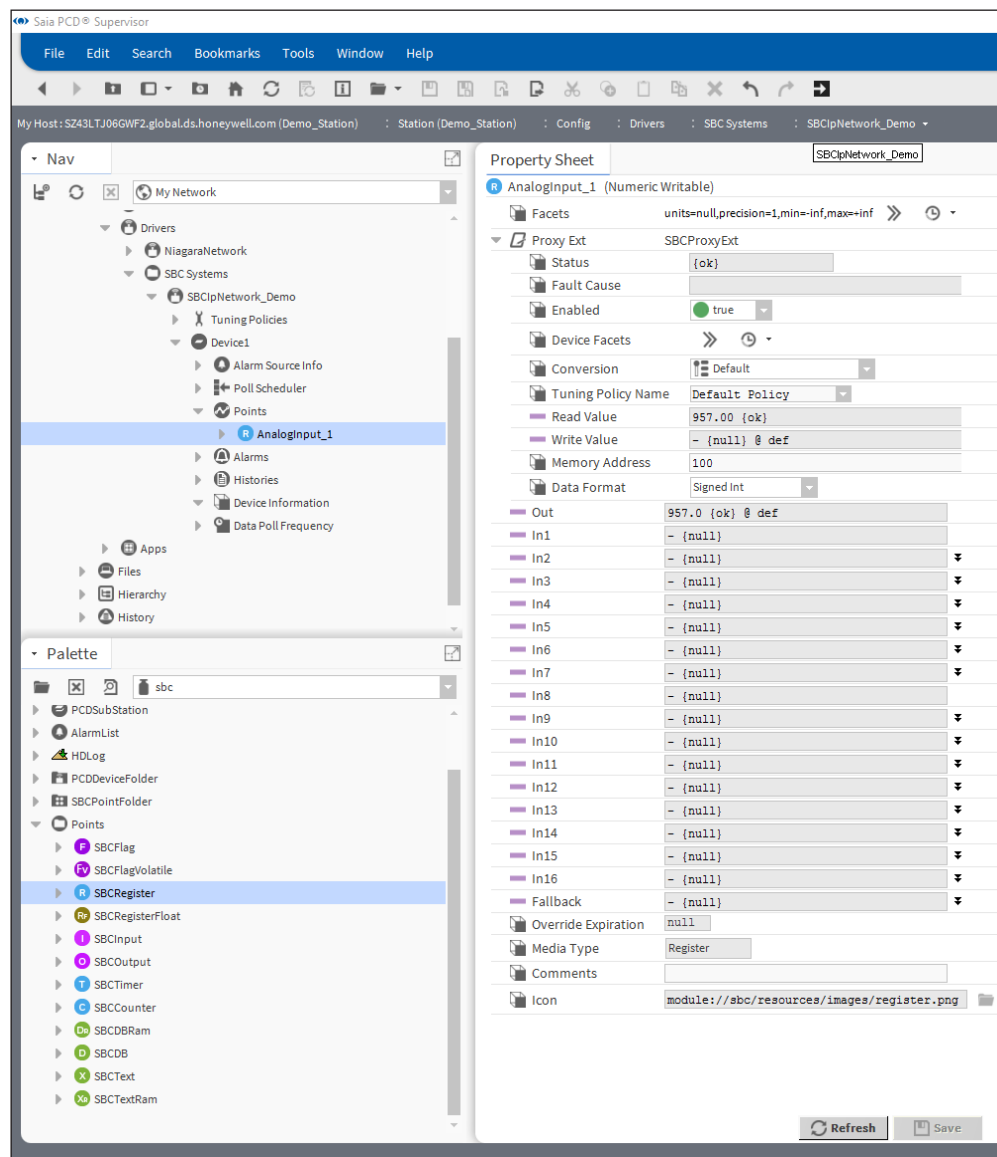
Let us create a “SBCRegister” and some “SBCFlag” type of points.

1. Navigate to the Points folder of the Device1. It is empty.
2. Navigate to the Palette → sbc → Points. In this folder there are templates for every each possible type of points. This means these type of variables can be found inside of the SBC Device depending on the user program. The template points are nicely colored so it is easy to distinguish the different types.
3. Drag the “SBCRegister” type from the Palette “sbc” and drop it to the Device1/ Points folder. In the pop-up window name it “AnalogInput_1”



Name it in such a way that it will connect here the physical analogue input 1 of the PCD3.S100 workshop module. Of course there is a corresponding program downloaded to the PCD device.

4. The address has to be set for that point. In this case, the first analogue input of the selected Device is mapped to the Register 100. (In this application this is a potentiometer of the PCD3.S100 simulator unit)
1. Double click to the AnalogInput_1.
 2. Open the Proxy extension.
 3. Setup the Memory Address to 100.
 4. Data Format can be as it was “Signed Integer”.
 5. Save it.



5. The Status must be **{ok}**. It can be seen that the “Read Value” and the “Out” are following the content of the “Device1/Register 100”.

6

6. The Conversion is set automatically to 0.1. The **Conversion** is set to **Linear** and the **Scale** is set to **0.1**. This will remove the 10 multiplication factor we use conventionally in the Building Automation. This scaling can be seen on the “Read Value” and the “Out”.

Property Sheet

R AnalogInput_1 (Numeric Writable)

Facets units=null,precision=1,min=-inf,max=+inf

Proxy Ext SBCProxyExt

Status {ok}

Fault Cause

Enabled true

Device Facets

Conversion Linear Scale 0.1

Tuning Policy Name Default Policy

Read Value 957.00 {ok}

Write Value - {null} @ def

Memory Address 100

Data Format Signed Int

Out 95.7 {ok} @ def

It is possible to set the Engineering Unit, precision, and the limits of the value, in the **Facets**.

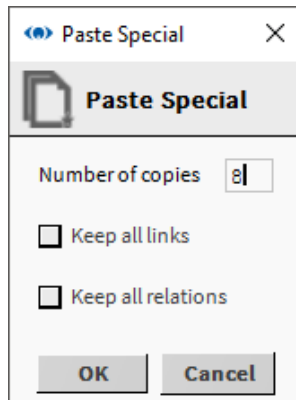
Config Facets

Key	Type	Value
units	Unit	null
precision	Integer	1
min	Double	-inf
max	Double	+inf

temperature (K) celsius (°C)

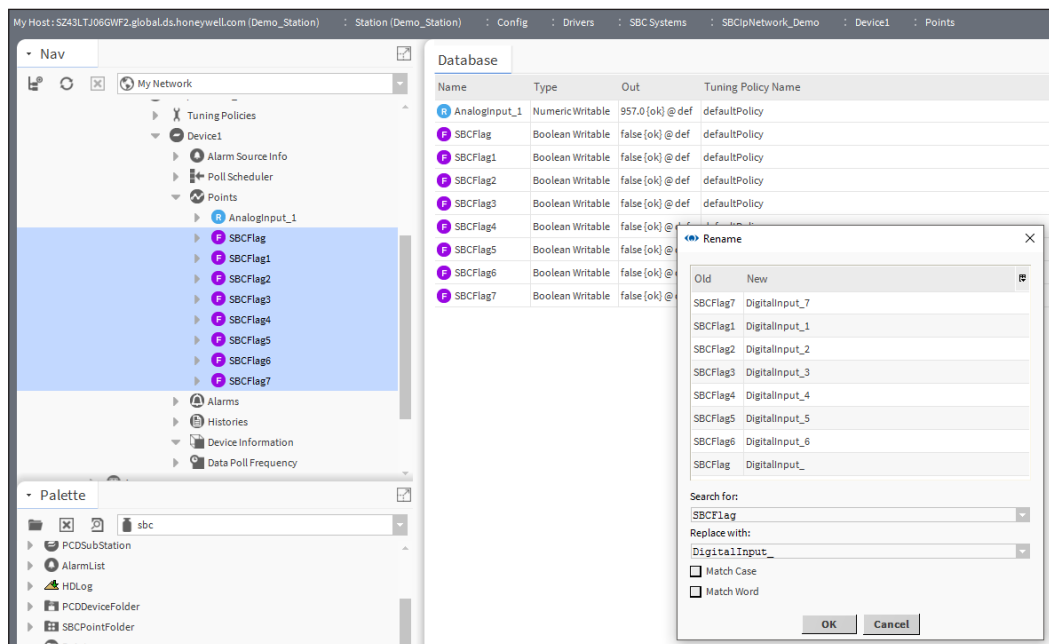
7. For the SBCFlag types. Copy the “SBCFlag” type of point from the Palette. Right click to the Device1/Points folder. Select “Paste Special”.

8. In the pop-up set the “Number of copies” to 8. Other settings must be untouched.



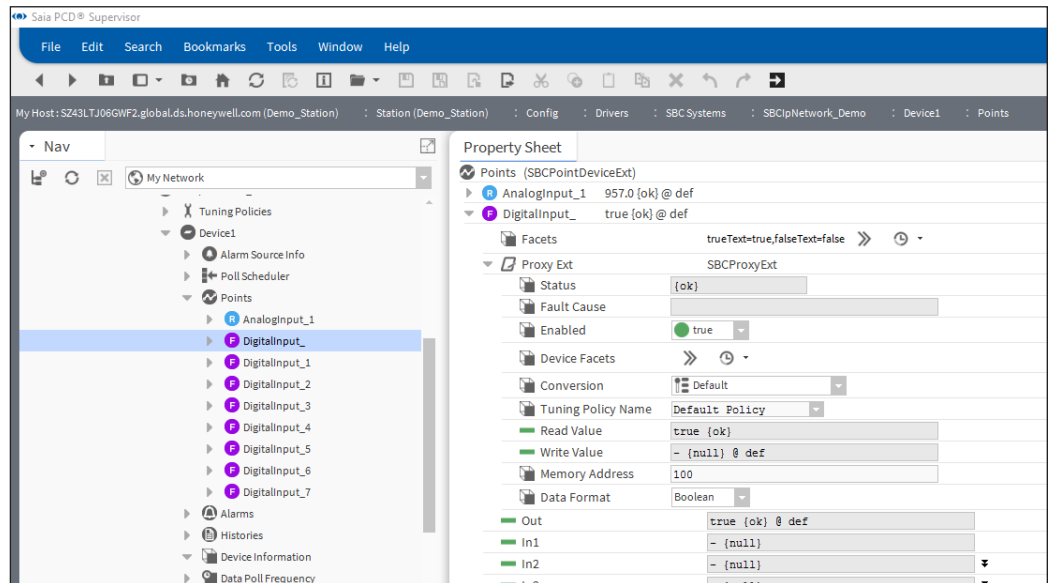
6

9. 8 points are generated with the name “SBCFlagx”
10. I want to change the names of the generated points. Select the points. Right click to the selection. Select rename from the context menu. Fill up the “Search for” and the “Replace with” fields. Press ok.



11. Right click to the “Points” folder of the Device1 → Views → AX Property Sheet
12. Setup the address of each “DigitalInput_” points.

13. The Status must be {ok}. The “Read Value” and the “Out” of the generated points are following the content of the Flag 100 to 107 of the Devcie1.



The same way it is possible to create every needed points and connect it to the corresponding media element of the Saia PCD® device.



Remember that Saia PCD® Supervisor is licensed for use up to a specific number of points. It is good practice to only add points that are actually required. Adding points that won't be used by Saia PCD® Supervisor will not only waste resources but also generate unnecessary extra network traffic.

6.2.5 Add Alarming to a data point in the Saia PCD® Supervisor

In the Saia PCD® Supervisor there is an Alarm Service which can be used to set Alarms for individual datapoints, regardless if the datapoint is considered alarm or not at the start of the engineering.

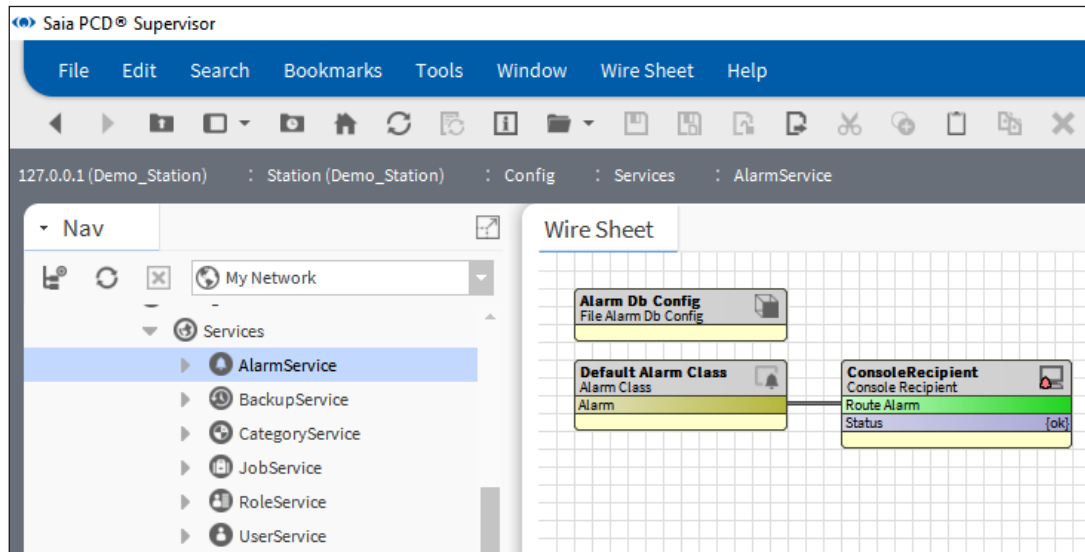
For example the Outside Air Temperature can generate an alarm when it goes under -20°C . For that we need to set the monitoring in the Saia PCD® Supervisor. So the Alarm is generated in the Saia PCD® Supervisor not in the PCD controller.



There is an other way of alarming, which is described in details later in this manual. The Alarms are generated in the PCD Device and the Saia PCD® Supervisor takes these alarms over.

6.2.5.1 Steps to set alarming to a datapoint

1. In the Nav tree open the 127.0.0.1/Station(Demo_Station)/Config/Services folder. And double click to the AlarmService.



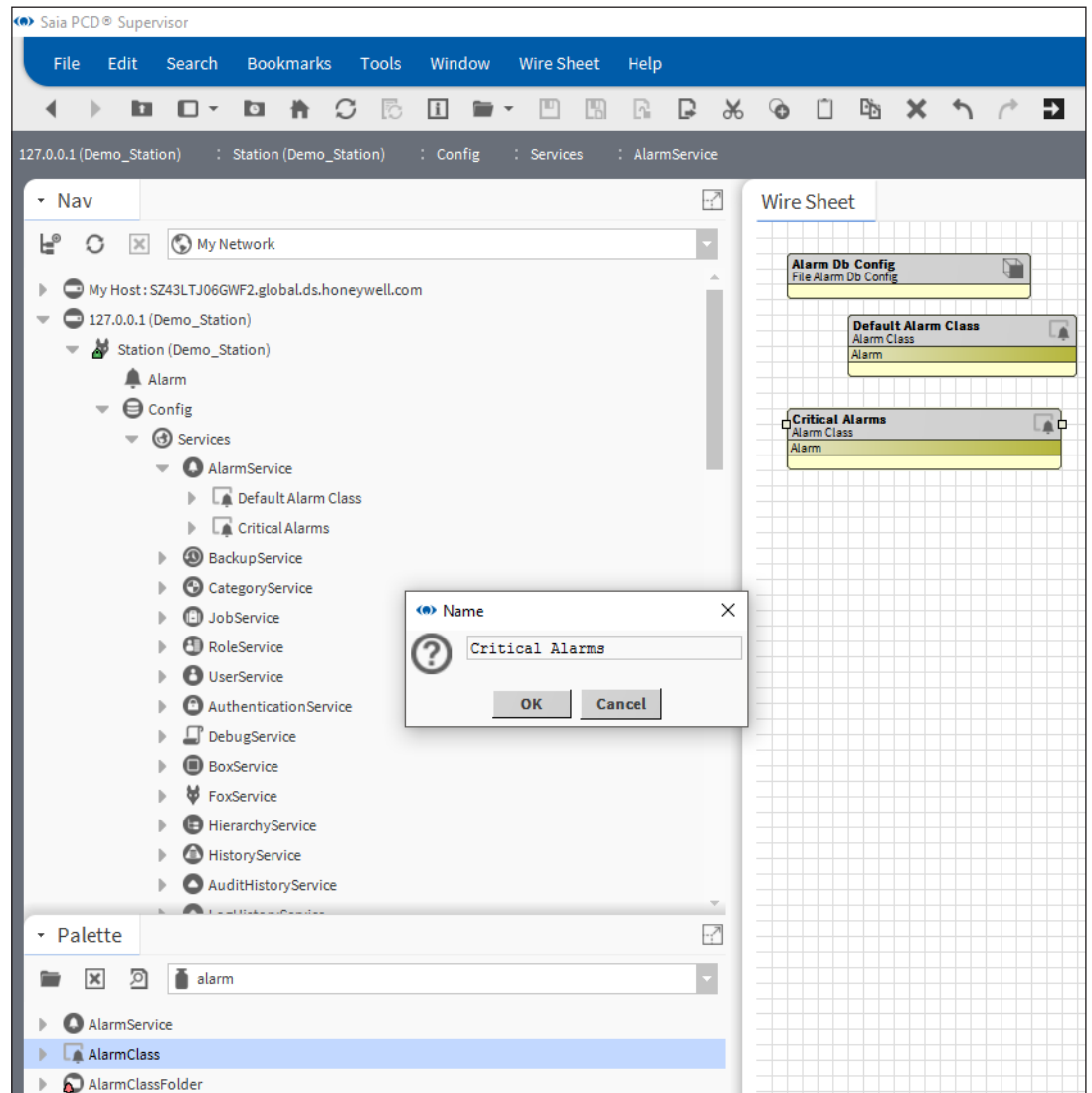
6

The default view (Wire Sheet) will be displayed with the default settings. (Alarm Db Config, Default Alarm Class and the Console Recipient).

The Default Alarm Class is already used for system alarms (for those alarms which is generated in the Saia PCD® Supervisor). Most of the cases we do not want to see the Supervisory system generated alarms together with the alarms which is coming from the controlled process. So we need a new alarm class to be placed.

2. Place a new alarm class to the Wire Sheet from the palette. It can be named as you it is proper. (here it is named Critical Alarms)

6

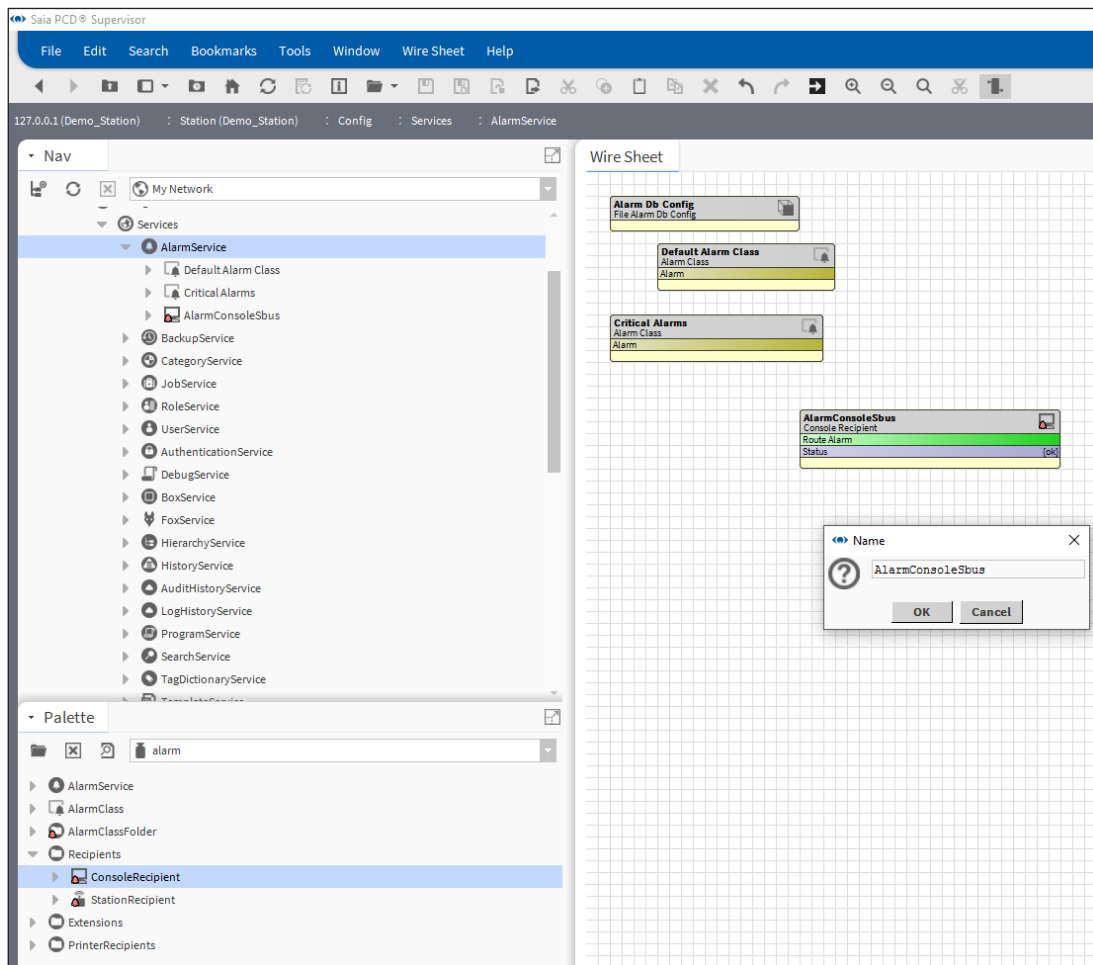


3. There Console Recipient is already placed. It is possible to use this recipient (re-name it to proper name) or place a new one.



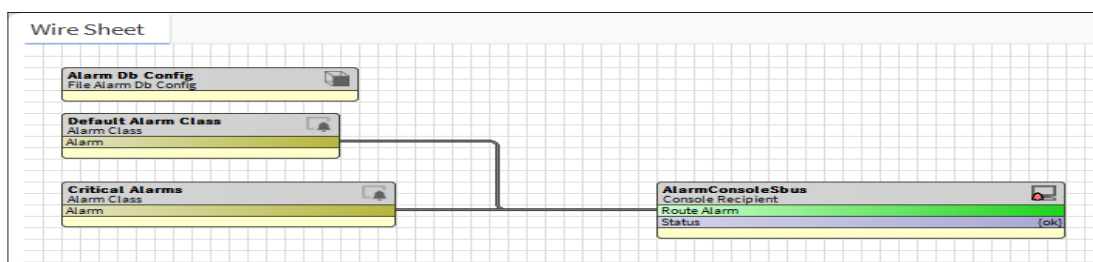
This Console Recipient is coming form the SaiaPCDSupervisor.ntpl template file.

The alarm console is one way to inform the User about alarm occurred in the system. There can be other way like sending E-mail or SMS.



6

4. Wire the Alarm console and the Alarm Classes together as the next image shows. The system has to know what to do with the alarms so that the Alarm Classes (container of alarms) and the Alarm Console (a way to display them) has to be connected.



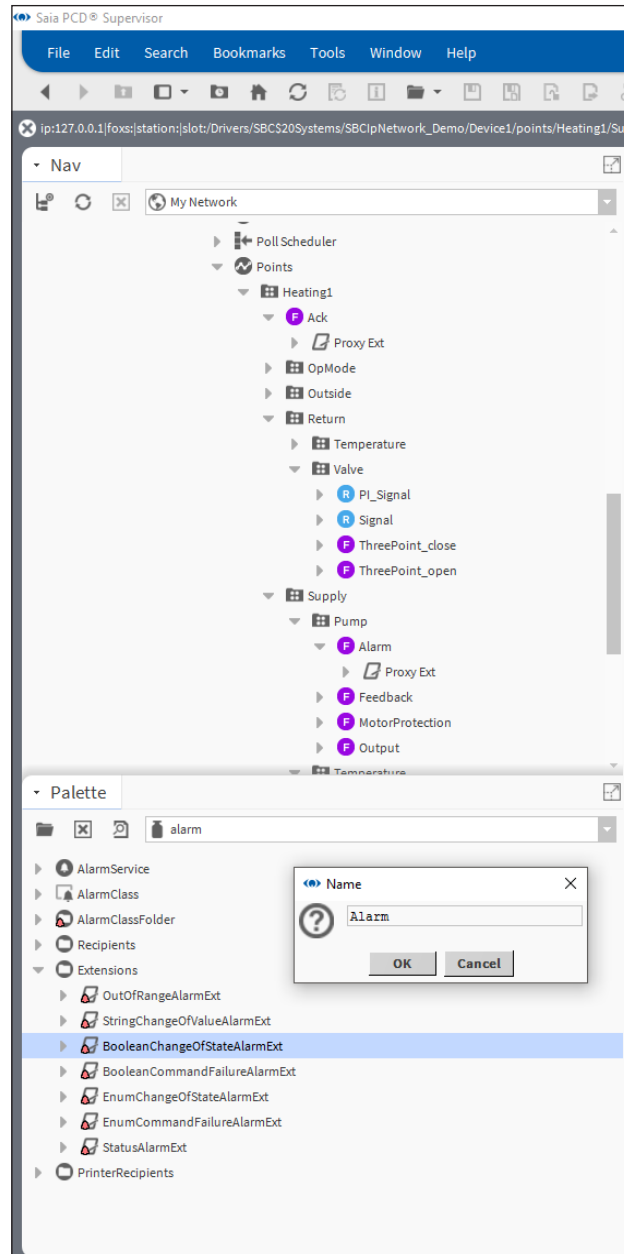
5. Copy the BooleanChangeOfStateAlarmExt from the Palette / Alarm / Extensions

Manual creation of data points

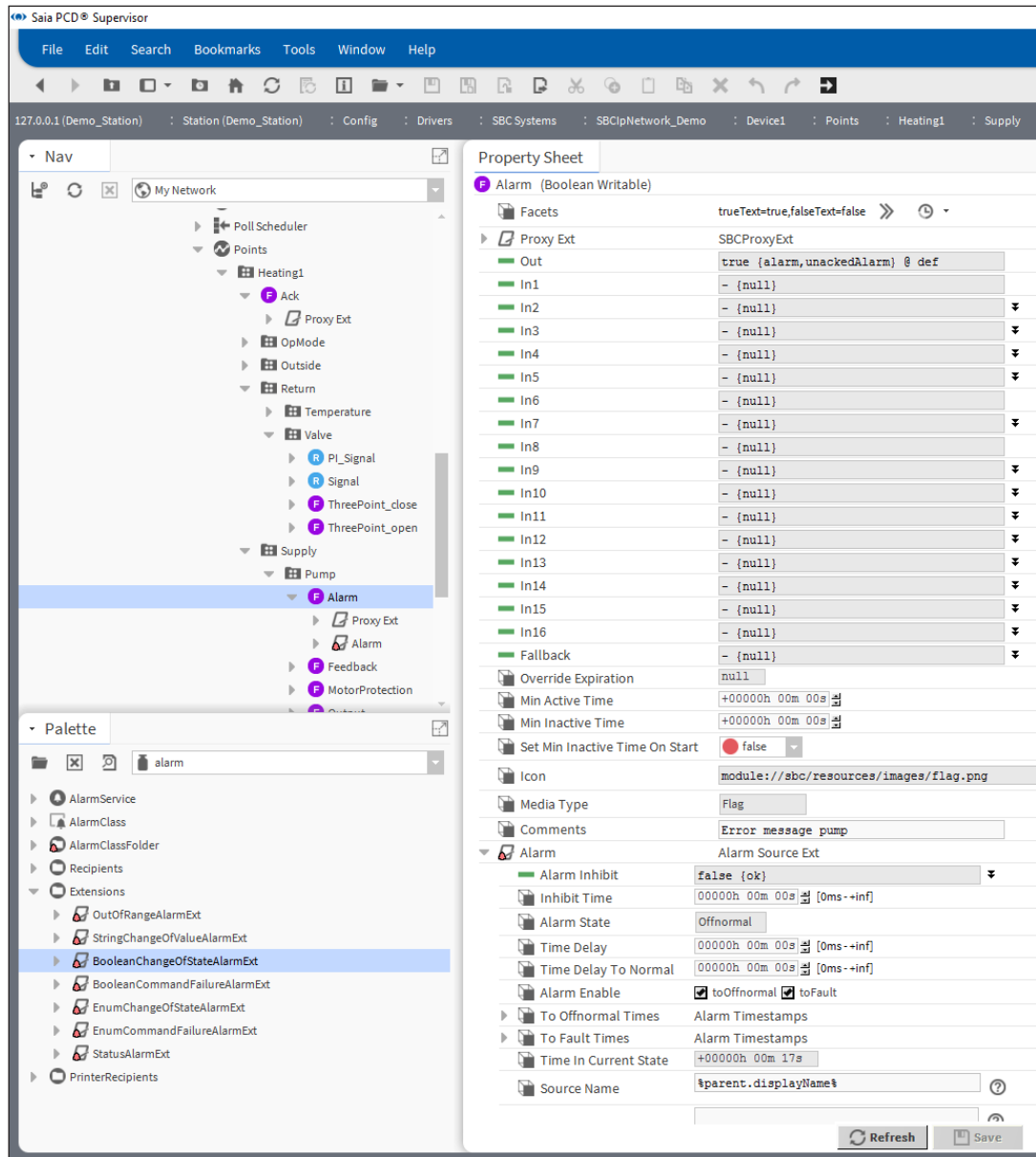
to the data point where alarm has to be added. (Boolean datapoint called: Points/Heating1/Supply/Pump/Alarm)

In the pop-up Name field give a proper name (or just leave it default)

6



6. Set up the properties of the Alarm Extension

Alarm inhibit = false**Alarm Enable** = x toOffnormal ; o toFault

Manual creation of data points

6

Property	Value	Meaning
Alarm inhibit	True/false	Alarm is activated / deactivated
Inhibit Time	hours / minutes / seconds	Stages of the alarms
Alarm state	<ul style="list-style-type: none"> - Fault - offNormal - Normal 	<ul style="list-style-type: none"> - Fault: value is invalid e.g hardware fault - offNormal: value is valid but out of the its borders - Normal: value is valid and inside of the border.
Time Delay	hours / minutes / seconds	Delay before alarm is generated
Time Delay To Normal	hours / minutes / seconds	Delay before alarm state goes away (if the alarm in the corresponding device is already cleared)
Alarm Enable	ToOffNormal / To Fault	Enables the Alarm stages to be monitored
To Offnormal Times	Alarm Timestamp	The details of the last occurred offNormal alarm
To Fault Times	Alarm Timestamp	The details of the last occurred Fault alarm
Time in the Current state	hours / minutes / seconds	The elapsed time since the state was changed
Source name	%parent.display-Name%	It takes the name from the parent object name.

7. Set up additional parameters

To Fault Text – Pump fault (it is unchecked, we do not have info if the value is reliable or not. If there is communication error between the Saia PCD® Supervisor and the PCD device then the state will be different)

- To Offnormal Text

To Normal Text

Offnormal Algorithm / Alarm value

Alarm Class
- = Pump Error (this will be the alarm)

= Pump OK (text when the alarm leaves)

= true

= Critical Alarm class (created earlier)

Property Sheet

Alarm (Alarm Source Ext)

Alarm Inhibit

- {null}

Inhibit Time

00000h 00m 00s [0ms-+inf]

Alarm State

Offnormal

Time Delay

00000h 00m 00s [0ms-+inf]

Time Delay To Normal

00000h 00m 00s [0ms-+inf]

Alarm Enable

☒ toOffnormal ☐ toFault

To Offnormal Times

Alarm Timestamps

To Fault Times

Alarm Timestamps

Time In Current State

+00000h 02m 10s

Source Name

\$parent.displayName

To Fault Text

Pump Fault

To Offnormal Text

Pump Error

To Normal Text

Pump Ok

Hyperlink Ord

null (Default View)

Sound File

null

Alarm Icon

null

Alarm Instructions

0Instructions

Fault Algorithm

Fault Algorithm

Offnormal Algorithm

Boolean Change Of State Algorithm

Alarm Value

☒ true

Alarm Class

Critical Alarms

Meta Data

Refresh

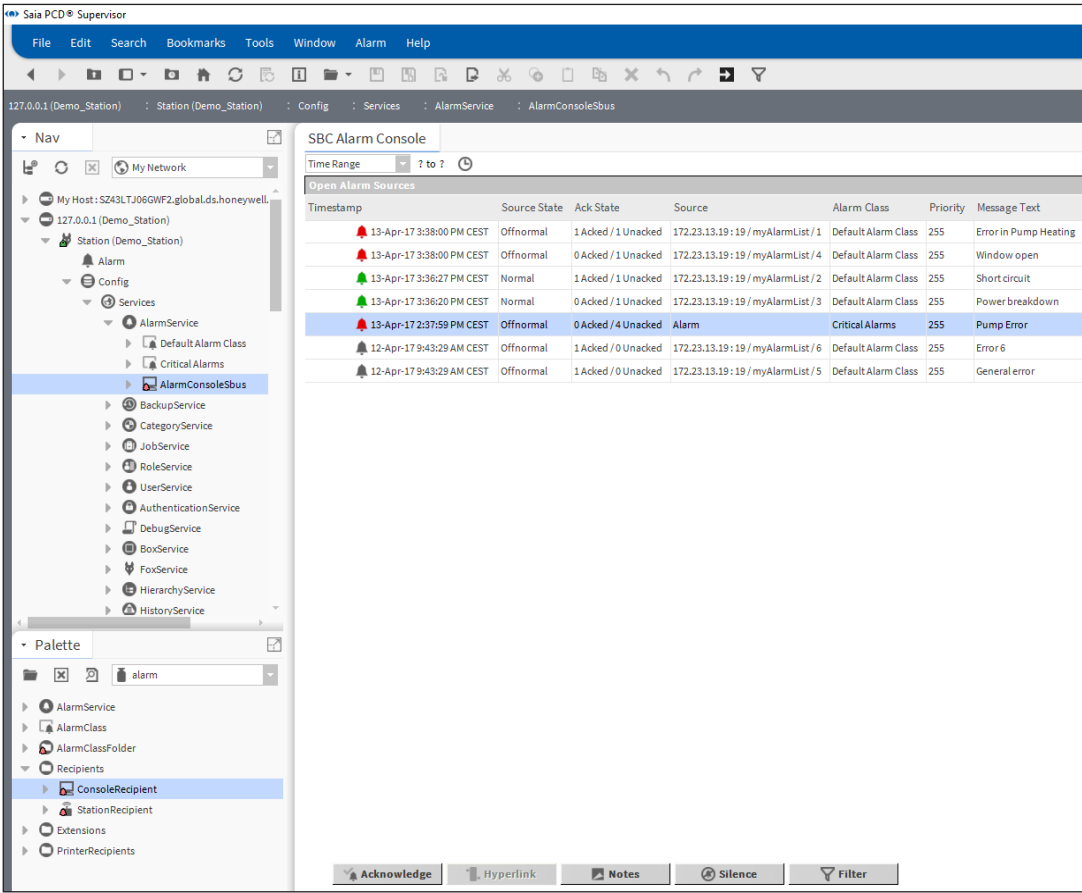
Save

Manual creation of data points

6

Property	Value	Meaning
To Fault Text	Any text which refers to the state	User defined / can be seen in the Alarm Console
To Offnormal Text	Any text which refers to the state	User defined / can be seen in the Alarm Console
To Normal Text	Any text which refers to the state	User defined / can be seen in the Alarm Console
Hyperlink ORD	ORD, BQL Query or path	When an alarm is reported in the console, the Hyperlink button activates. Clicking this button links to the location you specify here.
Sound File	Path text	Path of the sound file for audible alarm.
Alarm Icon	Path text	Path of the picture which is displayed in the "timestamp" column in the Console Recipient view.
Alarm Instructions	Instruction text	It is possible to define instructions what to do when alarm occurs.
Fault Algorithm	Fault Algorithm	Algorithm to generate alarm on Reliability of the associated point. This property when available, displays fault parameters. Different options are available here, depending on the alarm extension being used.
Offnormal Algorithm	Boolean Change Of State Algorithm	Algorithm of generating the alarm. Inside it is possible to set parameters to define the way of the alarm generation
Alarm Class	Any proper Alarm Class	Which Alarm Class is used to collect the alarm
Meta Data	Text	Allows you to enter new facets for the extension.

8. Open the Alarm console (double click on it).
It is possible to check the behavior of the Alarming of the Points/Heating1/Supply/Pump point.



6

When new alarm comes there is an audible sound to indicate it. This feature can be deactivated with the Silence button.

The Alarm can be Acknowledged, the list is updated accordingly.

It is possible to add notes to the alarm stored in the Saia PCD® Supervisor.

Possible to define filter the Alarms, for example filter only the Alarms which is relevant to the operator sitting front of the screen.

6.2.6 Add History to a data point in the Saia PCD® Supervisor

In the Saia PCD® Supervisor there is a History Service which can be used to set history log for individual datapoints.

For example the values of the Outside Air Temperature can be logged (history) then later the logged values can be displayed as trend curve or just a plain text table with the values in time order. It is also possible to export the values (in a defined time span) to external file.

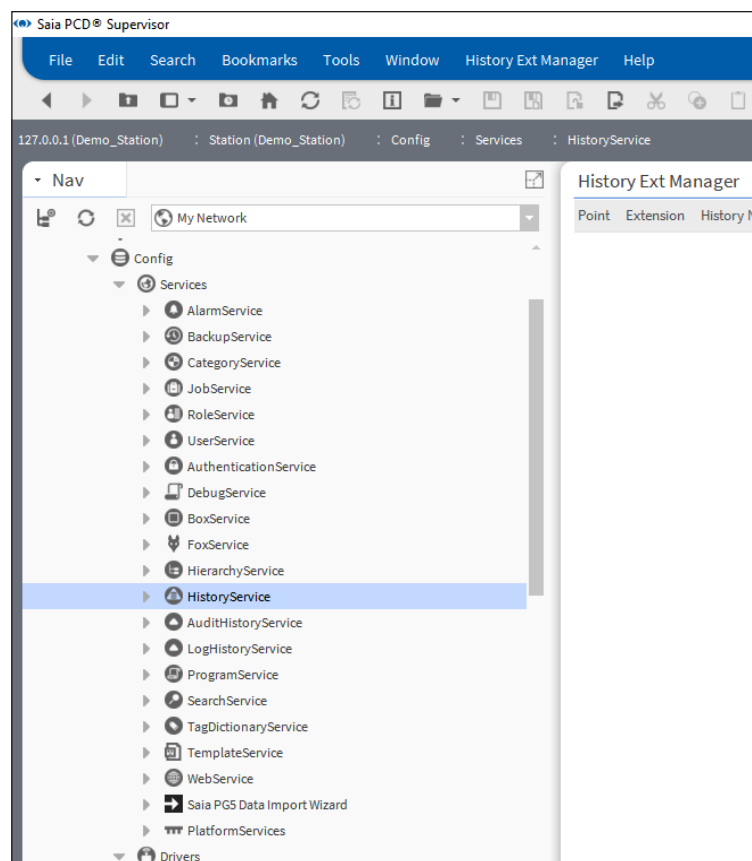


There is an other way of logging the history, which is described in details later in this manual. The histories (called HD Logs) are generated in the PCD Device and the Saia PCD® Supervisor appends the content to history files located in the Saia PCD® Supervisor.

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6.2.6.1 Steps to setup History for a datapoint in the Saia PCD® Supervisor

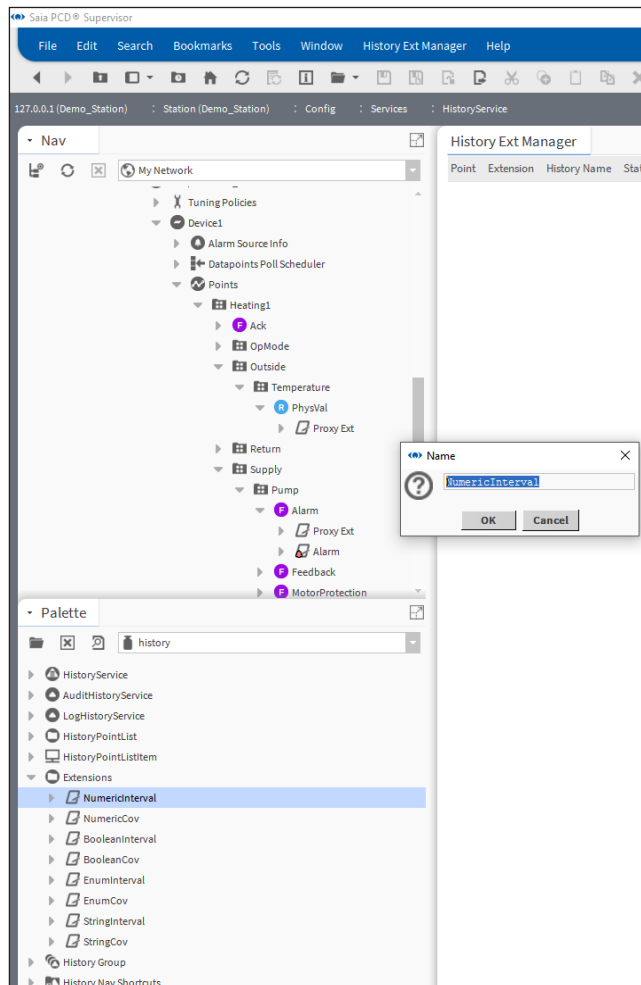
1. Check the History Service in the Services folder of the Station



2. Open the history Palette and copy the NumericInterval extension to the datapoint called Points/Heating1/Outside/Temperature/PhysVal.

In the pop-up window it is possible to rename the extension to a suitable name.

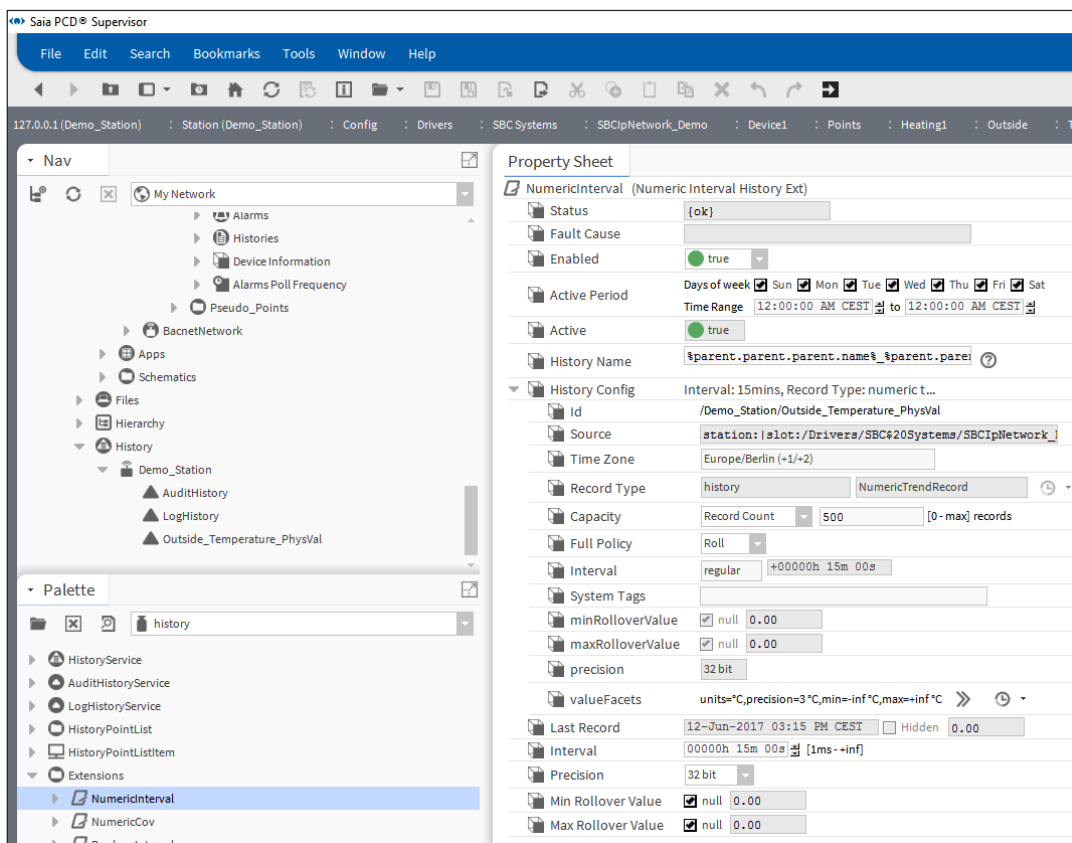
It is also possible to choose other type of history, for example Numeric COV or Boolean Interval etc. Please check the different type of History Extensions in the Niagara documentation.



3. setup the parameters of the NumericInterval extension.

Enabled = True**History name** = %parent.parent.parent.name%_%parent.parent.name%_%parent.name%**Interval** = 1 min

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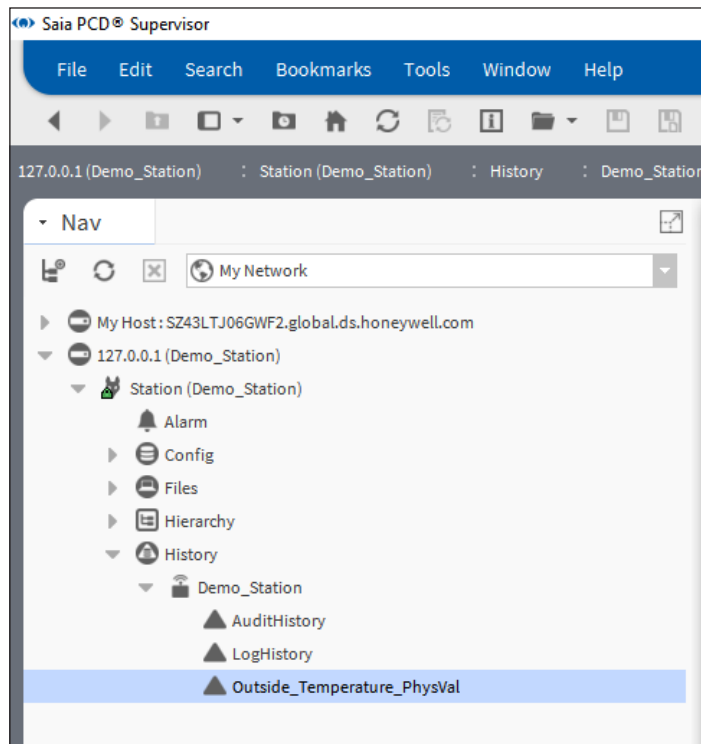
Property	Value	Meaning
Status	Enabled/Disabled	Show if the history is enable or not. It is always disabled after configuration. The user has to enable it.
Fault Cause	Any kind of system generated fault	Error occurred during History creation. For example the name of the history is too long (more than 67 chars)
Enabled	true / false	Switch to Enable / Disable the history of that point
Active period	Days of Week / Time range	Possible to schedule when the historization of that datapoint should be switched on
History name	Defined name of the history	It is possible to give name to the history or generate the name from the datapoint name. For example: %parent.parent.parent.name%_%parent.parent.name%_%parent.name% will generate the following name Outside_Temperature_PhysVal
History Config ..	Summarized settings of the History	It is possible to navigate one step down and modify the settings in detail.
.. ID	ID of the History	Generated by the system, should be unique.
.. Source	Source of the History	The full ORD of the history.

.. Time Zone	Time zone	The configured time zone of the PC where the Saia PCD® Supervisor is running
.. Record type	Record type	It is preconfigured in the Palette / Extensions
.. Capacity	Record count / Unlimited	The number of the records allowed to create / unlimited. It depends where the History is created. Limited size of memory device can be used to store the History.
.. Fill policy	Roll/Stop	Roll – the oldest history will be overwritten with the newest log Stop – when the record count is reached the logging is stopped
.. Interval	Interval of the logging	It is possible to setup the interval between two logs creation.
.. System Tags	e.g.: NorthAmerica; Region1; Cities.	This property allows you to assign additional metadata (the System Tag) to a history extension.
.. minRolloverValue	number	It takes over the settings from the same property below.
.. maxRolloverValue	number	It takes over the settings from the same property below.
.. precision	32 bit / 64 bit	It takes over the settings from the same property below.
.. valueFacets	e.g.: units, precision, min, and max.	Facets contain additional data applied to input and output values.
Last Record	Date and time	The date and time of the last value is stored.
Interval	Interval of the logging	Same as above: It is possible to setup the interval between two logs creation.
Precision	32 bit / 64 bit	The same as above: Precision of the floating point value which is used for that history.
Min Rollover Value	number	Related parameter for "Delta" logging for e.g. electric consumption for displaying the difference not the absolute value. It is valid for NumericChangeOf Value and for Numeric Interval. See Niagara documentation.
Max Rollover Value	number	Related parameter for "Delta" logging for e.g. electric consumption for displaying the difference not the absolute value. It is valid for NumericChangeOf Value and for Numeric Interval. See Niagara documentation.

4. Save the settings

Using the “Saia PG5 Data Import Wizard”

5. The following History is created

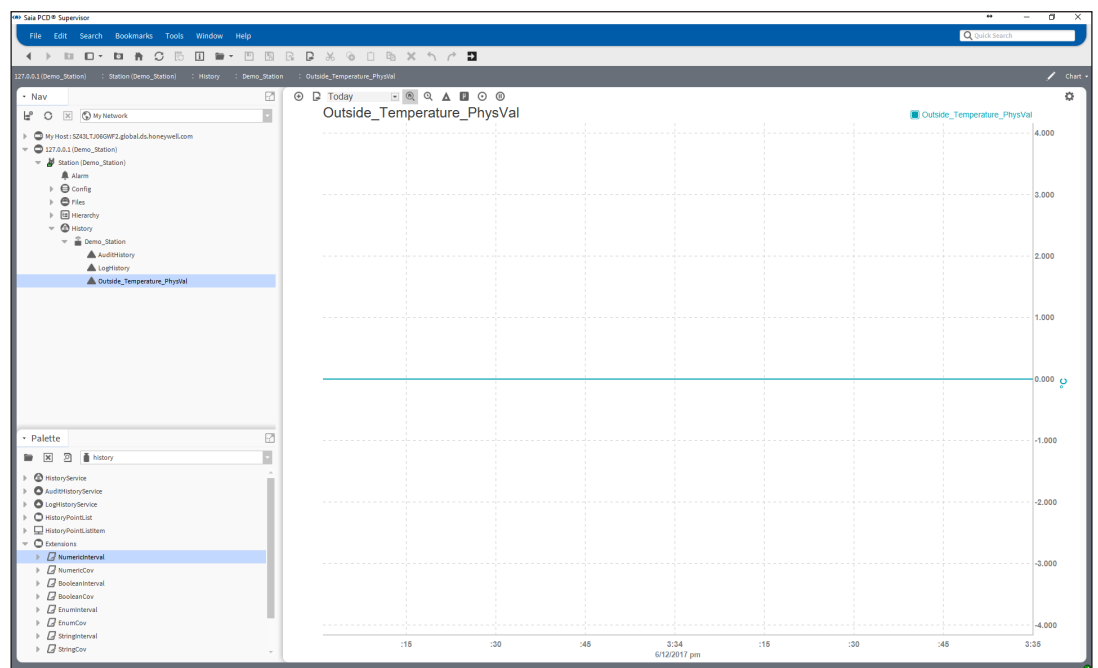


6

6. Double click to the name of the History

The Chart of the logged values will be opened.

Additional features can be checked in the Niagara documentation.



6.3 Using the “Saia PG5 Data Import Wizard”

The import wizard is an offline add-on tool to import the symbols from one or more Saia PCD® device(s) to the Saia PCD® Supervisor point database. The Import Wizard is integrated into the Saia PCD® Supervisor (it is not a standalone tool). The Import Wizard gives the possibility to import the “symbols” from one or more SBC PG5 project, which can contain of course many PCD devices per each.

The symbols, to be imported, can be filtered by type, by name.

The symbols can be re-imported any time or after modification has been done in the PG5 project. User can decide if the imported symbols are overwriting the points in the Saia PCD® Supervisor, or not.

The import procedure can be cancelled and new-started any time.

During import an error check is done, which ensures that only the good formed symbols are imported. The absolute necessity of using unique point names are ensured through the PG5 symbol table. The PG5 project can be buildable if the symbol table is correct. The downloaded PG5 program and the Saia PCD® Supervisor imported points must be all the time consistent.

When symbols from multi project are imported the System Integrator must make himself sure, that there are no the very same named symbols (points) are getting imported. For example there are two PG5 projects created, one is called Building_A and the other Building_B. Inside of both projects there are PCD devices called CPU1, CPU2, CPU3. This happens because the Building_B project is just a copy of Building_A project. Let us assume that the Building_A project has been already done. During import of the Building_B project e.g. the CPU1 symbols from Building_A are getting overwritten while the symbol name structure are the same in both projects. To avoid such a situation it is recommended to have a unique ID for each PCD device in the projects to be imported. Or use dedicated “Saia Burgess Controls Driver” for each PG5 project.

The points in the Saia PCD® Supervisor point database are structured hierarchically according to the symbol groups in the symbol table of PG5 project.

The following different type of symbols and other information/data can be imported from a PG5 project to the Saia PCD® Supervisor point database.

1. PG5 symbols or datapoints
2. Alarm list generated in the PG5 project
3. Historically logged data so called HD Logs.



Only SBC Web-Editor 8 generated Alarm lists are supported. SBC DDC Suite based alarms are not supported. Before importing the Alarm list and the HD Logs the web project in the Web-Editor 8 must be compiled. Take care to select the language for the Alarm list before compile in the Web-Editor 8. The up to date configuration files (csv files) must be available for import.



The 'Saia PG5 Data Import Wizard' is not supported on the Honeywell Optimiser Advanced Controller.

6.3.1

Important information about import wizard process in Saia PCD® Supervisor 2.1

Prior to version 2.1, projects were imported in Saia PCD® Supervisor by using CPU device name as slot in the ORD path from the PG5 project. This could cause an issue when importing device with the same CPU device name from different PG5 project into the same SBC supervisor station where unique name are required.

Slot Sheet

Slot	#	Name	Display Name
<input type="radio"/> Property	16	\$398\$20All\$20FBoxes	98 All FBoxes

Project Tree

- Project 'DDC Suite 27 ML - 18
- Properties
- TCP/IP Settings Table
- Common Files
- Library Manager
- 98 All FBoxes - PCD3.M6860 -
- DE_G01_R01 - PCD3.M5560 - 192.168.10.71, S-Bus Stn 72

5 Device Properties

Device Name:

98 All FBoxes

With the current newer version Saia PCD® Supervisor 2.1 the PG5 import wizard process apply a rule to compare the CPU device name and IP-Address as configured in PG5 device configuration. During the import process the device will be now mapped within the SbcIpNetwork applying a unique name conversion through SbcHeadstation or SbcSupstation appending to that a suffix number.

Slot Sheet

Slot	#	Name	Display Name
<input type="radio"/> Property	13	SbcHeadStation	FR_B01_L01
<input type="radio"/> Property	14	SbcHeadStation1	DE_B01_L01
<input type="radio"/> Property	15	SbcHeadStation2	98 All FBoxes

4 TCP/IP

Channel Number	9
TCP/IP Enabled	Yes
Ethernet RIO Network	None
IP Address	192.168.10.71

In case customers require to still use the old naming convention, we recommend performing that via Rename feature. The system as it is designed now will resolve the unique address by suing, as explained above, the combined reference of IP address and device name, independently from the name.

SBCIpNetwork

- Tuning Policies
- FR_B01_L01
- DE_B01_L01
- 98 All FBoxes

Rename

SbcHeadStation1

OK Cancel

Rename

DE_B01_L01

OK Cancel

Views

Actions

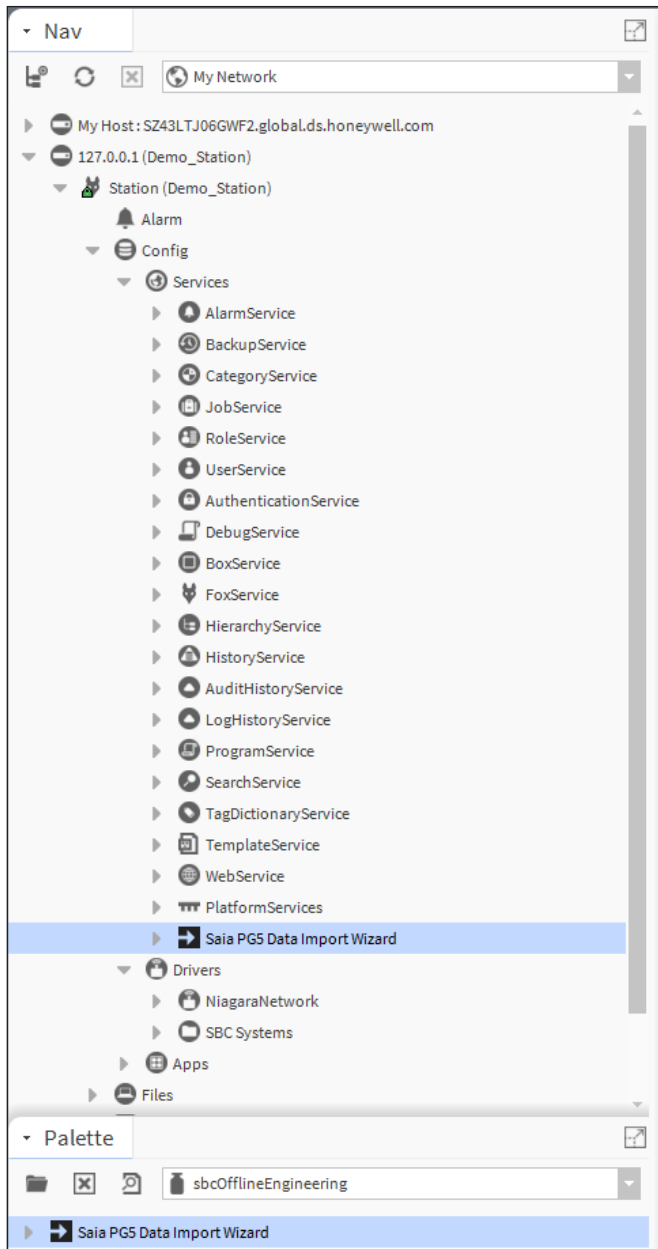
Rename

For further detailed information please refer to the Saia PCD® Supervisor manual or contact SBC technical support to get additional support.

6.3.2 Preparation

For importing the Symbols from PG5 project we need to use the Saia PG5 Data Import Wizard tool.

The “Saia PG5 Data Import Wizard” is installed together with Saia PCD® Supervisor.



It is a fact that the PG5 project (the program of the PCD controller) – from where the symbols, to be imported - is developed in a completely different tool, and this tool is not integrated presently in any way into the Saia PCD® Supervisor. Due to this fact at the beginning the Saia PCD® Supervisor has no information about the PG5 project and its symbols.

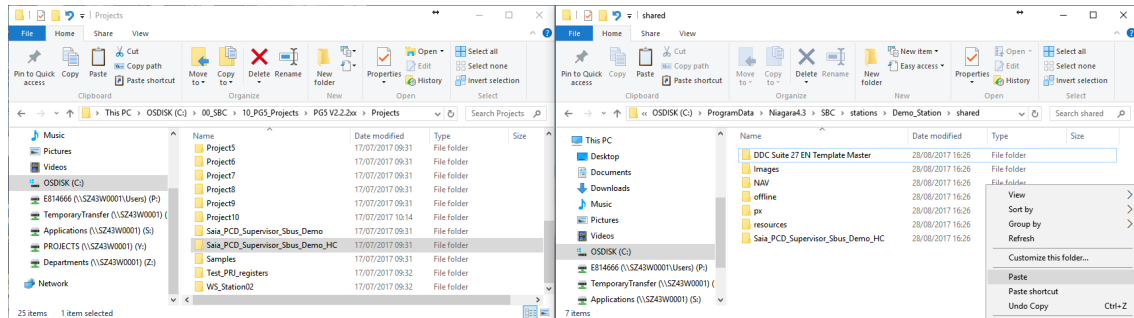
Using the “Saia PG5 Data Import Wizard”

It is needed to copy the actual up to date and compiled PG5 project under to the Station where it will be used.

Typical shared folder of a station would be like this:

C:\ProgramData\Niagara4.7\SBC\stations\Demo_Station\shared

So the complete PG5 project has to be copied there.



The copy procedure has to be repeated at each time when modification was made. (When compile of the PG5 project was happened, so the content of the symbol table could have been changed).

Naturally when the symbol table is changed, it is necessary to re-import the symbols from the PG5 project to the Saia PCD® Supervisor point database.



During new import the Saia PG5 Data Import Wizard will retain all user defined configuration of a datapoint, except memory address and comment. User can choose to overwrite comment or address&comment during the process.

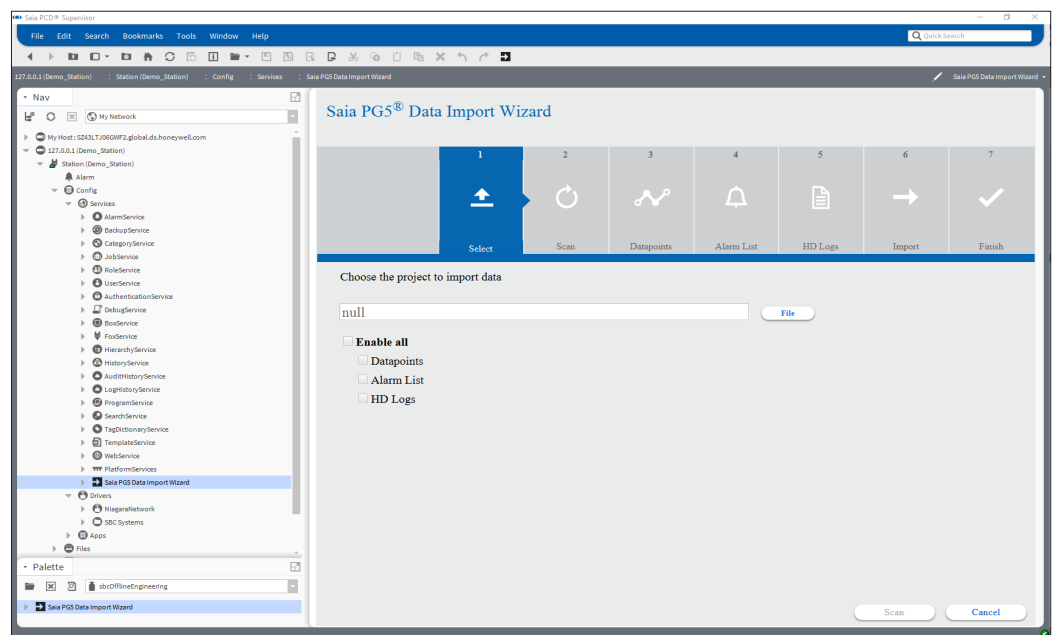
Using the “Saia PG5 Data Import Wizard”

6.3.3 Importing symbols from PG5 projects

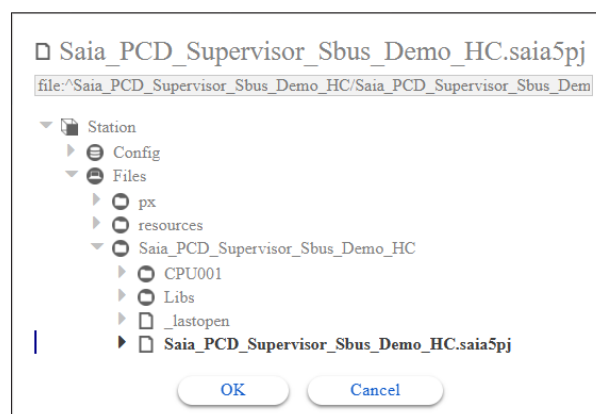
For importing symbols from the PG5 project the “Saia PG5 Data Import Wizard” has to be started. This tool will do an offline symbol import. When the symbols are imported to Saia PCD® Supervisor then we can call them **“Points”**. Discovery of the symbols in the Saia PCD device and do online symbol import is not possible.

1. Double click to the Saia PG5 Data Import Wizard under the currently used Station. The Wizard opens.

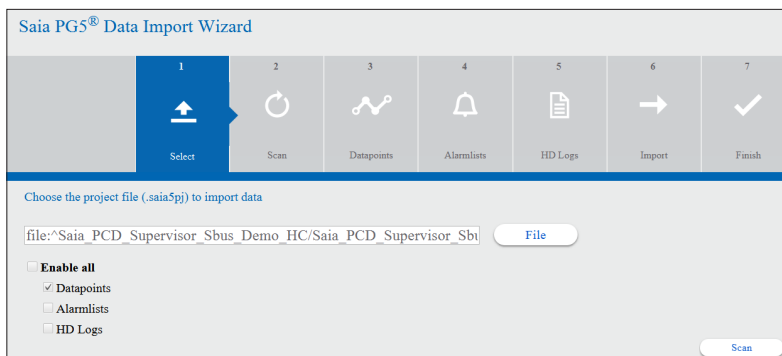
At the beginning nothing is selected.



2. Chose the right PG5 project. Click to the “File” button and select the PG5 project file of the project copied to the shared folder of the Station. Press OK.



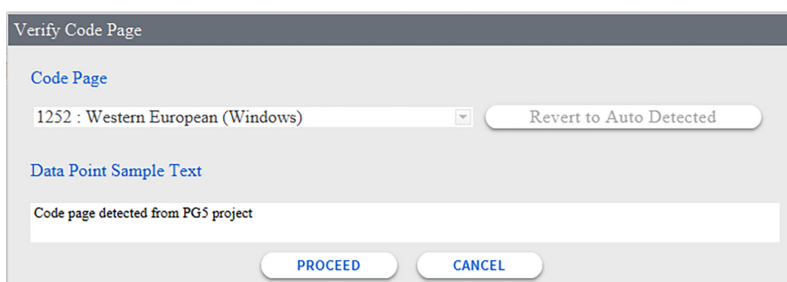
3. Check the datapoints and press Scan



The screenshot shows the 'Saia PG5 Data Import Wizard' at step 3, 'Datapoints'. The progress bar at the top shows steps 1 through 7, with step 3 highlighted. Below the progress bar, there is a section titled 'Choose the project file (.saia5pj) to import data' with a text box containing 'file:^Saia_PCD_Supervisor_Sbus_Demo_HC/Saia_PCD_Supervisor_Sbi' and a 'File' button. Below this, there is a section titled 'Enable all' with three checkboxes: 'Datapoints' (checked), 'Alarmlists' (unchecked), and 'HD Logs' (unchecked). A 'Scan' button is located at the bottom right.

At this window press Proceed

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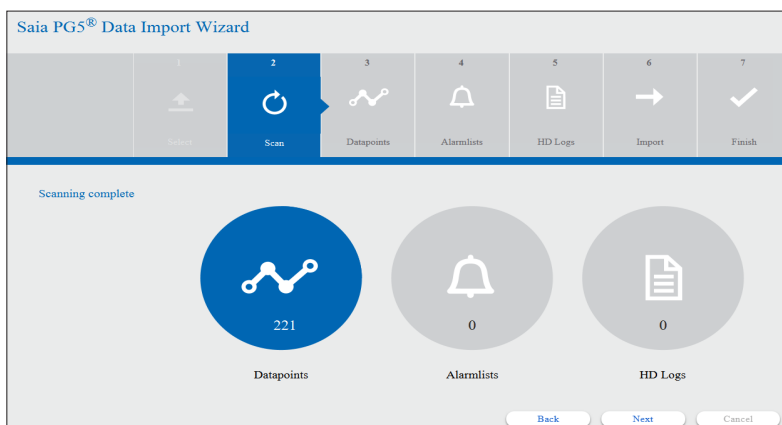
The screenshot shows the 'Verify Code Page' dialog box. It has a title bar 'Verify Code Page'. Below the title bar, there is a section titled 'Code Page' with a dropdown menu showing '1252 : Western European (Windows)' and a 'Revert to Auto Detected' button. Below this, there is a section titled 'Data Point Sample Text' with a text box containing 'Code page detected from PG5 project'. At the bottom, there are two buttons: 'PROCEED' and 'CANCEL'.



*It is possible but please try to avoid accented or special characters.
Not supported characters \$, # and %.*

For others proper code page has to be selected then they are correctly visible.

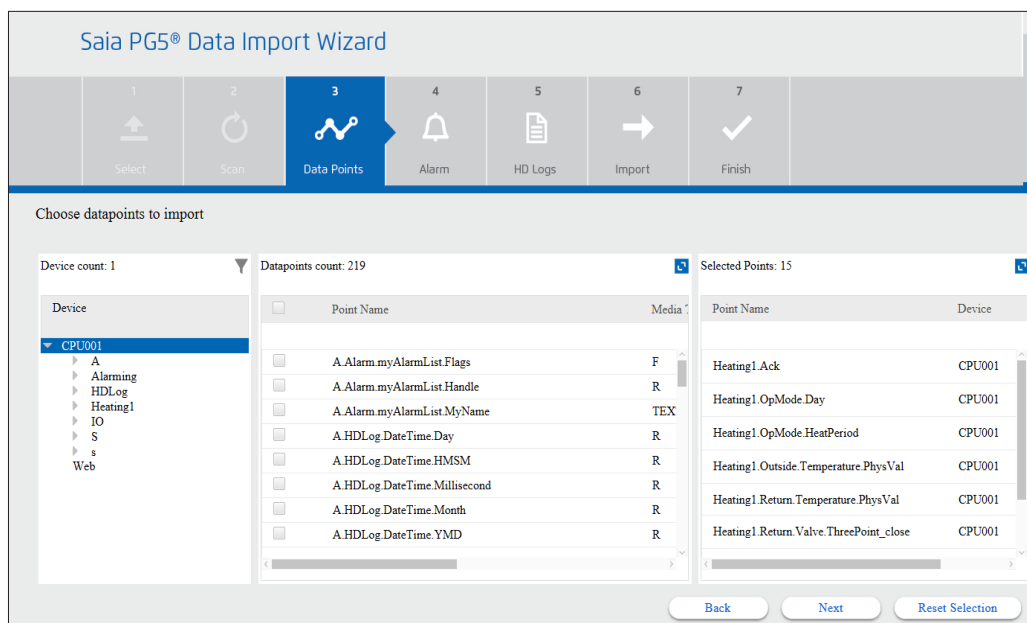
4. The amount of the possible symbols are calculated. Press Next.



The screenshot shows the 'Saia PG5 Data Import Wizard' at step 4, 'Scanning complete'. The progress bar at the top shows steps 1 through 7, with step 4 highlighted. Below the progress bar, there is a section titled 'Scanning complete'. It contains three large circular icons: 'Datapoints' with the number 221, 'Alarmlists' with the number 0, and 'HD Logs' with the number 0. At the bottom, there are three buttons: 'Back', 'Next', and 'Cancel'.

Using the “Saia PG5 Data Import Wizard”

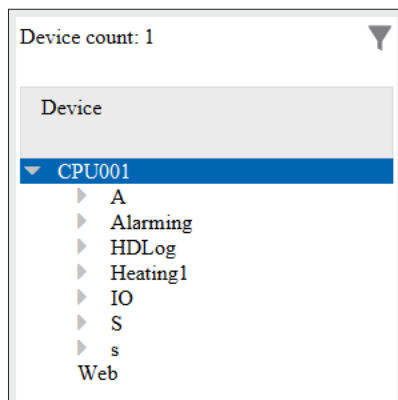
5. The symbol list is populated.



The top of the Wizard window can be seen that the procedure is at the stage of datapoints.



The left side of the Wizard window the found Devices with the symbol groups of the selected device. There is also a filter icon which pops up the possible filter settings.



In the middle of the Wizard window the symbols are shown with full names and details. It is possible to zoom the window by clicking the icon at the right top-most corner.

Datapoints count: 219

<input type="checkbox"/>	Point Name	Media Type	Memory Address	Data Format	Comment
<input type="checkbox"/>	A.Alarm.myAlarmList.Flags	F	6166	Boolean	Alarmflags
<input type="checkbox"/>	A.Alarm.myAlarmList.Handle	R	2175	Signed Int	Handle-ID
<input type="checkbox"/>	A.Alarm.myAlarmList.MyName	TEXT	3000	String	Name of list
<input type="checkbox"/>	A.HDLog.DateTime.Day	R	2334	Signed Int	Day
<input type="checkbox"/>	A.HDLog.DateTime.HMSM	R	2335	Signed Int	Hours/Minutes/S...
<input type="checkbox"/>	A.HDLog.DateTime.Millisecond	R	2336	Signed Int	Milliseconds
<input type="checkbox"/>	A.HDLog.DateTime.Month	R	2337	Signed Int	Month
<input type="checkbox"/>	A.HDLog.DateTime.Sec1970	R	2338	Signed Int	Seconds since 1970
<input type="checkbox"/>	A.HDLog.DateTime.Week	R	2339	Signed Int	Week of year
<input type="checkbox"/>	A.HDLog.DateTime.Year	R	2340	Signed Int	Year
<input type="checkbox"/>	A.HDLog.DateTime.YMD	R	2341	Signed Int	Year/Month/Day

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The symbols can be selected one by one by checking the checkbox beside the symbol. Or at the top beside the Point Name by checking the checkbox all the symbols are getting selected in the actual group.

The Data Format can be changed per Points. For example, when Register is the data type from the PG5 project the format of the data in the register can be Signed / Unsigned Integer or Motorola / IEEE float.

6. The right side of the Wizard window shows those symbols which are selected therefore are getting imported. This window can also be zoomed. Beside the symbol the big X icon is used to remove the symbol from the selection.

Selected Points: 3

Point Name	Device	
Heating1.Ack	CPU001	✕
Heating1.OpMode.Day	CPU001	✕
Heating1.OpMode.HeatPeriod	CPU001	✕

Using the “Saia PG5 Data Import Wizard”

6

7. Because in the middle window of the wizard shows all the symbols the System integrator has to be able to select the symbols which are needed to be imported. Filter can be defined, so only the interesting symbols will be shown.

Filter Data Points by

☐ Select All

☒ Registers

☒ Flags

☐ Counters

☐ I/Os

☐ Timers

☐ DB

☐ Text

RESTORE DEFAULTS APPLY

It is possible to select the type of the symbols to be filtered.

Or it is possible to define symbol groups not to be displayed. For that user must click to the + icon at the right side of the list and define the Group name (e.g. Web). There are some default symbol groups predefined.

Filter Data Points by

☐ Select All

☒ Registers

☒ Flags

☐ Counters

☐ I/Os

☐ Timers

☐ DB

☐ Text

Hide Data Points Starting with

A S IO s

Web

RESTORE DEFAULTS APPLY

Click to Apply to make the filter settings effective.

Device count: 1 Datapoints count: 2 Selected Points: 17

Device	Point Name	Media Type
CPU001	Web.HMS	R
	Web.YMD	R

Point Name	Device
Heating1.Supply.Pump.Alarm	CPU001
Heating1.Supply.Pump.Feedback	CPU001
Heating1.Supply.Pump.MotorProtection	CPU001
Heating1.Supply.Pump.Output	CPU001
Heating1.Supply.Temperature.PhysVal	CPU001
Heating1.Supply.Temperature.SetPt	CPU001
Web.HMS	CPU001
Web.YMD	CPU001

Back Next Reset Selection

Or you can Restore Defaults settings when it is needed.

8. We need the symbols from the Heating1 group and also from the Web group. Select them and press the Next.

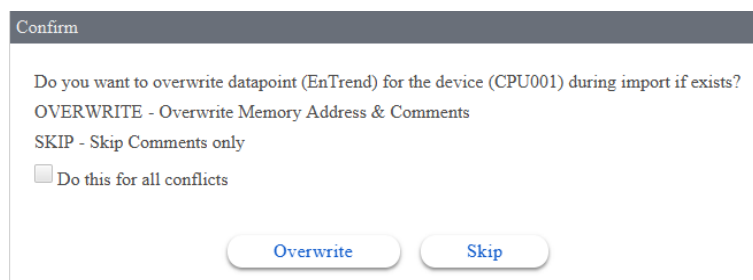
9. Pop-up window is displayed to warn you to overwrite or not the datapoint (the first one in the list).

It is possible to select the action for the remaining conflicts of the point database.

Check the “Do this for all conflicts” and press Overwrite.

Presently it works this way

- Overwrite = it overwrites the addresses and also the comments
- Skip = it overwrites the addresses only

**6**

During new import the Saia PG5 Data Import Wizard will retain all user defined configuration of a datapoint, except memory address and comment.

Using the “Saia PG5 Data Import Wizard”

10. The SBCIpNetwork driver folder is automatically generated under the Drivers folder of the Station. The datapoints were imported to the Points folder of the SBCIpNetwork driver. The datapoints are hierarchically structured as they are in the PG5 symbol table. The main folder of the Points are named according to the Device name in the PG5 project.

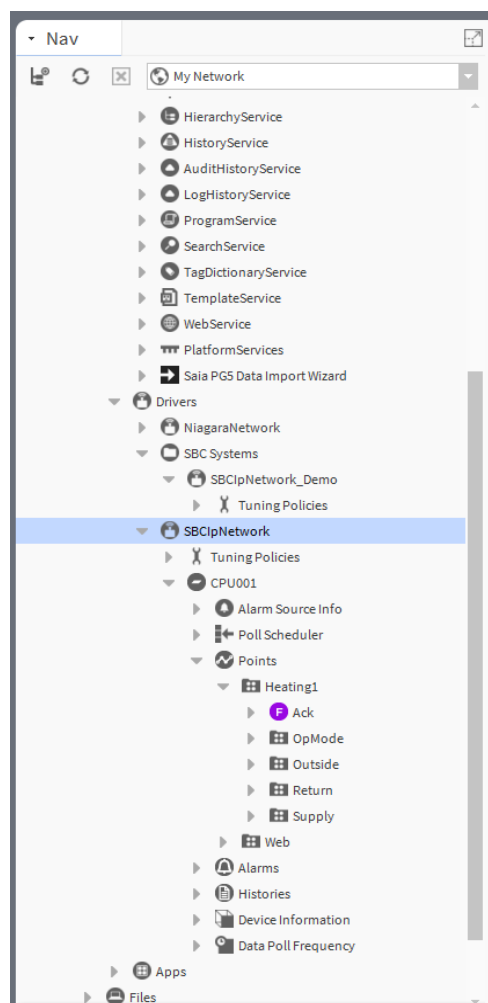


PCD device name can be the same in different PG5 Projects. Take care of it and make it sure that the imported Device names are unique in the Saia PCD® Supervisor.



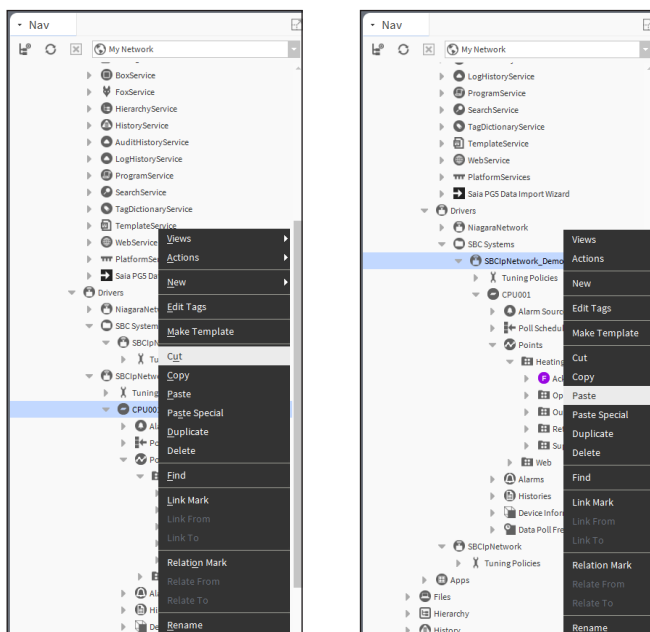
The Import Wizard always put the points in the SBCIpNetwork folder. This folder can be renamed. The next import then will be done to the renamed folder. The target folder of the import can not be freely chosen.

6



11. It can happen that the generated structure is not fitting to the predefined structure of the Saia PCD® Supervisor.

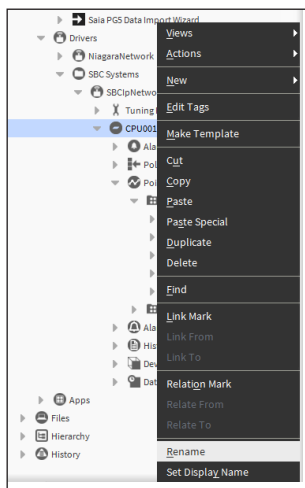
Then it is possible to move the points to an other “SBCIpNetwork” with simple cut and paste action.



6

The not used “SBCIpNetwork” then can be deleted.

It is also possible to rename the element of the folder structure. It makes mainly sense to rename the PCD Device (the top folder). The folders under are having the right names since the PG5 project is also built up with structured symbol names. Let us rename it to “Device1”



Presently the Saia PG5 Data Import Wizard is not capable to follow up the Folder structure changes. So at the next import it will again import the symbols under the SBCIpNetwork under Drivers.

12. During the import a **Conversion** with **factor 0.1** is applied automatically to every Registers which has data type **Signed** or **Unsigned Integer**. This conversion is used because the numbers in the Registers of the PCD device are usually multiplied with 10. This multiplication is a kind of standard convention in case of Building Automation Projects. Of course the conversion can be removed or modified by hand. For example, we need to modify the conversion when we are working with time values. Then the division between minutes and seconds would be 60.



During new import the Saia PG5 Data Import Wizard will retain all user defined configuration of a datapoint, except memory address and comment. User can choose to overwrite comment or skip during the process.

6.3.3.1 Properties of an imported datapoint

It can be seen in the AX Property Sheet of the datapoint that, there are many properties available.

We already touched the “Conversion”.

In this chapter the others will shortly be described.

Let us double click to symbol which is “Numeric Variable” type.

For example: Device1/Points/Heating1/.Outside/Temperature/PhysVal.

The AX property Sheet will come up because this is the associated page (default by the system, but changeable) to the datapoints.

6

The screenshot displays the Saia PG5 Data Import Wizard interface. On the left, the 'Nav' pane shows a hierarchical tree structure under 'My Network'. The path 'Device1/Points/Heating1/.Outside/Temperature/PhysVal' is selected. The main area on the right is the 'Property Sheet' for the 'PhysVal (Numeric Writable)' datapoint. It contains various configuration fields:

- Facets:** units=null, precision=1, min=-inf, max=+inf
- Proxy Ext:** SBCProxyExt
- Status:** {ok}
- Fault Cause:** (empty field)
- Enabled:** true
- Device Facets:** (empty field)
- Conversion:** Linear, Scale 0.1, Offset 0.0
- Tuning Policy Name:** Default Policy
- Read Value:** -133.00 {ok}
- Write Value:** - {null} @ def
- Memory Address:** 102
- Data Format:** Signed Int
- Out:** -13.3 {ok} @ def
- In1 to In16:** - {null} (each with a dropdown arrow)
- Fallback:** - {null}
- Override Expiration:** null
- Media Type:** Register
- Comments:** Actual physical value outside air temper
- Icon:** module://sbc/resources/images/register.png

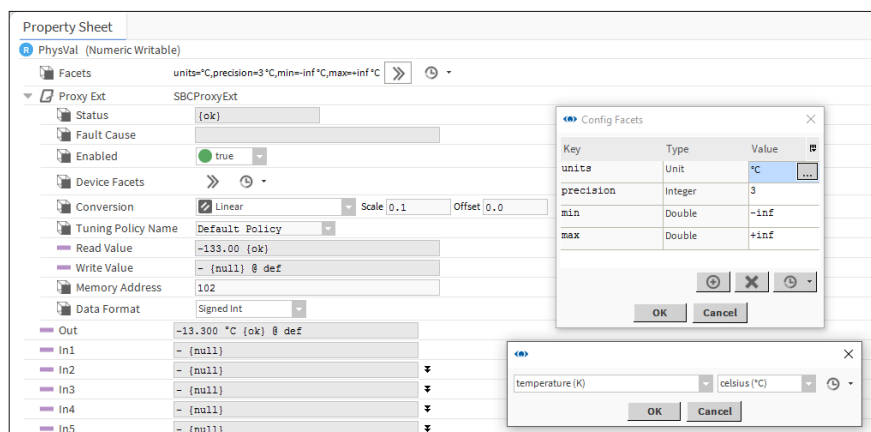
Using the “Saia PG5 Data Import Wizard”

Short description of the properties (top to down, row by row):

1. **Name of the data-point** without group structure and the type in bracket. The type of the datapoint is determined by the Saia PG5 Data Import Wizard during import. (changeable)
2. **Facets** This property allows you to configure how the value of the component is displayed. For example, on a Numeric Writable component you can set the units, precision, minimum and maximum value for the Out property value.

In case of the example we can use the following settings. We use three decimal precision. The “-inf and +inf” are the +/- infinity. As it is a measurement which comes from the PCD controller we do not need to set min and max. But for a writable parameter for a setpoint or for an output it makes sense to define the min / max parameter in order to ensure the operator typed value never goes out of its borders (e.g. by mistyping). The engineering unit can also be selected.

6



Unfortunately the Facets settings are not set automatically for the imported points. This means that the Facets parameters must be set for every each imported points manually.

3. **ProxyExt** We use in the Saia PCD® Supervisor so called Proxy Points (this is a feature of the Niagara framework). The function of the Proxy Point is to show the values of the symbols from different controllers in a uniformed way. The Proxy Points then are behaving in the same way inside of the Saia PCD® Supervisor regardless if they come from a Saia PCD controller or from a third party device.

- | | |
|--------------------------|---|
| 1. Status | <div style="display: inline-block; vertical-align: top; margin-right: 10px;"> {ok}
 {fault}

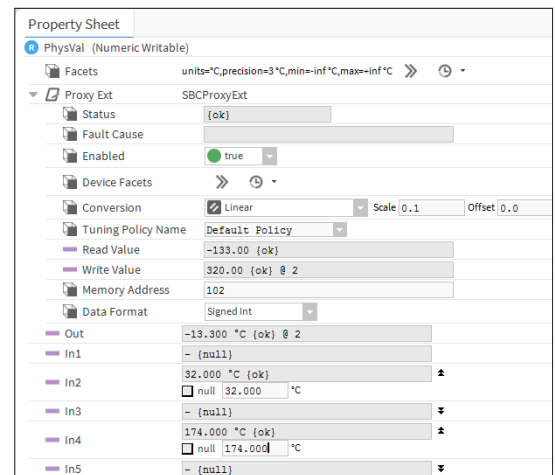
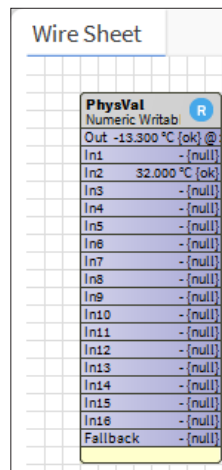
 {down}
 {disabled}
 {stale} </div> <div style="display: inline-block; vertical-align: top;"> communicating and ok
 communicating but the value is not correct

 no communication
 point is disabled
 the value of the point is not trustworthy </div> |
| 2. Fault cause | Possible cause of the fault |
| 3. Enabled | Enable / Disable the communication of this datapoint (Save it if modified) |
| 4. Device Facets | In cases for drivers that support a “Discovery” mechanism, a proxy point may be created with its facets (units) already defined—these reflect its “Device Facets” (in its ProxyExt). Not applicable for Saia PCD Devices due to no discovery. |
| 5. Conversion | (Type, Scale and Offset): the raw value comes from the PCD controller can be converted using different mathematical transformation. |
| 6. Tuning Policy | If other tuning policy has been defined it can be selected here. The Tuning Policy is used to define how frequently the datapoint is communicated. |
| 7. Read Value | Value from the controller as it is. |
| 8. Write Value | The type of the datapoint is Numeric Writable. So it possible to write back value to the PCD Controller. Because the connected variable in the PCD controller is a freely readable and writable Register. Other hand it can happen the user program in the PCD controller s just cyclically overwriting this Register. |
| 9. Memory Address | The address of the memory slot in the PCD controller to communicate with. |
| 10. Data Format | How the value is represented in the memory slot in the PCD controller. |

Using the “Saia PG5 Data Import Wizard”

4. **Out** This is the value which can be visible in the Saia PCD® Supervisor and be used/connected to other place (e.g. creating logic in the Wire Sheet”
5. **In1 to In16** These are inputs of this Proxy Point, if we see it as a Function box. The inputs can be connected to somewhere to get values or it is possible to define the value directly. There is a defined priority between the inputs (lowest In16). The values of the inputs can be enabled / disabled with checking the checkbox “null”. Then the values which is the highest priority will be downloaded to the PCD controller.

6



6. **Fallback** When any of the Input are not applied the Fallback value is applied.
7. **Override Expiration** It is possible to command Permanent or Time-duration bound override. When Time bound override is applied, then the Override Expiration shows the time and date when the override goes back to Auto automatically.
8. **Media Type** The type of the memory slot in the PCD controller. Needed for the correct communication.
9. **Comments** Imported comment from the PG5 project.
10. **Icon** Internal picture associated to this type of variable.

Certainly the other type of datapoints have a bit different looking Property Sheets. I do not describe every each of them. To get familiar with them needs self-study and reading the manuals.

6.3.4 Alarming

Importing Alarm list generated in the PG5 project

There are at least two possible ways to handle the Alarms in the Saia PCD® Supervisor.

1. The Alarms are generated in the PCD controller. They are organized to a memory territory, with Alarm text, time stamp, status (Acknowledged, Deleted, New, etc.) and comment. This information can be then imported to Saia PCD® Supervisor.



Only SBC Web-Editor 8 generated Alarm lists are supported. SBC DDC Suite based alarms are not supported. Before importing the Alarm list and the HD Logs the web project in the Web-Editor 8 must be compiled. Take care to select the language for the Alarm list before compile in the Web-Editor 8. The up to date configuration files (csv files) must be available for import.

6

2. In the Saia PCD® Supervisor there is alarm service which can be used to set Alarms for individual datapoints, regardless if the datapoint is considered alarm or not at the start of the engineering. For example the Outside air temperature can generate an alarm when it is crossing the -20°C. For that we need to set monitoring of this temperature in the Saia PCD® Supervisor. So the Alarm is generated in the Saia PCD® Supervisor not in the PCD controller. Therefore this alarm can not be seen for example in the SWeb application.

Here in this chapter we will see how to import the Alarm list form the PCD controller.

1. The Saia PG5 Data Import Wizard must be started.
2. The right PG5 project file must be selected in the **File** edit field.
3. Check the Alarm List checkbox

Saia PG5® Data Import Wizard

1 Select 2 Scan 3 Datapoints 4 Alarmlists 5 HD Logs 6 Import 7 Finish

Choose the project file (.saia5pj) to import data

file:"Saia_PCD_Supervisor_Sbus_Demo_HC/Saia_PCD_Supervisor_Sb... File

☐ Enable all

☐ Datapoints

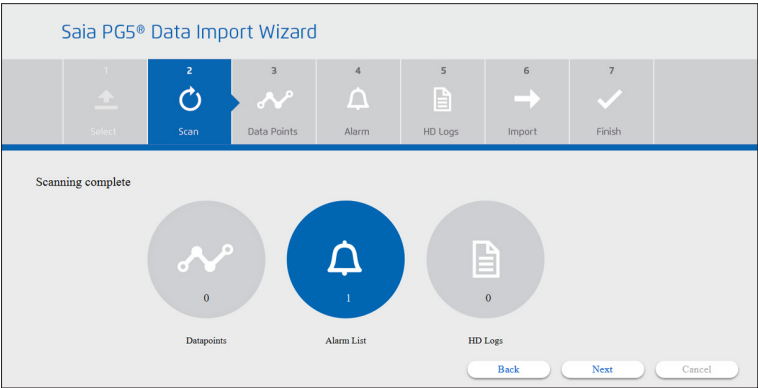
☒ Alarmlists

☐ HD Logs

Scan

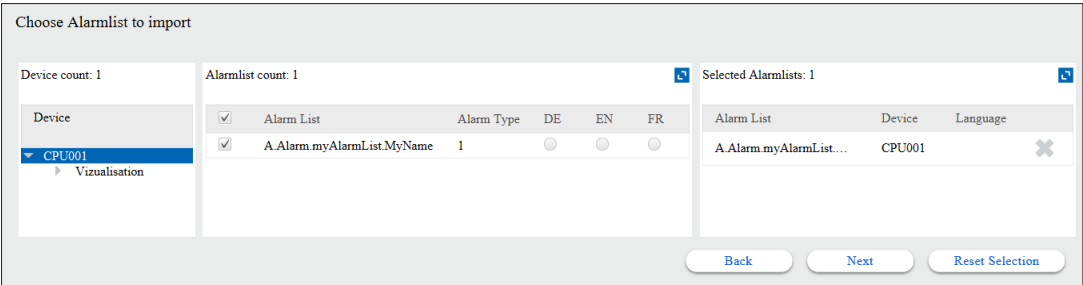
Using the “Saia PG5 Data Import Wizard”

4. Press Scan. The Alarm list of the selected PG5 project is being scanned.

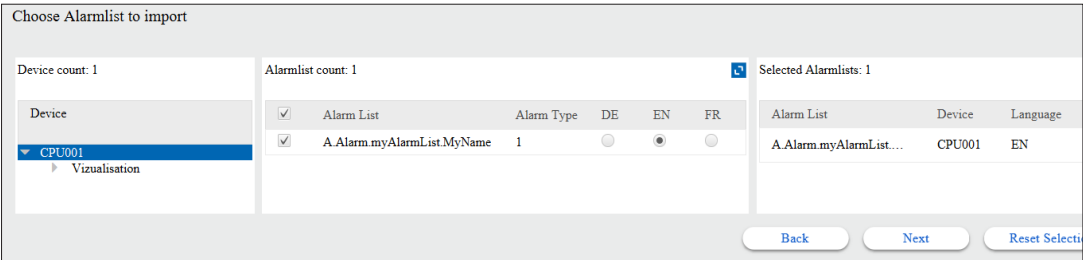


6

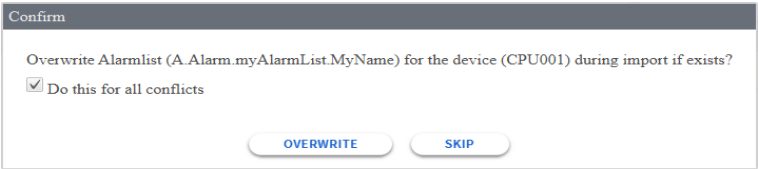
5. Select the Alarm list to be imported.



6. If the Alarm list is generated with more languages then select the required language.



7. Press **Next**. And confirm to overwrite the Alarmlist.



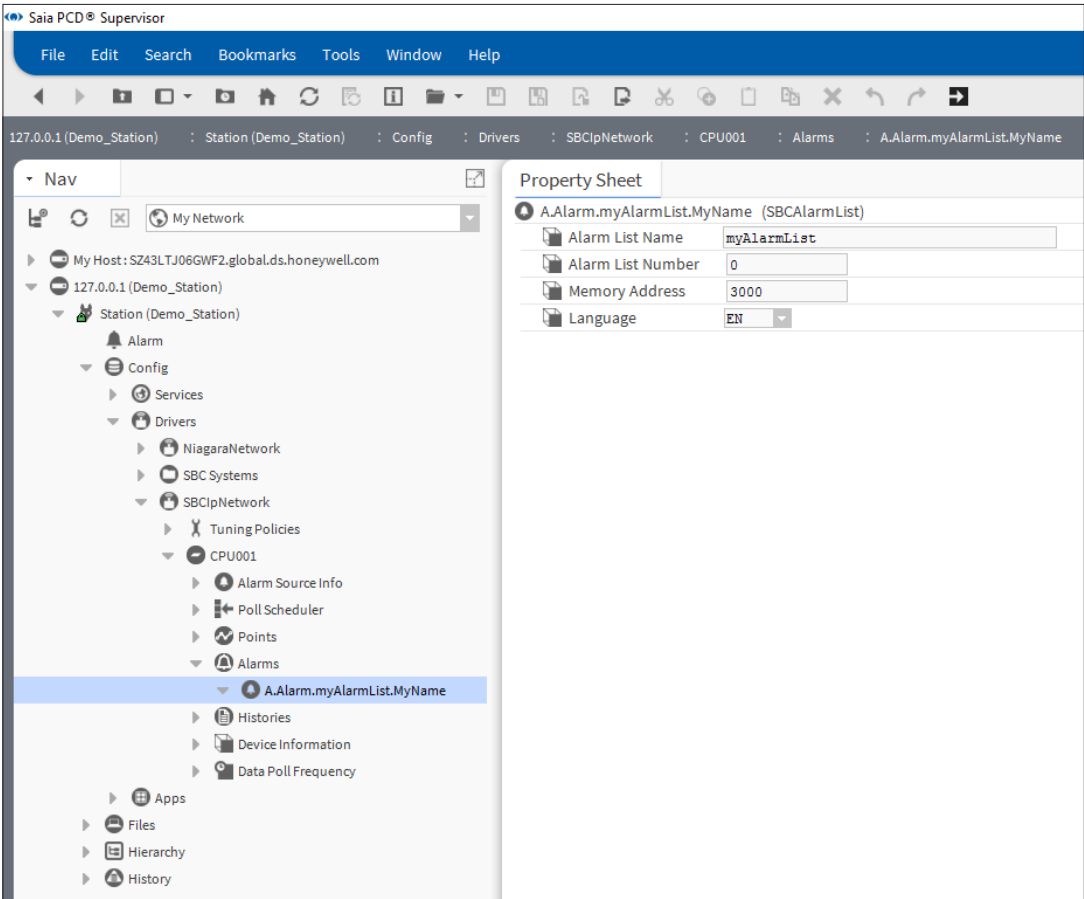
8. The Import is running



Import is ready. The details can be checked under the Device/Alarms folder.

6

More details are not available.



9. Check the Alarming behaviour by generating test alarms in the corresponding Saia PCD controller.

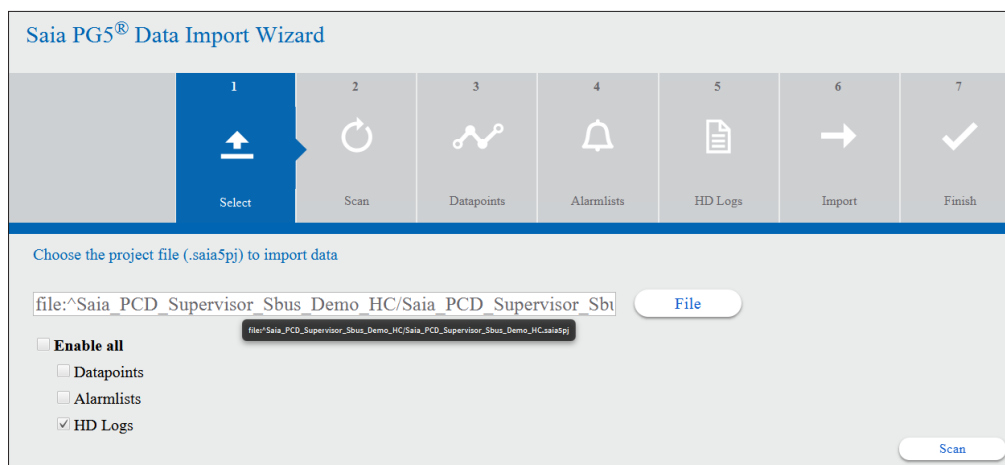
6.3.5 Importing Historically logged data so called HD Logs

There are at least two possible ways to handle the Historically logged data in the Saia PCD® Supervisor.

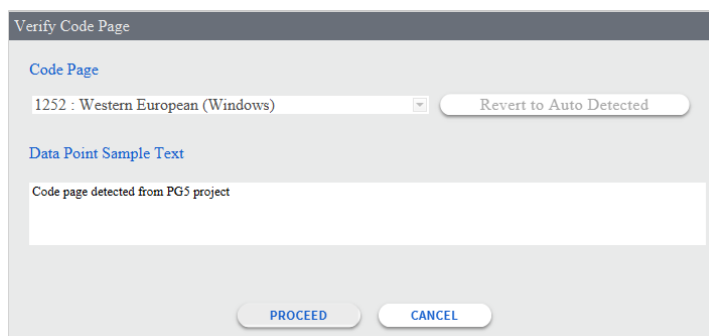
1. The HD Logs are generated in the PCD controller. The HD Log data can be saved in different format and into different memory territory in the PCD device. The Saia PCD® Supervisor supports only "csv" file based log data which are saved to the Flash File System of the PCD device. (This means that, the HDLog 3.0 Fbox generated logs, which are saved to INTFLASH, M1_2FLASH and SLOT0_3FLASH can be imported.)
2. In the Saia PCD® Supervisor there is History Service which can be used to log the interesting values to the hard drive of the PC. So the logged data then any time can be retrieved and can be displayed e.g. as a trend curve. So the Historical Log is generated in the Saia PCD® Supervisor not in the PCD controller.

Here in this chapter we will see how to import the HD Logs form the PCD controller.

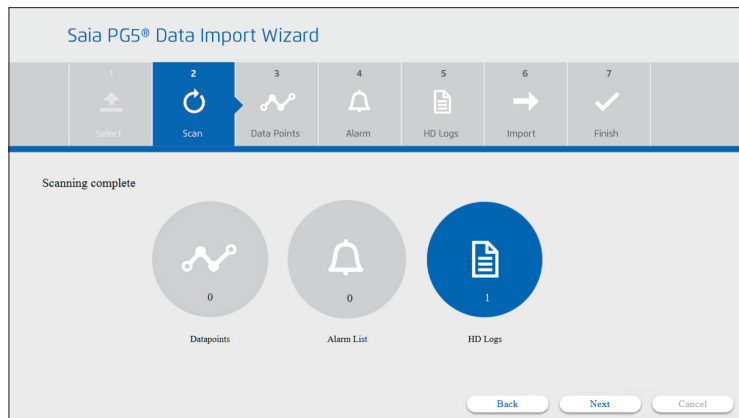
1. The **Saia PG5 Data Import Wizard** must be started.
2. The right PG5 project file must be selected in the **File** edit field.
3. Check the **HD Logs** check box, and press **Scan**



4. Press **Proceed** or select the right codepage manually and press Proceed.

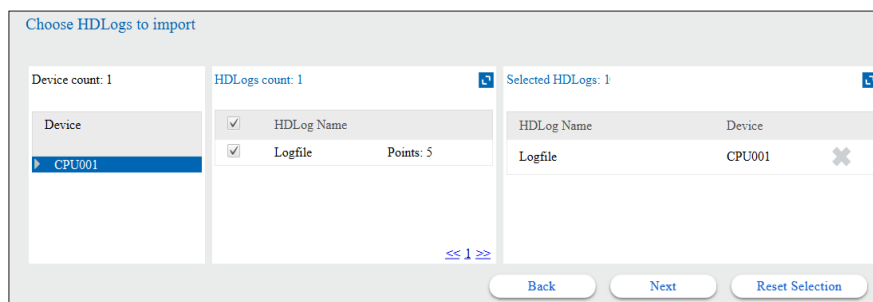


5. Summary of the found HD Logs is displayed, press **Next**

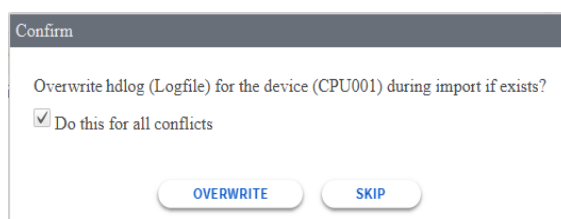


6

6. The detail view of the HD Logs is displayed. Select the needed HD Log files. Inside of one HD log file can be many different data points logged (symbols). Then press **Next**.



7. Check the check box and press **Overwrite** to proceed. The existing configuration will be overwritten.



8. The Import Wizard reports the successful import.

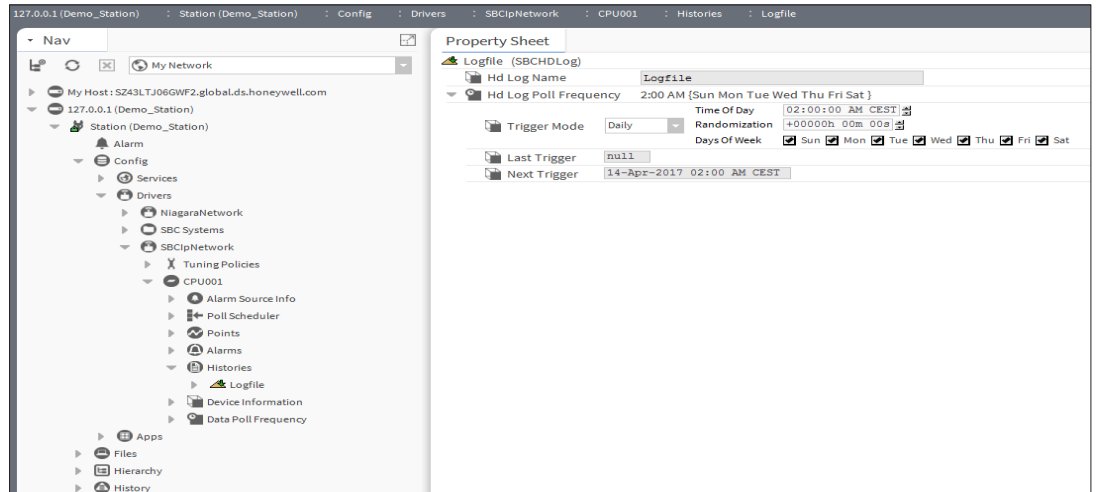


Import is ready. The details can be checked under the Device/Alarms folder.

Using the “Saia PG5 Data Import Wizard”

9. Check the result in the NAV tree / Device / Histories.

10. The default settings is to get the data from the PCD device (controller) once per day. This can be changed to get the data faster for example every 10 minutes.



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6.3.6 Starting the communication after the import



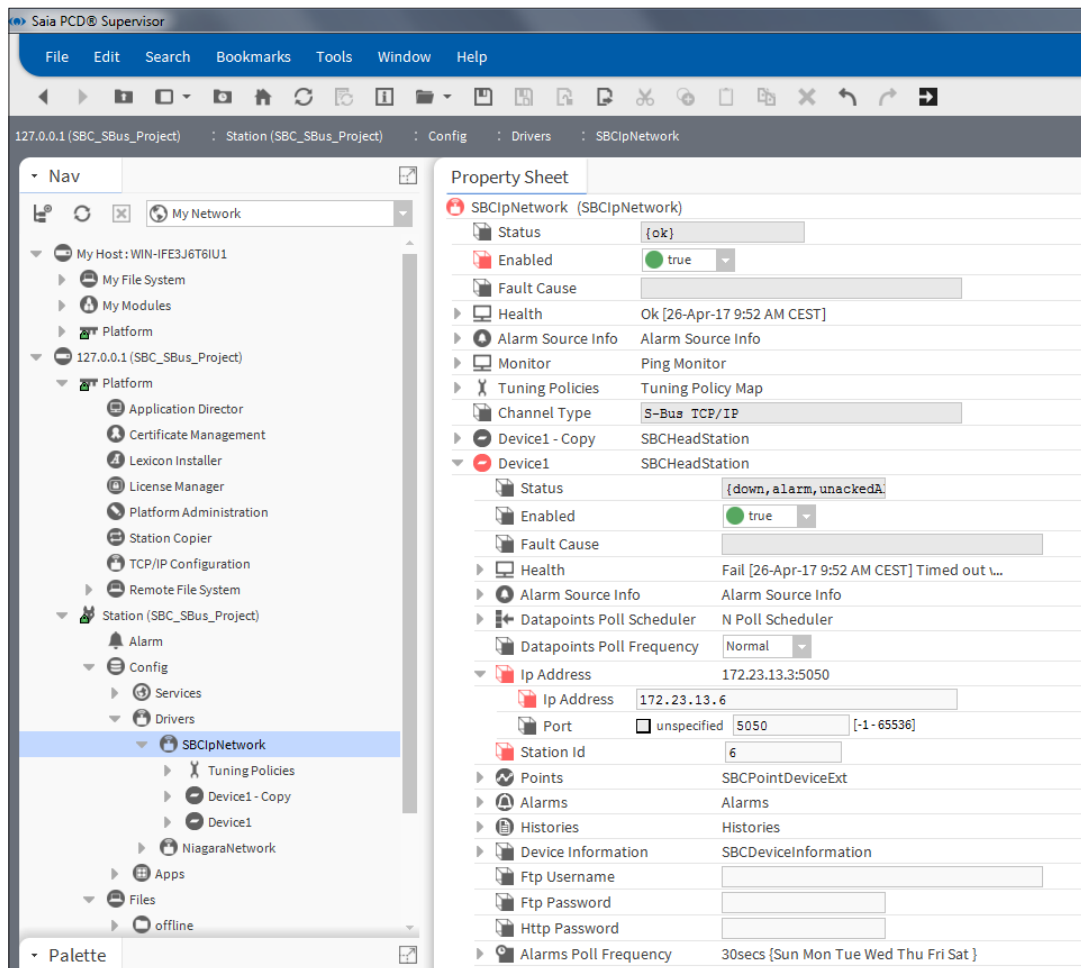
Drivers can be seen effectively as language packs. After the execution of the Saia PG5 Data Import Wizard we have got a new driver called the SBCIpNetwork. Once a driver is in place and configured the Saia PCD® Supervisor can speak to that protocol.

The PG import wizard works offline. It does not require a network connection to the PCD.

If the IP address and S-Bus station number of the Saia PCD® Supervisor was correctly configured in the Device configurator and the PCD with the Saia PCD® Supervisor software is connected to the same network and if the network setup is correct, then the communication should work directly after the execution of the “Import wizard” without problems.

6.3.6.1 Enabling the Saia PCD S-Bus IP-Driver

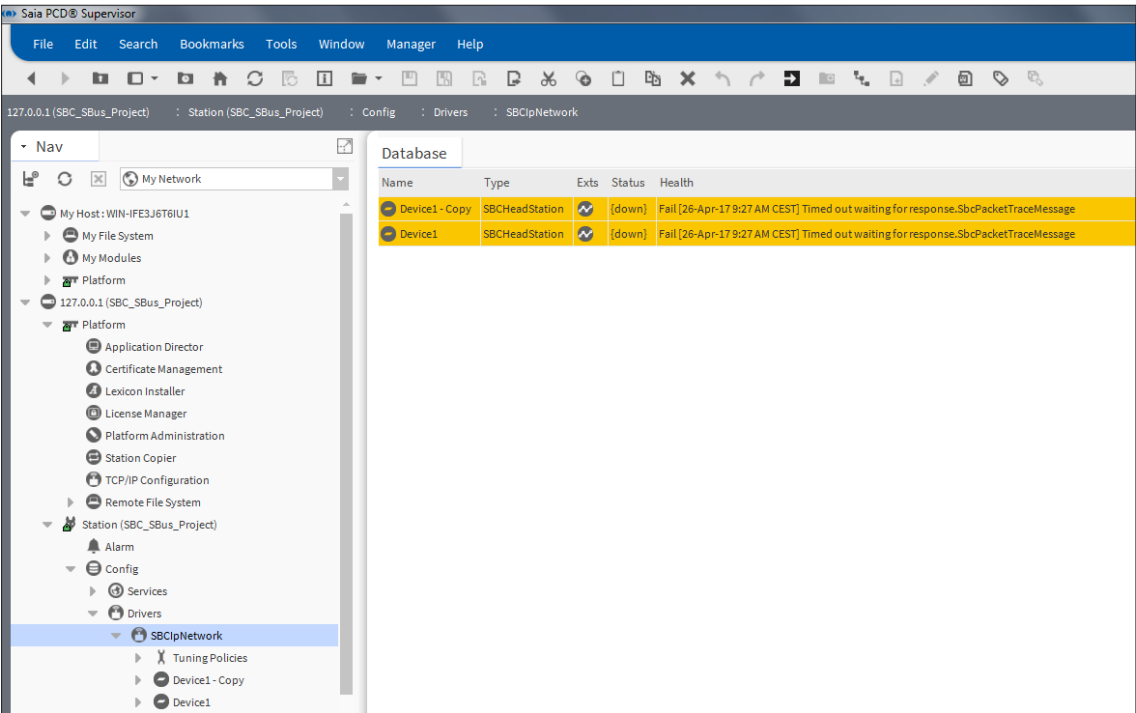
1. In the Nav tree open the Station/Drivers/SBCIpNetwork. Double click on the Device1.
2. In the property sheet check the settings (red colour marked lines) and enable the driver.
3. Save the modification.



6.3.6.2 Checking different settings to get the communication working

The following picture shows that the communication is not working the devices are orange colored

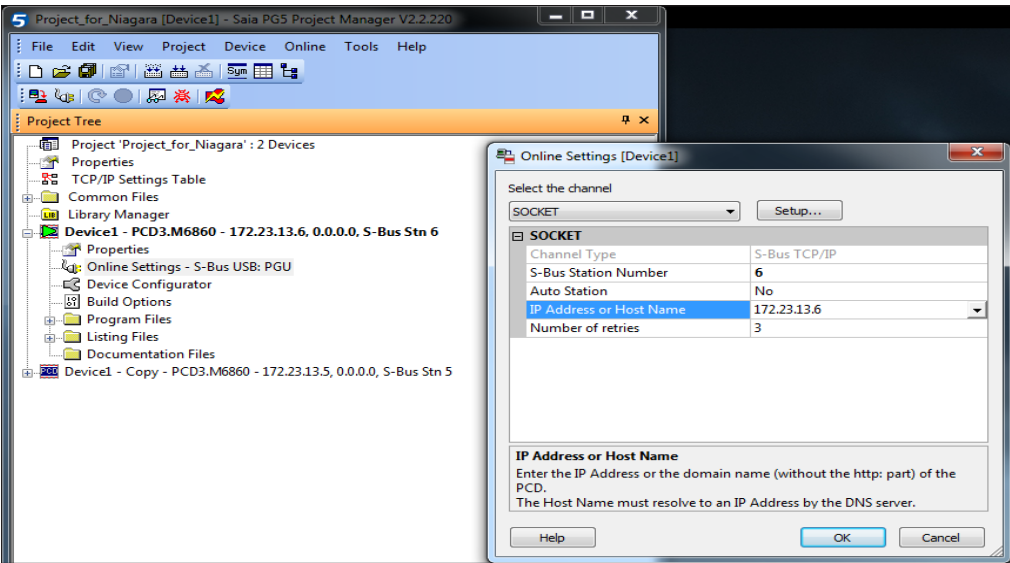
6

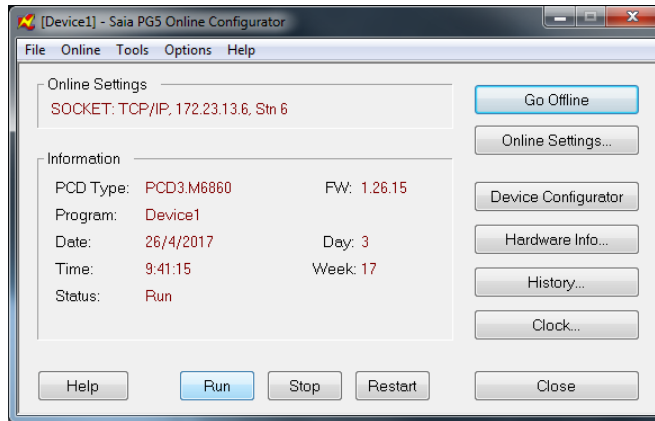


The following steps are needed to do debugging communication problems.

- 1. Check the communication between PG5 and the Device
This only works if the PG5 is installed onto the same PC

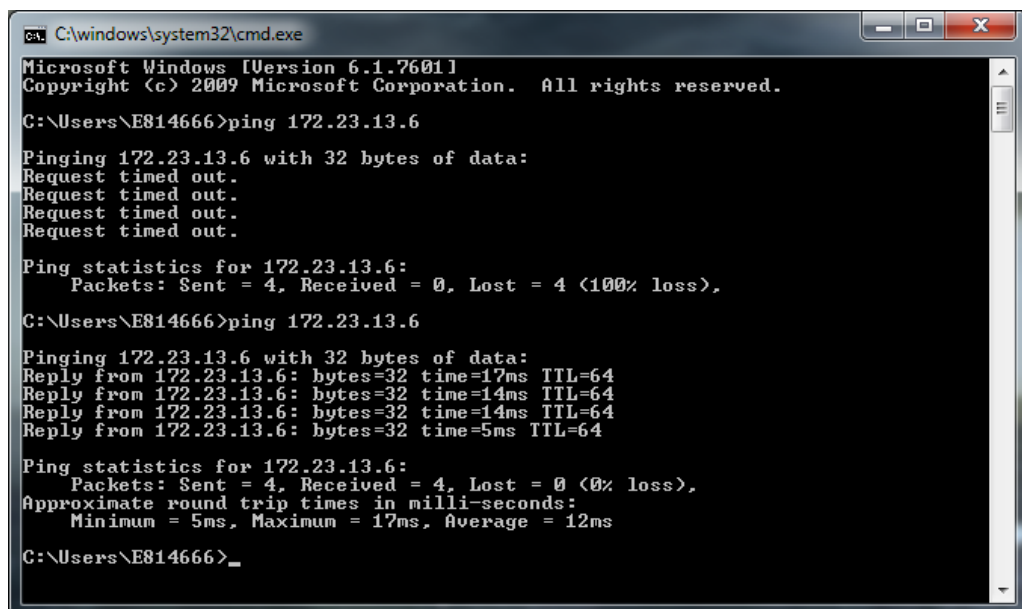
It should be possible to go online to the PCD with the online configurator of PG5 over a “Socket connection”





2. If it's not possible to go online over Socket to the PCD, try to ping the IP-address of the PCD.

6



If it's not possible to PING the PCD, there must be a problem with the network setup (e.g. IP address or Subnet mask)

or there is a problem with cabling or switches

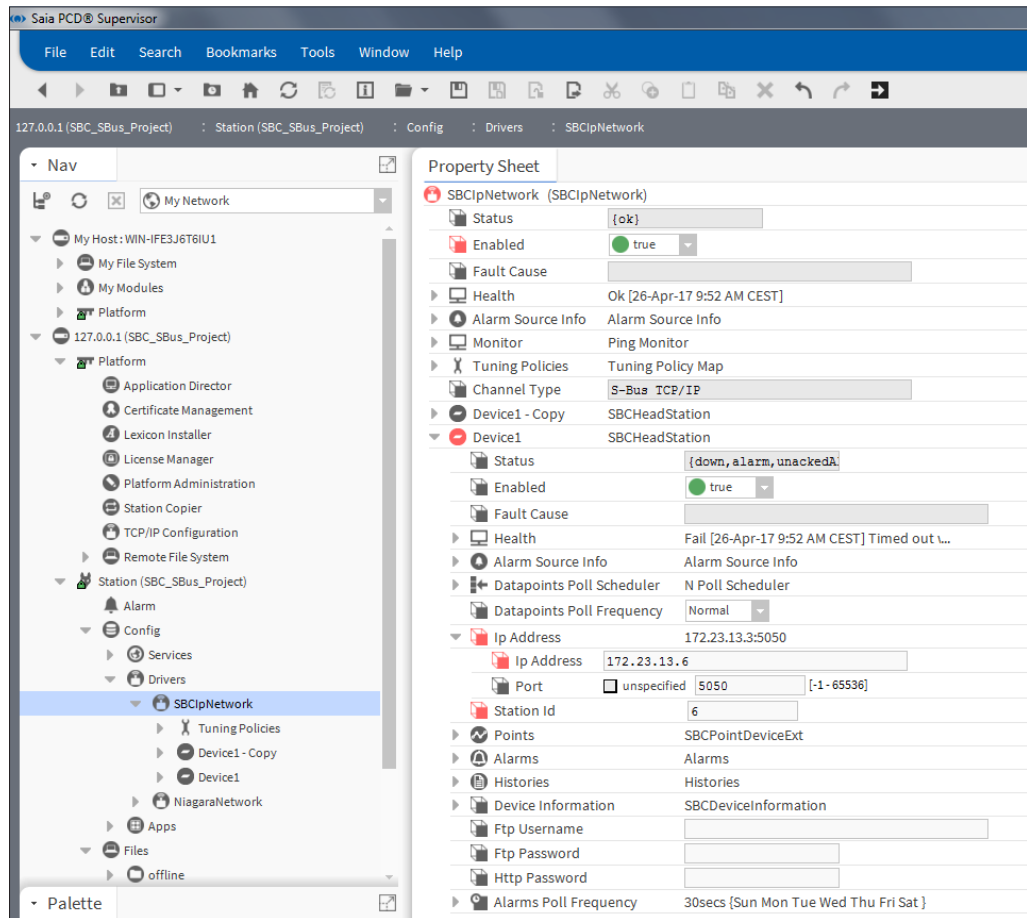
or there is problem with Windows Firewall Settings:

- File and Printer sharing must be enabled*
- ICMP Echo Requests must be enabled*

Using the “Saia PG5 Data Import Wizard”

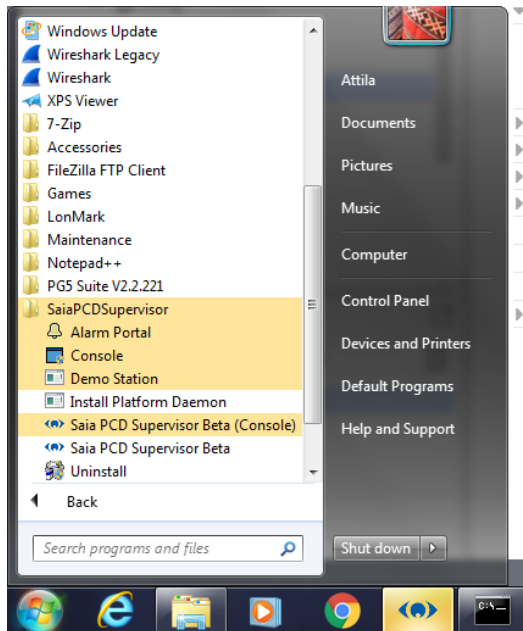
3. If there is connection to the controller but PCD Supervisor reports communication error, check the settings in the network driver.

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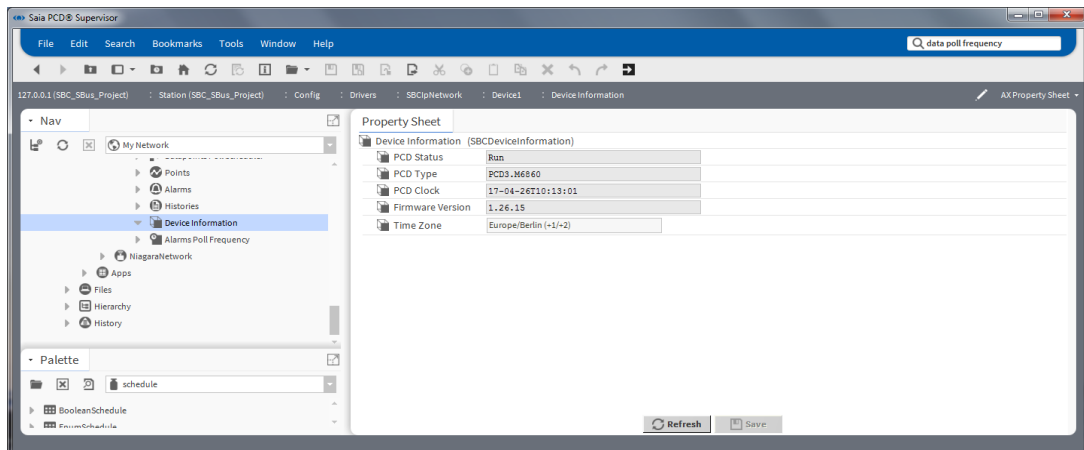
4. Restart the Platform Demon at last.

It is possible that restarting the Platform Daemon will help because the used network adapter and ports settings are getting updated after restart.



6

The communication is ok when the Devices are not colored and their status is {OK}. In addition, it is possible to see valid information of the PCD in the Nav tree Device Information subdirectory.



There are not so many possibilities given to fine tune the communication. It is possible to set three different kind of speeds (Fast Rate, Normal Rate, Slow Rate) as base. Then it is possible to set up the rates for a complete device.



The polling rate is the same for all datapoints within a Device.

Alarms Poll Frequency

30secs {Sun Mon Tue Wed Thu Fri Sat}

Interval

00000h 00m 30s [1ms - +inf]

Trigger Mode

Interval

Time Of Day

☐ Start Time 12:00:00 AM CEST End Time 11:59:59 PM CEST

Days Of Week

☒ Sun ☒ Mon ☒ Tue ☒ Wed ☒ Thu ☒ Fri ☒ Sat

Last Trigger

31-Aug-2017 02:18 PM CEST

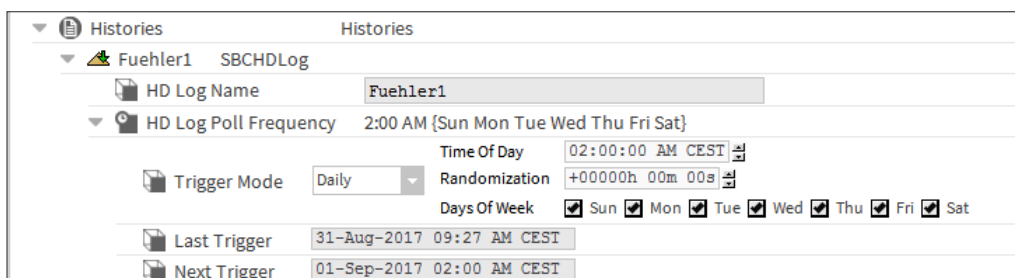
Next Trigger

31-Aug-2017 02:18 PM CEST

Refresh

Save

For the Histories (HD Logs) it is also possible to set a polling rate. The default setting is **Daily at 2 o'clock in the morning** to retrieve the HD logs from the Saia PCD Device. This setting can be changed to e.g.: **Interval, 30 seconds**. Which means, that every 30 seconds the HD Log data is polled, then the new values are uploaded to the History files of the Saia PCD® Supervisor. The details of the different settings can be found in the Niagara documentation.



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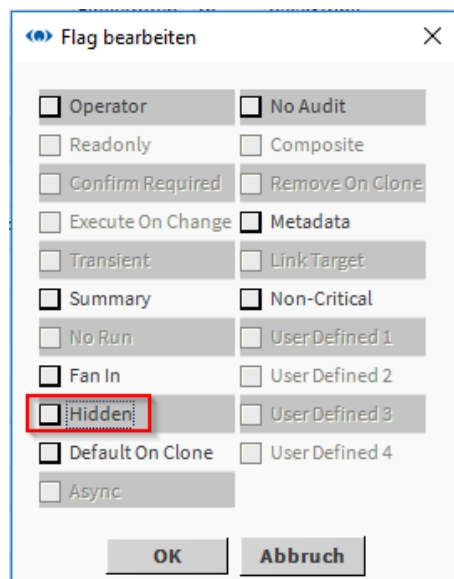
Starting with version 2.1 the Alarms Poll Frequency property is not visible below the Ax Property Sheet of the SBus Device.

To make it visible and therefore adjustable, switch to the Ax Slot Sheet of the device to be adjusted...

	26	projectName	Project Name	Eingefroren	m	baja:string	
Eigenschaft	27	deviceName	Device Name	Eingefroren	h	baja:String	
Eigenschaft	28	isProgramCRCRead	Is Program CRC Read	Eingefroren	rh	baja:Boolean	
Eigenschaft	29	programCRCMismatcherror	Program CRC Mismatcherror	Eingefroren		baja:String	
Eigenschaft	30	statusErrorMessage	Status Error Message	Eingefroren		baja:String	
Eigenschaft	31	uuid	Uuid	Eingefroren	rhd	baja:Uuid	
Eigenschaft	32	statusUuid	Status Uuid	Eingefroren	rhd	baja:Uuid	
Ausführen	33	readAlarms	Read Alarms	Eingefroren	haL	void (void)	
Ausführen	34	readMultiPoints	Read Multi Points	Eingefroren	ha	void (void)	
Eigenschaft	35	dataPollFrequency	Alarms Poll Frequency	Eingefroren	h	control:TimeTrigger	
Eigenschaft	36	Home	Home	Dynamisch	o	baja:PxView	
Eigenschaft	37	AlarmTextAssigner	AlarmTextAssigner	Dynamisch		alarmTextAssigner:Ala	
Eigenschaft	38	Link	Link	Dynamisch	t	baja:Link	

- Slot hinzufügen Ctrl+A
- Kopieren Ctrl+C
- Löschen Delete
- Slot umbenennen Ctrl+R
- Flag bearbeiten**
- Einheiten Bearbeiten
- Neuanordnen
- Anzeigenname

...and remove the "Hidden" flag with the function "Edit Flag" at the property:



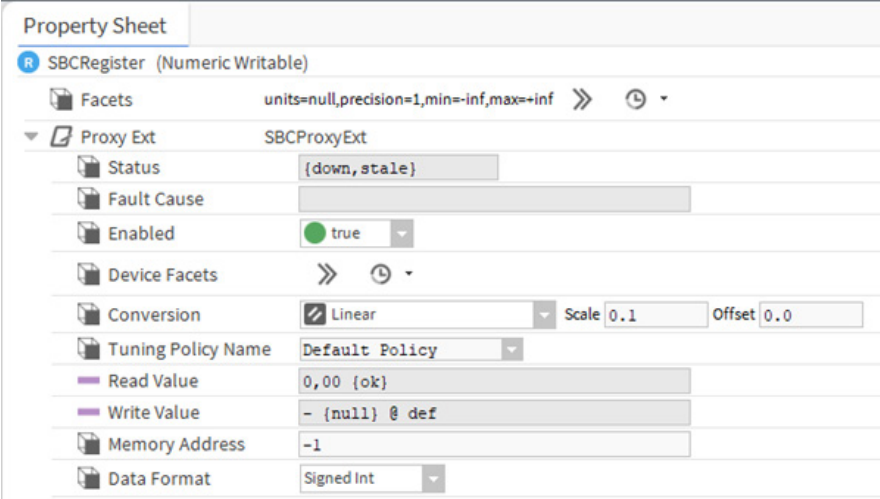
6.3.7 SbcLinear Conversion

6.3.7.1 Introduction

With the Patch 3127_1 for Supervisor Version 2.1, a new conversion type named “SbcLinearConversion” will be introduced. This conversion is only valid for SBC specific media types.

6.3.7.1.1 Before the Patch:

When for example a Register is created below the Points section the point gets the conversion type linear set per default:



Property Sheet

SBCRegister (Numeric Writable)

Facets units=null,precision=1,min=-inf,max=+inf

Proxy Ext SBCProxyExt

Status {down,stale}

Fault Cause

Enabled true

Device Facets

Conversion Linear Scale 0.1 Offset 0.0

Tuning Policy Name Default Policy

Read Value 0,00 {ok}

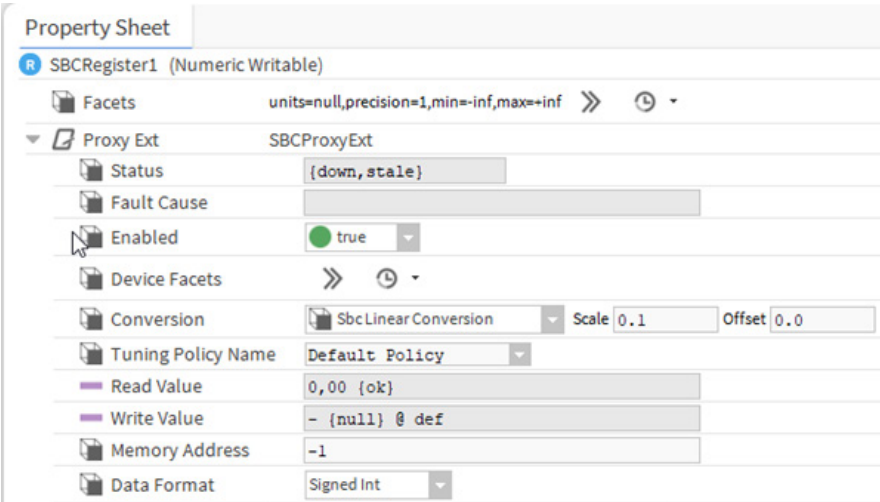
Write Value - {null} @ def

Memory Address -1

Data Format Signed Int

6.3.7.1.2 With Patch:

With the Patch **all newly** generated media gets automatically set the SbcLinearConversion as conversion type:



Property Sheet

SBCRegister1 (Numeric Writable)

Facets units=null,precision=1,min=-inf,max=+inf

Proxy Ext SBCProxyExt

Status {down,stale}

Fault Cause

Enabled true

Device Facets

Conversion SbcLinear Conversion Scale 0.1 Offset 0.0

Tuning Policy Name Default Policy

Read Value 0,00 {ok}

Write Value - {null} @ def

Memory Address -1

Data Format Signed Int

6.3.7.2 Installing the Patch

Download the Patch from SBC Support page and extract the files:

Downloads > Saia-PCD+Supervisor+2_1+Patch1.4.3127.1	
Name	Änderungsdatum
sbc-rt.jar	14.04.2020 09:41
sbc-rt.jar.sig	14.04.2020 10:07
sbc-ux.jar	14.04.2020 09:41
sbc-ux.jar.sig	14.04.2020 10:08
sbc-wb.jar	14.04.2020 09:41
sbc-wb.jar.sig	14.04.2020 10:08

6

Copy all files to the modules folder of your Supervisor Install Path:

OSDISK (C:) > SBC > SaiaPCDSupervisor_v48 > modules

Name	Änderungsdatum	Typ	Größe
sbcIconGallery-wb.jar	03.01.2020 10:52	Executable Jar File	1.246 KB
sbcIconGallery-wb.jar.sig	06.01.2020 10:16	SIG-Datei	1 KB
sbcOfflineEngineering-rt.jar	27.02.2020 13:19	Executable Jar File	200 KB
sbcOfflineEngineering-rt.jar.sig	27.02.2020 13:26	SIG-Datei	1 KB
sbcOfflineEngineering-ux.jar	27.02.2020 13:19	Executable Jar File	648 KB
sbcOfflineEngineering-ux.jar.sig	27.02.2020 13:26	SIG-Datei	1 KB
sbc-rt.jar	14.04.2020 09:41	Executable Jar File	184 KB
sbc-rt.jar.sig	14.04.2020 10:07	SIG-Datei	1 KB
sbc-ux.jar	14.04.2020 09:41	Executable Jar File	11 KB
sbc-ux.jar.sig	14.04.2020 10:08	SIG-Datei	1 KB
sbc-wb.jar	14.04.2020 09:41	Executable Jar File	20 KB
sbc-wb.jar.sig	14.04.2020 10:08	SIG-Datei	1 KB
schedule-rt.jar	27.08.2019 03:36	Executable Jar File	124 KB
schedule-ux.jar	27.08.2019 03:38	Executable Jar File	165 KB
schedule-wb.jar	27.08.2019 03:36	Executable Jar File	253 KB
search-rt.jar	27.08.2019 03:36	Executable Jar File	48 KB

ite

After that uninstall/install Plattform Daemon and restart Workbench.

6.3.7.3 Import in newly generated stations (after installing the Patch)

After the Patch is installed, all newly generated DataPoints will get add the new SbcLinearConversion automatically during import. No special work is needed here:

My Network

SBCLPNetwork

Tuning Policies

EN_R01_R01

DE_G01_R01

98 All FBoxes (98 All FBoxes)

Alarm Source Info

Datapoints Poll Scheduler

Points

Alarming

Analogue

AnaDig

Binary_BI

Binary_BV

Counter

DEC_O_AI

FBox

Output

Value

In_Dec

Database

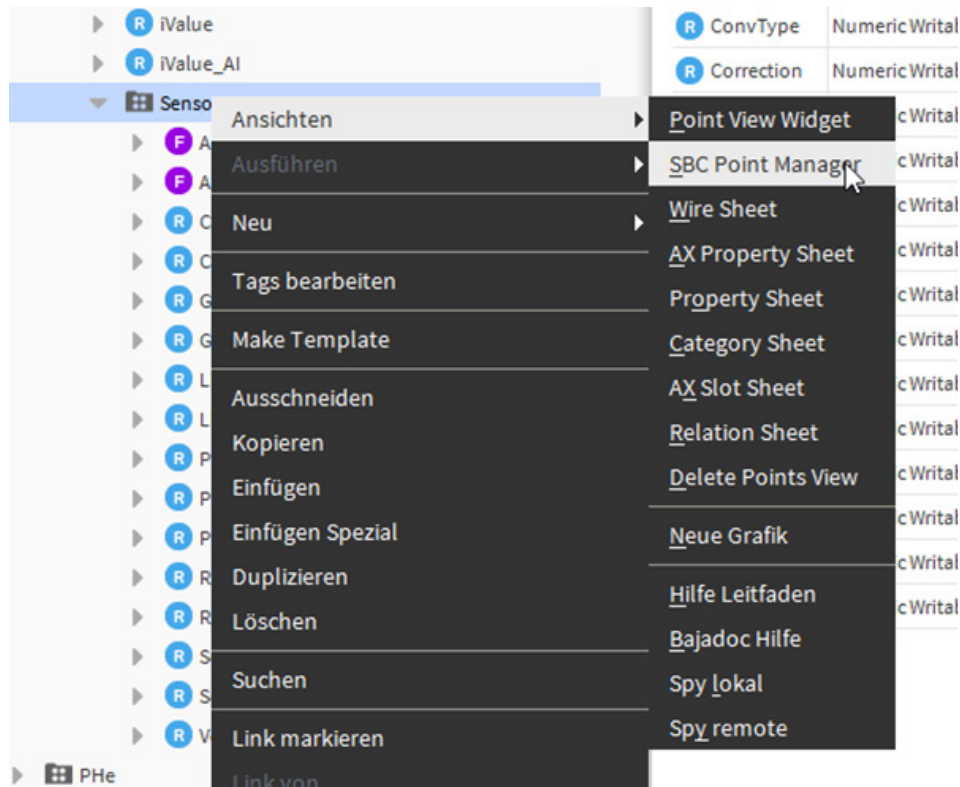
Name	Type	Out	Tuning Policy Name	Conversion
Output	Numeric Writable	0.0 [down, stale] @ def	defaultPolicy	SbcLinear Conversion *0.10
Value	Numeric Writable	0.0 [down, stale] @ def	defaultPolicy	SbcLinear Conversion *0.10

6.3.7.4 Updating existing stations

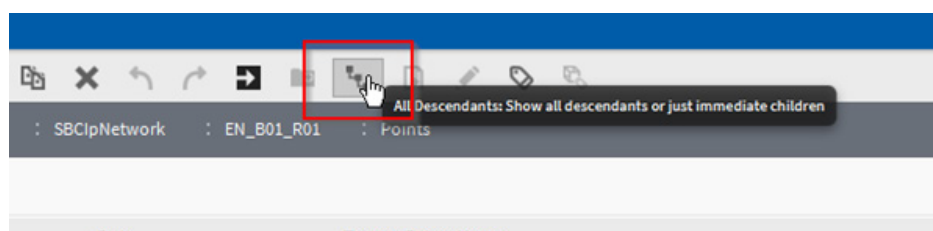
This section describes two ways how to update existing Station.

6.3.7.4.1 Change conversion type manually

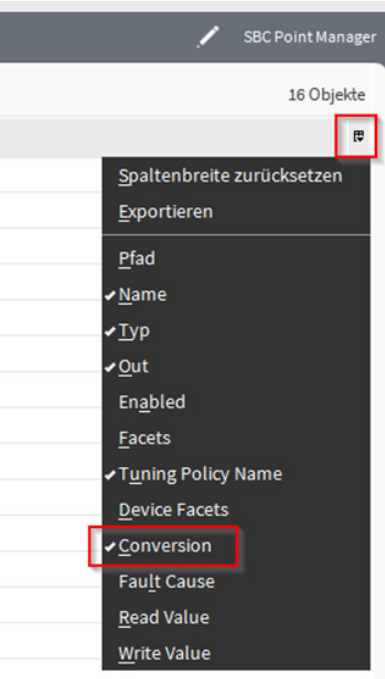
Go to a subsequent folder where you want to change the conversion type and open there the SBC Point Manager view by right clicking on the folder:



Activate the list view by clicking on the corresponding item:

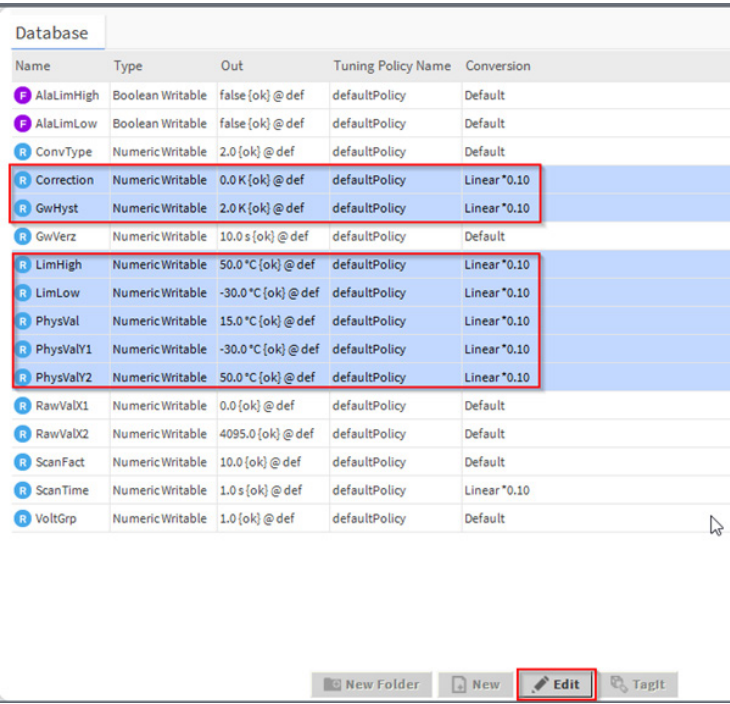


Open the table settings via click on the button in the upper right corner and set the Conversion Column to be displayed:



6

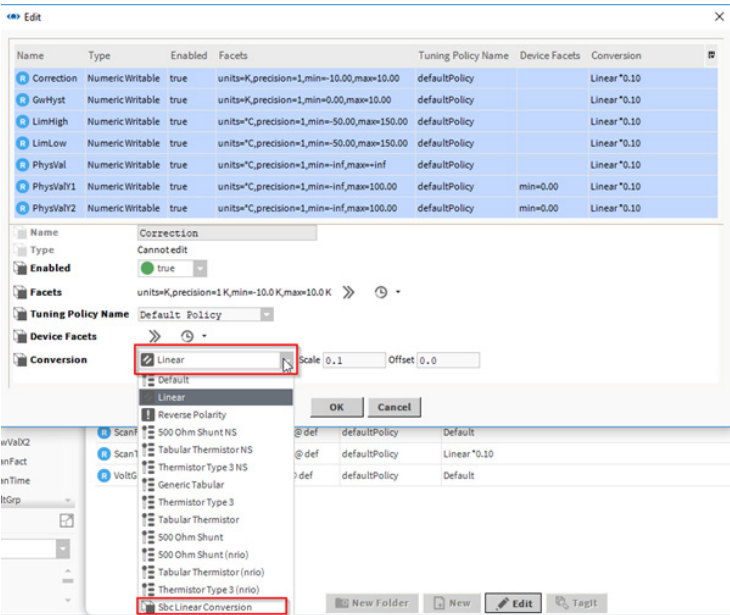
Choose and select the desired data points and click on the Edit button:



Using the “Saia PG5 Data Import Wizard”

In the upcoming window the chagement to the conversion type SbcLinearConversion can be done:

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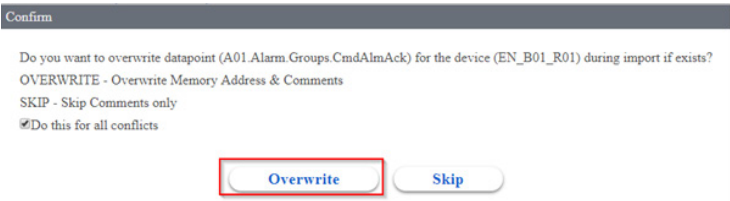
After clicking on OK button, the chagement will be applied to all selected items:

Database				
Name	Type	Out	Tuning Policy Name	Conversion
AlaLimHigh	Boolean Writable	false [ok] @ def	defaultPolicy	Default
AlaLimLow	Boolean Writable	false [ok] @ def	defaultPolicy	Default
ConvType	Numeric Writable	2.0 [ok] @ def	defaultPolicy	Default
Correction	Numeric Writable	0.0 K [ok] @ def	defaultPolicy	Sbc Linear Conversion
GwHyst	Numeric Writable	20.0 K [ok] @ def	defaultPolicy	Sbc Linear Conversion
GwVerz	Numeric Writable	10.0 s [ok] @ def	defaultPolicy	Default
LimHigh	Numeric Writable	500.0 °C [ok] @ def	defaultPolicy	Sbc Linear Conversion
LimLow	Numeric Writable	-300.0 °C [ok] @ def	defaultPolicy	Sbc Linear Conversion
PhysVal	Numeric Writable	150.0 °C [ok] @ def	defaultPolicy	Sbc Linear Conversion
PhysValY1	Numeric Writable	-300.0 °C [ok] @ def	defaultPolicy	Sbc Linear Conversion
PhysValY2	Numeric Writable	500.0 °C [ok] @ def	defaultPolicy	Sbc Linear Conversion
RawValX1	Numeric Writable	0.0 [ok] @ def	defaultPolicy	Default
RawValX2	Numeric Writable	4095.0 [ok] @ def	defaultPolicy	Default
ScanFact	Numeric Writable	10.0 [ok] @ def	defaultPolicy	Default
ScanTime	Numeric Writable	1.0 s [ok] @ def	defaultPolicy	Linear *0.10
VoltGrp	Numeric Writable	1.0 [ok] @ def	defaultPolicy	Default

6.3.7.4.2 Change conversion type automatically (PG5 projects without PointDefinition.csv)

To make the chagement automatically done you need to reimport your project with Saia PG5 Import wizard.

During import process select Overwrite:



6.3.7.4.3 Change conversion type automatically (PG5 projects with PointDefinition.csv)

If a PointDefinition.csv is part of the PG5 project you need to take care, if the right conversion type is set for each the data point.

Example on macro [_DDC_SPINT2270] from DDC Suite 2.7

Before the patch:

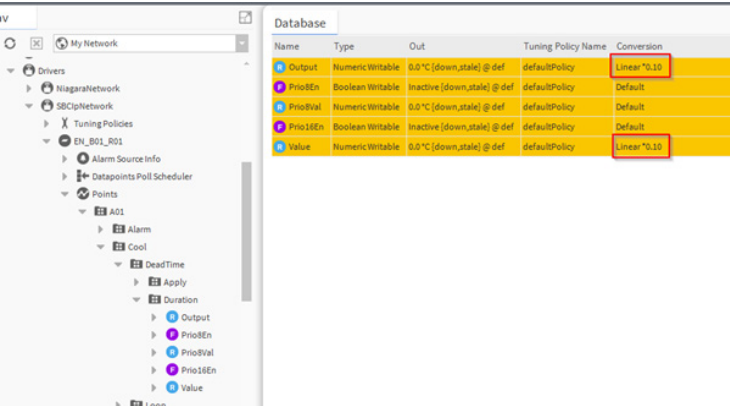
The conversion was assigned during import like this:

ProxyExt:Conversion='Linear+Scale=0.01+Offset=0.0'

[_DDC_SPINT2270]					
	Value	Value	Value	Facets=Units=celsius'	ProxyExt:Conversion=Linear+Scale=0.01+Offset=0.0'
	Output	Output	Output	Facets=Units=celsius'	ProxyExt:Conversion=Linear+Scale=0.01+Offset=0.0'
	Prio8En	Prio8En	Prio8En	Facets=FalseText=Inactive'	Facets=TrueText=Active'
	Prio8Val	Prio8Val	Prio8Val	Facets=Units=celsius'	ProxyExt:Conversion=Linear+Scale=0.01+Offset=0.0'
	Prio16En	Prio16En	Prio16En	Facets=FalseText=Inactive'	Facets=TrueText=Active'

6

The result was:



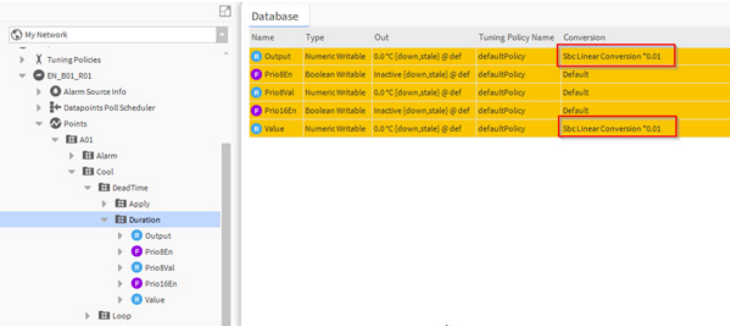
After patch was installed:

The conversion must be set like this:

ProxyExt:Conversion='SbcLinear+Scale=0.01+Offset=0.0'

[_DDC_SPINT2270]					
	Value	Value	Value	Facets=Units=celsius'	ProxyExt:Conversion=SbcLinear+Scale=0.01+Offset=0.0'
	Output	Output	Output	Facets=Units=celsius'	ProxyExt:Conversion=SbcLinear+Scale=0.01+Offset=0.0'
	Prio8En	Prio8En	Prio8En	Facets=FalseText=Inactive'	Facets=TrueText=Active'
	Prio8Val	Prio8Val	Prio8Val	Facets=Units=celsius'	ProxyExt:Conversion=SbcLinear+Scale=0.01+Offset=0.0'
	Prio16En	Prio16En	Prio16En	Facets=FalseText=Inactive'	Facets=TrueText=Active'

After import:



6.3.8 Enhanced PG5 Import Wizard

- The datapoint filter can now also be applied to tags
- Alarms can be configured with the alarm class specified in the AlarmService
- All data points are displayed in the list
- When importing very large projects, the data points no longer go to the status "stale"
- Imported alarms now have the correct timestamp
- Array import working

6

Filter Datapoints by

☐ Select All

☒ Registers

☒ Flags

☐ Counters

☐ IO

☐ Timers

☐ DB

☐ Text

Hide Datapoints Starting with

S.

Show Datapoints with tags

alarm areal

6.3.9 Addition to the standard import



Starting with Saia PCD® Supervisor V2.1

In addition to the standard import, the extended import wizard from version 2.1 and higher allows to add properties like facets, conversions, alarm, history extensions and more to the points during the import process.

6.3.9.1 The additional properties are required to work with the easy templating library DDC27

- To support the new import features PG5 2.3.175 and higher is required as well as the start of projects is recommended to use the new multilingual DDC-Suite 2.7 starting project ending with ML.
- In additional project not based on the new start project can get extend by the necessary additional information's using a helper application which allow to generate the list of used macro names in the project.

6

6.3.9.2 The predefined graphical templates for DDC 2.7 are created to support the DDC Suite 2.7 environment

- The easy Templating process itself can support various constellations of templates.



Important to know:

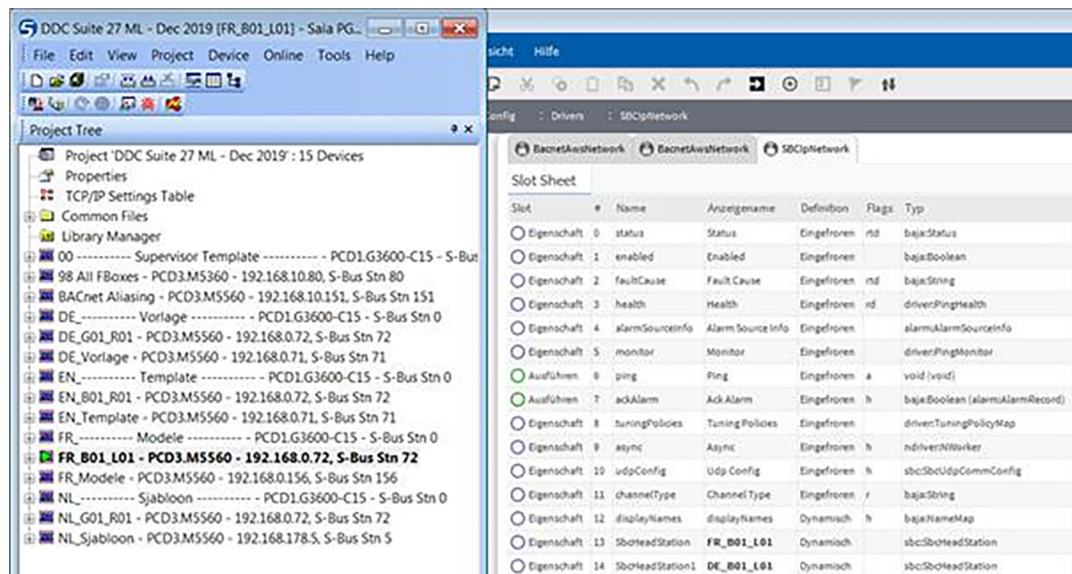
- Since Saia PCD® Supervisor 2.1 the CPU name from PG5 is no longer the import location in the NAV tree.
- The import location is now based on the IP-Address of the device and the CPU name is given from PG5 on top as the display name.
- During import the engineering point names are translated from different languages to English.
- This makes it possible to use one set of templates for all different existing languages for DDC Suite 2.7 projects.
- On top of the engineering data point name a display name will be added which represents the imported language in the NAV tree so the engineering and display name can differ.

6.3.10 System consequences for duplicated CPU names

Starting with V2.1!

During Import the IP-Address of the imported devices configured in the PG5 device configuration is used to identify the station below the S-Bus IP driver Network.

During import a unique naming convention is created for the device ORDs like SbcHeadStationX(x=INT) or SbcSubStationX(x=INT). The display name of the ORD from the imported note is set to the device name from the PG5 project.



This allows to import from different PG5 Projects having same device names applied without changes to the project.

If a station with the same IP-Address is imported and already existing below the S-Bus driver network, you will get asked to enter prefix before the import.

6.4 General functions

6.4.1 Configure Scheduled tasks

This chapter describes how to configure Schedulers to control the automations system during occupied and non-occupied time.

Scheduler

The Scheduler provides control of values and changes setpoints based on time and date. Lights, Fans, and HVAC equipment are turned on and off based on the time, day of week and date. The Scheduler is also used in process control and manufacturing applications.



Presently there is no Saia PCD® Supervisor compatible Schedulers in the Saia PCD Device. It means that, if the automation system needs high level scheduling functions, this must be done “upstairs” in the Saia PCD® Supervisor not in “downstairs” in the PCD Device. Which has the drawback that if the Supervisory computer fails to work the Scheduling function fails too.

There is an exception. It is possible to use the Saia PCD Device as BACnet Controller, in this way the BACnet standard scheduling functions can be used. This is compatible with the Saia PCD® Supervisor. However it needs to license and use the 3rd party (BACnet) driver in the Saia PCD® Supervisor.

Schedules are created using schedule components found in the schedule palette. Place these components in a station, configure, and link as needed to provide scheduling control of other components.

Scheduling functionality is the same whether using Workbench or an HTML5 web browser with one exception. Currently, in a web browser connection, you do not have the options to copy or paste components.

Schedule component categories

Component category		Description
Weekly	Boolean Numeric Enumerated String	Weekly schedules define regular, repeating, events by “time-of-day” and “day-of-week.” Also, you can configure any number of “special events” on a weekly schedule. Weekly schedules are the most used schedule components. Four different types vary by data category (Boolean, Numeric, Enum, and String). Each is identical except for input/output.
Calendar		Calendar schedules define specific days. Use a calendar schedule to define days with scheduling exceptions (e.g. holidays), and reference them in the “special events” setup of weekly schedules.
Trigger		Trigger schedules fire actions or topics. With a set of pre-configured schedules and a ScheduleSelector component, you can simply choose from a list of valid schedules to setup or change the schedule of a device.
Selectors		Schedule Selector components provide an easy way for you to select a schedule to use for controlling a particular component. As needed, you typically link its output to an action of a control point or extension.

Schedule component views

Weekly	Default view	for any weekly schedule component. In Workbench the Scheduler view provides four configuration tabs:
	Weekly Schedule	Sunday-through-Saturday (weekly) event times/values. Use this to define the regular weekly events.
	Special Events	All exceptions to the defined weekly schedule, as special events. Use this to define special event times.
	Properties	Important properties such as default output, schedule effective times, special event clean-up operation, and schedule facets.
	Summary	for any selected day, provides a tabular summary of all schedule events, with source. Also available under the Scheduler view dropdown list:
	Current Day Summary	provides a simple 24-hour linear graph of schedule event times and values for the current day.
Calendar	Default view	for a CalendarSchedule component. The Calendar Scheduler view provides a calendar where you can add, edit, or delete specific calendar days (exceptions to the regular weekly schedule) and establish relative priorities.
Trigger	Default view	for a TriggerSchedule component. The Trigger Scheduler view provides a two-part view combining a “day picker” and an event “time picker” for specifying when topics are fired on those days.

6

We configure a Weekly schedule and a Calendar Schedule in this chapter.



In a web browser the Scheduler view provides two configuration tabs: Weekly Schedule and Special Events. While the Current Day Summary and Property Sheet views are available under Scheduler view dropdown list.

Examples

- **Weekly Schedule**

The task is to configure a weekly schedule which switches on the Light in the normal office time from Monday till Friday and from 8:00 till 17:00. Friday the office time is reduced only from 8:00 till 14:00.

There is special event on 1st of September 2017. In this day the Light must be switched off from 9:00 till 11:35 due to test.

- **Calendar Schedule**

There are known official Holidays like Christmas or the Swiss National Day where the office is unoccupied therefore the Light must be Switched off.

6

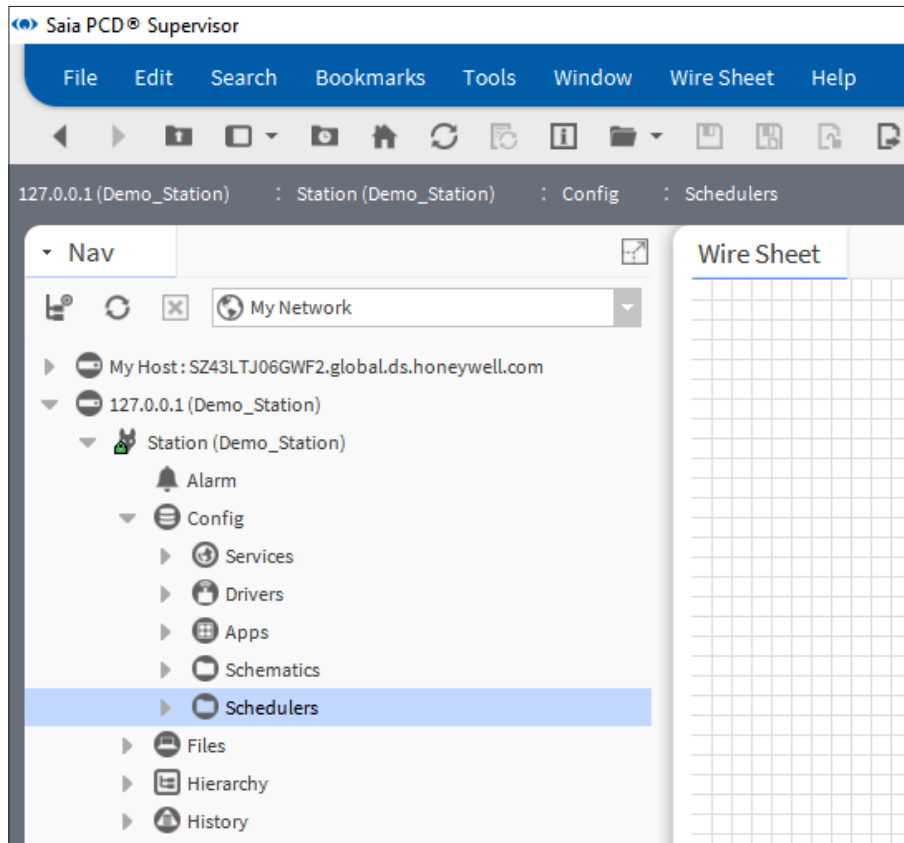
The steps to add and configure Schedulers to the Saia PCD® Supervisor:

1. Creating folder for the scheduling components
2. Add Weekly Scheduler component from Palette
3. Configuring normal events weekly schedules
4. Configuring special events weekly schedules
5. Add Calendar Scheduler component from the Palette
6. Configuring Calendar Schedule
7. Make the logic to control the physical point in the PCD device
or
8. Make the logic to control the physical point in the PCD device using reference between the schedulers.

6.4.2 Creating folder for the scheduling components

Schedules can be created and added to any part of Saia PCD® supervisor. However, it makes sense to manage these in a central location.

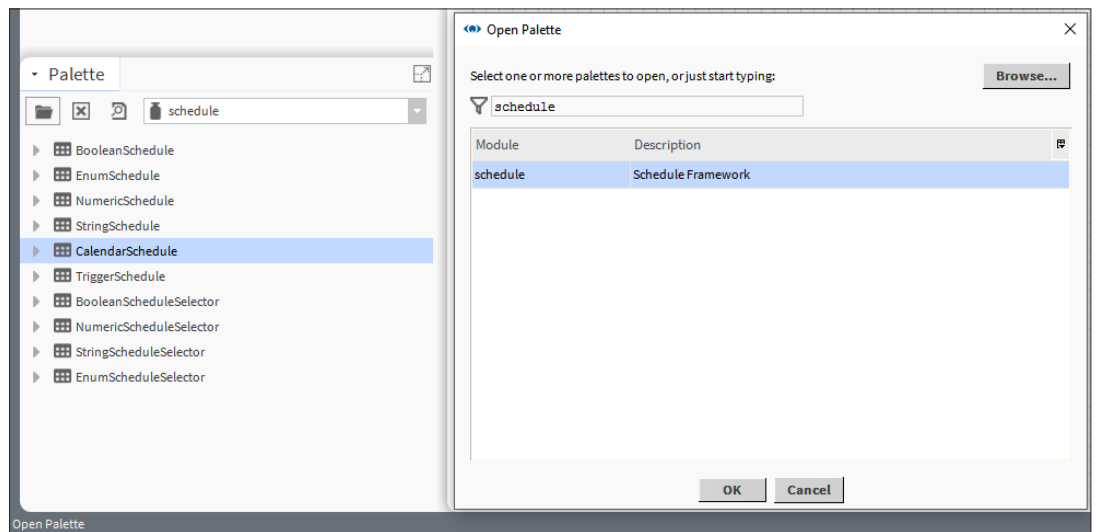
1. In the **Nav** tree open **127.0.0.1(localhost) > Station > Config**
2. Create there a folder called **Scheduler**.
3. Double click to the folder. The associated Wire Sheet will be opened.



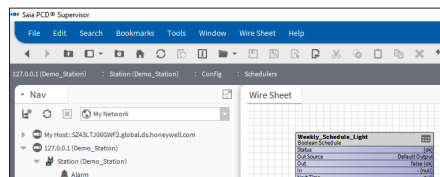
More details of using Wire Sheet can be found inside of the Niagara documentation.

6.4.3 Add Weekly Scheduler component from Palette

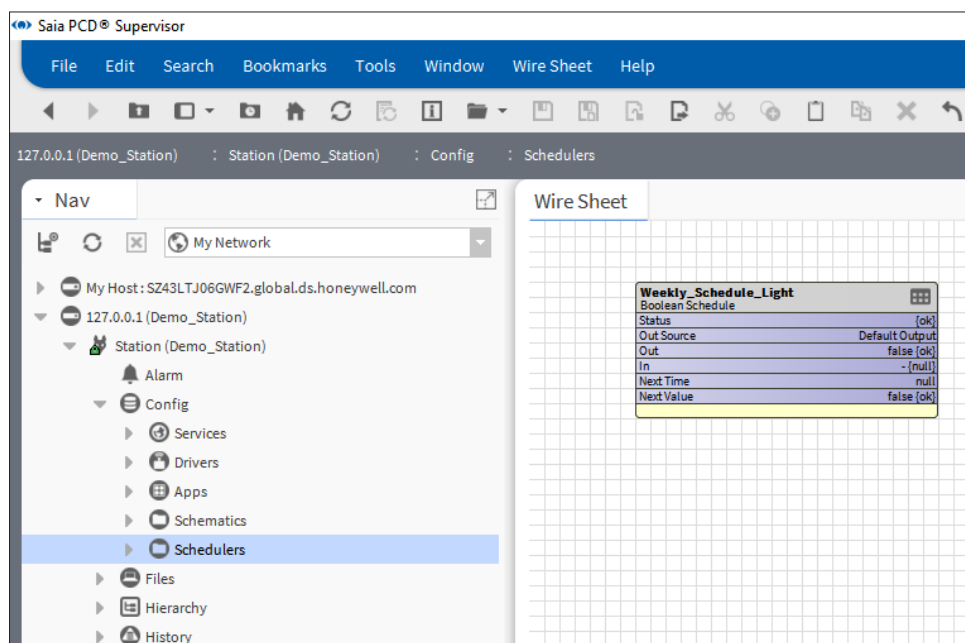
1. Open the **schedule** palette



2. Drag and Drop the BooleanSchedule component to the Wire Sheet of the Schedulers folder.
3. In the pop-up dialog specify the name of the component (Weekly_Schedule_Light)



4. A Weekly Schedule component is placed to the Wire Sheet.



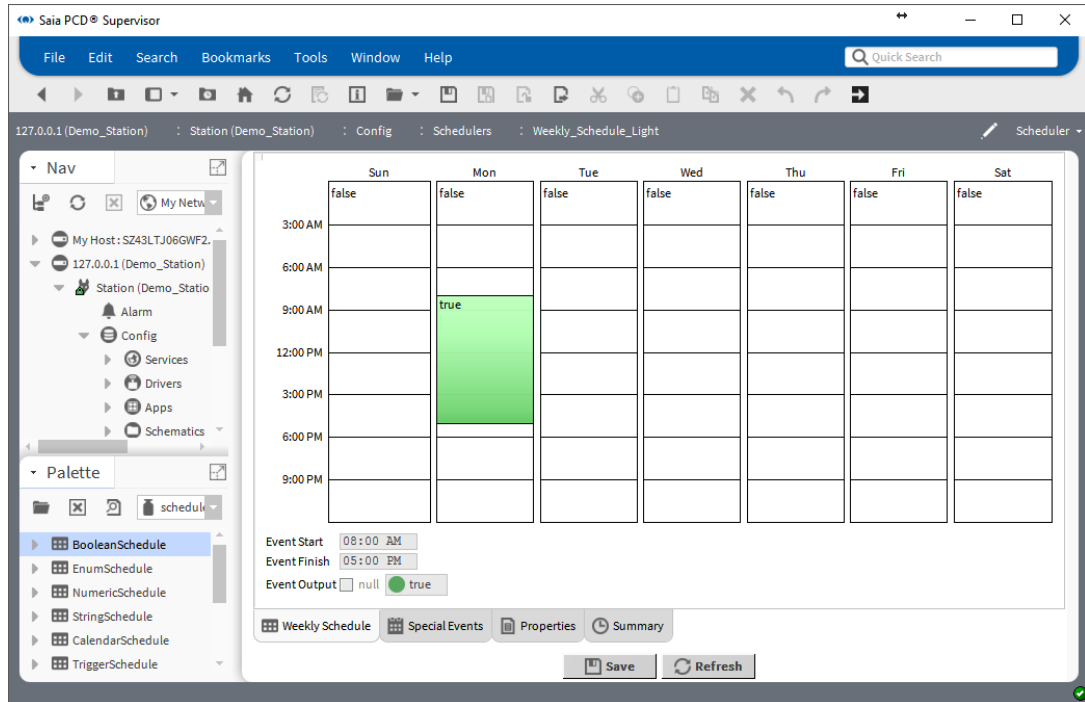
6.4.4 Configuring normal events weekly schedules

1. Double click to the Weekly_Schedule_Light function box to open the Scheduler configuration window.



Saia PCD® supervisor Schedules operate Sunday to Saturday and times are set from top to bottom.

2. In the weekly view specify the time range for Monday. For that go to Monday 8:00 press the mouse left button and drag the mouse down till 17:00 o'clock. The defined time range will be shown as green stripe.



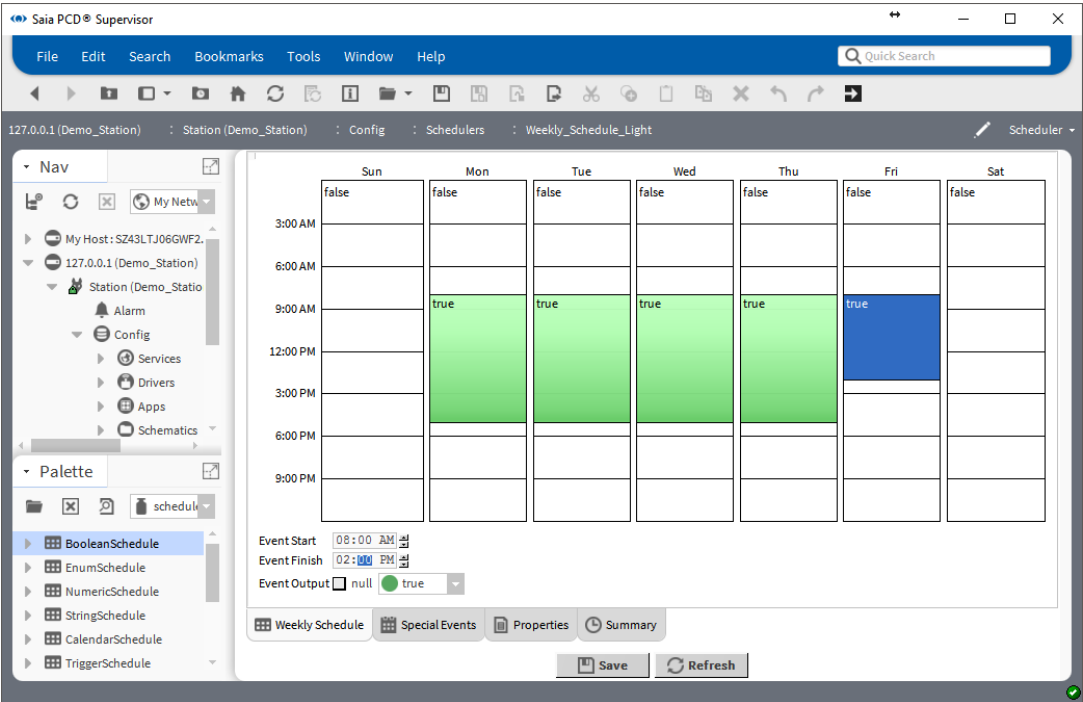
3. Do not worry if you do not find the exact time. Below the graphical representation, in the **Event Starts** and **Event Finishes** edit fields it is possible to type it.

In the **headings** of the green stripe and in the **Event Output** drop down box the scheduled value can be seen (**true**). It is possible to invert it.

4. Define time schedule for Tuesday to Friday too in the same way. Take care the office time in Friday is until 14:00. It is possible to do copy and paste. Right mouse click to the green stripe and select copy day. The selected time span is then shown in blue colour. Right mouse click to the remaining days and select paste day. Then set Friday 14:00 o'clock.

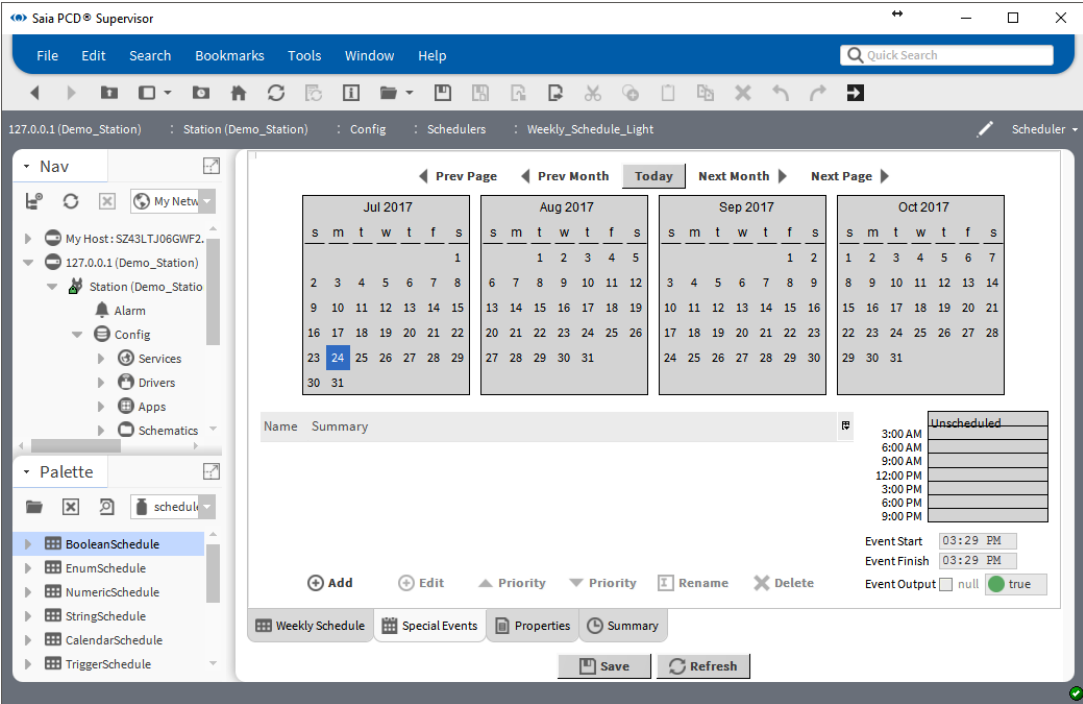
5. Click Save at the bottom of the page.

6

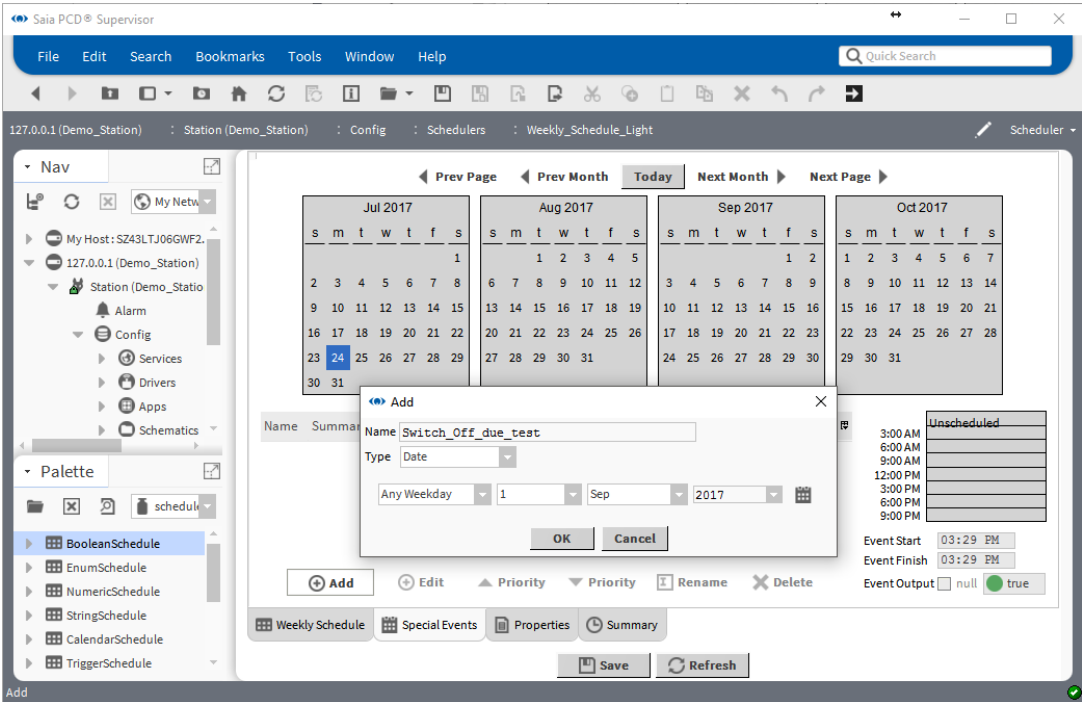


6.4.5 Configuring special events weekly schedules

- 1. Click to Special Events at the bottom of the page.
- 2. The Special Events summary page opens with the Today schedule visible.

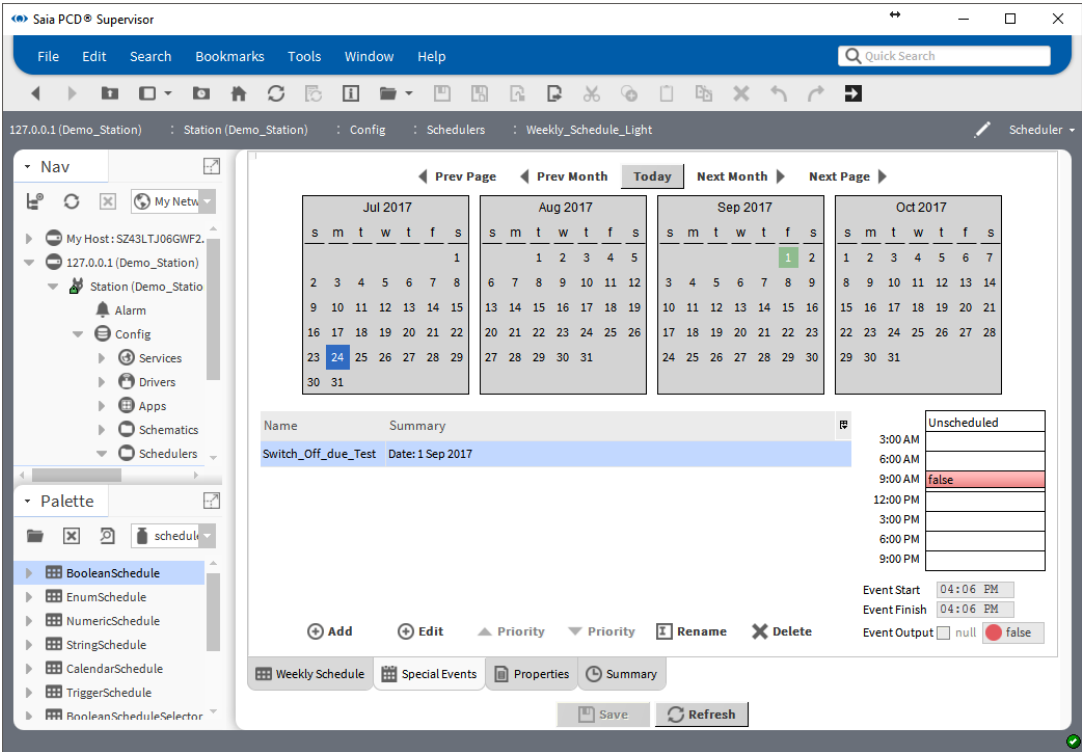


3. Click to Add and specify the date 1st of September 2017.



4. Click OK

5. Specify the schedule to switch off the Light from 9:00 till 11:35. Do this at the right side of the window by using the mouse and typing the values by hand. Do not forget to specify the **“false”** value to switch off the light



6. Save the configuration

7. Check the summary. Click to Summary at the Bottom of the page. Navigate to 1st of September 2017. Then in the text summary it can be seen the Special Event entry.

6

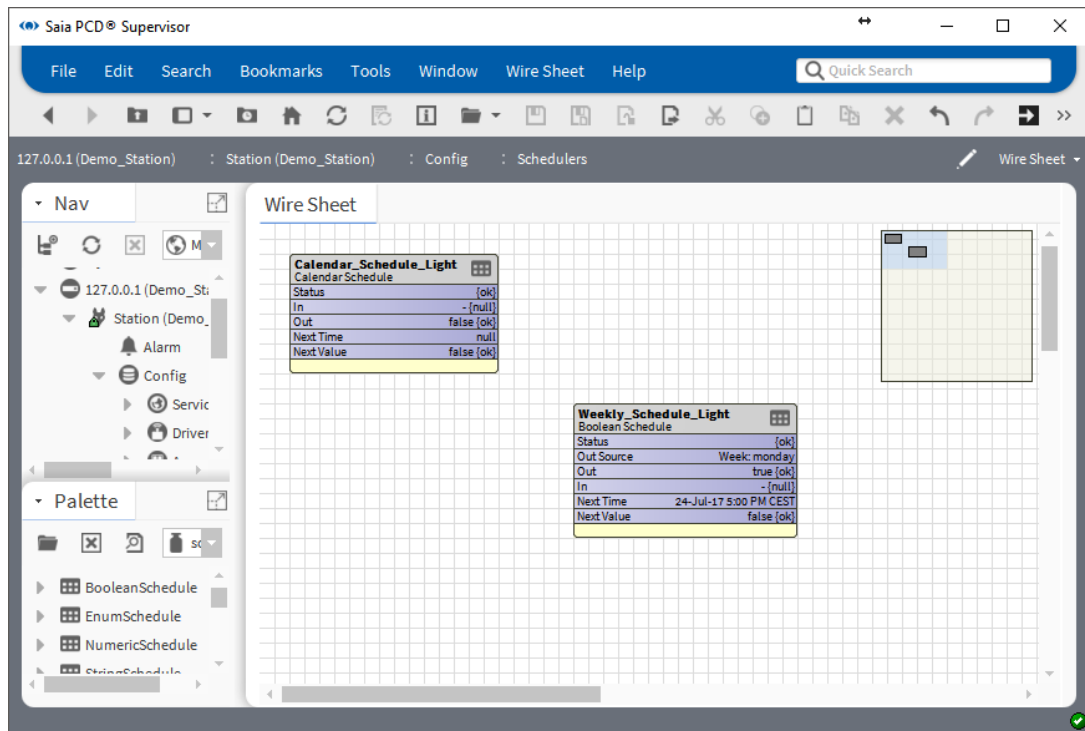
The screenshot shows the Saia PCD Supervisor interface. On the left is a navigation tree with 'Weekly' selected under 'Schedulers'. The main area displays a calendar for September 2017, with the 1st highlighted. Below the calendar is a table of events.

Timestamp	Output	Source
01-Sep-17 12:00 AM CEST	false [ok]	Default Output
01-Sep-17 8:00 AM CEST	true [ok]	Week:friday
01-Sep-17 9:00 AM CEST	false [ok]	Special Event: Switch_Off_due_Test
01-Sep-17 11:35 AM CEST	true [ok]	Week:friday

At the bottom of the interface, there are tabs for 'Weekly Schedule', 'Special Events', 'Properties', and 'Summary'. The 'Summary' tab is currently selected. There are also 'Save' and 'Refresh' buttons at the bottom right.

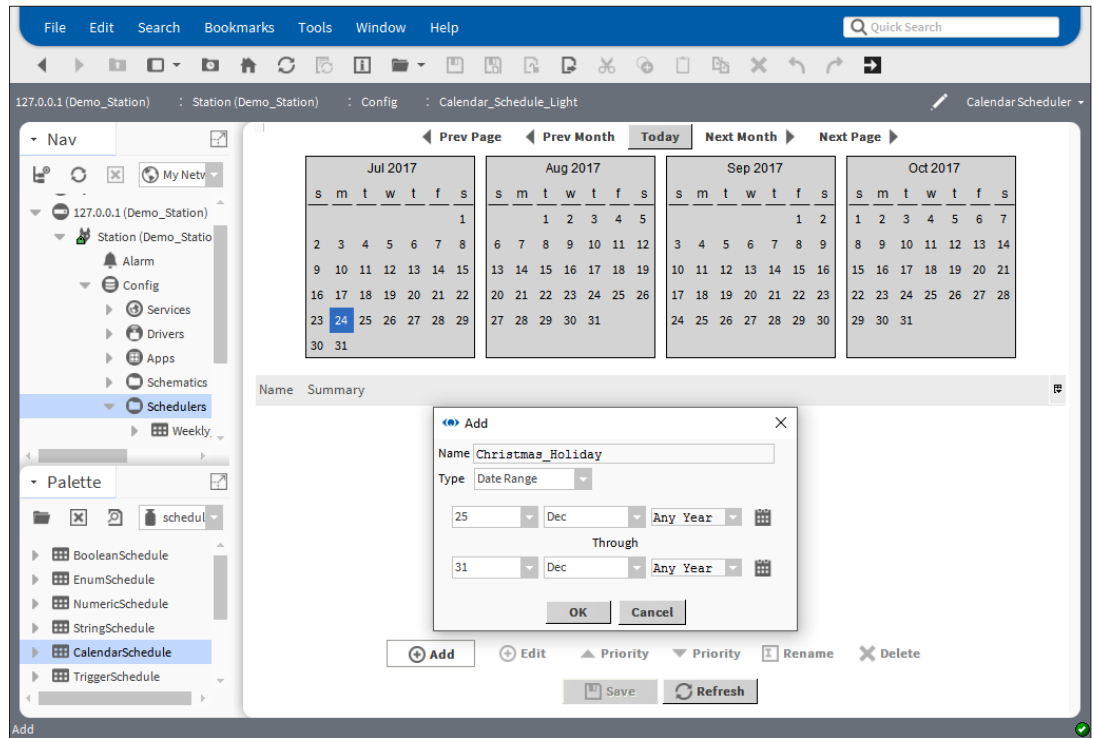
6.4.6 Add Calendar Scheduler component from the Palette

1. Open the **schedule** palette
2. Drag and Drop the CalendarSchedule component to the Wire Sheet of the Schedulers folder.
3. In the pop-up dialog specify the name of the component (Calendar_Schedule_Light)
4. A Calendar Schedule function box is placed to the Wire Sheet.



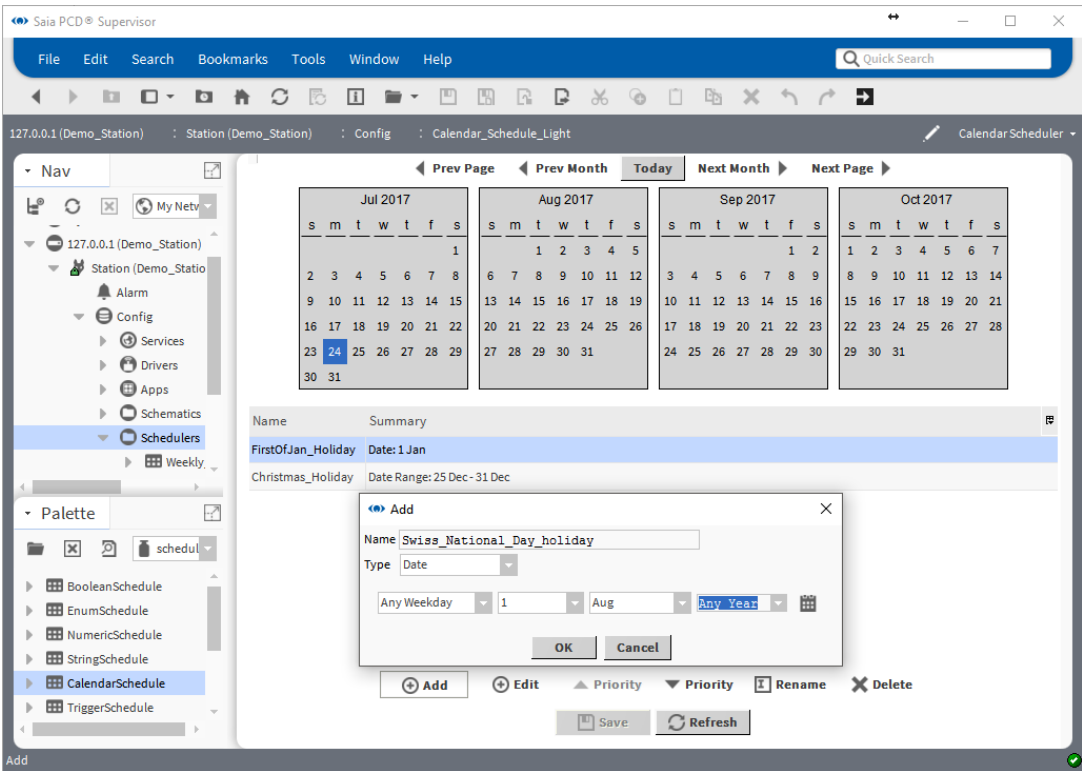
6.4.7 Configuring Calendar Schedule

1. Double click to the Calendar_Schedule_Light function box to open the Scheduler configuration window.
2. Click **Add** to schedule the Christmas holiday from 25th of December till 31th of December.



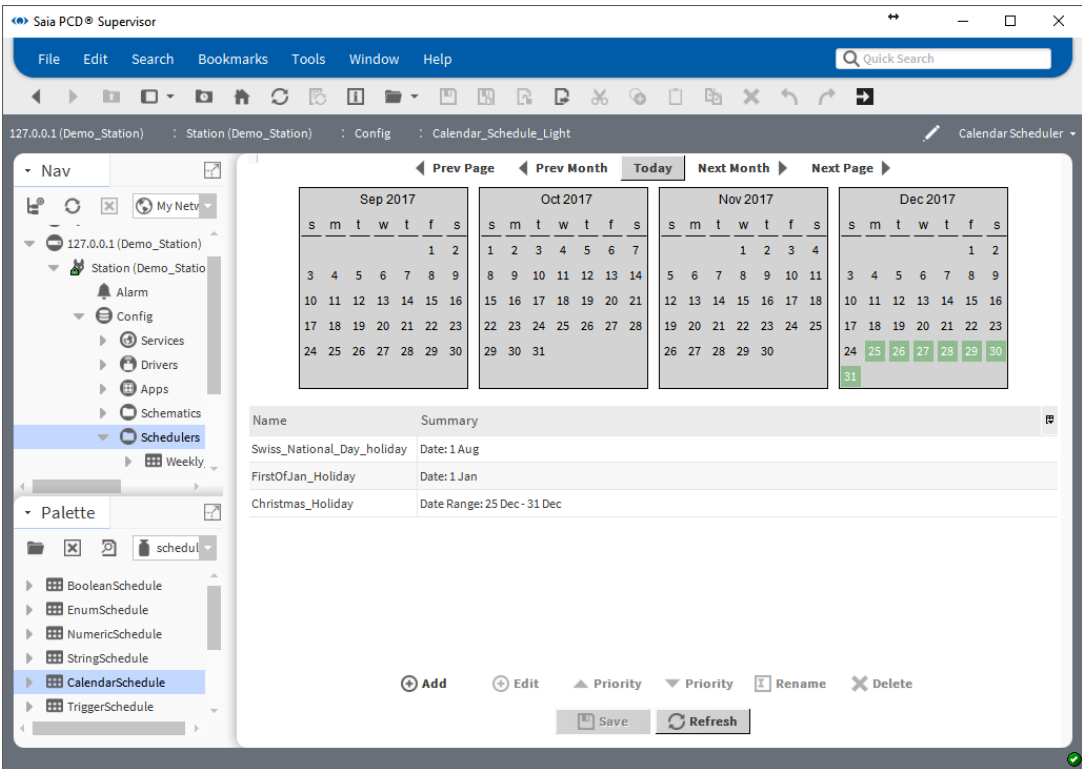
3. Click OK and then click Save.
4. Then it makes sense to define a holiday for 1st of January.

5. Then specify the holiday for the 1st of August (Swiss National Day)



6. Click OK, Click Save, Click Refresh.

7. Check the settings. Green background of the dates means schedule is set.



Short summary is in the middle of the page

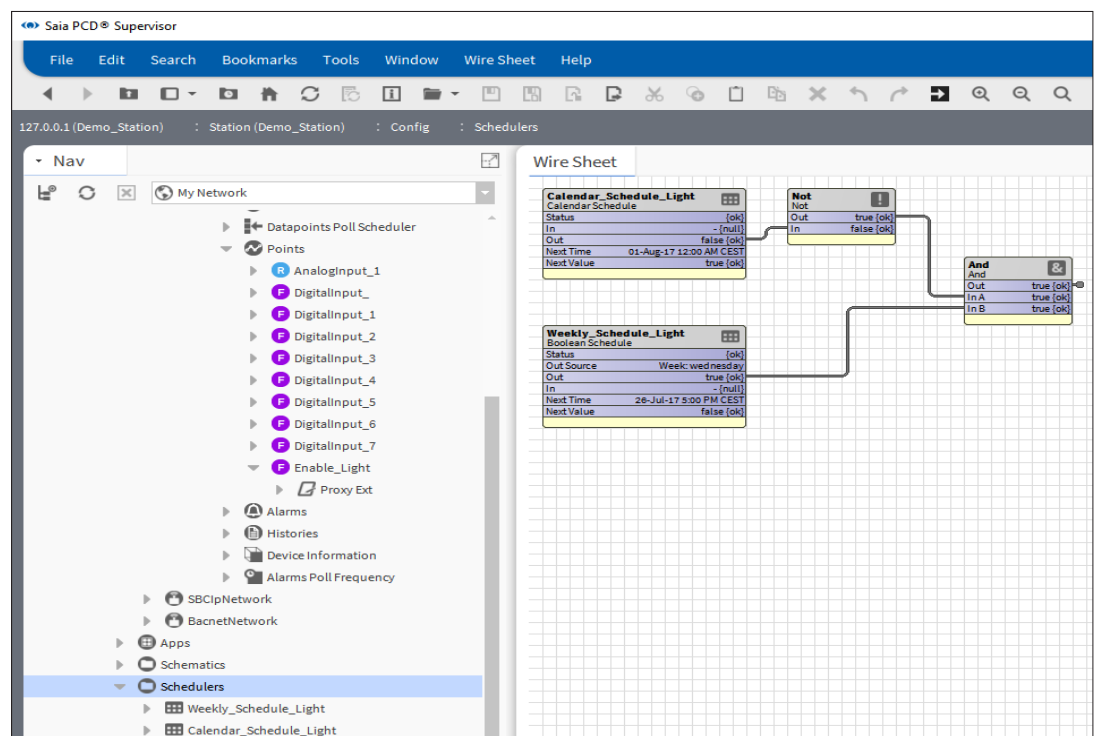
6.4.8 Make the logic to control the physical point in the PCD device

The previous steps are describing how to add and configure the needed schedulers. It is needed to transfer the Schedulers combined Out value to the data point which is really communicated to the PCD Device. This point is called Enable_Light in the Saia PCD® Supervisor. In the PCD Device the application program monitors this Flag and according to its state enables the light on/off.

Keep in mind. In the Calendar schedules we specified the Holidays, when there is nobody in the building. During the specified time the Calendar Schedule output will be high. We need to negate the output of the Calendar Schedule to get the correct logic.

6

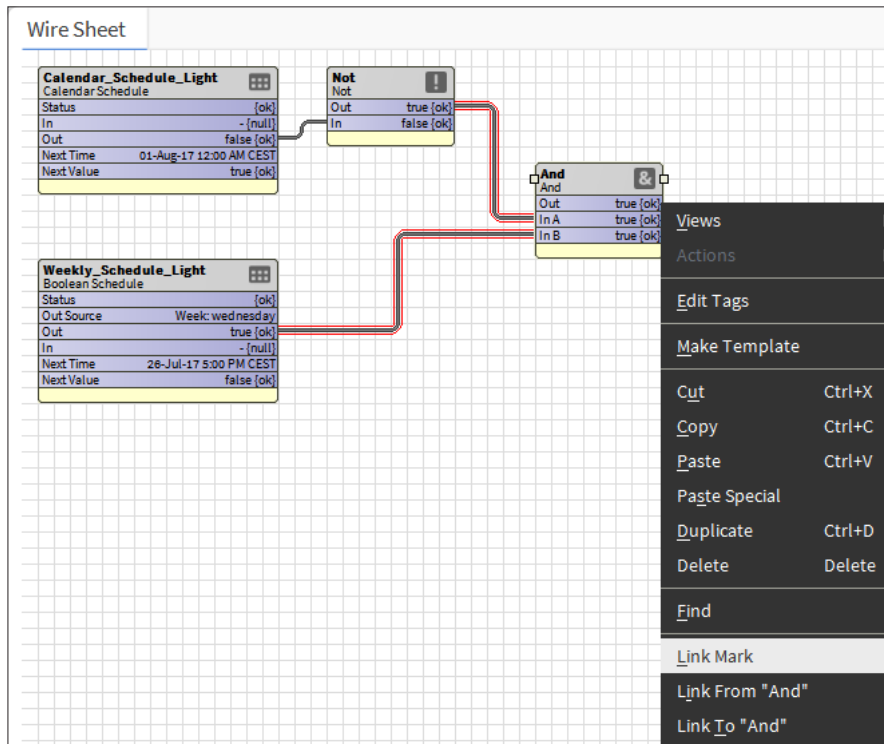
1. Navigate in the Nav tree to the Scheduler folder.
2. Double click to the Scheduler folder. The Wire Sheet pops up.
3. Open the kitControl Palette.
4. Drag and drop the “**And**” and “**Not**” function block form the Logic folder to the Wire Sheet.
5. Connect the function block together as the picture shows.



The **Out** pin of the And Function box must be connected to the Enable_Light pin **IN16**. But these Function Boxes are located in two different Wire Sheets. We need to link these two pins together.

6. Open the Wire Sheet for the Scheduler folder (if it is not open). And select the **And**-Function Box.

7. Right mouse click to the **Out** pin of the And Function box, then select the **Link Mark** command from the context menu.



6

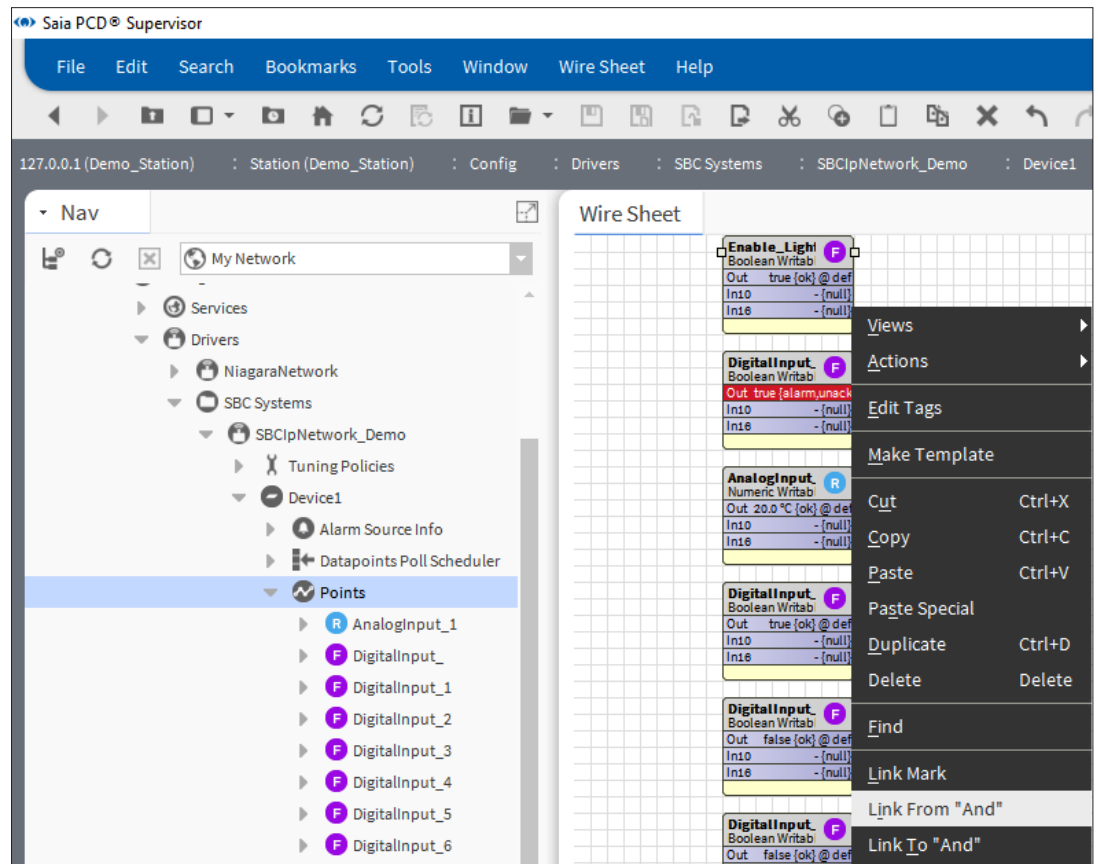
8. Navigate to the Points folder of the Device where the Enable_Light point is located.
9. Right mouse click to the **Points** folder and select the Wire Sheet form the views menu.
10. Organize the Function Boxes on the sheet to get some spaces between them.

At first time you open this Wire Sheet the Function Boxes which are representing the Points in that folder are overlapping each other. The Function Boxes are configured that way that the **Out**, **In10**, **In16** pins are visible. Right now these pins are enough for our work. But keep in mind that, the visibility of the pins are configurable, so many other pins can be set to be displayed.

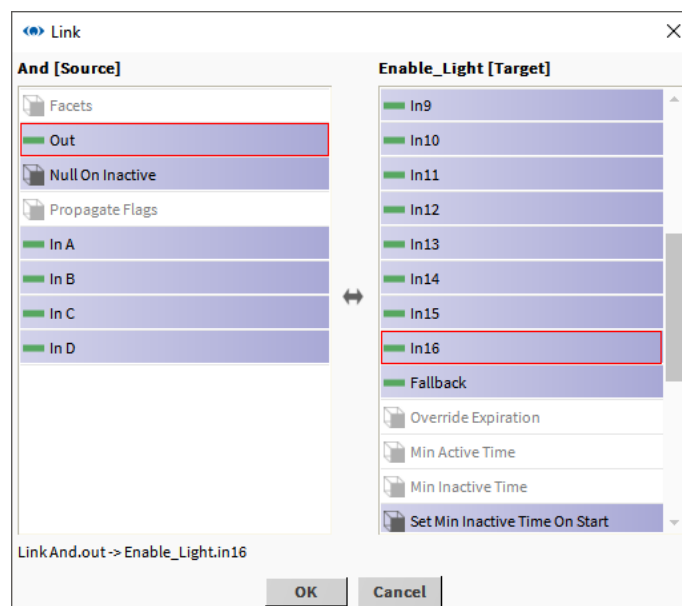
The meaning of the pins can be checked deeply in the Niagara manual.

11. Right mouse click to the **In16** pin of the Enable_Light Function Box.

12. Select the **Link from "And"** command from the context menu.

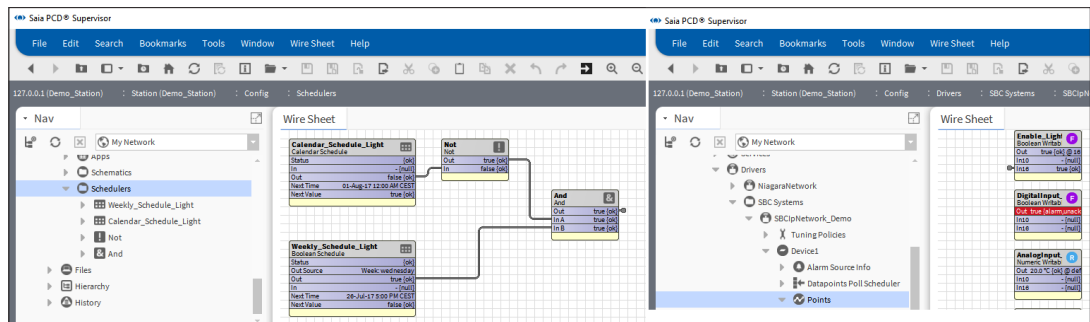


13. In the pop-up window the link between the two Function Boxes must be defined as the picture shows. The link can be checked by reading the text at the bottom left corner of the window.



14. Click OK. The pop-up will be closed
15. In the Wire Sheet check the marks of the link and also check that the link is live. It means that the Points/Enable_Light function box **In16** pin follows the Scheduler's/

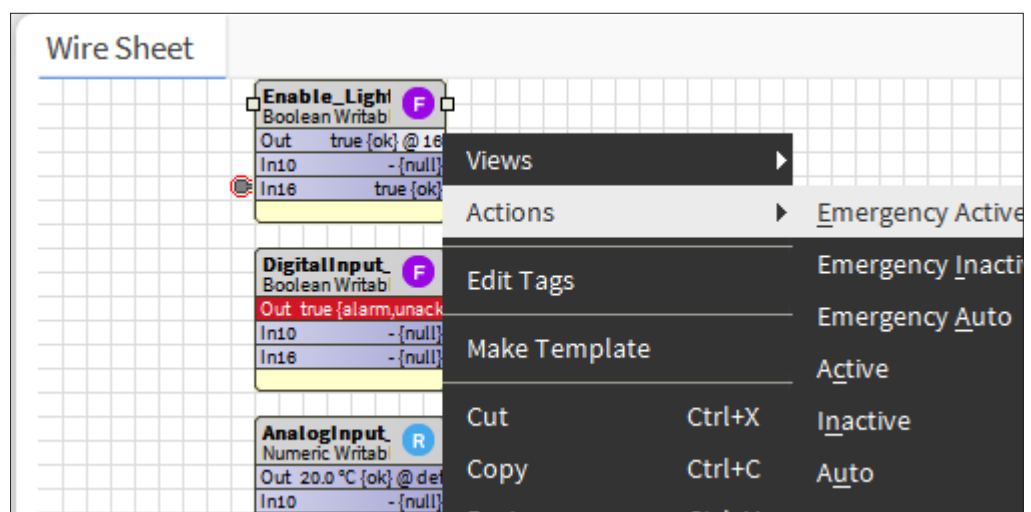
And Function Box **Out** pin of the And function box.



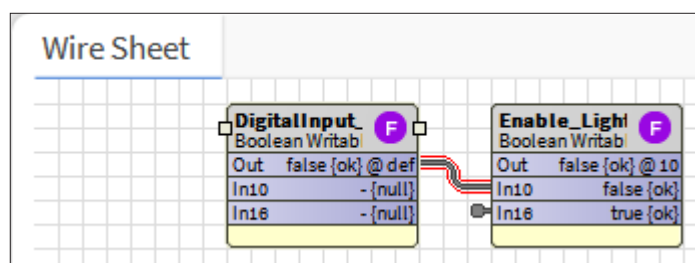
16. The state **Out** pin of the Enable_Light function box normally follows the state **In16** pin. The **Out** pin shows directly which value is downloaded the PCD device.
17. If the state of the **Out** pin has different value then the **In16** pin the following can happen.

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- A. The Out pin is forced by operator -> set back to **Auto**



- B. - Other higher level of **InX** pin is getting value from somewhere.
- Check the logic if it is valid



General functions

- C. - Inside of the Function Box other **InX** pin is selected with value to override the output.
- To check it double click to the Function Box.
The prioritized override technique of the Out pin is described in the Niagara manual.
 - The picture shows that, **In2** overrides In10 and In16 to command the **Out** pin.

6

Property Sheet

Enable_Light (Boolean Writable)

Facets trueText=true,falseText=false

Proxy Ext SBCProxyExt

Status {ok}

Fault Cause

Enabled true

Device Facets

Conversion Default

Tuning Policy Name Default Policy

Read Value false {ok}

Write Value false {ok} @ 2

Memory Address 999

Data Format Boolean

Out false {ok} @ 2

In1 - {null}

In2 null false

In3 - {null}

In4 - {null}

In5 - {null}

In6 - {null}

In7 - {null}

In8 - {null}

In9 - {null}

In10 false {ok}

In11 - {null}

In12 - {null}

In13 - {null}

In14 - {null}

In15 - {null}

In16 true {ok}

Fallback true {ok}

Override Expiration null

Min Active Time +000000h 00m 00s

Min Inactive Time +000000h 00m 00s

Set Min Inactive Time On Start false

Media Type Flag

Comments

Refresh Save

6.4.9 Make the logic to control the physical point in the PCD device using reference between the schedulers.

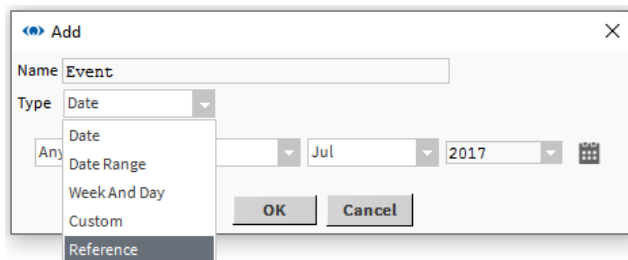
The previous steps are describing how to add and configure the needed schedulers. It is needed to transfer the Schedulers combined Out value to the data point which is really communicated to the PCD Device. This point is called Enable_Light in the Saia PCD® Supervisor. In the PCD Device the application program monitors this Flag and according to its state enables the light on/off.

Keep in mind. In the Calendar schedules we specified the Holidays, when there is nobody in the building. During the specified time the Calendar Schedule output will be high. We need to negate the output of the Calendar Schedule to get the correct logic.

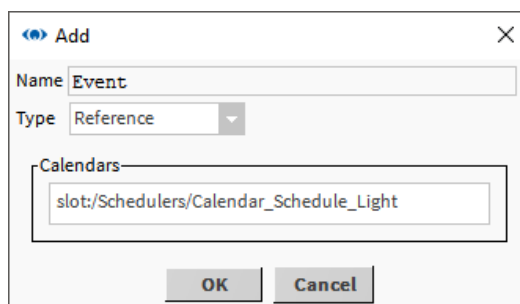
There is another more elegant way to make the connection between the Calendar Scheduler and the Weekly Scheduler. The way is to define reference between them.

The Calendar Scheduler is higher in priority, so we need to make a reference from the Weekly Scheduler to the Calendar Scheduler.

1. Navigate in the Nav tree to the Scheduler folder.
2. Double click to the Scheduler folder. The Wire Sheet pops up.
3. Double click to the Weekly_Schedule_Light. This will open the configuration window of the Scheduler.
4. Click to **Special Events** at the bottom of the page
5. Click to **Add**
6. In the pop-up window go to the **Type** and select **Reference** then click to **OK**.



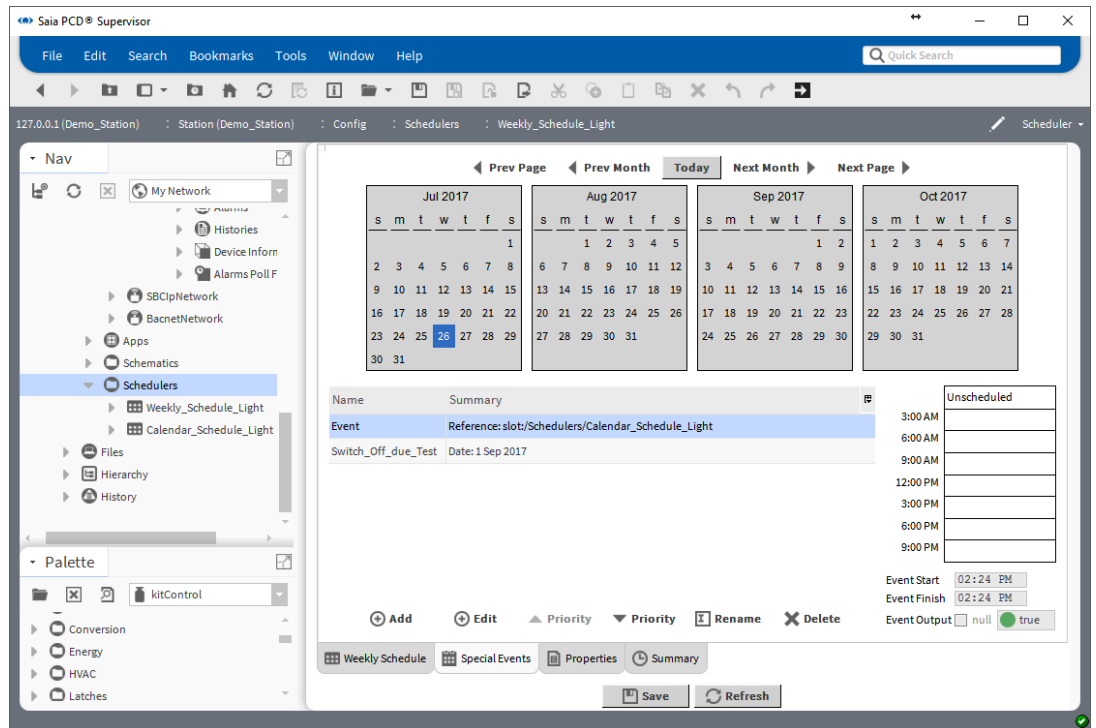
7. In the next pop-up window it is possible to select to which Scheduler the reference must be added. Here there is only one scheduler listed. Select Calendar_Schedule_Light then click OK.



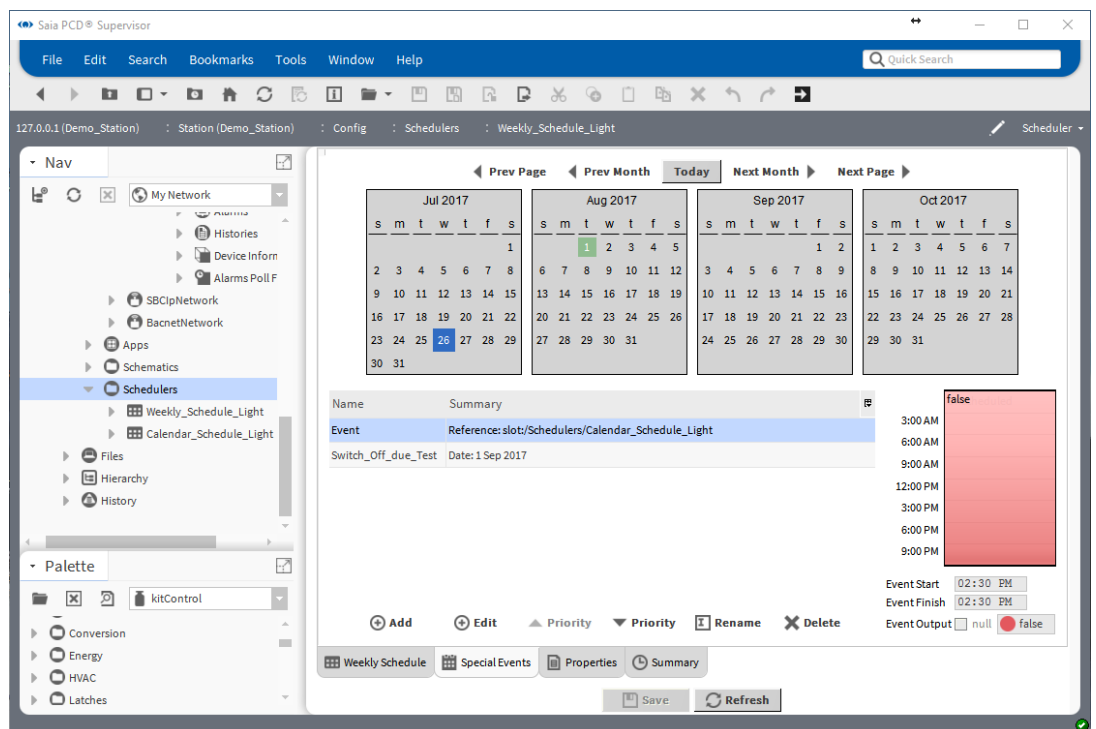
Connect to 3rd Party Systems

8. The Event = Reference to the weekly scheduler is added. But it is “**Unscheduled**”, can be seen in the right side.

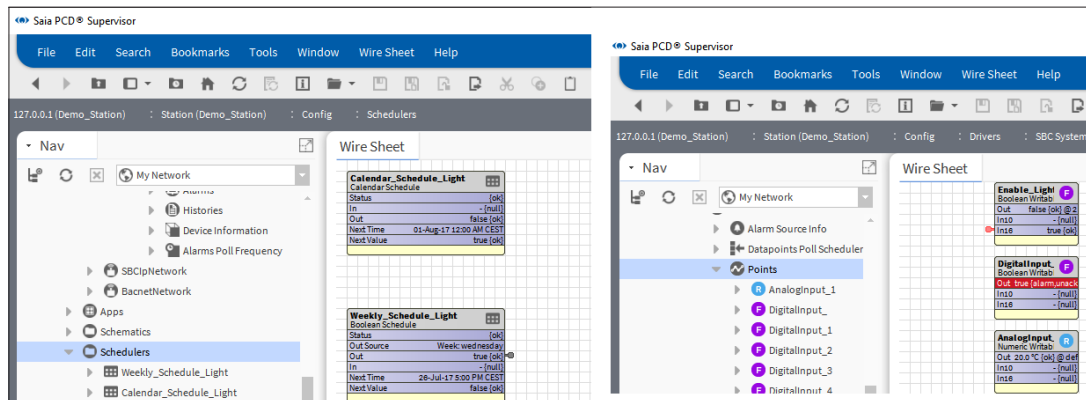
6



9. We need to define that during the Holidays, when the Calendar_Schedule_Light is high the Weekly_Schedule_Light must be low. For that the complete time range has to be defined to **false**.



10. Save the settings
11. Test the configuration by adding the today to the Calendar_Schedule_Light. This means create today as Holiday day.
12. Check that the Weekly_Schedule_Light **Out** pin goes **low**.
13. Remove the test setting from the Calendar_Schedule_Light.
14. Create reference between the Weekly_Schedule_Light **Out** pin and the Enable_Light **In16** pin in the same way as it was described above.
As you see the **Not** and the **And** Function Boxes are not needed to realize the same function.



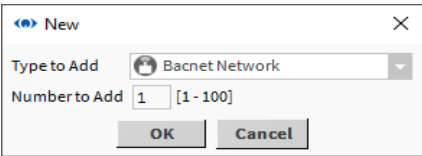
6.5 Connect to 3rd Party Systems

If you have purchased an OPEN license and want to use values from non-Saia Burgess Controls systems it is necessary to connect to the 3rd-party systems and add the required points to the Saia PCD® Supervisor database.

6.5.1 Add the Required 3rd Party Drivers

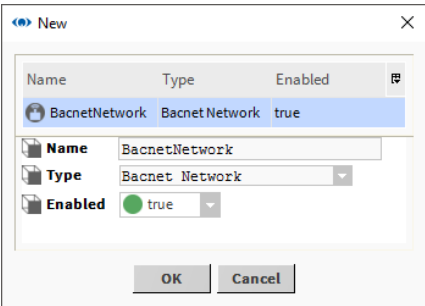
- 1. In the **Nav** tree open the **Station** folder.
- 2. Open the Config folder.
- 3. Double click on Drivers. The view pane will show a list of installed Drivers (Driver Manager).
- 4. Click on the New button. The New dialogue box is displayed.

6



In the Type to Add box select the required driver, e.g. 'BacnetNetwork'.

- 5. Click OK. The following dialogue box is displayed.



Change the default network Name to be a meaningful name.

- 6. Click OK. The Driver Manager will now show the driver.

Name	Type	Status	Enabled	Fault Cause
NiagaraNetwork	Niagara Network	{ok}	true	
BacnetNetwork	Bacnet Network	{ok}	true	

- 7. You now need to configure the driver

6.5.2 Configure 3rd Party Drivers

The configuration of each 3rd party driver is different, refer to the Tridium Niagara documentation for the details of the driver.

6.5.3 Add 3rd Party Points to the Database

The method of adding points to the database for each 3rd party driver is different, refer to the Tridium Niagara documentation for the details of the driver.

6.5.4 Using the BACnet Driver

The ability to use values from a BACnet system is quite common and is supported by Saia PCD® Supervisor. This section provides an overview of how to use the BACnet driver with Saia PCD® Supervisor. For full details refer to the Tridium Niagara documentation.

6

6.5.4.1 Configure the BACnet Driver

1. In the Nav tree open the Station folder.
2. Open the Config folder.
3. Double click on Drivers. The view pane will show a list of installed Drivers (Driver Manager).
4. In the Nav tree open the folder for the already added BACnet driver (BacnetNetwork) and double click Local Device.
5. Set the Object Id to the Saia PCD® Supervisor address on the BACnet network (range 1-4194302).

Property Sheet	
Local Device (Local Bacnet Device)	
Status	{fault}
Fault Cause	Invalid Object ID
Object Id	device -1

Connect to 3rd Party Systems

6. In the Nav tree open the BACnet Comm folder and double click Network and expand the IP port section also the adapter has to be chosen.

Property Sheet

Bacnet Comm (Bacnet Stack)

Comm Control

Client Bacnet Client Layer

Server Bacnet Server Layer

Transport Bacnet Transport Layer

Network Bacnet Network Layer

Router Table Bacnet Router Table

Ip Port NetworkPort: id=1 net=1 enabled max=2...

Network Number

Link B/IP (none:0xBAC0) Standard

Adapter Thinkpad USB 3.0 Ethernet Adapter

Ip Address

Udp Port

Ip Device Type

Bbmd Address

Registration Lifetime

Broadcast Distribution Table BDT: 0 entries

Foreign Device Table Foreign Device Table

Bbmd Debug

Status {fault}

Fault Cause java.lang.IllegalStateException: BACnet/

Poll Service BacnetMultiPoll

Max Devices

Enabled ☒

Port Id

Port Info Annex J IP


Routing Enabled ☒

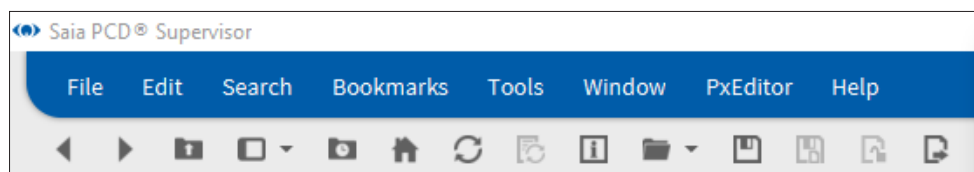
Maintain Routing Enabled ☐

Minimum Router Update Time ms

Router Discovery Timeout ms

Termination Time Value s

7. Set the Network Number to 1.
8. Set Enabled to true.
9. Click .

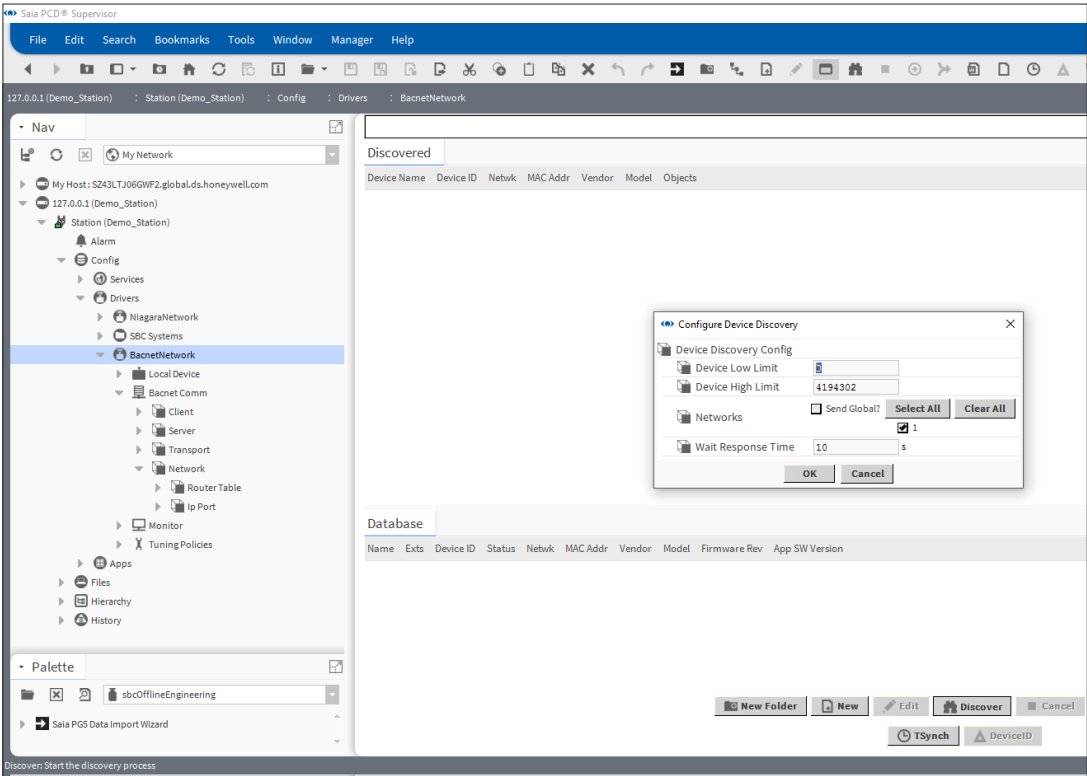


6.5.4.2 Discover and add BACnet Devices

In the **Nav** tree, open the **Drivers** folder and double click the BACnet driver. The view pane will display the **Bacnet Device Manager**.

- 1. Click to **Discover**

The **Configure Device Discovery** dialogue box is displayed.



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If the address range of controllers is known then the **Device Low Limit** and **Device High Limit** can be edited to reduce discovery time.

- 2. Click **OK**.
The discovery process starts. A progress bar at the top of the pane indicates the status of the discovery. Once the discovery is complete the devices that have been discovered are displayed in the **Discovered** list.

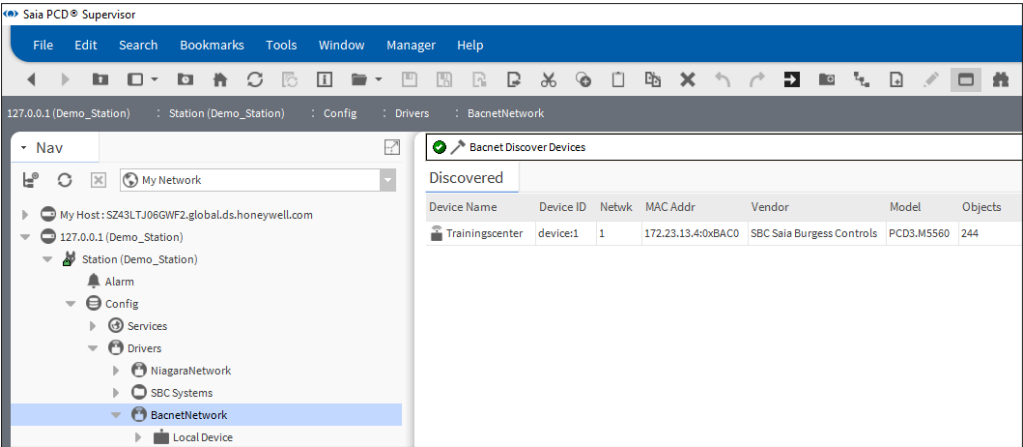
Job Log			
Status	Timestamp	Message	Details
Running	13-Apr-17 11:00 AM CEST	Finding BACnet Devices...	
Message	13-Apr-17 11:00 AM CEST	Who-Is: Local Broadcast,All Devices	
Message	13-Apr-17 11:00 AM CEST	Found BACnet device (objectid device:1) at address 1:172.23.13.4:47808...	
Message	13-Apr-17 11:00 AM CEST	Reading parameters for device:1, 1 of 1	
OK			

Connect to 3rd Party Systems



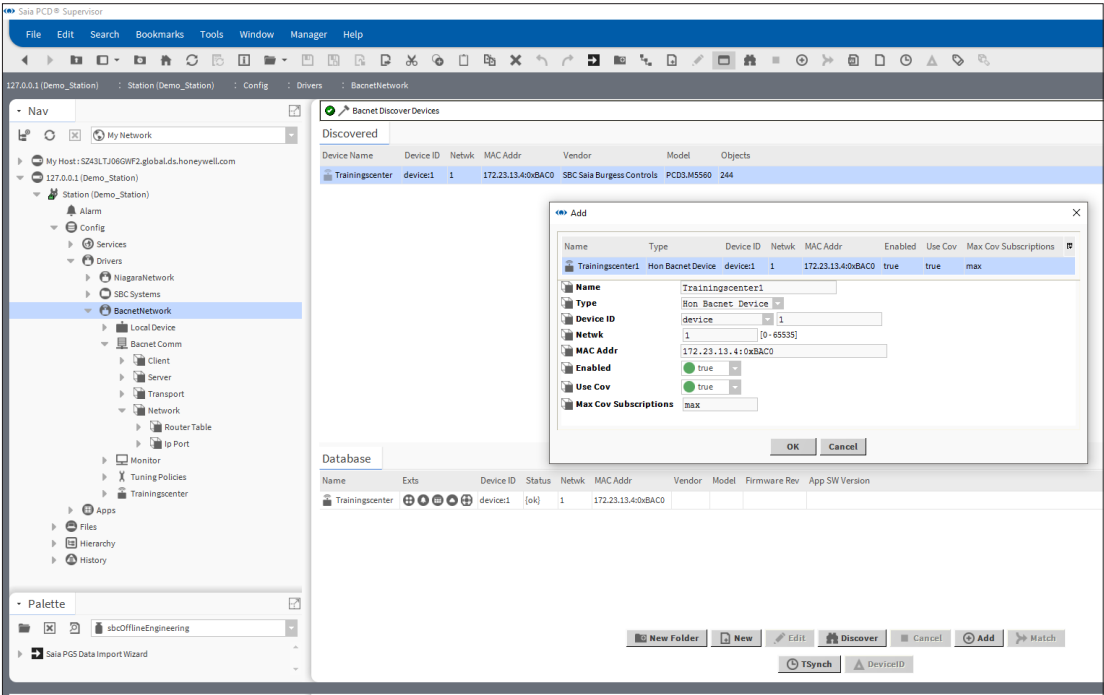
During the discovery process you can click on the » button at the top right corner to display a Job Log giving details about the discovery process so far.

In the **Discovered** list select the device(s) from which values are required. To select more than one device hold down the CTRL key and click on the required devices.



The discovery will also find SBC Saia Burgess Controls devices that have BACnet compatibility. In order to easily identify these devices sort the list by Vendor by clicking on the Vendor column.

Click **Add** or drag the selected device(s) to the Database list.
The **Add** dialog box is displayed.



Review the settings for each device:





- If required, change the device name in the **Name** box.
- If multiple devices are listed, click on the device in the list (to highlight it) to view its settings.

Check that the required devices have been added.

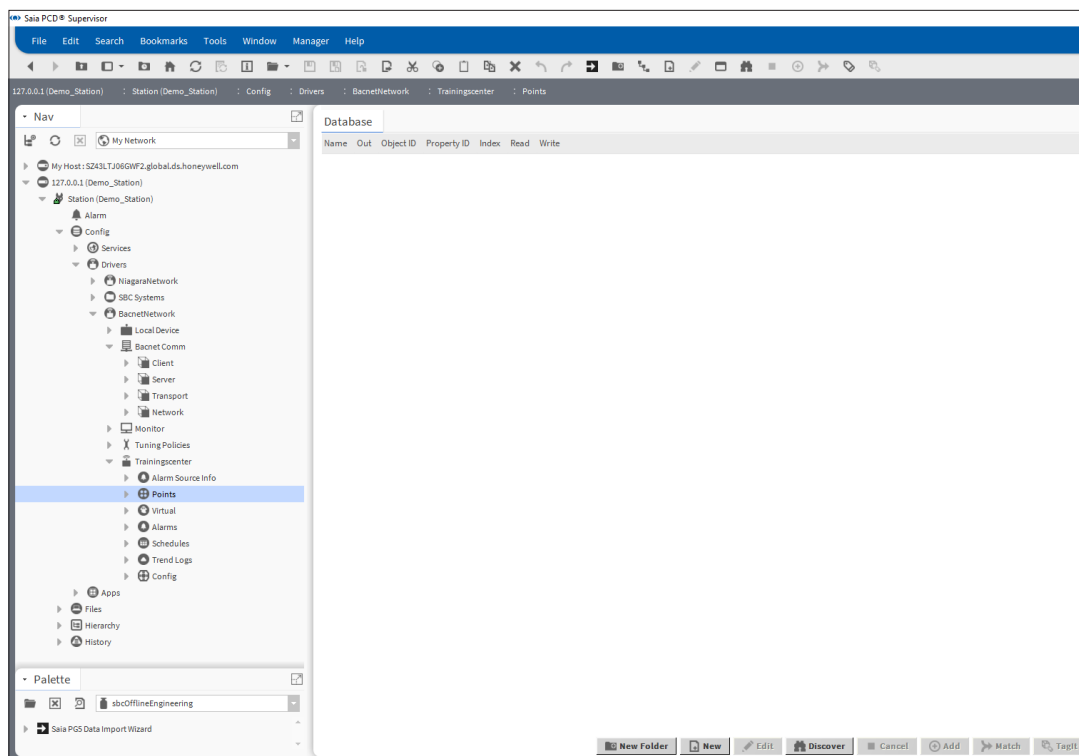
6.5.4.3 Add the required BACnet Points to the Database

This process allows you to add points, alarm configuration, schedules and histories from previously discovered devices.

1. In the **Nav** tree, open the **Drivers** folder and double click the BACnet driver. The view pane will display the **Bacnet Device Manager**.
2. In the **Exts** column of the **Database** list double click the required icon.

-  = Points
-  = Alarm Configuration
-  = Schedules
-  = Histories

The **BACnet Point Manager** is displayed.

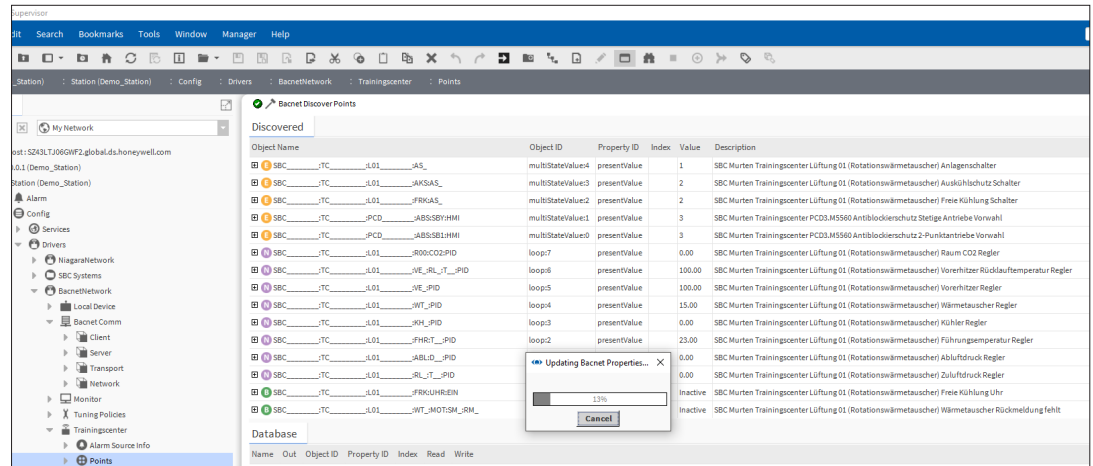


3. Click **Discover**

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- The discovery process starts. A progress bar at the top of the pane indicates the status of the discovery.

Once the discovery is complete, points are displayed in the **Discovered** list:



- In the **Discovered** list select the required points (values). To select more than one point hold down the CTRL key and click on the required points.



Remember that Saia PCD® Supervisor is licensed for use up to a specific number of points. It is good practice, therefore, to only add points that are actually required. Adding points that won't be used by Saia PCD® Supervisor will not only waste resources but also generate unnecessary extra network traffic.

- Click to **Add** or drag the selected point(s) to the **Database** pane.

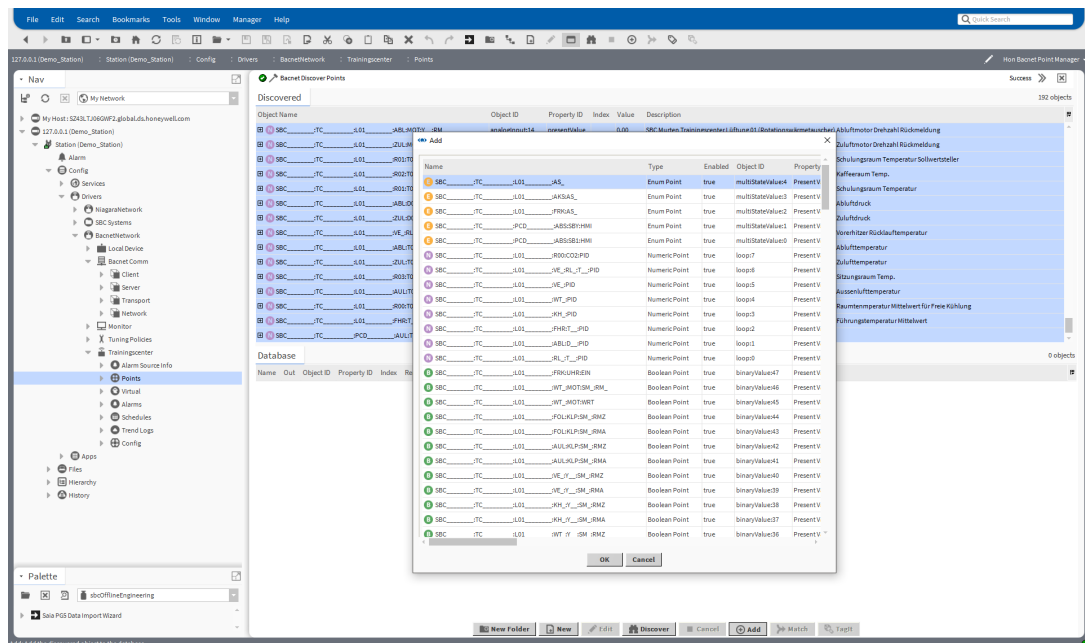
7. The **Add** dialogue box is displayed.

Saia PCD® Supervisor *automatically chooses the most suitable writable point type. However, this can be manually changed by selecting a point in the list and choosing a different Item Type*

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8. Click to **OK**

9. The selected point(s) is added to the database.



10. Repeat the above process to add points for each controller.

6.5.4.4 Enable Honeywell BACnet Service

The Honeywell BACnet service must be enabled if you want to use the SBC specific Add-ons provided by the SBC BACnet Utilities driver. This step must be done before creating the BACnet network.

Enabling the service includes 2 steps:

1. Adding the service to the Services tree
2. Enabling the service on its Properties Sheet

In SBC NX 4.2.xx.xx.x.x and lower, the service is already added to the Services tree by default. In SBC NX 4.3.xx.xx.x.x and higher, the service is not available by default and must be added to the Services tree manually.

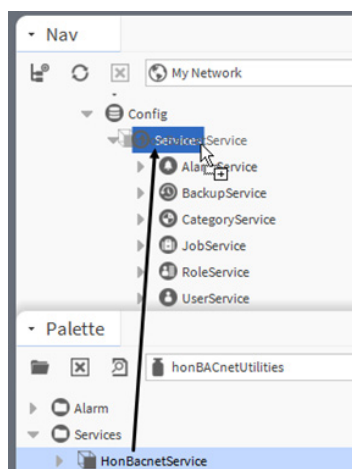
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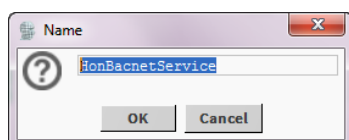
When using a station from a previous project in SBC NX 4.4.xx.xx.x.x, the Honeywell BACnet Service is available in disabled state as shown in the Services tree and on the Properties Sheet. If available, the Honeywell BACnet Service can be enabled/disabled at any time on the Properties Sheet

6.5.4.4.1 Procedure to enable Honeywell BACnet Service

1. In the Palette tab at the bottom, select **honBACnetUtilities** from the drop-down listbox, then open Services, and then drag&drop the **HonBACnetService** item to the Services folder.

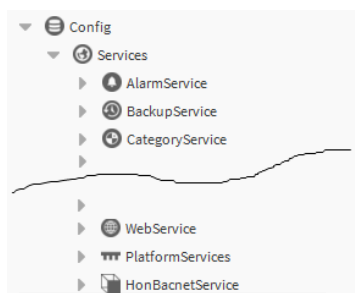


Result: The Name dialog box displays.

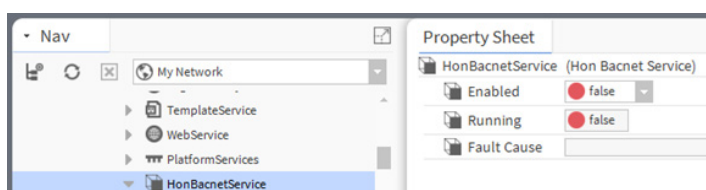


2. Change the name if desired, and then click **OK**.

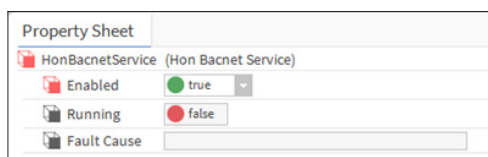
Result: The service is added to the Services folder.



3. Double-click the HonBacnetService in the tree.

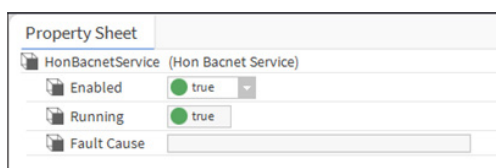


4. On the Property Sheet on the right, select 'true' in the **Enabled** drop-down listbox.



5. Click the **Save** button at the bottom.

Result: The service will be started indicated by 'true' setting in the **Running** drop-down listbox.

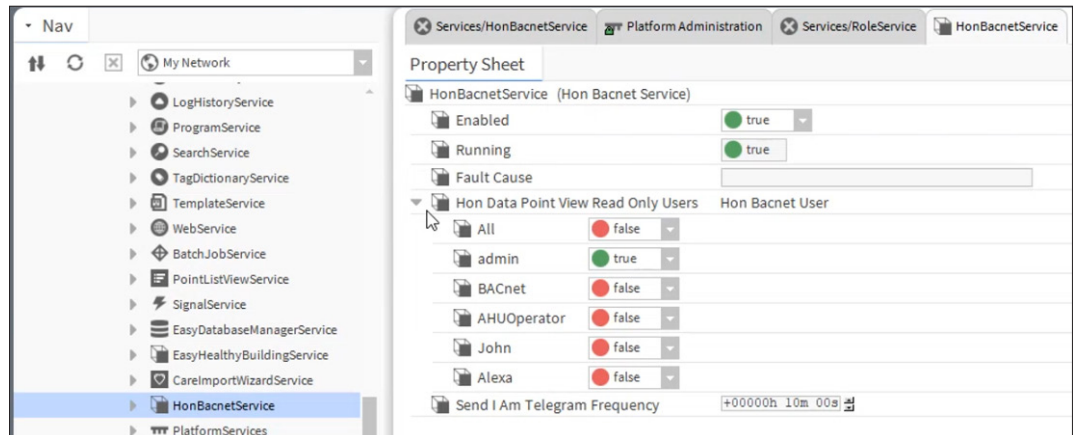


6. Continue by creating the BACnet network.

6.5.4.4.2 Procedure to change the user access of Hon Data Point View Read Only Users for Honeywell BACnet Service

1. Double-click the HonBacnetService in the tree.
2. On the Property Sheet on the right, expand the Hon Data Point View Read Only Users property.

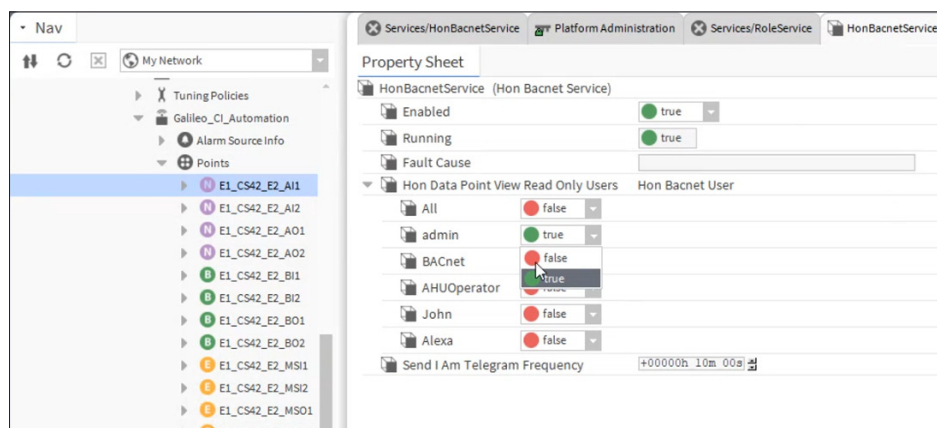
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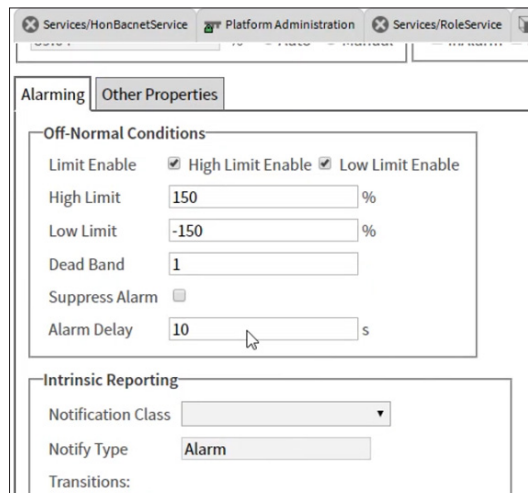
Result: The list of all assigned users name list along with default (All, admin, and BACnet) user names displays.

3. Select True (to disable access) or False (to enable access) in order to change the user access of Hon Data Point View.

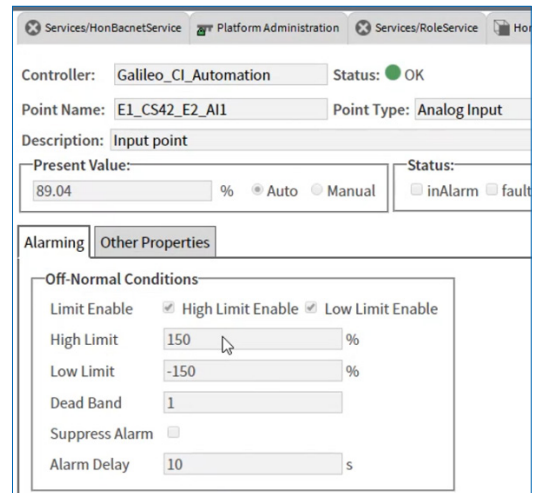


Result: As per the selection, users will see the parameters from Hon Data Point View page and their parameters in editable or non-editable view.

Editable



Non-Editable



6.6 Creating Schematics (Operator Views)

Schematics within Saia PCD® Supervisor are known as Operator Views (Presentation XML -- Px).

This section describes how to create the most commonly required features of Operator Views. For more in depth information please refer to the Tridium documentation.

It is recommended that you create a template page that contains features that are needed on each page, e.g. a logo, outside temperature, navigation buttons, etc. It is also recommended that you create a folder to store all the Operator Views, and another folder to store any images used on the pages.

The following steps are required to create Operator Views:

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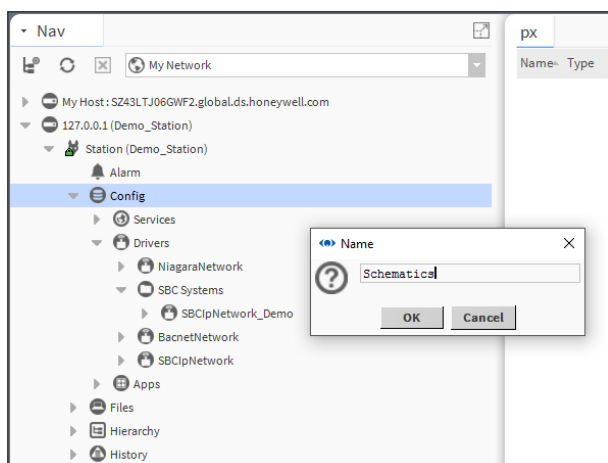
6.6.1 Prepare the folder structures

Preparing a good folder structure for the used Images and Operator views will help keeping the project clear and understandable. The engineering work will be faster because used elements can be easily found.

6.6.1.1 Create a Folder for the Operator Views

Operator Views can be created at any point within Saia PCD® Supervisor e.g. added to a folder, device or a module. However, this can make engineering unnecessarily complicated so it is recommended that a folder is created to contain them.

1. In the **Nav** tree open **localhost > Station**.
2. Right click **Config** and select **New> Folder**. The **Name** dialogue box is displayed.

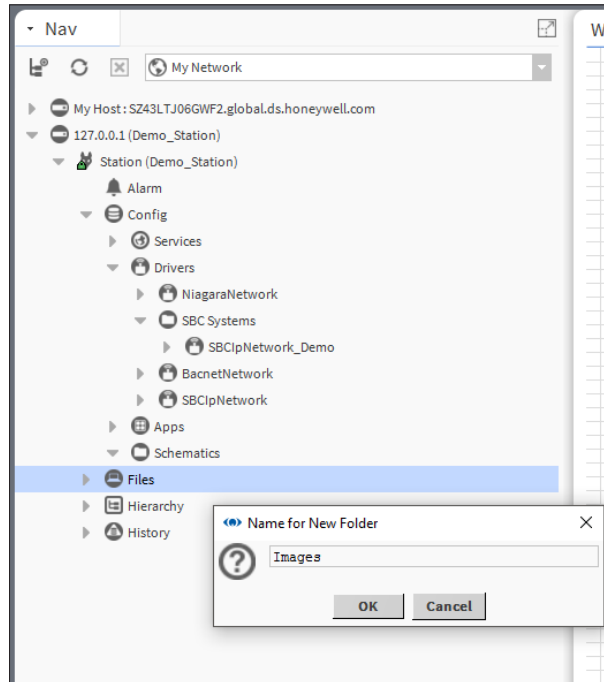


Specify the folders's name e.g. 'Schematics'.

3. Click to **OK**.

6.6.1.2 Create a Folder for the Images

1. In the **Nav** tree open **127.0.0.1(localhost)>Station(Demo_Station)**.
2. Right click **Files** and select **New> Folder**. The **Name** dialogue box is displayed.



3. Specify the folders's name e.g. 'Images'.
4. Click to **OK**.

6.6.1.3 Prepare Images

Any external images that are to be used on Operator Views must be created using a 3rd party graphics package and sized to the size required on the Operator Views.



Once the images have been added to Saia PCD® Supervisor they cannot be changed. SVG (Scaled Vector Graphics) images can be used and scaled inside in the Saia PCD® Supervisor.


6.6.1.4 Add Images to Saia PCD® Supervisor

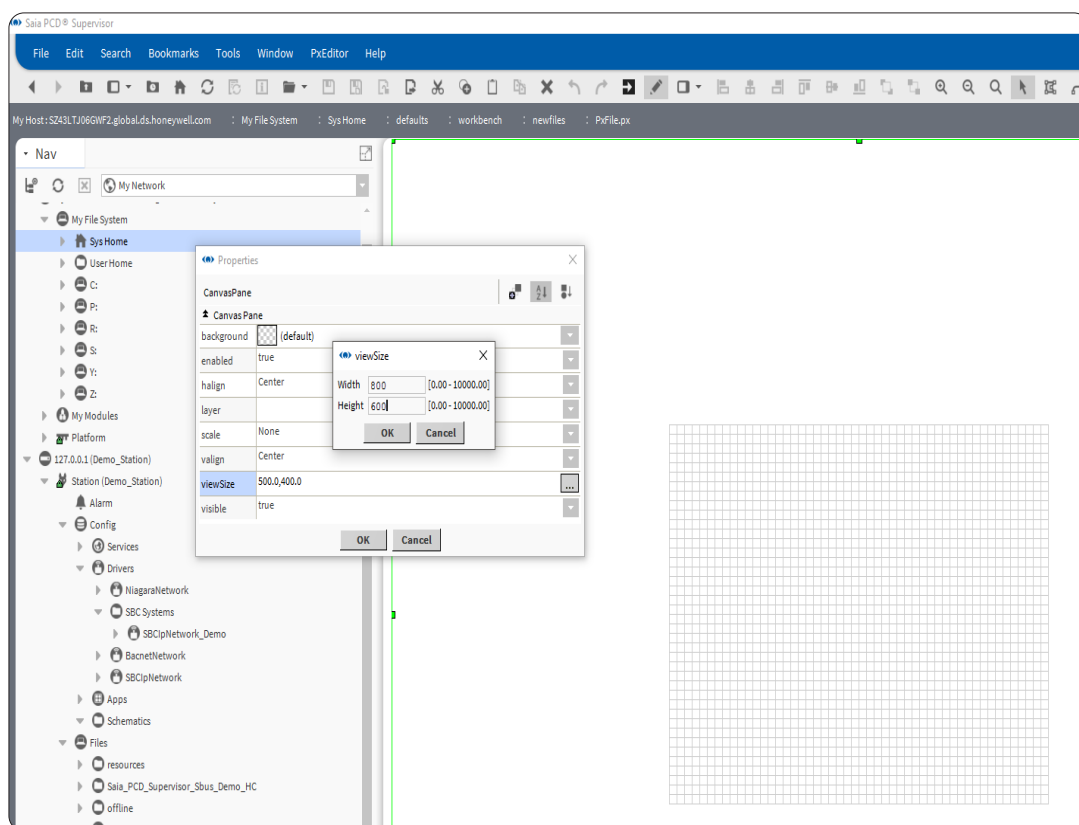
To use images within Saia PCD® Supervisor they must exist within the file structure of Saia PCD® Supervisor.

1. In the **Nav** tree open **My Host > My File System** and navigate to the file that is to be added (this could be a folder containing multiple graphics).
2. Right click the file or folder and select **Copy**.
3. In the **Nav** tree open **My Host > Station(Saia PCD Supervisor) > Files** and navigate to the location the image(s) are to be stored
4. Right click the location (e.g. images) and select **Paste**.

6.6.1.5 Customize the basic PX Template Page

Operator Views are created using the template PX Page (located - My Host > Sys Home > defaults > workbench > newfiles > PxFile.px). By editing this page all future Operator Views created will have this format.

1. In the **Nav** tree open **My Host > My File System > Sys Home > defaults > workbench > newfiles**.
2. Double click the **PxFile.px** file.
3. On the menu bar click the  icon to switch to **PX Editor** view.



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The grid in the middle of the screen is the viewable area of the page.

4. Design the page layout as required.
5. Save the file (select **File> Save**, or press CTRL+S).

6.6.2 Create a PX Page

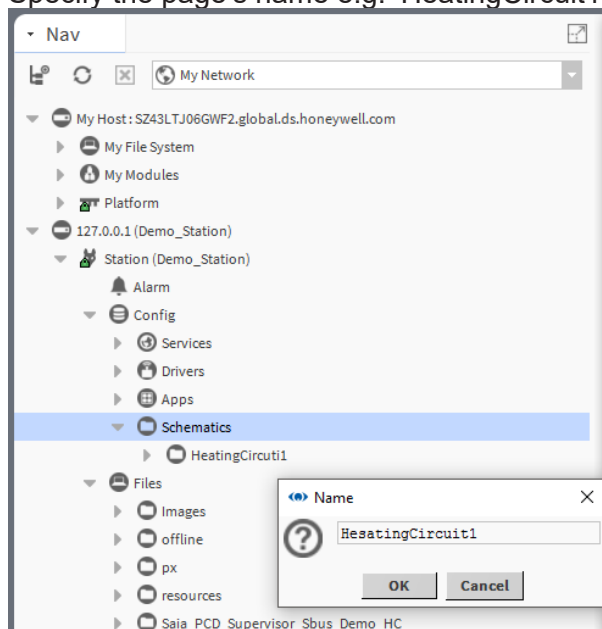


Operator Views are created by making a new view of an element in the Nav tree and once a PX view is added it is the new default view of the element.

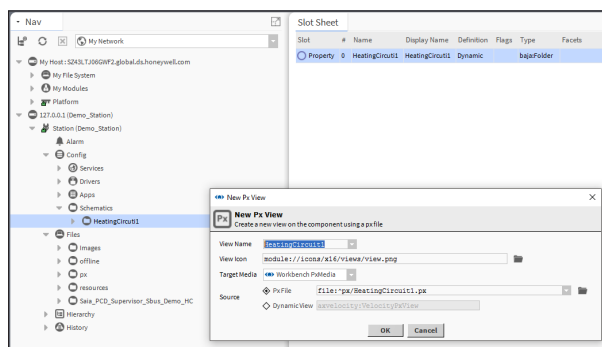
Operator Views are stored in the Saia PCD® Supervisor file structure, but are linked to the element where the view has been attached.

To keep structure simple it is a good idea to create subfolders. These subfolders hold the various schematics you want to create.

1. In the **Nav** tree open **127.0.0.1(localhost) > Station > Config** and navigate to where the PX Page is to be located
2. Right click the folder and select **New > Folder**. The **Name** dialogue box is displayed.
3. Specify the page's name e.g. 'HeatingCircuit1'.



4. Click **OK** A folder is created.
5. Right click the folder you have just created and select **Views > New View**. The **New Px View** dialogue box is displayed.




Enter the name of the page (same as the folder just created) in the **View Name** box.

6. Click **OK** The PX Page will be created based on the template page.

6.6.3 Edit a PX Page

The PX Editor is used to edit a PX Page.

1. In the **Nav** tree locate the PX file and double click on it.
2. On the menu bar click the  icon to switch to **PX Editor** view.
3. Change the page layout as required
4. Save the file (select **File> Save**, or press CTRL+S).

6.6.3.1 Create or Change PX Page Elements

After creating a new PX Page or opening an existing page for editing use the following procedures to design the page layout and content.

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6.6.3.2 Setting the Page Size and Background

To set the viewable area size:

1. Double click the layout grid to open the **Properties** dialogue box.
2. Click **viewSize** to set the visible screen size in pixels (maximum 10000 × 10000).
3. Click **OK**.

To set the background colour:

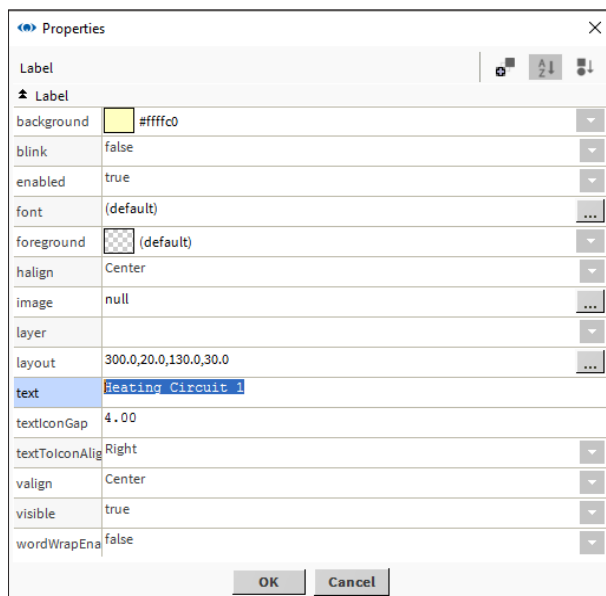
1. Double click the layout grid to open the **Properties** dialogue box.
2. Click the **background** as required and select either **Solid** or **Gradient** and use the colour picker to set the required colour(s).
3. Click **OK**.

To set the background image:

1. Double click the layout grid to open the **Properties** dialogue box.
2. Click the **background** as required and select **Image**.
3. Select the required image file and alignment settings.
4. Click **OK**.

6.6.3.3 Add Text

1. Right click the page and select **New > Label**. A label is added to the page.
2. Double click the label. The **Properties** dialogue box is displayed.



3. Enter the required text in the **text** box.
4. Click **OK**.

6.6.3.4 Add an Image

Add your own image

Images are sized on the screen based on their native dimensions (pixel size) - you cannot scale the image. Therefore, you may need to resize the image using your preferred graphics editor before adding to the page.

1. Navigate to the required image using the **Nav** tree.
2. Click and drag the file to the layout grid and position as required.



It is recommended that any images you intend using in Saia PCD® Supervisor are first copied into a folder within the Station.



As you drag the item on the page two green lines indicate the top left corner where the item will be positioned.

Add an Saia PCD® Supervisor Image

Saia PCD® Supervisor has some built in images that can be added to a PX Page. Open the palette containing the required graphics. The following palettes contains useful images, but there are others available

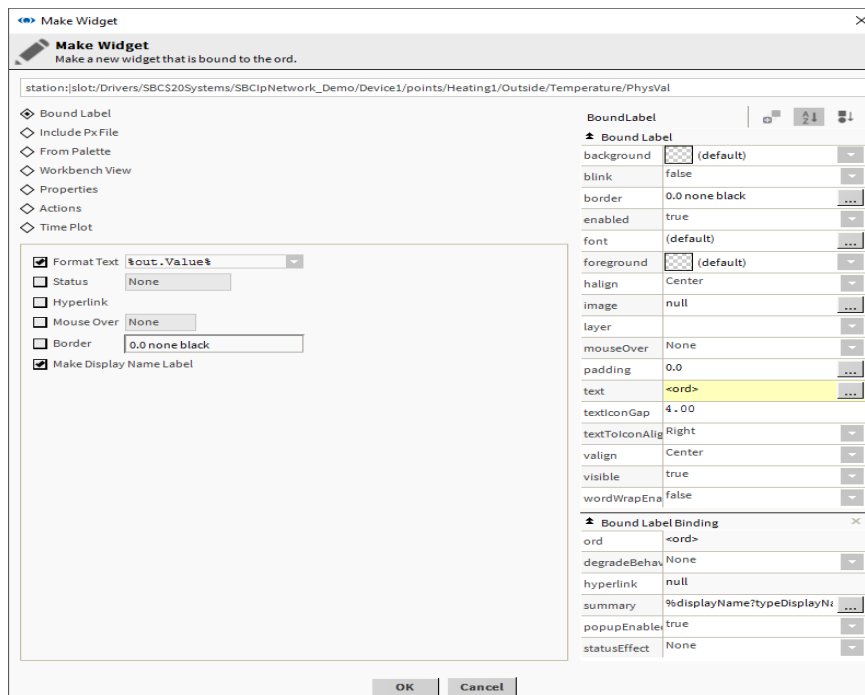
- kitPx** Covers elements like – logoff, buttons, PxInclude, line, rectangle etc
- kitPxHvac** is a library of various hardware graphics – pumps, boilers etc
- kitPxN4svg** is similar to kitPx but all the graphics are SVG (scalable vector graphics)

1. Navigate to the required image using the palette.
2. Click and drag the image to the layout grid and position as required.

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6.6.3.5 Add a Dynamic Object (Value)

1. Navigate to the required value using the **Nav** tree.
2. Click and drag the value to the layout grid and position as required.
3. When you release the mouse button the **Make Widget** dialogue box is displayed.
4. Select **Bound Label**.

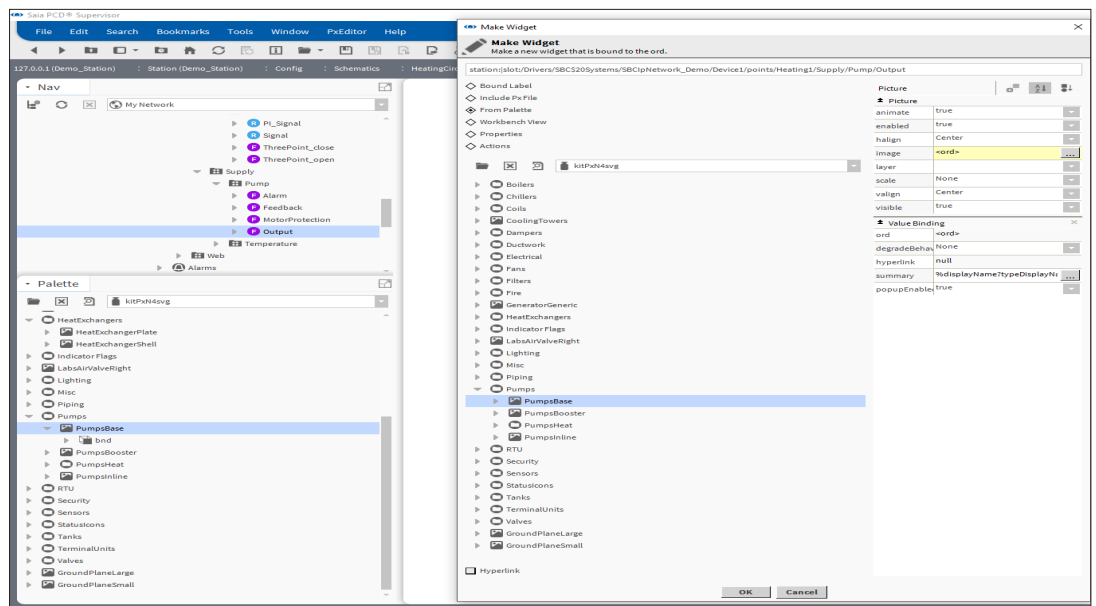


5. Select **Format Text** and choose **%out.value%** to display the value.
6. Select **Make Display Name Label** to display the label.
7. Click **OK**.

6.6.3.6 Add an Animated Image

Saia PCD® Supervisor has some built in images that can be animated depending on value from the system.

1. Navigate to the value that is to be linked to the image using the **Nav** tree.
2. Click and drag the value to the layout grid and position as required.
3. When you release the mouse button the **Make Widget** dialogue box is displayed.
4. Select **From Palette**.

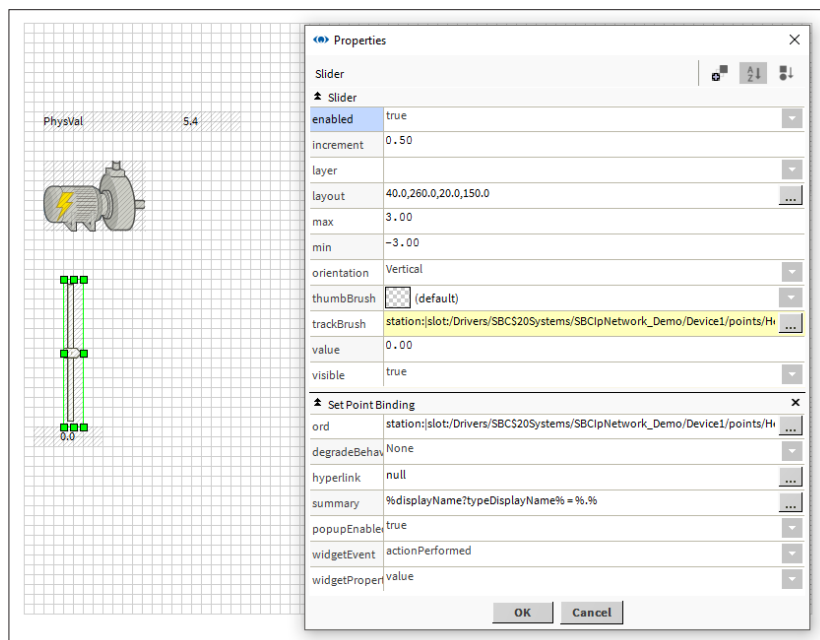
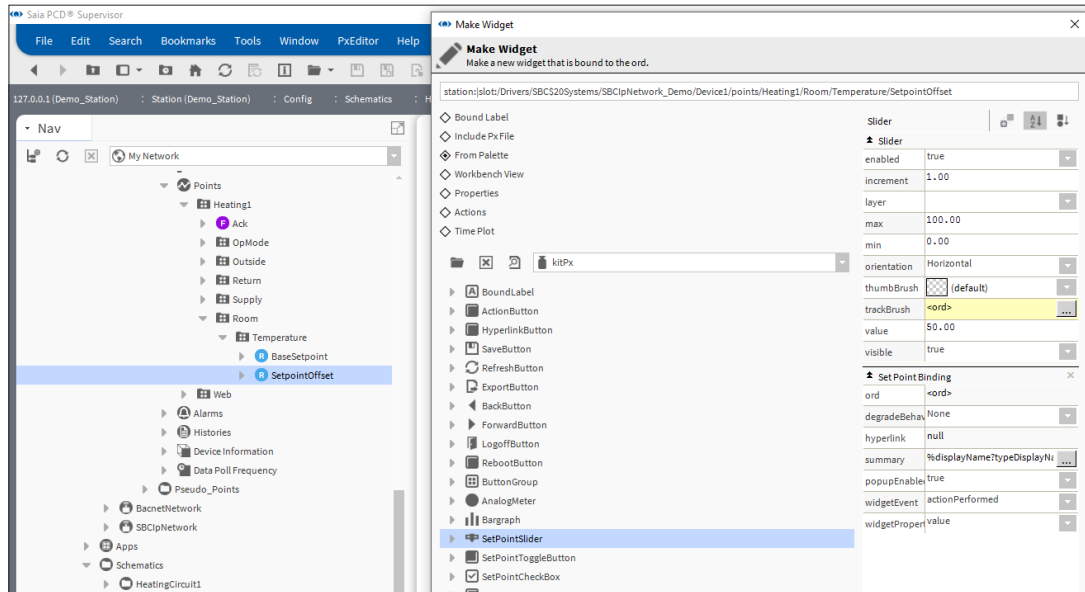


5. Open the palette containing the required graphics
6. Navigate to the required image using the palette.
7. Select the required image.
8. Click **OK**.

6.6.3.7 Add a Setpoint Slider

A slider can be added to enable an analogue value to be adjusted.

1. Navigate to the value that is to be linked to the slider using the Nav tree.
2. Click and drag the value to the layout grid and position as required.
3. When you release the mouse button the Make Widget dialogue box is displayed.
4. Select **From Palette**.

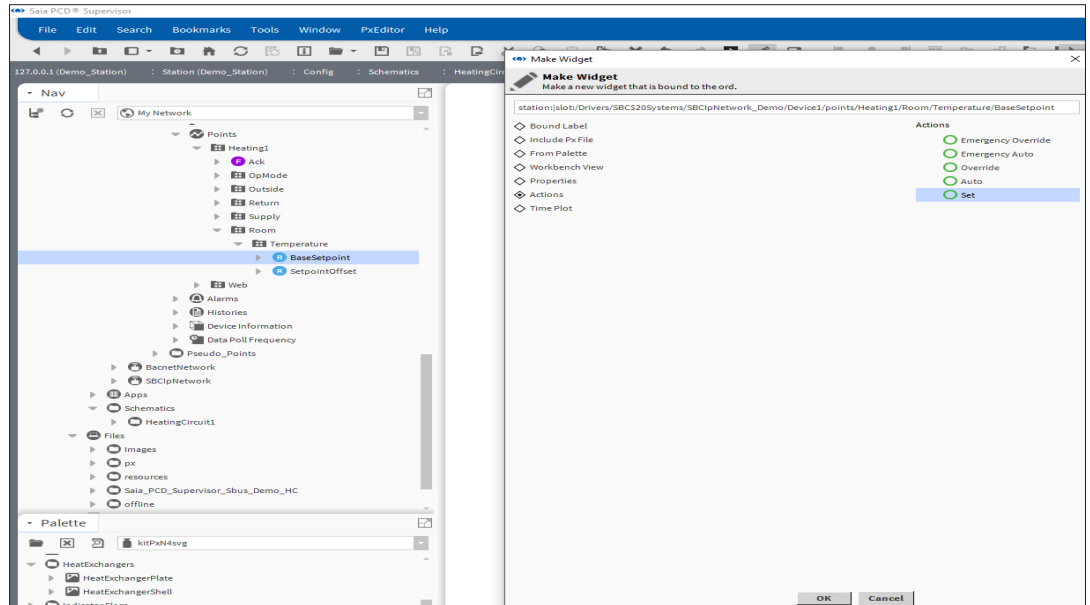


5. Open the KitPx palette
6. Select *SetPointSlider*.
7. Click **OK**.

Creating Schematics (Operator Views)

6.6.3.8 Add a Button to Adjust a Value

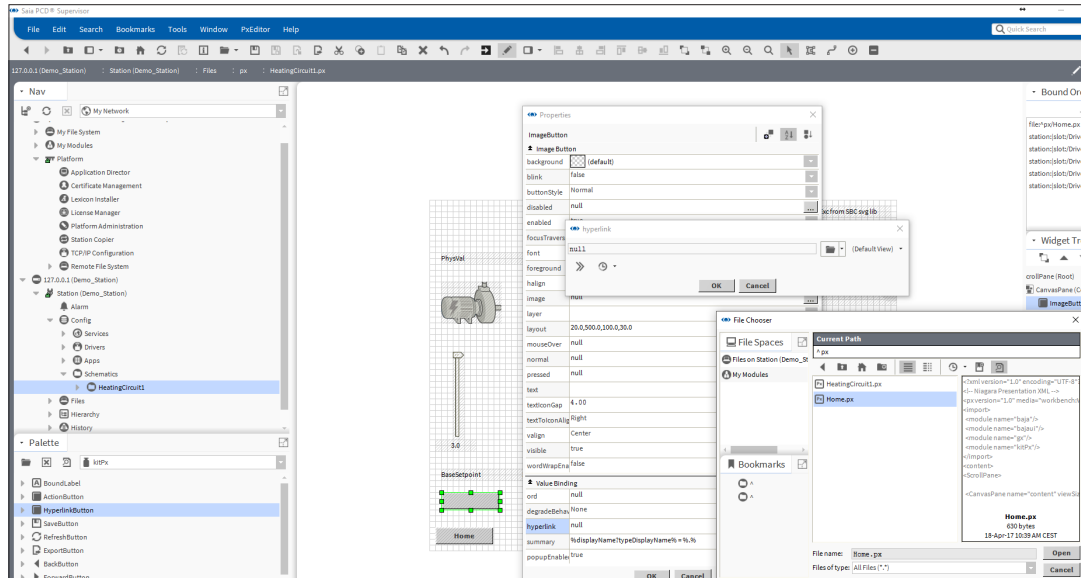
1. Navigate to the value that is to be adjusted using the **Nav** tree.
2. Click and drag the value to the layout grid and position as required.
3. When you release the mouse button the **Make Widget** dialogue box is displayed.
4. Select **Actions**.



5. Select **Set**.
6. Click **OK**.

6.6.3.9 Add a Link to Another Page

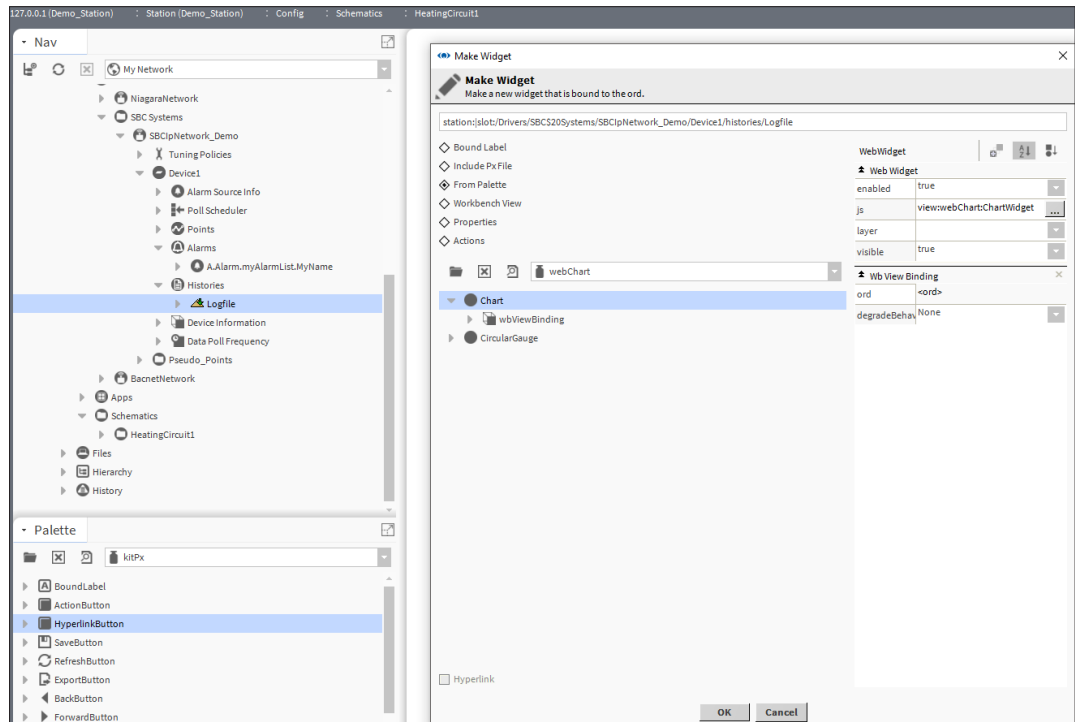
1. Navigate to the PX Page that is to be linked to using the **Nav** tree.
2. Click and drag the PX Page to the layout grid and position as required.
3. When you release the mouse button the **Make Widget** dialogue box is displayed.
4. Select **From Palette**.



5. Open the KitPx palette.
6. Select **HyperlinkButton**.
7. Select the **Hyperlink** check box.
8. Enter the required text in the **text** box.
9. Click **OK**.

6.6.3.10 Add a Graph

1. Navigate to the required history using the **Nav** tree.
2. Click and drag the history to the layout grid and position as required.
3. When you release the mouse button the **Make Widget** dialogue box is displayed.
4. Select **From Palette**.



5. Open the webChart palette
6. Select **Chart**.
7. Click **OK**.

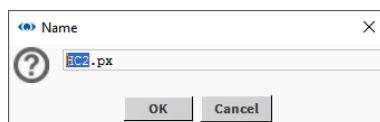
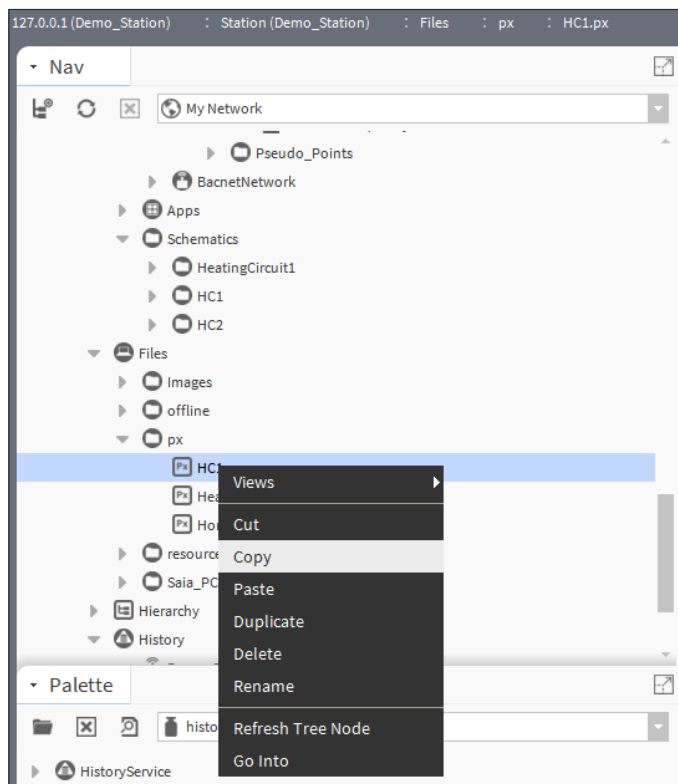
6.6.4 Reuse Operator Views

Operator Views can be reused, saving significant engineering time.

Normally Operator Views are created by using a new view attached to a folder in a centralised structure. However, as each PX Page is created in the file system in the 'px' folder, it is possible for a page to be reused by copying the file in the px folder and attaching it to the required folder.

1. Create a PX Page as required - see chapter [6.6.2 Create a PX Page](#)
2. In the **Nav** tree open **127.0.0.1 (localhost) > Station(Demo_Station) > Files > px**.
3. Right click the PX Page that is to be reused and select **Copy**.
4. Right click **px** and select **Paste**. The **Name** dialogue box is displayed.

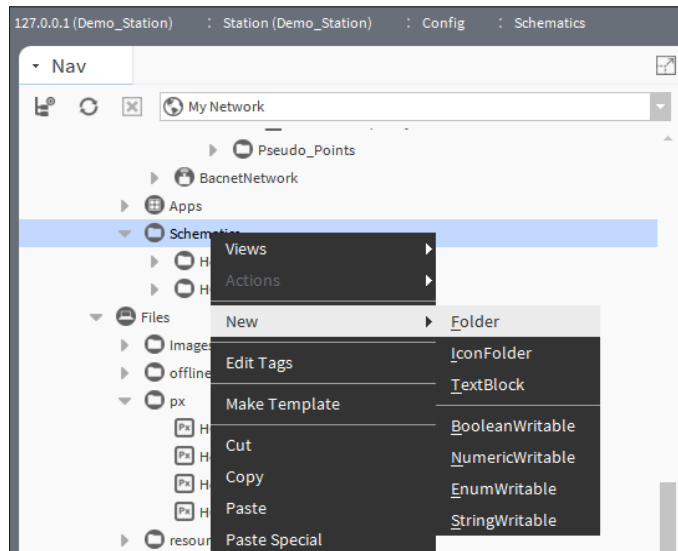
6



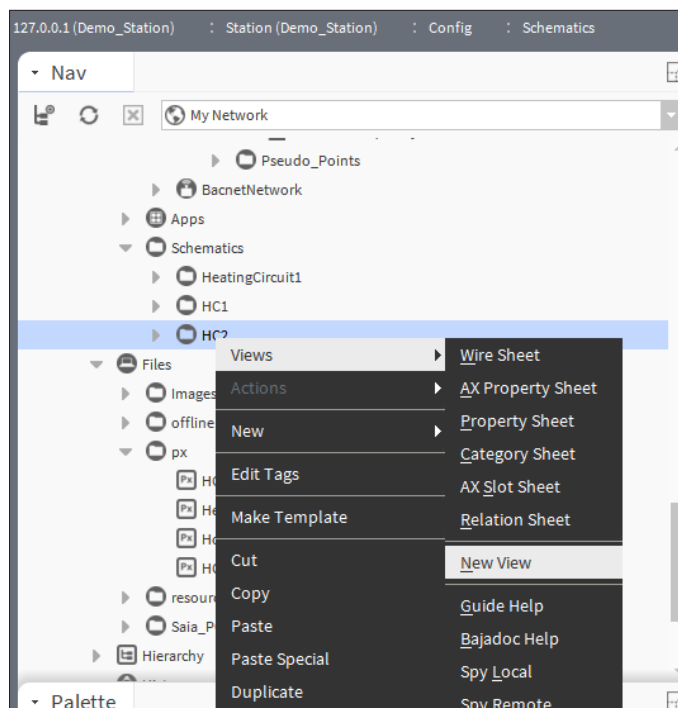
5. Enter a name for the pasted PX Page.
6. Click to **OK**. The PX Page will be added.
7. In the **Nav** tree open **127.0.0.1 (localhost) > Station(Demo_Station) > Config** and navigate to where the new PX Page is to be located.

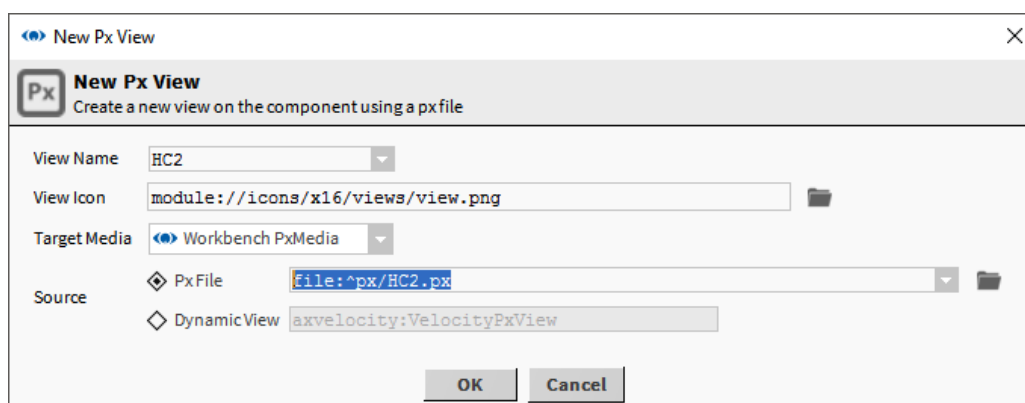
Creating Schematics (Operator Views)

8. Right click the folder and select **New> Folder**.
The **Name** dialogue box is displayed.



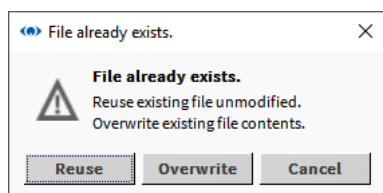
9. Specify the folder's name e.g. 'HC2'.
10. Click **OK** A folder is created.
11. Right click the folder you have just created and select **Views > New View**.
The **New Px View** dialogue box is displayed.





12. Enter the name of the page created above in the **View Name** box.

13. Click **OK** The **File already exists** dialogue box is displayed.



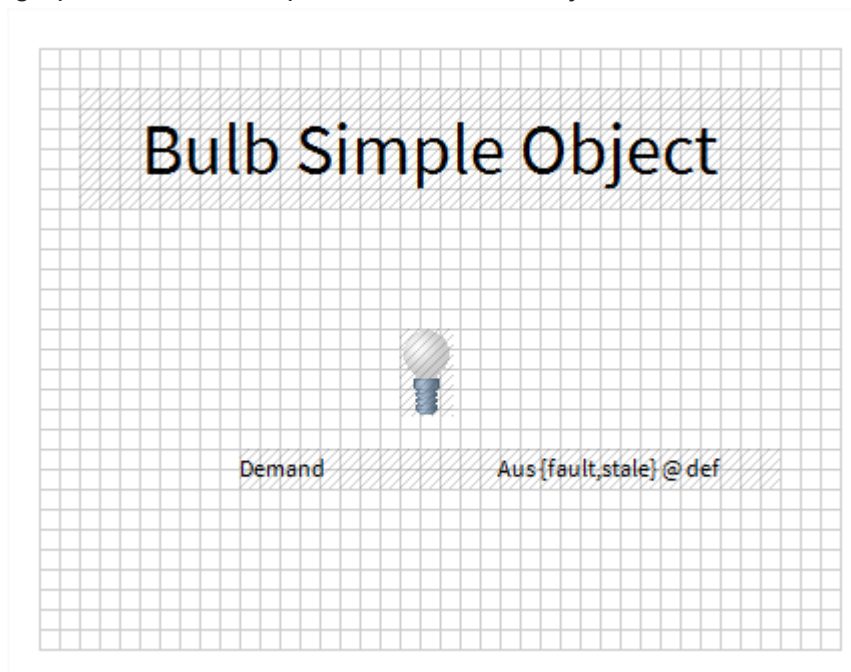
14. Click **Reuse**.

15. Edit the page as required.

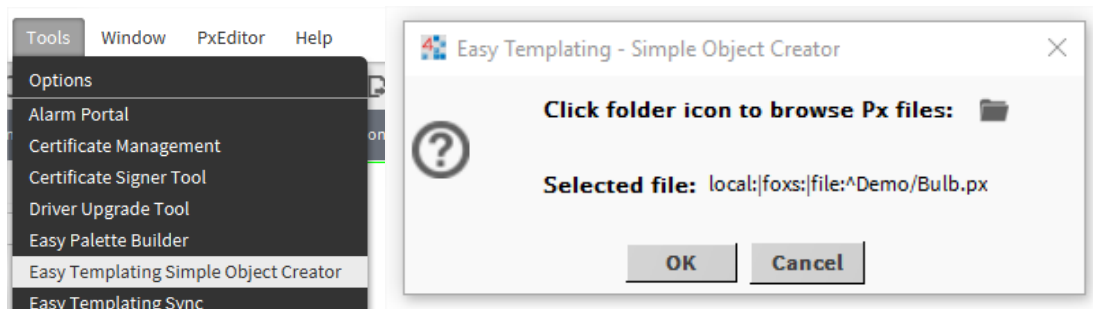
6.6.5 Easy Templating Simple Objects

6.6.5.1 Create simple objects

1. Using the standard PxEditor, design a PxPage using graphics, labels or any component you would usually use to design the page. Manually bind any points so the graphics are a live representation of the object.

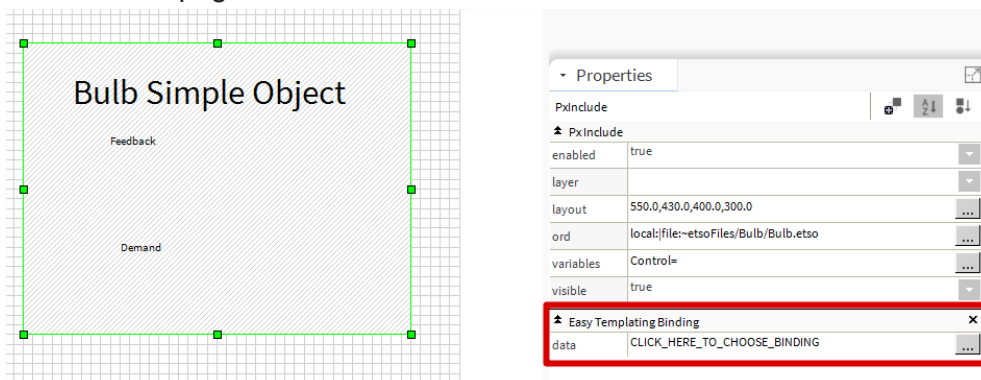


2. Using the Tools > Easy Templating Simple Object Creator, select the PxPage created in step 1, and generate the Simple Object. The new object will appear in the Easy Templating Sidebar when created – any errors will be shown in a toast popup.



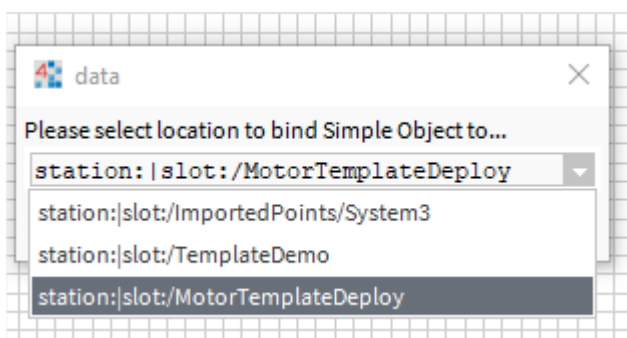
6.6.5.2 Using generated Simple Objects

1. On a new PxPage, drag one of the Simple Objects from the Easy Templating Side-bar onto the page.

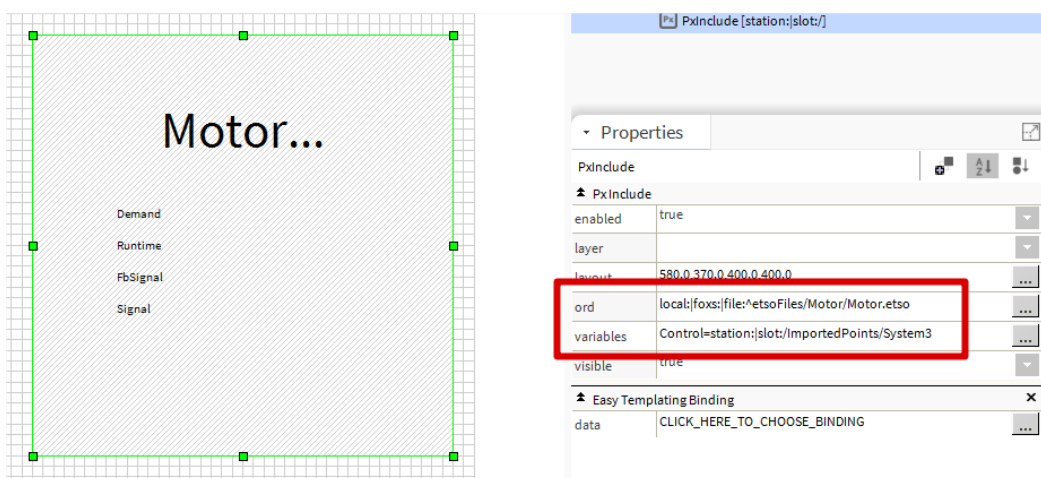


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2. Using either the Properties Sidebar, or the Properties Popup (double click), there will be a Easy Templating Binding on the Simple Object with a property reading "CLICK_HERE_TO_CHOOSE_BINDING". Clicking this will bring up matching location which meet all the points used in the Simple Object.



3. Once a selection has been made, the resources needed for the Simple Object will be copied over from the Simple Object directory, into the running station. The variable will then be set, linking the graphic to the chosen location.



4. If at any time you want to change where the Simple Object is bound to, repeat step 2 above and the variables location will be updated.

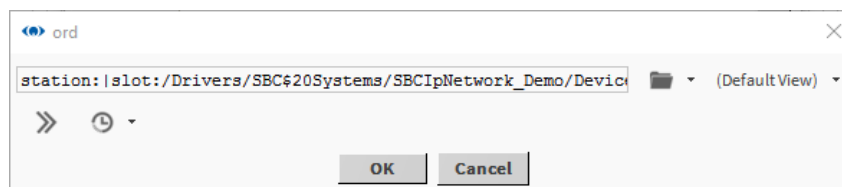
6.6.6 Reuse a Generic PX Page

Saia PCD controllers often have the same control program and the associated Operator Views are identical, but reference data from different controllers. Or it is also possible that one controller has the same control program multiple times for multiple equipment.

To reduce engineering time a PX Page with generic references to data in the controller can be re-used for multiple controllers by attaching it to the required controllers (points) in the **Nav** tree. In order to do this every reference from the PX page to the controller (points) must be made generic, and the PX Page must be associated with the controller or points folder.

Create generic PX page and make the ORDs relative:

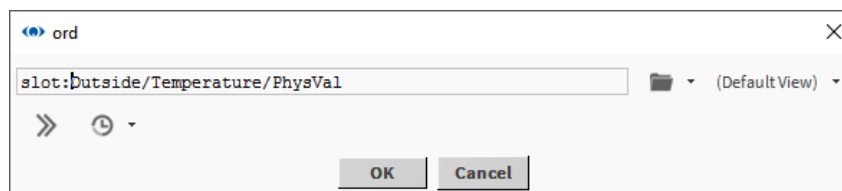
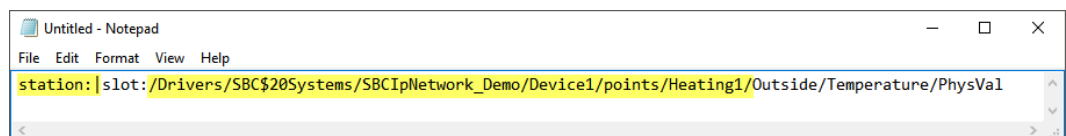
1. Create a PX Page as required - see chapter [6.6.2 Create a PX Page](#).
2. Open the **Bound Ords** pane.
3. Double click on the first ord that references a value in the controller. The **Edit ord** dialogue box is displayed.



Original **ORD** in the Editfield:

"station:|slot:/Drivers/SBC\$20Systems/SBCIpNetwork_Demo/Device1/points/Heating1/Outside/Temperature/PhysVal"

4. Edit the **ORD** to make it generic by removing references to the site, LAN, and controller. For example

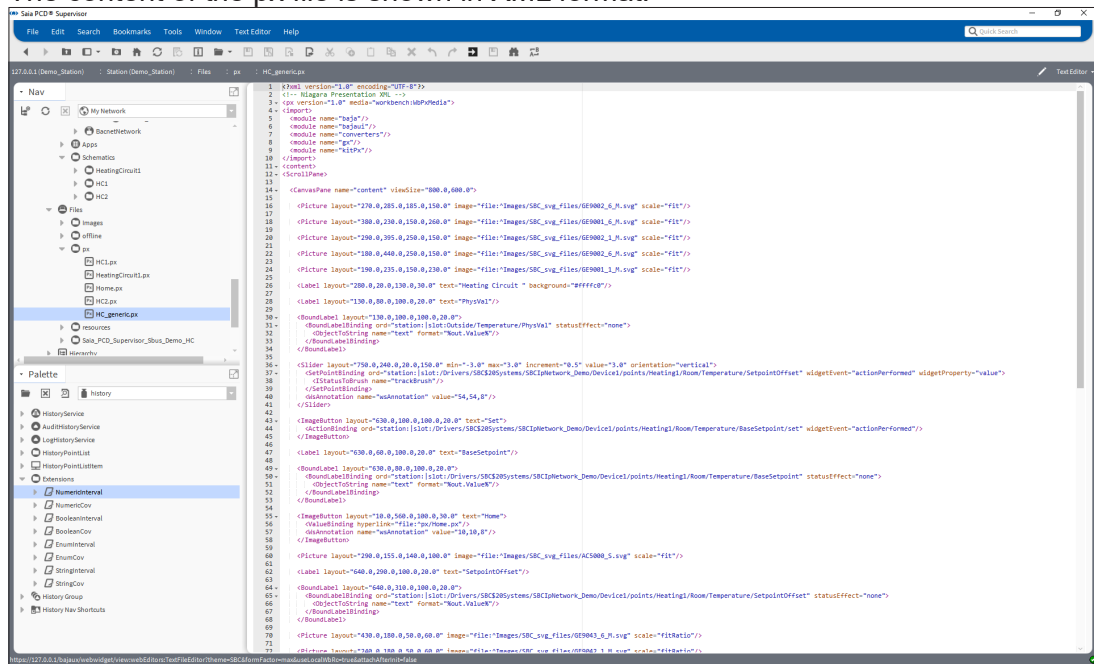


5. Click **OK**.
6. Press CTRL+S to save the page.

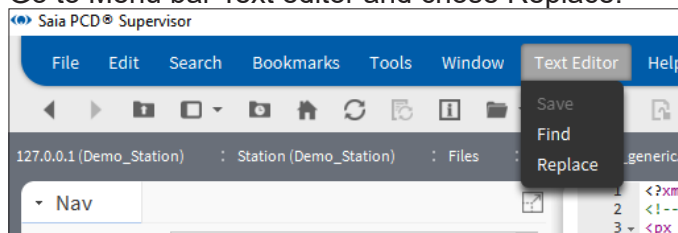
Using Text Editor to make the ORDs relative

Text Editor can be used if more ORD has to be modified or the **Relativize** command can be used.

1. Right mouse click to the page in the px folder to relativize
2. Select Views ➔ Text Editor
3. The content of the px file is shown in XML format.

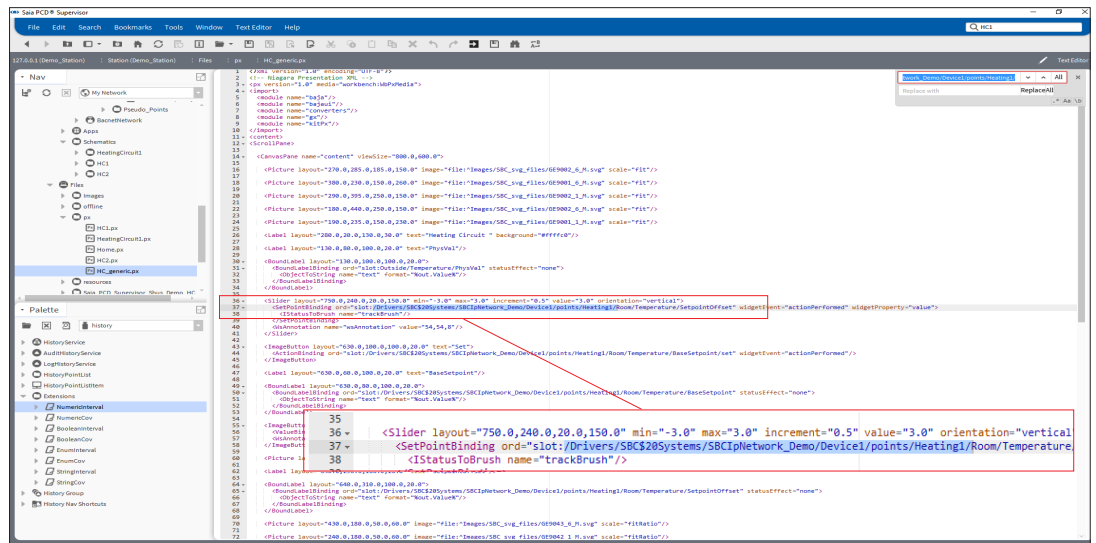


4. Go to Menu bar Text editor and chose Replace.

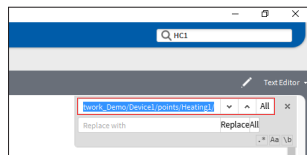


Creating Schematics (Operator Views)

- fill up the Find edit field and the Replace with edit field.

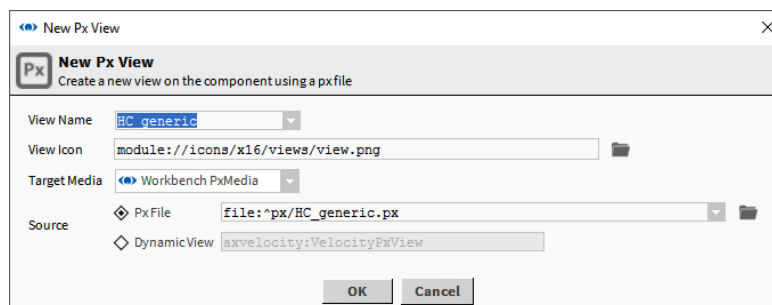


- Then click to Replace or All to replace one or all entries.

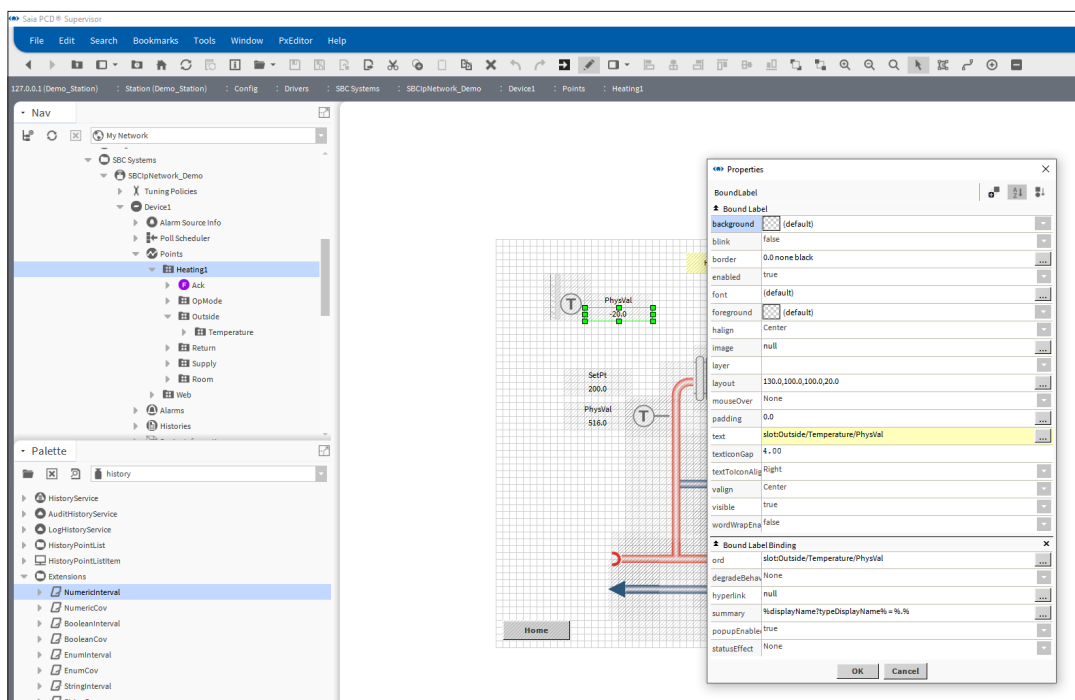
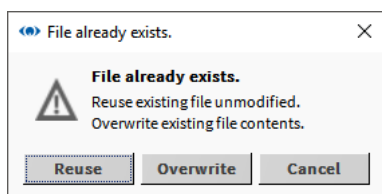


Associate a PX Page with a controller:

- Right click the PX Page that is to be reused and select **Copy**.
- Right click the **px** folder in the **Nav** tree and select **Paste**. The **Name** dialogue box is displayed.
- Enter a name for the PX Page (e.g. HC_generic).
- Click **OK**.
- In the **Nav** tree navigate to the controller that the page is to be associated.
- Right click the controller and select **Views > New View**. The **New Px View** dialogue box is displayed.



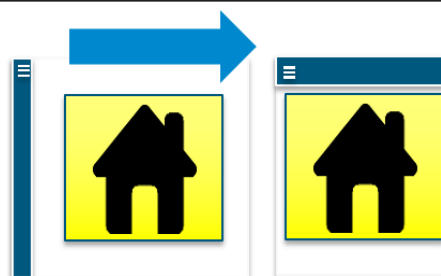
7. Enter the name of the page created above in the **View Name** box.
8. Click **OK** The **File already exists** dialogue box is displayed.



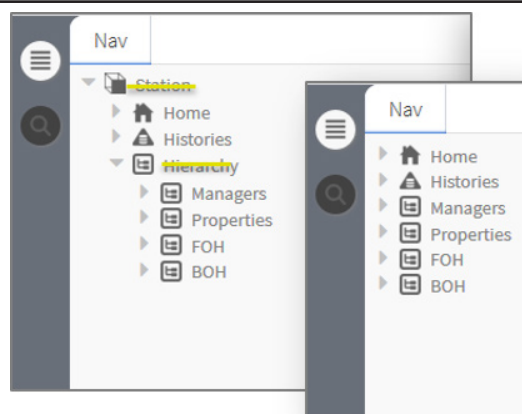
9. Click **Reuse**

6.6.7 New Px / responsiv elements

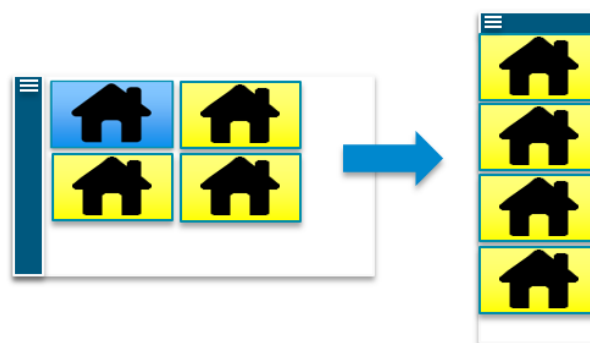
- Menu bar automatically jumps to another position



- "Station" and "Hierarchy" folders are no longer included in the browser nav tree



- New "Flow Pane" offers the possibility to define the number of columns and the pagination by yourself



6.6.8 Dashboards

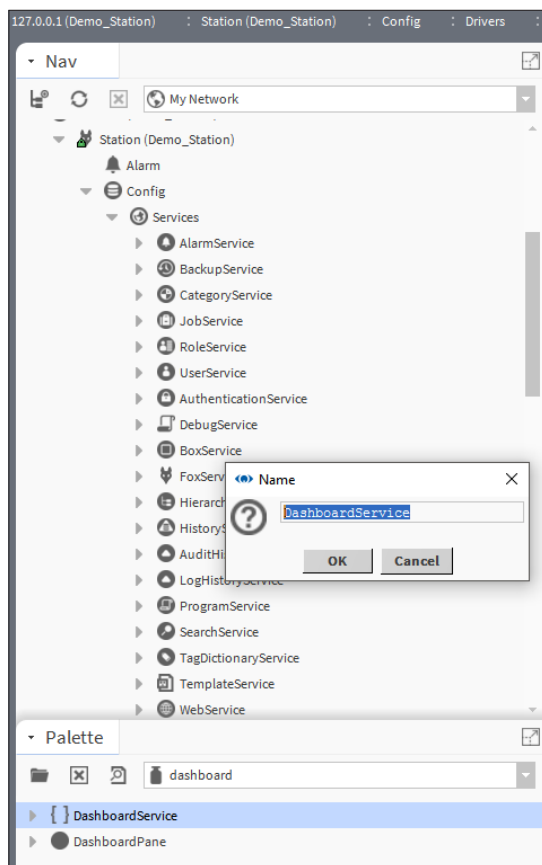
A Dashboard is an element on a PX Page which each user can customise to their requirements.

To use dashboards the Dashboard palette needs to be opened and the Dashboard Service needs to be added to the Services section of Saia PCD® Supervisor.

Dashboard panes are added to the PX view like any other Graphic, but it requires some extra configuration.

6.6.8.1 Add the Dashboard Service

1. In the **Nav** tree open **127.0.0.1(localhost)>Station(Demo_Station) > Config > Services**.
2. Open the Dashboard palette and drag *DashboardService* onto **Services**. The **Name** dialogue box is displayed.



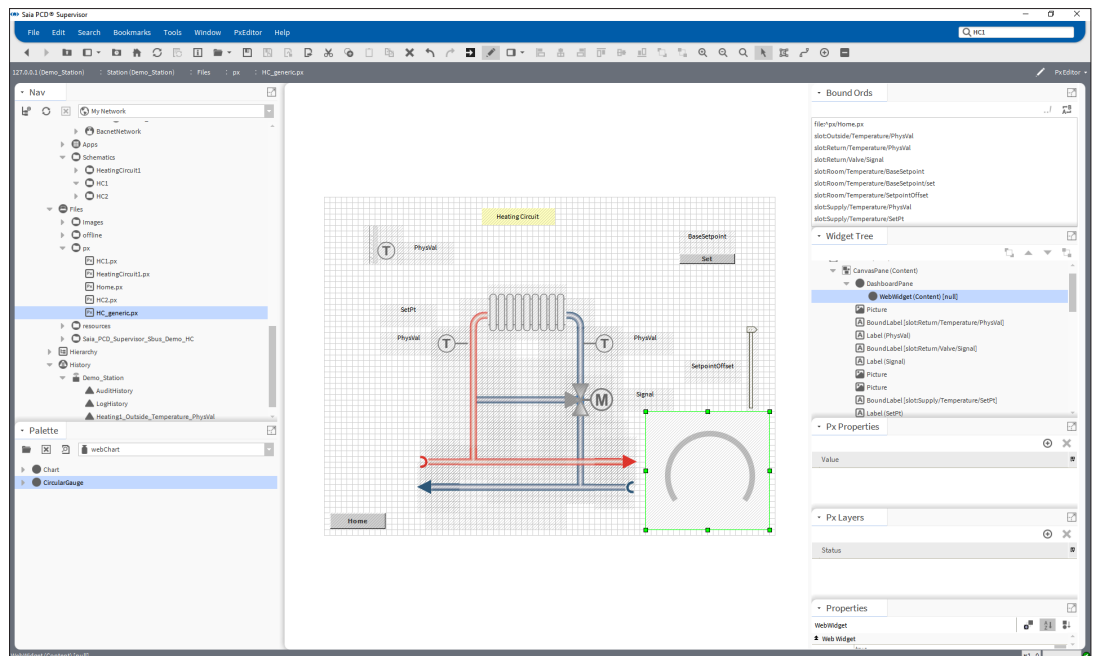
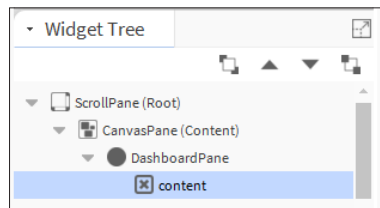
3. Click **OK**.

Set Up Saia PCD® Supervisor Users

6.6.8.2 Add a Dashboard to a PX Page

1. Create the PX Page as required.
2. Open the **Dashboard** palette and drag **DashboardPane** onto the page.
3. Open the **webChart** palette.
4. Drag either **Chart** or **Circular Gauge** onto the content of the Dashboard pane in the widget tree.

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5. Go online

6. Drag & Drop an analog value to the gouge



6.7 Set Up Saia PCD® Supervisor Users

Security of Saia PCD® Supervisor is controlled by users. The access rights of each user determines what information the user can access and what things they are able to change/configure.

To achieve this the security within Saia PCD® Supervisor is managed using three services:

1. Categories

Categories define what areas of the system a user can access.

2. Roles

Roles are used to group the categories together that are required for a particular job and to define the level of access to those categories.

E.g. a boiler engineer would only need access to the boilers but would require a high level of access. Therefore a role would be required for the engineers that gave high level access to the category that gave access to the boilers.

An energy manager would need information from all the plant but with a lower level of access. Therefore a role would be required for the energy manager that gave low level access to a number of categories covering all the plant.

Categories are assigned to roles using the Category Browser which is just another way of looking at the **Nav** tree.

3. Users

Users define which roles the user has, their password, expiry, web access view.

The 'admin' user is a superuser level access which has access to the whole system. Because of this details of the admin user's password should carefully controlled.

To configure users the required steps should be followed:

6.7.1 Configure Categories

Before creating the necessary categories it is necessary to plan what is required, you should consider the users and the distinct areas, then work out ‘Where’ needs to be granted access and create a category for each of these.

To configure categories the required steps should be followed:

6.7.1.1 Add a Category

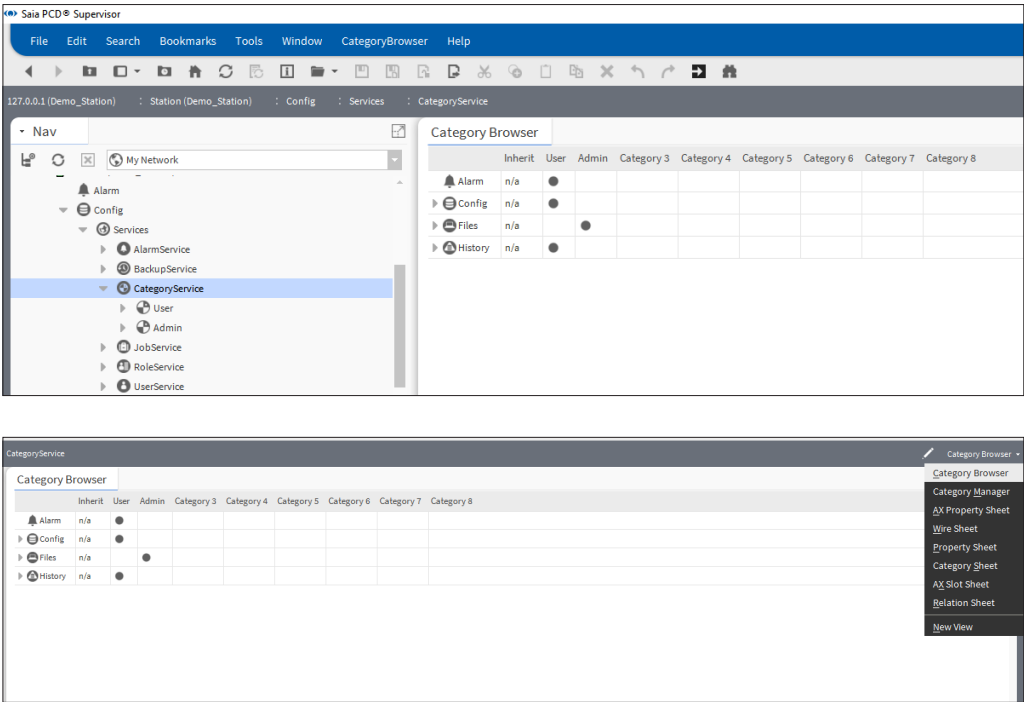
User and Admin categories are created by default and additional categories are added using the Category Manager.



The Admin category does not relate to the Admin user used to engineer Saia PCD® Supervisor.

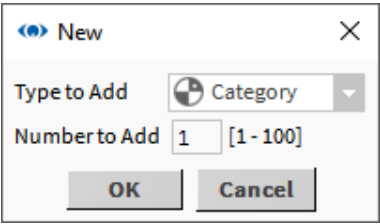
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- 1. In the **Nav** tree open **127.0.0.1(localhost) > Station(Demo_Station) > Config > Services**.
- 2. Double click **CategoryService**
The **CategoryBrowser** is displayed in the **view** pane.
- 3. Click the view changer box and select **Category Manager**.
The **Category Manager** is displayed in the **view** pane.

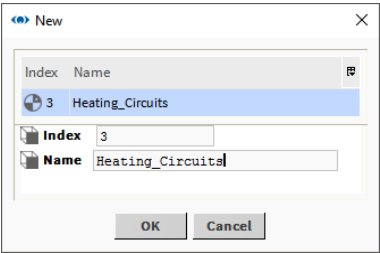


Set Up Saia PCD® Supervisor Users

4. Click **New** The **New** dialogue box is displayed.



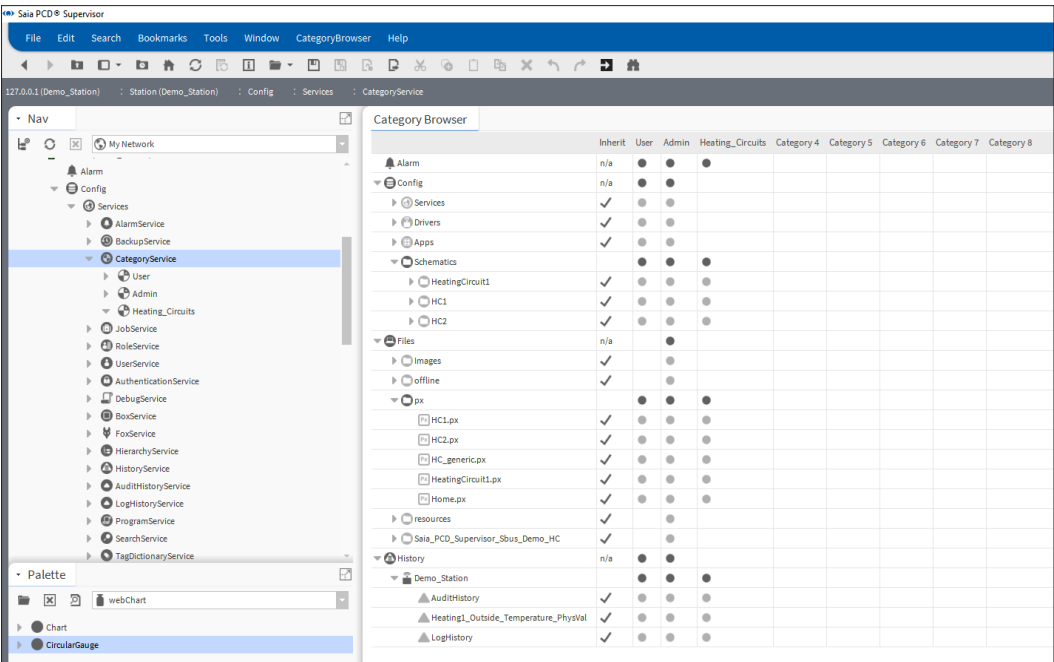
5. Click **OK** The dialogue box changes.



6. Enter the name of the category in the **Name** box.
7. Click **OK**.

6.7.1.2 Set up the Categories

1. In the **Nav** tree open **127.0.0.1(localhost) > Station(Demo_Station) > Config > Services**.
2. Double click **CategoryService**
The **CategoryBrowser** is displayed in the **view** pane.



- Grant each category access to the required areas of the system by clicking the required rows in the column for each category. To grant access to elements lower in the hierarchy expand the appropriate row and click.



Categories are a parent child system so selecting the top level will grant access to every child element under that level.

The inherit feature enables the access of the User category to be copied to another category. If there is a tick on the **Inherit** column for a row when that row is selected for another category the access from the User category is copied to the other category and **removed** from the User category. To reinstate access to the User category click the row in the **User** column.



Due to this it is potentially easy to accidentally remove rights.

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A dot in a cell indicates access to that specific area. If the dot is black the access will not be affected by the **Inherit** tick, if it is grey it will be affected.

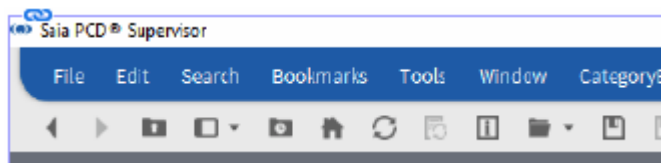
It is recommended that the Admin category is given the same access in the **Config** row as the User category i.e. leave the **Inherit** rows in the **Config** row as they are. For the other rows (Alarm, Files, and History) the **Inherit** rows can be unticked to enable you to specify the access more easily.



By default the 'Admin' and 'New' categories will have no access.

It is recommended that the 'Admin' category has access to some of the more complex areas of Saia PCD® Supervisor but not the whole of Saia PCD® Supervisor.

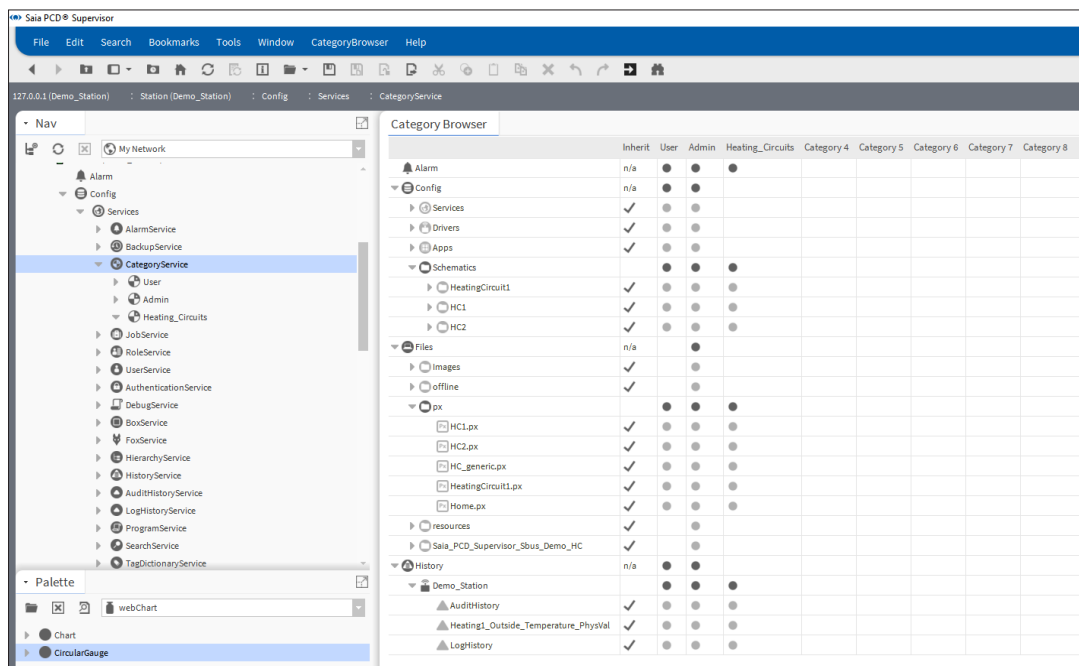
- Click .



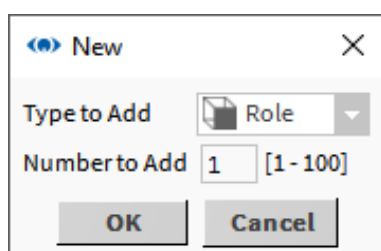
6.7.2 Configure Roles

Roles use the categories to define what areas of the system can be accessed. They can have multiple categories assigned. It is best to configure Roles with job roles in mind rather than specific areas like categories.

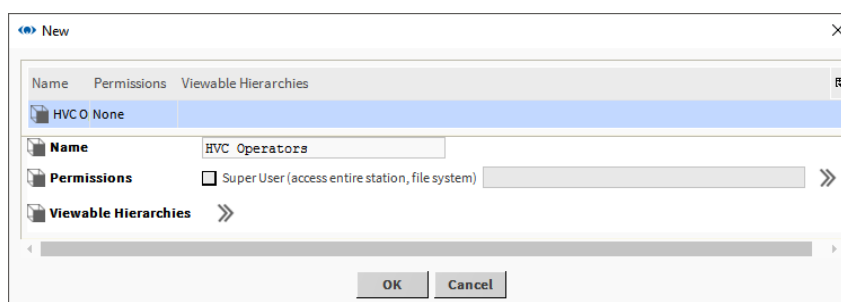
1. In the **Nav** tree open **127.0.0.1(localhost) > Station(Demo_Station) > Config > Services**.
2. Double click **RoleService** The **Role Manager** is displayed in the **view** pane.



3. Click **New** The **New** dialogue box is displayed.



4. Click **OK** The dialogue box changes.





It is recommended that the SuperUser (access entire station, file system) check box is NOT selected.

5. Click >> next to **Permissions**. The **Permissions** dialogue box is displayed.

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6. Specify the permissions for each category by clicking the appropriate column for each category.

When you assign permissions, higher-level permissions (green check marks) automatically include the lower level ones (grey check marks). For example, if you enable admin level write (W), the system automatically enables admin level read (R), as well as operator level read and write (RW).

The first column, **Category**, lists the groups to which you may grant permission. The **Operator** and **Admin** columns relate to the permissions level configured on each component. Below these headings are the cells to use for assigning one of three permissions to each category:

- R** Read allows the user to view the object.
- W** Write allows the user to change the object.
- I** Invoke allows the user to initiate an action related to the object.

Depending on how the permission level is set on the role, six permissions are derived:

Permission	Description
To allow a user to view operator level information	Check the Operator config flag on the slot and select the Operator R column on the permission map.
To allow a user to modify operator level information (if it is not read only)	Check the Operator config flag on the slot and select the Operator W column on the permission map.
To allow the user to view and invoke operator-level operations (actions)	Check the Operator config flag on the slot and select the Operator I column on the permission map
To allow the user to view admin level information	Leave the Operator config flag unchecked on the slot and select the Admin R column on the permission map.
To allow the user to modify admin level information (if it is not read only)	Leave the Operator config flag unchecked on the slot and select the Admin W column on the permission map.
To allow the user to view and invoke admin-level operations (actions)	Leave the Operator config flag unchecked on the slot and select the Admin I column on the permission map.

7. Click **OK**.
8. Click **OK** A confirmation dialogue box is displayed.
9. Click **Yes**.

6.7.3 Configure Users

To configure users the required steps should be followed:

see chapter [6.7.4 Add Users](#) [6.7.4](#)

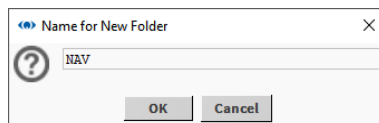
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6.7.3.1 Configure NAV Files

NAV files are used to define the PX Page that is displayed when a user logs in. Each user must have a NAV file assigned. It is recommend that a folder is created to store all the NAV files.

6.7.3.2 Create a Folder for the NAV Files

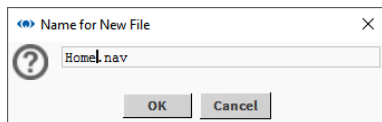
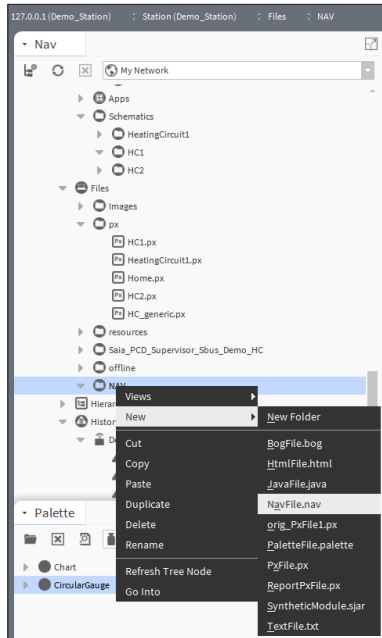
1. Right click **Files** and select **New> Folder**. The **Name** dialogue box is displayed.



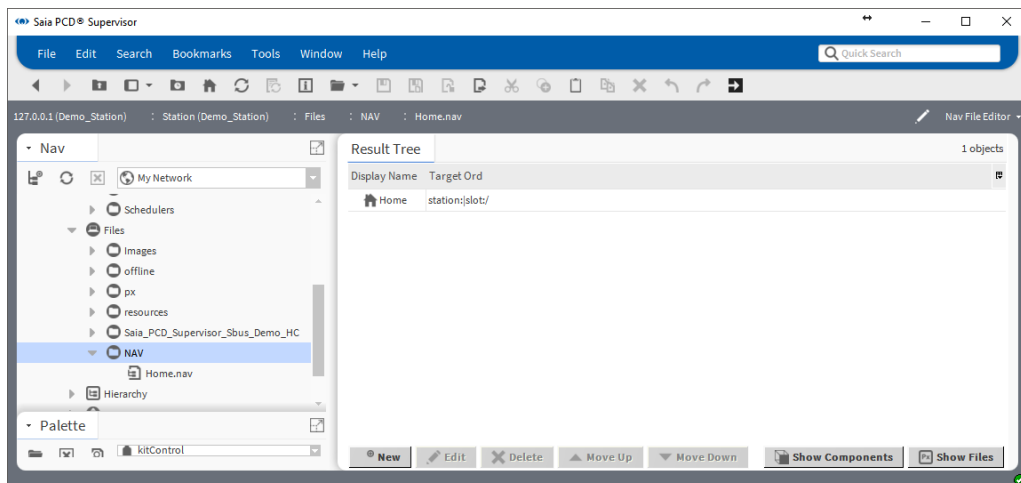
2. Specify the folders's name e.g. 'NAV'.
3. Click **OK**.

6.7.3.3 Create NAV Files

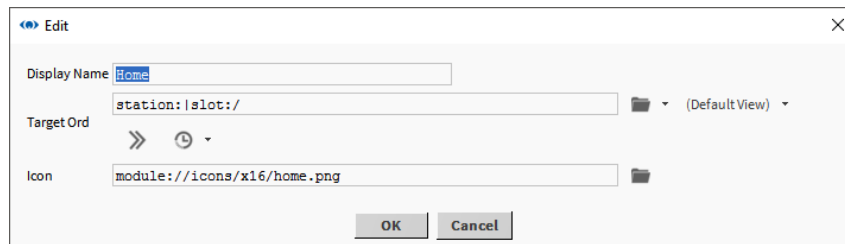
1. In the **Nav** tree open **127.0.0.1(localhost) > Station(Demo_Station) > Config** and navigate to where the NAV file is to be located
2. Right click the folder and select **New> NavFile.nav**. The **Name** dialogue box is displayed.



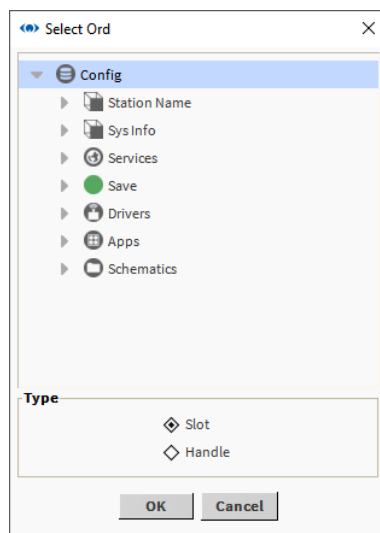
3. Specify the file's name e.g. 'Home'.
4. Click **OK** The file is created.
5. Open the folder containing the NAV file.
6. Double click the NAV file. The **Nav File Editor** is displayed in the view pane.



7. Click **Show Components**.
8. In the **Result Tree** double click to the NAV file. The **Edit** dialogue box is displayed.



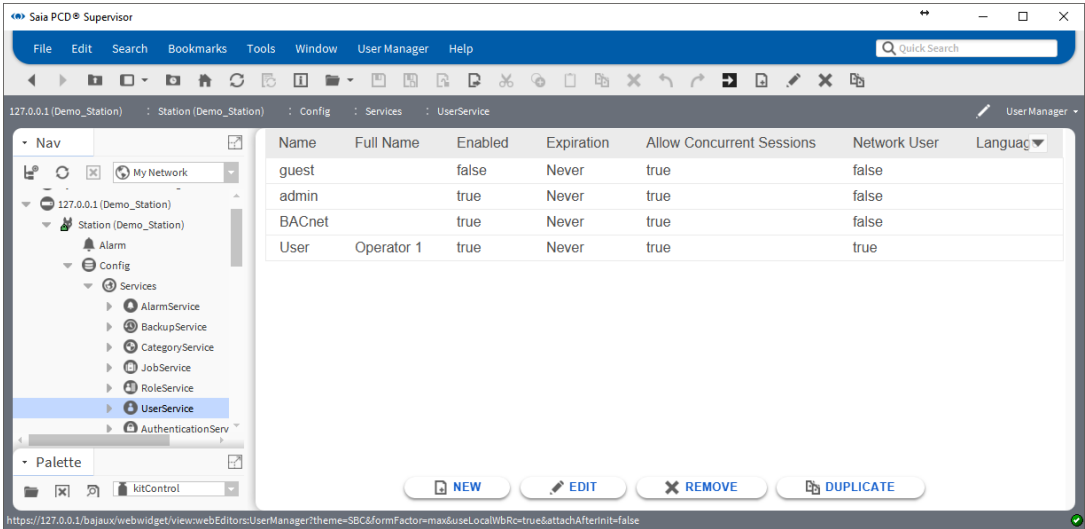
9. Click  next to **DefaultView**. The **Select Ord** dialogue box is displayed.



10. Navigate to the PX Page that is to be referenced by the NAV page and select it.
11. Click **OK**.
12. Click **OK**.

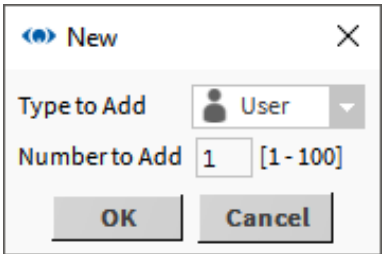
6.7.4 Add Users

- 1. In the **Nav** tree open **127.0.0.1(localhost) > Station(Demo_Station) > Config > Services**.
- 2. Right click **UserService** and select **Views > AX User Manager**. The **Ax User Manager** is displayed in the **view** pane.



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- 3. Click **New**. The **New** dialogue box is displayed.



Several users can be added at the same time. However, it is recommended to add users individually to prevent confusion when specifying passwords.

- 4. Click **OK** The dialogue box changes.

5. Double click of the new user

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The screenshot shows the 'Property Sheet' for a user named 'User1 (User)'. The sheet is divided into several sections with expandable/collapsible icons. The visible fields and their values are:

- Full Name:** Operator 1
- Enabled:** true
- Expiration:** Never Expires (Expires On: 24-Jul-2017 11:59 PM CEST)
- Lock Out:** false
- Language:** (empty)
- Email:** (empty)
- Password:** (masked with dots)
- Confirm:** (masked with dots)
- Authenticator:** Force Reset At Next Login: false
- Facets:** Time Format: (default), Unit Conversion: None
- Nav File:** null
- Prototype Name:** defaultPrototype
- Network User:** true
- Cell Phone Number:** (empty)
- Authentication Scheme Name:** DigestScheme
- Roles:** admin, Engineer, Energy manager
- Allow Concurrent Sessions:** true
- Default Web Profile:** Type: HTML5 HxProfile, Hx Theme: SBC, Enable HxWorkbench Views: Yes, Enable Nav Tree Side Bar: Yes, Enable Search Side Bar: Yes, Enable Palette Side Bar: Yes, Enable Nav File Tree: Yes, Enable Config Tree: Yes, Enable Files Tree: Yes, Enable Histories Tree: Yes, Enable Hierarchies Tree: Yes, Enable View Selection: Yes
- Mobile Web Profile:** Mobile Nav File: null, Type: Default HxProfile, Hx Theme: SBC
- User Pin Level:** Galileo User Pin

At the bottom right, there are 'Refresh' and 'Save' buttons.

6. Enter the user's username in the **Name** box.7. Enter the users full name in the **Full Name** box.8. If the user is to expire on a specific date select the **Expires On** option and specify the required date.9. Select the roles for the user in the **Roles** box.10. Enter the user's password in the **Password** box.

Passwords must be 10 digits alpha numeric with one or more capital letter.

11. Re-enter the user's password in the **Confirm** box.

12. To force the user to change the password when they next login set **Force Reset At Next Login** to *true*.
13. To force the user to change the password on a specific date, select the **Expires On** option and specify the required date.
14. If the password is to expire on a specific date select the **Expires On** option and specify the required date.
15. Specify the NAV file that is linked to the PX Page that is to be displayed when the user logs in in the **Nav** file box.
16. Specify what happens when a user logs in from a web browser in the **Default Web Profile** box.
17. In the **Type** box select the required option.
18. It is recommend that you select *HTML5 Hx Profile* as it will render the graphics in a HTML5 format avoiding Java issues.
19. In the **Hx Theme** box select "*SBC*".
20. Select **Yes** or **No** to specify whether the user has access to the following features:
 - Hx workbench views
 - Nav tree side bar
 - search side bar
 - palette side bar
 - Nav file tree
 - Config tree
 - Files tree
 - Histories tree
 - Hierarchies tree
21. Click **OK**.

6.8 Backup & Restore

To ensure that the Saia PCD® Supervisor configuration can be restored in the event of hardware or software failure it is recommended that the Saia PCD® Supervisor station is backed up. To reduce the risk it is recommended that the backup is performed in two ways:



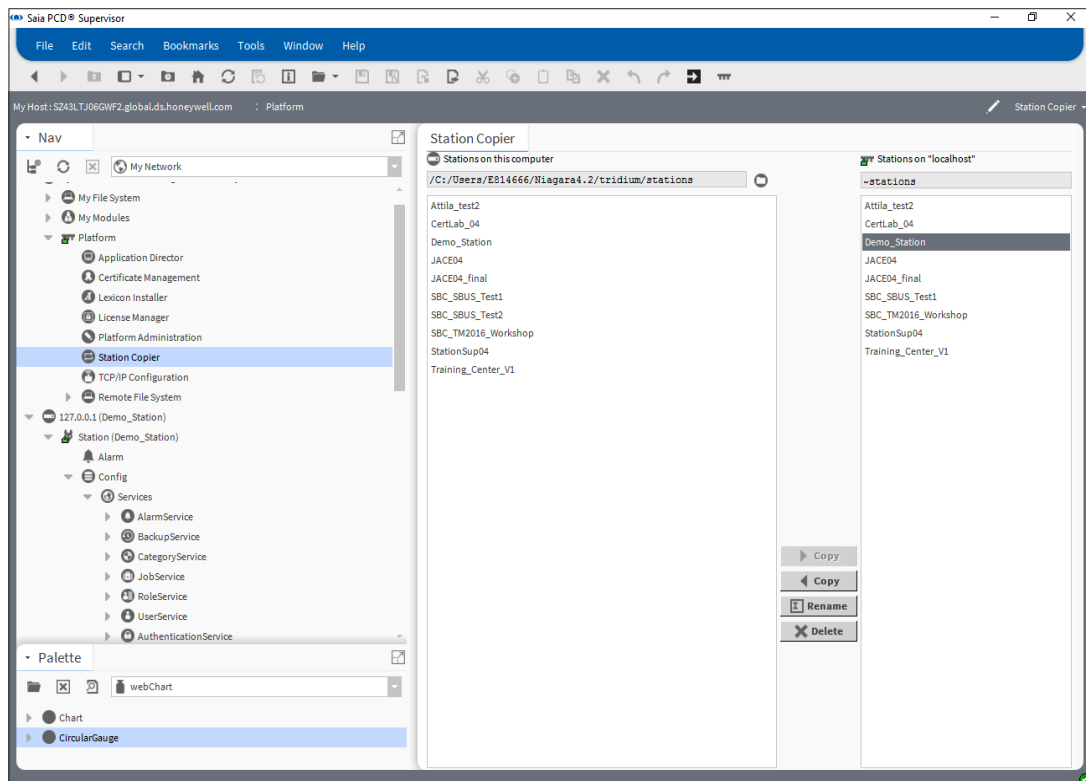
It is also important to ensure that the passphrase entered during the Saia PCD® Supervisor installation, platform password (normally PC login credentials) and the password for the 'admin' user (specified when creating the Saia PCD® Supervisor station) are available for use during any restore procedure.

6.8.1 Backup the Configuration

Using the Station Copier

The Saia PCD® Supervisor configuration can be copied from the localhost back to the local computer. This is not a true back up but it is useful as it makes the configuration available offline and thus reusable in future Saia PCD® Supervisor installations.

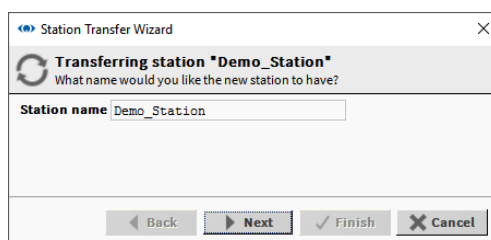
1. In the **Nav** tree right-click on **Platform** and select **Views > Station Copier**. The **Station Copier** is displayed in the view pane.



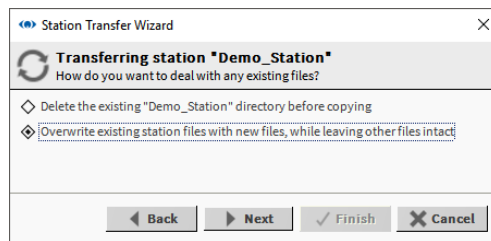
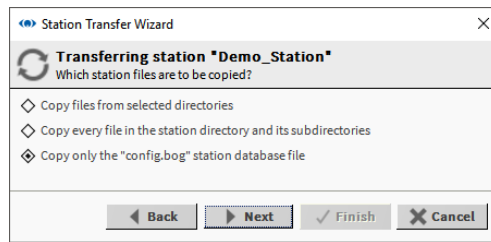
2. In the right-hand column (Stations on “localhost”) click the station to be copied (e.g. Saia PCD® Supervisor).

The Localhost is the live version of Saia PCD® Supervisor. Copying from left to right will overwrite the live version with an older PC version. **To copy the live version to the PC it is RIGHT to LEFT**

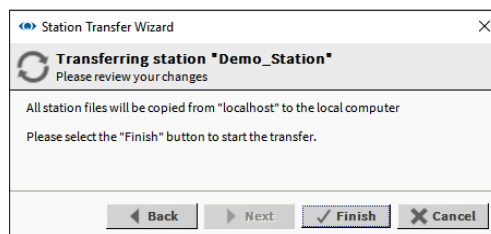
3. Click **< Copy**. The **Station Transfer Wizard** is displayed.



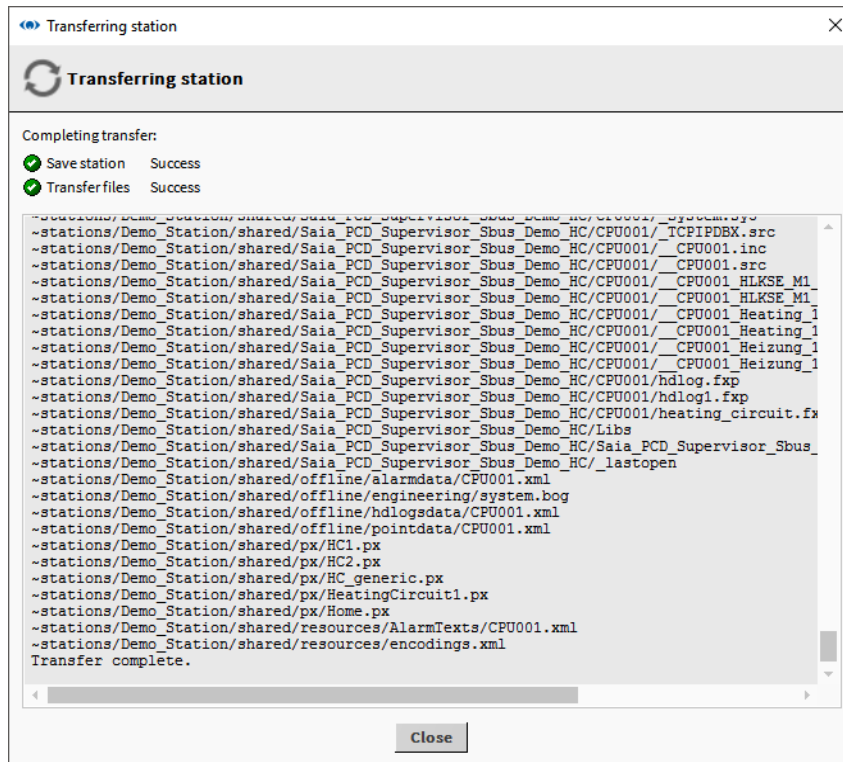
4. Enter the name of the backup copy (e.g. Saia PCD® Supervisor Backup).
5. Click **Next**.



6. Select **Copy every file in the station directory and its subdirectories**.
7. Click **Next**.
8. If the station already exists in the destination you will be prompted to delete the entire station, or just overwrite duplicate files. Select the required option and click **Next**.



9. Click **Finish** to start copying the files. Once the copy is complete the following dialogue box is displayed.



6

10. Click **Close**.
11. In the **Nav** tree open **My File System** and navigate to
C:/Users/MyUserName/Niagara4.7/Saia Burgess Controls/stations
12. Right-click the required station folder and select **Copy**.
13. Navigate to the required storage location (e.g. a plug-in memory device).
14. Right-click and select **Paste**.

6.8.2 Using the Backup Service

Using the Backup Service the backup file has not only the content of the station but also the default settings of the Workbench where the station was created and backed up.

The user can as well specify, if the alarm or histories database should be a part of the backup .dist file.

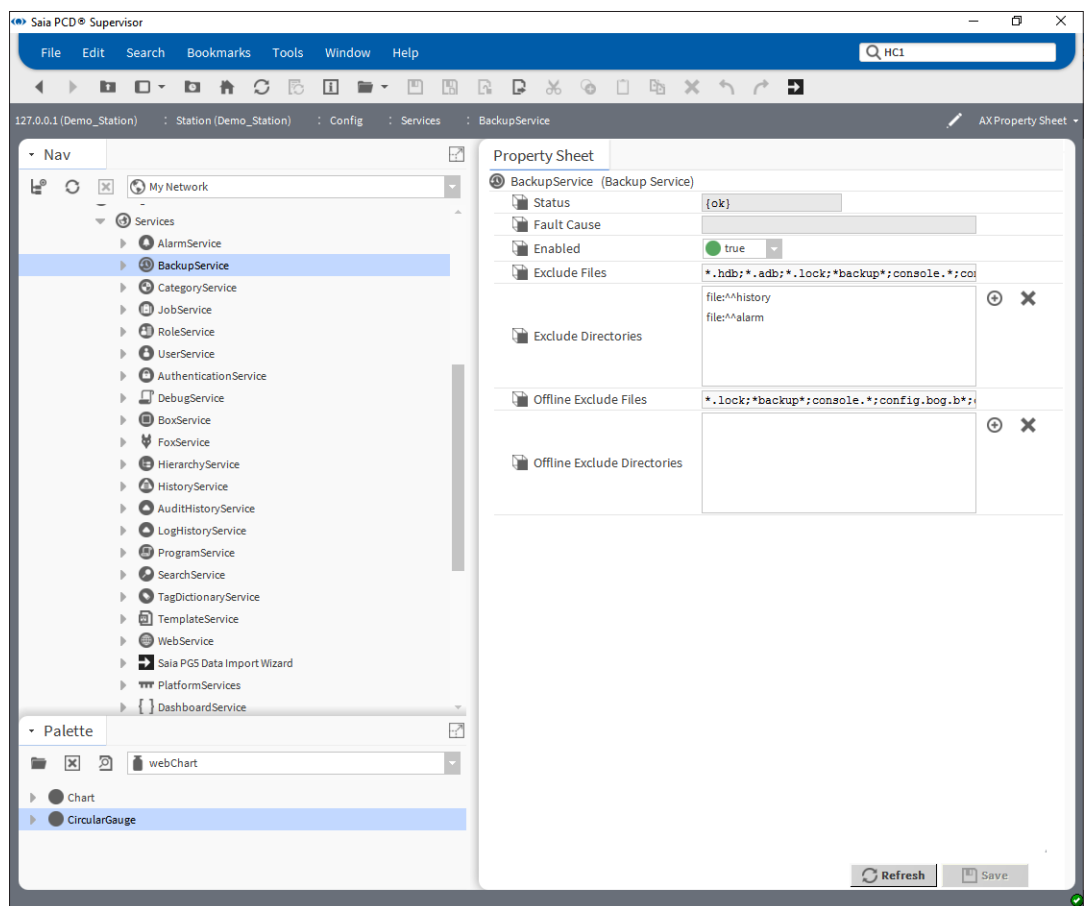
Doing a station backup, will prevent data-lose of the running station in case of hardware or system failure.

Station backups are stored as '.dist' files in

C:/Users/MyUserName/Niagara4.7/Saia Burgess Controls/backups

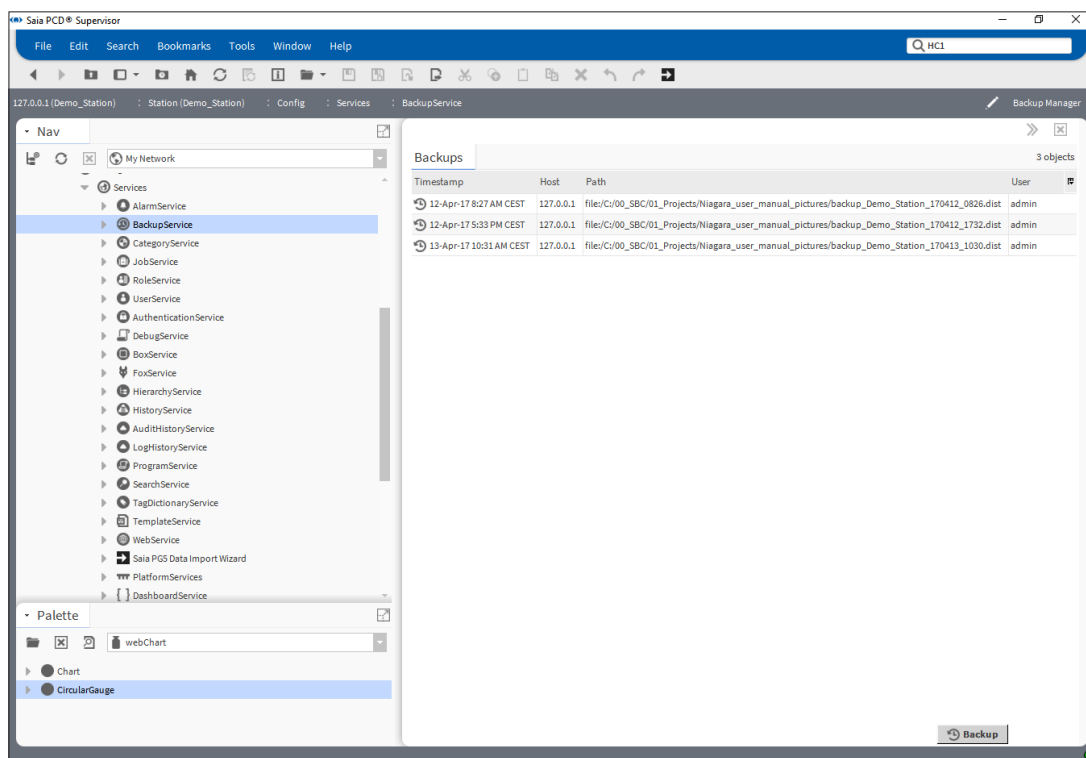
6

1. In the **Nav** tree open **Station > Config > Services**.
2. Right click **BackupServices** and choose **Views > Ax Property Sheet**.

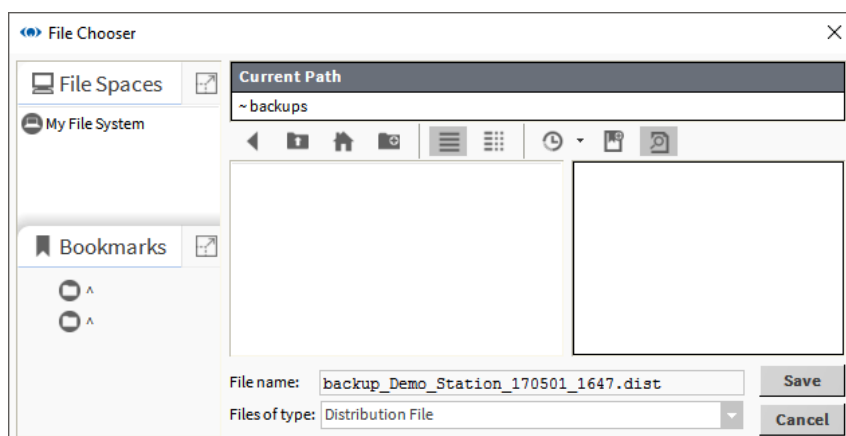


3. In the **Exclude Directories** box click *file:^history* and click **X**.
4. In the **Exclude Directories** box click *file:^alarm* and click **X**.
5. Click **Save**.

6. In the **Nav** tree double click **BackupService**. The **Backup Manager** is displayed in the view pane.



7. Click **Backup**. The **File Chooser** dialogue is displayed.



8. If required rename the backup in the **File name** box.
9. Click **Save**.
10. Ensure the backup file is stored securely.

6.8.3 Restore the Configuration

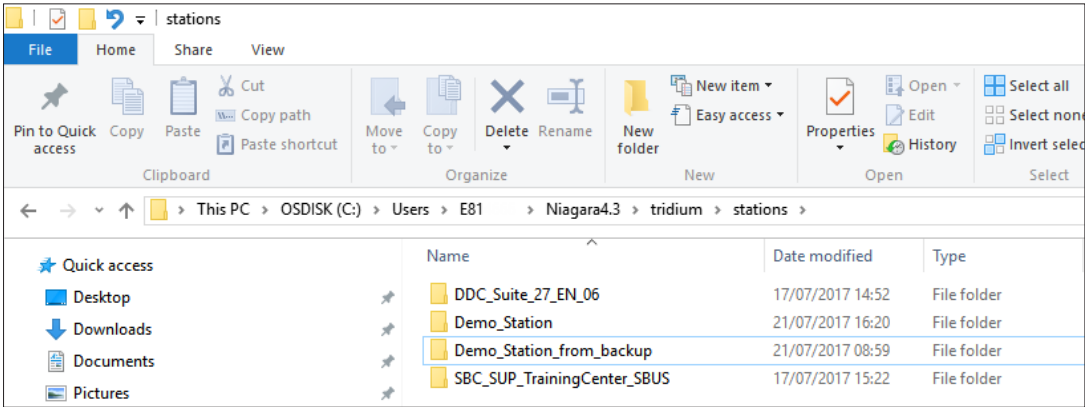
6.8.3.1 Restore Using the Station Copier

To restore a station copy follow the procedure described in chapter [6.8.1 Backup the Configuration](#) but copy the station from left to right.

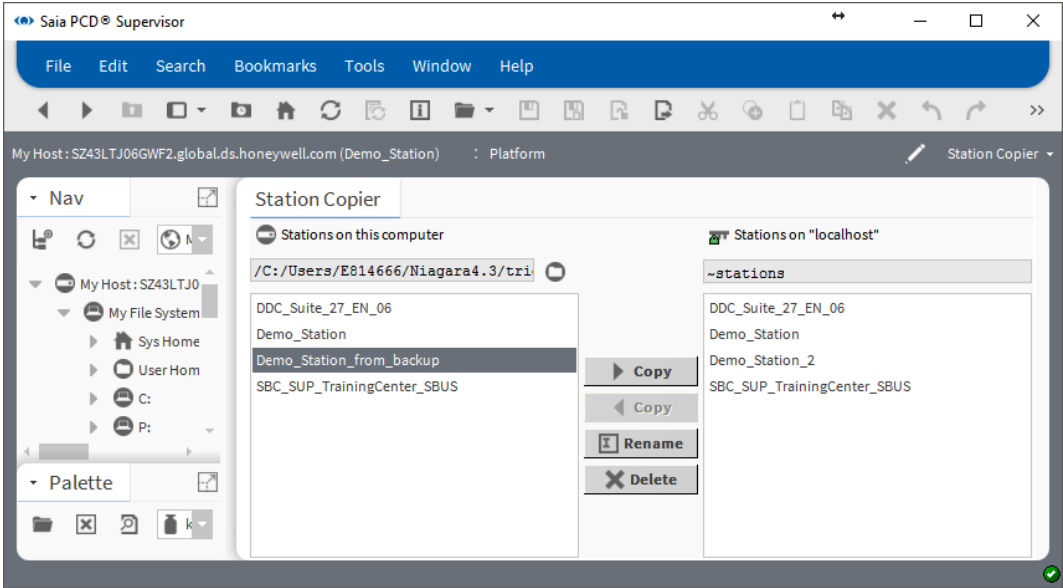
6.8.3.2 Restore the Station Using the dist file

- 1. Rename the backup.dist file to a zip by renaming the extension and unzip it.
- 2. Copy the unzipped station to the User home station folder.

6



- 3. Use the station copier to copy it to the daemon home and start.



6.9 SBC S-BUS driver in Optimizer Advanced Controller

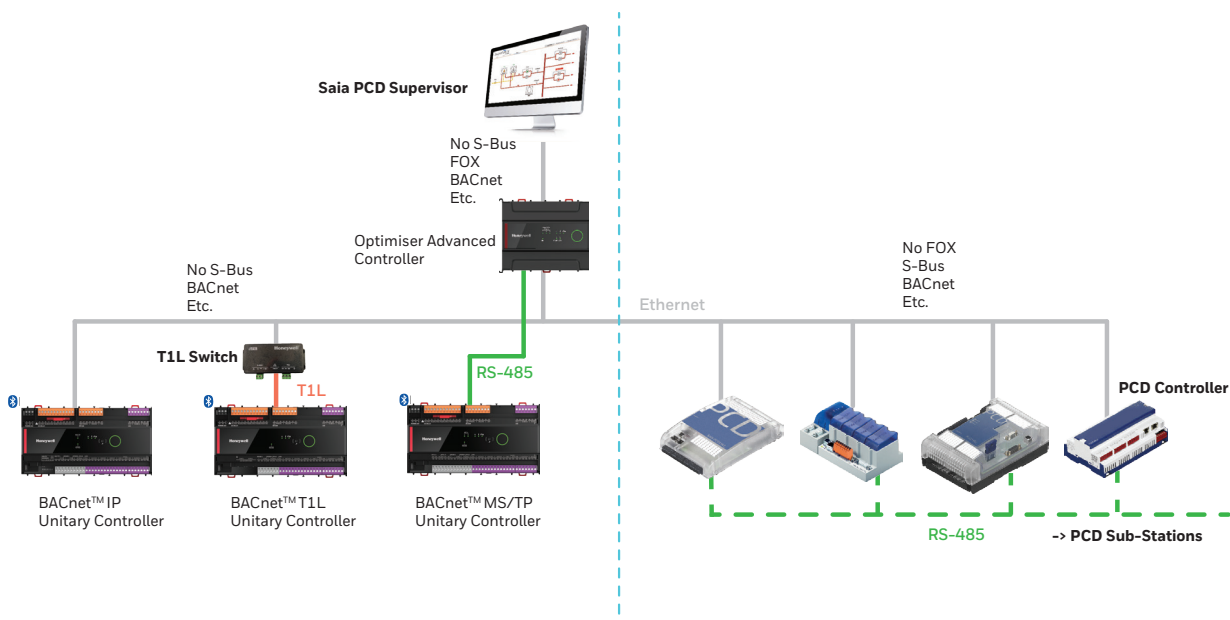
The driver support within the Optimizer Advanced Controller is positioned with respect to the SBC portfolio. It is intended to provide means for the SBC partners to migrate the existing PCD (Building Management) to a Niagara based Optimizer Solution which establishes a horizontal integrated solution. This will use the existing S-BUS- IP within the Advanced Controller without any functional changes. Within the existing S-BUS driver, the Advanced Controller can act as the S-Bus Primary device, which means it can read and write from any PCD that has ethernet connection. This also allows the Advanced Controller to be integrated into the existing SBC PCD® networks.

The image below is the representation of the horizontal integration of the Advanced Controller with the existing Saia PCD® Supervisor.

6.9.1 System Architecture

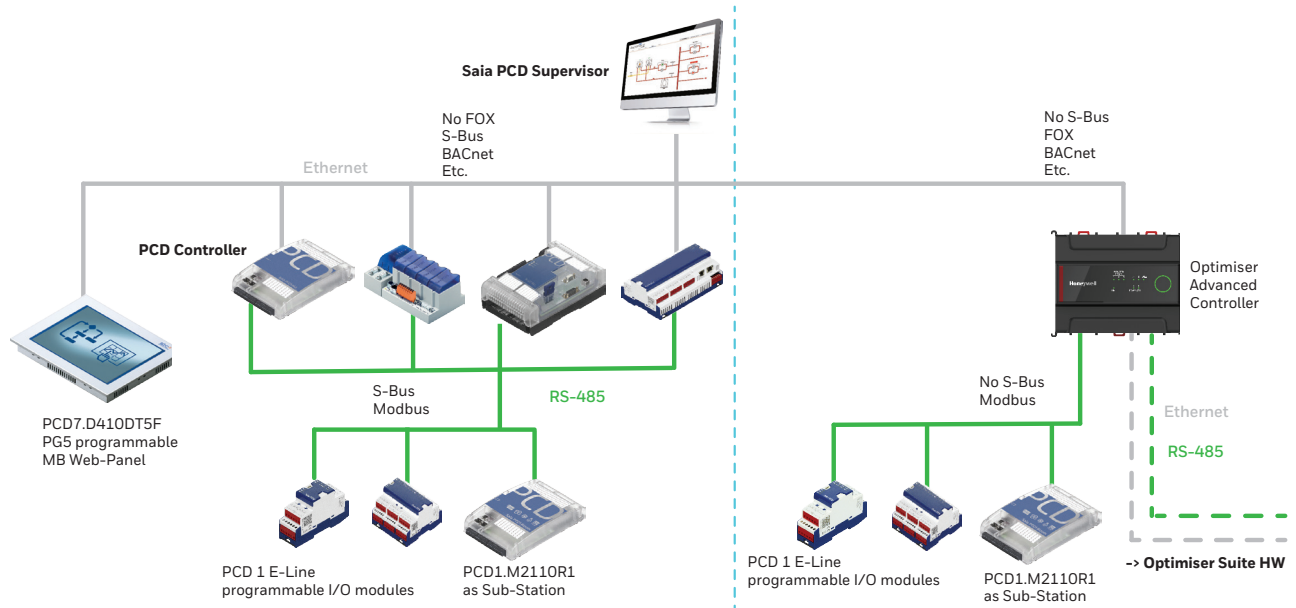
6.9.1.1 Focus on Enhancing Connectivity with Optimizer Suite Hardware

6



Ethernet communication to Sub-PCD Stations over RS-485 which are connected behind a gateway.

6.9.1.2 Focus on Enhancing Connectivity with Saia PCD Hardware



Ethernet communication to Sub-PCD Stations over RS-485 which are connected behind a gateway.

6.9.2 Optimizer Advanced Controller communication with existing PCD.

6.9.2.1 Prerequisites

1. The user should ensure that the below listed modules/software version is available before starting the Advanced Controller integration with SBC.
 - List of compatible modules/software
 - SBC PCD Workbench
 - SBC Supervisor Package
2. The first step is to configure and commission the Advanced Controller, that needs to communicate with the existing SBC PCD network. This controller needs to be in the same Subnet or LAN as that of the Saia PCD® Supervisor. In case otherwise, the firewall needs to be opened between different Subnets.
3. Follow the below listed procedure to configure the Optimiser Advanced Controller:
 - To install the Advanced Controller, refer the Mounting Instructions document (31-00553).
 - Connect the power Supply.
 - Connect the controller to workbench.
 - Ensure that the supported modules are available in the workbench
 - Copy the station/Create a station/Open a station.



Refer to the *Advanced Installation Instruction and Commissioning Guide - 31-00584* for following the above listed procedures.

- 4. Once the controller is completely set up the S-BUS station needs to be created in the application director, and it should be up and running. Please refer to point 6.1.3 for creating the station.
- 5. Under this station the S-Bus IP driver needs to be added. Lastly all the S-Bus devices need to be added under this driver to start the communication with the Optimizer Advanced Controller.

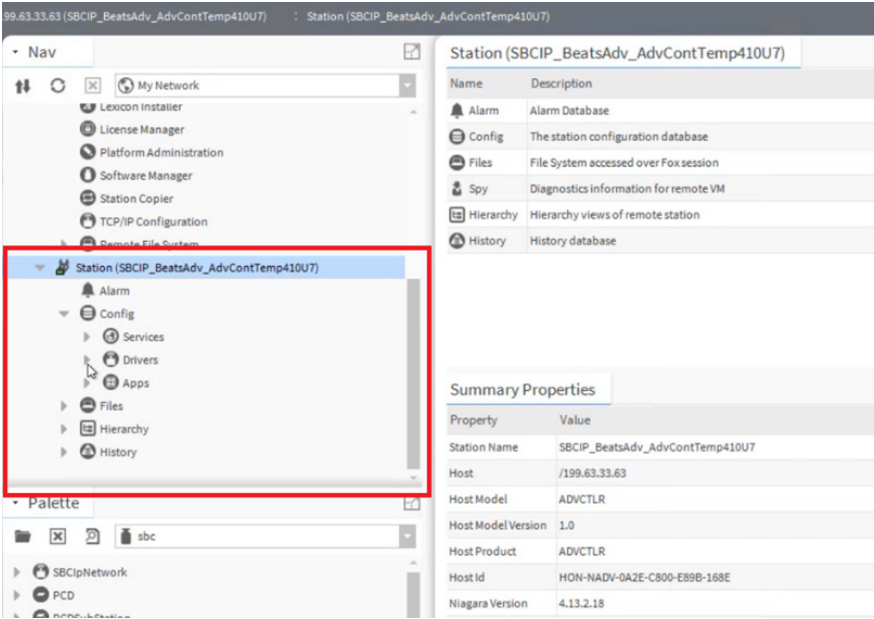
6.9.3 Procedure to add the S-BUS IP driver:

- 1. This procedure can be referred from section 6.2 in the Saia PCD® Supervisor V3.0 Configuration Manual.

6

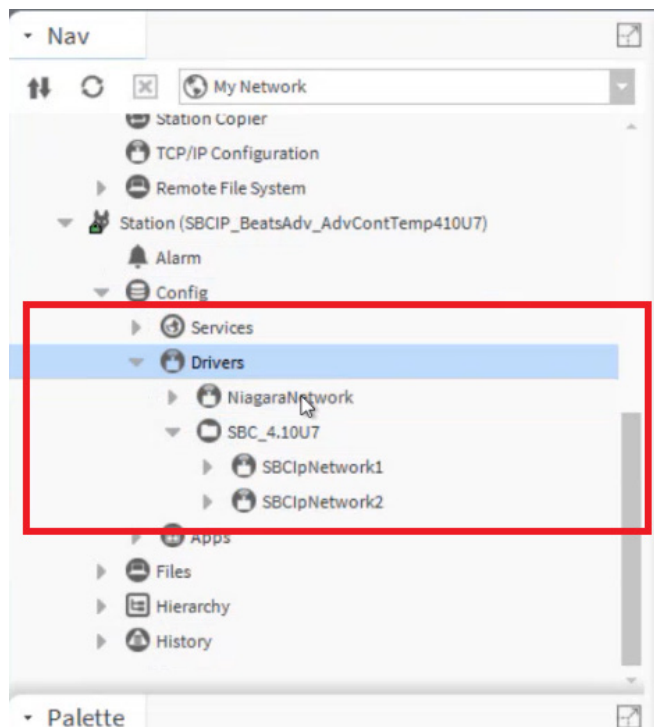
6.9.4 Procedure to add the S-BUS IP driver (SBCIpNetwork)

- 1. The SBC-IP driver needs to be added under the station file. As shown in the Fig below navigate to drivers under the desired station.

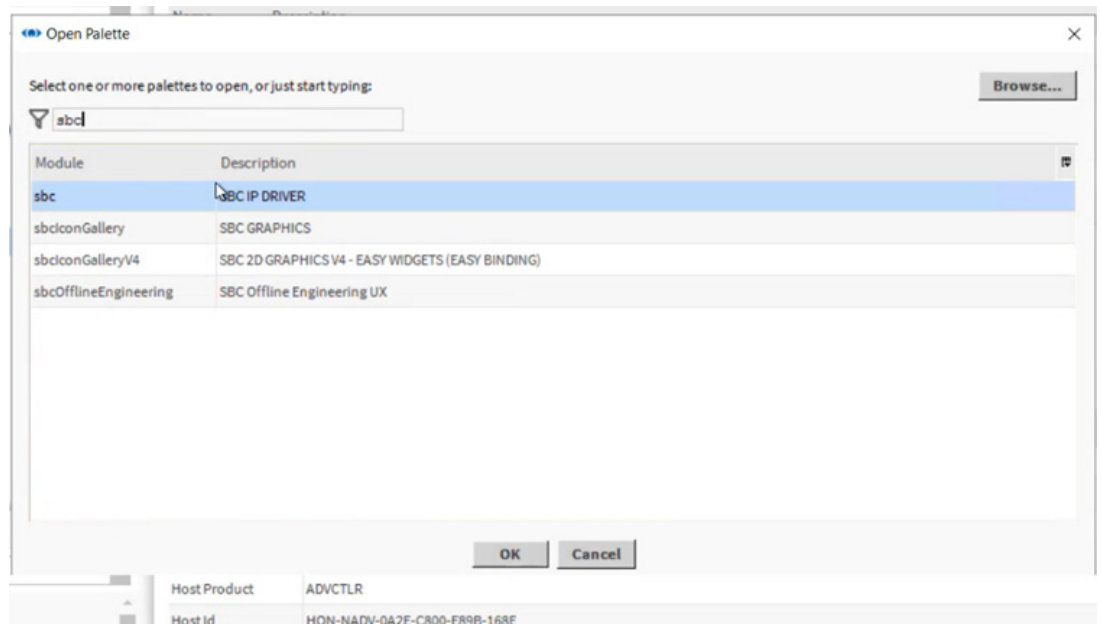


Backup & Restore

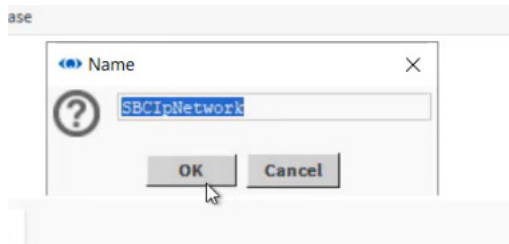
2. Click on drivers to add the SBC-IP driver as shown below. The driver section can have multiple drives such as Niagara, BACnet etc.



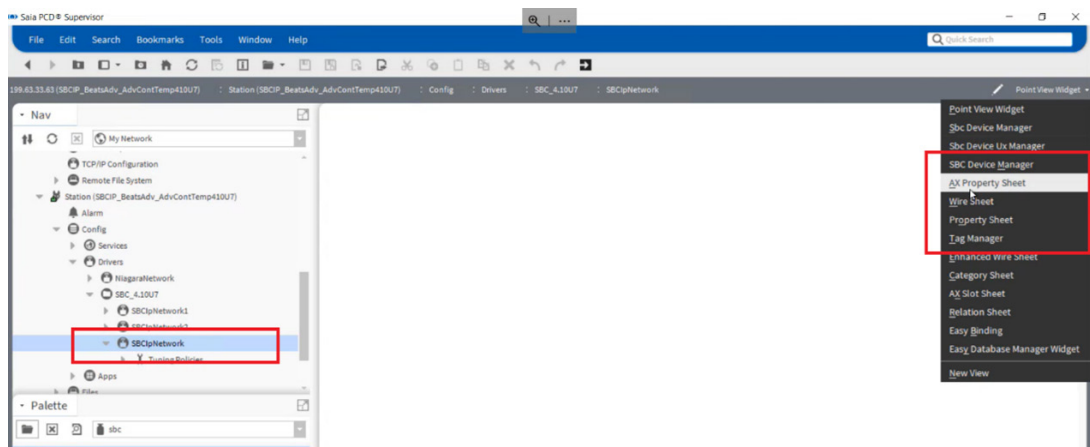
3. From the palette, look for module SBC (SBC IP DRIVER) in the search window and drag and drop it under the driver section of the station.



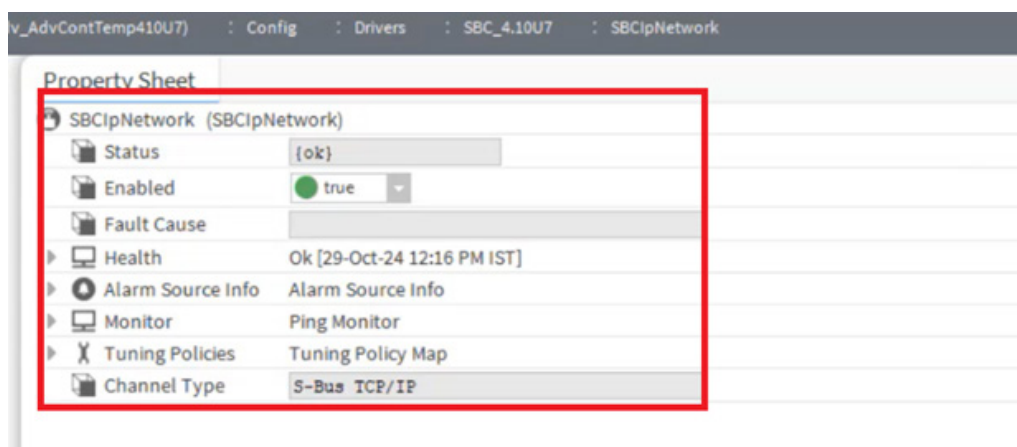
4. Name the S Bus IP driver as desired name, when the below window pops up.



5. Once created, click on the SBC-IP network that is added and go to the property sheet as shown below.

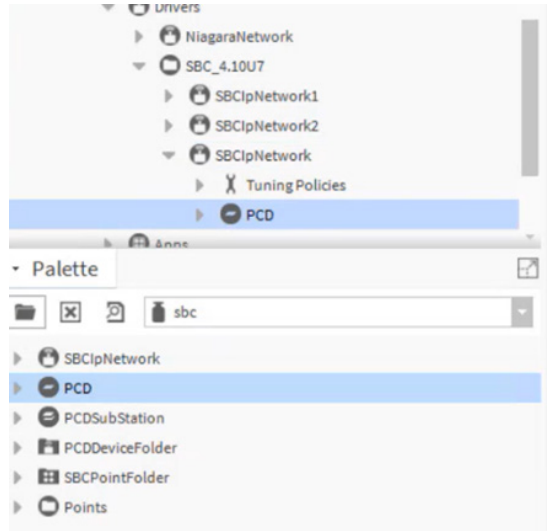


6. Once created, click on the SBC-IP network that is added and go to the property sheet as shown below. Check for status it should be {ok} and enable tab should be True.

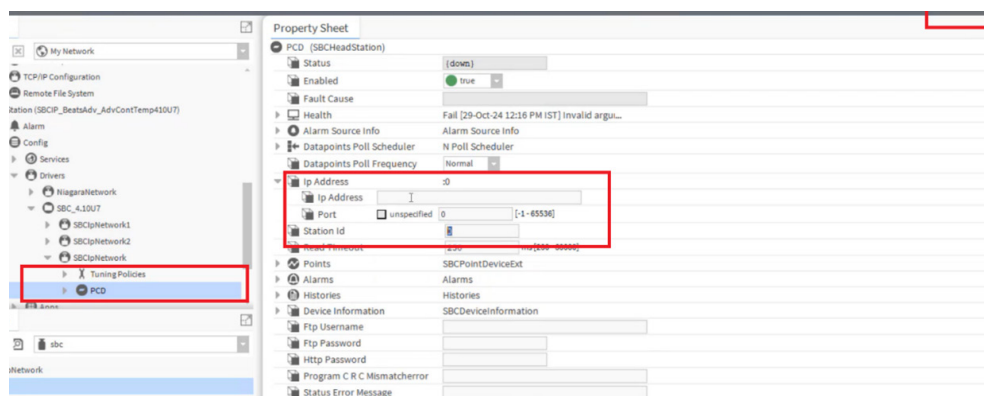


To enable the service, make the service true. True is to Enable and false is to disable service.

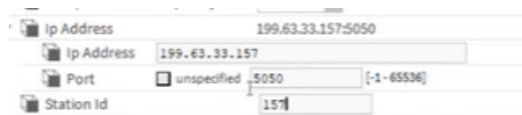
- After enabling the services, we need to add the devices that need to communicate with the Advanced Controller. For this go to the palette and look for the PCD device. Drag and drop the PCD device under the S-Bus IP as shown in the image below.



- After adding the required PCD, device we need to configure the IP address and station ID for the device. Click on the device and navigate to the property sheet as shown below.



While commissioning the PCD the IP address, Port number and station ID's are assigned, same details need to be filled in this property sheet as well.



7 Using Saia PCD® Supervisor

This section covers the general procedures for day-to-day use of Saia PCD® Supervisor.

Once configured Saia PCD® Supervisor needs to be running all the time to enable to collect logged data, control occupation times, process alarms and allow users to access information.

If **AUTO-START** was selected when the Saia PCD® Supervisor station was created, the Station will be running whenever the PC is started and running.

If this is not the case the Saia PCD® Supervisor station must be started manually see chapter [7.3 Manual start the Saia PCD® Supervisor Station](#)

Go to ..

[7.1 Access Saia PCD® Supervisor](#)

["7.2 Use Saia PCD® Supervisor"](#)

[7.3 Manual start the Saia PCD® Supervisor Station](#)

[7.4 HTML5 Enhancements](#)

[7.5 Cloud Connector](#)

[7.6 Bulk deploy](#)

[7.7 VykonPro modules \(on request\)](#)

["7.8 Setting customized login and background logo"](#)

["7.9 Headstation and Substation Ping Read Timeout"](#)

["7.10 Setting up the S-Bus clock"](#)

["7.11 Use of UDP config slot from the Property sheet in every headstation"](#)

7.1 Access Saia PCD® Supervisor

Saia PCD® Supervisor can be accessed from a PC using the Saia PCD® Supervisor application or from a web browser.

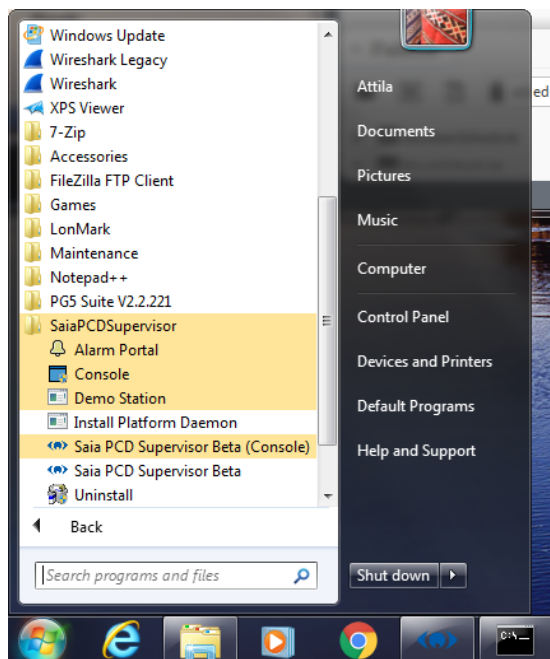


When accessing Saia PCD® Supervisor from a web browser not all features are available.

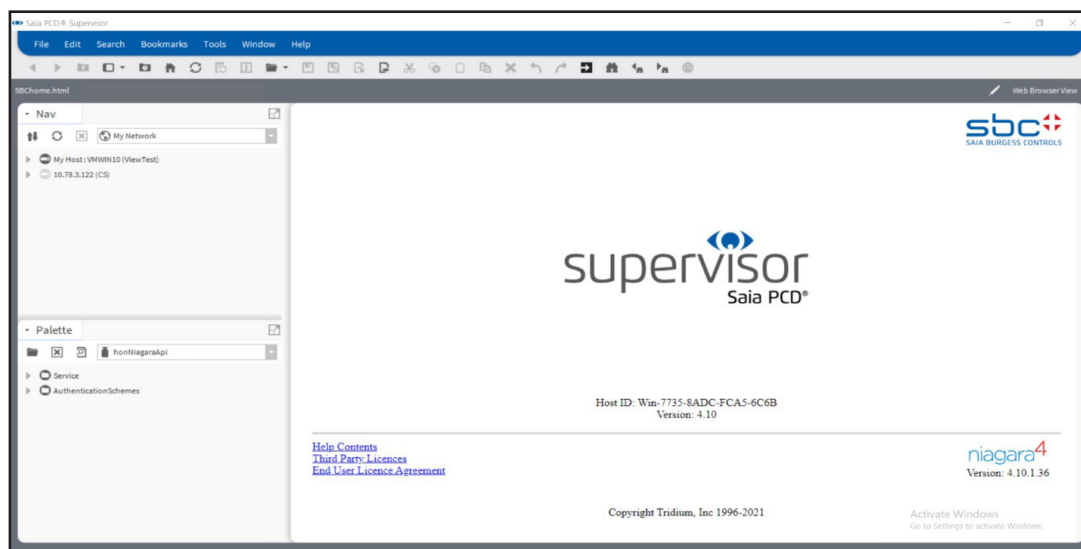
7.1.1 Launch the Saia PCD® Supervisor Application

1. Click **Start** and choose **All Programs**.
2. Navigate to the **Saia PCD Supervisor** folder
3. Click **Saia PCD Supervisor v1.0R**

4. The Saia PCD® Supervisor application window will open:



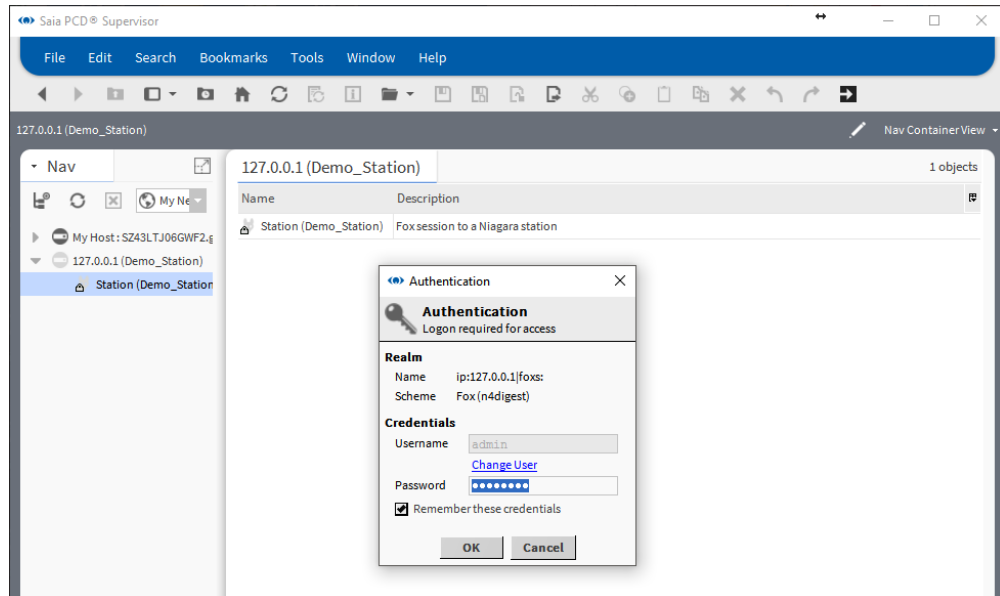
7



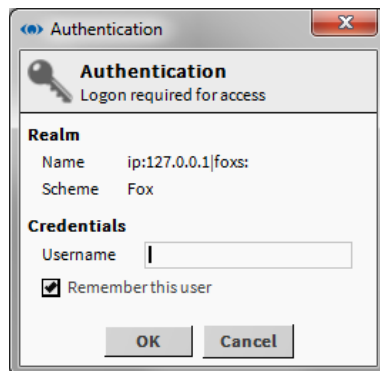
7.1.1.1 Log on

(of course the Platform must be running always).

1. In the **Nav** tree double click on **Station**. The **Authentication** dialogue box is displayed with a default user selected:



2. To select a different user click **Change User**, otherwise go to step 5.



Select the Remember this user tickbox to make this the default username.

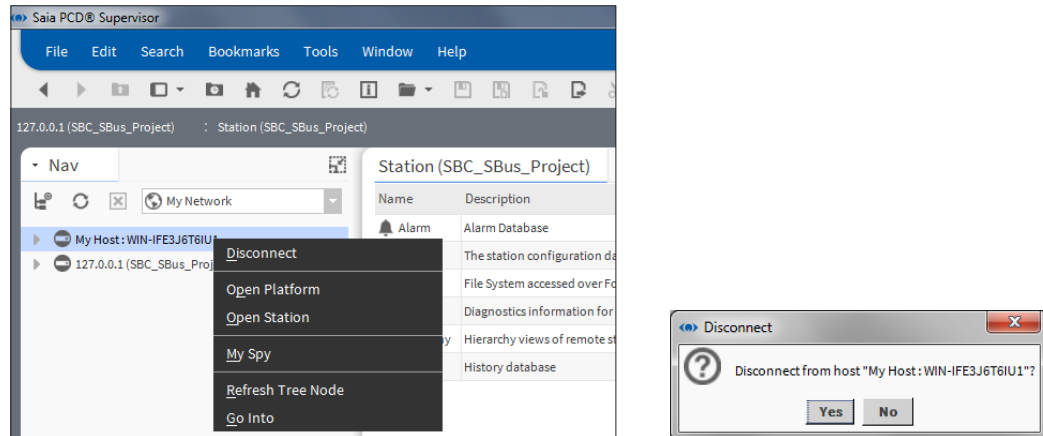
3. Enter a new **Username**.
4. Click **OK**.
5. Type the appropriate password in the **Password** box.
6. Click **OK** The user associated navigation (and start page) will be invoked

7.1.1.2 Log off

1. When you have finished using Saia PCD® Supervisor it is important to log off from Saia PCD® Supervisor to ensure that the system cannot be accessed by unauthorised users. Logging off requires you to disconnect from both the Platform and

Station.

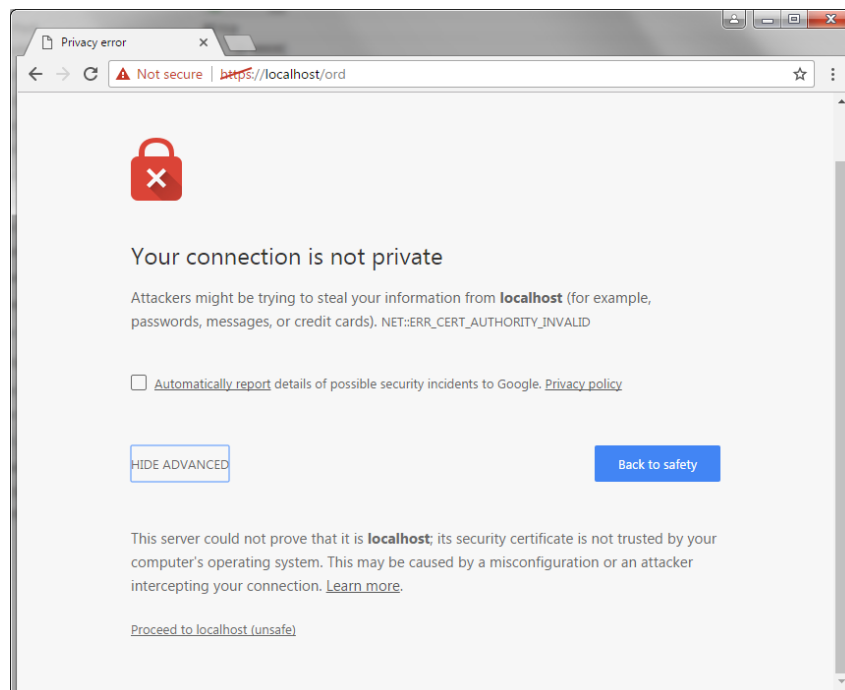
- In the **Nav** tree right-click on **My Host** and select **Disconnect**. The **Disconnect** dialogue box is displayed.



- Click **Yes** to disconnect.

7.1.2 Access Saia PCD® Supervisor from a Web Browser

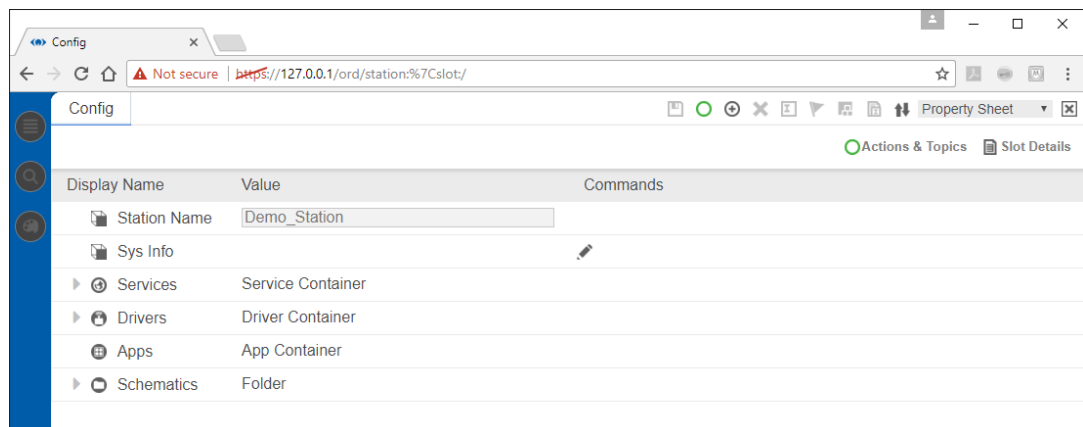
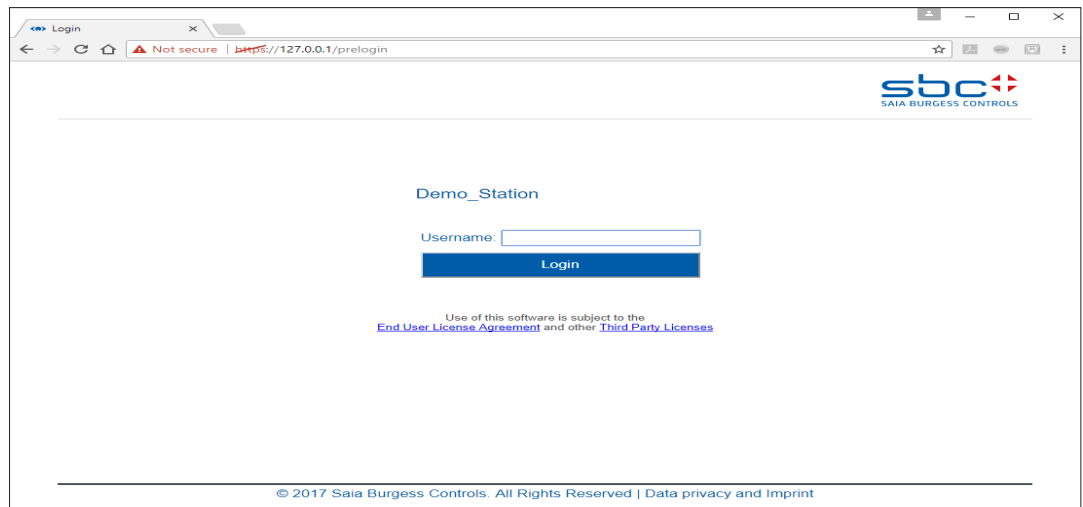
- Go to the IP address of the PC running Saia PCD® Supervisor. The Saia PCD® Supervisor log on page is displayed.



Please contact your local IT-department to get certificate!

2. Proceed to localhost

7



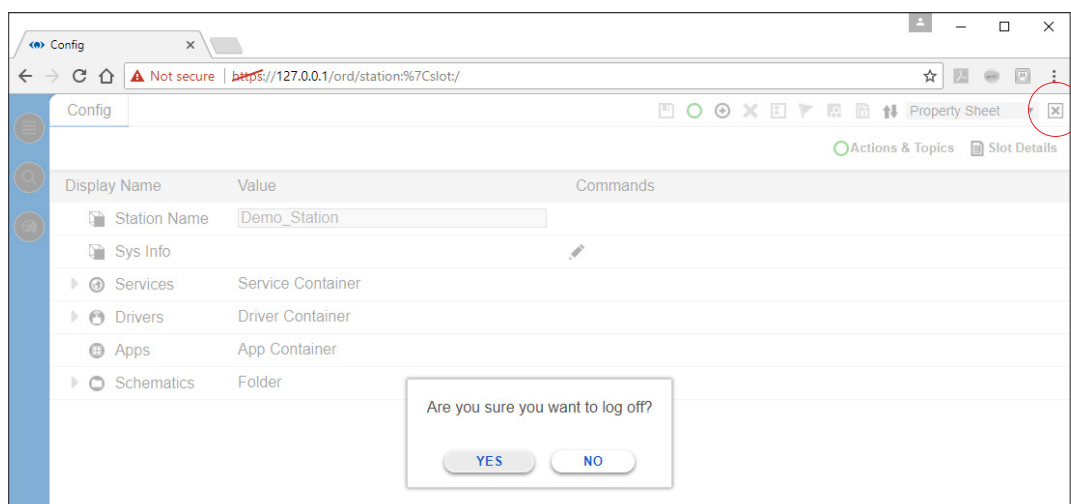
3. Enter your user name.
4. Click **Login**.
5. Enter your password.
6. Click **Login**.



If the correct certificates, are installed then the security warning is not coming up. The connection is immediately built from the browser to the server.

7.1.2.1 Log off

1. Click “X”



2. Click **Yes**.

7.2 Use Saia PCD® Supervisor

Once you have accessed Saia PCD® Supervisor it can be used in two different ways:

→ [7.2.1 Using Saia PCD® Supervisor via Operator Views](#)

→ [7.2.2.2 Nav Tree](#)

The method you use will depend on how Saia PCD® Supervisor has been configured, your level of access and the tasks you want to do.

7.2.1 Using Saia PCD® Supervisor via Operator Views

Use of Saia PCD® Supervisor via Operator Views (PX Pages) requires more initial configuration, but enables users to access the system using graphical pages tailored to their requirements in a controlled way.

The Operator Views will have been designed to provide clickable links to either move between pages or select particular controls (e.g. to change a set point, change occupancy times, etc). When you log in you will be taken to a landing page from which you can navigate to the required information and, if allowed, make adjustments. Simply click on the links provided; the user interface should make it obvious what the link does.

7.2.1.1 Access the Operator Views

When you log on a PX Page will normally be displayed allowing you to navigate to parts of the system that you have access to.

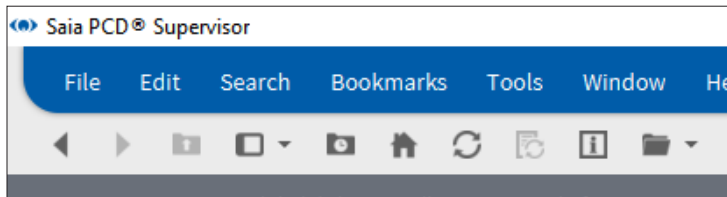
If a PX Page is not displayed and you want to navigate the system using Operator Views you will need to display the required page from the **Nav** tree.

1. In the **Nav** tree open **127.0.0.1(localhost) > Station(Demo_Station) > Files > PX >** and navigate to the required PX Page (start page).
2. Double click the page.

7.2.1.2 Use the Operator Views

Navigation

Once a PX Page is displayed you will be able to navigate to other parts of the system by clicking on the links provided. These links may be in the form of text hyperlinks buttons, or graphics with hyperlinks depending on how the page has been configured. The display should make it clear the function of each item on the page.



The next and previous buttons (◀ ▶) can be used to move between the pages you have already viewed.

Adjustments

If you have the authority and the page has been configured appropriately you may be able to make adjustments by clicking on various graphical elements, e.g. sliders and buttons.



The meaning and use of such items should be intuitive.

7

7.2.1.3 Use Dashboards

A Dashboard is an item on a PX Page that enables you to choose the information that is displayed. Once you have set up the item it can be saved so that next time you visit the page your selections are visible. Selections made by other users do not affect yours. A PX Page may contain one or more dashboard items.

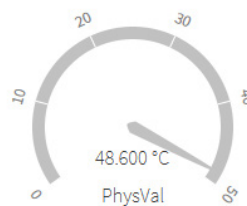
There are two types of dashboard item; Gauges and Charts.

Gauge

A gauge type dashboard appears as shown below and enables an analogue value to be represented in a graphical way.



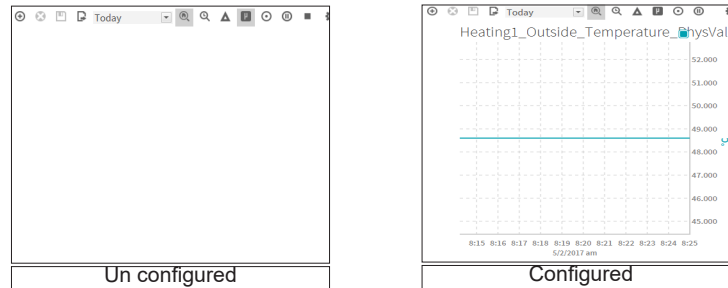
Un configured



Configured

Chart

A chart type dashboard appears as shown below and enables values to be represented as a graph, e.g. histories. Time schedules can also be added enabling you to view the occupancy state and when a parameter is at a certain value.



7

7.2.1.4 Configuring a Dashboard



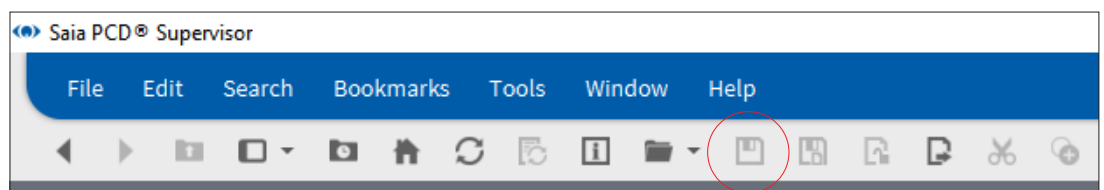
*Configuring a dashboard requires access to the **Nav** tree.*

Adding an item to a Dashboard

- Use the **Nav** tree to locate the point required.
- Drag the point onto the dashboard. For charts you can add more than one value.
-

Save a Dashboard

- Click  on the dashboard.



7.2.2 Using Saia PCD® Supervisor via the Nav Tree

7.2.2.1 Basic Controls and Navigation

To see the location of the following Saia PCD® Supervisor controls and features, refer to the diagram on chapter [“2.2 User Interface Application \(Host PC\)”](#)

7.2.2.2 Nav Tree

To show the side bar:

- On the menu bar select **Window > Side Bars** and ensure **Show Side Bars** is checked.

To add a Nav tree to the side bar:

- On the menu bar select **Window > Side Bars > Nav**.

•

To remove a Nav tree from the side bar:

- Click the arrow to the left of the **Nav** tree title and select **Close**.

7

7.2.2.3 Palettes

To show the side bar:

- On the menu bar select **Window > Side Bars** and ensure **Show Side Bars** is checked.

To add a Palette to the side bar:

- On the menu bar select **Window > Side Bars > Palette**.
- Click the file icon and select the Palette type from the displayed options.

To remove a Palette from the side bar:

- Click the arrow to the left of the **Palette** title and select **Close**.

7.2.2.4 Locator Bar

To navigate down the hierarchy:

- Holding the mouse over an item: a small arrow will appear.
- Click the arrow to reveal a drop down box and select the required option.

•

To navigate up the hierarchy:

- Click on an item in the bar to navigate back to that level.

To navigate to specific location:

- Click in a blank area of the locator bar and type the path directly into the box.

7.2.2.5 View Pane & View Changer

To change the view of a selected item:

- Click the view changer box and choose the required view.
Or
Right-click the item (e.g. in the **Nav** tree), then select **Views >** and the required view.

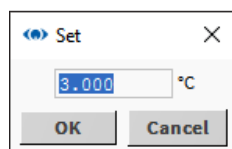
7**7.2.2.6 Viewing and Changing values of a Point****To view a point value:**

- Use the **Nav** tree to locate the point required.
- Double click the point (or right-click and select **Views > AX Property Sheet**) to view its **Property Sheet**. The **Out** item will indicate the current point value.

To change a point value (writable points only):

1. Use the **Nav** tree to locate the point required, right-click the point and select **Actions > Set Value**.
Or
Click the button that allows the value to be adjusted.

The **Set** dialogue box is displayed.



2. Type the required value.



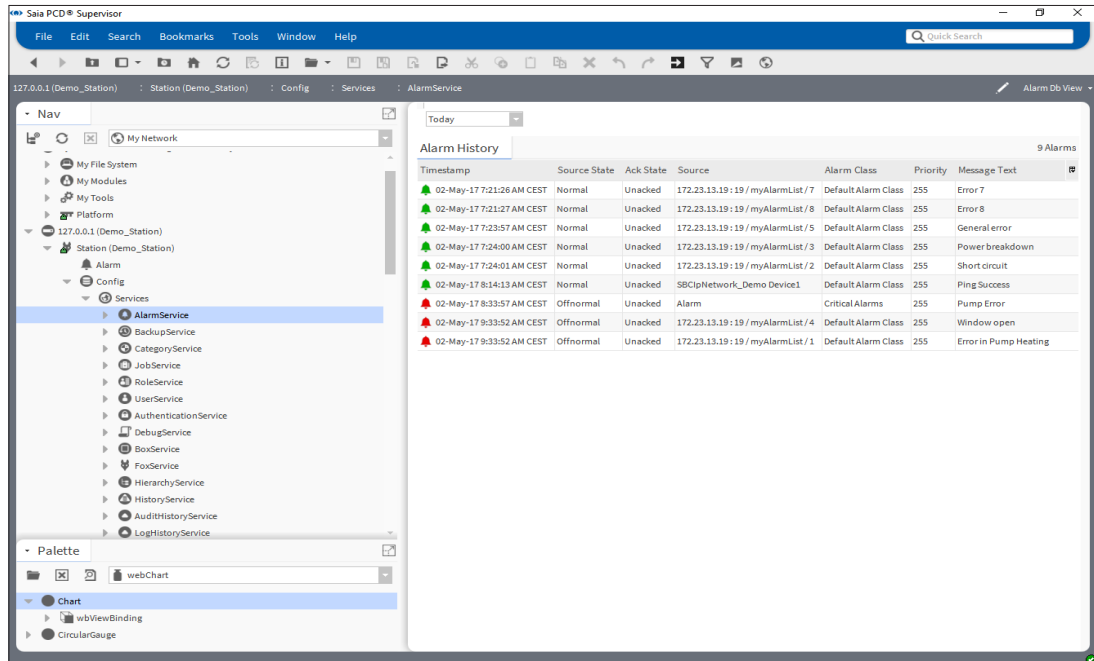
As default Saia PCD® Supervisor does not check that the value entered is valid. The limits can be set for Numeric Writable. When the operator types value outside of the limits the value will not be accepted.

3. Click **OK**.

7.2.2.7 Viewing Alarms

Viewing Alarms Using the Alarm History

1. In the **Nav** tree open the **Services** folder (under Station > Config).
2. Right-click **AlarmService** and select **Views > Alarm Db View**. The **Alarm History** is displayed in the view pane.



3. Use the selector box (top left) to choose the required period.



It is recommended that the Saia PCD® Supervisor user need to use the updated station in order to load the SBC Alarm Console page correctly.

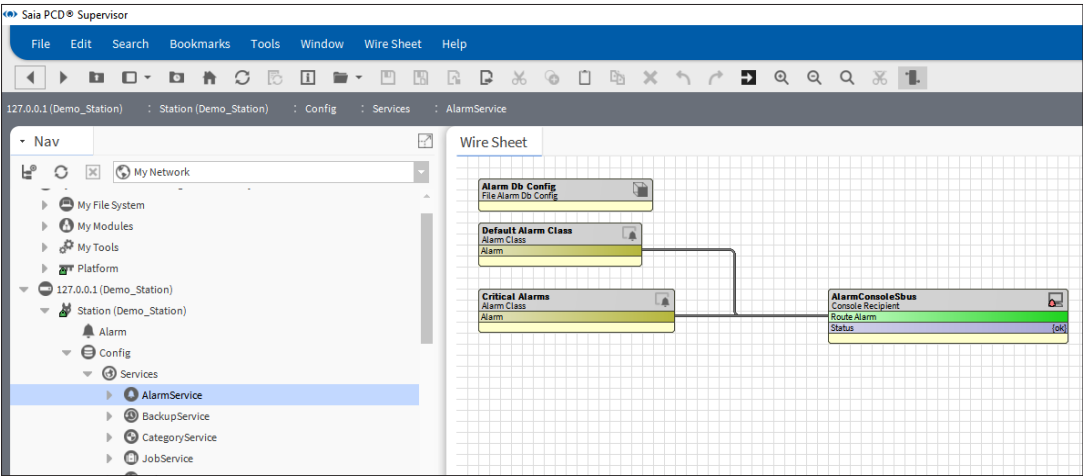
7.2.2.8 Using the Alarm Console

The Alarm Console allows you to view details of each alarm, acknowledge an alarm or add notes to alarms. Notes are useful to record actions (particularly for critical alarms) such as who has been notified, contact numbers and agreed timescales for fixing the problem.

To view specific alarm details:

- 1. In the **Nav** tree open the **Station > Config > Services** folder.
- 2. Double click **AlarmService**. The view pane will display the **Alarm Service** wire sheet.
- 3. Double click on the required **ConsoleRecipient** to open the **Alarm Console**:

7



SBC Alarm Console							
Time Range ? to ?							
Open Alarm Sources							
Timestamp	Source State	Ack State	Source	Alarm Class	Priority	Message Text	
02-May-17 9:33:52 AM CEST	Offnormal	0 Acked / 1 Unacked	172.23.13.19:19 / myAlarmList / 4	Default Alarm Class	255	Window open	
02-May-17 9:33:52 AM CEST	Offnormal	0 Acked / 1 Unacked	172.23.13.19:19 / myAlarmList / 1	Default Alarm Class	255	Error in Pump Heating	
02-May-17 8:33:57 AM CEST	Offnormal	0 Acked / 11 Unacked	Alarm	Critical Alarms	255	Pump Error	
02-May-17 8:14:13 AM CEST	Normal	0 Acked / 2 Unacked	SBCIpNetwork_Demo Device1	Default Alarm Class	255	Ping Success	
02-May-17 7:24:01 AM CEST	Normal	0 Acked / 1 Unacked	172.23.13.19:19 / myAlarmList / 2	Default Alarm Class	255	Short circuit	
02-May-17 7:24:00 AM CEST	Normal	0 Acked / 1 Unacked	172.23.13.19:19 / myAlarmList / 3	Default Alarm Class	255	Power breakdown	
02-May-17 7:23:57 AM CEST	Normal	0 Acked / 1 Unacked	172.23.13.19:19 / myAlarmList / 5	Default Alarm Class	255	General error	
02-May-17 7:21:27 AM CEST	Normal	0 Acked / 1 Unacked	172.23.13.19:19 / myAlarmList / 8	Default Alarm Class	255	Error 8	
02-May-17 7:21:26 AM CEST	Normal	0 Acked / 1 Unacked	172.23.13.19:19 / myAlarmList / 7	Default Alarm Class	255	Error 7	
01-May-17 10:00:37 AM CEST	Offnormal	0 Acked / 1 Unacked	BacnetNetwork Trainingscenter	Default Alarm Class	255	Ping Failed	
01-May-17 8:32:22 AM CEST	Normal	0 Acked / 1 Unacked	172.23.13.19:19 / myAlarmList / 6	Default Alarm Class	255	Error 6	
18-Apr-17 7:50:44 AM CEST	Normal	0 Acked / 1 Unacked	SBCIpNetwork CPU001	Default Alarm Class	255	Ping Success	
13-Apr-17 4:19:14 PM CEST	Normal	0 Acked / 36 Unacked	slot:/Drivers/BacnetNetwork/Trainingscenter/alarms	Default Alarm Class	255	Normal	
12-Apr-17 12:47:14 PM CEST	Offnormal	1 Acked / 0 Unacked	172.23.13.19:19 / myAlarmList / 1	Default Alarm Class	255	Error in Pump Heating	
12-Apr-17 9:43:29 AM CEST	Offnormal	1 Acked / 0 Unacked	172.23.13.19:19 / myAlarmList / 2	Default Alarm Class	255	Short circuit	
12-Apr-17 9:43:29 AM CEST	Offnormal	1 Acked / 0 Unacked	172.23.13.19:19 / myAlarmList / 6	Default Alarm Class	255	Error 6	
12-Apr-17 9:43:29 AM CEST	Offnormal	1 Acked / 0 Unacked	172.23.13.19:19 / myAlarmList / 5	Default Alarm Class	255	General error	



Current alarms are indicated by a red icon, returned to Normal alarms are indicated by a green icon.

4. Double click an alarm line to open the **Alarm Viewer**. This will list all current and cleared alarms related to the same alarm condition:

local:|station:|slot:/Drivers/SBC\$20Systems/SBCIpNetwork_Demo/Device1/points/Heating1/Supply/Pump/Alarm/Alarm

Open Alarm Sources1 Sources / 11 Alarms

Timestamp	Source State	Ack State	Source	Alarm Class	Priority	Message Text
02-May-17 8:33:57 AM CEST	Offnormal	Unacked	Alarm	Critical Alarms	255	Pump Error
18-Apr-17 10:45:40 AM CEST	Normal	Unacked	Alarm	Critical Alarms	255	Pump Ok
18-Apr-17 10:37:45 AM CEST	Normal	Unacked	Alarm	Critical Alarms	255	Pump Ok
18-Apr-17 9:39:09 AM CEST	Normal	Unacked	Alarm	Critical Alarms	255	Pump Ok
18-Apr-17 9:31:44 AM CEST	Normal	Unacked	Alarm	Critical Alarms	255	Pump Ok
18-Apr-17 9:08:39 AM CEST	Normal	Unacked	Alarm	Critical Alarms	255	Pump Ok
18-Apr-17 8:38:09 AM CEST	Normal	Unacked	Alarm	Critical Alarms	255	Pump Ok
18-Apr-17 8:06:38 AM CEST	Normal	Unacked	Alarm	Critical Alarms	255	Pump Ok
18-Apr-17 7:58:53 AM CEST	Normal	Unacked	Alarm	Critical Alarms	255	Pump Ok
13-Apr-17 4:14:29 PM CEST	Normal	Unacked	Alarm	Critical Alarms	255	Pump Ok
13-Apr-17 2:37:59 PM CEST	Normal	Unacked	Alarm	Critical Alarms	255	Pump Ok

Acknowledge

Hyperlink

Notes

Review Video

Close

5. Double click an alarm to open the **Alarm Record**, giving full details of the alarm.

Alarm Record

Timestamp

02-May-17 8:33:57 AM CEST

Uuid

11f20d95-73ab-4601-82d8-8e650d54cab8

Source State

Offnormal

Ack State

Unacked

Ack Required

true

Source

Alarm
local:|station:|slot:/Drivers/SBC Systems/SBCIpNetwork_Demo/Device1/points/Heating1/Supply/Pump/Alarm/Alarm

Alarm Class

Critical Alarms

Priority

255

Normal Time

null

Ack Time

null

User

Unknown User

Alarm Data

Alarm Value

true

Count

21

Escalated

From State

normal

Message Text

Pump Error

Notes

>>

Numeric Value

1

Offnormal Value

true

Present Value

true

Source Name

Alarm

Status

{ok} @ def

Time Zone

Europe/Berlin (+1/+2)

To State

offnormal

Alarm Transition

Offnormal

Last Update

02-May-17 8:33:57 AM CEST

Acknowledge

Hyperlink

Notes

Close

To acknowledge an alarm:

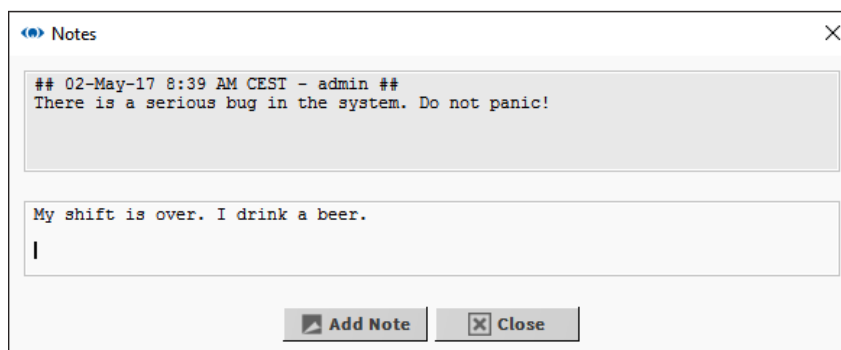
- Click the alarm in the **Alarm Console** or **Alarm Viewer** or open the **Alarm Record** for a specific alarm.
- Click the **Acknowledge** button.



Multiple alarms can be selected and acknowledged at the same time in the Alarm Console or Alarm Viewer by clicking in conjunction with CTRL and/or Shift keys.

To view or add notes for an alarm:

1. Click the alarm in the **Alarm Console** or **Alarm Viewer** or open the **Alarm Record** for a specific alarm.
2. Click the **Notes** button. The **Notes** window is displayed and any previously added notes will be shown with a timestamp in the top section:



3. Type any new details in the lower section and click the **Add Note** button to save, or click **Close** to close the window without adding a new note.



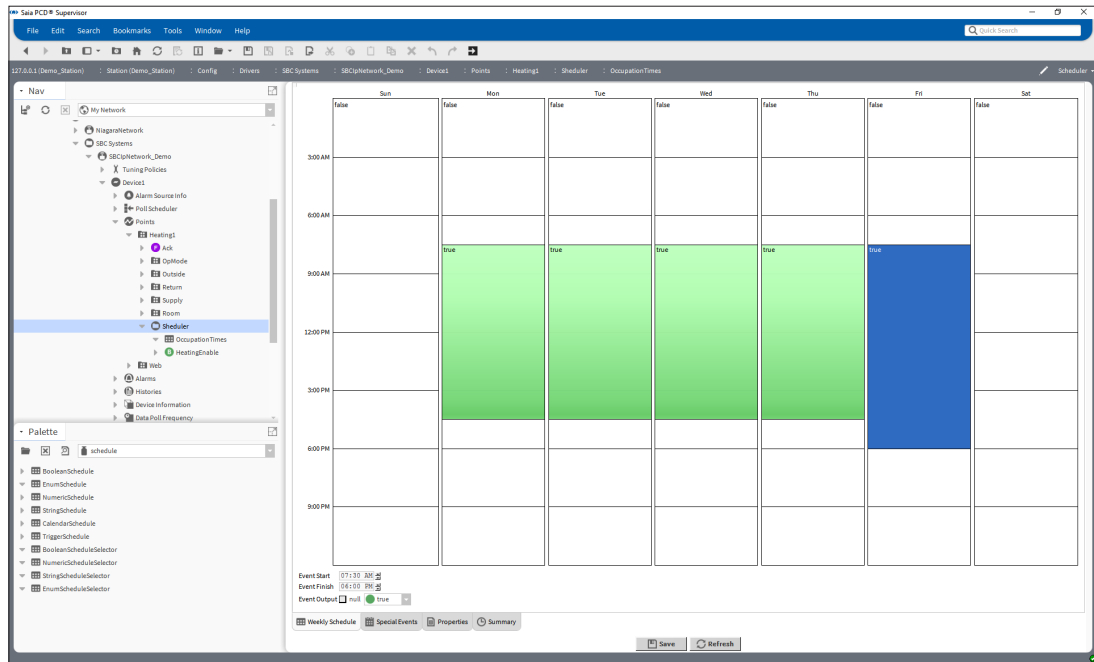
You cannot add notes to multiple alarms.

7.2.2.9 Viewing and changing Occupation Times (Scheduler and Calendar) in Saia PCD® Supervisor

Changing the Weekly Schedule

The weekly schedule determines the occupation times for a normal week, i.e. no Special Events apply.

1. In the **Nav** tree open **Localhost > Station(Demo_station)**, navigate to the required WeeklySchedule.
2. Double click the WeeklySchedule. The **Scheduler** is displayed in the view pane.



7

3. Select the **Weekly Schedule** tab.
4. Specify the required occupation times:

To add a new time period:

Drag the mouse in the required white area of the grid.

To make adjustments to existing time periods:

Drag the top or bottom edge of the green rectangles to the required time.

To set all day occupation:

Right click the day and select **All Day Event**.

To apply a period a day's times Monday to Friday:

Right click the day and select **Apply M-F**.

To remove a time period:

Right-click the rectangle and select **Delete Event**.

To remove all time periods for a day:

Right click the day and select **Clear Day**.

To copy a day:

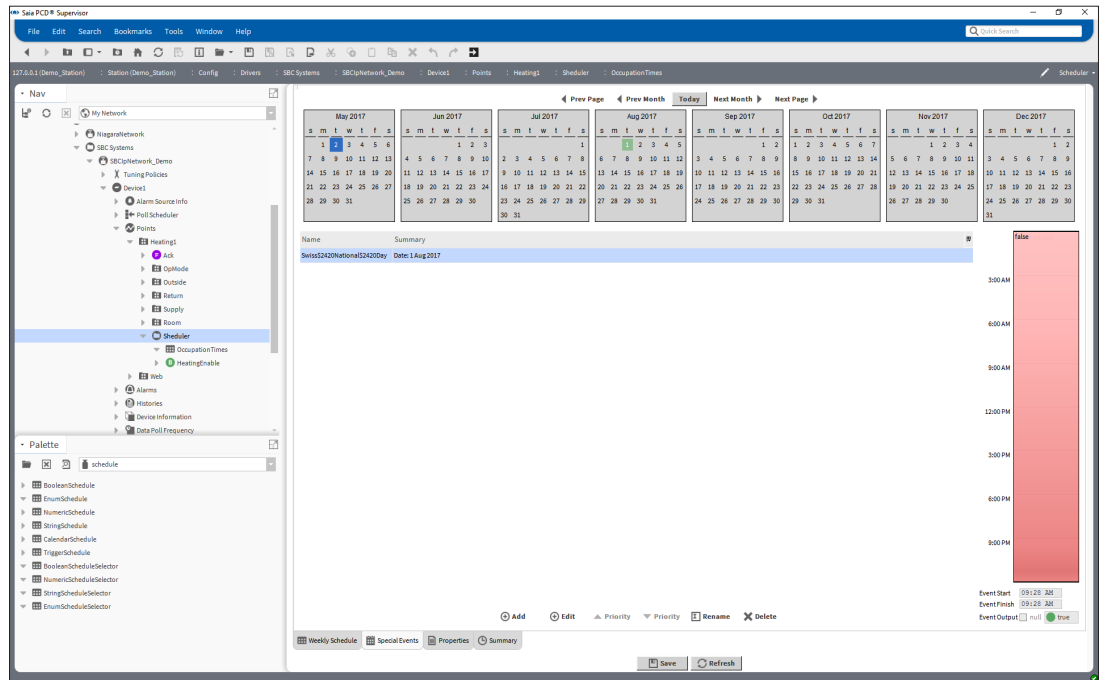
Right click the day and select **Copy Day** then right click the day the times are to be copied to and select **Paste Day**.

5. Click **Save**.

Editing Special Events

Special events enable different occupation times to be used on specific days.

1. In the **Nav** tree open **Localhost > Station(Demo_station)**, navigate to the required BooleanSchedule.
2. Double click the WeeklySchedule. The **Scheduler** is displayed in the view pane.
3. Select the **Special Events** tab.



4. Specify the required Special Events:

Add a special event

1. Click **Add**. The **Add** dialog box is displayed.

2. Specify a name for the special event in the **Name** box.
3. Select *Date* or *Date Range* in the **Type** box.

Specify the date(s) the special event applies to:

Date: Specify the day month and year in the appropriate box.

Date Range: Specify the day month and year for the beginning of the range in the appropriate box in the top row and specify the day month and year for the end of the range in the appropriate box in the bottom row

4. Click **OK**.

Edit the times

- Click the special event for which the times are to be edited.

To add a new time period:

Drag the mouse in the required white area of the grid.

To make adjustments to existing time periods:

Drag the top or bottom edge of the green rectangles to the required time.

To set all day occupation:

Right click the day and select **All Day Event**.

To remove a time period:

Right-click the rectangle and select **Delete Event**.

To remove all time periods:

Right click the rectangle and select **Clear Day**.

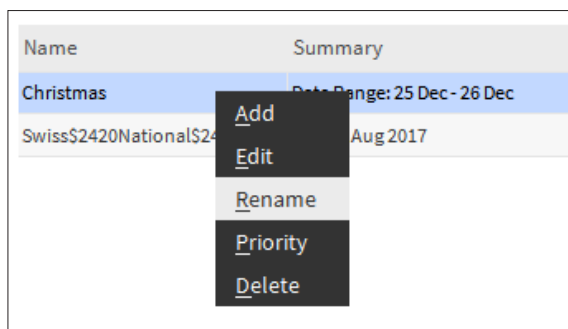
To ensure non-occupancy outside the specified periods

Right click the day and select **Schedule Defaults**.

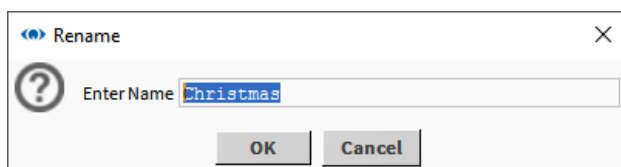
7

Rename a special event

- Right click the special event that is to be renamed.
- Click **Rename**. The **Rename** dialogue box is displayed.

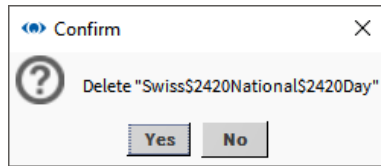


- Enter the new name.



- Click **OK**.
- Delete a special event
- Right click the special event that is to be deleted.

- Click **Delete**. The **Confirm** dialogue box is displayed.

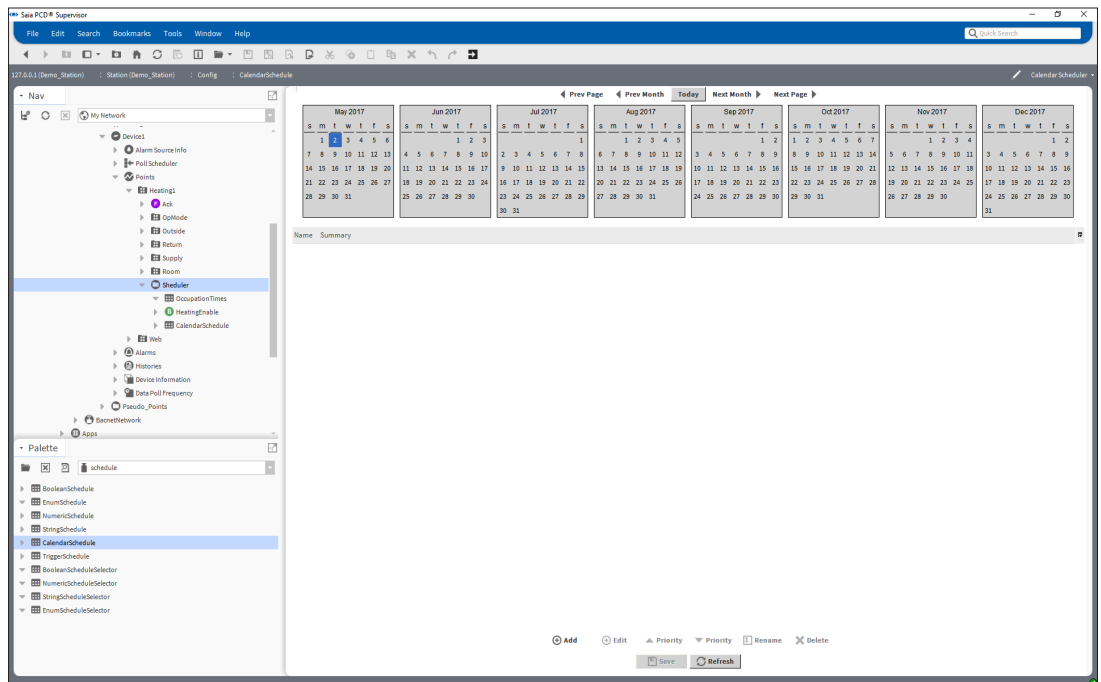


- Click **Yes**.
- Click **Save**.

Editing the CalendarSchedule

If a CalendarSchedule has been added to specify days different occupation times are used, these days can be edited by add or removing events from the CalendarSchedule.

- In the Nav tree open Localhost > Station(Demo_station), navigate to the required CalendarSchedule.
- Double click the CalendarSchedule. The Scheduler is displayed in the view pane..



Add a date

1. Click **Add**. The **Add** dialogue box is displayed.

2. Specify a name for the special event in the **Name** box.
3. Select *Date* or *Date Range* in the **Type** box.

Specify the date(s) the special event applies to:

Date: Specify the day month and year in the appropriate box.

Date Range: Specify the day month and year for the beginning of the range in the appropriate box in the top row and specify the day month and year for the end of the range in the appropriate box in the bottom row.

7

4. Click **OK**.

Edit a date

1. Double click the date that is to be edited.
2. Edit the date as required.

Rename a date

1. Right click the date that is to be renamed.
2. Click **Rename**. The **Rename** dialogue box is displayed.

3. Enter the new name.

4. Click **OK**

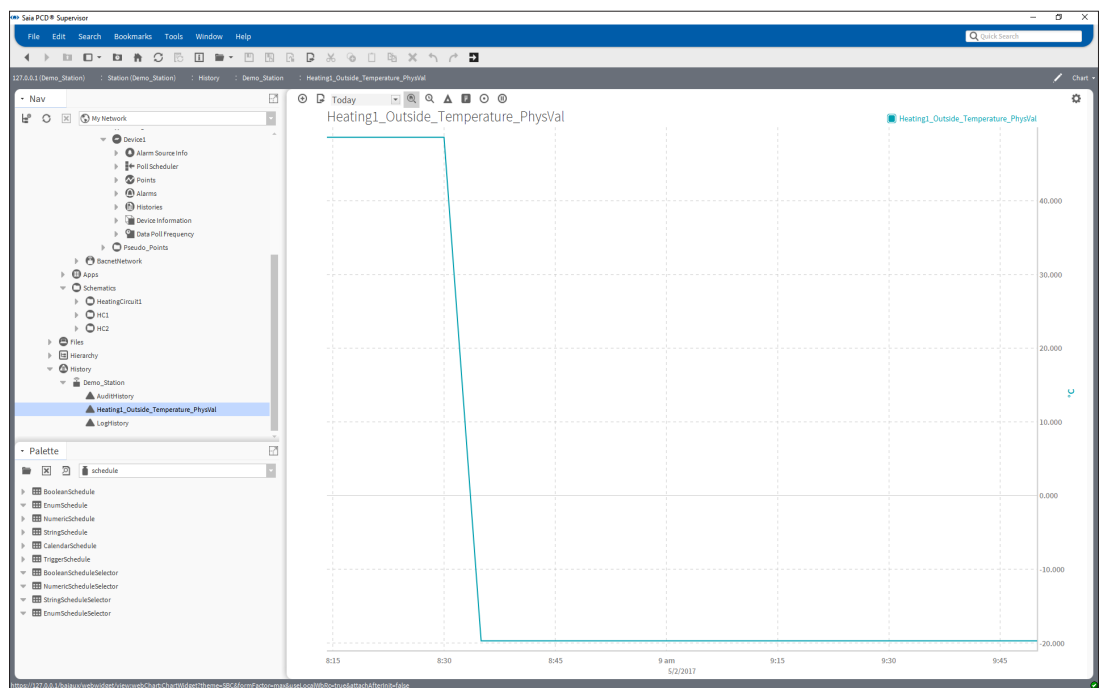
Delete a date

1. Right click the date that is to be deleted.
2. Click **Delete**. The **Confirm** dialogue box is displayed.
3. Click **Yes**.
4. Click **Save**.

7.2.2.10 Viewing a History (Graph)

1. In the **Nav** tree open the **History** folder (Station > History).
2. Open the folder for the required controller.
3. Double click on the history that you wish to view. The **Chart** view is displayed.

7



Viewing Multiple Plot Graphs

To add another plot to the same chart:

Drag the required history from the **Nav** tree onto the **Chart** view.

Adjusting the Displayed Information

To change the displayed time period:

Use the selector (at the top left of the Chart view) to choose the required time period.

To change the horizontal scale:

Mouse over the appropriate scale until the cursor changes to a double arrow.

Drag the mouse left or right to change the scale.

To change the vertical scale:

Mouse over the appropriate scale until the cursor changes to a double arrow.

Drag the mouse up or down to change the scale.

7

Viewing the Source Data


To view the source data in table form:

Click the View Changer and select **History Table**.

Exporting a Graph or Data Table

1. In the **Nav** tree, right-click on the required history and select **Export**. The **Export** dialogue box is displayed.
2. In the **Select Exporter** box select the required export type and file format.
3. Choose the export method (e.g. Save to File).
4. Click **OK**.

Viewing Live Updates

1. View the desired plot (as described above) and change the view to **History Chart**.
2. Click the Play button  to start getting history updates. At the bottom right corner of the window the message 'Waiting on first Live Update...' will appear.
3. When the time period has elapsed the message will change to show 'Last Live Update' with the date and time of the update.



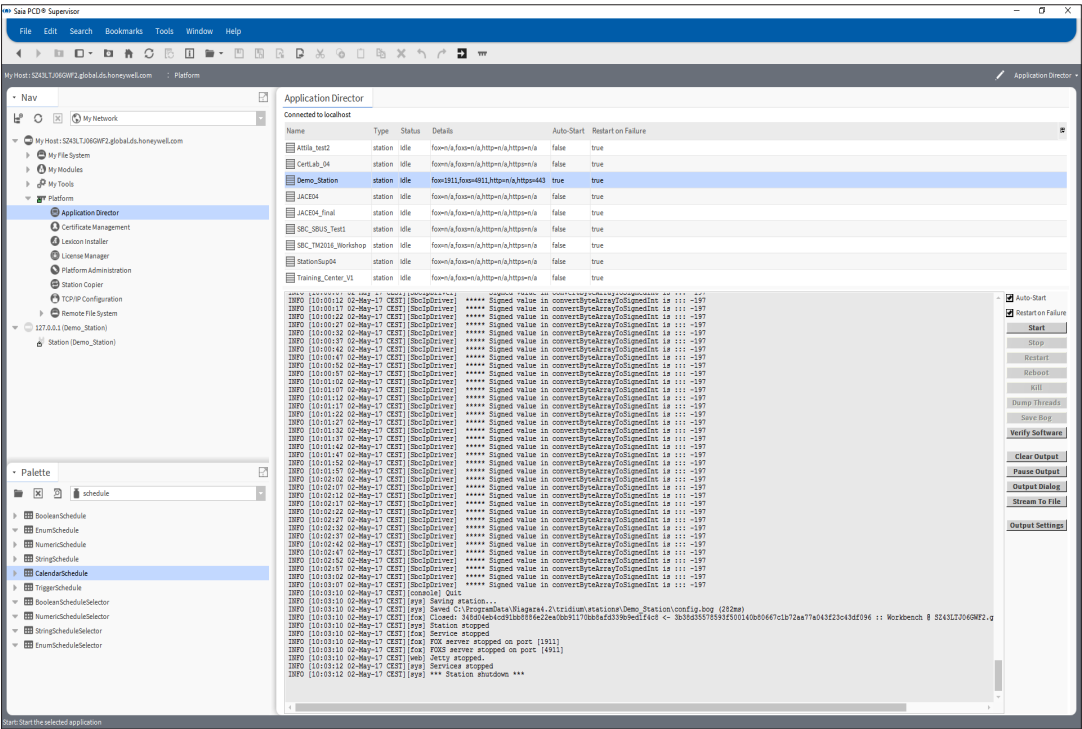
If you zoom in on the chart, live updates will not be visible anymore. If you need to see values that are not visible on the chart you need to switch to History Table view

Manual start the Saia PCD® Supervisor Station

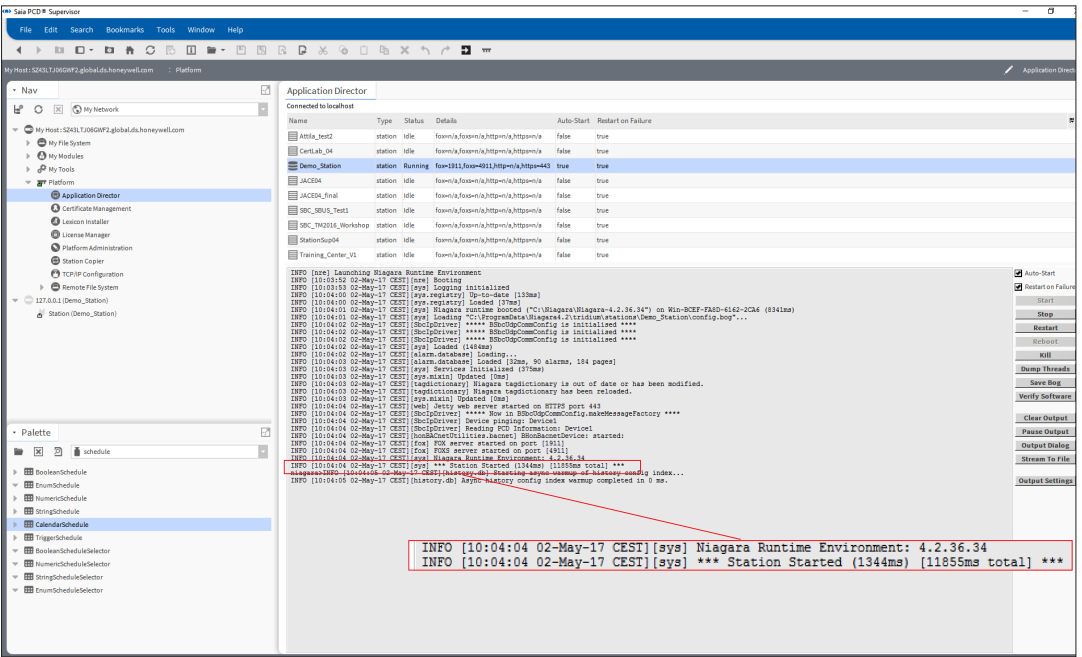
7.3 Manual start the Saia PCD® Supervisor Station

1. In the **Nav** tree open **My Host > Station(Saia PCD® Supervisor) > Platform > Services**.
2. Double click **Application Director**. The **Application Director** is displayed in the view pane.

7



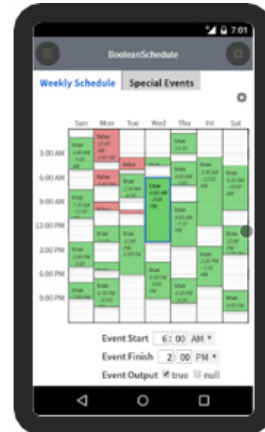
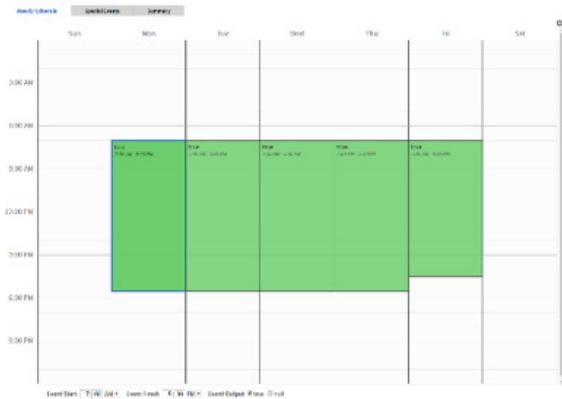
3. Click **Start**. The station will be started, check that a 'Station Started' message is shown.



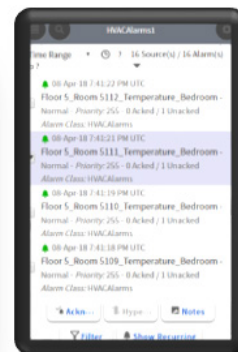
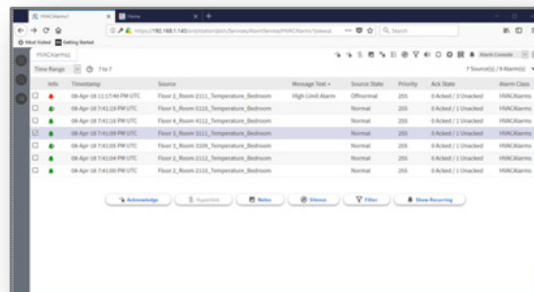
7.4 HTML5 Enhancements

Improved and newly created base templates for improved usability, also for mobile devices.

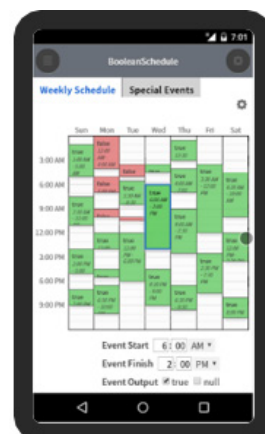
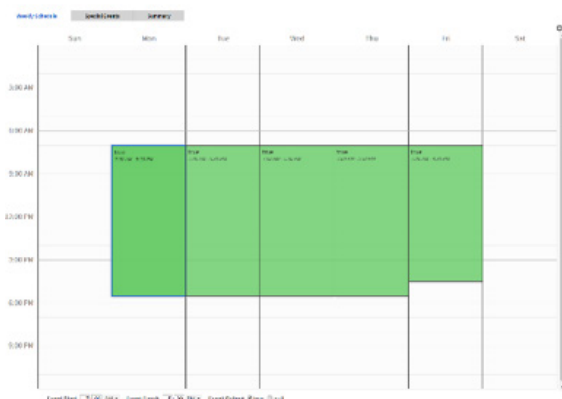
- Time program view **improved**
 - (complete in HTML5)



- Alarm console new
 - (complete in HTML5)
 - Improved use of available space
 - Responsive: details fold-out, automatic scaling

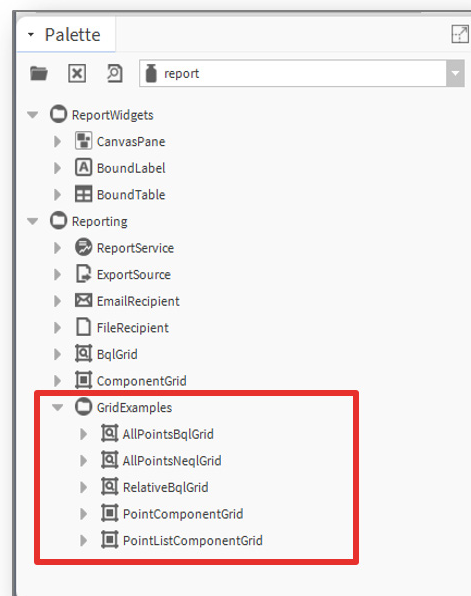


- Role manager new
 - (complete in HTML5)
 - Improved use of available space



7.4.1 New reporting functions

- All reporting visualizations are fully integrated in HTML5
- Responsive design for mobile devices
- Can now also be used in the dashboard
- Improved export functions
- Predefined examples in the palette
- NEQL and BQL can be combined



7.5 Cloud Connector

Enables station to establish secured connection to the cloud

- Reduction of operating costs
- Improved uptime, reliability and energy efficiency
- Reduce data loss with automatic backup service
- Included in installation and at no additional cost - Part of Software Maintenance Service (SMA)
- First cloud offers:
 - Backup as a Service (BaaS) - offers secure and scalable backups in the cloud (Available from Tridium)
 - Action management - manage common priority problems from anywhere using the app
 - Performance Analysis - Automatic Error Detection and Notification




Cloud Connector Device Registration

Device Registered	
Cloud Connector Enabled	
Device Connected	
System Type	Plant
System GUID	-- none --

REGISTER DEVICE FORCE RECONNECT

7.6 Bulk deploy

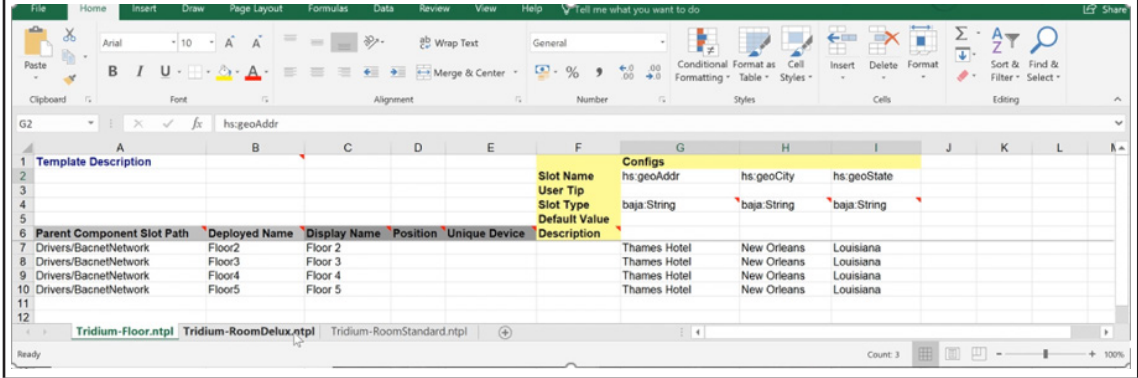
A single action can create multiple instances of one or more templates on a station

■ The mass provision process includes these primary steps:

● Select a template and create an Excel file from it

● Each Excel worksheet contains a row with the unique information required by each Device

● This “customized” Excel file is selected for mass implementation and extracts all configurations into the respective Devices



7.7 VykonPro modules (on request)

The VykonPro module is a collection of station components and px widgets that are provided as a value add to the Vykon channel partners. The station components and px widgets only function in a station whose license is branded Vykon (brandId="vykon" or brandId="vykon.security"). There are no extra features required in the license file for the components to function.

■ These tools are designed to save programming time, extend the standard offering, and help with system development

■ A demonstration station called "vykonProTest" is available from Niagara Central

- The station shows how each single component can be implemented in the vykonPro modules



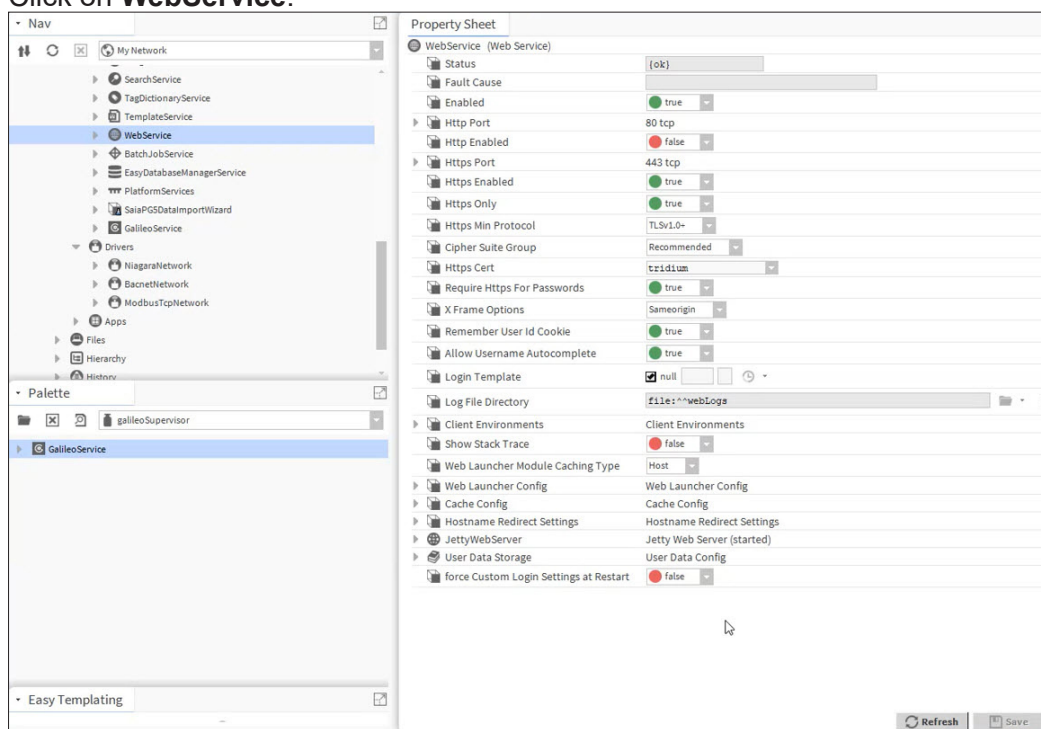
Setting customized login and background logo

7.8 Setting customized login and background logo

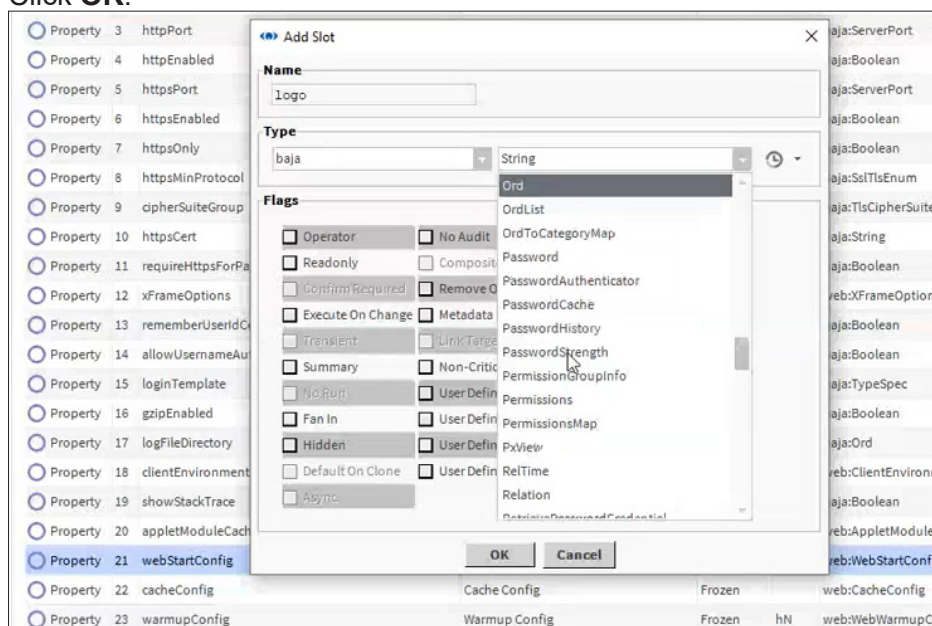
This chapter describes how an user can add and save the customized station login design with customized background logo.

Adding slots for customized login and background logo

1. In the **Nav** tree, open **127.0.0.1(localhost) > Station > Config > Services**.
2. Click on **WebService**.



3. Go to the **AX Slot Sheet** view from the View Selector.
4. Right click on the page and select **Add Slot**.
5. The **Add Slot** dialogue box is displayed. Type the correct and same name in the Name area. Select the required **Type**. User can select **baja Ord** or **baja String**. Click **OK**.



- Similarly, create one more slot for the css login. Click **OK**.

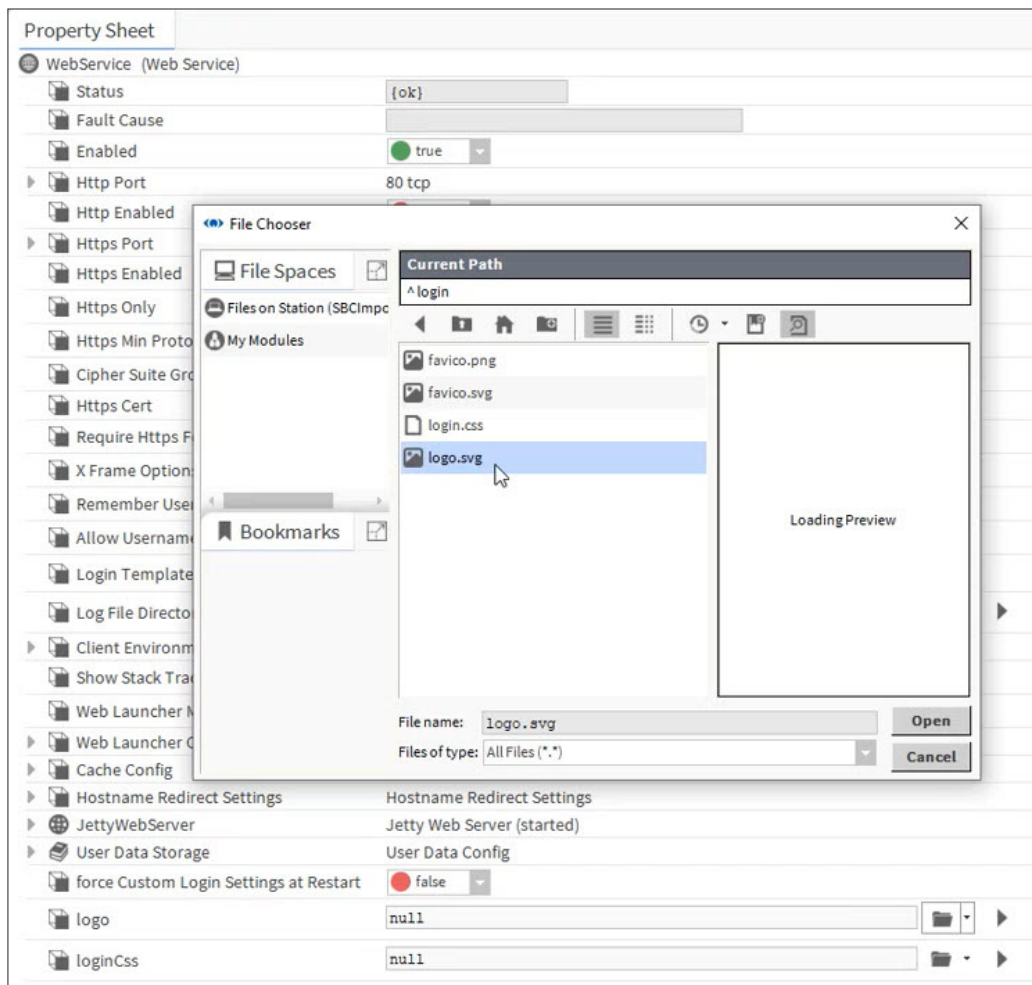


For more details on how to add or edit a Slot, refer to Tridium Niagara documentation docuser file which is available in the Niagara workbench.

- Go to the **AX Property Sheet** view from the View Selector.

To set the customized logo background colour:

- Go to the newly added **logo** property.
- Click **Folder** icon. The **File Chooser** dialogue box is displayed.
- Select the required logo image file.



- Click **Save** to apply your changes.

To set the customized css login:

- Go to the newly added **css login** property.
- Click **Folder** icon. The **File Chooser** dialogue box is displayed.
- Select the required css file with login details.
- Click **Save** to apply your changes.

Setting customized login and background logo

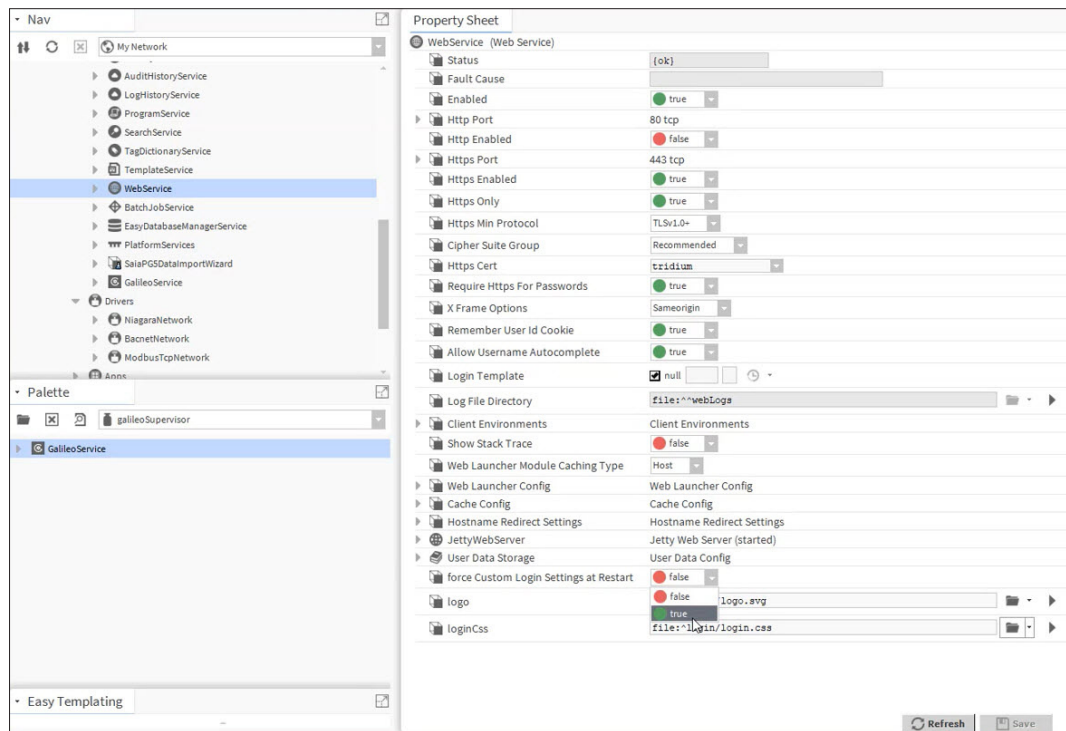
To retain customized css login and logo after the station restart:

1. Go to the **Force Custom Login Settings at Restart** property.



In order to access Force Custom Login Settings at Restart property, user must add the GalileoService in the Nav tree under the Services portal from Palette. For more details, refer to Tridium Niagara documentation docuser file which is available in the Niagara workbench.

2. To retain customized css login and logo even after the station restart, select the **Force Custom Login Settings at Restart** property to *true*.



3. To override customized css login and logo on station restart, select the **Force Custom Login Settings at Restart** property to *false*.

7.9 Headstation and Substation Ping Read Timeout

The communication between the headstation devices and substation devices is critical and need to be consistently synchronous. Particularly for the substations, it takes more time to get the response for the request sent compared to the headstation.

To overcome this difference, a new “**Headstation Ping Read Timeout**” property slot is introduced in Headstation devices. Similarly, a new “**Substation Ping Read Timeout**” property slot is introduced in Substation devices and the read timeout is increased from 250 millisecond (ms) to 4000 millisecond (ms) by default.

This conversion is only valid for SBC specific media types.

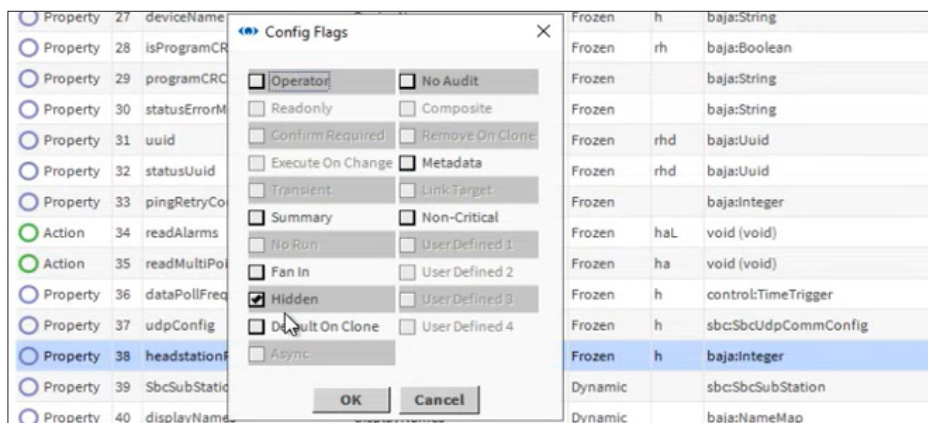
Using a Headstation Ping Read Timeout property slot:

1. In the Nav tree, open **127.0.0.1(localhost) > Station > Config > Drivers**.
2. Go to **SBCIpNetwork** and select the Headstation.

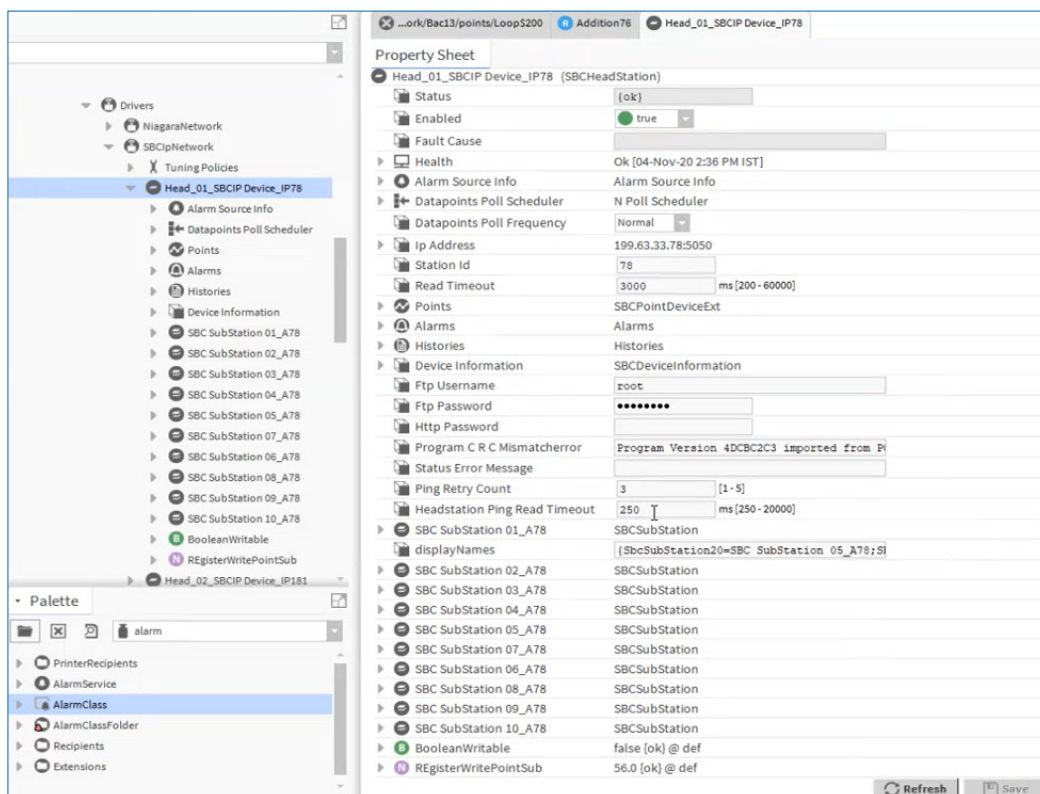
- Go to the **AX Slot Sheet** view from the View Selector.
- Select the **Headstation Ping Read Timeout** property from the Slot list. Right click on it and select **Config Flangs**.
- The **Config Flangs** dialogue box is displayed. Remove the selection of *Hidden* flag.



For more details about Config Flangs, refer to Tridium Niagara documentation docuser file which is available in the Niagara workbench.



- Click **OK**.
- Go to the **AX Property Sheet** view from the View Selector.



- The **Headstation Ping Read Timeout** property slot is now listed in the Property sheet with default value of 250 ms. This value is user configurable ranging from 250 ms to 20000 ms.

Headstation and Substation Ping Read Timeout

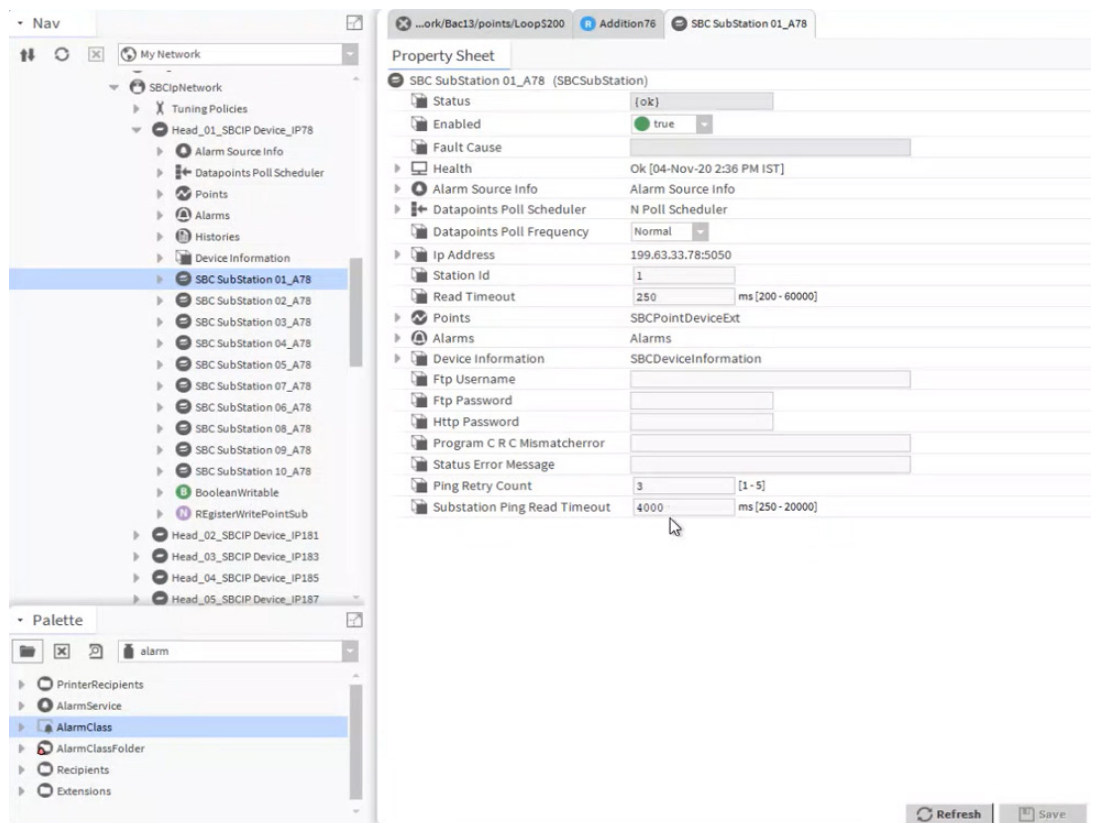
Using a Substation Ping Read Timeout property slot:

1. In the Nav tree, open **127.0.0.1(localhost) > Station > Config > Drivers**.
2. Go to **SBCIpNetwork > Headstation > Substation**.
3. Go to the **AX Slot Sheet** view from the View Selector.
4. Select the **Substation Ping Read Timeout** property from the Slot list. Right click on it and select **Config Flangs**.
5. The **Config Flags** dialogue box is displayed. Remove the selection of *Hidden* flag.



For more details about Config Flags, refer to Tridium Niagara documentation docuser file which is available in the Niagara workbench.

6. Click **OK**.
7. Go to the **AX Property Sheet** view from the View Selector.



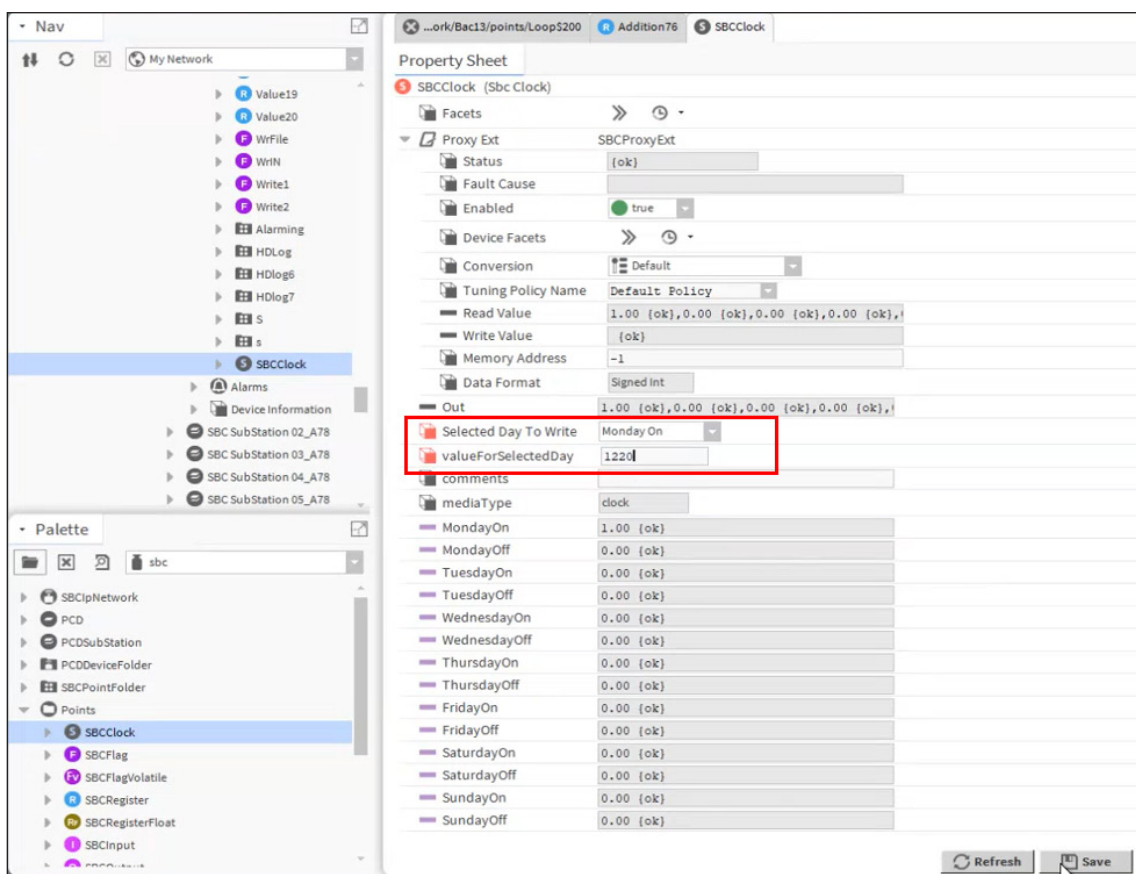
8. The **Substation Ping Read Timeout** property slot is now listed in the Property sheet with default value of 4000 ms (4 seconds). This value is user configurable ranging from 250 ms to 20000 ms.

7.10 Setting up the S-Bus clock

A new SBC Clock feature enables you to set the seven day clock which captures 14 times. Each day can be assigned with two values, On or Off. Also the same set SBC Clock points can be read and write to the Saia PCD devices.

To add a S-Bus clock

1. Click on the folder icon under Palette. Open Palette dialogue box is displayed.
2. Select SBC IP Driver from drop down list. "Points" palette will be displayed under Palette window area.
3. Go to **Points**. Select **SBCClock** and then drag and drop it to the Points folder of required station or device under Nav. tree.

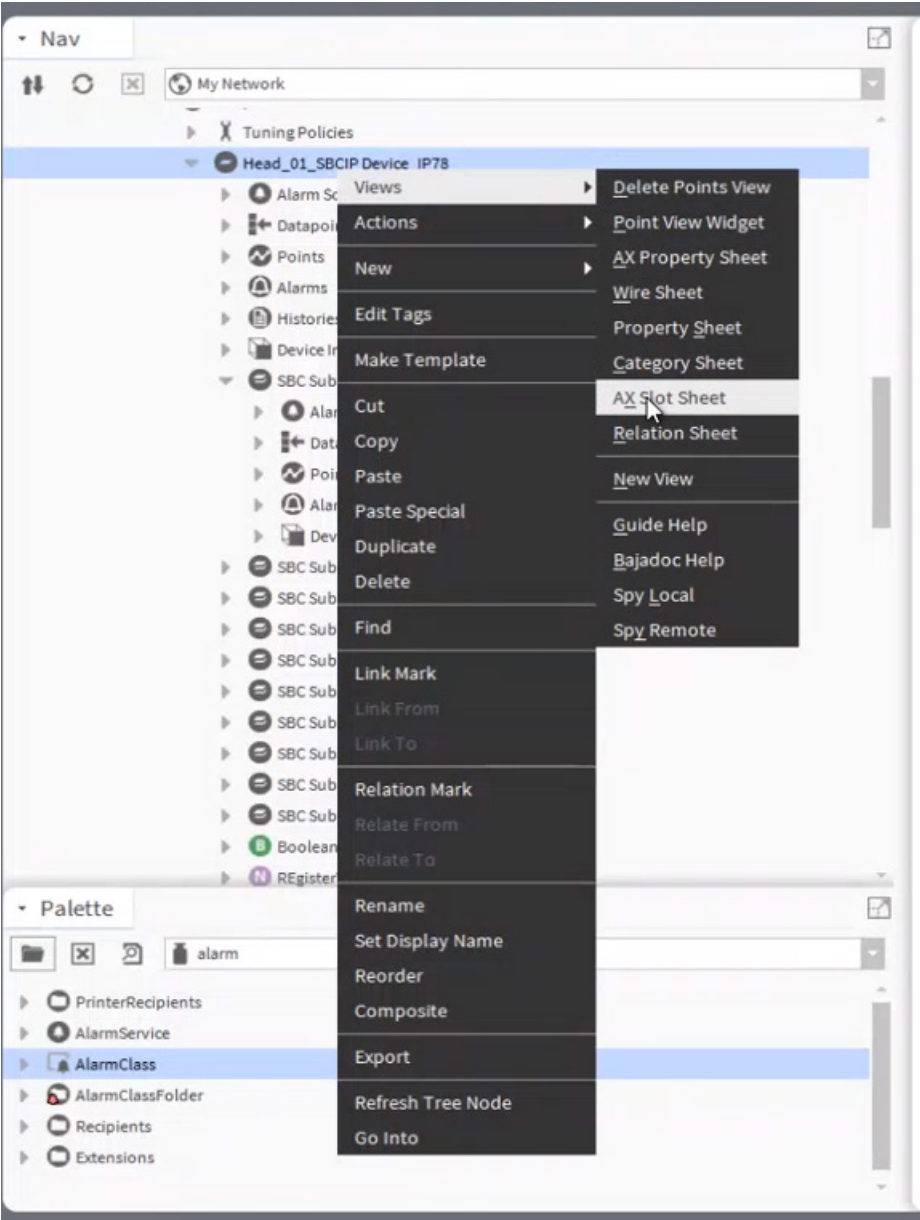


4. Now, the SBCClock Point is added under tree. Click **SBCClock**.
5. Set On or Off status for selected day (Monday to Sunday). Then, add the time in the form of integer number type.
For example: Selected Day to Write - Monday On
Value for Selected Day - 1220.
6. Click **Save** to save data to supervisor.
7. To write the saved values into the controller/device, right-click on the AX Property Sheet. Go to **Actions > Set**.

7.11

Use of UDP config slot from the Property sheet in every headstation

To overcome the issue of exception from the overfilled stack, every workstation is added with one UDP channel from version 3.0. Now, each headstation can process 32 transaction threads which can help to process received and sent requets. This will enhance the communication speed and performance.



Property	33	pingRetryCount	Ping Retry Count	Frozen	baja:Integer
Action	34	readAlarms	Read Alarms	Frozen	haL void (void)
Action	35	readMultiPoints	Read Multi Points	Frozen	ha void (void)
Property	36	dataPollFrequency	Alarms Poll Frequency	Frozen	h control:TimeTrigger
Property	37	udpConfig	Udp Config	Frozen	h sbc:SbcUdpCommConfig
Property	38	headstationPingReadTimeout	Headstation Ping Read Timeout	Frozen	baja:Integer

8 Saia PCD® Supervisor - Point View Widget

8.1 Introduction

8.1.1 Purpose and Deliverables of the Point View Widget

The Point View Widget is a browser-based interface designed for BEMS (Building Energy Management System) users in order to perform the most common operations requested to maintain and run any BEMS system efficiently.

The point view widget is interconnected with the standard Niagara user administration. This provides a customized solution considering individual user requirements (restrictions) when working with point lists. The Niagara user administration allows any kind of deep-structured definition for users. As an example, 3 typical BEMS user types (profiles), each having specific prerequisites and operational needs, are described in the following:

Operator

- Familiar and comfortable with software based on standard browser technology
- No knowledge of BEMS internals
- Individual user access possible by user privilege management
- Viewing core information of points: value, status, alarms, and logs
- Search for names using wildcards
- Operations applicable to multiple points in one step
- Quick filtering for points in alarm, in overridden state, and with logs
- Saving point lists as favourites

8

Service Manager

- The service manager can apply all functions of the operator. In addition, the service manager can:
 - Apply multi-string search with no need to know SQL
 - Present and extract data as Excel report
 - Easily access historical data and display point logs
 - Convert complex schematics into an easy understandable tabular format for a comprehensive overview of system health status

Partner

- Has super-user (admin) rights and can apply all functions of the operator and service manager
- As a superuser having excellent expertise, he is able to design individual user profiles (e.g. operator, service manager, etc.) which allow these users to take out the required information from the BEMS effectively based on the usage of the point view widget
- Needs less pre-engineering and post-customization to support the users

For detailed instructions on how to create user profiles using the Niagara user administration, we recommend a training that can be provided by the corresponding Honeywell TAC department.

Prerequisites

8.2 Prerequisites

In order to run the Niagara Supervisor and make use of the point view widget, make sure, that the following prerequisites are fulfilled:

- Niagara 4.7 is installed on the PC
- The Modules folder contains the following Galileo modules:
 - galileoPointListWrapper-rt
 - galileoPointViewer-rt
 - galileoPointViewer-ux
 - galileoSignalR-rt
- The Niagara Workbench is started
- The platform is connected
- The station is running and connected
- The Galileo services “PointListViewService” and “SignalService” are available in the “Services” folder. If the station is originally created based on a Tridium template, please refer to the “Selecting the Right Station Template “, page. 6 section for adding the missing services to the station.

8

8.2.1 What's new with Niagara 4.7?

Point-List-View

- Standard view is now selectable
- PLV at global system level (no more missing data points)
- Tooltip for description
- Points are updated after station restart
- History extensions are also displayed via the log icon
- Set / Override are configurable
- The PLV correctly displays the decimal places defined in the lexicon file

2852 Points Default View

<input type="checkbox"/> Label	Value	Log	Status	Path	DataFormat
Register					
TotMsg	0,00		down,overridden_state,@def	/Drivers/Network/AH...	Signed Int
Flag					
<input type="checkbox"/> lAlarm	<input type="checkbox"/> false		down_state,@def	/Drivers/Network/AH...	Boolean
lLamp_DO	<input type="checkbox"/> false		down,overridden_state,@def	/Drivers/Network/AH...	Boolean
<input checked="" type="checkbox"/> lMaintenance	<input type="checkbox"/> false		down_state,@def	/Drivers/Network/AH...	Boolean
<input checked="" type="checkbox"/> lPushButton_DI	<input type="checkbox"/> false		down_state,@def	/Drivers/Network/AH...	Boolean
<input type="checkbox"/> Forwarded	<input type="checkbox"/> false		down_state,@def	/Drivers/Network/AH...	Boolean
Register					
<input type="checkbox"/> Output	0,00		down_state,@def	/Drivers/Network/AH...	Signed Int
Flag					
<input type="checkbox"/> Prio8En	<input type="checkbox"/> false		down_state,@def	/Drivers/Network/AH...	Boolean
Register					
<input type="checkbox"/> Prio8Val	0,00		down_state,@def	/Drivers/Network/AH...	Signed Int
Flag					
<input type="checkbox"/> Prio16En	<input type="checkbox"/> false		down_state,@def	/Drivers/Network/AH...	Boolean
Register					
<input type="checkbox"/> Value	0,00		down_state,@def	/Drivers/Network/AH...	Signed Int
<input type="checkbox"/> IntTime	0,00		down_state,@def	/Drivers/Network/AH...	Signed Int

1 **2** 3 20

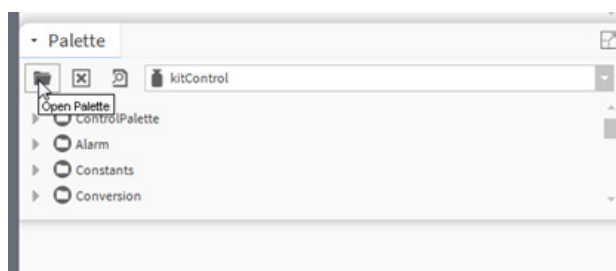
8.2.2 Selecting the Right Station Template

In order to apply the point view widget, select the brand-specific template when creating the station, e.g. the Saia PCD Supervisor System template for the Saia Burgess Controls AG brand. This adds the required services to the Services folder automatically.

If the station is created using a Tridium template, you must manually add the required services from the “galileoPointViewer” and “galileoSignalR” palettes to the Services folder as described in the following:

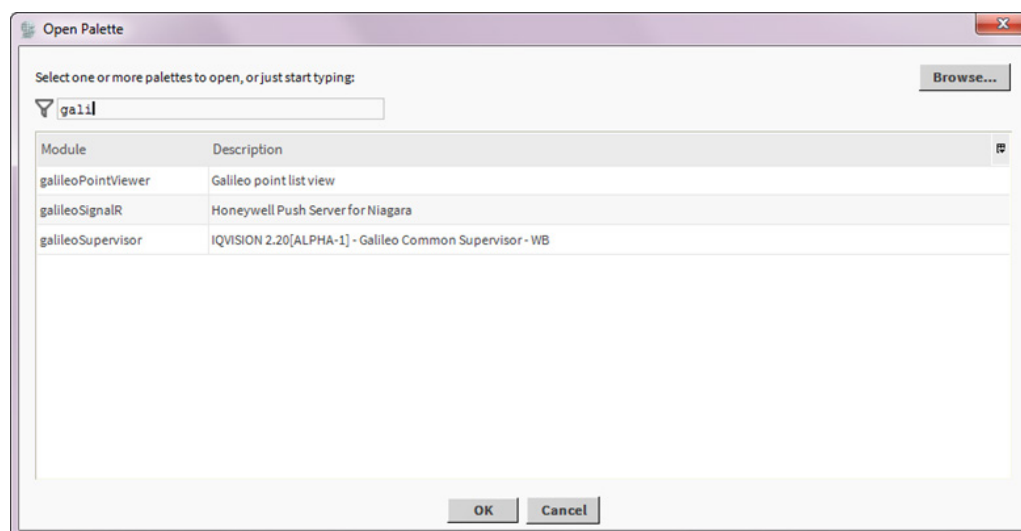
Procedure

1. In the Palette pane, open a new palette by clicking the Open icon.



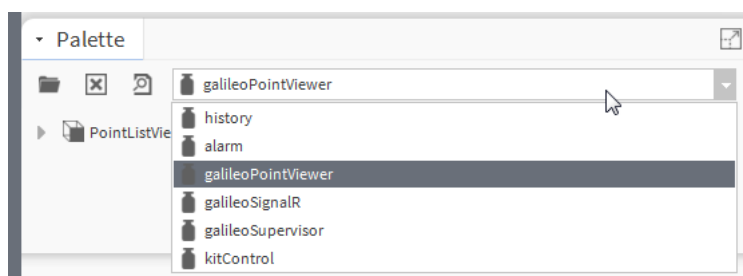
8

RESULT: The Open Palette dialog box displays.



2. Enter 'galileo' or the first part of the string in the search field.

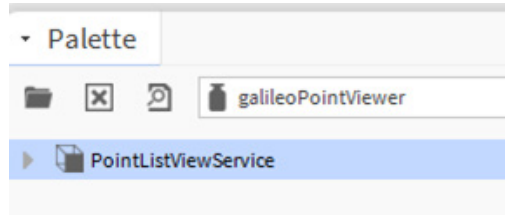
RESULT: The galileo items are displayed.



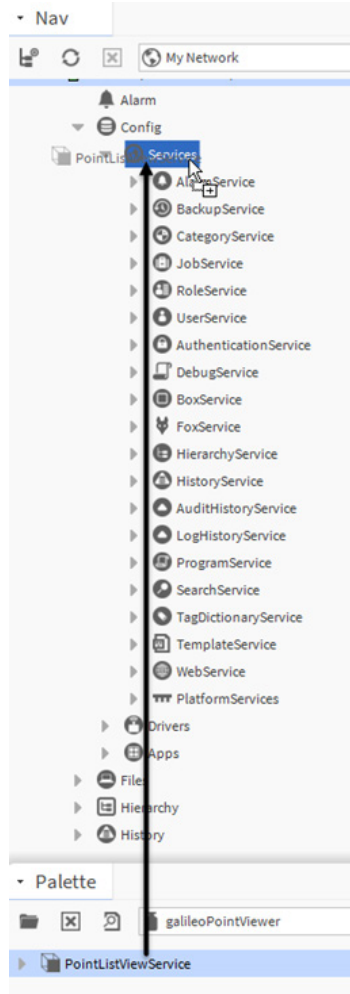
3. Select e.g. 'galileoPointViewer' at first.

Prerequisites

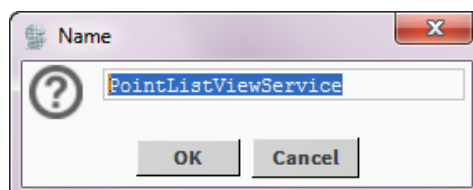
RESULT: The 'PointListViewService' is displayed.



4. Select the 'PointListViewService' in the Palette, and then drag&drop it to the Services folder in the Nav tree.

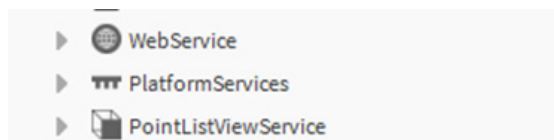


RESULT: The Name dialog box displays.

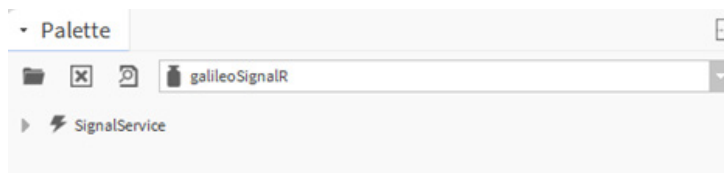


5. If desired, change the name, and then click the OK button.

RESULT: The 'PointListViewService' is added to the Services folder in the Nav tree.



6. Add the 'SignalService' in the same way to the Services folder (see the following screenshots).

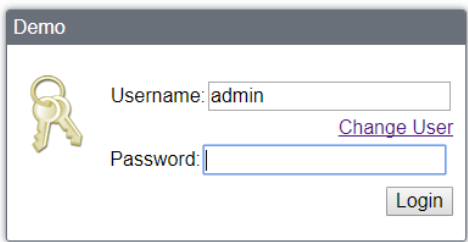


8.3 Starting Niagara Supervisor

Procedure

1. Open your browser and enter the IP address, URL, or hostname into the address field.
2. If your browser does not allow a secure https connection, continue by applying the unsecure mode provided by the browser.

RESULT. The Login dialog box displays showing the name of the station, in this case “Demo”, in the title line.

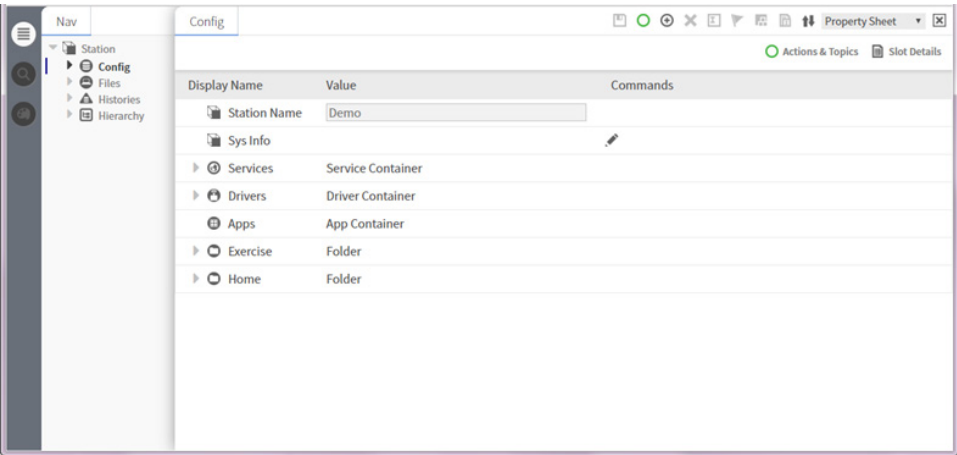


Use of this software is subject to the [End User License Agreement](#) and other [Third Party Licenses](#)

To connect using Java Web Start [click here](#)

3. If not already displayed in the Username field, enter your user name, and in the Password field, enter your password.
4. Click the Login button.

RESULT: The Station window displays. The Nav tree is shown on the left and the Config folder is pre-selected.



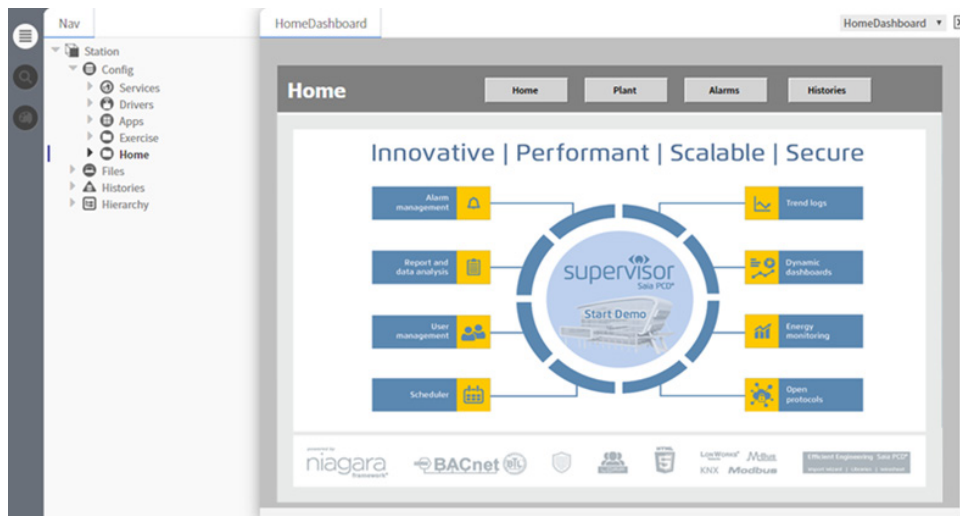
8.3.1 Enabling Point View Widget

The points of the station to be displayed via point view widget can be located in any driver and/or Niagara folder.

Procedure

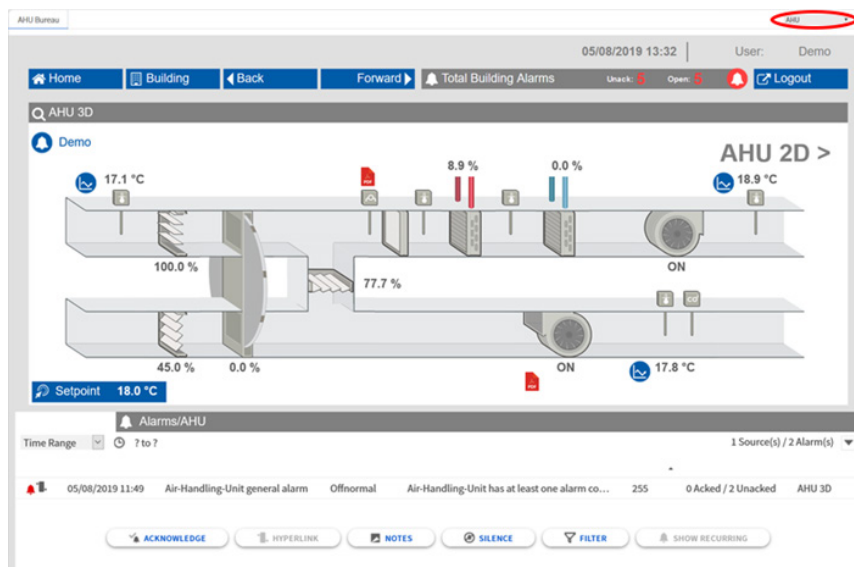
1. After login (see “Starting Niagara Supervisor” section), expand the Config folder and browse to the Home folder which typically displays the building graphically.
2. Double-click the Home folder.

RESULT: On the right pane, the building graphic displays.



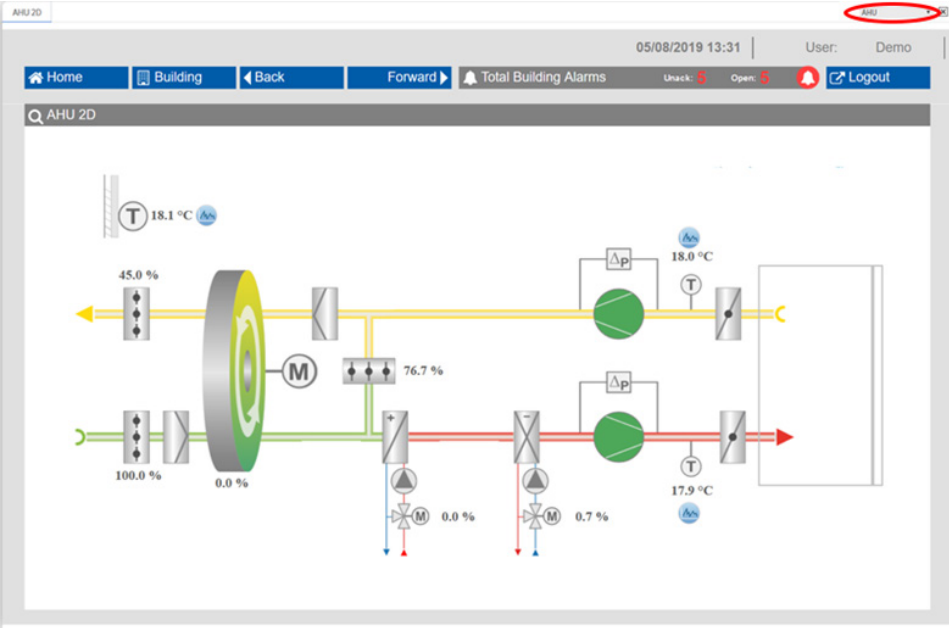
3. Navigate to the plant by clicking the Plant button in the graphic.

RESULT: On the right pane, the plant graphic displays.



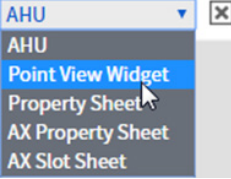
Starting Niagara Supervisor

Or in 2D:



8

4. On the upper right corner, click the drop-down listbox and then click on Point View Widget in the menu.



RESULT. On the right pane, the point list displays. By default, the list is displayed in the Default View.

Building

Point View Widget

21 Points

Search by Point Label

Default View

Actions

<input type="checkbox"/>	Label	Value	Log	Status	Path
<input checked="" type="checkbox"/>	NumericWritable				
<input type="checkbox"/>	SupplyTemp	20.88 °C		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogInput/SupplyTemp
<input type="checkbox"/>	OaTemp	1.15 °C		unackedAlarm	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogInput/OaTemp
<input type="checkbox"/>	RecoveryTemp	16.00 °C		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogInput/RecoveryTemp
<input type="checkbox"/>	MixedTemp	8.00 °C		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogInput/MixedTemp
<input type="checkbox"/>	ReturnTemp	19.00 °C		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogInput/ReturnTemp
<input checked="" type="checkbox"/>	FL1_AI1	21.00 pf		overridden	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogInput/FL1_AI1
<input type="checkbox"/>	FL1_AI2	30.00 %		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogInput/FL1_AI2
<input type="checkbox"/>	OaDamper	100.00 %		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogOutput/OaDamper
<input checked="" type="checkbox"/>	HeatValve	80.00 %		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogOutput/HeatValve
<input type="checkbox"/>	ExhaustDamper	100.00 %		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogOutput/ExhaustDamper
<input type="checkbox"/>	ReturnDamper	20.00 %		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogOutput/ReturnDamper
<input type="checkbox"/>	CoolValve	0.00 %		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogOutput/CoolValve
<input type="checkbox"/>	FL1_AO1	3.80		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogOutput/FL1_AO1
<input type="checkbox"/>	FL1_AO2	8.00		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogOutput/FL1_AO2
<input type="checkbox"/>	HeatSetpoint	23.00 °C		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogValue/HeatSetpoint
<input type="checkbox"/>	CoolSetpoint	19.00 °C		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogValue/CoolSetpoint
<input checked="" type="checkbox"/>	BooleanWritable				
<input type="checkbox"/>	ReturnFan	OFF		alarm	/Drivers/BacnetNetwork/AHU_01/points/AHU/BinaryOutput/ReturnFan
<input type="checkbox"/>	SupplyFan	ON		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/BinaryOutput/SupplyFan
<input type="checkbox"/>	RecWheel	OFF		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/BinaryOutput/RecWheel
<input checked="" type="checkbox"/>	EnumWritable				
<input type="checkbox"/>	PlantMode	Auto		ok	/Drivers/BacnetNetwork/AHU_01/points/AHU/MultistateValue/PlantMode

1 2 20

For a detailed description of the point view widget screen, please refer to the subsequent “Point View Widget Description” section, page 146.

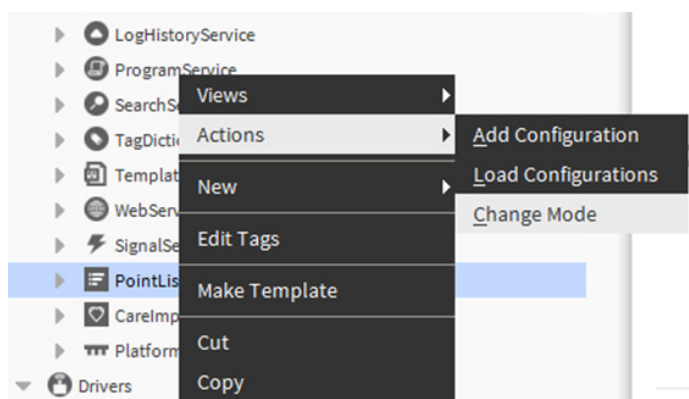
8.3.2 Engineering Mode

When PointListViewService is activated the detail pane on the right side uses as default the PointView Widget.

Niagara default views assigned to the hierarchy elements listed in the tree on the left side are inactive. During engineering activities this is not always an advantage. To activate the Niagara default views assigned to the hierarchy elements the engineering mode has to be activated.

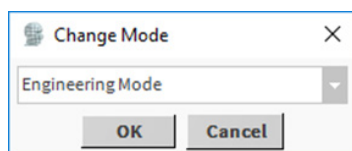
Procedure

At the PointListViewService hierarchy element use right click Actions menu and select Change Mode.



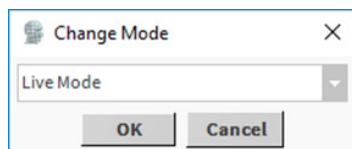
8

Select Engineering Mode



RESULT: Standard Niagara default views assigned to the hierarchy elements listed in the tree on the left side are active.

Engineering mode can be deactivated using the same menu selecting Live Mode.



Engineering Mode will automatically be deactivated when user logs off or station is restarted.

Point View Widget Description

8.4 Point View Widget Description

This section briefly describes the components and functions of the Point Widget View. For descriptions of the numbers assignment, please refer to the corresponding table below and on the next page.



Fig. 1. Point View Widget Overview

Table 1. Functions of the Point View Widget

No.	Name	Functional Description
1	Point View Widget Enable	Here you select the Point View Widget from the drop-down listbox for displaying the point list.
2	Plant / Folder Name	Shows the name of the plant/folder selected in the Nav tree or accessed via plant graphic
3	No. of Points	Shows the number of points included in the point list
4	Point List	In the area below, the point list is displayed
5	Point Properties	Shows the point properties as configured via column toggler (17). Point properties can be: <ul style="list-style-type: none"> • Label Point name • Value Point value • Logs Graphic history icon in case point has a history (11) • Status Auto, manual, or alarm • Path Location of the point • PointType (disabled by default) Point type such as NumericWritable, BooleanWritable, etc.
6	Point Group	Shows the point category to which the points belong

7	Alarm Status Indicator	If displayed, the point is in alarm
8	Override Status Indicator	If displayed, the point is in manual state and its point value is overridden
9	Label Name / Property sheet	Shows the point name. By clicking the blue name, the property sheet displays for editing
10	Point Value	Allows the direct change of a writable point's value
11	History Indicator	If displayed in the Logs column, the point has a history (history extension assigned). By clicking the blue History icon, the chart displays.
12	Point View Mode	Allows selecting the source of the points to be displayed. Points can originate in the Points folder or its subfolders, or any other folder underneath the driver/network (default view), in a graphic (PX page), or in a favourite
13	Filtering by Status	Allows quick display of points which are overridden, or in alarm, or which have histories.
14	Filtering by Label	Allows searching points by name (label) by entering concatenated strings using wildcards.
15	Actions Menu	Provides the following actions: <ul style="list-style-type: none"> • Setting points into manual mode • Setting points into auto mode • Setting points to fallback value / relinquish default value • Export points to a CSV file • Saving points to a favourite
16	Point Selection	Here you select the point(s) by clicking the checkboxes
17	Column Toggler	Allows configuring the point properties to be displayed columnwise.
18	Group Toggler	Allows toggling the point group (showing/hide)
19	Page Browser	Allows setting the number of displayed points per page and browsing through the list pages
20	Column Sorter	Allows ascending and descending sorting of the corresponding column


For detailed descriptions on each component and function, please refer to corresponding subsequent sections.

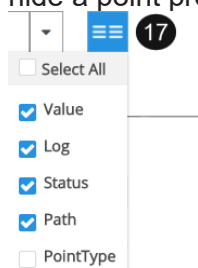
8.4.1 Basic Working Techniques

This section describes general functions of configuration, display and navigation of list.

Setting Columns Display

The Column Toggler (17) allows the configuration of the point properties to be displayed per column.

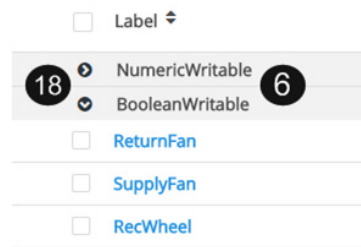
1. On top right corner, click the ColumnToggler icon .
2. In the drop-down menu, check the point property you want to display in a column. To hide a point property, uncheck the property.





Point View Widget Description

Expanding and Collapsing Point Groups

Points are arranged in point type groups (6) such as NumericWritable, BooleanWritable etc. If a high number of points are arranged in a group and you want to optimize the list display for viewing other point type groups on one page, you can use the Group Toggler (18) to collapse a group. As required you can expand the group again by using the Group Toggler.

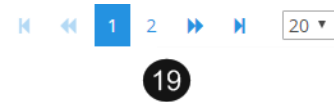



1. To collapse a point group, click the down arrow  in front of the group name.
2. To expand a collapsed point group, click the horizontal arrow  in front of the group name.

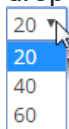
8



Setting Point Count Display and Page Browsing

At the bottom of the list, the Page Browser (19) allows setting the number of displayed points per page and browsing through the list pages.



1. For adjusting the number of displayed points per page, click the right-handed Page drop-downlist  and select the number from 20, 40, or 60.



2. For browsing through the list pages, click the forward  and backward  buttons or click on the page number.

Sorting Point Properties in Column

Point properties can be sorted ascending and descending in their columns by using the upward/downward arrows (20) right to the column title (property name).



- 1. To sort the properties in ascending order, click the upward arrow ▲.
- 2. To sort the properties in descending order, click the downward arrow ▼.

8.4.2 Selecting Point View Mode

Points can be located or included in any of the following places in your station:

- Points folder and subfolders underneath the device and/or network
- Individual folders underneath the device and/or network
- Any Niagara folder
- Graphic (PX) file
- Favourites (must first have been created in the Point View Widget)

Referring to this, the following point view modes are selectable:

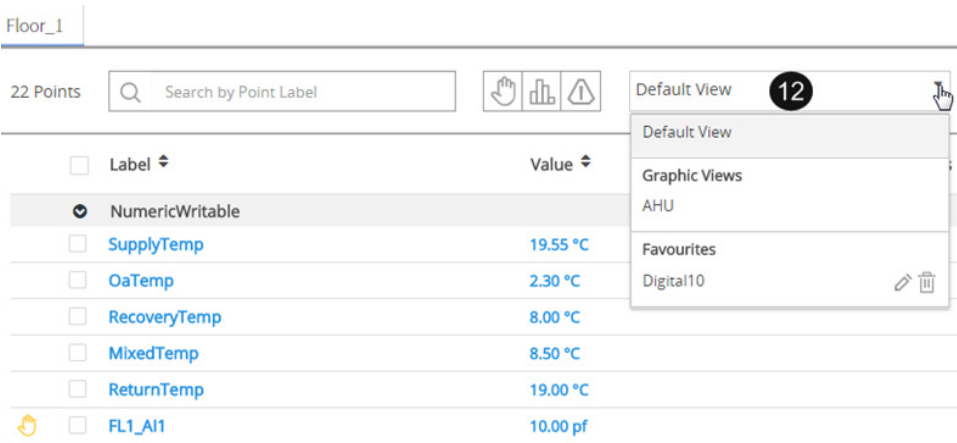
- Default View
shows all points of the station
- Graphic Views
shows all points used in the selected graphic
- Favourites
shows all points saved in the favourite

When selecting the point view mode, only the points included in the selected Point View are listed in the point list.

By default, the Default View mode is preselected after the points are loaded in the Point View Widget.

Procedure

- 1. In the control bar, click the “Point View Mode” drop-down listbox (12), and then click the view.



RESULT. The point list is updated according to the selected view.

8.4.3 Filtering Points

Points can be filtered by their label (name) and status. The filtering functions apply in all point view modes: Default view, Graphic views and Favourites.

Please refer to the subsequent sections for detailed descriptions for the two methods.

8.4.3.1 Filtering Points by Status

By applying predefined filters (13), points of the current point list can be filtered by the following status:

- Overridden points
- Points with histories (trend points)
- Points in alarm



8

Multiple predefined point filters can be used simultaneously.



When using more than one filter, the filters will be logically linked with AND. That is, for example, when searching for overridden points and points in alarm, only those points which fulfil both filter criteria, will be listed. Filters can also be applied additionally to the search function as described in the “Filtering Points by Label”. In this case, that filtering logic will be considered additionally.

Applying a Predefined Filter

1. To apply a predefined filter, click the icon, e.g. the Alarm icon

RESULT: The filter is enabled and the icon toggles to active state indicated by the blue color .

2. To release a predefined filter, toggle the filter by clicking the Alarm icon again.
Example: Filtering for overridden points

Procedure

1. To filter for overridden points, click the Overridden icon in the control bar.
RESULT: The icon toggles to active state . In the list, only points that are in “overridden” status are displayed. The overridden status of a point is indicated by the hand symbol in front of the point label and by the message “overridden” in the Status column

2 Points		Q Search by Point Lat		Default View	Actions	
<input type="checkbox"/>	Label	Value	Logs	Status	Path	
<input checked="" type="checkbox"/>	NumericWritable					
	<input type="checkbox"/> FL1_Alt	10.00 pf		overridden	/Drivers/BacnetNetwork/AHU_0...	
	<input type="checkbox"/> HeatSetpoint	21.00 °C		overridden	/Drivers/BacnetNetwork/AHU_0...	

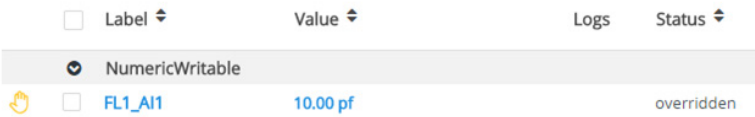
For filtering for points in alarm or with histories, apply the corresponding filter functions in the same way.

8.4.3.2 Point Status Indications

The status of a point is indicated graphically (override hand symbol, alarm rectangle) in front of the point label and descriptive in the Status column. As an exception, for a point with a history, the graphic indication is displayed in the Logs column by a chart symbol.

Graphic Point Status Indications

→ Overridden point



→ Point in alarm







→ Point with history



The different colors and status descriptions for alarm points are described in the following table (see below):

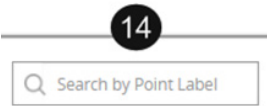
Table 2. Alarm Status and its Color Indications

Color	Status Text	Cause
Red 	UnackedAlarm Alarm	<ul style="list-style-type: none">• The current state of the alarm source is OffNormal and the alarm is not acknowledged• The current state of the alarm source is Fault and the alarm is not acknowledged
Green 	UnackedAlarm	The current state of the alarm source is Normal and the alarm is not acknowledged
Orange 	Alarm	The current state of the alarm source is Normal and the alarm is acknowledged
Yellow 	Alarm	<ul style="list-style-type: none">• The current state of the alarm source is OffNormal and the alarm is acknowledged• The current state of the alarm source is Fault and the alarm is acknowledged
White	Ok	The current state of the alarm source is Normal and the alarm is acknowledged

Point View Widget Description

8.4.3.3 Filtering Points by Label

In the current point list, points can be filtered (searched) by point label (14). This can be done by entering simple or concatenated text strings using wildcards.



8.4.3.4 Procedure

1. In the Search by Point Label field, enter the string.
RESULT: The point list is updated with the found points instantly as you type the string.



When using a concatenated text string, the text string parts will be logically linked with OR. That is, for example, when entering “temp+set”, any points having either “temp” or “set”, or both in their label will be listed. The search function can be applied additionally to the status filtering function as described in the “Filtering Points by Status” section. In this case, that filtering logic will be considered additionally.

Examples: Filtering for points that contain “temp” in its label. In a second step, filtering for points that contain “set” in its label.

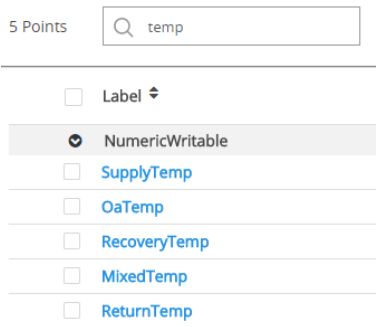


Fig. 2. Searching in point labels using single text string

RESULT. All points containing “temp” in its label are listed.

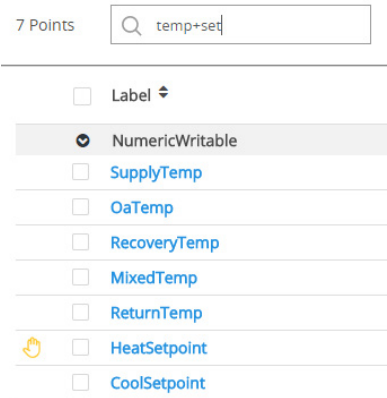


Fig. 3. Searching in point label using concatenated text string

RESULT: All points containing “temp” and all points containing “set” in their labels are listed.

8.4.4 Setting Point Values

The value of a point is set by one of the following causes:

- Automatic update
executed by the running application, see “Relinquishing Points” section
- Manual override
Explicitly done by the user, see “Manual Override (Direct Point Editing)” section and “Manual Override (Enhanced Point Editing)”.
- Fallback value / Relinquish default
Pre-setting defined by the user, see “Setting Point to Fallback / Relinquish Default Value” section.

8.4.4.1 Manual Override (Direct Point Editing)

You can manually override the value of a single writable point by changing its value directly in its Value field (Direct Point Editing). The overridden status is indicated descriptive in the Status column (overridden) and graphically by the hand symbol 🖐️ in front of the point label. In the priority array, the changed value is written to the slots ‘In8’ and ‘Out’.

Direct point editing allows changing the value of a single writable point in one step. For changing values of multiple writable points simultaneously, please refer to the “Manual Override (Enhanced Point Editing)” section.

<input type="checkbox"/> Label ↕	Value ↕	Log	Status ↕
<input checked="" type="checkbox"/> NumericWritable			
<input type="checkbox"/> CoolSetpoint	19.00 °C		ok
<input checked="" type="checkbox"/> BooleanWritable	10		
<input type="checkbox"/> ReturnFan	<input checked="" type="checkbox"/> ON		ok

Procedure

In the following steps, NumericWritable and BooleanWritable points are described as examples for direct point editing.

1. Overriding Value of NumericWritable Point
For overriding the value of a single NumericWritable point, click the value in the Value column (for overriding the value of a BooleanWritable point, see step 3).

<input type="checkbox"/> Label ↕	Value ↕
<input checked="" type="checkbox"/> NumericWritable	
<input type="checkbox"/> CoolSetpoint	16,0

Fig. 4. Example “Manual Override of NumericWritable Point”


2. Enter the value, and then press ENTER key.

<input type="checkbox"/> Label ↕	Value ↕	Log	Status ↕
<input checked="" type="checkbox"/> NumericWritable			
🖐️ <input type="checkbox"/> CoolSetpoint	16.00 °C		overridden

RESULT: The value is overridden. The overridden status is indicated descriptive in the Status column (overridden) and graphically by the hand symbol 🖐️ in front of the point label. At the bottom, the history of point editing is shown in the Updating point details... window (see step 4).

3. Overriding Value of BooleanWritable Point

Point View Widget Description

For overriding the value of a single BooleanWritable point, click the left and right edge respectively (depending on the current status) of the binary switch icon  in the Value column.

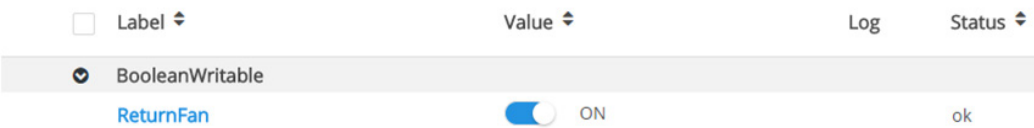

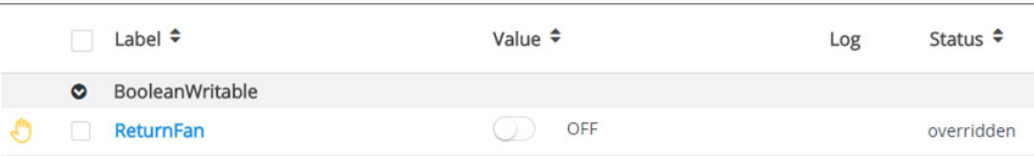


Fig. 5. Example “Manual Override of BooleanWritable Point”

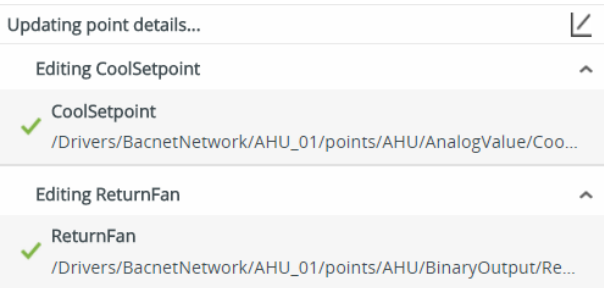
RESULT: The value is overridden. The overridden status is indicated descriptive in the Status column (overridden) and graphically by the hand symbol  in front of the point label. At the bottom, the history of point editing is shown in the Updating point details... window (see step 4).





- 8
4. Viewing Point Editing History
- The Updating point details... window at the bottom shows the actions performed to the points and their point labels.



5. To view details of an edited point, click the down arrow . The point path is displayed and a green arrow indicates that the point value has been successfully changed.



6. To hide the Updating edit point details... window, click the Hide icon .
7. To re-display the Updating edit point details... window, click the View icon .




8.4.4.2 Manual Override (Enhanced Point Editing)

You can manually override a single writable point or multiple writable points of the same group with the same value simultaneously by using the Set to Manual action (Enhanced Point Editing) in the Actions menu. In addition, enhanced point editing allows applying a certain duration the points should stay in manual override.

The following options are available:

- Permanent
- 1, 15, or 3 minutes
- 1, 2 or 3 hours
- Override expiration: discards current duration

The overridden status is indicated descriptive in the Status column (overridden) and graphically by the hand symbol  in front of the point label. In the priority array, the changed value is written to the slots 'In8' and 'Out'.



Multiple writable points can have the same or different facets.
Multiple writable Enum points must have the same Enum range.

5 Points Default View 15 Actions

<input type="checkbox"/> Label	Value	Log	Status	Path
NumericWritable				
<input type="checkbox"/> OaDamper	100.00 %		ok	/Driv
<input type="checkbox"/> ExhaustDamper	100.00 %		ok	/Driv
<input type="checkbox"/> ReturnDamper	20.00 %		ok	/Drivers/BacnetNetwork/AHU_01/
BooleanWritable				
<input type="checkbox"/> ReturnFan	ON		overridden,unackedAlarm	/Drivers/BacnetNetwork/AHU_01/
<input type="checkbox"/> SupplyFan	ON		ok	/Drivers/BacnetNetwork/AHU_01/

Procedure

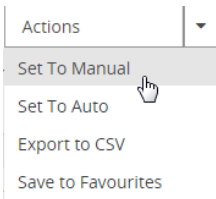
In the following steps, NumericWritable and BooleanWritable points are described as examples for enhanced point editing.

1. Overriding Value of NumericWritable Points
Select the points you want to override manually by checking the checkbox at the point label (for overriding the value of BooleanWritable points, see step 5).

<input checked="" type="checkbox"/> Label	Value	Log	Status
NumericWritable			
<input checked="" type="checkbox"/> OaDamper	100.00 %		ok
<input checked="" type="checkbox"/> ExhaustDamper	100.00 %		ok

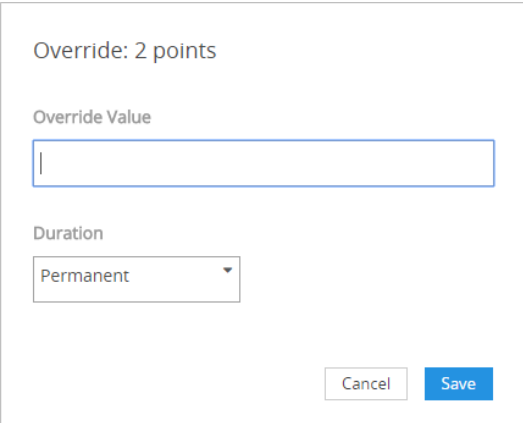
Fig. 6. Example “Manual Override of NumericWritable Points”

2. Click the Actions menu (15) on the top, and then click Set to Manual.



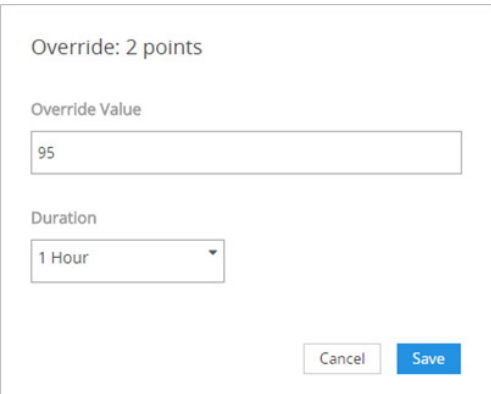
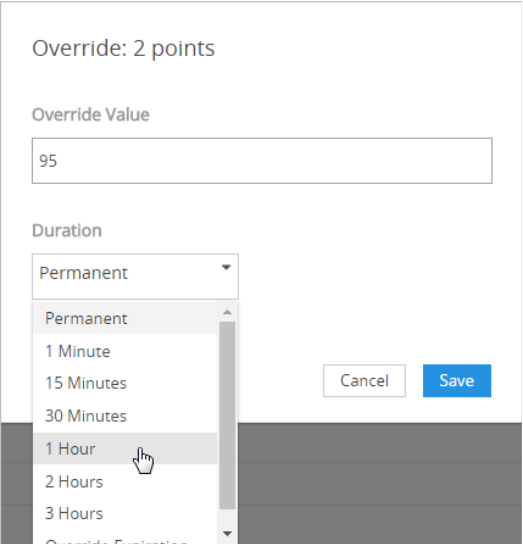
Point View Widget Description

RESULT: The Override dialog box displays and shows the number of selected points.



3. In the Override Value field, enter the value, and from the Duration drop-down list, select the duration.

8




4. Click the Save button.


RESULT: Any selectable points are overridden with the new value as indicated in the Value column. The overridden status is indicated descriptive in the Status column (overridden) and graphically by the hand symbol 🖐️ in front of the point label.

<input type="checkbox"/> Label ↕	Value ↕	Logs	Status ↕
NumericWritable			
 <input type="checkbox"/> OaDamper	95.00 %		overridden
 <input type="checkbox"/> ExhaustDamper	95.00 %		overridden


At the bottom, the history of point editing is shown in the Updating point details... window.

Updating edit point details... 

Editing OaDamper + 1 points ^



OaDamper
/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogOutput/OaDamper



ExhaustDamper
/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogOutput/ExhaustDamper

For detailed description of the Updating point details... window, please refer to step “Viewing Point Editing History”.

5. Overriding Value of BooleanWritable Points

For overriding BooleanWritable points, please apply the previous steps 1 and 2 in the same way as described for the NumericWritable points above.

8



<input checked="" type="checkbox"/> Label ↕	Value ↕	Log	Status ↕
BooleanWritable			
<input checked="" type="checkbox"/> ReturnFan	 ON		ok
<input checked="" type="checkbox"/> SupplyFan	 ON		ok

Fig. 7. Example “Manual Override of BooleanWritable Points”

6. In the Override Value field, select the “false” state, and from the Duration drop-down list, select the duration.

Override: 2 points

Override Value

false



Duration

15 Minutes

Cancel

Save

7. Click the Save button.

RESULT: The points are overridden with the new value as indicated by the toggled switch icon  in the Value column. The overridden status is indicated descriptive in the Status column (overridden) and graphically by the hand symbol  in front of the point label.

Point View Widget Description

<input checked="" type="checkbox"/>	Label ▾	Value ▾	Log	Status ▾
<input checked="" type="checkbox"/>	BooleanWritable			
	<input checked="" type="checkbox"/> ReturnFan	<input type="checkbox"/> OFF		overridden
	<input checked="" type="checkbox"/> SupplyFan	<input type="checkbox"/> OFF		overridden

At the bottom, the history of point editing is shown in the Updating point details... window.

Updating point details...	
Editing ReturnFan + 1 points	
	ReturnFan /Drivers/BacnetNetwork/AHU_01/points/AHU/BinaryOutput/R...
	SupplyFan /Drivers/BacnetNetwork/AHU_01/points/AHU/BinaryOutput/S...

8

For detailed description of the Updating point details... window, please refer to step “Viewing Point Editing History”.

8.4.4.3 Inline Command Editing

The Inline Command option allows to edit point values in the Point View Widget. Click on the point value opens edit field where new value can be entered.

<input checked="" type="checkbox"/>	NumericWritable			
<input type="checkbox"/>	Analog_Out_1	20.0 %	ok,@def	/Drivers/NiagaraNetwork/...
<input type="checkbox"/>	Analog_Out_2	12.0	ok,@def	/Drivers/NiagaraNetwork/...
<input type="checkbox"/>	Analog_Out_3	20.0 %	ok,@def	/Drivers/NiagaraNetwork/...
<input type="checkbox"/>	Analog_Out_4	20.0 %	ok,@def	/Drivers/NiagaraNetwork/...

By pressing the enter key value will be set and point state changes to overridden.

<input checked="" type="checkbox"/>	NumericWritable			
<input type="checkbox"/>	Analog_Out_1	20.0 %	ok,@def	/Drivers/NiagaraNetwork/...
	Analog_Out_2	12.0 %	overridden,@8	/Drivers/NiagaraNetwork/...
<input type="checkbox"/>	Analog_Out_3	20.0 %	ok,@def	/Drivers/NiagaraNetwork/...
<input type="checkbox"/>	Analog_Out_4	20.0 %	ok,@def	/Drivers/NiagaraNetwork/...

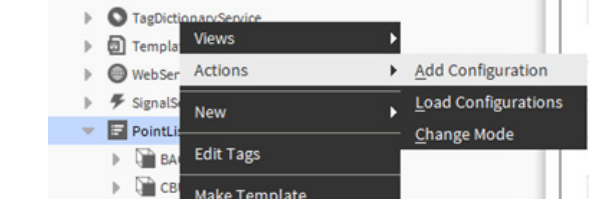
8.4.4.4 Inline Command Configuration

8.4.4.4.1 Disable Default Override state by Network point type configuration

Point state changes by default to override after point value editing. Automatically default setting can be disabled via configuration of Point Types.

Procedure

- 1. At the PointListViewService hierarchy element use right click Actions menu and select Add Configuration.

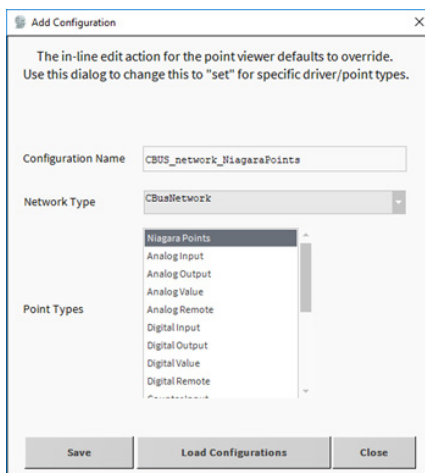




In case if new Drivers or Point Type definitions were added to the configurations.xml file before starting the configuration press Load Configurations at the PointListViewService right click Actions menu.

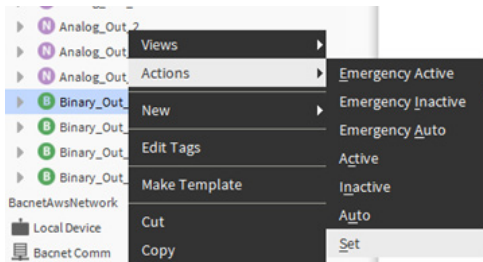
2. Configuration of Point Types

- Enter a configuration name,
- Select the Network Type
- Select Point Types where the default override state should be disabled (multi selection via 'ctrl' key)
- Press "Save".



8

RESULT: For the selected Point Types the default override state after editing the point value will not be set. The point state will stay unchanged. I.e. This is the same operation as in Action Set menu of single point

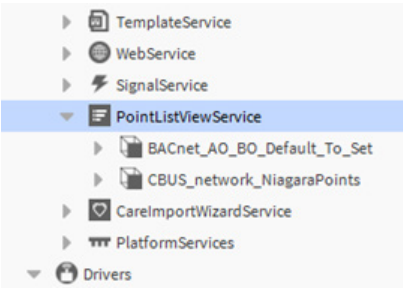


Points can be configured only grouped per point types not per single point. Only one configuration per network is possible. i.e. all applying point types within the same network have to be in one configuration.

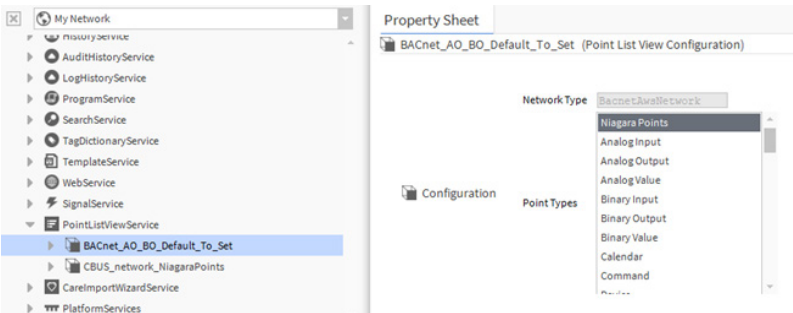
Point View Widget Description

8.4.4.5 Edit existing Configurations

Added Configurations are displayed under the PointListViewService.



For changes double click on the entry and use dialog on the right pane



8



In case if new Drivers or Point Type definitions were added to the configurations.xml file before starting the configuration press Load Configurations at the PointListViewService right click Actions menu.

8.4.4.6 Relinquishing Points

When setting the point value of a point that is in manual override to Auto, the point value will be relinquished. In the priority array, the slots 'In 8' and 'Out' will be cleared. You can relinquish a single writable point or multiple writable points of the same group simultaneously.



Relinquishing multiple points belonging to different groups (e.g. NumericWritable and BooleanWritable) simultaneously is not possible.

5 Points	<input type="text" value="fa-damp"/>				Default View		15	Actions
<input type="checkbox"/>	Label	Value	Log	Status	Path			Set To Manual
<input type="checkbox"/>	NumericWritable							Set To Auto
<input checked="" type="checkbox"/>	OaDamper	100.00 %		ok	/Driv			Set
<input checked="" type="checkbox"/>	ExhaustDamper	100.00 %		ok	/Driv			Export to CSV
<input type="checkbox"/>	ReturnDamper	20.00 %		ok	/Drivers/BacnetNetwork/AHU_01/			Save to Favourites
<input type="checkbox"/>	BooleanWritable							
<input checked="" type="checkbox"/>	ReturnFan	ON		overridden_unackedAlarm	/Drivers/BacnetNetwork/AHU_01/			
<input type="checkbox"/>	SupplyFan	ON		ok	/Drivers/BacnetNetwork/AHU_01/			

Procedure

In the following steps, NumericWwritable and BooleanWritable points are described as examples for relinquishing points.

- 1. Relinquishing NumericWritable Points
Select the points, you want to relinquish by checking the checkbox at the point label

(for relinquishing the value of BooleanWritable points, see step 4).

<input type="checkbox"/> Label ↕	Value ↕	Logs	Status ↕
NumericWritable			
<input type="checkbox"/> OaDamper	95.00 %		overridden
<input type="checkbox"/> ExhaustDamper	95.00 %		overridden

2. Click the Actions menu on the top, and then click Set to Auto.

Actions ▾

Set To Manual

Set To Auto

Set

Export to CSV

Save to Favourites

RESULT: The Relinquish dialog box displays and shows the number of selected points.

8

Relinquish: 2 points

☒ Auto

Cancel

Apply

3. Click the Apply button.

RESULT: The points are relinquished to Auto as indicated in the Value column. The auto status is indicated descriptive in the Status column (ok). At the front of the point label, the overridden hand symbol is removed.



<input type="checkbox"/> Label ↕	Value ↕	Logs	Status ↕
NumericWritable			
<input type="checkbox"/> OaDamper	100.00 %		ok
<input type="checkbox"/> ExhaustDamper	100.00 %		ok



4. Relinquishing BooleanWritable Points
For BooleanWritable points, apply the previous steps 1 through 3 in the same way as described for the NumericWritable points above.

<input checked="" type="checkbox"/> Label ↕	Value ↕	Log	Status ↕
BooleanWritable			
<input checked="" type="checkbox"/> ReturnFan	<input type="checkbox"/> OFF		overridden
<input checked="" type="checkbox"/> SupplyFan	<input type="checkbox"/> OFF		overridden

RESULT: The points are relinquished to Auto as indicated by the toggled switch icon

Point View Widget Description

 in the Value column. The auto status is indicated descriptive in the Status column (ok). At the front of the point label, the overridden hand symbol  is removed.

<input checked="" type="checkbox"/> Label	Value	Log	Status
BooleanWritable			
<input checked="" type="checkbox"/> ReturnFan	 ON		ok
<input checked="" type="checkbox"/> SupplyFan	 ON		ok





8.4.4.7 Setting Point to Fallback / Relinquish Default Value



By using the Set action of the Actions menu (15), you can write a value to the Fallback value (Niagara points) or Relinquish Default (BACnet points) in the priority array. This function can be applied to a single writable point or multiple writable points of the same group simultaneously. Multiple writable points of the same group can have different initial values (true or false). Points which are already in the desired state, remain in this state, the others are updated accordingly.

8



Applying the Set action simultaneously to multiple writable points of different groups (e.g. NumericWritable and BooleanWritable) is not possible.

21 Points    Default View 15 Actions 

<input type="checkbox"/> Label	Value	Log	Status	Path
NumericWritable				
<input type="checkbox"/> SupplyTemp	20.66 °C		ok	/Dri
<input type="checkbox"/> OaTemp	1.09 °C		ok	/Dri
<input type="checkbox"/> RecoveryTemp	16.00 °C		ok	/Drivers/BacnetNetwork/AHU_01
<input checked="" type="checkbox"/> MixedTemp	12.00 °C		ok	/Drivers/BacnetNetwork/AHU_01
<input checked="" type="checkbox"/> ReturnTemp	19.00 °C		ok	/Drivers/BacnetNetwork/AHU_01

Set To Manual
Set To Auto
Set
Export to CSV
Save to Favourites



Procedure

In the following steps, NumericWwritable and BooleanWritable points are described as examples for the Set action application.

1. Setting NumericWritable Points to Fallback / Relinquish Default Value
- Select the points, of which you want to set the fallback value and relinquish default respectively (for setting the value of BooleanWritable points, see step 5).

<input type="checkbox"/> Label	Value	Log	Status
NumericWritable			
<input checked="" type="checkbox"/> MixedTemp	12.00 °C		ok
<input checked="" type="checkbox"/> ReturnTemp	19.00 °C		ok

2. Click the Actions menu (15) on the top, and then click Set.

Actions	
Set To Manual	
Set To Auto	
Set 	
Export to CSV	
Save to Favourites	

RESULT: The Set dialog box displays and shows the number of selected points.

Set: 2 points

Set Value

Cancel

Apply

3. Enter the value.

Set: 2 points

Set Value

Cancel

Apply


8


4. Click the Apply button.


RESULT: The value is set as indicated in the Value column.

<input type="checkbox"/> Label ▾	Value ▾	Log	Status ▾
NumericWritable			
<input checked="" type="checkbox"/> MixedTemp	14.00 °C		ok
<input checked="" type="checkbox"/> ReturnTemp	14.00 °C		ok


At the bottom, the history of point editing is shown in the Updating point details... window.

Updating point details... 

Editing MixedTemp + 1 points 

 MixedTemp



/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogInput/Mixe...

 ReturnTemp

/Drivers/BacnetNetwork/AHU_01/points/AHU/AnalogInput/Retu...

For detailed description of the Updating point details... window, please refer to step “Viewing Point Editing History” above.

5. Setting BooleanWritable Writable Points to Fallback / Relinquish Default Value
Please apply the previous steps 1 and 2 in the same way as described for the Nu-
mericWritable points.

<input type="checkbox"/> Label ▾	Value ▾	Log	Status ▾
BooleanWritable			
<input checked="" type="checkbox"/> ReturnFan	 ON		ok
<input checked="" type="checkbox"/> SupplyFan	 ON		ok

Point View Widget Description

RESULT: The Set dialog box displays and shows the number of selected points.

Set: 2 points

Set Value

true

Cancel

Apply

6. Select the other value.

Set: 2 points

Set Value

false

Cancel

Apply

8

7. Click the Apply button.

RESULT: The value is set as indicated in the Value column.

<input type="checkbox"/> Label	Value	Log	Status
<input checked="" type="checkbox"/> BooleanWritable			
<input checked="" type="checkbox"/> ReturnFan	<input type="checkbox"/> OFF		alarm,unackedAlarm
<input checked="" type="checkbox"/> SupplyFan	<input type="checkbox"/> OFF		ok

At the bottom, the Updating edit point details... window displays and shows the actions performed to the points and their point labels.

At the bottom, the history of point editing is shown in the Updating point details... window.

Updating point details...

Editing ReturnFan + 1 points

ReturnFan

/Drivers/BacnetNetwork/AHU_01/points/AHU/BinaryOutput/R...

SupplyFan

/Drivers/BacnetNetwork/AHU_01/points/AHU/BinaryOutput/S...

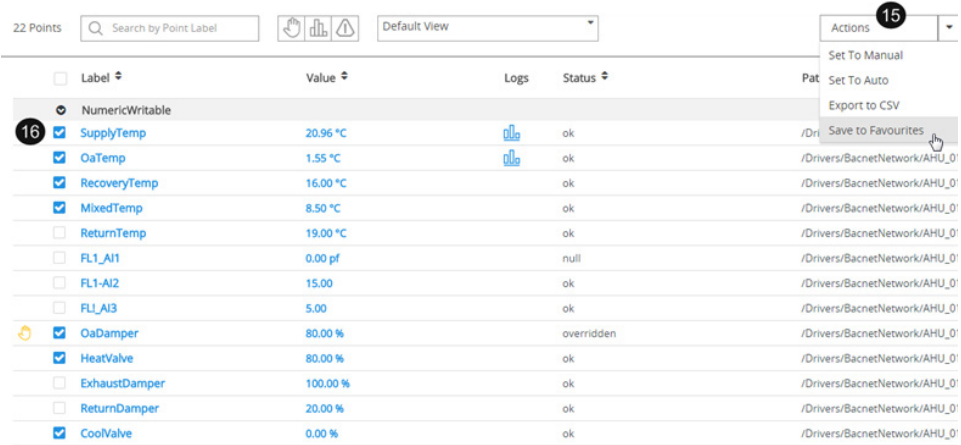
For detailed description of the Updating point details... window, please refer to step “Viewing Point Editing History”.

8.4.5 Saving Points to Favourites

Points of particular interest which should be viewed more often, can be saved into a favourite for quick display (fast access list).
The points to be saved to a favourite can be assorted from any accessible source (see “Selecting Point View Mode“ section) and by using any available point filtering method (see “Filtering Points“ section).

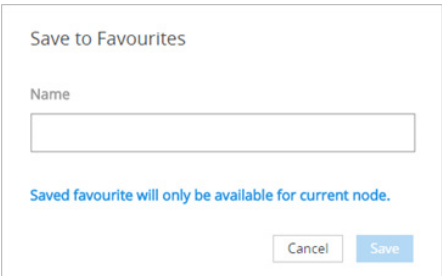
Procedure

- 1. Select the points (16), you want to save to a favourite, then click the Actions menu (15), and then click Save to Favourites.



8

RESULT: The Save to Favourites dialog box displays.



- 2. In the Name field, enter the name.



For the name, any alphanumeric characters and the following characters are allowed: - , _ . The following characters are not allowed: @ , ! , # , % , \$, .

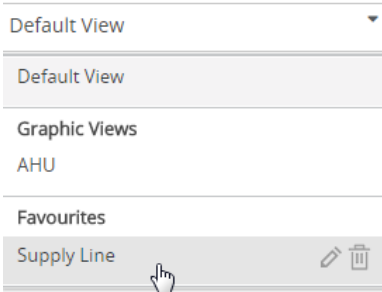
- 3. Click the Save button.

RESULT: The favourite is saved under Favourites in the View Point Mode menu. To view a favourite, please refer to the “Viewing Favourites” section.

Point View Widget Description

8.4.5.1 Viewing Favourites
Procedure

- 1. To view a favourite points list, click the Point View Mode menu, and then click the favourite under Favourites.



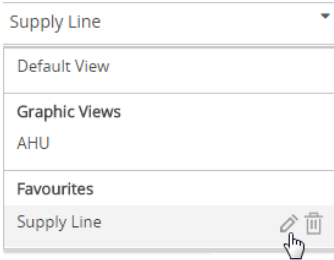
RESULT: The favourite point list is displayed.

8

7 Points	<input type="text" value="Search by Point Label"/>				Supply Line	Actions	
<input type="checkbox"/> Label	Value	Logs	Status	Path			
<input checked="" type="checkbox"/> NumericWritable							
<input type="checkbox"/> OaTemp	1.93 °C		ok	/Drivers/BacnetNetwork/AHU_0...			
<input type="checkbox"/> SupplyTemp	20.06 °C		ok	/Drivers/BacnetNetwork/AHU_0...			
<input type="checkbox"/> OaDamper	80.00 %		overridden	/Drivers/BacnetNetwork/AHU_0...			
<input type="checkbox"/> RecoveryTemp	16.00 °C		ok	/Drivers/BacnetNetwork/AHU_0...			
<input type="checkbox"/> MixedTemp	8.50 °C		ok	/Drivers/BacnetNetwork/AHU_0...			
<input type="checkbox"/> HeatValve	80.00 %		ok	/Drivers/BacnetNetwork/AHU_0...			
<input type="checkbox"/> CoolValve	0.00 %		ok	/Drivers/BacnetNetwork/AHU_0...			

8.4.5.2 Renaming Favourites
Procedure

- 1. To rename a favourite points list, click the Point View Mode menu, and then click the Rename icon right to the favourite.



RESULT: The Rename Favourite dialog box displays.

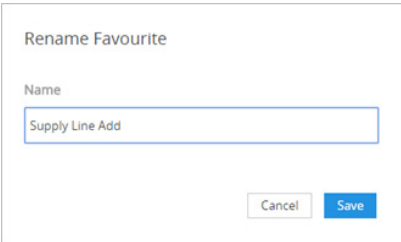
Rename Favourite

Name

Supply Line

CancelSave

2. In the Name field, change the name, and then click the Save button.



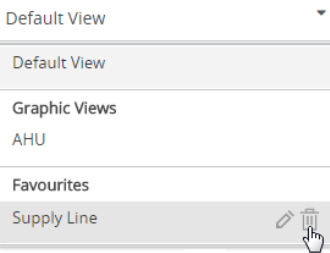
RESULT: The favourite is saved with the new name and available in the Point View Mode menu.

8.4.5.3 Deleting Favourites

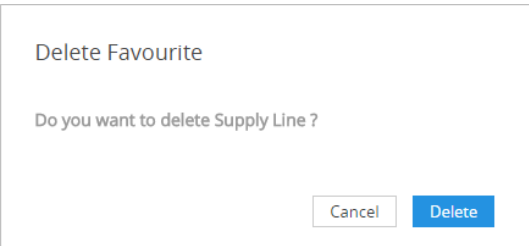
Procedure

1. To delete a favourite points list, click the Point View Mode menu, and then click the Delete icon  right to the favourite.

8



RESULT: The Delete Favourite dialog box displays.



2. Click the Delete button.

RESULT: The favourite is deleted in the Favourites menu.

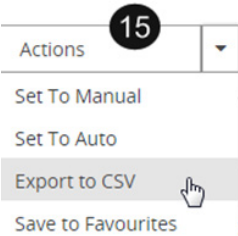
Point View Widget Description

8.4.6 Exporting Points to CSV

A point list can be exported to an Excel CSV file.

Procedure

1. To export a points list to a CSV file, click the Actions menu (15), and then click Export to CSV.



RESULT: The complete point list is exported to the CSV file.




Particular individual points cannot be exported to a CSV file.

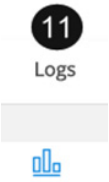
8

8.4.7 Viewing Point Histories

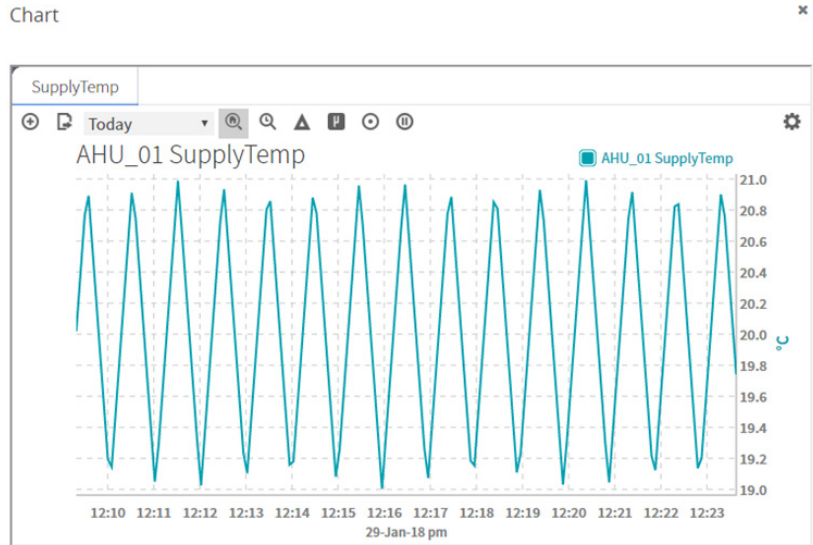
If a single point has a history assigned by the Niagara history extension, its history can be shown graphically.

Procedure

1. To view the history of a point, click the History icon  in the Logs column (11).



RESULT: The chart of the point is displayed in standard Niagara format.



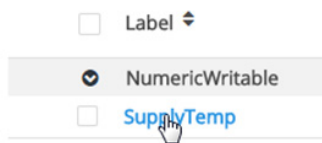
2. For detailed information on working with charts in Niagara, please refer to the Niagara online documentation.

8.4.8 Editing Point Properties

The detailed point properties of each individual point can be shown on the property sheet. The point properties are shown in the corresponding default view of the property sheet. The default views of property sheets are different depending on the origin (controller, driver) of the points. That is, the property sheet of a generic Niagara point is shown in another default view as a point based on a specific driver. In the following procedure, a Niagara point is used as an example.

Procedure

- 1. To display the properties of a point, click the name of the point in the Label column.



RESULT: The property sheet of the point is displayed in its default view.

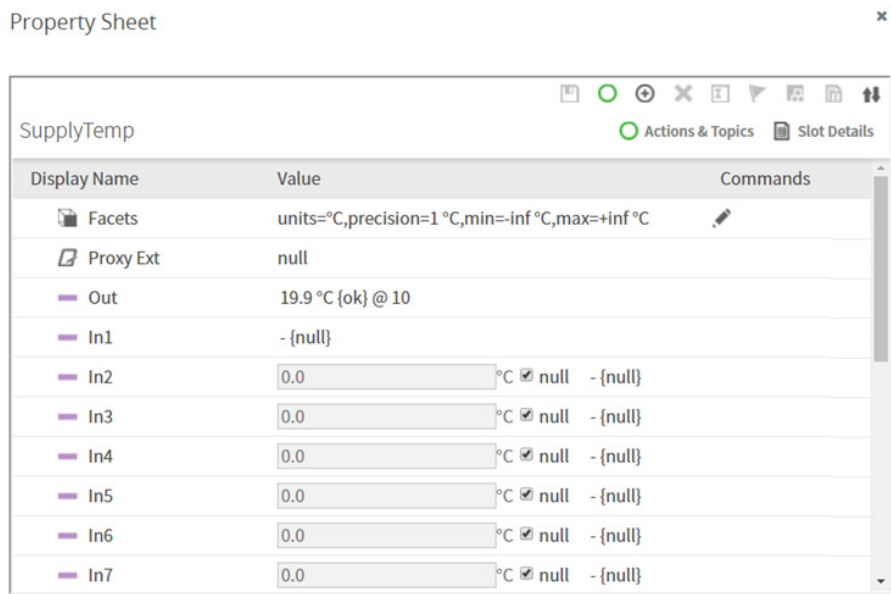


Fig. 12. Example “Default View of Niagara Point Property Sheet”

- 2. For detailed information on working with the various property sheets, please refer to the corresponding Niagara documentation and the proprietary driver and controller documentation.

Point View Widget Description

8.4.9 Delete Points View

- The Delete Point View shows an overview of all data points that are not used in the project
 - Not on a PX page
 - No alarm/trend extension
 - Not on the wire sheet
 - From another application
- Applicable for any communication driver
- Under Files an xml file is stored, which shows all unused data points including a mark if it has already been deleted

Remove Unused Points 517 unused points

<input type="checkbox"/>	NAME	PATH
<input type="checkbox"/>	CLK_ON_	slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/CLK\$3aON_
<input type="checkbox"/>	COO-CP-ALM-FLC	slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO\$3aCP_\$3aALM\$3aFLC
<input checked="" type="checkbox"/>	COO-CP-ALM-MAN	slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO\$3aCP_\$3aALM\$3aMAN
<input type="checkbox"/>	COO-CP-ALM-MOT	slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO\$3aCP_\$3aALM\$3aMOT
<input type="checkbox"/>	COO-CP-ALM-MSW	slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO\$3aCP_\$3aALM\$3aMSW
<input checked="" type="checkbox"/>	COO-CP-CNT-HRS	slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO\$3aCP_\$3aCNT\$3aHRS
<input type="checkbox"/>	COO-CP-MNT	slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO\$3aCP_\$3aMNT
<input type="checkbox"/>	COO-PID	slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO\$3aPID
<input type="checkbox"/>	COO-PID-Y_	slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO\$3aPID\$3aY_
<input type="checkbox"/>	COO-Y-ALM-FBO	slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO\$3aY_\$3aALM\$3aFBO
<input type="checkbox"/>	COO-Y-ALM-MAN	slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO\$3aY_\$3aALM\$3aMAN

points.xml points.xml

```

1 <Points>
2 <Point name="CLK:ON_" path="slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/CLK$3aON_" handle="h:1759f" delete="0"/>
3 <Point name="COO:CP-ALM:FLC" path="slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO$3aCP_$3aALM$3aFLC" handle="h:175a5" delete="0"/>
4 <Point name="COO:CP-ALM:MAN" path="slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO$3aCP_$3aALM$3aMAN" handle="h:175a7" delete="1" st
5 <Point name="COO:CP-ALM:MOT" path="slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO$3aCP_$3aALM$3aMOT" handle="h:175a9" delete="0"/>
6 <Point name="COO:CP-ALM:MSW" path="slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO$3aCP_$3aALM$3aMSW" handle="h:175ab" delete="0"/>
7 <Point name="COO:CP-CNT:HRS" path="slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO$3aCP_$3aCNT$3aHRS" handle="h:175ad" delete="1" st
8 <Point name="COO:CP-MNT" path="slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO$3aCP_$3aMNT" handle="h:175b3" delete="0"/>
9 <Point name="COO:PID" path="slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO$3aPID" handle="h:175b5" delete="0"/>
10 <Point name="COO:PID-Y_" path="slot:/Drivers/BacnetOwsNetwork/DS_SupN4_AHU/points/AHU1/COO$3aPID$3aY_" handle="h:175b7" delete="0"/>

```


8.5 Advanced Documentation/Information Section

8.5.1 Inline Command Configuration adding new Drivers and Point Types

In case if further drivers or data point types are needed for Inline Command Configuration, definitions of further Point Types can be added via editing the configurations file.

Procedure

Under Station – Files – config double click on configurations.xml.

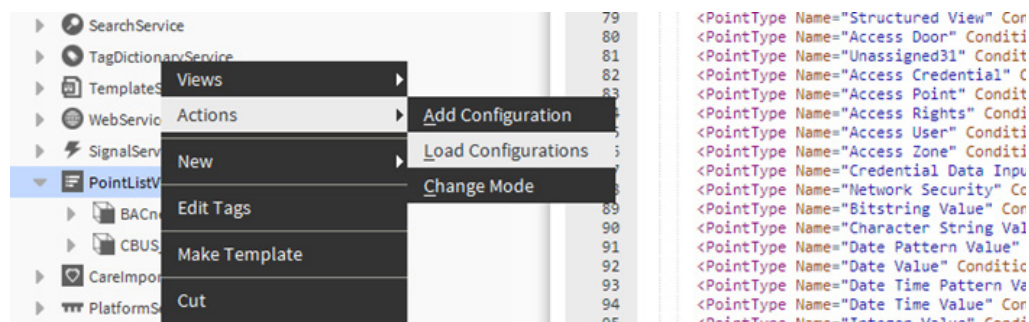
See right pane to edit the configuration text.



8

To apply the changes the file has to be saved and explicit be loaded to the station.

To load the configuration file, go to the PointListViewService hierarchy element use right click Actions menu and select Load Configuration.



A Annex

A.1 Icons



In manuals, this symbol refers the reader to further information in this manual or other manuals or technical information documents. As a rule there is no direct link to such documents.



This sign accompanies instructions that must always be followed.

A.2 Related documents

Document number	Document type	Document name
26-062 ENGxx	Leaflet	Release Notes
26-658 GERxx	Quick Start	FindSymbolsAndMacros
27-668 ENGxx	User Guide	Point List Widget
27-669 ENGxx	Manual	Easy Templating for Saia PCD® Supervisor
31-061 ENGxx	Flyer	Saia PCD® Supervisor
31-703 ENGxx	Brochure	Saia PCD® Supervisor
34-001 ENGxx	Data Sheet	Saia PCD® Supervisor
31-702 ENGxx	Brochure	Saia PCD® Supervisor EM
34-002 ENGxx	Data Sheet	Saia PCD® Supervisor EM
Easy Features Documentation References		
41-0001	User Guide	Easy Templating - Installation and Operations Guide
41-0002	User Guide	Easy Binding - Installation and Operations Guide
41-0003	User Guide	Easy Database Manager - Installation and Operations Guide
41-0004	User Guide	Point List View - Installation and Operations Guide
41-0005	User Guide	Easy Alarm Management - Installation and Operations Guide

A.3 Software-Versions

Book-Version	Saia PCD® Supervisor	Niagara
27-651 ENG01	Version V1.1	Based on Niagara V4.3
27-651 ENG02	Version V1.2	Based on Niagara V4.7
27-651 ENG03	Version V2.0	Based on Niagara V4.7U1
27-651 ENG04	Version V2.0	Based on Niagara V4.7U1
27-651 ENG05	Version V2.0	Based on Niagara V4.7U1
27-651 ENG06	Version V2.1	Based on Niagara V4.8
27-651 ENG07	Version V2.1 Patch release	Based on Niagara V4.9
27-651 ENG08	Version V3.0	Based on Niagara V4.9
27-651 ENG09	Version V4.10	Based on Niagara V4.10
27-651 ENG10	Version V4.14	Based on Niagara V4.14

What's new?

A.4 What is new in V1.2

Name	Description	See section
Enhanced PG5 Import Wizard	Including filtering based on tags from PG5	6.3.8
Point-List-View	For straightforward display and management of filtered data points	see document 27-668
Delete Points View	Enables simple deletion of all unused data points	see document 27-668
Bulk deploy	Mass provisioning of data points in Excel (export/import)	7.6
Cloud Connector	Action management, performance analytics	7.5
Cyber Security	In-depth cyber security measures (especially for connecting to the cloud)	see document 26-624
Energy Monitoring	Add-on (including 1-hour demo runtime)	
Alarm Consolen Improvments	Trend charts and role manager are fully integrated in HTML5	
HTML5 extensions	Including new Px elements	7.4
Px Editor tools	For example for ensuring a responsive design	
Improved BACnet Alarming		
SMA Reminder	Software maintenance reminder	
New reporting functions		7.4.1
Multilanguage	EN/GE/FR at Niagara level	
Profinet driver	3rd-party module – licence can be acquired from Tridium	

A.5 What is new in V2.0

Name	Description	See section
Point List View	Allows to build a basic Supervisor in few minutes	See manual: 27-668 ENGxx
Easy Templating for Simple Objects	To automate recurrent tasks and maximise reuse SBC Application templates for HVAC to match PG5 symbols (DDC Suite)	Ch. 6.6.5
Easy Binding	Allows the creation basic schematics with lower engineering effort	Ch. 6.6.5.2
YvkonPro modules	The yvkonPro modules are an comprehensive collection of components and px widgets	Ch 7.7

A.6 What is new in V2.1

Name	Description	See section
Latest Niagara release	Niagara 4.8	
Easy templating	Tool for complex objects	See new manual 27-669_ENGxx
Template Library	Single Objects	
Mapping table	for S-Bus import	
Aliasing table	for BACNet import	
3rd Party Module Signing	Requiring all third party modules to be signed increases security posture of a Niagara installation	
Analytics	7 existing standard reports for meaningful output	
E-Signature	Supports site procedures typically when controlling the manufacturing of food or pharmaceuticals	
JSON Toolkit	Enables the connection to IoT Software and 3rd Party applications, cloud services and databases	
Milestone Camera Driver	Milestone Systems is a leading provider of open platform video management software	
Point Database Manager (PDM)	Saves overall license costs	
Easy Binding	Own graphics (design agency) can be quickly integrated	
Predefined application and project templates	Decreases the engineering time	
Multilanguage	EN/GE/FR	At Niagara level.
Guest access / Kiosk mode		Available from Core Niagara but is not usable by SBC (Usable for Niagara based controllers).
IEEE 802.1x	Registration in computer networks	
Security Dashboard		

A.7 What is new in V3.0

Name	Description	See section
Next Niagara release	Niagara 4.9	
Easy Templating tool	Tool for complex objects	See new manual 41-00001
Easy Binding tool	Own graphics (design agency) can be quickly integrated	See new manual 41-00002
Easy Database Manager	Remove unused data points to reduce license costs. Saves overall license cost. Enables optimal station performance for critical infrastructure projects (data centre)	See new manual 41-00003
Point List View	Tool for complex objects	See new manual 41-00004
Easy Alarm Management	Tool for complex objects	See new manual 41-00005
User login preferences	Option to define & save customized login parameters as per user reference	See section 7.8
Enhanced BACnet support	Added BACnet driver with server and client support.	

A.8 Using the Extended Support Options

Saia PCD® Supervisor is now provisioned with multiple extended support options that can be purchased:

Refer to the Saia-PCD-Supervisor Data Sheet (34-001) to know more about available extended support options.

In order to use these options it is necessary to license Saia PCD® Supervisor with the appropriate license.

See chapter [5 Licensing Saia PCD® Supervisor](#)

For details of configuring and using these option refer to the Saia Burgess Controls documentation.

A.9 **Contact**

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International Represetatives &
SBC Sales Companies: www.saia-pcd.com/contact



Saia Burgess Controls Technical Support are only able to provide support for Saia PCD® Supervisor and the Saia Burgess Controls driver features described in this manual. They are unable to provide support for 3rd party drivers and undocumented aspects of Saia PCD® Supervisor's operation.