AZI: Configuration

The Azure Injector module provides the ability to push Tag data to an Azure IoT Hub, Azure IoT Edges, Azure Event Hubs and Azure IoT Central endpoints.

The configuration for this module are located under the Configure tab of the Ignition Gateway web UI in the left hand navigation pane under 'Azure Injector Settings'.

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SEQUENTIAL FUNCT	TION CHARTS Config > > Azure Injector Settings	
ome Settings	Trial Mode 1:47:23 We're glad you're test driving our software. Have fun.	Activate Ignitio
AWS INJECTOR		
Settings		
onfig AZURE INJECTOR		
Settings		
EFM ABB TOTALFLO	w	
Settings		
The Search		

$\leftarrow \rightarrow \mathbf{G}$	C D localhost:8088/web/config/azure.azureInjectorSettings?3	ជ	⊚ ⊻ ◻ ≡
Ignition Gateway			Ladmin Log Out
gnition		Help 🕑	Get Designer
А SYSTEM	Config > > Azure Injector Settings		
Overview	Trial Mode 1:59:48 We're glad you're test driving our software. Have fun.		Activate Ignition
Backup/Restore			
atus Ignition Exchange	General Azure IoT Hubs Azure IoT Edges Azure Event Hubs Azure IoT Central Sets Tar		
Licensing	General Azure IoT Hubs Azure IoT Edges Azure Event Hubs Azure IoT Central Sets Tag	g Agents	
nfig Modules			
Projects Redundancy	Main		
Gateway Settings			
	Enabled Zenable the Azure Injector module		
NETWORKING			
Web Server	Save Changes		
Gateway Network Email Settings			
Email Settings			
SECURITY	Note: For additional details on configuring Azure Injector, see the documentation here		
General			
Auditing			
Users, Roles			
Service Security Identity Providers			
Security Levels			
Q Search			

The configuration options for each of the seven tabs - General, Azure IoT Hubs, Azure IoT Edges, Azure Event Hubs, Azure IoT Central, Sets and Tag Agents - are detailed below.

General

The configuration section available is Main.

\rightarrow C	O localhost:8088/w	eb/comg/azure.azure	injectorsettings?3				☆		⊚ ⊻ ◻ ≡
								Help 🕑	≟admin Log Out ∋ Get Designer
SYSTEM	Config > > Azure	Injector Settings							
0verview	Trial Mode 1:59:48	We're glad you're test drivin	ng our software. Have fun.						Activate Ignition
Backup/Restore									
Ignition Exchange	General	Azure IoT Hubs	Azure IoT Edges	Azure Event Hubs	Azure IoT Central	Sets	Tag Agents		
Licensing Nodules									
Projects									
Redundancy	Main								
Gateway Settings	Enabled	🔽 Enable the A	Azure Injector module						
NETWORKING									
Web Server				Save Cha					
Gateway Network				Save ch	anges				
Email Settings									
SECURITY	Note: For ad	ditional details on confi	guring Azure Injector, see	e the documentation					
General									
Auditing Users, Roles									
Service Security									
Identity Providers									
Security Levels									
Q Search									

Enabled

 Sets whether the module is enabled or disabled. If disabled, the Tag Agents will not run and now data will be pushed to any configured endpoints.

Azure IoT Hubs

The Azure IoT Hubs tab has two parts - Settings and Certificates

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tion Gateway									≗admin Log C
nition								Help 🕜	Get Designe
SYSTEM	Config > > Azure	Injector Settings							
Overview	Trial Mode 1:40:58	We're glad you're test driv	ing our software. Have fun.						Activate Igni
Backup/Restore									
Ignition Exchange	General	Azure IoT Hubs	Azure IoT Edges	Azure Event Hubs	Azure IoT Central	Sets	Tag Agents		
Licensing	General	Azure for Hubs	Azure for Edges	Azure Event Hubs	Azure for Central	Sets	Tag Agents		
Modules Projects		_							
Redundancy	Settings	Certificates							
Gateway Settings									
	Setting	Name	Enabled F	Protocol Set	Store & Forward Ena	abled		Status	
NETWORKING Web Server	No Azure	IoT Hub Settings							
Gateway Network		new Azure IoT Hub	Sotting						
Email Settings	• Create	new Azure for Hub	Setting						
·									
SECURITY									
Auditing									
Users, Roles									
Service Security									
Identity Providers									
Security Levels									
Q Search									

Azure IoT Hubs - Settings

This tab provides a list of the Azure IoT Hub endpoints that the module should connect to to push tag data. One or more Azure IoT Hub endpoints can be configured on this tab.

Clicking on the 'Create new Azure IoT Hub ..' link will bring up the following form to add a new Azure IoT Hub. The configuration sections available are Main , Authentication, Store & Forward and Advanced

Azure IoT Hub Settings - Main

$- \rightarrow $ C	O D localhost:8088/we	o/config/azure.azur	elnjectorSettings?6				☆		⊚ ⊀ ◻ ≡
Ignition Gateway									Log Out -
gnition								Help 🕑	Get Designer
SYSTEM	Config > > Azure I	jector Settings							
^{ne} Overview	Trial Mode 1:40:02 V	e're glad you're test driv	ing our software. Have fun.						Activate Ignition
Backup/Restore									
US Ignition Exchange	General	Azure IoT Hubs	Azure IoT Edges	Azure Event Hubs	Azure IoT Central	Sets	Tag Agents		
fig Modules									
Projects	Settings	Certificates							
Redundancy Gateway Settings									
Gateway Settings									
NETWORKING	Main								
Web Server		admin							
Gateway Network Email Settings	Setting Na	A friendly r	name for this Azure IoT Hul	bsetting					
Email Settings	Enabled	🗸 Enable t	this setting						
SECURITY	Liabed	Chable	inis secting						
General	Protocol	MQTT		T					
Auditing Users, Roles		The IoT Hu	b client protocol						
Service Security		Default		V					
	Set	The Set thi	s IoT Hub is associated wit	th					

- Setting Name

 This is a friendly name of the Azure IoT Hub used to easily identify it. This must also be unique.
- Enabled Whether or not this connection is enabled.
 - - The protocol to use when connecting to the Azure IoT Hub.
 Currently MQTT only is supported.
- Set
 - $^{\circ}~$ The Set to associate this Azure IoT Hub connection with.

Azure IoT Hub Settings - Authentication

C C A https	://localhost:8043/web/config/azu	ire.azurelnjectorSettings?9 分 🛛 🛛 🗠 🛄
Security Zones	Config > > Azure Injector S	Settings
DATABASES	Trial Mode 1:23:13	Activate I
Connections	Authentication	
Drivers Store and Forward	Enable Certificate Based	Enable certificate based authentication instead of using a connection string
ALARMING	Authentication	(default: false)
General	Password	
Journal	1 ussionu	The Azure Connection String used for establishing a connection with the IoT Hub
Notification On-Call Rosters		
Schedules	Password	Re-type password for verification.
AGS	MQTT Hostname	
History Realtime		
PC CLIENT	Device ID	The Device ID as provisioned in the Azure IoT Hub configuration
OPC Connections OPC Quick Client	CA Certificate File	- none - 🔻
DPC UA		CA Certificate file currently in use
Device Connections Security	Client Certificate File	- none - 🔻 Client certificate file currently in use
Server Settings		
ACNET Local Devices	Client Private Key File	- none - 🔻
Local Devices		
iterprise administration Setup	Password	The password associated with the certificate's private key (optional)
Q Search	Password	Re-type password for verification.

- Enable Certificate Based Authentication Whether or not to use certificate based authentication.
 - $^{\circ}\;$ This determines the authentication fields available for use.
- Password

 - Available if not using certificate based authentication
 This is the Azure IoT Hub device connection string used to connect in the following format:
 HostName=<Host Name>;DeviceId=<Device Name>;SharedAccessKey=<Device Key>
- MQTT Hostname
 - ° Available if using certificate based authentication
 - This is the DNS endpoint name of your IoT Hub
- Device ID
 - ° Available if using certificate based authentication
 - The Device ID to connect to as provisioned in the IoT Hub
- CA Certificate File

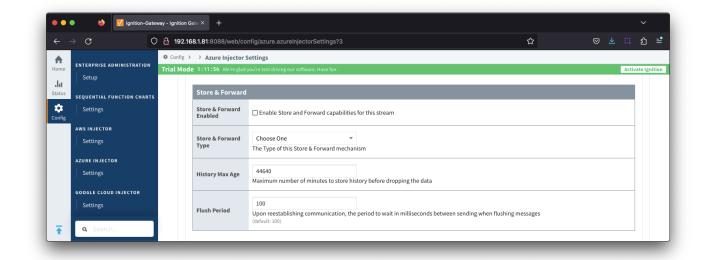
- ° Available if using certificate based authentication
- The CA certificate that signed the SSL certificate being used in the IoT Hub server. See this document for more information.
- The drop down is populated from a list of files that have been uploaded to the IoT Hub/Certificates tab.

Client Certificate File

- ° Available if using certificate based authentication
- The client certificate file as provisioned for the Device ID specified above. See this Connecting to Azure IoT Hub with Certificate Based
- Authentication for details on creating the client certificate
- ^o The drop down is populated from a list of files that have been uploaded to the IoT Hub/Certificates tab.
- Client Private Key File
 - ° Available if using certificate based authentication
 - The client private key file that was used in generating the certificate for the Device ID specified above. See this Connecting to Azure IoT Hub with Certificate Based Authentication for details on creating the client private key
 - The drop down is populated from a list of files that have been uploaded to the IoT Hub/Certificates tab.
- Private key password
 - Available if using certification based authentication
 - The password used for the private key if one was specified for the Client Private Key File

Azure IoT Hub Settings - Store & Forward

From release 4.0.19, major improvements have been made to the disk-backed History Store. As a result, Message Capacity has been deprecated and History Max Age added



- Store & Forward Enabled
 - Whether to enable Store & Forward capabilities for this endpoint
- Store & Forward Type
 - The type of the Store & Forward mechanism options: In_Memory and Disk_Backed (available in release 4.0.17 and higher)
 - Data stored with an In_Memory Store & Forward will not be persisted across a module configuration change, module disable/enable, module restart or power loss.
 - Data stored with a Disk_Backed Store & Forward will persist across a module configuration change, module disable/enable, module restart or power loss
- Message Capacity deprecated in 4.0.19
 - The maximum number of messages to store before dropping the oldest historical messages
- History Max Age
 - The maximum number of minutes to store history before dropping the data
- Flush Period
 - ° The period of time to wait (in milliseconds) between sending when flushing messages

Azure IoT Hub Settings - Advanced

\rightarrow C C		b/config/azure.azureInjectorSettings?9	☆ ♡ ⊻ 🛱
L courses	Config > > Azure Injecto	-	
Settings	Trial Mode 1:28:30 We're gl	id you're test driving our software. Have fun.	Activate Ignit
GOOGLE CLOUD INJECTOR	Advanced		
Settings	Keep Alive	30 The MQTT Client keep alive time (in seconds) (default: 30)	
Settings		(verault. 30)	
MQTT DISTRIBUTOR	Max Message Siz	262144 Maximum message size before dividing into multiple messages (default: 262,144)	
MQTT ENGINE Settings	Session Expiration	86400 The number of seconds before the session token expires (default: 86,400)	
MQTT RECORDER Settings MQTT TRANSMISSION	Content Type	NONE The content type to include in the topic to Azure IoT Hub (default: NONE)	
History Settings	Content Encodin	NONE The content encoding to include in the topic to Azure IoT Hub (default: NONE)	
	Azure Date/Time Format	LONG_MS_SINCE_EPOCH	
Q Search	Custom Topic Extension	The Custom Topic Extension to append to the topic string for things like Application Propert	

- Keep Alive
 - The MQTT keep alive timeout in seconds
- Max Message Size
 - The maximum message size in bytes that any message can be when pushing to IoT Hub. Generally, this should match the max message size allowed by IoTHub.
- Session Expiration
 - How long in seconds to specify for session token timeouts when not using certificate based authentication
- Content Type
 - The content type to include in the topic to Azure IoT Hub
 - NONE (default) No content type header will be included with the message
 - APPLICATION_JSON The application/json header will be included with the message and make the body of the message available for routing if content encoding is also not 'NONE'
 - See Using IoT Hub Message Based Routing tutorial for more details
- Content Encoding
 - ° The content encoding to include in the topic to Azure IoT Hub
 - NONE (default) No content encoding header will be included with the message
 - UTF_8 The 'utf-8' header will be included with the message and make the body of the message available for routing if the content type is also set to APPLICATION_JSON
 - UTF_16 The 'utf-16' header will be included with the message and make the body of the message available for routing if the content type is also set to APPLICATION_JSON
 - UTF_32 The 'utf-32' header will be included with the message and make the body of the message available for routing if the content type is also set to APPLICATION_JSON
 - See Using IoT Hub Message Based Routing tutorial for more details
- Azure Date/Time Format
 - ° The date/time format to use when pushing messages to IoT Hub
 - LONG_MS_SINCE_EPOCH (default) The timestamp values will all be as numbers in milliseconds since epoch (Jan 1, 1970) in UTC
 - STRING_AZURE_COMPAT The timestamp will be pushed as described here. This is useful when wanting to use 'edge' timestamps in Azure Time Series insights.
 - See Pushing Data to Azure Time Series Insights tutorial for more details

Azure IoT Hubs - Certificates

This tab provides a list of the certificate or private keys if loaded and available for certificate based authentication.

This will include the CA Certificate that signed the SSL cert being used on the IoTHub server along with any device(s) certificate and private key files.

All certificate or private keys must be in PEM format.

For modules pre 4.0.9, only RSA PKCS1 format private keys are supported.

For modules 4.0.9 to 4.0.16, RSA PKCS8 format private keys are also supported.

For modules 4.0.17 or higher, password encrypted PKCS8 private keys are also supported.

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gnition Gateway									Ladmin Log Οι
nition.								Help 🕜	Get Designer
SYSTEM	Config > > Azure	Injector Settings							
Overview	Trial Mode 1:38:00	We're glad you're test drivi	ng our software. Have fun.						Activate Igniti
Backup/Restore									
us Ignition Exchange									
Licensing	General	Azure IoT Hubs	Azure IoT Edges	Azure Event Hubs	Azure IoT Central	Sets	Tag Agents		
fig Modules									
Projects Redundancy	Settings	Certificates							
Gateway Settings									
1	Friendly	Name	Certifi	cate Filename		File Desci	iption		
NETWORKING	No Certif	icates							
Web Server									
Gateway Network	→ Create	new Certificate							
Email Settings									
SECURITY			onfiguring MQTT Transmi	ssion, see the					
General	document	ation here							
Auditing									
Users, Roles									
Service Security									
Identity Providers Security Levels									
Security Zones									
Q Search									

Clicking on the 'Create new Certificate ..' link will bring up the following form to add a new Certificate. The Certificates tab contains a single Main section.

Azure IoT Hub Certificates - Main

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v Ignitio	n Gateway										Ladmin Log Out
Igni	tion									Help 🕑	Get Designer
	SYSTEM	🌣 Config	> > Azure Ir	njector Settings							
Home	Overview	Trial Mo	de 1:37:17 W	/e're glad you're test dr	ving our software. Have fun.						Activate Ignition
հո	Backup/Restore										
Status	Ignition Exchange		General	Azure IoT Hubs	Azure IoT Edges	Azure Event Hubs	Azure IoT Central	Sets	Tag Agents		
🔹 Config	Licensing Modules										
oning	Projects				-						
	Redundancy		Settings	Certificates							
	Gateway Settings										
	NETWORKING		Main								
	Web Server		Certificate	File Browse	No file selected.						
	Gateway Network		Upload		icate file or private key to	upload					
	Email Settings										
	SECURITY		Friendly Na	me The friend	lly name of this certificate	file or private key					
	General				ity name of this certificate	ine of private key					
	Auditing		File Descrip	ation							
	Q Search		beseri	The desc	iption of this certificate fi	le or private key					
	u Search										

- Certificate File Upload
- Browse to the certificate file or private key to upload.
- Friendly Name The friendly name of the certificate file or private key. • File Description
 - The description of the certificate file or private key.

Azure IoT Edges

The Azure IoT Edges tab has two parts - Settings and Certificates

Azure IoT Edge - Settings

This tab provides a list of Azure IoT Edge endpoints that the module should connect to to push tag data. One or more Azure IoT Edge endpoints can be configured on this tab.

$\leftarrow \rightarrow$	G		alhost:8088/we	b/config/azure.azur	elnjectorSettings?15				☆		⊚ ⊀ 📫	
Ignition	Gateway										≗admin Log	g Out →
gniti	ion									Help 🕜	Get Desig	ner
A I	SYSTEM		g > > Azure lı									
ome	Overview	Trial M	ode 1:36:38 W	/e're glad you're test driv	ing our software. Have fun.						Activate Ig	gnition
հ	Backup/Restore											
atus	Ignition Exchange		General	Azure IoT Hubs	Azure IoT Edges	Azure Event Hubs	Azure IoT Central	Sets	Tag Agents			
nfig	Licensing Modules											
ing in the second se	Projects											
	Redundancy		Settings	Certificates								
	Gateway Settings											
	NETWORKING		Setting Na		Enabled Se	t Automatic	Store & Forward E	nabled		Status		
	Web Server		No Azure I	oT Edge Settings								
	Gateway Network		→ Create n	ew Azure IoT Edge	Setting							
	Email Settings			J. J	U							
	SECURITY											
	General											
	Auditing											
	Q Search											

Clicking on the 'Create new Azure IoT Edge..." link will bring up the following form to add a new Azure IoT Edge. The configuration sections available are M ain, Connectivity, Authentication, Store & Forward and Advanced.

Azure IoT Edges Settings - Main

\rightarrow G	O D localhost:8088/web	/config/azure.azur	elnjectorSettings?17				☆		◎ 쏘 ◻ ▫
nition Gateway									🕹 admin Log Out
Inition								Help 🕜	Get Designer
SYSTEM	Config > > Azure In	jector Settings							
ne Overview	Trial Mode 1:35:55 We	're glad you're test driv	ing our software. Have fun.						Activate Ignitio
Backup/Restore									
Ignition Exchange	Course 1	the state of the last	1	terre French to be	to a later of the later	C 15	T - A A		
Licensing	General	Azure IoT Hubs	Azure IoT Edges	Azure Event Hubs	Azure IoT Central	Sets	Tag Agents		
fig Modules									
Projects Redundancy	Settings	Certificates							
Gateway Settings									
· · · · · · · · · · · · · · · · · · ·									_
NETWORKING	Main								
Web Server									
Gateway Network	Setting Nan	A friendly i	name for this Azure IoT E	dge setting					
Email Settings									
SECURITY	Enabled	Enable	this setting						
General		Default		v					
Auditing	Set		is IoT Edge is associated						
Users, Roles		The bee th							
Service Security	Automatic	🗌 lf true, A	Azure Edge environment ation sections of this conf	variables will be used as th	e connection parameters	rather than the	ose defined in the	Connectivity a	nd

- Setting Name This is the friendly name of the Azure IoT Edge used to easily identify it. This must be unique.
- Enabled ° Whether or not this connection is enabled.
- Set

The Set to associate this Azure IoT Edge connection with

- Automatic
 - Whether the Azure Edge environment variables will be used as the connection parameters rather than those defined in the connectivity and Authentication sections of the configuration.

Azure IoT Edges Settings - Connectivity

← -	> C	🔿 🗛 https:,	//localhost:8043/web	/config/azure.azureInjectorSettings?3	☆	⊘ ⊻ ≡
♠	Service Security Identity Providers	🌣 Config 🗲	> > Azure Injector S	ettings		
Home	Security Levels	Trial Mod	e 1:59:19 We're glad	iou're test driving our software. Have fun.		Activate Ignition
.l.I Status	Security Zones		Connectivity			
🔅 Config	DATABASES Connections		MQTT Server URL	ssl://edgehub:8883 The MQTT Server URL for the Azure IoT Edge		
Ŧ	Q Search			(default: ssl://edgehub:8883)		

- MQTT Server URL
 - $^\circ~$ The MQTT Server URL for the Azure IoT Edge. Default: ssl://edgehub:8883

Azure IoT Edges Settings - Authentication

C C A http		zure.azurelnjectorSettings?2 ☆ 🛇 ど 🕻
ALARMING	Config > > Azure Injector S	Settings
General	Trial Mode 1:56:38	Activate Ig
Journal	Authentication	
Notification		
On-Call Rosters Schedules	Enable Certificate Based Authentication	Enable certificate based authentication instead of using a connection string
TAGS		
History		The Connection Christian and for each blicking a second sting with the
Realtime	Password	The Connection String used for establishing a connection with the IoT Edge when using 'Connection String Authentication'. This is either the Connection String associated with the Child Device or with the Azure Edge Module.
OPC CLIENT		
OPC Connections	Passward	
OPC Quick Client	Password	Re-type password for verification.
OPC UA		- none - 🔻
Device Connections	CA Certificate File	CA Certificate file currently in use on the IoT Edge instance. It is used
Security	en en tintate rite	for both Certificate and Connection String based authentication. This is the CA Device Certificate that was uploaded to the Azure Edge
Server Settings		instance.
BACNET	Client Certificate File	- none - 🔻
Local Devices		Client certificate file currently in use
NTERPRISE ADMINISTRATION	Client Private Key	2020
Setup	File	- none - Client private key file currently in use
SEQUENTIAL FUNCTION CHARTS	Deserved	
Settings	Password	The password associated with the certificate's private key (optional)
AWS INJECTOR	Password	
Settings		Re-type password for verification.
AZURE INJECTOR	Hostname	Enable TLS Hostname Verification. This should be true on
Settings	Verification	production systems.
EFM ABB TOTALFLOW	MQTT Hostname	
Settings		
	Device ID	
FM EMERSON ROC		The Device ID as provisioned in the Azure IoT Edge configuration
Settings		
EFM EXPORT		ENVIRONMENT_VARIABLE
	Module ID Config	The method to use to configure the Module ID. This should be 'NONE' if using a 'child device' connection to Edge. It should be
Settings	Option	'ENVIRONMENT_VARIABLE' if you want to pick up the Module ID from the 'IOTEDGE_MODULEID' environment variable. Otherwise, specify
500GLE CLOUD INJECTOR		IGNITION_CONFIG and specify the Module ID in this configuration
Settings		page.
BM CLOUD INJECTOR	Module ID	The Module ID as provisioned in the Azure IoT Edge configuration.
Cattings		This is only used if the 'Module ID Config Option' is IGNITION_CONFIG.

• Enable Certificate Based Authentication

- Whether or not to use certificate based authentication.
- ° If not using certificate based authentication, the 'Password' field must be used.
- If certificate based authentication is used, the other Authentications fields must be used.
- Password (required if not using certificate based authentication)
 - This is the Azure IoT Edge connection string used to connect.
 - ° This is either the Connection string associated with the Child Device or with the Azure Edge Module
- CA Certificate File
 - The CA certificate file currently in use on the IoT Edge instance.
 - It is used for both Certificate and Connection String based authentication and is the CA Device Certificate that was uploaded to the Azure Edge instance.
 - The drop down is populated from a list of files that have been uploaded to the IoT Edge/Certificates tab.
- Client Certificate File (required if using certificate based authentication)
 - The client certificate file currently in use
 - The drop down is populated from a list of files that have been uploaded to the IoT Edge/Certificates tab.
- Client Private Key File (required if using certificate based authentication)
 - The client private key file currently in use
 - The drop down is populated from a list of files that have been uploaded to the IoT Edge/Certificates tab.
- Password/Private key password
- The password used for the private key if one was specified for the key
- MQTT Hostname (required if using certificate based authentication)
- This is the DNS endpoint name of your IoT Hub
- Device ID (required if using certificate based authentication)
 - The Device ID as provisioned in the Azure IoT Edge configuration
- Module ID Config Option
 - The method to use to configure the Module ID. This should be 'NONE' if using a 'child device' connection to Edge. It should be 'ENVIRONMENT_VARIABLE' if you want to pick up the Module ID from the 'IOTEDGE_MODULEID' environment variable. Otherwise, specify IGNITION_CONFIG and specify the Module ID in this configuration page.
- Module ID
 - The Module ID as provisioned in the Azure IoT Edge configuration. This is only used if the 'Module ID Config Option' is IGNITION_CONFIG.

Azure IoT Edges Settings - Store & Forward

From release 4.0.19, major improvements have been made to the disk-backed History Store. As a result, Message Capacity has been deprecated and History Max Age added

••• • • <u>•</u> Ign	tion-Gateway - Ignition	Gate × +		
$\leftarrow \rightarrow \mathbf{G}$	🗘 👌 192.1	168.1.81:8088/web/co	onfig/azure.azurelnjectorSettings?3 🗘 🛛 💆 🗒	മ ≓
Home Setup	ATION Trial Mo		l you're test driving our software. Have fun.	rate Ignition
Settings	CHARTS	Store & Forward Enabled	Enable Store and Forward capabilities for this stream	
AWS INJECTOR		Store & Forward Type	Choose One	
AZURE INJECTOR		History Max Age	44640 Maximum number of minutes to store history before dropping the data	
GOOGLE CLOUD INJECT	DR	Flush Period	100 Upon reestablishing communication, the period to wait in milliseconds between sending when flushing messages (default: 100)	

- Store & Forward Enabled
 - Whether to enable Store & Forward capabilities for this endpoint
- Store & Forward Type
 - The type of the Store & Forward mechanism options: In_Memory and Disk_Backed (available in release 4.0.17 and higher)
 Data store durity on the Memory Object 2.5 Second will not be required as a method of the second store of the second store
 - Data stored with an In_Memory Store & Forward will not be persisted across a module configuration change, module disable/enable, module restart or power loss.
 - Data stored with a Disk_Backed Store & Forward will persist across a module configuration change, module disable/enable, module restart or power loss
- Message Capacity deprecated in 4.0.19
 - The maximum number of messages to store before dropping the oldest historical messages

- History Max Age
- The maximum number of minutes to store history before dropping the data
- Flush Period
 - The period of time to wait (in milliseconds) between sending when flushing messages

Azure IoT Edges Settings - Advanced

•••	单 What's new wit	h Firefox - More 🗚	<mark> //</mark> Ignition Gateway - I	gnition Gate ×																	
$\leftarrow \rightarrow$	С	O 🗛 https://	localhost:8043/web/	config/azure.a	azur	zureln	njector	Setting	ngs?2							ŝ	7	◙	⊻		
	MQTT TRANSMISSION		> Azure Injector S	-																	
Home	History	Trial Mod	e 1:55:50 We're glad y	ou're test driving	g our :	our soft	itware. Ha	lave fun.	l										Acti	vate Ig	nition
.l.I Status	Settings		Advanced																		
Config			Keep Alive	30 The MQTT Clie (default: 30)	lient	ent kee	ep alive	e time (i	(in secor	onds)											
			Max Message Size	262144 Maximum mer (default: 262,144			size bef	fore div	viding in	into mu	ultiple m	essages									
			Session Expiration	86400 The number o (default: 86,400)			onds bef	fore the	e sessio	on toke	en expire	S									
			Content Type	NONE The content ty (default: NONE)		/pe to i	include	e in the	₹ e topic to	to Azur	re loT Hu	b									
			Content Encoding	NONE The content e (default: NONE)		ncodin	ng to inc	iclude ir	▼ in the to	opic to	Azure lo	T Hub									
			Azure Date/Time Format	LONG_MS_S The date/time					▼ n pushir	ing dat	a to Azur	re									
Ŧ	Q Search		Custom Topic Extension	The Custom T	Торі	opic Ex	xtensio	on to app	ppend to	to the t	topic stri	ng for thin	gs like A	Application	n Propertie	s					

- Keep Alive
 - The MQTT keep alive in seconds
- Max Message Size
 - The maximum message size in bytes that any message can be when publishing to IoT Edge. Generally, this should match the max message size allowed by IoT Edge.
- Session expiration
- ° How long in seconds to specify for token timeouts when not using certificate based authentication
- Content Type
 - The content type to include in the topic to Azure IoT Edge
 - NONE (default) No content type header will be included with the message
 - APPLICATION_JSON The application/json header will be included with the message and make the body of the message available for routing if content encoding is also not 'NONE'
- Content encoding
 - The content encoding to include in the topic to Azure IoT Edge
 - NONE (default) No content encoding header will be included with the message
 - UTF_8 The 'utf-8' header will be included with the message and make the body of the message available for routing if the content type is also set to APPLICATION_JSON
 - UTF_16 The 'utf-16' header will be included with the message and make the body of the message available for routing if the content type is also set to APPLICATION_JSON
 - UTF_32 The 'utf-32' header will be included with the message and make the body of the message available for routing if the content type is also set to APPLICATION_JSON
- Azure Date/Time Format

 - The date/time for mat to use when pushing messages to IoT Edge
 LONG_MS_SINCE_EPOCH (default) The timestamp values will all be as numbers in milliseconds since epoch (Jan 1, 1970) in UTC
 - STRING_AZURE_COMPAT - The timestamp will be pushed as described here. This is useful when wanting to use 'edge' timestamps in Azure Time Series Insights.
- Custom Topic Extension
 - The Custom Topic Extension to append to the topic string for things like Application Properties

Azure IoT Edges - Certificates

This tab provides a list of the certificate or private keys loaded and available for certificate based authentication. This should generally include the root CA for your IoT Edge, the client certification file and the client private key file.

All certificate or private keys must be in PEM format. If using modules pre 4.0.9, any private key must also be in RSA PKCS1 format. If using modules 4.0.9 or greater, any private key must also be in either RSA PKCS1 or PKCS8 format.

$\cdot \rightarrow \mathbf{G}$	Iccalhost:8088/web/config/azure.azureInjectorSettings?19		☆	⊚ ± □ =
gnition Gateway				Log Out
gnition			Н	elp 🛛 Get Designer
SYSTEM	Config > > Azure Injector Settings			
me Overview	Trial Mode 1:35:01 We're glad you're test driving our software. Have fun.			Activate Ignition
Backup/Restore				
tus Ignition Exchange				
Licensing	General Azure IoT Hubs Azure IoT Edges	Azure Event Hubs Azure IoT Central	Sets Tag Agents	
nfig Modules				
Projects	Settings Certificates			
Redundancy				
Gateway Settings	Friendly Name Certificate		File Description	
NETWORKING		rnename	File Description	
Web Server	No Certificates			
Gateway Network	→ Create new Certificate			
Email Settings				
1				
SECURITY	Note: For additional details on configuring MQTT Transmission documentation here	n, see the		
General				
Auditing				
Users, Roles				
Service Security				

Clicking on the 'Create new Certificate...' will bring up the following form to add a new certificate. The Certificates tab contains only a single Main section.

Azure IoT Edges Certificates - Main

/!

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lgnitior?	n Gateway										≗admin Log Out÷
lgnit	tion									Help 🕜	Get Designer
≜	SYSTEM		g > > Azure lı								
ome	Overview	Trial M	lode 1:34:23 W	/e're glad you're test d	riving our software. Have fun.						Activate Ignition
հո	Backup/Restore										
atus	Ignition Exchange		General	Azure IoT Hubs	Azure IoT Edges	Azure Event Hubs	Azure IoT Central	Sets	Tag Agents		
\$	Licensing		General	Azure for ridos	Azure for Euges	Azure Event hubs	Azure for central	5665	Tag Agents		
onfig	Modules Projects				-						
	Redundancy		Settings	Certificates							
	Gateway Settings										
	NETWORKING		Main								
	Web Server		Certificate	File Browse	No file selected.						
	Gateway Network		Upload		ficate file or private key to	upload					
	Email Settings										
	SECURITY		Friendly Na	ame							
	General			The frien	dly name of this certificate	file or private key					
	Auditing										
			File Descrip	otion	ription of this certificate fil						

- Certificate File Upload
- ° Browse to the certificate or private key to upload
- Friendly Name The friendly name of the certificate file or private key
- File Description The description of the certificate file or private key

Azure Event Hubs

This tab provides a list of Azure Event Hub endpoints that the module should connect to to push tag data. One or more Azure Event Hub endpoints can be configured on this tab.

$\leftarrow \rightarrow $ (c (alhost:8088/we	eb/config/azure.azure	elnjectorSettings?23					☆		⊚ ⊻ ◻ ≡
Ignition Gate	way											Ladmin Log Out→
Ignitior	i.										Help 🕐	Get Designer
🔒 ѕүѕт	EM	🌣 Conf	ig > > Azure I	Injector Settings								
lome O	verview	Trial M	lode 1:33:43 \	We're glad you're test drivi	ng our software. Have fun.							Activate Ignition
ла в	ackup/Restore											
tatus Ig	nition Exchange		General	Azure IoT Hubs		Azure Event		Azure IoT Central				
· · · · · · · · · · · · · · · · · · ·	icensing		General	Azure IoT Hubs	Azure IoT Edges	Azure Event	HUDS	Azure IoT Central	Sets	Tag Agents		
	lodules											
	rojects edundancy		Setting Nam	ne	Enabled	Set	Store &	Forward Enabled			Status	
	ateway Settings		No Azure Eve	ent Hub Settings								
			→ Create nev	w Azure Event Hub S	otting							
NET	WORKING		 Create net 	WAZUTE EVent hub 3	Jecung							
w	leb Server											
	ateway Network											
E	mail Settings											
SECU	JRITY											
G	eneral											
A	uditing											

Clicking on the 'Create new Azure Event Hub ..' link will bring up the following form to add a new Azure Event Hub. The configuration sections available are Main, Store & Forward and Advanced

Azure Event Hub - Main

	⇒ C	0 🗅 loc	alhost:8088/we	b/config/azure.azure	elnjectorSettings?25				☆		⊚ ⊀ 🗅
gnitio	n Gateway								_	_	🚨 admin Log O
Ini	tion									Help 🕜	Get Designe
r I	SYSTEM	🌣 Conf	ig > > Azure I	njector Settings							
e	Overview	Trial M	lode 1:32:37 \	Ve're glad you're test drivi	ng our software. Have fun.						Activate Ignit
	Backup/Restore										
us	Ignition Exchange Licensing		General	Azure IoT Hubs	Azure IoT Edges	Azure Event Hubs	Azure IoT Central	Sets	Tag Agents		
, ig	Modules										
	Projects										
	Redundancy		Main								
	Gateway Settings		Setting Name		ne for this Azure Event Hu	b sotting					
	NETWORKING			Amendiy han	le for this Azure Event nu	ib setting					
	Web Server Gateway Network		Enabled	🗹 Enable this	setting						
	Email Settings										
			Password	The Arture Con	paction String used for a	establishing a connection v	with the Event Hub				
	SECURITY			The Azure Con	inection string used for e	stablishing a connection v	vith the Event Hub.				
	General										
	Auditing		Password	Re-type passw	vord for verification.						
	Users, Roles Service Security										
	Service Security		Set	Default		*					
	Q Search			The Set this Ev	vent Hub is associated wi	ith					

- Setting Name

 This is a friendly name of the Azure Event Hub used to easily identify it. This must also be unique.
- Enabled
 - ° Whether or not this connection is enabled.
- Password/Connection String
 - $^{\circ}\;$ This is the Azure Event Hub connection string used to connect.
 - NOTES: Be sure to provide the connection string for the EventHub itself and not the EventHub Namespace. They both have connection strings, but the one for the EventHub will be of the form -

Endpoint=<YOUR_ENDPOINT>;SharedAccessKeyName=<YOUR_KEYNAME>;SharedAccessKey=<YOUR_KEY>=; EntityPath=<YOUR_EVENTHUB_ENTITYPATH>

The Namespace connection string will not contain the entity path.

- Set
- $^{\circ}~$ The Set to associate this Azure Event Hub connection with.

Azure Event Hub Settings - Store & Forward

From release 4.0.19, major improvements have been made to the disk-backed History Store. As a result, Message Capacity has been /!∖ deprecated and History Max Age added

	\rightarrow G \Diamond	192.1	68.1.81:8088/web/co	nfig/azure.azureInjectorSettings?3	⊘ ⊻ ୍ ଶ ≡
A ome I₁	ENTERPRISE ADMINISTRATION		Azure Injector Azure Injector Ie 1:11:56 We're glad	Settings you're test driving our software. Have fun.	Activate Ignitio
atus	SEQUENTIAL FUNCTION CHARTS		Store & Forward		
🏚 Ionfig	Settings		Store & Forward Enabled	Enable Store and Forward capabilities for this stream	
	AWS INJECTOR Settings		Store & Forward Type	Choose One The Type of this Store & Forward mechanism	
	AZURE INJECTOR		History Max Age	44640 Maximum number of minutes to store history before dropping the data	
	GOOGLE CLOUD INJECTOR Settings		Flush Period	100 Upon reestablishing communication, the period to wait in milliseconds between sending when flushing messages (default: 100)	

- Store & Forward Enabled
 - Whether to enable Store & Forward capabilities for this endpoint
- Store & Forward Type
 - The type of the Store & Forward mechanism options: In_Memory and Disk_Backed (available in release 4.0.17 and higher)
 Data stored with an In_Memory Store & Forward will not be persisted across a module configuration change, module disable/enable,
 - module restart or power loss.
 Data stored with a Disk_Backed Store & Forward will persist across a module configuration change, module disable/enable, module
- restart or power loss
 Message Capacity deprecated in 4.0.19
 - The maximum number of messages to store before dropping the oldest historical messages
- History Max Age
 - The maximum number of minutes to store history before dropping the data
- Flush Period

 The period of time to wait (in milliseconds) between sending when flushing messages

Azure Event Hub Settings - Advanced

÷ -	\rightarrow C	🔿 🔓 htt	ps://localhost:8043/we	eb/config/azure.azureInjectorSettings?30	☆	⊚ ± ⊑
A	History Realtime	🌣 Con	fig > > Azure Injecto	r Settings		
ome	Redutine	Trial P	Mode 0:41:56 We're gla	ad you're test driving our software. Have fun.		Activate Ignition
.հս	OPC CLIENT		Advanced			
Config	OPC Connections OPC Quick Client		Max Message Size	262144 Maximum message size before dividing into multiple messages (default:262,144)		
	Device Connections Security Server Settings		Content Encoding	NONE The content encoding of the data to push to Event Hub (default: NONE)		
	Search		Azure Date/Time Format	LONG_MS_SINCE_EPOCH The date/time format to use when pushing data to Azure		

Max Message Size

- The maximum message size for the Azure Event Hub. Default is 262144 bytes (256KB). Generally, this should match the max message size allowed by the Event Hub.
 - EventHub Basic: 262144 bytes (256KB)
 - EventHub Standard or better: 1048576 bytes (1MB)
- Content Encoding
 - The content encoding of the data to push to Event Hub.
 - Current options are UTF_8, UTF_16 and UTF_32
- Azure Date/Time Format
 - The date/time format to use when pushing messages to IoT Hub
 - LONG_MS_SINCE_EPOCH (default) The timestamp values will all be as numbers in milliseconds since epoch (Jan 1, 1970) in UTC

- STRING_AZURE_COMPAT The timestamp will be pushed as described here. This is useful when wanting to use 'edge' timestamps in Azure Time Series insights.
- See Pushing Data to Azure Time Series Insights tutorial for more detail

Azure IoT Central

This tab provides a list of Azure IoT Central endpoints that the module should connect to to push tag data. One or more Azure IoT Central endpoints can be configured on this tab.

	\rightarrow G		ocalhost:8088/we	eb/config/azure.azure	InjectorSettings?38				☆		⊚ ± □ ≡
🛙 Ignitic	on Gateway										💄 admin Log Out -
lgni	tion									Help 🕜	Get Designer
♠	SYSTEM	¢ Co	nfig > > Azure	Injector Settings							
Home	Overview	Trial	Mode 1:27:49	We're glad you're test drivii	ng our software. Have fun.						Activate Ignition
հո	Backup/Restore										
Status	Ignition Exchange										
\$	Licensing		General	Azure IoT Hubs	Azure IoT Edges	Azure Event Hubs	Azure IoT Central	Sets	Tag Agents		
onfig	Modules										
	Projects		Setting Nan	ne	Enabled	Set Store	& Forward Enabled			Status	
	Redundancy		No Azure IoT	Central Settings							
	Gateway Settings			_							
	NETWORKING		→ Create net	w Azure IoT Central S	Setting						
	Web Server										
	Gateway Network										
	Email Settings										
	SECURITY										
	Q Search										

Clicking on the 'Create new Azure IoT Central Setting.." link will bring up the following form to add a new Azure IoT Central. The configuration sections available are Main, Store & Forward and Advanced.

Azure IoT Central - Main

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$- \rightarrow \mathbf{G}$	🔿 ዿ 19	9 2.168.1.81 :8088	/web/config/azure.a	zurelnjectorSettings?	12					ជ		യ 🛄 മ്
Ignition Gateway												💄 admin Log C
gnition											Help 🕜	Get Designe
SYSTEM	🌣 Conf	fig > > Azure I	njector Settings									
Overview	Trial N	Mode 1:54:57	We're glad you're test driv	ing our software. Have fun.								Activate Igni
Backup/Restore												
Ignition Exchange												
Licensing		General	Azure IoT Hubs	Azure IoT Edges	Azure Ev	ent Hubs	Azure IoT Central	Sets	Та	g Agents		
nfig Modules												
Projects Redundancy		Name	Er	nabled Tag Provider Name	Tag Path	Convert UDTs	Publish UDT Definitions	Set	Group ID	Edge Node ID	Device ID	
Gateway Settings		Azure_TagA bb	gent_97bd7c2a-9 tr	ue default	Edge Nodes	true	true	Defaul t				delete
NETWORKING												
Web Server		→ Create net	w Tag Agent Setting	S								
Email Settings												
q Search												

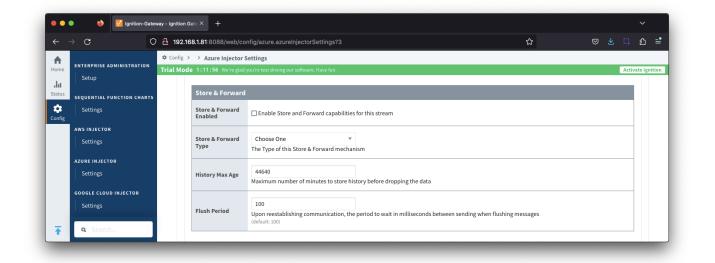
- Setting Name

 This a friendly name of the Azure IoT Central used to easily identify it. This must also be unique.
- Enabled $^{\circ}~$ Whether or not this connection is enabled.
- Scope ID
 - The Azure IoT Central Scope ID.

- Found in the IoT Central -> Administration Device Settings.
- Password
 - ° The Azure Enrollment Group Symmetric Key.
 - Found in the IoT Central -> Security -> Permissions -> Device Connection Groups -> [SAS-IoT-Devices] -> SAS -> Primary/Second key.
- Global Endpoint
- The global endpoint of the IoT Central connection. Default is global.azure-devices-provisioning.net
- Provisioned Device ID
- The provisioned Device ID associated with this IoT Central connection.
- Model ID
 - The Model ID associated with this IoT Central connection.
- Set
 - ° The Set associated with this IoT Central connection.

Azure IoT Central - Store & Forward

From release 4.0.19, major improvements have been made to the disk-backed History Store. As a result, Message Capacity has been deprecated and History Max Age added



- Store & Forward Enabled
 - Whether to enable Store & Forward capabilities for this endpoint
- Store & Forward Type
 - The type of the Store & Forward mechanism options: In_Memory and Disk_Backed (available in release 4.0.17 and higher)
 Data stored with an In_Memory Store & Forward will not be persisted across a module configuration change, module disable/enable, module restart or power loss.
 - Data stored with a Disk_Backed Store & Forward will persist across a module configuration change, module disable/enable, module restart or power loss
- Message Capacity deprecated in 4.0.19
- The maximum number of messages to store before dropping the oldest historical messages
- History Max Age
- The maximum number of minutes to store history before dropping the data
- Flush Period
 - ° The period of time to wait (in milliseconds) between sending when flushing messages

Azure IoT Central - Advanced

← -	⇒ C O	localhost:8088/web/con	fig/azure.azureInjectorSettings?40	ជ	⊗ ± □ ≡
A	BACNET	Config > > Azure Injecto	-		
ome	Local Devices	Trial Mode 1:03:01 We're gl	ad you're test driving our software. Have fun.		Activate Ignition
II stus	ENTERPRISE ADMINISTRATION	Show advanced	properties		
*	Setup	Advanced			
nfig	SEQUENTIAL FUNCTION CHARTS	Max Message Size	262144 Maximum message size before dividing into multiple messages (default: 262,144)		
	AWS INJECTOR Settings Q Search	Azure Date/Time Format	LONG_MS_SINCE_EPOCH The date/time format to use when pushing data to Azure		

- Max Message Size
- The maximum message size in bytes that any message can be when pushing to IoT Central.
- Azure Date/Time Format
 - $^{\circ}~$ The date/time format to use when pushing messages to IoT Hub
 - LONG_MS_SINCE_EPOCH (default) The timestamp values will all be as numbers in milliseconds since epoch (Jan 1, 1970) in UTC
 - STRING_AZURE_COMPAT The timestamp will be pushed as described here. This is useful when wanting to use 'edge' timestamps in Azure Time Series insights.
 - See Pushing Data to Azure Time Series Insights tutorial for more details

Sets

This tab contains a list of Azure Sets. Each set represents a grouping of Azure IoT/Event Hub endpoints. When a set is referenced by a Tag Agent, the Agent will push Tag data to all Azure IoT/Event Hub endpoints contained within that Set.

A The Sets are disjoint, meaning that a single Azure IoT/Event Hub endpoint cannot be in more than one set.

Out of the box the Azure Injector module will have one "Default" set defined. Additional Sets can be configured for situations where multiple Tag Agents will need to push to different Azure IoT Hub endpoints.

$ \rightarrow$ G	0 0	localhost:8088/w	eb/config/azure.azure	InjectorSettings?27				☆		⊘ ⊀ ◻ ≡
Ignition Gateway										Log Out
gnition									Help 🕜	Get Designer
SYSTEM		Config > > Azure								
^{me} Overview	Tria	al Mode 1:31:45	We're glad you're test drivin	ng our software. Have fun.						Activate Ignition
Backup/Restore										
tus Ignition Exchange Licensing	2	General	Azure IoT Hubs	Azure IoT Edges	Azure Event Hubs	Azure IoT Central	Sets	Tag Agents		
fig Modules										
Projects		Name	Descr	iption	Push Policy					
Redundancy Gateway Settings		Default	Defau	lt set	PUSH_TO_ALL				dele	te edit
NETWORKING			w Azure Set							
Web Server		• createrie	WAZure Set							
Gateway Networl	c									
Email Settings										
SECURITY										
Q Search										

Clicking on the 'Create new Azure Set ..' link will bring up the following form to add a new Set. The configuration section available is Main

Sets - Main

\rightarrow G	🔿 🗅 localhost:	8088/wel	o/config/azure.azure	InjectorSettings?29				ជ		⊚ ⊀ ◻ ≡
nition Gateway										Log Out
nition									Help 🕜	Get Designer
SYSTEM	🌣 Config 🗲 💈	Azure In	jector Settings							
e Overview	Trial Mode 1	:31:04 W	'e're glad you're test drivir	ng our software. Have fun.						Activate Ignition
Backup/Restore										
s Ignition Exchange	6.	neral	Azure IoT Hubs	Annual LT Educa	Azure Event Hubs	Azure IoT Central	Sets	Tracharanta		
Licensing	Ger	heral	Azure IoT Hubs	Azure IoT Edges	Azure Event Hubs	Azure IoT Central	Sets	Tag Agents		
g Modules										
Projects	Mai									
Redundancy	Mai		_							
Gateway Settings	Nam		New Set							
NETWORKING	Ndii	le	The friendly na	ame of this Set						
Web Server										
Gateway Network	Des	ription:								
Email Settings			Description of	this Set						
			PUSH_TO_A		v					
SECURITY	Pus	n Policy				be pushed to or only one	will at a time			

- Name
 - This is the friendly name of the set used to easily identify it.
- Description
- This is a friendly description of the set.
- Push Policy
 - $\circ\,$ This defines which endpoints to push to.
 - ° If PUSH_TO_ALL is selected, every endpoint that is part of this set will receive all messages.
 - If PUSH_TO_ANY is selected, only one of the endpoints that is part of this set will receive any given message. PUSH_TO_ANY is useful when adding endpoint configurations to increase the throughput of the Injector.

Tag Agents

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Tag Agents define which tags will be picked up from the Ignition tag tree, converted to a JSON representation and pushed to one or more Azure endpoints.

Tag Agents will monitor tags from a specific Tag Provider and, optionally, a specific Tag Path. If the tag folder hierarchy has been constructed as Group ID, Edge Node ID, and Device ID, then these will automatically be used when building up the JSON message payload which includes these in the topic.

Review the Cloud Injector Tag Agents and Tag Trees describing how Tag Agent configurations interact with Ignition tag trees

If your tag folder hierarchy does not conform to this structure, you can explicitly define these required elements under the SparkPlug Settings section to be included when building the message topic.

±admin Log Out
Activate Ignition
Activate Ignition
delete

Clicking on the 'Create new Tag Agent Settings..' link will bring up the following form to add a new Tag Agent. The configuration sections available are Age nt Settings, Sparkplug Settings and Advanced

Tag Agents - Agent Settings

\rightarrow G	O 🎍 192.168.1.81:8088/web/	config/azure.azureInjectorSettings?17	☆ ⁽²⁾	C1 g	ŝ
Projects	Config > > Azure Injecto	r Settings			
Redundancy	Trial Mode 1:48:54 We're gl	d you're test driving our software. Have fun.		Activate	Igniti
Gateway Settings	Name	Azure_TagAgent_97bd7c2a-9bb A unique name for the Tag Agent			
Web Server Email Settings Gateway Network	Enabled	✓ Enable Tag Agent (default: true)			
SECURITY	Tag Provider Name	default The Name of the tag provider			
General Auditing Users, Roles	Tag Path	Edge Nodes A path to the root folder where the tag tree starts (optional)			
Service Security Identity Providers OAuth2 Clients	Push Trigger	EVENT_DRIVEN	ush all data on a periodic basi:	à.	
Security Levels Security Zones	Tag Pacing Period	1000 If using an EVENT_DRIVEN Push trigger, the waiting period in milliseconds after an initial tag change event before pushi	ing all changed tags. If using		
DATABASES Connections		PERIODIC, the number of milliseconds to wait between pushing all data. (default: 1,000)			
Drivers Store and Forward	Convert UDTs	Converts UDT members to normal Tags			
ALARMING	Publish UDT Definitions	Publish UDT Definitions in BIRTH			
General Journal	Optimize UDTs	Optimizes UDT payload sizes in NDATA and DDATA payloads			
Q Search	Set	Default The Set this Agent is associated with			

- Name A unique name for the tag agent.
- Enabled
 - Sets whether the Tag Agent is enabled or disabled. If disabled, the Tag Agent will not run and no data will be pushed to any configured endpoints.
- Tag Provider Name
- The name of the Tag provider containing the tags.
- Tag Path An optional path to the root folder where the tag tree starts.

- ° Defines what triggers a push to the cloud endpoint
 - EVENT_DRIVEN (default) when a tag change event (value or quality) occurs, and no pending push exists, tag events will be
 aggregated for the 'Tag Pacing Period' before being pushed.
 - PERIODIC will push the latest data for all tags associated with the Agent every 'Tag Pacing Period'. With this option, only one event per tag will be sent and tag change events will not be captured.
- Tag Pacing Period
 - The buffer period, in milliseconds, that Tag events will be aggregated into a single payload before pushing.
- Convert UDTs
 - Whether to convert UDT members to normal Tags before publishing. If enabled the Tags representing the UDT member will retain their member path prefixed by the UDT Instance name.
- Publish UDT Definitions
 - $^{\circ}~$ This will only be used if 'Convert UDTs' is false
 - ° Whether or not to push the UDT Definitions in the the NBIRTH messages
- Optimize UDTs
 - This will only be used if 'Convert UDTs' is false
 - ° Whether or not to 'convert UDTs' only for DATA messages.
- Set
 - ° The Set of Azure IoT Hub endpoints that the Tag Agent will push to.

Review the Managing UDTs through Injector Tag Agents for more details on the Convert UDTs, Publish UDT Definitions and Optimize UDTs parameters

Tag Agents - Sparkplug Settings

$\leftarrow \rightarrow \mathbf{G}$	0 8	https://localhost:8043,	/web/config/azure.azureInjectorSettings?50	ជ	⊚ ⊻ ◻ ≡
Notification On-Call Rosters		Config > > Azure Injec al Mode 0:20:48 We're	ctor Settings e glad you're test driving our software. Have fun.		Activate Ignition
Schedules TAGS History		Sparkplug Sett Group ID	tings		
OPC CLIENT		Edge Node ID	An ID representing a logical grouping of Edge Nodes and Devices (optional)		
OPC Connections OPC Quick Client		Device ID	An ID representing an Edge or Network (EoN) Node (optional) An ID representing a Device (optional)		

- Group ID
- An ID representing a logical grouping of MQTT Edge Of Network (EoN) Nodes and Devices into the infrastructure.
- Edge Node ID
- An ID that uniquely identifies the MQTT Edge Of Network (EoN) Node within the infrastructure.
 Device ID
 - ° An optional ID that uniquely identifies a Device within the infrastructure.

Tag Agents - Advanced

	\rightarrow C	O 🔓 ht	tps:// localhost :8043	3/web/config/azure.azureInjectorSettings?50	☆	⊠ ± 📫		
♠	Device Connections	🌣 Con	ifig > > Azure Inje	ector Settings				
lome	Security	Trial Mode 0:20:31 We're glad you're test driving our software. Have fun.						
.l.i Status	Server Settings		Advanced Sett	tings				
\$	Local Devices		Filtered	access Rights; clamp Mode; deadband; deadband Mode; for mat String; historical Deadband; deadban	;historicalDeadbandMode;historical	DeadbandStyle;histc		
Config	q Search		Properties	A semicolon delimited list of Tag properties to filter/block from being published				

• Filtered Properties

 A semicolon delimited list of Tag properties to filter/block from being published. These should typically not be modified unless there is an explicit requirement that a specific property is needed to be added or removed from the default.