

Niagara 4 Driver for SiteManager

User Guide

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Table of contents

Change log	3
Driver Overview	4
Prerequisites for integration	4
Installation	4
Licensing	5
Order codes.....	5
Basic config guide	5
Setup guide	6
Overview	6
Connection	6
LAN connection	7
Serial connection	8
Adding a SiteManager Network to station.....	9
Configuring a SiteManager Network.....	10
Site Manager Device Manager.....	11
Adding new Site Manager Devices to the Station	12
Site Manager Device Tcp.....	14
Site Manager Device Serial.....	15
Shared properties of Site Manager Device	16
Actions on Site Manager Device	16
Sending messages in Wire Sheet	18
FAQ.....	19

Change log

3.8

- Build for 3.8.111

4.4

- Build for 4.4.73
- Added option to define messages from wire sheet

Driver Overview

The Safecontrol SiteManager Driver is written using Tridium's NDriver Framework for use in Niagara 4 or later.

The driver provides support for communicating with Secomea SiteManager through LAN or RS-232 cable. Driver can send predefined SMS and email messages, send custom SMS and email messages and read messages received by SiteManager. Driver also provides received message history.

This help is also connected to the objects in Workbench and you can use the "Guide on target" function in the help or right menu to get more information.

Prerequisites for integration

1. Correctly installed modules with the driver, see chapter "Installation" for more details.
2. Active license and certificate for the driver on the target platform, see chapter "Licensing" for more details.
3. Correctly wired SiteManager to JACE 8000 or PC with Tridium Supervisor 4.

Installation

Source files are available for download from SAFECONTROL license web (<https://license.safecontrol.cz>). Extract the **siteManager.zip** archive and copy all included *.jar files to your Niagara modules directory, which is typically **C:\Niagara\Niagara-4.4.xx.xx\modules**.

For correct behaviour it is necessary to install *.jar files on the client platform (Workbench PC) as well as on the target platform (JACE8000 or Supervisor).

Note: Close the Niagara Workbench after inserting all the modules in the folder. Next time you start the Niagara Workbench the driver will be loaded in Niagara Workbench and will be immediately available for use.

Licensing

Driver is license limited to one device. Demo license is limited up to 90 days and purchased licenses are not time limited.

You can ask for license via SAFECONTROL license web (<https://license.safecontrol.cz>) or by sending e-mail to sales@safecontrol.cz. Purchased license will be generated via Niagara-Central license web where it will be available for download together with safecontrol.certificate file. You can also download license online in Niagara Workbench from license manager view, see picture below:

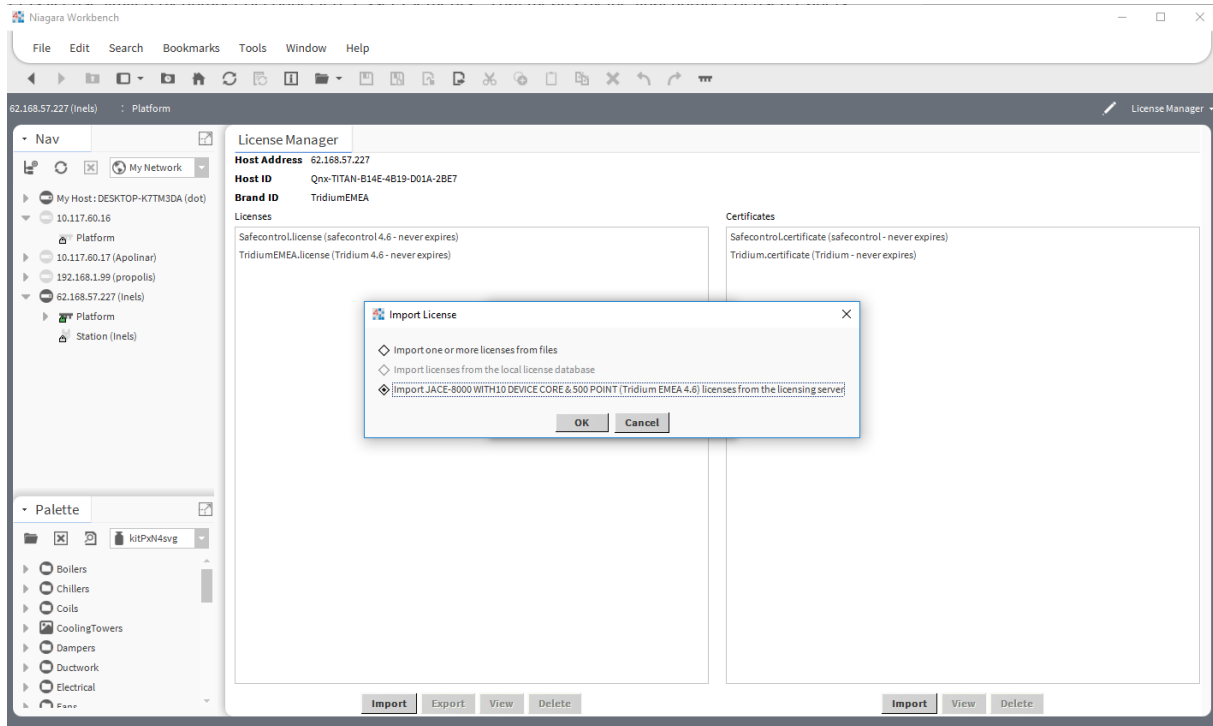


Figure 1: License import via License manager

Order codes

- DR-SC-SMS – Driver for connection to Secomea SiteManager – SMS modem – 1 device

Basic config guide

1. Connect SiteManager to JACE or PC with Tridium Supervisor 4.
2. Add new SiteManager Network to your Drivers node.
3. Add new SiteManagerDeviceTcp or SiteManagerDeviceSerial to your Site Manager Network.
4. Correctly configure newly added SiteManagerDevice.

For more in-depth help read following chapters.

Setup guide

Overview

A SiteManager Network represents container for SiteManager Devices. There are located global configuration parameters (poll scheduler, ping monitor, tuning policies...) common for all descendant devices (Site Manager devices) in the network properties.

Connection

If you are using Tridium Supervisor 4, connect SiteManager to same LAN as PC.

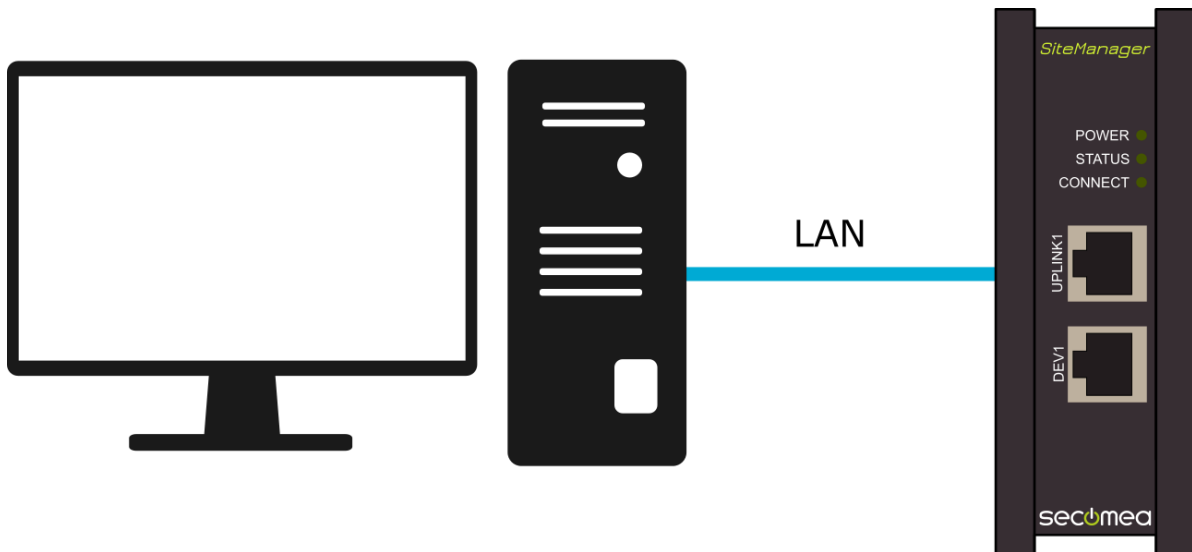


Figure 2: Diagram of connection PC to SiteManager using LAN

If you want to connect SiteManager to JACE 8000 you have following two options:

- Connect SiteManager to same LAN as JACE.
- Use NPB-8000-232 extension module for JACE8000 and connect to SiteManager with RS-232 null modem cable.

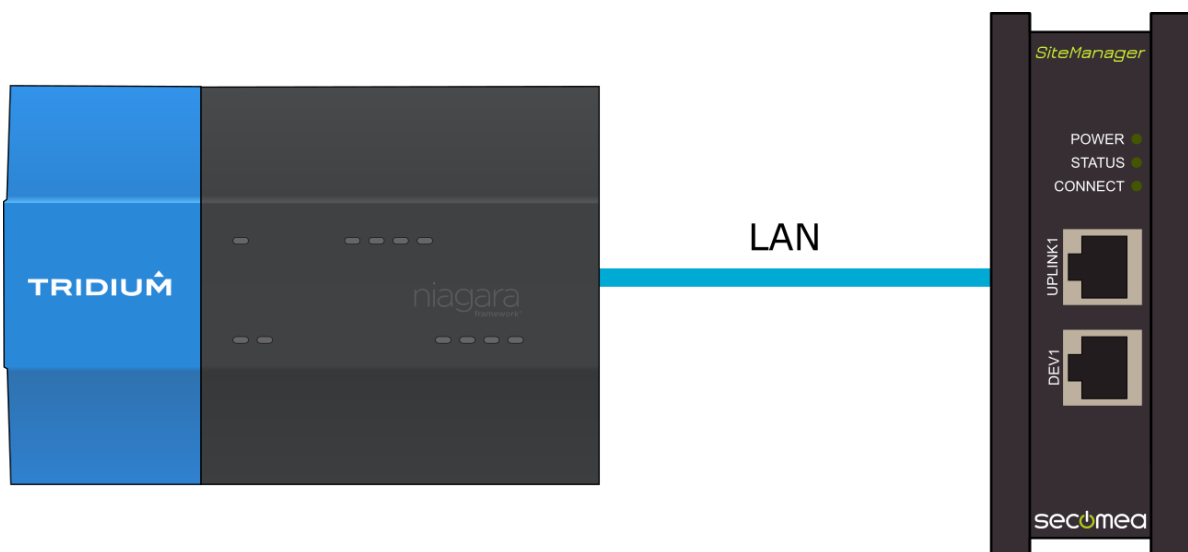


Figure 3: Diagram of connection JACE 8000 to SiteManager using LAN

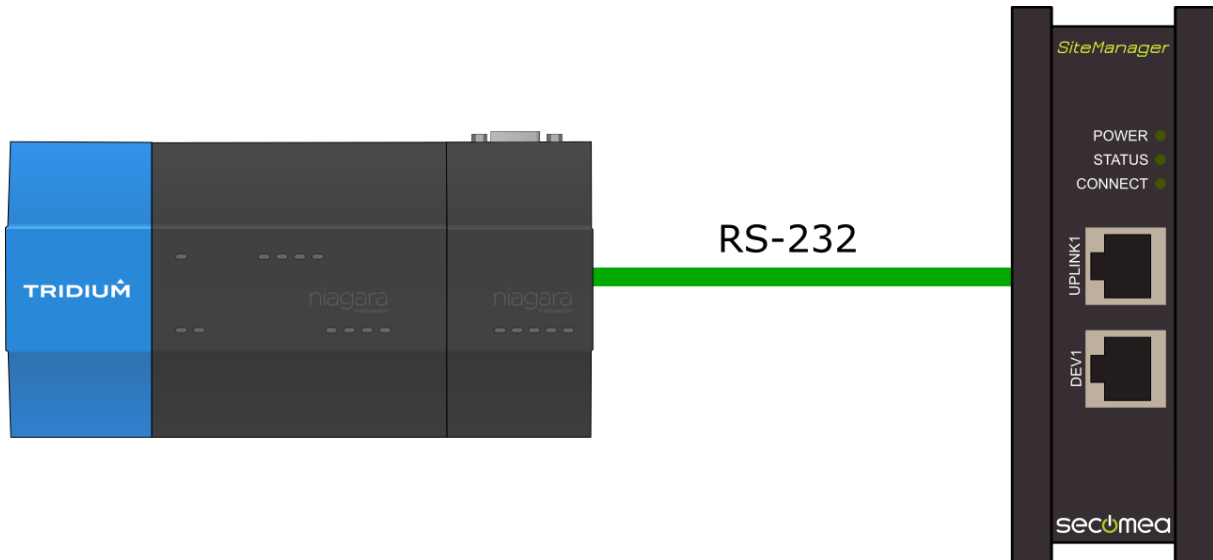


Figure 4: Diagram of connection JACE 8000 with NPB-8000-232 module to SiteManager using RS-232

LAN connection

If you are connected to SiteManager with LAN you have to set JACE 8000 or PC with Tridium Supervisor 4 as an agent in SiteManager web interface:

1. Open your web browser.
2. Fill address bar with `https://{SiteManagerIp}` (`https://192.168.1.108` for example) press Enter and login.
3. Click **GateManager → Agents**.
4. Create new agent.
5. Fill Device Name, set Device Type as Custom (advanced) Tcp, fill Device Ip with Ip address of your JACE or PC with Tridium Supervisor 4 and press Save.

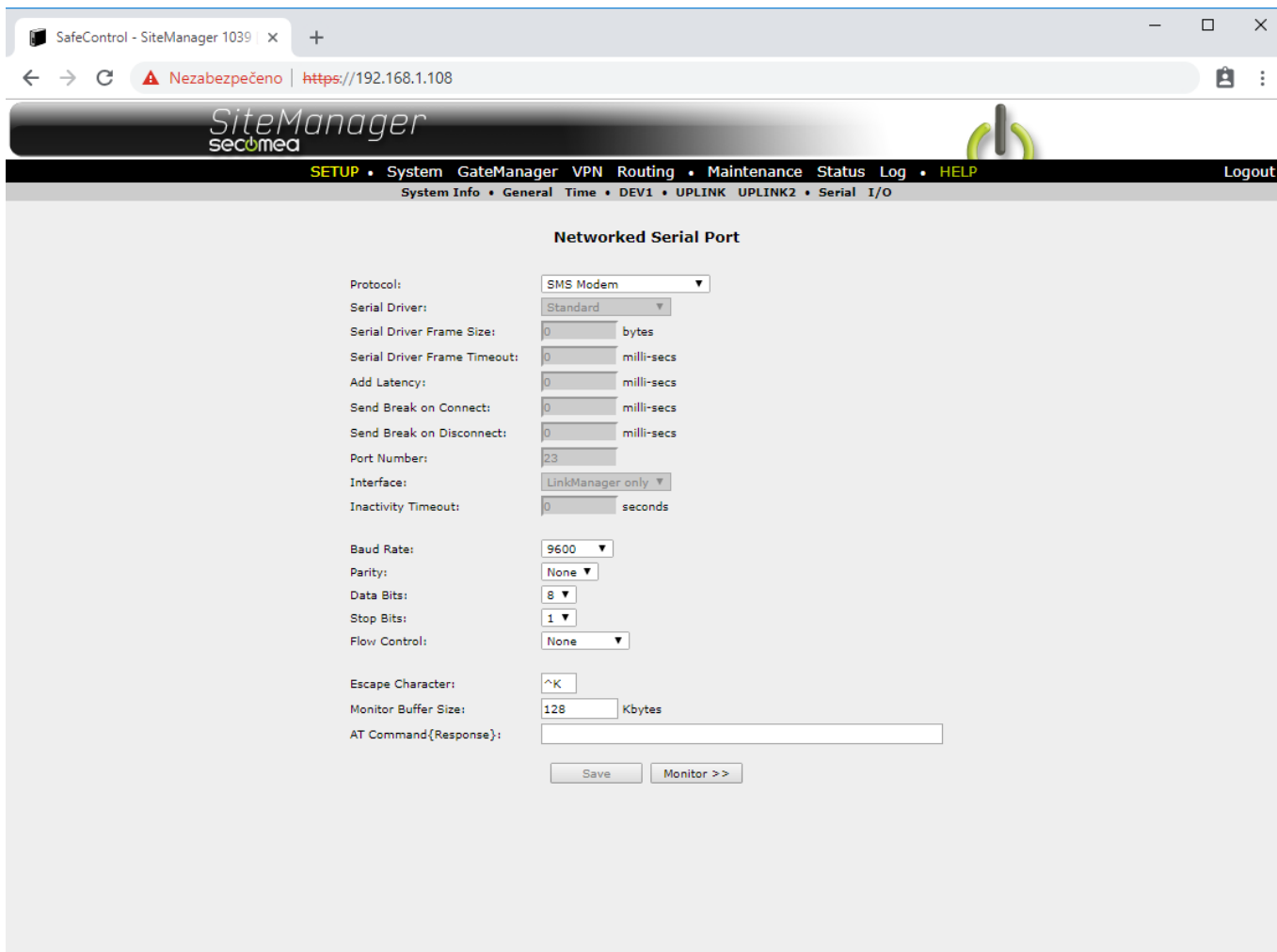


Figure 5: JACE set up as Agent

Serial connection

If you are using RS-232 connection to JACE 8000, check settings of Serial port in SiteManager web interface.

1. Open your web browser.
2. Fill address bar with [https://{SiteManagerIp}](https://192.168.1.108) (<https://192.168.1.108> for example) press Enter and login.
3. Click **System** → **Serial**.
4. Set protocol as SMS Modem.



The screenshot shows the 'Networked Serial Port' configuration page in the SiteManager web interface. The browser address bar shows <https://192.168.1.108>. The page title is 'SiteManager secomea'. The navigation menu includes 'SETUP', 'System', 'GateManager', 'VPN', 'Routing', 'Maintenance', 'Status', 'Log', and 'HELP'. The breadcrumb trail is 'System Info > General > Time > DEV1 > UPLINK > UPLINK2 > Serial > I/O'. The 'Networked Serial Port' section contains the following settings:

Protocol:	SMS Modem
Serial Driver:	Standard
Serial Driver Frame Size:	0 bytes
Serial Driver Frame Timeout:	0 milli-secs
Add Latency:	0 milli-secs
Send Break on Connect:	0 milli-secs
Send Break on Disconnect:	0 milli-secs
Port Number:	23
Interface:	LinkManager only
Inactivity Timeout:	0 seconds
Baud Rate:	9600
Parity:	None
Data Bits:	8
Stop Bits:	1
Flow Control:	None
Escape Character:	^K
Monitor Buffer Size:	128 Kbytes
AT Command{Response}:	

Buttons: Save, Monitor >>

Figure 6: Correct protocol settings

Adding a SiteManager Network to station

To add a SiteManager Network, perform these following steps:

1. Open the station and expand the nav tree.
2. Double click on the Drivers node.
3. In the Driver Manager window click the “New” button.
4. Select SiteManager Network from the drop-down list and click Ok.
5. Enter a name for the network and click Ok.

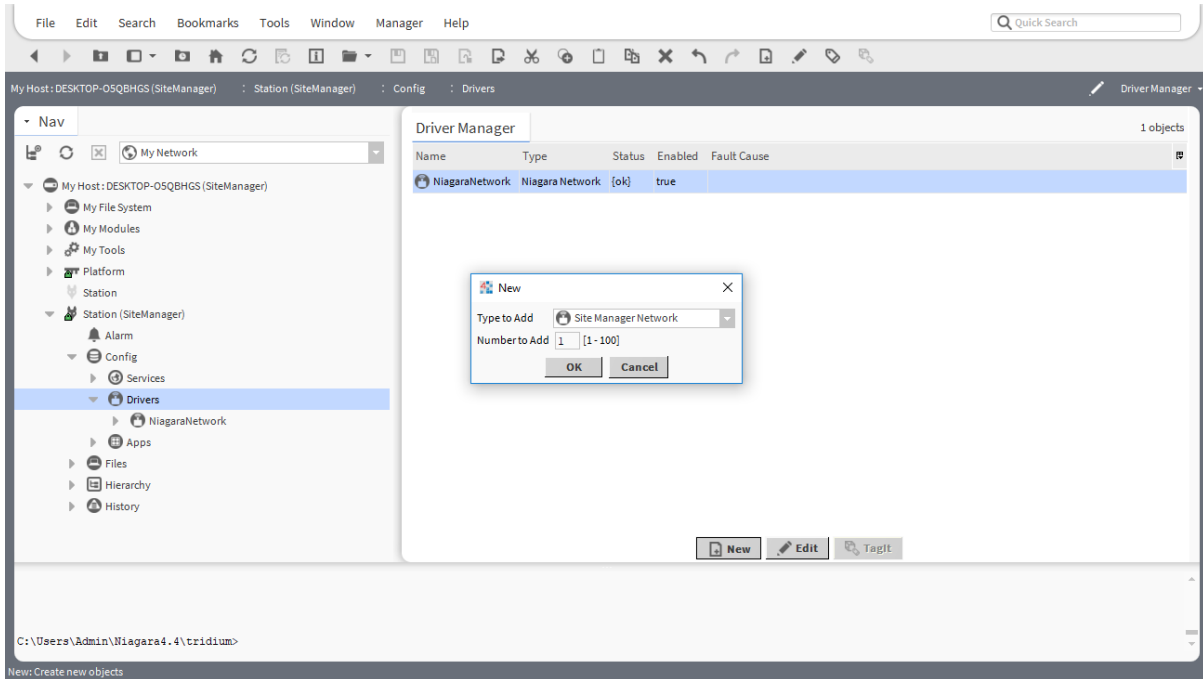


Figure 7: Adding a new SiteManager Network

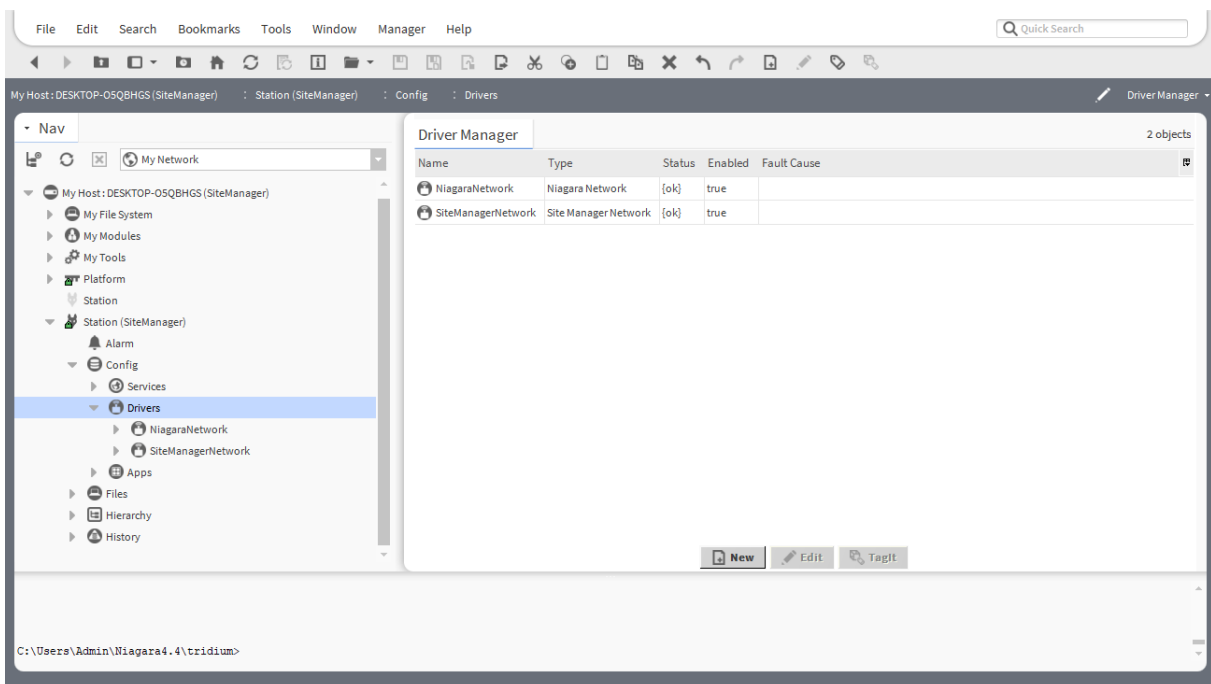


Figure 8: Successfully added SiteManager Network

Configuring a SiteManager Network

In the SiteManager Network property sheet is located common settings for all descendants (SiteManager Devices). Ping monitor and global poll scheduler are shared for all devices under SiteManager Network. You can choose for each device a poll rate (slow, normal, fast) defined in this property sheet.

SiteManagerNetwork (Site Manager Network)

Status	{ok}
Enabled	<input checked="" type="checkbox"/> true
Fault Cause	
Health	Ok [19-Oct-18 2:37 PM CEST]
Alarm Source Info	Alarm Source Info
Monitor	Ping Monitor
Tuning Policies	Tuning Policy Map
Poll Scheduler	N Poll Scheduler
Poll Enabled	<input checked="" type="checkbox"/> true
Fast Rate	00000h 00m 01.000s [1ms-+inf]
Normal Rate	00000h 00m 05.000s [1ms-+inf]
Slow Rate	00000h 00m 30.000s [1ms-+inf]
Statistics Start	19-Oct-2018 02:17 PM CEST
Average Poll	2,0ms
Busy Time	0% (94ms/1389sec)
Total Polls	47 over 94ms
Dibs Polls	2% (1/47)
Fast Polls	0% (0/47)
Normal Polls	0% (0/47)
Slow Polls	97% (46/47)
Dibs Count	current=0 average=0
Fast Count	current=0 average=0
Normal Count	current=0 average=0
Slow Count	current=0 average=0
Fast Cycle Time	average = 1000ms
Normal Cycle Time	average = 1000ms
Slow Cycle Time	average = 25267ms

Figure 9: Property Sheet of the Csv Network

Site Manager Device Manager

Site Manager Device Manager is the primary View on the SiteManager Network component (You can open it by double-clicking on SiteManagerNetwork in nav tree). The manager provides a table view of all devices under the SiteManager Network.

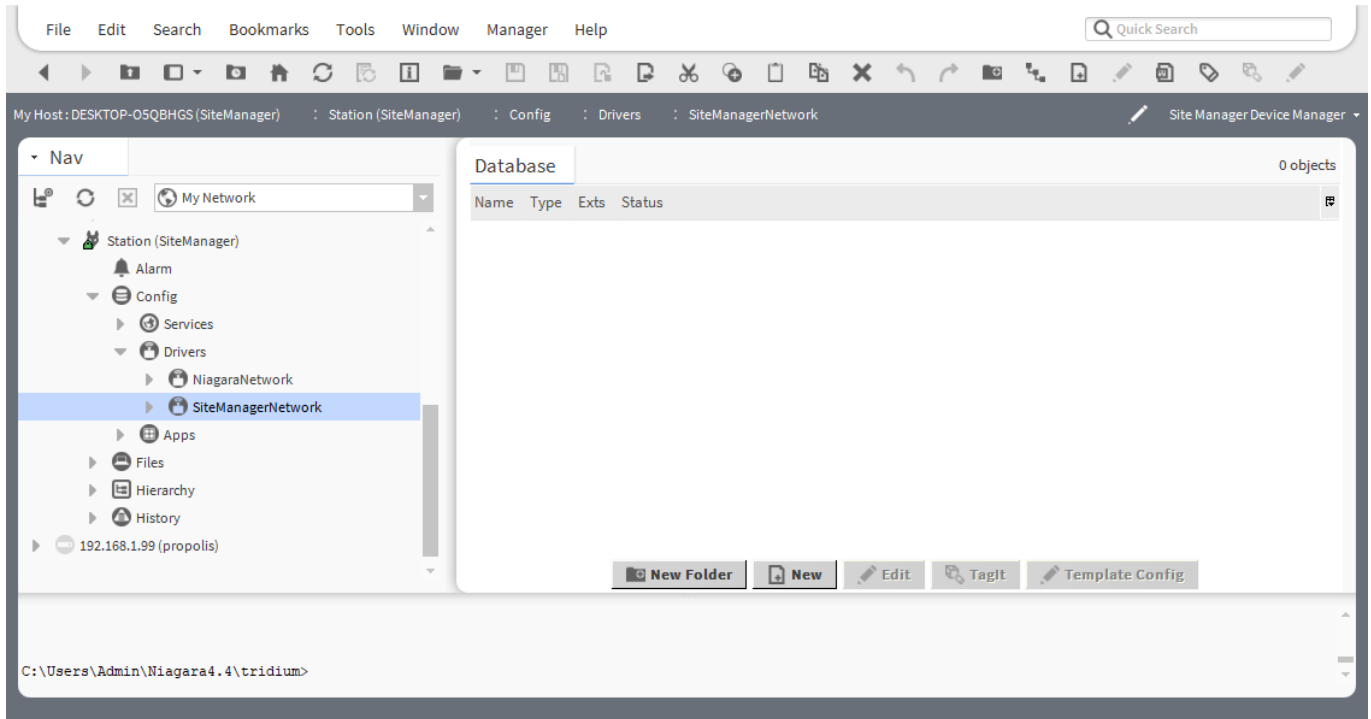


Figure 10: Site Manager Device Manager

Site Manager Device Manager provides set of control buttons in the bottom of the View:

- **New Folder** – This will create new folder of type Site Manager Device Folder meant for custom ordering of Devices.
- **New** – With this button you can create new Site Manager device.
- **Edit** – Same as double-click on device, you can edit names of selected devices.
- **TagIt** – This button is disabled in current release.
- **Template Config** – This button is disabled in current release.

Adding new Site Manager Devices to the Station

To insert new device in the SiteManager Network, perform these following steps:

1. Open Site Manager Device Manager.
2. Click the “New” button.
3. Based on type of your connection pick according SiteManager Device:
 - For LAN connection type pick Site Manager Device Tcp.
 - For RS-232 connection type pick Site Manager Device Serial.
4. Write in name for new Site Manager Device.
5. Click “Ok” button.

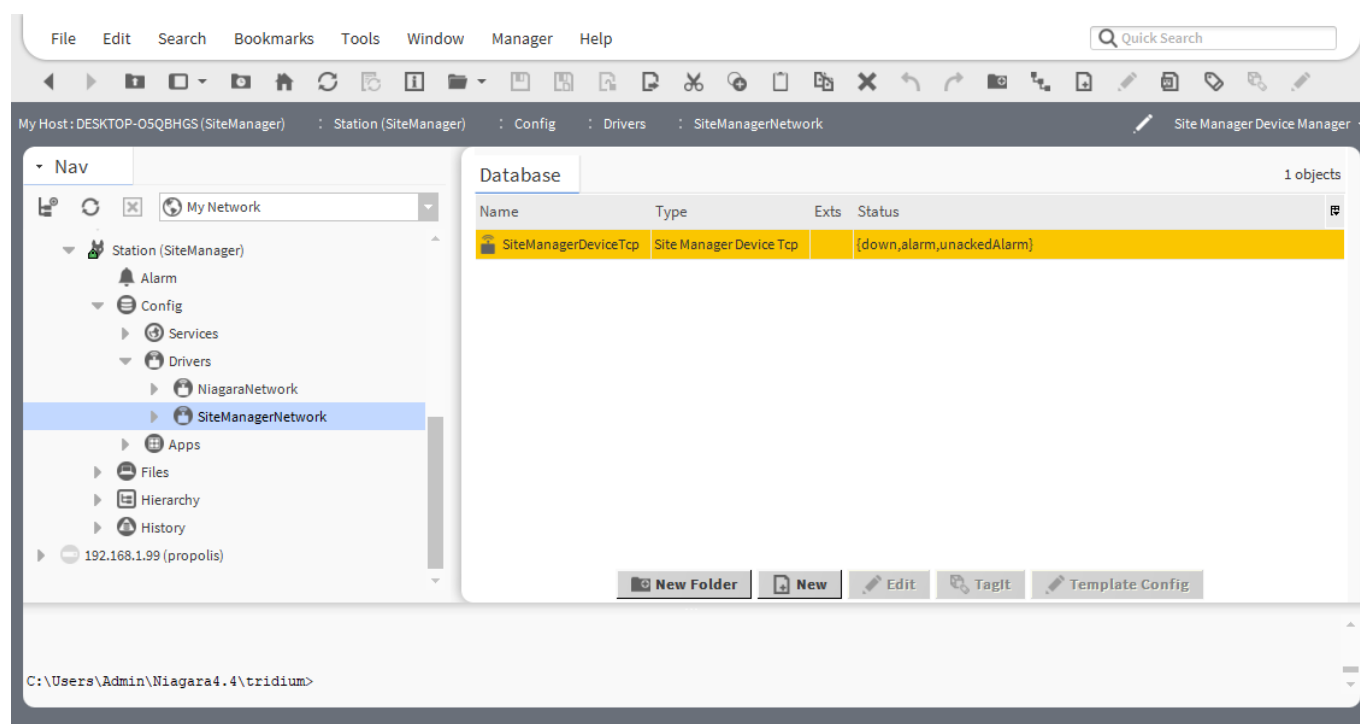


Figure 11: Newly added Site Manager Device Tcp

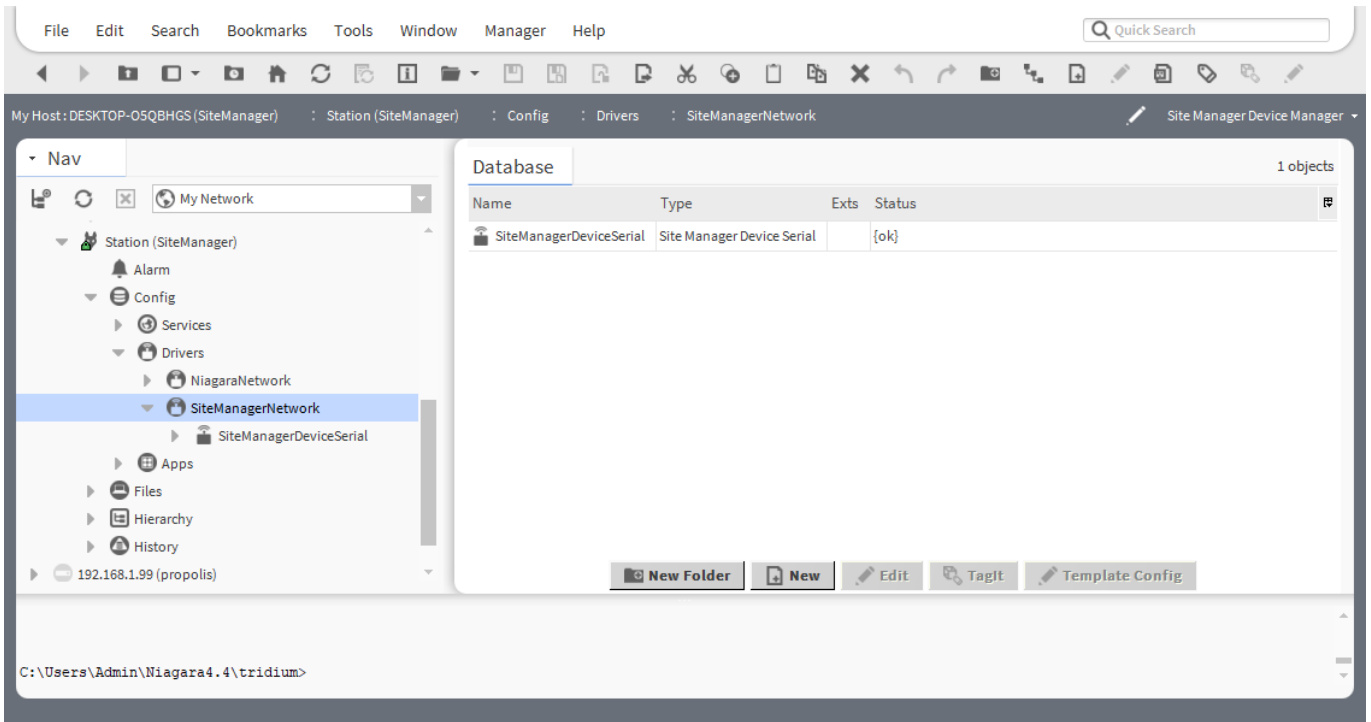


Figure 12: Newly added Site Manager Device Serial

Site Manager Device Tcp

By double clicking the device in the device tree is opened Site Manager Device Tcp property sheet. Important property is Tcp Address. You need to correctly input Ip Address and Port (usually 26864) of SiteManager. Click Save and if configuration is alright, driver should connect to SiteManager and status should read {ok}.

Status	{ down }
Enabled	<input checked="" type="checkbox"/> true
Fault Cause	
▶ Health	Fail [26-Oct-18 10:00 AM CEST] Site mana{...}
▶ Alarm Source Info	Alarm Source Info
Poll Frequency	Slow
▶ Message History	Site Manager Message History
▶ Predefined Message To Send	Simple Message
To	
Text	
▶ Recieved Messages Buffer	Recieved Messages
▶ Last Message	Recieved Message
▼ Tcp Address	:0
Ip Address	
Port	<input type="checkbox"/> unspecified 0 [-1 - 65536]

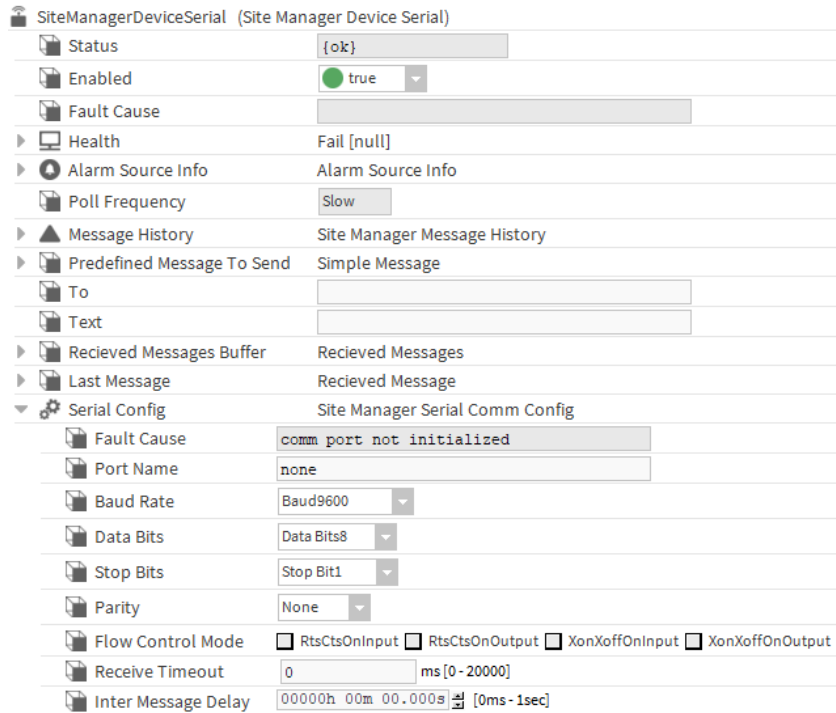
Figure 13: Property sheet of Site Manager Device Tcp

SiteManagerDeviceTcp (Site Manager Device Tcp)	
Status	{ ok }
Enabled	<input checked="" type="checkbox"/> true
Fault Cause	
▶ Health	Ok [26-Oct-18 10:01 AM CEST]
▶ Alarm Source Info	Alarm Source Info
Poll Frequency	Slow
▶ Message History	Site Manager Message History
▶ Predefined Message To Send	Simple Message
To	
Text	
▶ Recieved Messages Buffer	Recieved Messages
▶ Last Message	Recieved Message
▼ Tcp Address	192.168.1.108:26864
Ip Address	192.168.1.108
Port	<input type="checkbox"/> unspecified 26864 [-1 - 65536]

Figure 14: Property sheet of Site Manager Device Tcp after configuration

Site Manager Device Serial

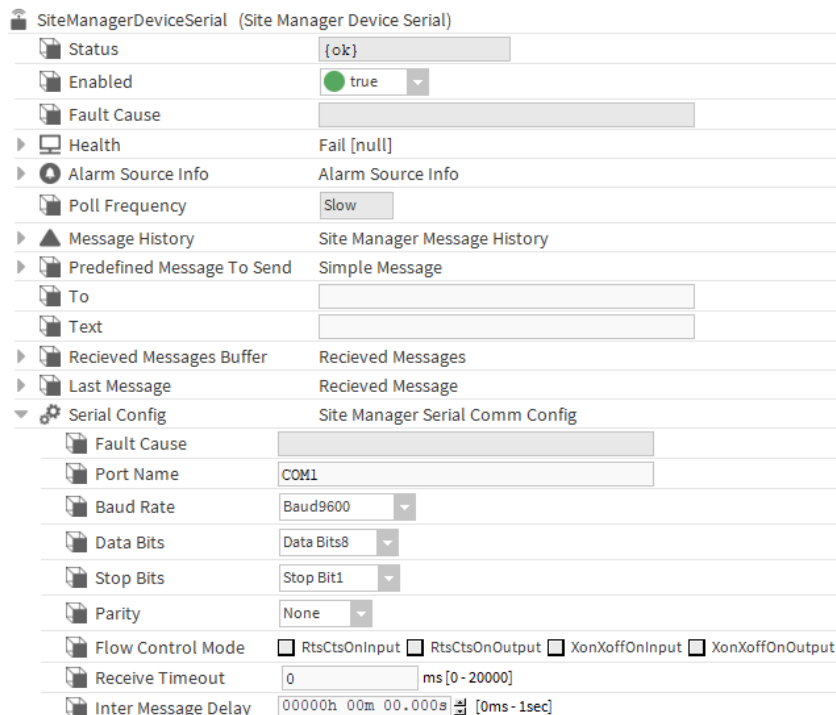
By double clicking the device in the device tree is opened Site Manager Device Serial property sheet. Important property is Serial Config. You need to correctly input Port Name (usually COM1) to which SiteManager is connected. Check if Baud Rate, Data Bits, Stop Bits, Parity and Flow Control are same as in SiteManager web interface. Click Save and if configuration is alright, driver should connect to SiteManager and status should read {ok}.



SiteManagerDeviceSerial (Site Manager Device Serial)

Status	{ok}
Enabled	<input checked="" type="checkbox"/> true
Fault Cause	
Health	Fail [null]
Alarm Source Info	Alarm Source Info
Poll Frequency	Slow
Message History	Site Manager Message History
Predefined Message To Send	Simple Message
To	
Text	
Received Messages Buffer	Received Messages
Last Message	Received Message
Serial Config	Site Manager Serial Comm Config
Fault Cause	comm port not initialized
Port Name	none
Baud Rate	Baud9600
Data Bits	Data Bits8
Stop Bits	Stop Bit1
Parity	None
Flow Control Mode	<input type="checkbox"/> RtsCtsOnInput <input type="checkbox"/> RtsCtsOnOutput <input type="checkbox"/> XonXoffOnInput <input type="checkbox"/> XonXoffOnOutput
Receive Timeout	0 ms [0 - 20000]
Inter Message Delay	00000h 00m 00.000s [0ms - 1sec]

Figure 15: Property sheet of Site Manager Device Serial



SiteManagerDeviceSerial (Site Manager Device Serial)

Status	{ok}
Enabled	<input checked="" type="checkbox"/> true
Fault Cause	
Health	Fail [null]
Alarm Source Info	Alarm Source Info
Poll Frequency	Slow
Message History	Site Manager Message History
Predefined Message To Send	Simple Message
To	
Text	
Received Messages Buffer	Received Messages
Last Message	Received Message
Serial Config	Site Manager Serial Comm Config
Fault Cause	
Port Name	COM1
Baud Rate	Baud9600
Data Bits	Data Bits8
Stop Bits	Stop Bit1
Parity	None
Flow Control Mode	<input type="checkbox"/> RtsCtsOnInput <input type="checkbox"/> RtsCtsOnOutput <input type="checkbox"/> XonXoffOnInput <input type="checkbox"/> XonXoffOnOutput
Receive Timeout	0 ms [0 - 20000]
Inter Message Delay	00000h 00m 00.000s [0ms - 1sec]

Figure 16: Property sheet of Site Manager Device Serial after configuration

Shared properties of Site Manager Device

Both Site Manager Devices share these properties:

- **Message History** – If enabled, collects all read messages from SiteManager.
- **Predefined Message** – Has two fields, “To” for phone number and “Text” for message itself.
- **To** – Address property for **Send** action.
- **Text** – Text property for **Send** action.
- **Received Messages Buffer** – Shows up to 10 read messages from SiteManager.
- **Last Message** – Detailed info of last received message.

Actions on Site Manager Device

Site Manager Device has defined five actions:

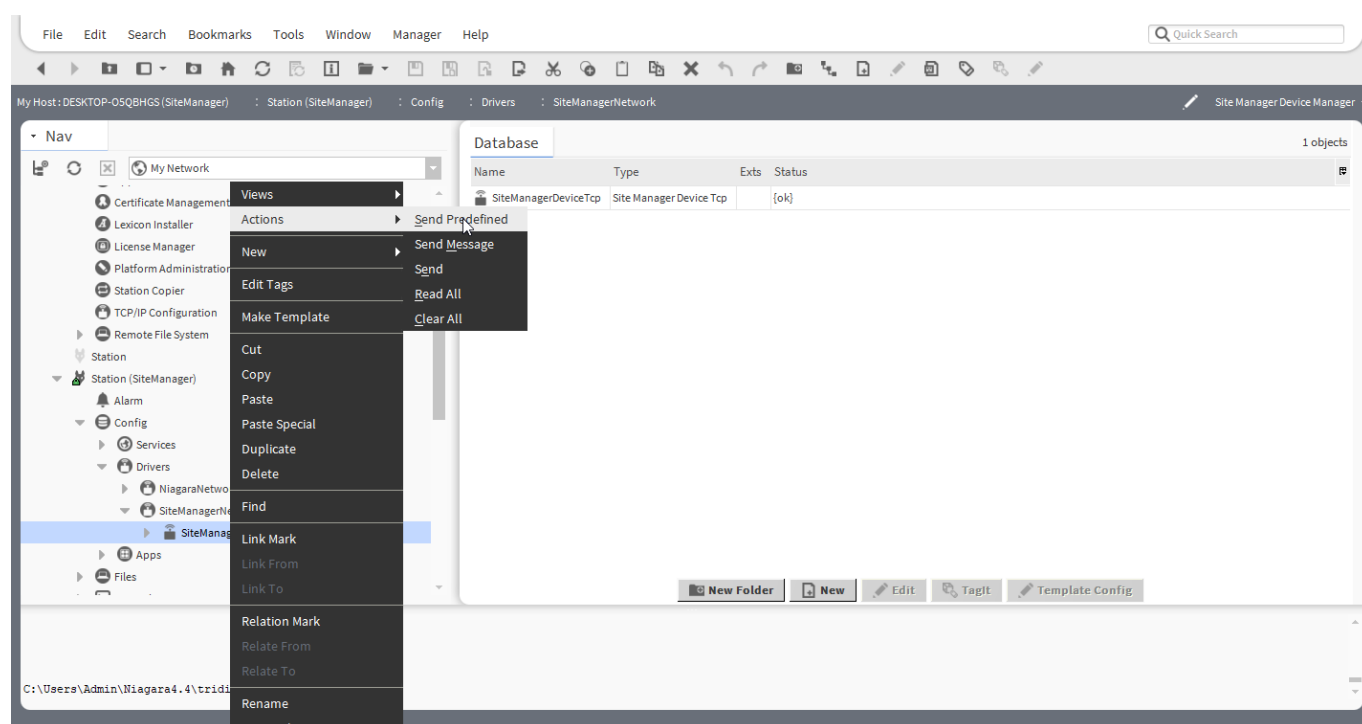


Figure 17: Actions on Site Manager Device

- **Send Predefined** – Will send Predefined Message To Send in Site Manager Device property sheet. Phone number can have international prefix included, but it is not required. If you want to send an email, fill in email address in this format <local-part@domain.com>. To send email you must have correctly setup email sending in SiteManager web interface.

To	111222333
Text	Example

Figure 18: Phone number without international prefix

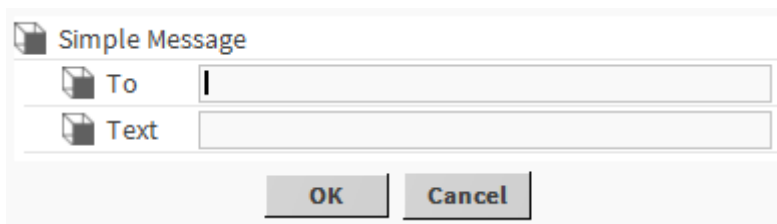
To	+420111222333
Text	Example

Figure 19: Phone number with international prefix

To	<local-part@domain.com>
Text	Example

Figure 20: Format of email address

- **Send Message** – Dialog window will pop up with “To” and “Text” fields. Fill both field and press Ok to send message.



The dialog window titled "Simple Message" contains two input fields: "To" and "Text". Below the fields are two buttons: "OK" and "Cancel".

Figure 21: Dialog window of Send Message action

- **Send** – Will send message based on To and Text properties in Site Manager Device Property Sheet.

▶	Predefined Message To Send	Simple Message
	To	<input type="text"/>
	Text	<input type="text"/>
▶	Recieved Messages Buffer	Recieved Messages

Figure 22: To and Text properties

- **Read All** - Reads all messages from SiteManager. SiteManager stores up to 10 last received messages and driver will copy them to Received Messages Buffer in Site Manager Device property sheet.
- **Clear All** – Deletes all messages from SiteManager.

Sending messages in Wire Sheet

The following picture is example how you can send different messages from wire sheet. Diagram will send changes of window and temperature status.

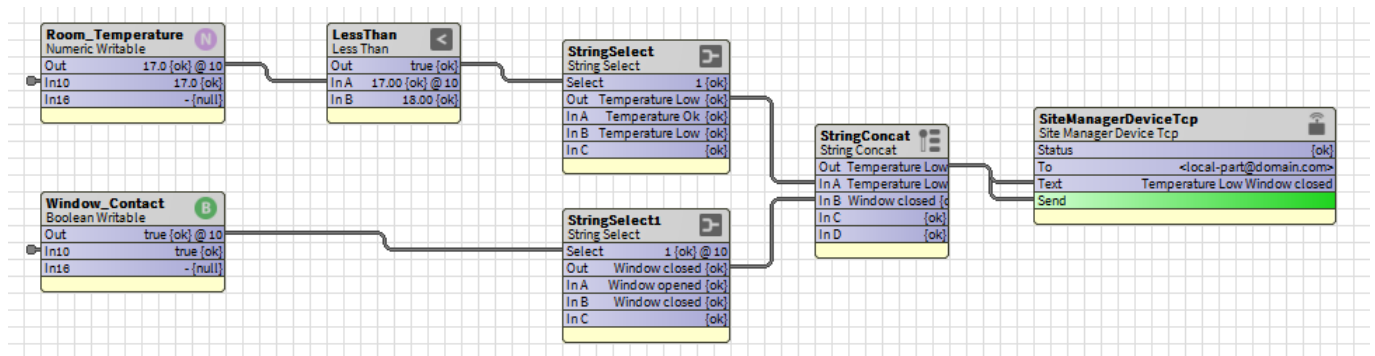


Figure 23: Fig 1. Automatic window and temperature status transmission diagram

FAQ

Q: Driver is not communicating with SiteManager through LAN!

A: Check correct wiring to SiteManager and JACE or PC with Tridium Supervisor 4. Check if you correctly have setup agent in SiteManager web interface according to **Connection** section.

Q: Driver is not communicating with SiteManager through RS-232!

A: Check correct wiring to SiteManager and JACE. Check if serial protocol in SiteManager web interface is set to SMS Modem and if Baud Rate, Parity, Data Bits, Stop Bits and Flow Control are same as in Serial Conf property of Site Manager Device Serial.