

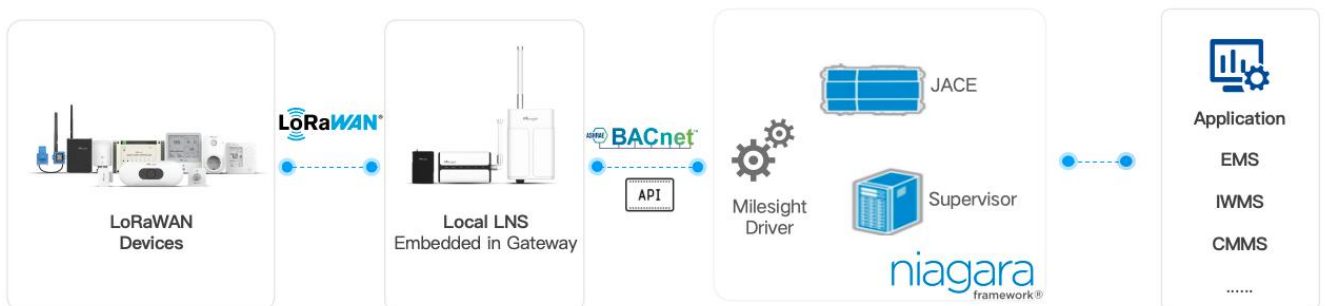
# Milesight BACnet Driver For Niagara Framework



## ◆ Introduction

Milesight BACnet Driver for the Niagara Framework is a comprehensive integration tool that combines Milesight gateways' HTTP RESTful API with the BACnet protocol to enable streamlined management and configuration of Milesight end devices. Designed to optimize the convergence of LoRaWAN® networks with Niagara ecosystems, this solution empowers Niagara-proficient engineers to rapidly implement system integrations. It effectively bridges LoRaWAN® node data acquisition with Building Management Systems (BMS), facilitating seamless interoperability while maintaining native Niagara operational paradigms for accelerated deployment cycles.

## ◆ Application Example



## ◆ Features

- Support scanning and adding Milesight gateways to Niagara Framework
- Support adding Milesight gateways to Niagara Framework manually
- Support modifying gateway's network and BACnet parameter configurations
- Support creating, deleting, modifying, and synchronizing Milesight end-devices
- Support adding, deleting, modifying, and synchronizing BACnet Objects of Milesight end-devices
- Support adding, deleting, modifying, and synchronizing BACnet Notification Class Objects of Milesight end-devices
- Support downlink control functionality by writing to BACnet Objects
- Support upgrading and synchronizing Milesight sensor's decoder archive
- Support BACnet Alarm/Event notification functionality

## ◆ Compatibility

System	
Niagara Framework	N4.10 and higher
Hardware	
UG56	Firmware 56.0.0.6-r2 and higher
UG65	Firmware 60.0.0.46-r2 and higher
UG67	Firmware 60.0.0.46-r2 and higher

## ◆ Niagara Integration Example

The screenshot displays the Milesight Gateway Manager interface. On the left, a tree view shows the configuration structure under 'My Network', including 'Services', 'Drivers', 'MilesightNetwork', 'Local Device', 'BACnet Config', 'Monitor', 'Tuning Policies', 'Alarm Source Info', and 'Sub Devices'. The 'MilesightNetwork' section is expanded, showing various BACnet objects like 'am325.status', 'am325.cn2', 'am325.screener\_class', 'am325.giv', 'am325.pm2\_5', 'am325.hcho', 'am325.an', 'am325.firmware\_version', 'am325.light\_level', 'am325.pm10', 'am325.pressure', 'am325.buzzer\_status', 'am325.temperature', 'am325.hardware\_version', 'am325.bvoc', and 'am325.humidity'.

On the right, the 'BACnet Discover Devices' window is open, showing a table of discovered devices. The table has columns for Device Name, Device ID, Netbus, MAC Addr, Vendor, Model, and Objects. The following table represents the data shown in the screenshot:

Device Name	Device ID	Netbus	MAC Addr	Vendor	Model	Objects
V5133-P	device111	1	192.168.45.72:0BAC0	BACnet Stack at SourceForge	GRU	1
V5135-P	device44351	1	192.168.45.151:0BAC0	BACnet Stack at SourceForge	GRU	15
Yet Another BACnet Explorer	device3	1	192.168.45.251:04FCF	Morten Kvistgaard, MIT license, 2015	YABE_2015	1
UG56-4222C4746113	device3000	1	192.168.45.254:0BAC0	Xiamen Milesight IoT Co., Ltd.	UG56-L00E-808H-EA	2
UG56-240	device3000	1	192.168.45.240:0BAC0	Xiamen Milesight IoT Co., Ltd.	UG56-L00E-808H-EA	15
UG57-4222A4320893	device3000	1	192.168.45.190:0BAC0	Xiamen Milesight IoT Co., Ltd.	UG57-L00E-810M-EA	1
UG56-4222F358032	device10803	1	192.168.45.160:0BAC0	Xiamen Milesight IoT Co., Ltd.	UG56-L04EU-808H-EA	152
UG56-42225270207	device3000	1	192.168.45.192:0BAC0	Xiamen Milesight IoT Co., Ltd.	UG56-L04AF-810M-EA	6
UG56-4221A4988194	device3000	1	192.168.45.191:0BAC0	Xiamen Milesight IoT Co., Ltd.	UG56-L00E-808H-EA	119

Below the discovered devices table, there is a 'Database' section showing a table of objects. The table has columns for Name, Exts, Device ID, Status, Netbus, MAC Addr, Vendor, Model, Firmware Rev, App SW Version, U R L, Username, and Password. The following table represents the data shown in the screenshot:

Name	Exts	Device ID	Status	Netbus	MAC Addr	Vendor	Model	Firmware Rev	App SW Version	U R L	Username	Password
40.E1		device1	(Event)	0	naR					http://192.168.40.81:443	admin	--password--
UG56-404CC2847961		device284759	(Event)	1	192.168.45.240:0BAC0	Xiamen Milesight IoT Co., Ltd.	UG56-L00E-808H-EA	56.0.0.6-r2-a2	1.0	http://192.168.45.240	admin	--password--
UG56-404CC2847962		device1	(Event)	1	192.168.45.251:0BAC0	Xiamen Milesight IoT Co., Ltd.	UG56-L00E-808H-EA	60.0.0.46-r2-a2	1.0	http://192.168.45.251	admin	--password--
45.191		device3000	(ok)	1	192.168.45.191:0BAC0	Xiamen Milesight IoT Co., Ltd.	UG56-L00E-808H-EA	60.0.0.46-r2-a2	1.0	http://192.168.45.191	admin	--password--

## Milesight BACnet Driver Datasheet

Name	Status	Points	Dev EUI	Payload Codec	Description	Application Key	Symt	Profile Name	Device Address	Network Session Key	Application Session Key	Time
am319	[ok]	1	24E12473D538704	AM319-MQTT	am319	5574646994b4a8f2913230313923	Uploaded Successfully	Cisco-OTAA	0x23be72	45e7010733846294781040e2534a6b	4e15ab7be43757b314409f14e01c	1440 min
wrt101	[ok]	1	24E124734E284328	WRT101	24E124734E284328	5574646994b4a8f2913230313923	Uploaded Successfully	Cisco-OTAA	0752e986	e3e26633938271be4272f8336a21145	105523721a8b76386ed6ba77615	1440 min
EM300-CL	[ok]	1	24E124734E284328	EM300-CL-L3.5	ts201	5574646994b4a8f2913230313923	Uploaded Successfully	Cisco-OTAA				1440 min
ts201-th	[ok]	1	24E124734E284328	ts201	ts201	5574646994b4a8f2913230313923	Uploaded Successfully	Cisco-OTAA				1440 min
UC300	[ok]	1	24E124465239920	UC300-L3.5	ts201-090	5574646994b4a8f2913230313923	Uploaded Successfully	Cisco-OTAA				1440 min

Name	Out	Object ID	Property ID	Index	Read	Write
am319.status	3 [ok]	multStateInput2	Present Value	-1	Polled	readonly
am319.co2	1011.00 ppm [ok]	analogInput2	Present Value	-1	Polled	readonly
am319.lorawan_class	ClassCtoB [ok]	multStateValue4	Present Value	-1	Polled	readonly
am319.pir	Trigger [ok]	binaryInput4	Present Value	-1	Polled	readonly
am319.pm2_5	42.00 ug/m³ [ok]	analogInput6	Present Value	-1	Polled	readonly
am319.hcho	0.00 mg/m³ [ok]	analogInput3	Present Value	-1	Polled	readonly
am319.sn	6710e33870481924 [ok]	characterStringValue7	Present Value	-1	Polled	readonly
am319.firmware_version	v1.6 [ok]	characterStringValue3	Present Value	-1	Polled	readonly
am319.light_level	4 [ok]	multStateValue3	Present Value	-1	Polled	readonly
am319.pm10	49.00 ug/m³ [ok]	analogInput5	Present Value	-1	Polled	readonly
am319.pressure	1015.70 hPa [ok]	analogInput8	Present Value	-1	Polled	readonly
am319.buzzer_status	Off [ok]	binaryInput2	Present Value	-1	Polled	readonly
am319.temperature	26.60 °C [ok]	analogInput9	Present Value	-1	Polled	readonly
am319.hardware_version	v2.1 [ok]	characterStringValue4	Present Value	-1	Polled	readonly
am319.tvoc	1.10 [ok]	analogInput10	Present Value	-1	Polled	readonly
am319.humidity	53.50 %RH [ok]	analogInput4	Present Value	-1	Polled	readonly
am319.device_status	On [ok]	binaryInput3	Present Value	-1	Polled	readonly
am319.ipso_version	v0.1 [ok]	characterStringValue6	Present Value	-1	Polled	readonly
am319.battery	0.00 % [ok]	analogInput1	Present Value	-1	Polled	readonly

### Note:

- The Scan-to-Add gateway feature works when the gateway and Niagara system are on the same LAN.
- Upgrading and synchronizing the decoder archive works with Milesight end devices only.

