

NETx LaMPS

Lighting/DALI Management



Digital Addressable Lighting Interface (DALI)

Application specific protocol for lighting systems

Advanced features for lighting control

- Tests of lamps and ballasts
- Special functionality for emergency lighting

Pure field level protocol

- Mostly used in combination with system standards like KNX
- No standardized IP interface

KNX is the most common way to integrate DALI

Some KNX/DALI gateways have multiple channels

Up to 64 DALI devices can be connected to 1 channel

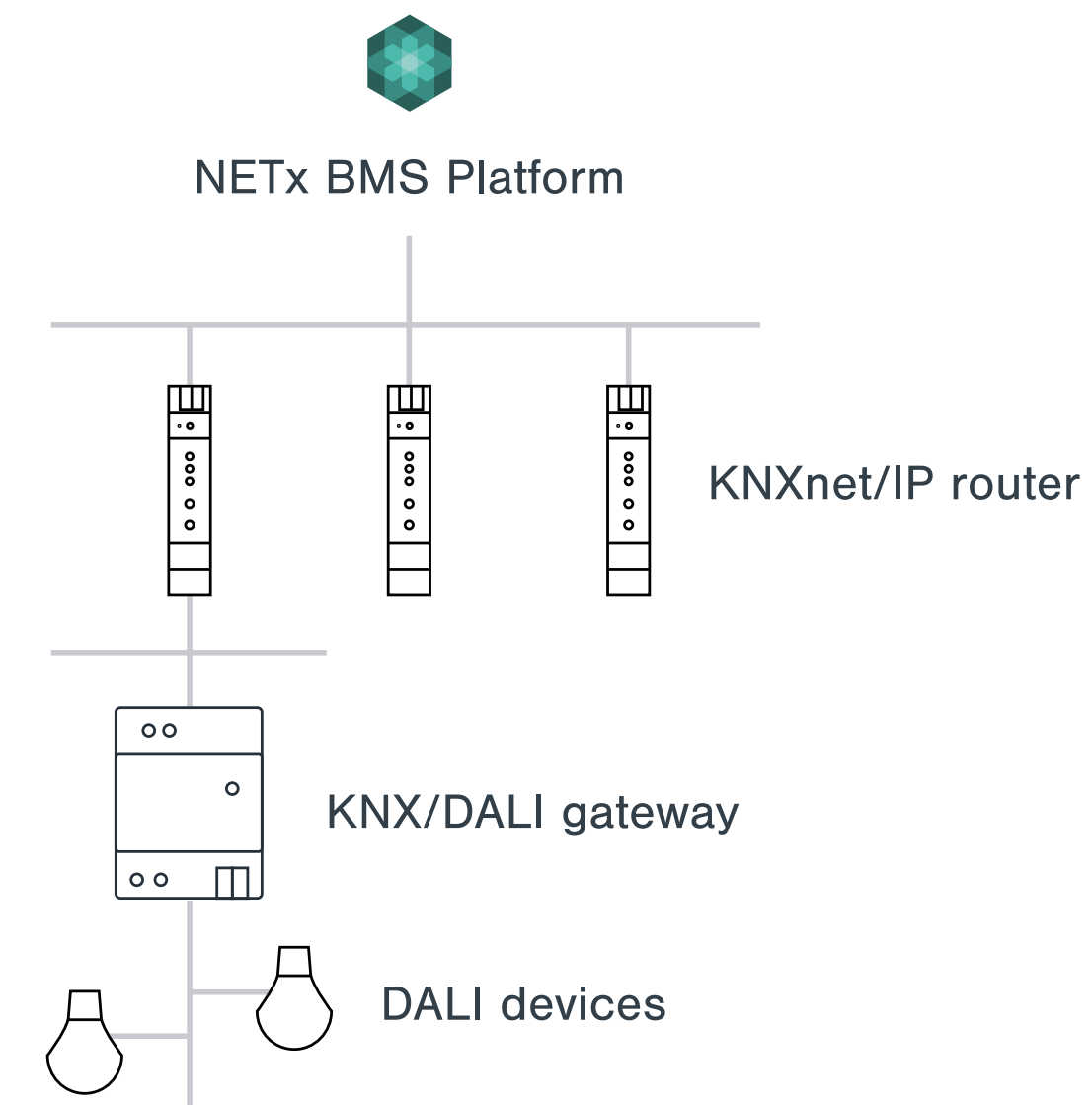
Using KNX, DALI can be connected to Building Management Systems (BMS)

- Visualization, monitoring, maintenance of lighting control

DALI data and information are provided as KNX group objects

- Objects for lighting control (on/off, dimming, status, ...)
- Objects for maintenance (trigger tests, providing test results, ...)
- Objects for emergency lighting control (emergency status, emergency tests, ...)

KNX/DALI gateways are used to interconnect the DALI bus to KNX



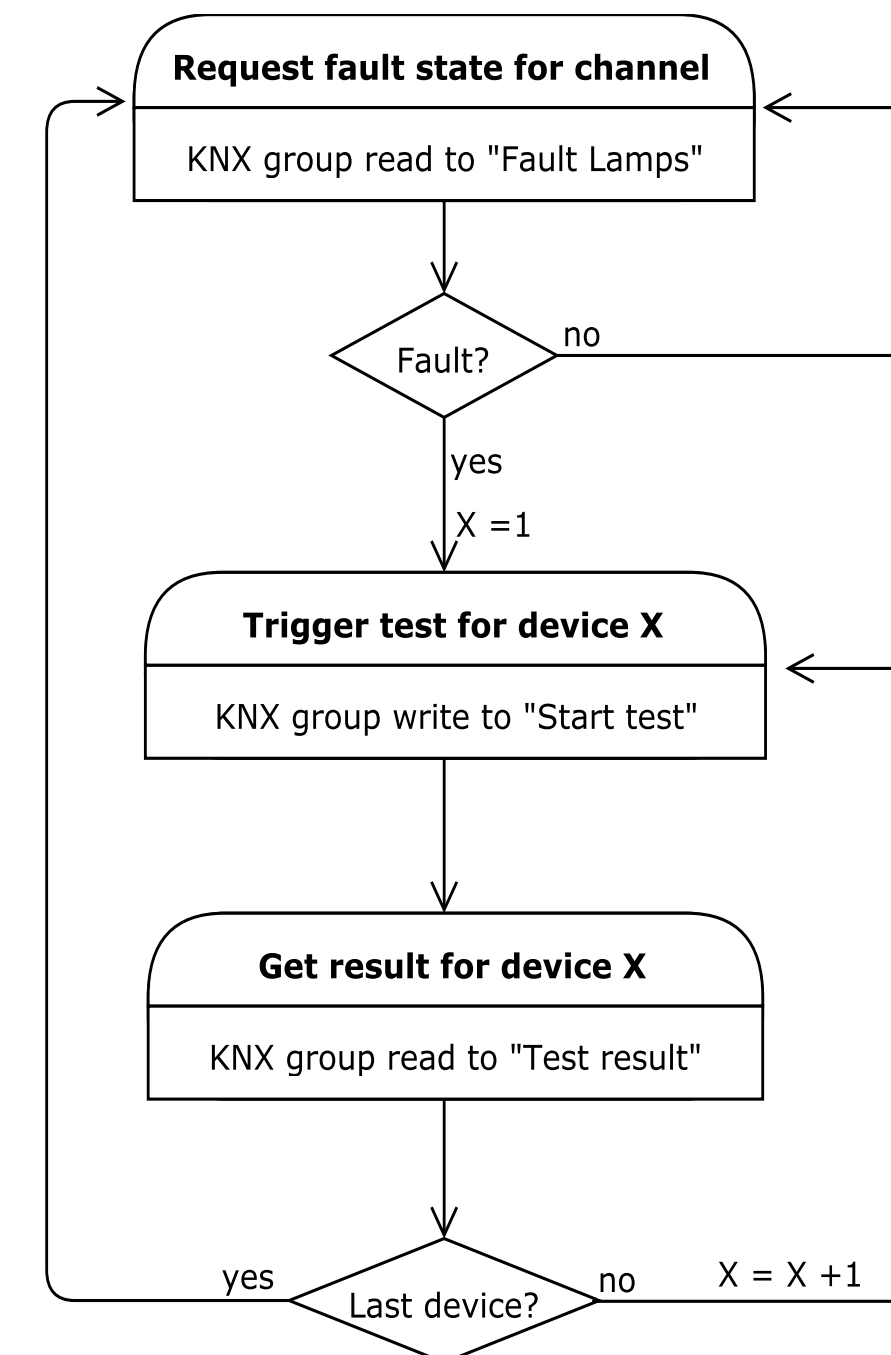
KNX group object mapping for DALI

High amount of functions and high amount of devices per gateway would result in a high amount of KNX group objects at the gateway

To avoid this, only parts of the functionality are available for each DALI device

- Group objects per DALI device: on/off, dimming, status, ...
- Group object per channel: trigger function tests, test results, ...

Stateful communication is required to get all information per device, e.g. DALI tests



KNX data point types (DPTs) for DALI

Standard functions are available as standard DPTs (e.g. dimming)

Many KNX/DALI gateways use even non standardized DPTs

For enhanced functions like testing, complex DPTs are used, e.g.

DPT_DALI_Control_Gear_Diagnostics

r	r	r	r	r	CE	BF	LF
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RR	AI	Addr
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Manufacturer-specific implementation

There are many different manufactures for KNX/DALI gateways

Only standard functionality is common to all DALI gateways (on/off, dimming, ...)

Advanced features like DALI testing are manufacturer-specific

- Manufacturer-specific non standardized DPTs
- Manufacturer-specific, stateful communication logics are required

Time-consuming and complex task for integrators and electrical engineers

Extension module for
NETx BMS Platform

Provides manufacturer-independent
view of KNX/DALI gateways

Uniform data point view

Triggering DALI tests

Show common DALI errors and error for each device separately

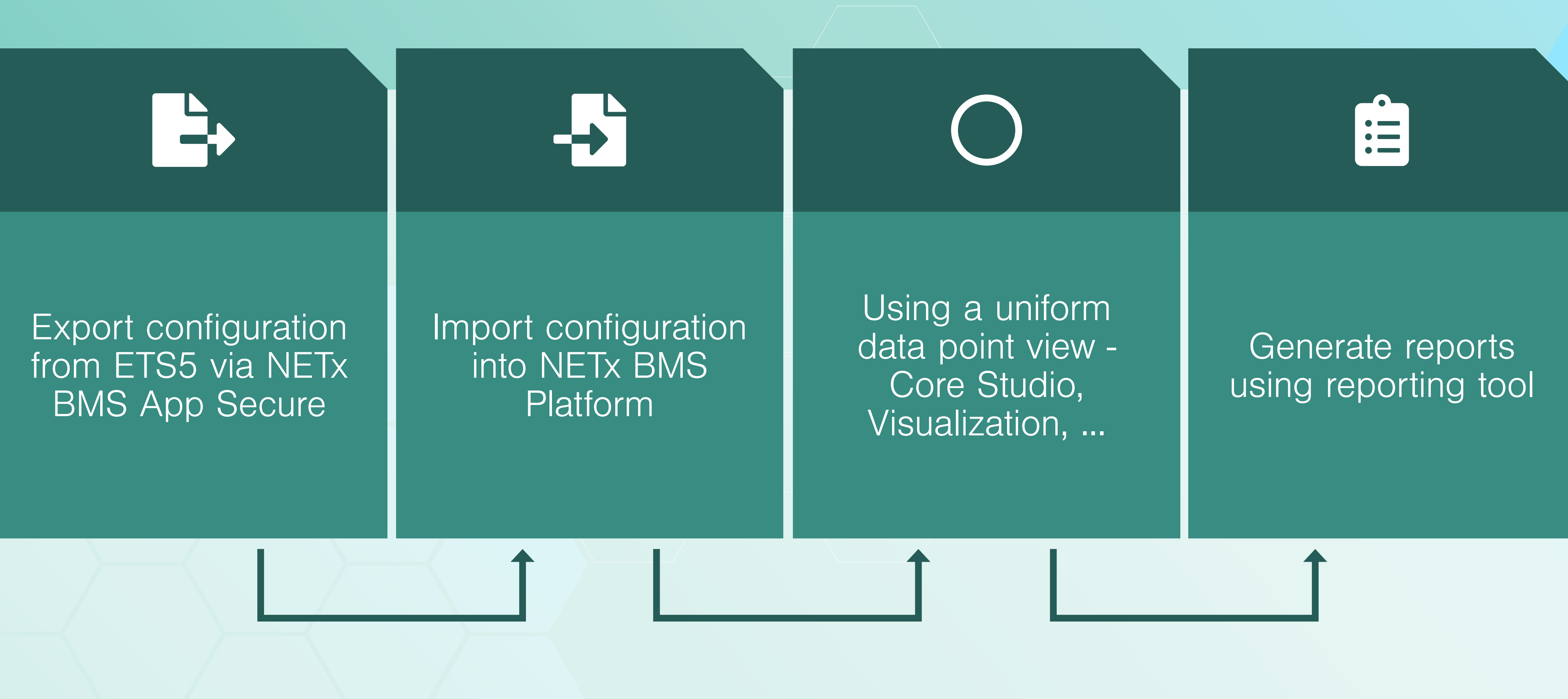
Support for DALI emergency tests

Stores test results in SQL database

Reporting tool for generating
customized reports

Automatic export from ETS5 using
NETx BMS App Secure

Support for multiple KNX/DALI gateways: ABB, Gira, Hager, IPAS, Jung, MDT,
Schneider, Siemens, Zennio, EAE, ...



LaMPS Module: uniform data point view

1.1.6 DALI gateway		
<input type="radio"/> KNX IP Connection	KNX IP Connection	True
<input type="radio"/> Fault	True if any fault occurred	True
<input type="radio"/> Fault Power Failure	Fault Power Failure (1525)	False
<input type="radio"/> Fault Short Circuit	Fault Short Circuit (1527)	False
<input type="radio"/> Fault Devices	Fault Devices (1524)	True
<input type="radio"/> Fault Lamp	Fault Lamp	True
<input type="radio"/> Fault Ballast	Fault Ballast	True
<input type="radio"/> Fault Converter	Fault Converter	False
<input type="radio"/> Trigger Test	Trigger Test	
<input type="radio"/> Test Running	Test Running	False
Emergency		
<input type="radio"/> Emergency Mode Active	Emergency Mode Active (1...	False
<input type="radio"/> Emergency Lighting Failure	Emergency Lighting Failure...	False
<input type="radio"/> Start Function Test		
<input type="radio"/> Start Duration Test		
<input type="radio"/> Start Partial Duration Test		
<input type="radio"/> Start Battery Test		
<input type="radio"/> Stop Test		
<input type="radio"/> Emergency Lights test running		False

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