

KNX

BACnet

MQTT

Modbus

OPC
(DA/UA)

SNMP

Fidelio/Opera | Protel | Infor
RMS Cloud | CharPMS
VingCard Web | Kaba | Salto

DALI EnOcean
M-Bus DMX

Proprietary solutions

All-in-one

**Building management software for
medium-sized and enterprise building
automation projects**



NETx LaMPS
Lighting/DALI management

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

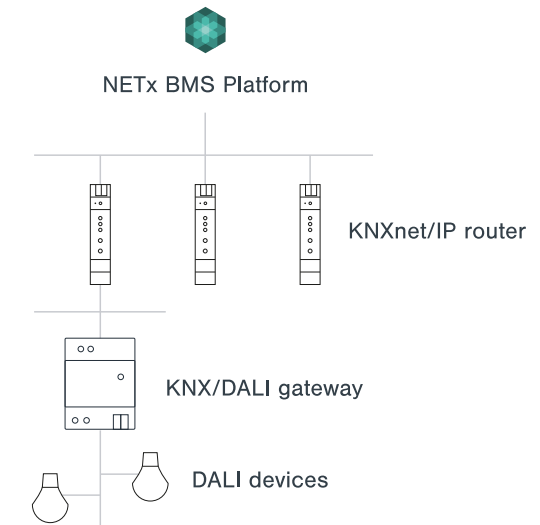
Using KNX, DALI can be connected to Building Management Systems (BMS)

- Visualization, monitoring, maintenance of lighting control

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

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, ...)



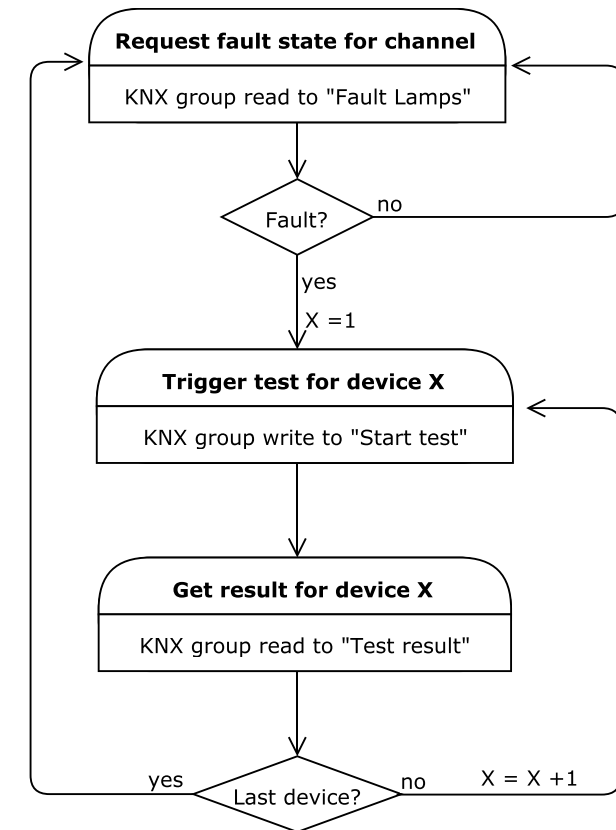
KNX/DALI gateways: challenges - KNX group object mapping for DALI

High number of functions and high number of devices per gateway would result in a high number 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/DALI gateways: challenges - 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

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RR	AI	Addr
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KNX/DALI gateways: challenges - manufacturer-specific implementation

There are many different manufactures
for KNX/DALI gateways

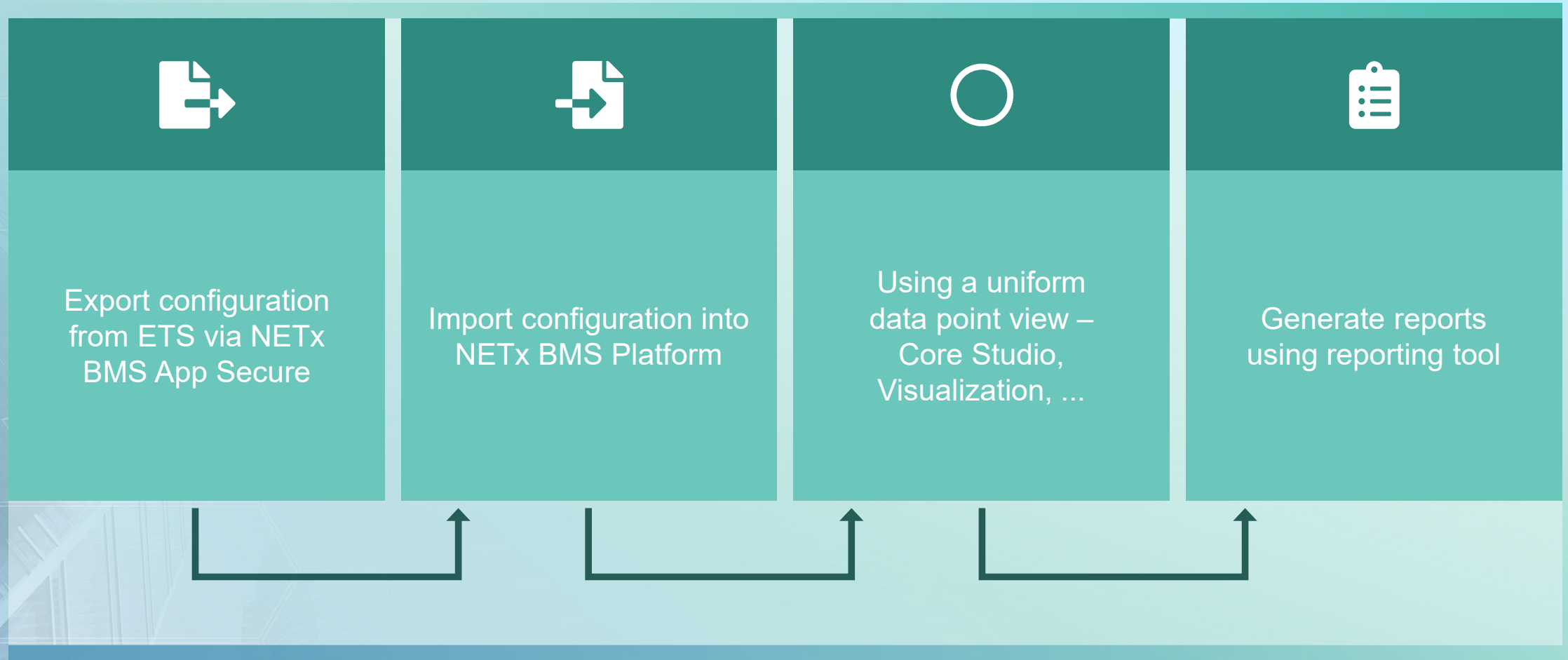
Only standard functionality is common to all
DALI gateways (on/off, dimming, ...)

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 ETS 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

Item Tree		
Item	Description	Value
NETx		
XIO		
Cluster		
Module		
MaRS		
LaMPS		
DALI		
BuildingA		
Floor1		
My DALI Gateway		
Fault General	Fault General	True
Fault DALI	Fault DALI (4 22)	False
Fault Device	Fault Device (5 23)	True
Fault Lamps	Fault Lamps (6 24)	False
Trigger Test	Trigger Test	
Test Running	Test Running	False
Device1		
Fault	Displays if any fault occurred	True
Fault Lamp	Fault Lamp	False
Fault Device	Fault Device	True
OnOff		True
Device2		
Fault	Displays if any fault occurred	True
Fault Lamp	Fault Lamp	False
Fault Device	Fault Device	True
OnOff		False

www.netxautomation.com