SAFECONTROL

Niagara 4 Driver for OtisCompass User Guide

SAFECONTROL

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Change log

4.8

- Build for 4.8.0.110

SAFECONTROL

Driver Overview

The SAFECONTROL Driver for OtisCompass is written using Tridium's BFramework, for use in Niagara 4 or later.

The driver provides support for communication with OtisCompass using UDP/IP protocol through network. The driver's main purpose is to serve as gateway to OtisCompass for Tridium Supervisor 4 or JACE8000 stations (and OEM variations i.e. Centra Line, Trend, …).

The driver allows you to set operation modes and allowed floors on DEC and to send authorized floors to DEC.

This help is also connected to the objects in Workbench / Coach NX 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. JACE 8000 or PC with Tridium Supervisor 4 must be connected to internet.

Installation

Source files are available for download from SAFECONTROL license web (https://license.safecontrol.cz). Extract the **otisCompass.zip** archive and copy all included *.jar files to your Niagara modules directory, which is typically **C:\Niagara\Niagara-4.x.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

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 bellow:

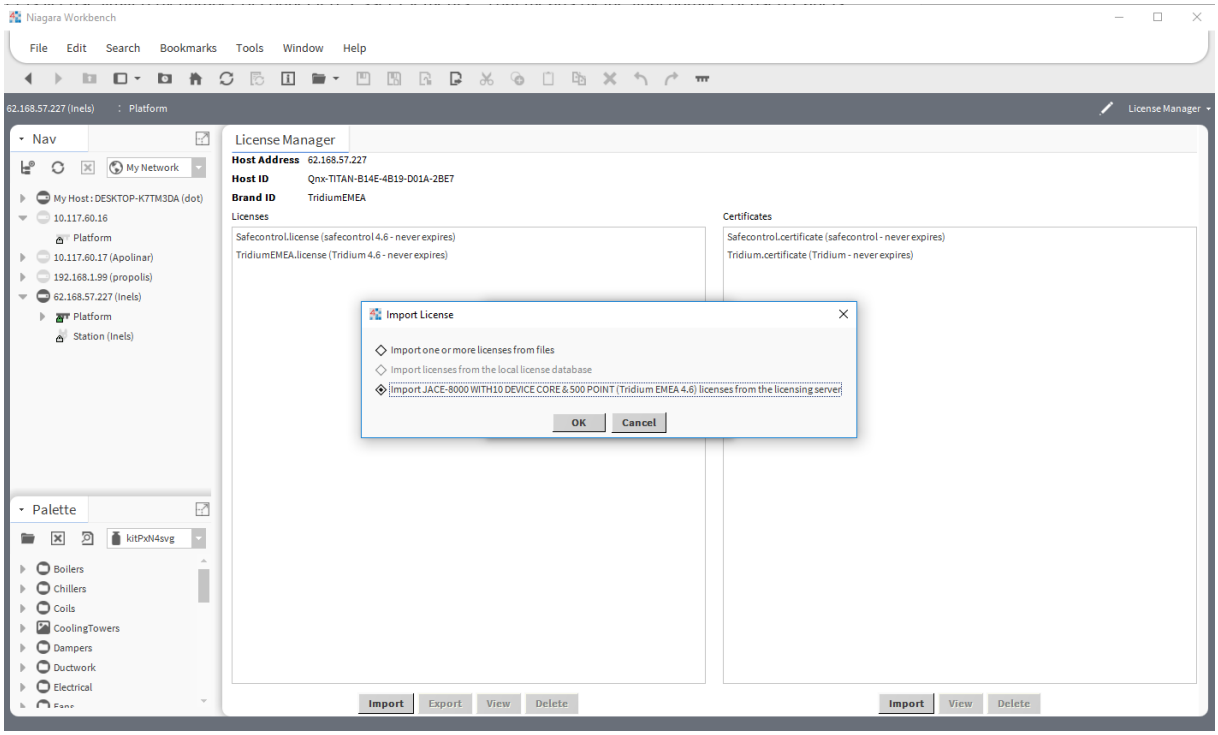

Figure 1: License import via License manager

Order codes

- DR-SC-OTIS – Driver for OtisCompass

Basic config guide

1. Connect JACE 8000 or PC with Tridium Supervisor 4 to the network.
2. Add new OtisCompassNetwork to your Drivers node.
3. Correctly configure newly added OtisCompassNetwork.
4. Add new OtisCompassDevice under OtisCompassNetwork.
5. Correctly configure newly added OtisCompassDevice.

For more in-depth help read following chapters.

Setup guide

Connection

Connect your JACE 8000 or PC with Tridium Supervisor 4 to the same network as OtisCompass DER/DES. Add new OtisCompassNetwork under Drivers. MulticastUdpConfig, DecUdpConfig and DesUdpConfig are preconfigured according to OtisCompass documentation.

OtisCompassNetwork properties description

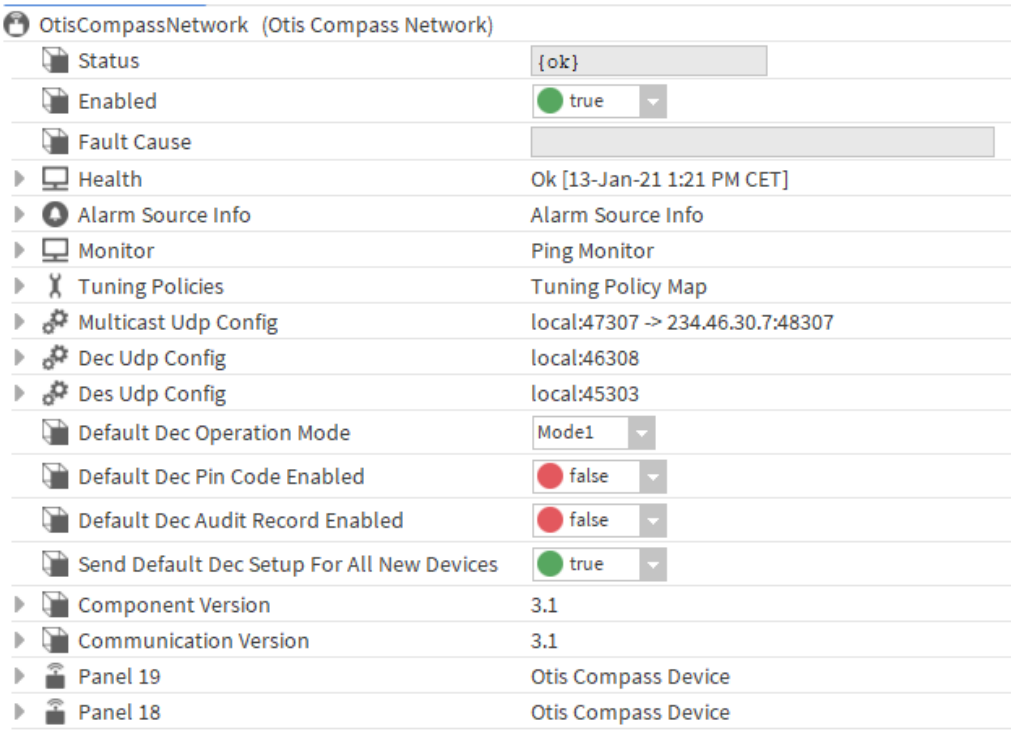

Figure 2: OtisCompassNetwork under Drivers node

- **MulticastUdpConfig**
  - Address: configuration used to send heartbeat from (should not be changed)
  - MulticastAddress: multicast address to which is sent heartbeat every 1 second (should not be changed)
- **DecUdpConfig** – configuration to send messages to DEC from (should not be changed)
- **DesUdpConfig** – configuration used to communicate with DES (should not be changed)
- **DefaultDecOperationMode** – default setting of DEC operation mode to be sent to DEC
- **DefaultDecPinCodeEnabled** – default setting of DEC pin code enabled to be sent to DEC
- **SendDefaultDecSetupForAllNewDevices** – OtisCompassNetwork keeps track of all DEC IP addresses received from DES, even those which are not under OtisCompassNetwork. If this property is set to true, OtisCompassNetwork will send DECSecurityOperationModeV2 with default configuration to all new learned DEC devices, which are not under OtisCompassNetwork and OtisCompassNetwork does not keep track of them yet
- **ComponentVersion** – component version sent in heartbeat (should not be changed)
- **CommunicationVersion** – communication version sent in heartbeat (should not be changed)

OtisCompassNetwork actions description

- Ping – OtisCompassNetwork will send Heartbeat message to multicast address
- AddDiscoveryAddress – will add IP address to learned IP addresses, OtisCompassNetwork will not send DECSecurityOperationModeV2 to this new learned address

Adding new DECs

Open OtisCompassManager and click New button. New window appears, fill properties of new DEC, only IP address is needed to establish communication with DEC.

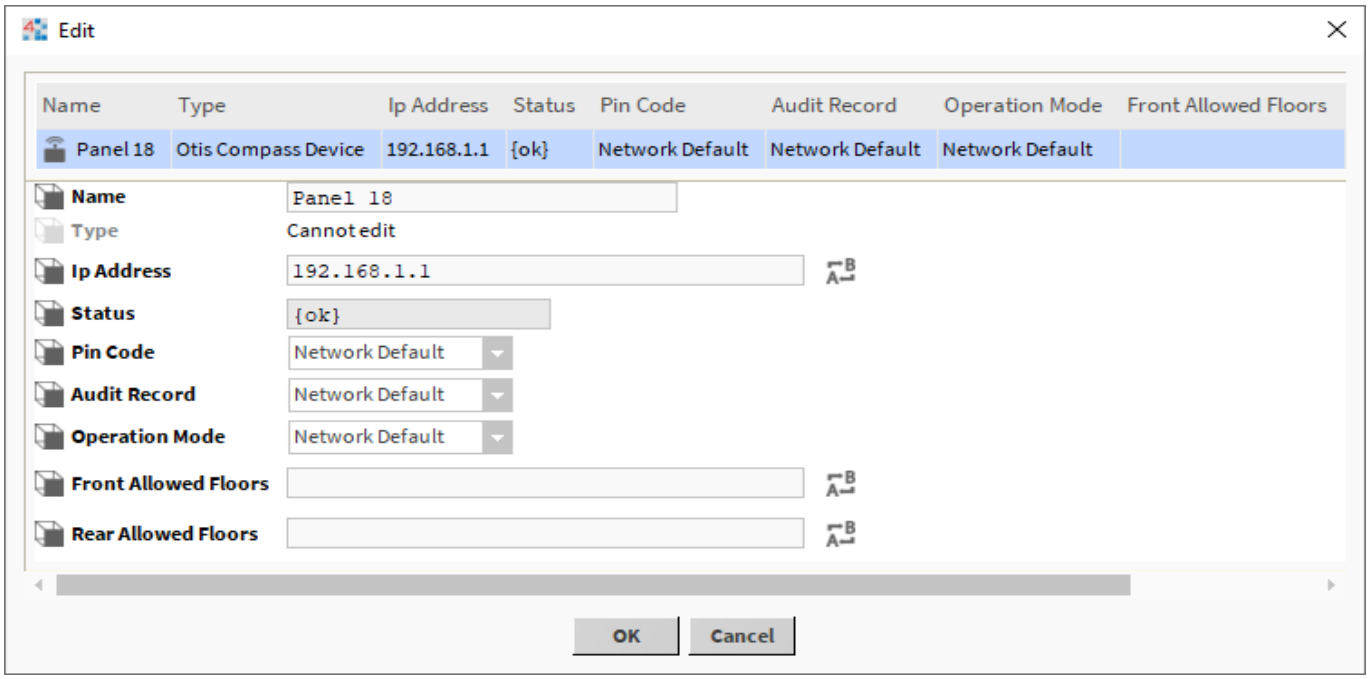

Figure 3: New DEC window

OtisCompassDevice properties description

- **Address** – address of DEC device, fill only IP, port is preset according to documentation
- **PinCode** – pin code setting to send in Send Operation Mode action, if Network Default option is selected value is taken from DefaultDecPinCodeEnabled property of OtisCompassNetwork
- **AuditRecord** – sets if DEC should send back Audit Record upon receiving Authorization message from station, if Network Default option is selected value is taken from DefaultDecPinCodeEnabled property of OtisCompassNetwork. Authorization records are saved to history database
- **OperationMode** – sets operation mode of DEC, if Network Default option is selected value is taken from DefaultDecPinCodeEnabled property of OtisCompassNetwork
    - **Mode 1** – the user will present their credential in the form of a card swipe or PIN code. If the credential is valid, the station will send a default floor to the DEC. Alternatively, a user may enter a destination first, and then present a credential to go to a non-default floor. The user does not have to present a credential if the destination is not secured
    - **Mode 2** – the user must present a valid credential to the Security System (card swipe or PIN code) and then select a destination floor. The DEC will receive, from the station, a message with the user's Authorized Floors or an indication that the credential was invalid
    - **Mode 3** – the user will select their desired floor. This may be done with or without the presentation of a credential (card swipe or PIN code). If the destination selected is allowed the DEC will forward the call request to the DES. If it is not, the user will be requested to present their credential
    - **Mode 4** – the user will present their credential (card swipe or PIN code) and if the credential is valid, a default floor will be sent to the DEC. Within a reasonable time period, the user may override the selection of the default floor and choose another destination floor
- **FrontAllowedFloors** – list of floor numbers separated by comma which are sent to DEC allowing access to floors with front door openings
- **RearAllowedFloors** – list of floor numbers separated by comma which are sent to DEC allowing access to floors with rear door openings
- **LastAuditRecord** – last received Security Audit Record from DEC, only received when AuditRecord property is set to Enabled

Properties PinCode, AuditRecord, OperationMode, FrontAllowedFloors and RearAllowedFloors are sent to DEC in DECSecurityOperationModeV2 message triggered upon receival of online status of DEC from DES or by SendOperationMode action on OtisCompassDevice.

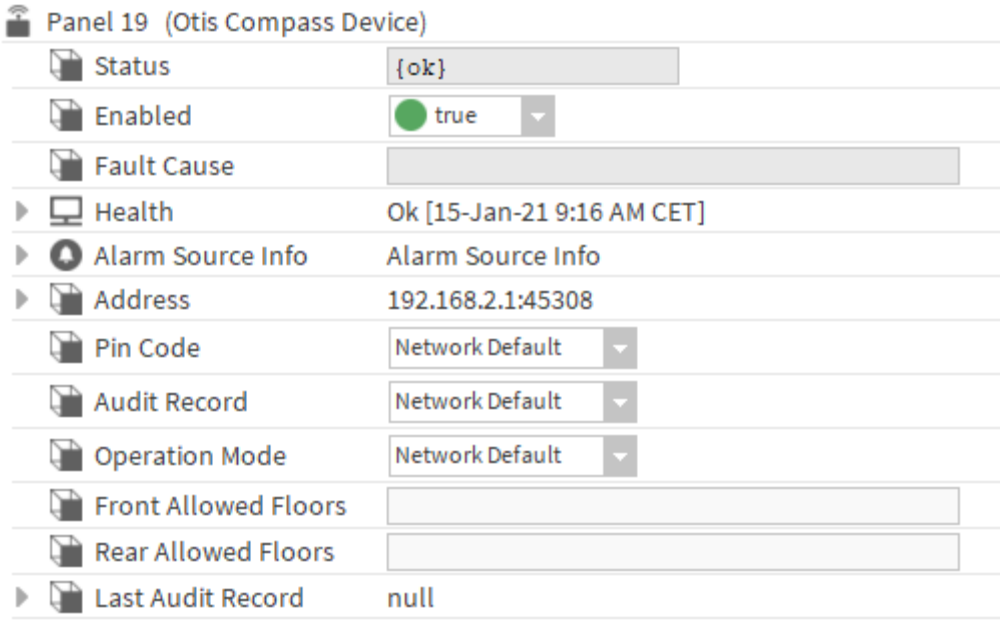

Figure 4: OtisCompassDevice properties

OtisCompassDevice actions description

- **Ping** – checks online status of DEC
- **SendOperationMode** – will send DECSecurityOperationModeV2 message to DEC
- **Authorize** – will send Authorize message to DEC with following options
  - **Valid** – indicates if athorization is valid
  - **Credentials** – hex string describing 16bytes of credential data, if hex string is shorter, it will be padded with zeroes from right to 16bytes
  - **DefaultFloor** – default floor of this user
  - **DefaultDoorSelection** – default front/rear door selection for the default floor (front = 0, rear = 1)
  - **FrontDoors** – authorized floors. Indicates which floors with front door openings this user is authorized to access. Format is floor numbers separated by comma (e.g., 0,2,5)
  - **RearDoors** – authorized floors. Indicates which floors with rear door openings this user is authorized to access. Format is floor numbers separated by comma (e.g., 0,2,5)

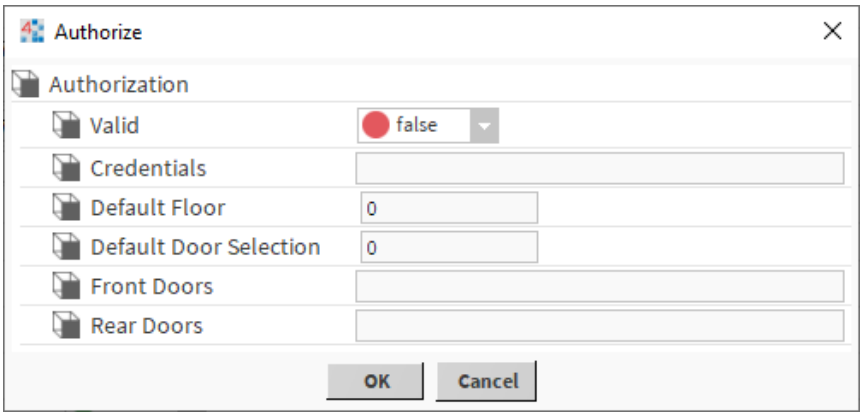

Figure 5: Authorize window