

# UDMI METHODOLOGY FOR SMART BUILDINGS

Your Keynote Speakers...



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Integration Manager

# TYRRELL BUILDING TECHNOLOGIES GROUP



IoT and Automation Products,  
R&D, Distribution and Training



Master System Integrator,  
Maintenance and Support



Smart Building, Analytics and  
Reporting Platform



Technology and Services to Support Improved Sustainability and ESG Goals



SMART BUILDING  
TECHNOLOGY,  
ENABLEMENT  
AND BENEFITS  
BASED ON UDMI



# AVAILABLE SMART BUILDING STANDARDS



LIVING BUILDING CHALLENGE



BOMA BEST®



# SMART BUILDING LANDSCAPE IN THE UK



**Not Certified**  
SmartScore



**SmartScore**  
Under Certification



**SmartScore**  
CERTIFIED



**SmartScore**  
SILVER



**SmartScore**  
GOLD



**SmartScore**  
PLATINUM



**WiredScore**  
Under Certification



**WiredScore**  
CERTIFIED



**WiredScore**  
SILVER



**WiredScore**  
GOLD



**WiredScore**  
PLATINUM



Making a Start



Below Average



Average



Good



Excellent



Market Leading

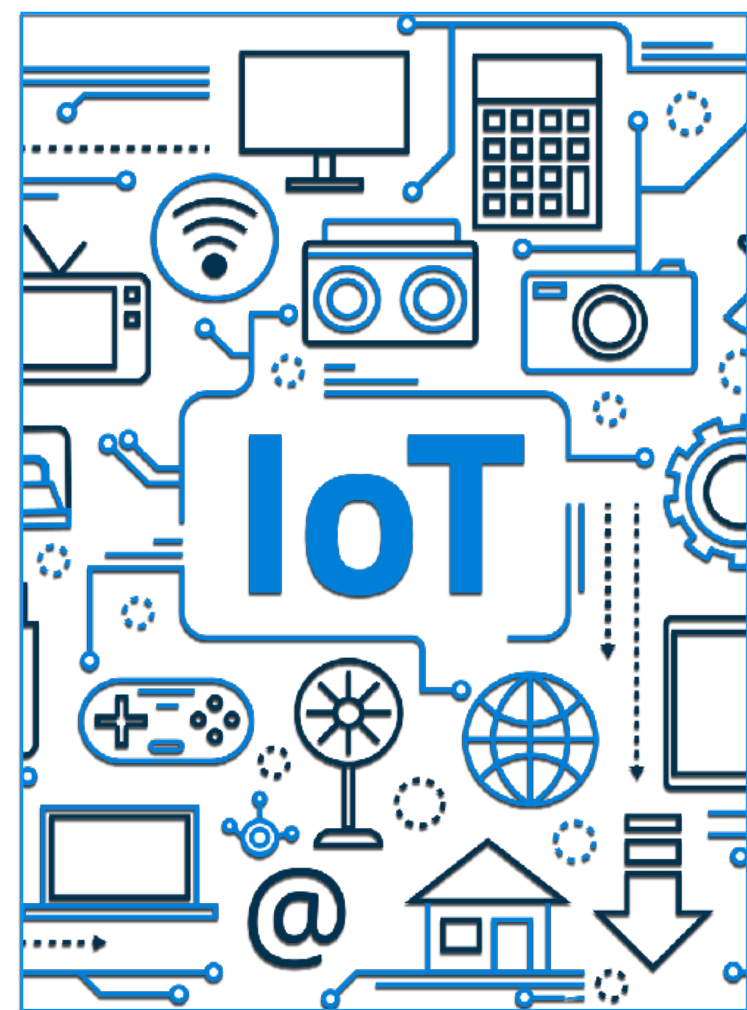


# SMART BUILDING ASPIRATIONS - WHY?

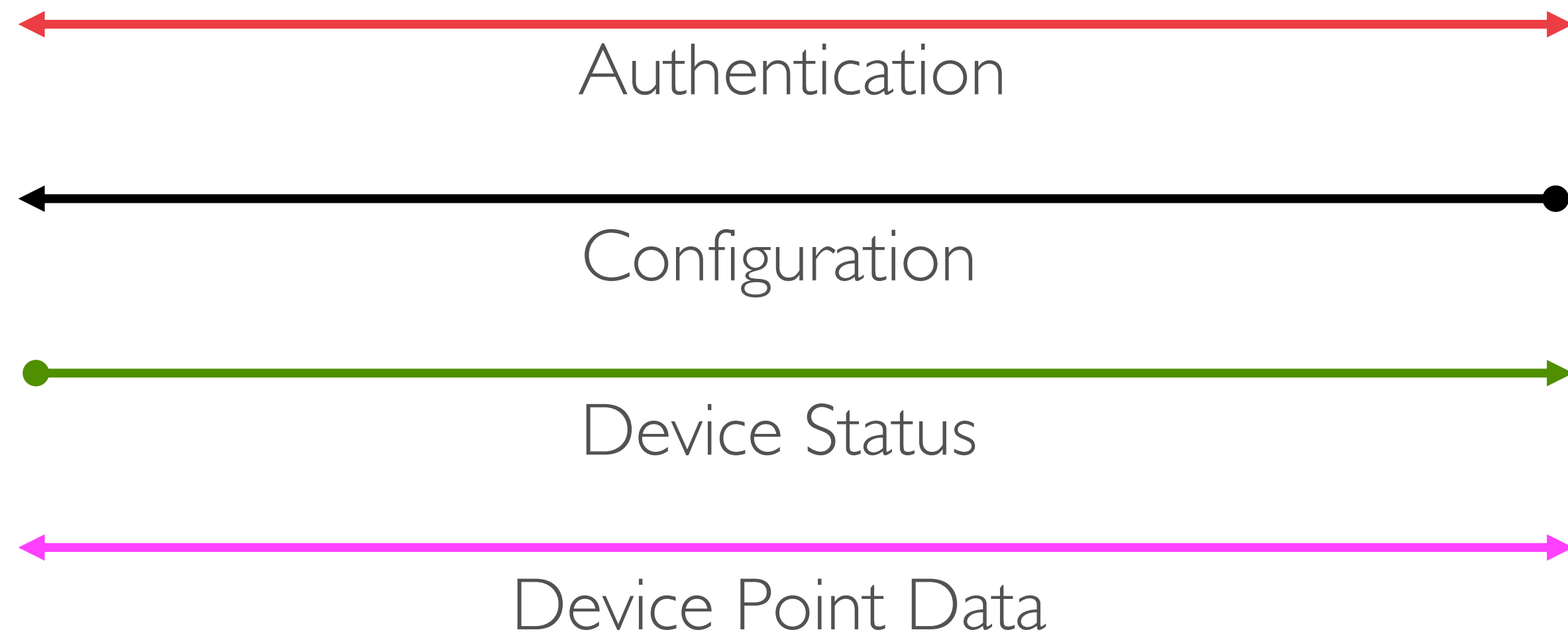
1. Improves Energy Consumption 
2. Ensures Efficient Resource Management 
3. Predictive Maintenance 
4. Offers Real-Time Insights 
5. Leads to Enhanced Productivity 
6. Improves Security Standards 

# UDMI AND THE PROBLEM IT SOLVES

Universal Device Management Interface

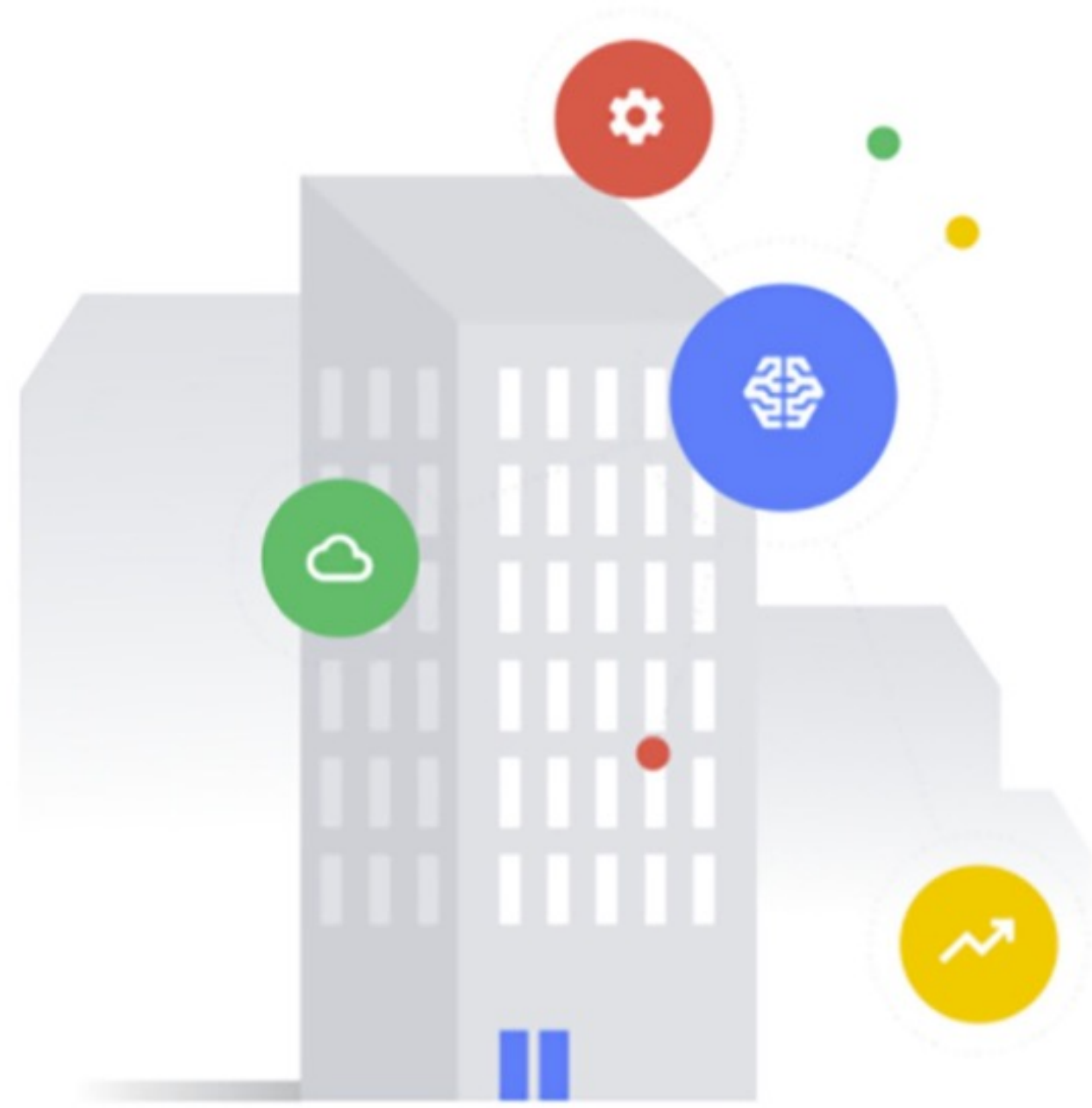


Devices

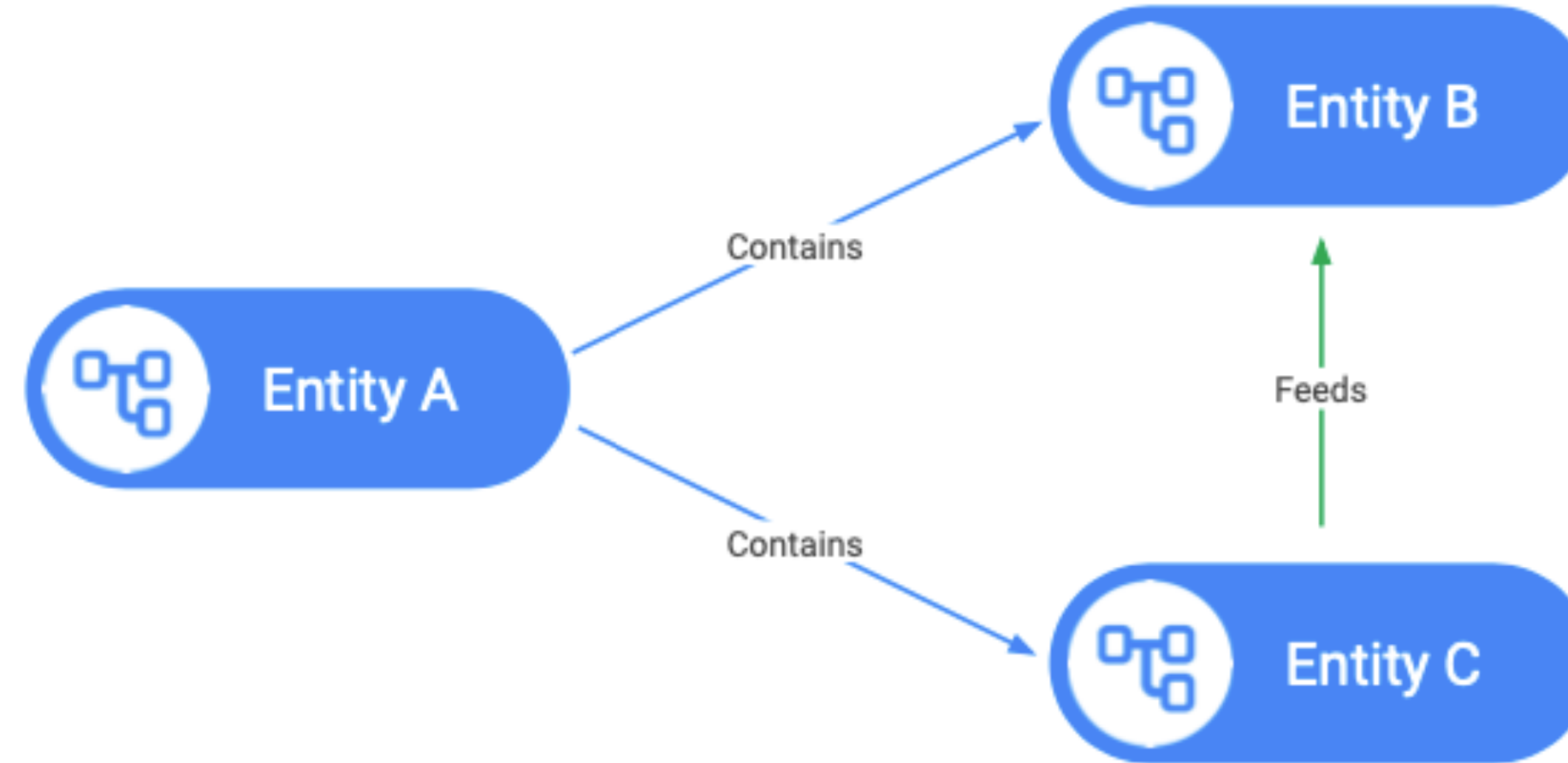


# WHAT IS DBO?

Digital Buildings Ontology



- Entities
- Entity Types
- Properties
- Relationships



Relationship Example

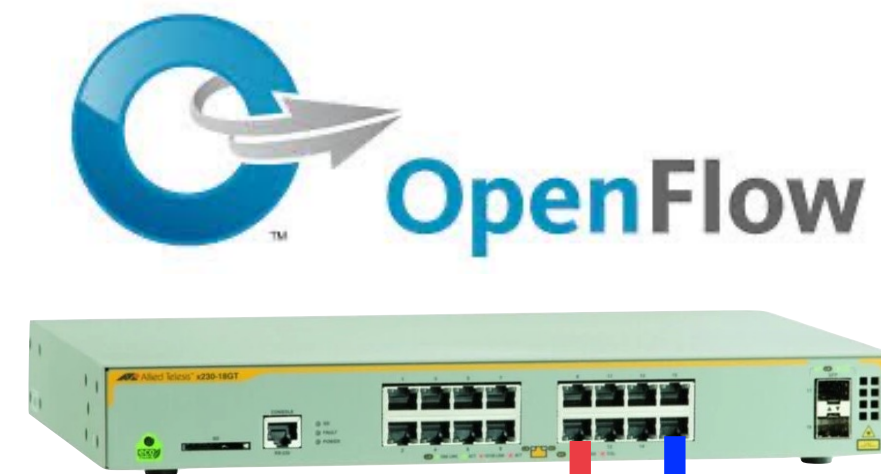


Real World 'Entity' Example



# WHAT IS DAQ?

Device Automated Qualification



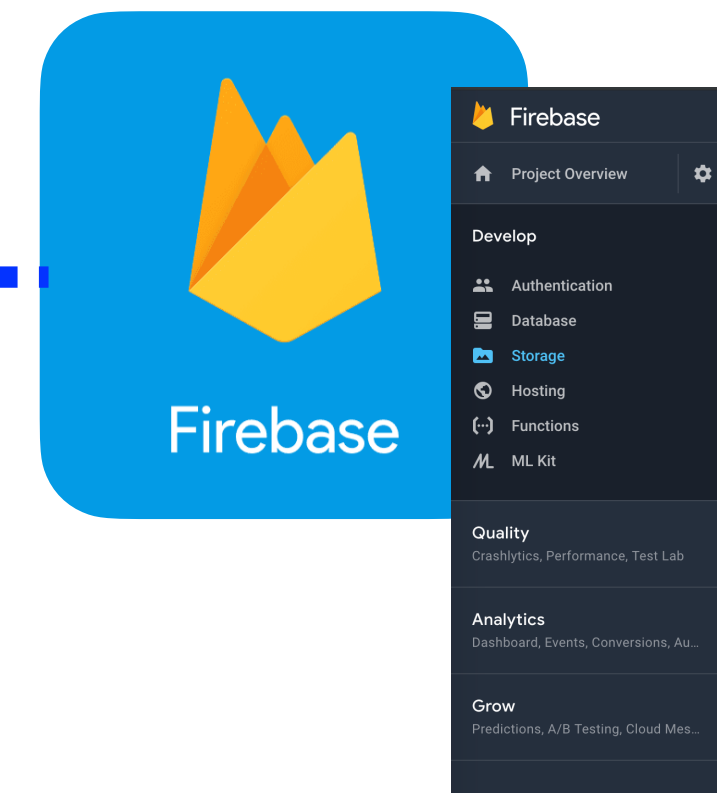
Test Device  
(Controller)



DAQ Framework

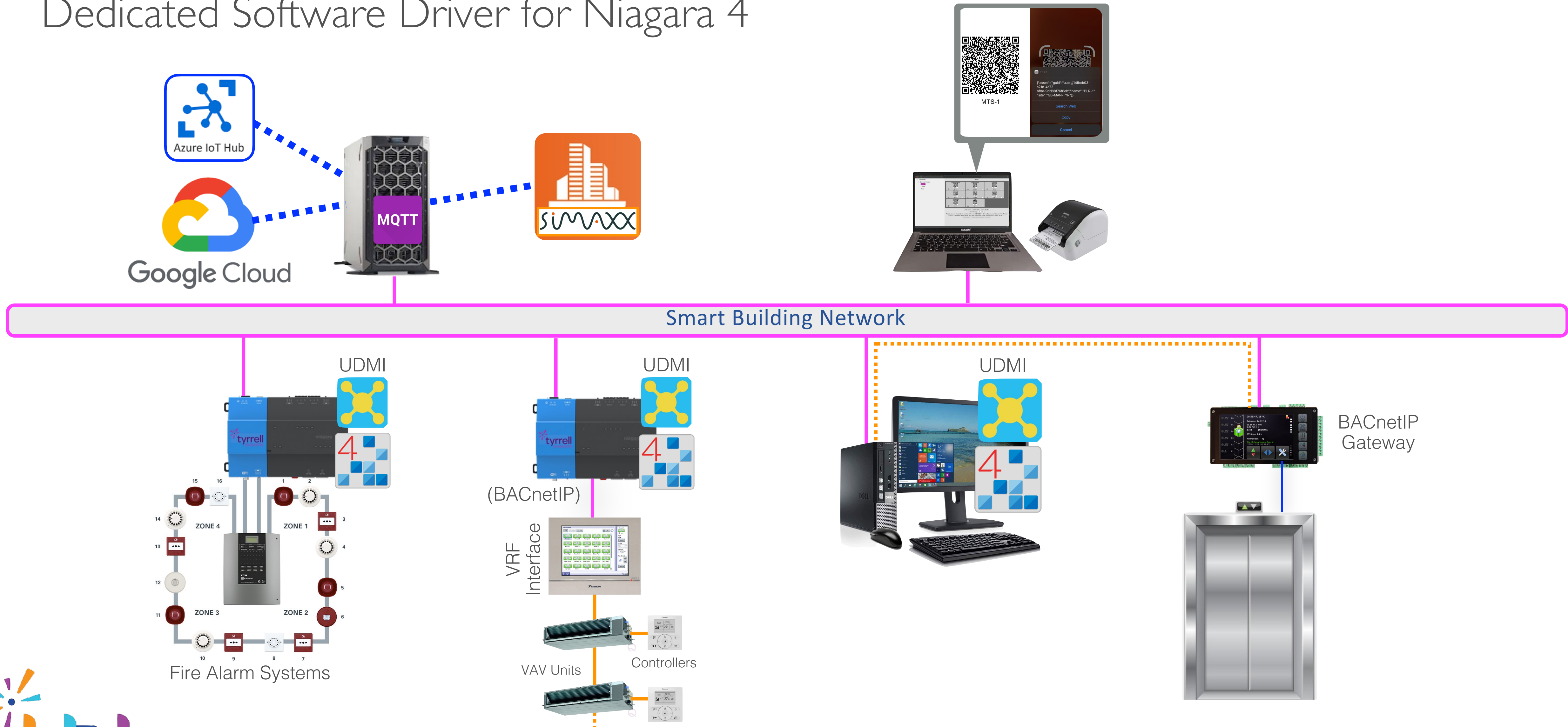


DAQ Dashboard



# THE UDMI GATEWAY

## Dedicated Software Driver for Niagara 4



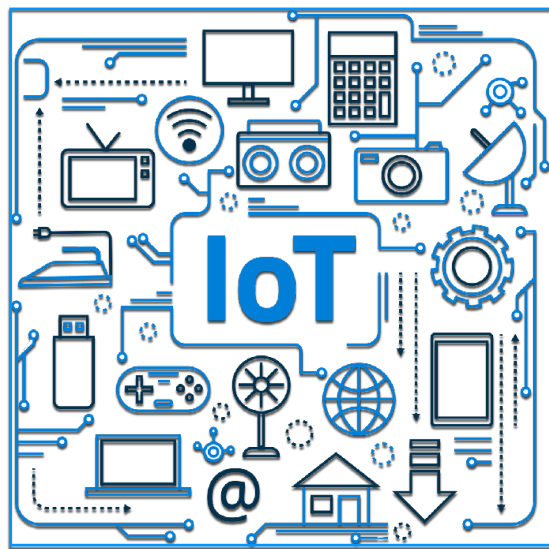
simax

UDMI ENABLED

SMART BUILDING PLATFORM

# ABOUT SIMAXX

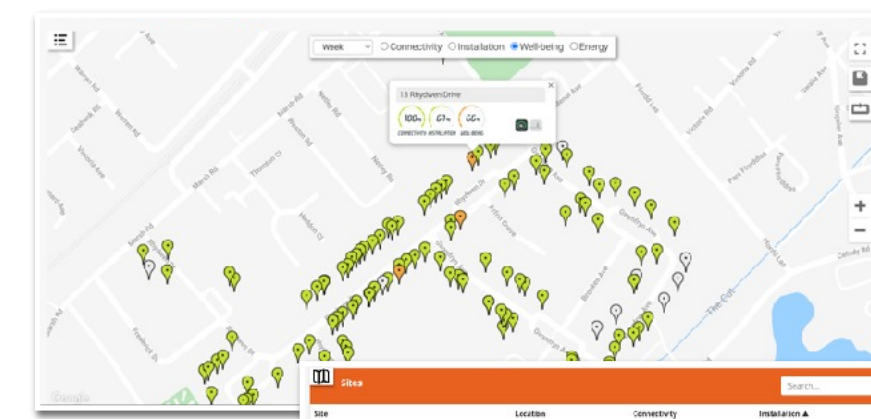
Numerous IoT Based Systems



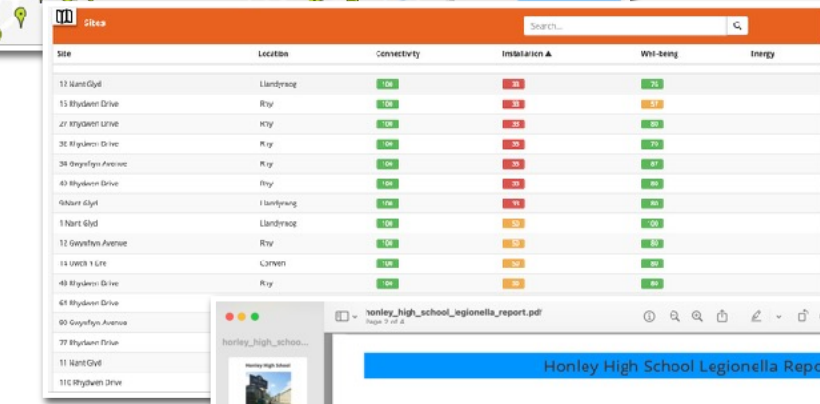
APIs for Cloud Services



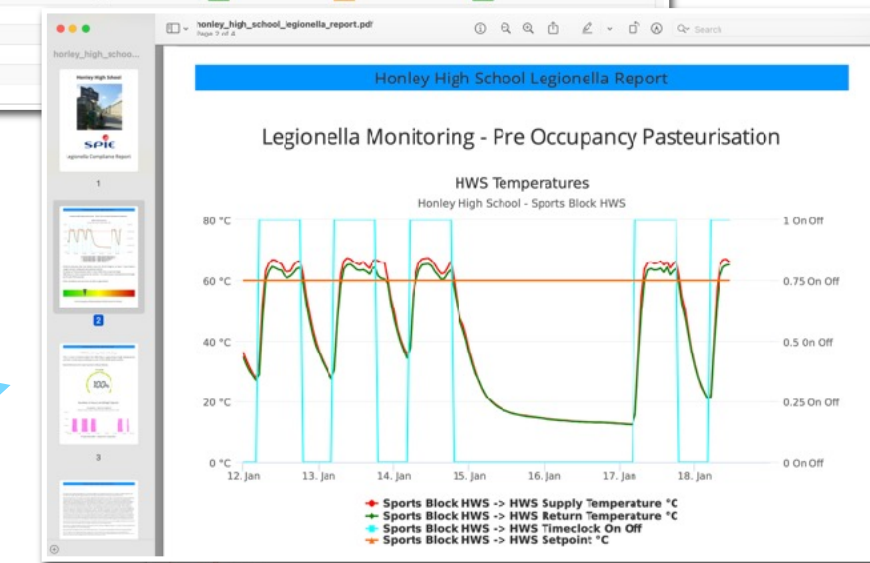
Estate Management



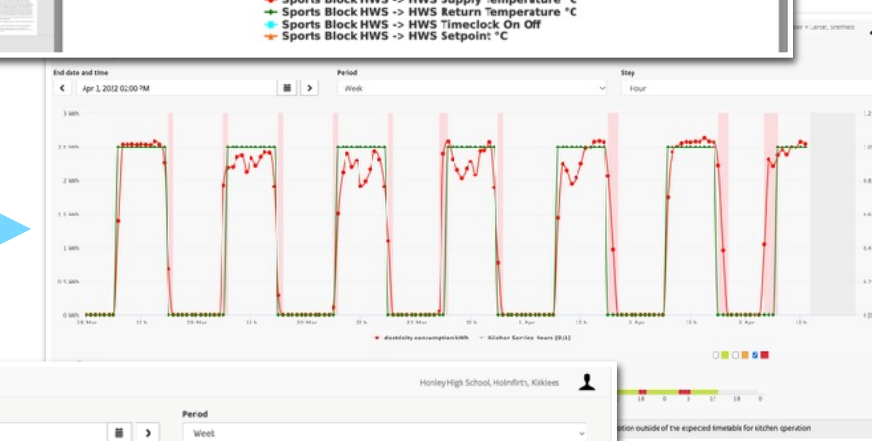
Benchmarking



Compliance Reporting

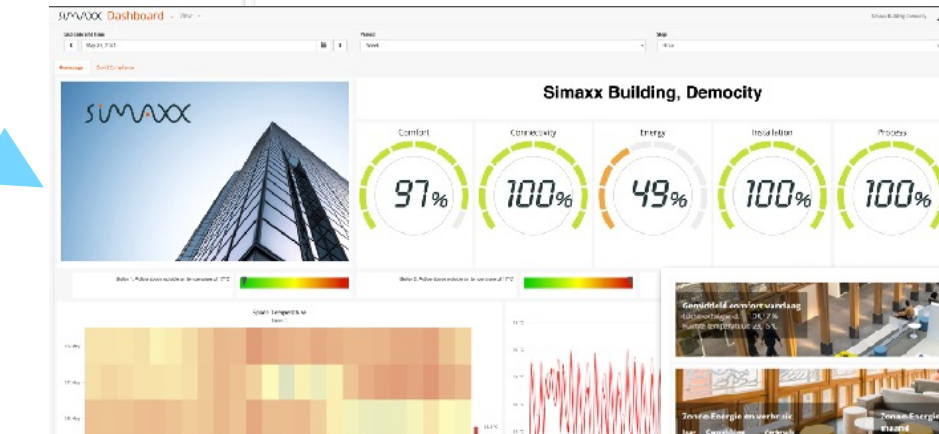


Energy Saving Insights

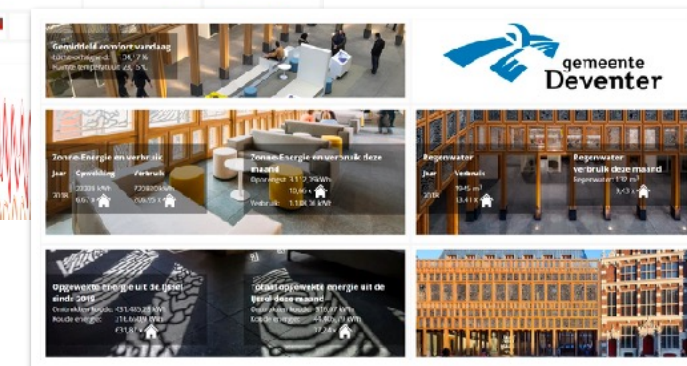


How to save and optimise

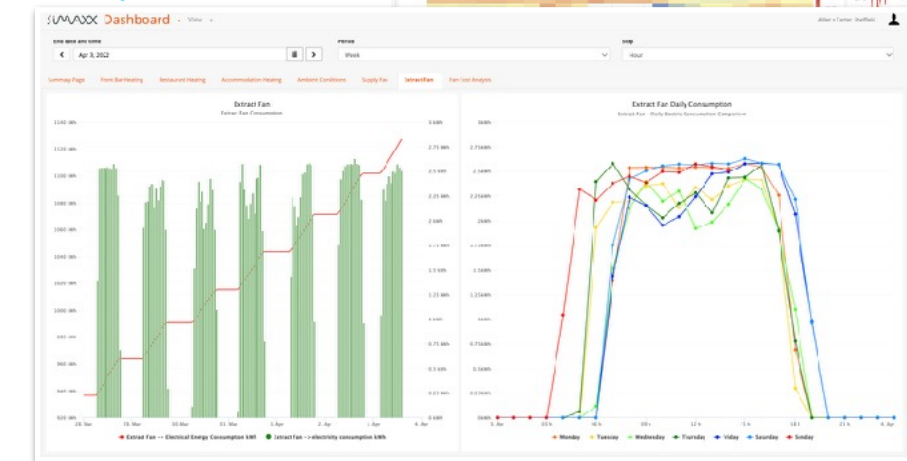
User Dashboards



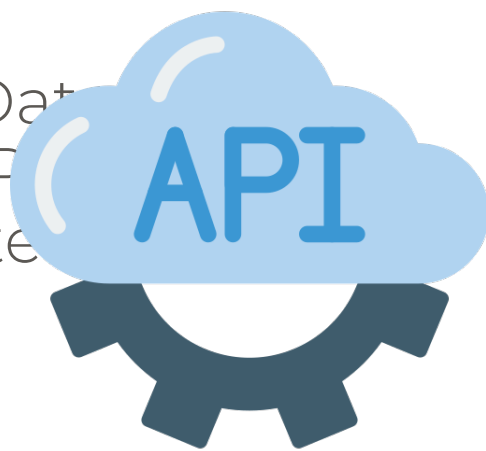
Green Screens



Energy Analysis



Weather Data  
Sensor API  
SmartMeter

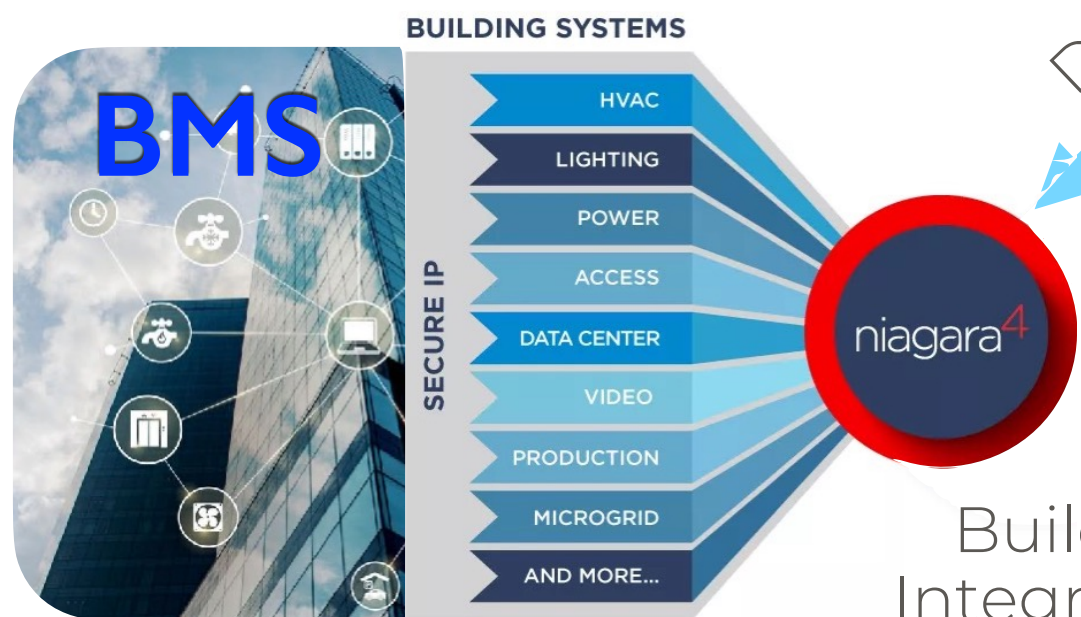


Data and Analytic Optimisation

Data and Analytic Optimisation



Building Systems Integration via Tridium Niagara



Automated FM Work Order Generation



# SIMAXX AND S-DAQ

## Simaxx Device Automated Qualification

### Simaxx DAQ App



Test Device (Controller)

SDAQ Agent



SSL



Date	Model	Mac Address	Qualified
29/12/22 21:15	UPRL-JEZ	dca632ba6707	QUALIFIED
21/12/22 04:22	Model ZK-322	fc694782224e	UNQUALIFIED
20/12/22 10:55	Model A-IVCTP	1c697a02fe87	QUALIFIED
1/1/23 18:02	MKKLI-89-VV	fc6947822244	PENDING

Metadata data for device UPRJ-JEZ

Unqualified Pending Qualified

Input type:  Ad Hoc  Configuration

Manufacturer: W.W. Grainger  
M & M Control  
Model: UPRJ-JEZ  
Witnesses: John Doe, Emily Smith, Michael Johnson

Onboarding device

Equipment Model: UPRJ-JEZ  
Name (BDNS): UPRJ-1000-001  
Name (Human Readable): UPRJ Cooling System  
Supplier: W.W. Grainger  
Equipment Manufacturer: M & M Control  
Serial number: 1000-01-2021-12345  
Date of manufacture: 01/01/2020  
MAC address: 12:34:56:78:9A:BC  
Software version: 1.0.0  
Machine readable identifier (GUID): 8ee7c82e-5a4f-4f9d-ab69-c8b4f0c2d3e4  
Human readable identifier: UPRJ-1000-001-2021-01-01  
Network configuration records (IPv4, IPv6, DHCP capable, 802.1X etc.): IPv4: 192.168.0.10, IPv6: 2001:0db8:85a3:0000:0000:8a2e:0370:7334, DHCP capable: Yes, 802.1X: No

DAQ scan report for device 88c9b3d067e9

Report summary

Overall device result: PASS

Category	Total Tests	Pass	Other
Other	0	N/A	0/0/0

Syntax: Pass / Fail / Skip

Expectation	pass	skip	info	fail
Other	12	17	2	1

Result	Test	Category	Expectation	Notes
pass	base_startup_dhcp	Other	Other	
pass	base_switch_ping	Other	Other	target
skip	cloud.admin_event_posttest	Other	Other	No device id
skip	cloud.admin_event_system	Other	Other	No device id
skip	cloud.admin_provision	Other	Other	No device id
skip	cloud.admin_state_posttest	Other	Other	No device id
skip	cloud.admin_state_system	Other	Other	No device id
pass	communication.network_mtu_end	Other	Other	All packets received. Data packets were sent at a frequency of less than 5 minutes
info	communication.network_type	Other	Other	Broadcast packets received. Unicast packets received.
pass	connection.base_target_ping	Other	Other	target reached
info	connection.network_mac_address	Other	Other	Device MAC address is 88:c9:b3:d0:67:e9
pass	connection.network_mac_oid	Other	Other	Manufacturer: Seemans found for address 88:c9:b3:d0:67:e9
pass	connection.switch_port duplex	Other	Other	Full duplex mode detected
pass	connection.switch_port_link	Other	Other	Link is up
pass	connection.switch_port_speed	Other	Other	Speed auto-negotiated successfully. Speed is greater than 10 MBPS
pass	dns.network_base_name_resolution	Other	Other	Device sends DNS requests and resolves host names
pass	ntp.network_ntp_support	Other	Other	Using NTPv4.

DAQ Device Test Reports





# UDMI APPS IN SIMAXX

















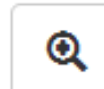

The image displays a grid of 18 application icons for SIMAXX, arranged in three rows and six columns. Each icon is orange with a white symbol, and its name is written below it. A blue rectangular box highlights the following four applications:

- Dashboard
- Documents
- Reports
- Users
- Sites
- Events
- Historian
- Analytics
- Profiles
- Connector Manager
- Report designer
- Estate Manager
- Weather Service
- Device Qualification**
- Device Onboarding**
- UDMI Editor**
- Commissioning**
- Administration

# DEVICE AUTOMATED QUALIFICATION APP

simmax Device Qualification Demo Site - housing, Leigh 

**▼ Reports**  

Date ▼	Supplier	Manufacturer	Model	Description	Mac Address	Qualified	
<input type="text" value="dd/MM/yy HI"/>	<input type="text" value="search"/>	<input type="text" value="search"/>	<input type="text" value="search"/>	<input type="text" value="search"/>	<input type="text" value="search"/>	<input type="text" value="search"/>	
21/09/23 09:48					00:00:54:37:68:D7	PENDING	  
21/09/23 09:48	AF Switchgear	MOXA SWITCH / Provided AF Switchgear	0000		00:90:E8:00:00:10	UNQUALIFIED	  
11/09/23 09:46	Schinlder	Schinlder	CUBE TIESSE		00:0D:5A:10:01:FD	QUALIFIED	  
07/09/23 15:34	FMS	Avigilion	H4 Video Intercom		00:18:85:4B:E7:75	PENDING	  
17/08/23 09:46	FMS	Gallegher	Controller-6000 Standard		00:90:1D:03:66:3D	QUALIFIED	  
17/08/23 09:21	FMS	Gallegher	Controller-6000 Two Doors		00:90:1D:02:C1:CE	QUALIFIED	  



# DEVICE AUTOMATED QUALIFICATION APP

DAQ – Device report test overview (on screen or as PDF)

Report

DAQ scan report for device 88:C9:B3:D0:68:05

Report summary

Overall device result PASS

Category	Total Tests	Result	Other
Other	0	N/A	0/0/0

Syntax: Pass / Fail / Skip

Expectation	pass	skip	info	fail
Other	13	16	2	1

Result	Test	Category	Expectation	Notes
pass	base.startup.dhcp	Other	Other	
pass	base.switch.ping	Other	Other	target
skip	cloud.udmi.event_pointset	Other	Other	No device id
skip	cloud.udmi.event_system	Other	Other	No device id
skip	cloud.udmi.provision	Other	Other	No device id
skip	cloud.udmi.state_pointset	Other	Other	No device id
skip	cloud.udmi.state_system	Other	Other	No device id
pass	communication.network.min_send	Other	Other	ARP packets received. Data packets were sent at a frequency of less than 5 minutes
info	communication.network.type	Other	Other	Broadcast packets received. Unicast packets received.
pass	connection.base.target_ping	Other	Other	target reached
info	connection.network.mac_address	Other	Other	Device MAC address is 88:c9:b3:d0:68:05
pass	connection.network.mac_out	Other	Other	Manufacturer: Sercomm found for address 88:c9:b3:d0:68:05
pass	connection.switch.port_duplex	Other	Other	Full duplex mode detected
pass	connection.switch.port_link	Other	Other	Link is up
pass	connection.switch.port_speed	Other	Other	Speed auto-negotiated successfully. Speed is greater than 10 MBPS
pass	dns.network.hostname_resolution	Other	Other	Device sends DNS requests and resolves host names
pass	ntp.network.ntp_support	Other	Other	Using NTPv4.
fail	ntp.network.ntp_update	Other	Other	Device clock not synchronized with

## DAQ scan report for device 88c9b3d06805

### Report summary

Overall device result PASS

Category	Total Tests	Result	Other
Other	0	N/A	0/0/0

Syntax: Pass / Fail / Skip

Expectation	pass	skip	info	fail
Other	13	16	2	1

Result	Test	Category	Expectation	Notes
pass	base.startup.dhcp	Other	Other	
pass	base.switch.ping	Other	Other	target
skip	cloud.udmi.event_pointset	Other	Other	No device id
skip	cloud.udmi.event_system	Other	Other	No device id
skip	cloud.udmi.provision	Other	Other	No device id
skip	cloud.udmi.state_pointset	Other	Other	No device id
skip	cloud.udmi.state_system	Other	Other	No device id
pass	communication.network.min_send	Other	Other	ARP packets received. Data packets were sent at a frequency of less than 5 minutes
info	communication.network.type	Other	Other	Broadcast packets received. Unicast packets received.

A Received DAQ report for Device with MAC-address 88:C9:B3:D0:68:05





# DEVICE ONBOARDING APP

simmax Device Onboarding

Report Editor test, Nieuwegein

Select a model to view its devices: [dropdown]

Onboard multiple devices: Upload Excel file

Onboard a single device: Onboard new device

Export as Excel file: Export

stag

Approve all devices of this model

Search...

Manufacturer	Model	BDNS Type	Description	MAC	Date	Approved
search	search	search	search	search	dd/MM/yy HH:mm	

Last updated:

Use the dropdown above to select a model and view its devices.

simmax Device Onboarding

Report Editor test, Nieuwegein

Export as Excel file: Export

stag

Import progress

Progress by Manufacturer and Model:

Tridium, JACE8000	Updated: 2 Added: 0	100%
Kaiterra, SE-200P	Updated: 85 Added: 0	100%
Xovis, PC2SE-UL	Updated: 262 Added: 0	100%

OK

Use the dropdown above to select a model and view its devices.




# DEVICE ONBOARDING APP

1	Building	Floor	Description	BDNS Dev Type	Manufacturer	Model	Serial Number	Rev	Firmware Version	OS Version	Driver Version	LAN1 MAC	LAN2 MAC
2	GB-EDH-ATRM	0	JACE-BMS- Atrium	EAPPL	Tridium	JACE8000	80053904		4.11.2.8	tridium-qnx7-n4-titan-am335x-hs (4.11.2.8)		AA:BB:CC:DD:EE:01	
3	GB-EDH-B4	1	JACE-BMS- Building 4	EAPPL	Tridium	JACE8000	80053914		4.11.2.8	tridium-qnx7-n4-titan-am335x-hs (4.11.2.8)		AA:BB:CC:DD:EE:02	
4	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG20019196		2.3.2			88:C9:B3:D0:55:82	
5	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG20019169		2.3.2			88:C9:B3:D0:55:67	
6	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21023673		2.3.2			88:C9:B3:D0:66:FF	
7	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21023303		2.3.2			88:C9:B3:D0:65:8D	
8	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21020440		2.3.2			88:C9:B3:D0:5A:5E	
9	B4	1	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21023745		2.3.2			88:C9:B3:D0:67:47	
10	B4	1	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21023078		2.3.2			88:C9:B3:D0:64:AC	
11	B4	1	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21022039		2.3.2			88:C9:B3:D0:60:9D	
12	B4	1	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21022034		2.3.2			88:C9:B3:D0:60:98	
13	B4	1	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21023225		2.3.2			88:C9:B3:D0:65:3F	
14	B4	1	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG20019164		2.3.2			88:C9:B3:D0:55:62	
15	B4	2	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21022027		2.3.2			04:39:26:FE:D7:FD	
16	B4	2	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG20019512		2.3.2			88:C9:B3:D0:56:BE	
17	B4	2	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21022986		2.3.2			88:C9:B3:D0:64:50	
18	B4	2	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21020367		2.3.2			88:C9:B3:D0:5A:15	
19	B4	2	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21022064		2.3.2			88:C9:B3:D0:60:B6	
20	B4	2	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG20019421		2.3.2			88:C9:B3:D0:56:63	
21	B4	2	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG20019140		2.3.2			88:C9:B3:D0:55:4A	
22	B4	2	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG20019168		2.3.2			88:C9:B3:D0:55:66	
23	B4	2	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21021964		2.3.2			88:C9:B3:D0:60:52	
24	B4	2	SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21023930		2.3.2			88:C9:B3:D0:68:00	
25	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21021954		2.3.2			88:C9:B3:D0:60:48	
26	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21021951		2.3.2			88:C9:B3:D0:60:45	
27	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21023241		2.3.2			88:C9:B3:D0:65:4F	
28	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21023302		2.3.2			88:C9:B3:D0:65:8C	
29	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21023249		2.3.2			88:C9:B3:D0:65:57	
30	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21021987		2.3.2			88:C9:B3:D0:60:69	
31	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21023287		2.3.2			88:C9:B3:D0:65:7D	
32	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21021738		2.3.2			88:C9:B3:D0:5F:70	
33	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21023273		2.3.2			88:C9:B3:D0:65:6F	
34	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21021706		2.3.2			88:C9:B3:D0:5F:50	
35	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG20019252		2.3.2			88:C9:B3:D0:55:BA	
36	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21021792		2.3.2			88:C9:B3:D0:5F:A6	
37	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21022045		2.3.2			88:C9:B3:D0:60:A3	
38	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG20019216		2.3.2			88:C9:B3:D0:55:96	
39	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG20019385		2.3.2			88:C9:B3:D0:56:3F	
40	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG21023090		2.3.2			88:C9:B3:D0:64:B8	
41	B4		SPACE-Sensor	CDS	Kaiterra	SE-200P	VG20019767		2.3.2			88:C9:B3:D0:57:BD	



# DEVICE ONBOARDING APP

**simmaxx Device Onboarding** - View ▾ Demo Site - housing, Leigh 

Select a model:  Onboard multiple devices:  Onboard a single device:  Export as Excel file:

Model	BDNS Type	Description	MAC	Date ▼	Approved	
<input type="text" value="search"/>	<input type="text" value="search"/>	<input type="text" value="search"/>	<input type="text" value="search"/>	<input type="text" value="M/d/yy h:mm a"/>		
Kaiterra	SE-200P	EAPPL	IAQ_45002	88:C9:B3:D0:60:69	15/01/24 10:12	<input checked="" type="checkbox"/> <input type="button" value="edit"/> <input type="button" value="delete"/>
Kaiterra	SE-200P	EAPPL	IAQ_51002	88:C9:B3:D0:5F:85	15/01/24 10:12	<input checked="" type="checkbox"/> <input type="button" value="edit"/> <input type="button" value="delete"/>
Kaiterra	SE-200P	EAPPL	IAQ_50003	88:C9:B3:D0:55:77	15/01/24 10:12	<input checked="" type="checkbox"/> <input type="button" value="edit"/> <input type="button" value="delete"/>
Kaiterra	SE-200P	EAPPL	IAQ_47001	88:C9:B3:D0:56:3F	15/01/24 10:12	<input checked="" type="checkbox"/> <input type="button" value="edit"/> <input type="button" value="delete"/>
Kaiterra	SE-200P	EAPPL	IAQ_45006	88:C9:B3:D0:5F:50	15/01/24 10:12	<input checked="" type="checkbox"/> <input type="button" value="edit"/> <input type="button" value="delete"/>
Kaiterra	SE-200P	EAPPL	IAQ_52004	88:C9:B3:D0:57:C1	15/01/24 10:12	<input checked="" type="checkbox"/> <input type="button" value="edit"/> <input type="button" value="delete"/>
Kaiterra	SE-200P	EAPPL	IAQ_47002	88:C9:B3:D0:64:B8	15/01/24 10:12	<input checked="" type="checkbox"/> <input type="button" value="edit"/> <input type="button" value="delete"/>
Kaiterra	SE-200P	EAPPL	IAQ_53007	88:C9:B3:D0:55:8D	15/01/24 10:12	<input checked="" type="checkbox"/> <input type="button" value="edit"/> <input type="button" value="delete"/>
Kaiterra	SE-200P	EAPPL	IAQ_53004	88:C9:B3:D0:55:C2	15/01/24 10:12	<input checked="" type="checkbox"/> <input type="button" value="edit"/> <input type="button" value="delete"/>
Kaiterra	SE-200P	EAPPL	IAQ_50004	88:C9:B3:D0:66:D2	15/01/24 10:12	<input checked="" type="checkbox"/> <input type="button" value="edit"/> <input type="button" value="delete"/>
Kaiterra	SE-200P	EAPPL	IAQ_53006	88:C9:B3:D0:67:DC	15/01/24 10:12	<input checked="" type="checkbox"/> <input type="button" value="edit"/> <input type="button" value="delete"/>
Kaiterra	SE-200P	EAPPL	IAQ_46001	88:C9:B3:D0:55:BA	15/01/24 10:12	<input checked="" type="checkbox"/> <input type="button" value="edit"/> <input type="button" value="delete"/>



# DEVICE ONBOARDING APP

Onboarding overview of a single selected device:-

**Update device** ✕

Building	<input type="text" value="B5"/>
Floor	<input type="text"/>
Description	<input type="text" value="SPACE-Sensor"/>
BDNS Dev Type	<input type="text" value="CDS: sensor - CO2 sensor"/>
Manufacturer *	<input type="text" value="Kaiterra"/>
Model *	<input type="text" value="SE-200P"/>
Serial Number	<input type="text" value="VG21O21962"/>
Rev	<input type="text"/>
Firmware Version	<input type="text" value="2.3.2"/>
OS Version	<input type="text"/>
Driver Version	<input type="text"/>
LAN1 MAC	<input type="text" value="88:C9:B3:D0:60:50"/>
LAN2 MAC	<input type="text"/>
WIFI MAC	<input type="text" value="04:39:26:FE:D7:BC"/>
Device Type DAQ Tested	<input type="text" value="Yes"/>
Updated date	20/09/23 16:19

|





# UDMI EDITOR APP

simaxx UDMI Editor Onboarding Simaxx Demo Site, Leigh

Upload Excel Reports

UDMI Assets Validate Selected Devices

BDNS Site ID	BDNS Asset	Section	Description	Registration Date	Registration Pass	Validate	Valid Date	View
search...	search...	search...	search...	search...	search...	search...	search...	
GB-EDH-ATRM	ELV-1	AT-0-LB1	Elevator - Atrium Bank 1-1			<input type="checkbox"/>		>
GB-EDH-B4	ELV-1	B4-0-LB1	Elevator - Building 4 Bank 1-1	2023/08/14		<input type="checkbox"/>	2023/08/16	>
GB-EDH-B5	ELV-1	B5-0-LB1	Elevator - Building 5 Bank 1-1	2023/08/14		<input type="checkbox"/>		>

Upload Excel will ask you to pick a file. Needs feedback if the file fails import (would be helpful if it could tell you why it failed....)

Once uploaded the table will then populate.

Each row will represent an 'Asset' (device).

BDNS Site ID represents the 3x Buildings

BDNS Asset is the asset type represented (Lift / AHU / FCU etc)

Section is the physical location in the building the device is located

Description is the human readable field so a 'normal' person can understand what the line actually is

Registration Date - The FIRST time the asset was 'seen' in a UDMI format (Via the broker).

Specifically the first time data was sent FROM the JACE to the BROKER.

Registration Pass - Did the received Payload(s) match what Simaxx was expecting

Validate - Will ONLY be possible for registered assets that have valid data.

Validation date - Date & Time of validation.

View - More Info on this asset - SEE THE NEXT SLIDE

ONLY Validated Assets will be allowed to populate time series database with received telemetry



# UDMI EDITOR APP

When a UDMI STATE response has been received, the validation steps are carried out automatically

We expect the STATE message to correspond on the following levels: -

- GUID
- ID / TOPIC
- Pointset (points a device is supposed to have)
- Location

UDMI Asset Viewer			
GUID	<u><a href="#">XXXXXXXXXXXXXXXXXXXX</a></u>		
BDNS Site ID	GB-EDH-ATRM		
BDNS Asset	ELV-1		
Section	AT-0-LB1		
Description	Elevator - Atrium Bank 1-1		
<u>Registration Date</u>	2023/08/14 - PASSED		
Validate	2023/08/16		
UDMI Data	EXPECTED	RECEIVED	Valid
GUID	<u><a href="#">uuid://3ee82528-38e3-447c-9bf0-c111de6bac24</a></u> ,	*	Valid
ID	<u><a href="#">metadata/GB-MAN-BES1_MTS-1</a></u>	*	Valid
Pointset	<u><a href="#">"Humidity_Sensor": {"units": "Percent-relative-humidity"},</a></u> <u><a href="#">"Intake_Air_Temperature_Sensor": {"units": "Degrees-Celsius"}</a></u>	*	Invalid
Location	<u><a href="#">"section": "ZZ-AHU01",</a></u> <u><a href="#">"site": "GB-MAN-TYR"</a></u>	*	Valid



# UDMI MESSAGING AND VALIDATION

```
2023-09-20 12:27:10,660 DEBUG parser.UDMICSVConfigParser (UDMICSVConfigParser.java:66) - Added row: {Rev=, Gateway Number=, Building Name=, Is Gateway=true, Writable=false, Boolean True Text=, Label Name Suffix=, Serial Number=3637357, Asset Id=02MQiQUB51jwzcbH2NBzyA, Device Make=Tridium, Proxie
2023-09-20 12:27:10,660 DEBUG parser.UDMICSVConfigParser (UDMICSVConfigParser.java:66) - Added row: {Rev=, Gateway Number=42001, Building Name=, Is Gateway=, Writable=false, Boolean True Text=, Label Name Suffix=, Serial Number=1234, Asset Id=2VGJ5ZrDbFvxcEk1_uyEeG, Device Make=Some Make, Proxie
2023-09-20 12:27:10,661 DEBUG parser.UDMICSVConfigParser (UDMICSVConfigParser.java:66) - Added row: {Rev=, Gateway Number=42001, Building Name=, Is Gateway=, Writable=false, Boolean True Text=, Label Name Suffix=, Serial Number=1234, Asset Id=2VGJ5ZrDbFvxcEk1_uyEeG, Device Make=Some Make, Proxie
2023-09-20 12:27:10,661 DEBUG parser.UDMICSVConfigParser (UDMICSVConfigParser.java:66) - Added row: {Rev=, Gateway Number=42001, Building Name=, Is Gateway=, Writable=false, Boolean True Text=, Label Name Suffix=, Serial Number=1234, Asset Id=281$uBoqH7_AUz0rHEiOcZ, Device Make=Some Make, Proxie
2023-09-20 12:27:10,662 DEBUG parser.UDMICSVConfigParser (UDMICSVConfigParser.java:66) - Added row: {Rev=, Gateway Number=42001, Building Name=, Is Gateway=, Writable=false, Boolean True Text=, Label Name Suffix=, Serial Number=1234, Asset Id=281$uBoqH7_AUz0rHEiOcZ, Device Make=Some Make, Proxie
2023-09-20 12:27:10,662 DEBUG parser.UDMICSVConfigParser (UDMICSVConfigParser.java:66) - Added row: {Rev=, Gateway Number=42001, Building Name=, Is Gateway=, Writable=false, Boolean True Text=, Label Name Suffix=, Serial Number=1234, Asset Id=281$uBoqH7_AUz0rHEiOcZ, Device Make=Some Make, Proxie
2023-09-20 12:27:10,663 DEBUG parser.UDMICSVConfigParser (UDMICSVConfigParser.java:66) - Added row: {Rev=, Gateway Number=42001, Building Name=, Is Gateway=, Writable=false, Boolean True Text=, Label Name Suffix=, Serial Number=1234, Asset Id=2$3HksSnrAeh1VPPFW9FjY, Device Make=Some Make, Proxie
2023-09-20 12:27:10,663 DEBUG parser.UDMICSVConfigParser (UDMICSVConfigParser.java:66) - Added row: {Rev=, Gateway Number=42001, Building Name=, Is Gateway=, Writable=false, Boolean True Text=, Label Name Suffix=, Serial Number=1234, Asset Id=2$3HksSnrAeh1VPPFW9FjY, Device Make=Some Make, Proxie
2023-09-20 12:27:10,664 DEBUG parser.UDMICSVConfigParser (UDMICSVConfigParser.java:90) - CSV-Parse siteName: GB-MAN-B4
2023-09-20 12:27:10,664 DEBUG parser.UDMICSVConfigParser (UDMICSVConfigParser.java:96) - CSV-Parse cloudRegion:
2023-09-20 12:27:10,664 DEBUG parser.UDMICSVConfigParser (UDMICSVConfigParser.java:101) - CSV-Parse registryId:
2023-09-20 12:27:10,664 DEBUG parser.UDMICSVConfigParser (UDMICSVConfigParser.java:73) - CSV-Parse OK Config: com.simaxx.udmi.gateway.lib.UDMIConfigCSV@54d58f1c
2023-09-20 12:27:10,665 DEBUG processor.UDMICSVConfigProcessor (UDMICSVConfigProcessor.java:61) - Processing RAW config...
2023-09-20 12:27:10,859 DEBUG processor.UDMICSVConfigSiteProcessor (UDMICSVConfigSiteProcessor.java:36) - Found existing Site! no update implemented yet
2023-09-20 12:27:10,868 DEBUG processor.UDMICSVConfigDeviceProcessor (UDMICSVConfigDeviceProcessor.java:70) - Found existing device! : updating device according to spreadsheet
2023-09-20 12:27:10,966 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:53) - Creating pointset for device AHU-42003
2023-09-20 12:27:11,002 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:65) - Pointset creation OK!
2023-09-20 12:27:11,004 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point return_air_flowrate_sensor is true
2023-09-20 12:27:11,004 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point supply_air_cooling_temperature_setpoint is true
2023-09-20 12:27:11,004 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point supply_air_flowrate_sensor is true
2023-09-20 12:27:11,017 DEBUG processor.UDMICSVConfigDeviceProcessor (UDMICSVConfigDeviceProcessor.java:70) - Found existing device! : updating device according to spreadsheet
2023-09-20 12:27:11,040 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:53) - Creating pointset for device AHU-46001
2023-09-20 12:27:11,062 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:65) - Pointset creation OK!
2023-09-20 12:27:11,062 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point supply_air_cooling_temperature_setpoint is true
2023-09-20 12:27:11,063 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point return_air_flowrate_sensor is true
2023-09-20 12:27:11,063 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point supply_air_flowrate_sensor is true
2023-09-20 12:27:11,071 DEBUG processor.UDMICSVConfigDeviceProcessor (UDMICSVConfigDeviceProcessor.java:70) - Found existing device! : updating device according to spreadsheet
2023-09-20 12:27:11,089 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:53) - Creating pointset for device AHU-46002
2023-09-20 12:27:11,122 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:65) - Pointset creation OK!
2023-09-20 12:27:11,122 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point toggle_switch is true
2023-09-20 12:27:11,123 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point supply_air_cooling_temperature_setpoint is true
2023-09-20 12:27:11,123 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point toggled_state_indicator is true
2023-09-20 12:27:11,123 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point return_air_flowrate_sensor is true
2023-09-20 12:27:11,124 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point supply_air_flowrate_sensor is true
2023-09-20 12:27:11,132 DEBUG processor.UDMICSVConfigDeviceProcessor (UDMICSVConfigDeviceProcessor.java:70) - Found existing device! : updating device according to spreadsheet
2023-09-20 12:27:11,150 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:53) - Creating pointset for device CGW-42001
2023-09-20 12:27:11,177 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:65) - Pointset creation OK!
2023-09-20 12:27:11,178 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point output_voltage_sensor is true
2023-09-20 12:27:11,178 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point ammonia_leak_detection_alarm is true
2023-09-20 12:27:11,179 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point power_sensor is true
2023-09-20 12:27:11,179 DEBUG creator.MQTTBrokerUserCreator (MQTTBrokerUserCreator.java:76) - Found gateway, processing MQTT broker user!
2023-09-20 12:27:11,207 DEBUG creator.MQTTBrokerUserCreator (MQTTBrokerUserCreator.java:84) - MQTT broker user OK! for existing Device
2023-09-20 12:27:11,218 DEBUG processor.UDMICSVConfigDeviceProcessor (UDMICSVConfigDeviceProcessor.java:70) - Found existing device! : updating device according to spreadsheet
2023-09-20 12:27:11,237 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:53) - Creating pointset for device EM-42047
2023-09-20 12:27:11,247 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:65) - Pointset creation OK!
2023-09-20 12:27:11,247 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point output_voltage_sensor is true
2023-09-20 12:27:11,247 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point power_sensor is true
2023-09-20 12:27:11,251 DEBUG processor.UDMICSVConfigDeviceProcessor (UDMICSVConfigDeviceProcessor.java:70) - Found existing device! : updating device according to spreadsheet
2023-09-20 12:27:11,269 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:53) - Creating pointset for device EM-42049
2023-09-20 12:27:11,296 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:65) - Pointset creation OK!
2023-09-20 12:27:11,297 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point output_voltage_sensor is true
2023-09-20 12:27:11,297 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point ammonia_leak_detection_alarm is true
2023-09-20 12:27:11,297 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point power_sensor is true
2023-09-20 12:27:11,303 DEBUG processor.UDMICSVConfigDeviceProcessor (UDMICSVConfigDeviceProcessor.java:70) - Found existing device! : updating device according to spreadsheet
2023-09-20 12:27:11,326 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:53) - Creating pointset for device EM-44048
2023-09-20 12:27:11,342 DEBUG creator.UDMIPointSetCreator (UDMIPointSetCreator.java:65) - Pointset creation OK!
2023-09-20 12:27:11,343 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point output_voltage_sensor is true
2023-09-20 12:27:11,343 DEBUG validator.UDMIPointValidator (UDMIPointValidator.java:65) - pre creation validation for point power_sensor is true
2023-09-20 12:27:11,468 INFO mqtt.MQTTUDMIConfigSender (MQTTUDMIConfigSender.java:42) - PUBLISHING CONFIG to: /devices/AHU-42003/config
2023-09-20 12:27:11,496 TRACE mqtt.MQTTCallback (MQTTCallback.java:29) - MQTT message delivered org.eclipse.paho.client.mqttv3.MqttDeliveryToken@2c4b736d.
2023-09-20 12:27:11,497 TRACE mqtt.MQTTMessageListener (MQTTMessageListener.java:22) - Got Topic: /devices/AHU-42003/config and Message {"timestamp":"2023-09-20T12:27:11.351+00:00","version":"1.4.1","system":{"last_start":"1970-01-01T00:00:00.000+00:00","min_loglevel":200,"metrics_rate_sec":600}}
2023-09-20 12:27:11,499 DEBUG validator.UDMIMessageTopicValidator (UDMIMessageTopicValidator.java:21) - Validation OK for Topic: /devices/AHU-42003/config,
2023-09-20 12:27:11,503 DEBUG validator.UDMIConfigValidator (UDMIConfigValidator.java:38) - existing UDMI Config for timestamp 2023-09-20T12:27:11.351+0000 received
2023-09-20 12:27:11,504 DEBUG validator.UDMIMessageValidator (UDMIMessageValidator.java:30) - Payload validation OK!
2023-09-20 12:27:11,518 TRACE mqtt.MQTTMessageListener (MQTTMessageListener.java:22) - Got Topic: /devices/AHU-42003/events/system and Message {"version":"1.4.1","timestamp":"2023-09-20T12:27:11.505Z","logentries":[{"level":300,"message":"'config' applied ok","category":"system.config.apply","ti
2023-09-20 12:27:11,522 DEBUG validator.UDMIMessageTopicValidator (UDMIMessageTopicValidator.java:21) - Validation OK for Topic: /devices/AHU-42003/events/system,
2023-09-20 12:27:11,523 DEBUG processor.MQTTMessageProcessor (MQTTMessageProcessor.java:175) - Received event:system message: com.simaxx.udmi.gateway.lib.UDMIEventSystem@3fcee61c, Payload: {"version":"1.4.1","timestamp":"2023-09-20T12:27:11.505Z","logentries":[{"level":300,"message":"'config' ap
2023-09-20 12:27:11,537 DEBUG processor.UDMIEventsSystemProcessor (UDMIEventsSystemProcessor.java:30) - NEW: AHU-42003 : com.simaxx.udmi.gateway.lib.UDMIEventSystem@3fcee61c
2023-09-20 12:27:11,537 DEBUG validator.UDMIMessageValidator (UDMIMessageValidator.java:30) - Payload validation OK!
```





# UDMI MESSAGING AND VALIDATION

## UDMI CONFIG Payload for device AHU-42003 (as per shown log)

```
2023-09-20 12:27:11,468 INFO mqtt.MQTTUDMIConfigSender (MQTTUDMIConfigSender.java:42) - PUBLISHING CONFIG to: /devices/AHU-42003/config
2023-09-20 12:27:11,496 TRACE mqtt.MQTTCallback (MQTTCallback.java:29) - MQTT message delivered org.eclipse.paho.client.mqttv3.MqttDeliveryToken@2c4b736d.
```

```
{
  "timestamp": "2023-09-20T12:27:11.351+00:00",
  "version": "1.4.1",
  "system": {
    "last_start": "1970-01-01T00:00:00.000+00:00",
    "min_loglevel": 200,
    "metrics_rate_sec": 600
  },
  "pointset": {
    "sample_limit_sec": 1,
    "sample_rate_sec": 600,
    "points": {
      "return_air_flowrate_sensor": {
        "ref": "station:|slot:/Fake_UDMI_Points/Atrium_Power",
        "units": "Cubic-feet-per-minute"
      },
      "supply_air_cooling_temperature_setpoint": {
        "ref": "station:|slot:/Fake_UDMI_Points/Atrium_Volts",
        "units": "Degrees-Celsius"
      },
      "supply_air_flowrate_sensor": {
        "ref": "station:|slot:/Fake_UDMI_Points/BooleanPoint",
        "units": "Cubic-feet-per-minute"
      }
    }
  }
}
```



# UDMI MESSAGING AND VALIDATION

UDMI STATE Response from device AHU-42003 on previous CONFIG (as per Log)

```
validator.UDMIMessageTopicValidator (UDMIMessageTopicValidator.java:21) - Validation OK for Topic: /devices/AHU-42003/state,  
processor.MQTTMessageProcessor (MQTTMessageProcessor.java:158) - Received state message: com.simaxx.udmi.gateway.lib.dto.mqtt.UDMISTate@5a74f945  
processor.UDMIStateProcessor (UDMIStateProcessor.java:82) - NEW: AHU-42003 : com.simaxx.udmi.gateway.lib.UDMIState@5a74f945
```

```
{  
  "system": {  
    "software": {  
      "firmware": ""  
    },  
    "operation": {  
      "restart_count": 4,  
      "last_start": "2023-09-14T09:39:58.425Z",  
      "operational": true  
    },  
    "serial_no": "",  
    "last_config": "2023-09-20T12:27:11.351Z",  
    "hardware": {  
      "model": "",  
      "make": ""  
    },  
    "status": {  
      "level": 300,  
      "message": "'config' applied ok",  
      "category": "system.config.apply",  
      "timestamp": "2023-09-20T12:27:11.505Z"  
    }  
  },  
  "pointset": {  
    "state_etag": "331a7866a40dece95875aa5bf82e94f7",  
    "points": {  
      "return_air_flowrate_sensor": {  
        "units": "Cubic-feet-per-minute",  
        "status": {  
          "level": 300,  
          "message": "'Source Point Value - Status' is '{ok}'",  
          "category": "pointset.point.applied",  
          "timestamp": "2023-09-14T09:40:00.781Z"  
        }  
      },  
      "supply_air_cooling_temperature_setpoint": {  
        "units": "Degrees-Celsius",  
        "status": {  
          "level": 300,  
          "message": "'Source Point Value - Status' is '{ok}'",  
          "category": "pointset.point.applied",  
          "timestamp": "2023-09-14T09:40:00.782Z"  
        }  
      },  
      "supply_air_flowrate_sensor": {  
        "units": "Cubic-feet-per-minute",  
        "status": {  
          "level": 300,  
          "message": "'Source Point Value - Status' is '{ok}'",  
          "category": "pointset.point.applied",  
          "timestamp": "2023-09-14T09:40:00.783Z"  
        }  
      }  
    }  
  },  
  "version": "1.4.1",  
  "timestamp": "2023-09-20T12:27:11.519Z"  
}
```



# UDMI MESSAGING AND VALIDATION

## UDMI EVENT/SYSTEM Response to confirm config has been successful on previous CONFIG (as per Log)

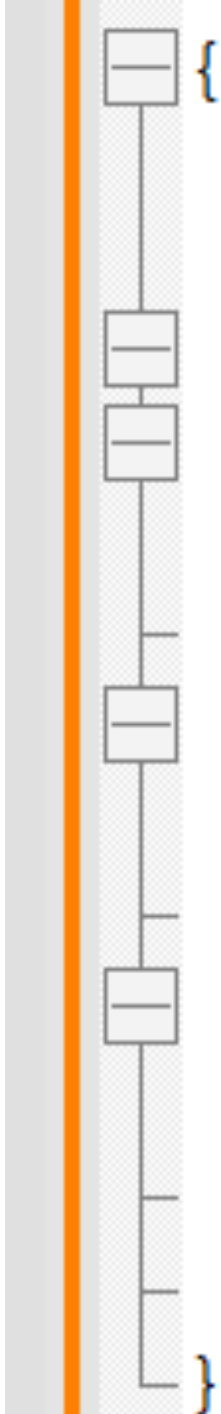
```
mqtt.MQTTMessageListener (MQTTMessageListener.java:22) - Got Topic: /devices/AHU-42003/events/system and Message {"version":"1.4.1","timestamp":"2023-09-20T12:27:11.505Z"}
validator.UDMIMessageTopicValidator (UDMIMessageTopicValidator.java:21) - Validation OK for Topic: /devices/AHU-42003/events/system,
processor.MQTTMessageProcessor (MQTTMessageProcessor.java:175) - Received event:system message: com.simaxx.udmi.gateway.lib.UDMIEventSystem@3fcee61c, Payload: {"version":"1.4.1","timestamp":"2023-09-20T12:27:11.505Z"}
processor.UDMIEventsSystemProcessor (UDMIEventsSystemProcessor.java:30) - NEW: AHU-42003 : com.simaxx.udmi.gateway.lib.UDMIEventSystem@3fcee61c
validator.UDMIMessageValidator (UDMIMessageValidator.java:30) - Payload validation OK!
```

```
{
  "version": "1.4.1",
  "timestamp": "2023-09-20T12:27:11.505Z",
  "logentries": [{
    "level": 300,
    "message": "'config' applied ok",
    "category": "system.config.apply",
    "timestamp": "2023-09-20T12:27:11.505Z"
  }]
}
```



## UDMI EVENT/POINTSET message for (incoming telemetry)

```
2023-09-20 12:30:17,471 TRACE mqtt.MQTTMessageListener (MQTTMessageListener.java:22) - Got Topic: /devices/AHU-42003/events/pointset and Message {"version":"1.4.1","timestamp":"2023-09-20T12:30:17.437Z","points":{"return_air_flowrate_senso":{"present_value":50.643555438030056},
2023-09-20 12:30:17,474 DEBUG validator.UDMIMessageTopicValidator (UDMIMessageTopicValidator.java:21) - Validation OK for Topic: /devices/AHU-42003/events/pointset,
2023-09-20 12:30:17,476 DEBUG processor.UDMIEventsPointsetProcessor (UDMIEventsPointsetProcessor.java:155) - Received event:pointset message: com.simaxx.udmi.gateway.lib.dto.mqtt.UDMIReceivePointSetDto@708dba65, Payload: {"version":"1.4.1","timestamp":"2023-09-20T12:30:17.437Z'
2023-09-20 12:30:17,513 DEBUG processor.UDMIEventsPointsetProcessor (UDMIEventsPointsetProcessor.java:115) - new sample: { "udmiPointId":"4", "udmiPointName":"return_air_flowrate_senso", "udmiPointId":"4", "timestamp":"1695213017437", "value":"50.643555438030056"}
2023-09-20 12:30:17,540 DEBUG processor.UDMIEventsPointsetProcessor (UDMIEventsPointsetProcessor.java:115) - new sample: { "udmiPointId":"5", "udmiPointName":"supply_air_cooling_temperature_setpoin", "udmiPointId":"5", "timestamp":"1695213017437", "value":"50.60366575920738"}
2023-09-20 12:30:17,615 DEBUG processor.UDMIEventsPointsetProcessor (UDMIEventsPointsetProcessor.java:115) - new sample: { "udmiPointId":"6", "udmiPointName":"supply_air_flowrate_sensor", "udmiPointId":"6", "timestamp":"1695213017437", "value":"0.0"}
2023-09-20 12:30:17,666 DEBUG validator.UDMIMessageValidator (UDMIMessageValidator.java:30) - Payload validation OK!
```



```
{
  "version": "1.4.1",
  "timestamp": "2023-09-20T12:30:17.437Z",
  "points": {
    "return_air_flowrate_senso": {
      "present_value": 50.643555438030056
    },
    "supply_air_cooling_temperature_setpoin": {
      "present_value": 50.60366575920738
    },
    "supply_air_flowrate_sensor": {
      "present_value": 0.0
    }
  }
}
```

# UDMI COMMISSIONING APP

Reports

Commissioning Dashboard


BDNS Site ID	BDNS Asset	Section	Description	Simaxx Valid	Validate	Valid Date	View	QR
<i>search...</i>	<i>search...</i>	<i>search...</i>	<i>search...</i>	<i>search...</i>	<i>search...</i>	<i>search...</i>		
GB-EDH-ATRM	ELV-1	AT-0-LB1	Elevator - Atrium Bank 1-1		<input type="checkbox"/>		>	<input type="checkbox"/>
GB-EDH-B4	ELV-1	B4-0-LB1	Elevator - Building 4 Bank 1-1	2023/08/14	<input type="checkbox"/>	2023/08/16	>	<input type="checkbox"/>
GB-EDH-B5	ELV-1	B5-0-LB1	Elevator - Building 5 Bank 1-1	2023/08/14	<input type="checkbox"/>		>	<input type="checkbox"/>



# UDMI COMMISSIONING APP

Current point value auto validation which is carried out includes :-

- Have values changed state within an expected time period?
- Are values between expected low and high?
- Do the points belong to the device?

Simmax Commissioning Dashboard Simmax Demo Site, Leigh 




Reports

**GB-EDH-B5 / ELV-1** Print Qr Code Commission

<b>Description</b>	Elevator - Atrium Bank 1-1
<b>Registration Date</b>	2023/08/14 - 08:00:00
<b>Validated</b>	2023/08/16 - 09:23:24
<b>Commissioned</b>	2023/08/20 - 12:00:01

GB-EDH-B5 / ELV-1



Point Name	Point Type	Value	Time Stamp	Low Val	High Val	Bool Off	Bool On	Enum Values	Valid	Plot
Point 1	Numeric	21.1°C	2023/08/14 - 08:00:00	-10	40				<span style="background-color: green; color: white;">Valid</span>	
Point 2	Boolean	0 (OK)	2023/08/14 - 08:00:00			OK	Alarm		<span style="background-color: green; color: white;">Valid</span>	
Point 3	Enumerated	2 (Fire)	2023/08/14 - 08:00:00					Ok/Fault/Fire	<span style="background-color: green; color: white;">Valid</span>	



# SIMAXX DAQ AND S-DAQ IMPLEMENTATION

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## Q MILEGROUP

- ⦿ 350,000 sq ft Grade A offices
- ⦿ 190-room hotel
- ⦿ 40,000 sq ft provisional retail
- ⦿ Smart Building provision
- ⦿ Full systems integration
- ⦿ Unified data schema



# THANK YOU AND ANY QUESTIONS?



Ged Tyrrell  
Group CEO



Susan Gibson  
Product Owner &  
Delivery Manager



Thomas Hynes  
Smart Buildings  
Integration Manager

