Managing files with MQTT Transmission and MQTT Engine

Prerequisites:

- Knowledge of Ignition and Module installation process: Cirrus Link Module Installation
- Installation of the following Cirrus Link MQTT modules selecting the version compatible with your Ignition installation.
- Modules can be downloaded from the Ignition Strategic Partner Modules download page:
 - MQTT Distributor
 - MQTT Engine
 - MQTT Transmission

Overview:

Transmission is an MQTT module for Ignition that can publish files using MQTT Sparkplug to be processed by MQTT engine.

Files are transferred using Sparkplug over MQTT and which files get transferred and when they get transferred can be configured in a number of different ways. The file transfer configuration also defines how quickly a file transfer occurs and how long before a timeout will occur on failure to receive host side acknowledgements which can be adjusted as required based on the size of files you are sending and any bandwidth constraints that you may have.

This tutorial shows how to configure the MQTT modules to publish files using both the manual and auto publish methods.

- Install the MQTT modules
- Configure Primary Host on MQTT Engine and MQTT Transmission
- Config MQTT Engine File Handling
- Configure MQTT Transmission to publish files
- Manual Publish of Files
- Auto Publish of Files
- Viewing the messages in the Ignition logs
- Extra Activities

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- Adjust the file transfer configuration to define how quickly a file transfer occurs and how long before a timeout will occur on failure to
 receive host side acknowledgements based on the size of files you are sending and any bandwidth constraints that you may have.
- Setup two Ignition systems a host system installed with MQTT Engine and MQTT Distributor and and edge system installed with MQTT Transmission

Install the MQTT modules

Install the three MQTT modules listed in the pre-requisites onto your Ignition system following the Cirrus Link Module Installation guide.

By default, both MQTT Engine and MQTT Transmission are configured to connect to MQTT Distributor on tcp://localhost:1883 and will show as Connected under their respective Servers configuration setting in the Ignition UI. MQTT Transmission will also have an Example Transmitter configured pointing to a set of tags that are configured in the Ignition "default" tag provider.

Review the MQTT Transmission Transmitters and Tag Trees tutorial for additional information on how Transmitter configurations interact with Ignition tag trees to create the Sparkplug IDs required.

This allows the three modules to automatically connect and provide a starting base for the tutorial.

Configure Primary Host on MQTT Engine and MQTT Transmission

Primary Host ID must be configured for File Transfer to work

Navigate to the MQTT Engine > Settings in the left side of the Ignition Gateway UI and select the General tab.

Set Primary Host Enabled and add a Primary Host ID as shown below:

← -	\rightarrow C	🔿 🔁 192.168.1.81:8088/web	/config/mqttengine.settings?3		ල 📪 එ 🗄
Ignitio	n-Gateway				Ladmin Log Ou
gni	tion			Help 🕑	Get Designer
	SYSTEM	🌣 Config > Mqttengine > MQ	2TT Engine Settings		
ome	Overview	Trial Mode 0:43:33 We'reg	glad you're test driving our software. Have fun.		Activate Ignition
հ	Backup/Restore				
atus	Ignition Exchange				
3	Licensing	General S	ervers Namespaces		
nfig	Modules				
	Projects				
	Redundancy	Main Settings			
	Gateway Settings	Enabled	C Enable the MQTT Engine		
	NETWORKING	Primary Host			
	Web Server	Enabled	Whether or not primary host STATE message will be published. If true, the Primary Host ID field should also be set		
	Email Settings				
	Gateway Network	Primary Host ID	MyPrimaryHost		
			The Primary Host ID to allow connecting clients to ensure they remain connected to this application (optional)		

Navigate to the MQTT Transmission > Settings in the side of the Ignition Gateway UI and select the Sets tab.

Edit the Default Set and add a Primary Host ID as shown below:

ightarrow C	🔿 훱 192.168.1.81:8088,	/web/config/mqtttransmission.settings?1		☆	ල 🖾 එ ≣
nition-Gateway					💄 admin 📔 Log Out
nition				Help	Get Designer
SYSTEM	Config > Mqtttransmiss	sion > MQTT Transmission Settings			
ne Overview	Trial Mode 0:39:51 V	Ve're glad you're test driving our software. Have fun			Activate Ignitie
Backup/Restore					
us Ignition Exchange					
Licensing	General	Servers Sets Transmitter	rs Records Files		
fig Modules					
Projects	✓ Successi	fully updated MQTT Server Set "Default"			
Redundancy					
Gateway Settings	Name	Description	Primary Host ID		
NETWORKING	Default	Default server set	MyPrimaryHost	(delete edit
o Search					

Config MQTT Engine File Handling

Now we can configure the MQTT Engine module to process the published files.

Navigate to the MQTT Engine > Settings in the left side of the Ignition Gateway UI and select the Namespaces tab. From the Default tab, edit the Sparkplug B namespace shown below:

\rightarrow C	🗘 🗋 loca	lhost:8088/web/	/config/mqtte	ngine.settin	gs?5			☆		S ∓ □ =
nition Gateway										Log Out
nition									Help 🕜	Get Designer
SYSTEM	🌣 Config	> Mqttengine >	MQTT Engine	Settings						
Overview	Trial Mo	ode 0:53:21 We	're glad you're te	st driving our s	oftware. Have fun.					Activate Ignitio
Backup/Restore										
Ignition Exchange		Conoral	Soniors	Namosna	605					
Licensing		General	Servers	Namespa						
Projects										
Redundancy		Default	Custom							
Gateway Settings										
NETWORKING		Name			Namespace Type	E	Enabled			
Web Server		Elecsys			Elecsys	t	rue			edit
Gateway Network		for a large starting			*					
Email Settings		Sparkplug	A		SparkplugA	t	rue			edit
SECURITY		Sparkplug	в		SparkplugB	t	rue			edit
General										
Auditing		xirgo			xirgo	t	rue			edit
O Search										

Now select the 'Files' tab and set the following

- Ignore Files
- ° Set this property to unchecked so that publish files will not be ignored
- File Host Type:
 ACTIVE to specify that a message ACK is sent back to MQTT Transmission
- Set to some directory file path (i.e. 'C:\My Files' or something similar) where the files will be stored Add Topic Tokens
- Leave this property as checked to add the Group ID, Edge Node ID and Device ID to the base file directory path • File Storing Policy
- Set this policy to REPLACE_EXISTING_FILE
- File Attributes Policy
 - ° Leave this property at the default value of IGNORE

Review the MQTT Engine Configuration guide for information on all the File properties \oslash

When complete, it should look similar to the following. Save the changes after confirming.

	> C	🗘 🗋 localhos	st:8088/web/config/mo	attengine.settings?8	<u>ନ</u>	9	⊻		
	Redundancy	🌣 Config 🗲	Mqttengine > MQTT En;	gine Settings					
me	Gateway Settings	Trial Mode	0:51:34 We're glad you	re test driving our software. Have fun.			Activat	e Ignit	tio
ы	NETWORKING		General Filt	ters Files String Conversion					
itus	Web Server								
2	Gateway Network		Main						
nfig	Email Settings						1.		
	SECURITY		Ignore Files	If checked, all published files will be ignored.					
	General								
	Auditing		File Host Type	Defines if file host sends message ACKs (i.e. acts as an Active Host) back to MQTT Transmission.					
	Users, Roles			(default: ACTIVE)					
Service Security							-		
	Identity Providers		Location						
	Security Levels						1.		
	Security Zones		Base File	/tmp/tmp/engine					
	DATABASES		Directory	The directory to store files in when using the "Store" file policy.					
	Connections			✓ If checked, adds Group, EdgeNode, and Device IDs to the base file directory specified above.					
	Drivers		Add Topic Tokens	(default: true)					
	Store and Forward								
	ALARMING		File Storing Policy	REPLACE_EXISTING_FILE The policy for storing incoming files (i.e. keep existing file or replace it with the new one)					
	General			(default: REPLACE_EXISTING_FILE)					
	Journal						-		
	Notification		File Attributes	IGNORE T					
_			Policy	The policy for handling basic attributes (i.e. CreationTime, LastModifiedTime, and LastAccessTime) or (defaults (CALORE)	incoming files.				

Configure MQTT Transmission to publish files

Now we can configure the MQTT Transmission module to publish files using a configured Transmitter. Navigate to the MQTT Transmission > Settings in the left side bar of the Ignition Gateway UI and select the Transmitters tab.

Make note of the Sparkplug IDs configured for your transmitter. For our example we have the Group ID as My MQTT Group and the Edge Node ID as Edge Node faec7e

If you have an existing Transmitter configured where the Sparkplug IDs are created dynamically from the Ignition tag path, see MQTT Transmission Transmitters and Tag Trees, you will need to identify the Edge Node Descriptor being used and include the GROUP_ID and EDGE_NODE_ID in the Files configuration.

$ ightarrow$ C' $\mathbf{\hat{C}}$	🖸 🗋 localhost:8088/web/config/mqtttransmission.settings?80	··· ☑ ☆
nition		≗admin Log Out
nition		Help 😮 Get Designer
SYSTEM	Config > Mqtttransmission > MQTT Transmission Settings	
e Overview	Trial Mode 1:26:01 We're glad you're test driving our software. Have fun.	Activate Ignition
Backup/Restore		
Ignition Exchange	General Servers Sets Transmitters Records Files	
Licensing Modulor		
Projects	Name Enabled Tag Provider Tag Path Set History Store Spar	kolug IDs
Redundancy		
Gateway Settings	Example Transmitter true default MQTT Tags Default My MO	QTT Group/Edge Node faec7e delete edit
NETWORKING	→ Create new Settings	
Web Server		
Gateway Network		
Email Settings		
Q Search		

Now on the 'Files' tab, select the Create new Files... link and configure the following fields

- Name
 By default a unique name will be set for this File Record. You can edit this if you choose but it must be unique.
 - This is the tag provider where the publish control and information tags will be created. In our example, set to 'default'.
- Tag Folder Path
 - This is the tag folder in the specified tag provider where the publish control and information tags will be created.
 - In our examples, set to 'files_manual' if configuring for manual publish or 'files_auto' if configuring for auto publish
- Enable Auto-Publish
 - This will enable auto_publish.
 - In our examples, leave unchecked if configuring for manual publish and check if configuring for auto publish.
- ° Group ID Use the Group ID from your Transmitters Sparkplug ID. For this example, My MQTT Group
- ° Edge Node ID:
 - Use the Edge Node ID from your Transmitters Sparkplug ID. For this example, Edge Node faec7e

Review the MQTT Transmission Configuration guide for information on all the File properties \odot

When complete, it should look similar to the following. Save the changes after confirming.

← -		calhost:8088/	web/config/mqtttra	ansmission.settings?9 🔂 🛇 ⊻ 🛄						
♠	Modules	🌣 Config	Config > Mqtttransmission > MQTT Transmission Settings							
Home	Projects	Trial Mo	de 1:21:41	Activate Ignit						
.hi	Catoway Sottings									
Status	Gateway Settings		Tag Settings							
m	NETWORKING									
Config Web Server			Name	FT_d163269a-2f2						
	Gateway Network			A unique name for the Files Record						
	Email Settings									
			Tag Provider	default The Name of the tag provider						
	SECURITY									
	General			files manual						
	Auditing		Tag Folder Path	The path to the Tag folder						
	Users, Roles									
	Service Security									
	Identity Providers		File Settings							
	Security Levels									
	Security Zones DATABASES		Enable Auto- Publish	Enable auto-publishing						
	Connections			60 The rate to seen the 'Files' directory specified in the 'Dublish						
	Drivers		File Scan Rate	Files Path' tag for files to publish						
	Store and Forward			(default: 60)						
	ALARMING		File Scan Pate	SECONDS 👻						
	General		Time Unit	Time Unit for the 'File Scan Rate' configuration parameter						
	Journal			(default: SECONDS)						
	Notification									
	On-Call Rosters		Sparkplug Setti	ngs						
	Schedules		apariping setti							
			Group ID	My MQTT Group						
	TAGS		creap is	Group ID						
	History									
	Realtime		Edge Node ID	Edge Node faec7e Edge Node ID						
	OPC CLIENT									
	OPC Connections		Device ID							
	ope out-the distant		Device ID	Device ID						

After the configuration is saved, it should look similar to below:

	C	○ D loc	calhost:8088/we	eb/config/mq	tttransmission.s	settings?35				☆		⊚ ⊀ ◻ ▫
Ignition	Gateway											🚨 admin Log Out
gnit	ion										Help 🕜	Get Designer
•	SYSTEM	🌣 Con	fig > Mqtttransmi	ssion > MQT	Transmission S	Settings						
ome	Overview	Trial I	Mode 0:35:08	We're glad you'r	e test driving our so	ftware. Have fun.						Activate Ignitic
հ	Backup/Restore											
atus	Ignition Exchange											
•	Licensing		General	Servers	Sets	Transmitters	Records	Files				
onfig	Modules											
	Projects		✓ Success	sfully updated	d Files "FT_d163	269a-2f2"						
	Redundancy											
	Gateway Settings		Name		Tag Provider	Tag Folder Pat	h Gro	up ID	Edge Node ID	Device ID		
	NETWORKING		FT_d16326	9a-2f2	default	files_manual	My	MQTT Group	Edge Node faec7e		del	ete edit
	Web Server											
	• Search		→ Create ne	w Files								

Manual Publish of Files

With a File record created following the steps in Configure MQTT Transmission to publish files with the 'Enable Auto-Publish' unchecked and the Tag Folder Path set to "files_manual", everything should be configured to send files from MQTT Transmission to MQTT Engine.

Open Ignition Designer on the system running MQTT Transmission. You should see the control and information tags created in the specified tag provider and folder as shown below:

• • •	Test - Igr	nition - Ignition I	Designer			
H → → → → → → → → → → → → → → →	11					
Project Browser			ē	$_{-}$ \times		
Q+ Filter		Proje	ct Propertie	es 🔏		57.0
Alarm Notification Pipelines				0	Scripting 🛄 Learn more	⊡ Ga
Tag Browser			-7	_ X		
+- Q ∅ default			•	: -	Create a N	lew Scrip
Tags		UDT Definition	5			
Тад		Val	ue		Name of the	script
- 🗁 files_manual						
- 🐼 Last Published File				N/A	Cre	ate
►-🐼 Last Published Sequence Number				0		
- 🐼 Percent Completed				0		
► 🐼 Publish File						
► 🐼 Publish File Count				0		
► 🖓 Publish File in Transit				N/A		
► 🐼 Publish File Path						
► 🐼 Publish Operation Status						
▶ 🐼 Publish Operation Status Code				0		
MQTT Tags						
					154 / 1	024 mb
-					134/1	52 I IIID 8

The control and information tags created in the folder are:

Name	Туре	Description
Last Published File	String	Name of last published file
Last Published Sequence Number	Integer	Sequence number of last published file since last reset of metrics
Percent Completed	Byte	Publish completion percent for file being published
Publish File	Boolean	Manual trigger to publish file
Publish File Count	Long	Number of files published since last reset of metrics
Publish File in Transit	String	Name of current file being published
Publish Files Path	String	Full path to the target file to publish over MQTT
Publish Operation Status	String	Status description of current publish operation

Publish Operation Status Code	Integer	Status code for current publish operation
Reset	Boolean	Trigger to reset publish metrics

At this point, we just need to tell MQTT Transmission which file to send. Download and unzip this sample file to some location and note that location.

This sample_file.zip contains two text files which are:

sample_file.txt

• This is a text file with an arbitrary string. But, it could be a file of any type. This is purely for demonstration purposes.

sample_file.txt.md5

 $^\circ~$ This is a text file that contains only the md5 sum of the sample_file.txt

1. The md5 sum file is only required when using the auto publish method. This is needed to ensure that the file to be transferred is complete and ready to be published.

If you are testing with a different file, certain characters have special meanings when used in filenames such as "*" for wildcards, and "\" in filename paths. If a file you are trying to publish contains any of the characters listed below, it will prevent files from being written to the file system.

" * : < > ? / \ |

Leading and trailing spaces in filenames and filenames ending in '.' are also not supported.

With the file to be transferred in place, we can now set the 'Publish File Path' tag.

This path must be the full path to the target file to publish over MQTT. In this example, we're using the path of '/tmp/transmission/sample_file.txt'. However, on a Windows system that would look something like 'C:\full\path\to\my\sample_file.txt'. When this is set, you should see something like this



Finally, click the 'Publish File' boolean tag. This will begin the file publish process which will cause the file to be published. After doing so, you should see something similar to what is shown below.

	Test Impition Impition Designer	
	Test - Ignition - Ignition Designer	
Project Browser		
Q, Filter	Project Properties 🔏	Scripting III Learn more
Alarm Notification Pipelines	\$	
Tag Browser	ם _ ×	
+- Q ♂ default	• :-	Create a New Script
Tags	UDT Definitions	
Tag	Value	Name of the script
- Files_manual		
- w Last Published File	sample_file.txt	Create
Ast Published Sequence Number	1	
Publish File	100	
Publish File Count	1	
	 N/A	
► 🐼 Publish File Path	/tmp/transmission/sample_file.txt	
Publish Operation Status	Success	
Publish Operation Status Code	200	
MQTT Tags		
		•■
-		152 / 1024 110 5

You should also now see the file to the location you set as the 'Base File Directory' in your MQTT Engine namespace configuration for Sparkplug B.

A The files will be left on the originating filesystem after a successful publish and will need to be removed manually

Auto Publish of Files

With a File record created following the steps in Configure MQTT Transmission to publish files with 'Enable Auto-Publish' checked and the Tag Folder Path set to "files_auto", everything should be configured to send files from MQTT Transmission to MQTT Engine.

Open Ignition Designer on the system running MQTT Transmission. You should see the control and information tags created in the specified tag provider and folder as shown below:

	Test - Ignition - Ig	gnition Designer		
🗎 🕑 🔸 🏕 🏷 🇯 🗎 👯 🕪 1	L			
Project Browser		. T	$- \times$	
Q- Filter		Project Properties	s 🔏	Scripting M Learn more
Alarm Notification Pipelines			0	
lag Browser		ē.	$ \times$	
+- Q 💭 default		•	:-	Create a New Scrit
Tags	UDT [Definitions		
Тад		Value	^	Name of the script
- 🗁 files_auto				
Last Published File		N/	A	Create
- 🚱 Last Published Sequence Number			0	Creace
Percent Completed			0	
Publish File Count			0	
Publish File in Transit		N/	Α	
Publish Files Folder				
Publish Operation Status				
Publish Operation Status Code			0	
files_manual				
MQII lags				
			~	
				155 / 1024 mb

The control and information tags created in the folder are:

Name	Туре	Description
Last Published File	String	Name of last published file
Last Published Sequence Number	Integer	Sequence number of last published file since last reset of metrics
Percent Completed	Byte	Publish completion percent for file being published
Publish File Count	Long	Number of files published since last reset of metrics
Publish File in Transit	String	Name of current file being published
Publish Files Folder	String	Full path to the target folder containing the files to publish over MQTT
Publish Operation Status	String	Status description of current publish operation
Publish Operation Status Code	Integer	Status code for current publish operation
Reset	Boolean	Trigger to reset publish metrics

At this point, we just need to tell MQTT Transmission which folder contains the file(s) to publish. Download and unzip this sample file to some location and note that location.

This sample_file.zip contains two text files which are:

- sample_file.txt
 - This is a text file with an arbitrary string. But, it could be a file of any type. This is purely for demonstration purposes.
- sample_file.txt.md5
 - $^\circ~$ This is a text file that contains only the md5 sum of the sample_file.txt

If you a testing with a different file, certain characters have special meanings when used in filenames such as "*" for wildcards, and "\" in filename paths. If a file you are trying to publish contains any of the characters listed below, it will prevent files from being written to the file system.

"*:<>?/\|

⁄≞

/!\

Leading and trailing spaces in filenames and filenames ending in '.' are also not supported.

When transferring files using auto_publish, MQTT Transmission requires two files to be present before it will transfer the target file. The first is the file itself. The second is a file that has the same name as the target file followed by a '.md5' extension. The file containing the md5 sum of the target file will not be transferred.

The contents of that file must contain the Message Digest Algorithm 5 (or MD5 sum) of the file. The MD5 sum can be calculated using command line utilities on most operating systems or through scripting in Ignition. Here are some examples:

Linux

```
ubuntu@linux-host:~$ md5sum myfile.bin
07180622a24ebf905cf5f770cd54197a myfile.bin
```

In the above example, the md5 sum is: 07180622a24ebf905cf5f770cd54197a

OSX

```
user@osxhost:~$ md5 sample_file.txt
MD5 (sample_file.txt) = 85324ffbcc7d97c478adf53796aff787
```

In the above example, the md5 sum is: 85324ffbcc7d97c478adf53796aff787

Windows

```
Get-FileHash -Algorithm MD5 .\some_file.iso
Algorithm Hash
Path
-----
MD5 80FD169D3FDADBC97E66C168F796B1BF
\temp\some_file.iso
```

c:

In the above example, the md5 sum is: 80FD169D3FDADBC97E66C168F796B1BF

Ignition Script

import hashlib

MQTT Transmission will scan the folder specified in the tag, with a frequency defined by the File Scan Rate, and publish all files that appear in this directory automatically.

M When the file is successfully transferred both the file and associated md5 sum file will be removed from the originating filesystem.

Viewing the messages in the Ignition logs

The records published from MQTT Transmission can be be viewed in the Ignition Gateway logs by setting the com.cirruslink.mqtt.engine.gateway. sparkplug.SparkplugPayloadHandler logger to TRACE.

Review the Gateway Loggers from	Ignition for details on how to do t	his.
D SparkplugPayloadHandler	22Dec2022 10:48:26	Got Sparkplug message: spBv1.0/My MQTT Group/NDATA/Edge Node 994161
T SparkplugPayloadHandler	22Dec2022 10:48:26	On topic=spBv1.0/My MQTT Group/NDATA/Edge Node 994161: Incoming payload: SparkplugBPayload [timesta mp=1671727706485, metrics=[Metric [name=sample_file.txt, alias=null, timestamp=1671727706485, dataType =File, isHistorical=null, isTransient=null, metaDatametaData [isMultiPart=false, contentType=application/oct et-stream, size=110, seq=1, fileName=sample_file.txt, fileType=, md5=85324fbcc7d97c478ad53796aff787, de scription=], propertise=Propertyset [corpertyMap=filePublishingTagFolderPath=PropertyValue [type=String, value=my_files/, isNull=false], filePublishingTagFovide=PropertyValue [type=String, value=defaut, isNull=fal se]]], value=File [fileName=sample_file.txt, bytes=[84, 104, 105, 115, 32, 105, 115, 29, 73.2; 115, 97, 109, 112, 1 08, 101, 32, 102, 105, 108, 101, 32, 116, 111, 32, 116, 105, 101, 115, 116, 32, 100, 101, 32, 116, 114, 77, 110, 1 15, 102, 101, 114, 32, 99, 97, 112, 97, 98, 105, 104, 105, 116, 105, 101, 115, 32, 103, 101, 103, 103, 105, 110, 115, 104, 104, 32, 09, 110, 105, 115, 115, 105, 111, 110, 32, 116, 1104, 32, 09, 110, 103, 105, 111, 110, 32, 116, 1114, 97, 110, 115, 109, 105, 115, 115, 105, 111, 110, 32, 116, 1114, 32, 69, 110, 103, 105, 111, 110, 32, 116, 1114, 32, 69, 110, 103, 32, 83, 112, 97, 114, 107, 112, 108, 117, 113, 33, 10]], isNull=false]], seq=5, uuid= ull, body=null]

Extra Activities

At this point you have a fully functional system which can be expanded or modified as required. Below are some addition configuration options to try:

Adjust the file transfer configuration to define how quickly a file transfer occurs and how long before a timeout will occur on failure to receive host side acknowledgements based on the size of files you are sending and any bandwidth constraints that you may have.

\rightarrow C	O 🗅 loc	🗅 localhost:8088/web/config/mqtttransmission.settings?18 යි				
OPC CLIENT	🌣 Cont	fig > Mqtttransmission >	MQTT Transmission Settings			
OPC Connections	Trial M	Trial Mode 0:45:38 We're glad you're test driving our software. Have fun. Active				
OPC Quick Client		Show advanced properties				
OPC UA		Advanced Settings				
Device Connections						
Security Server Settings		Message Size	1000 Number of bytes to transfer in one message (default: 1,000)			
BACNET	DN	Message Pacing Period	1000 Message Pacing Period in milliseconds (default: 1,000)			
Setup SEQUENTIAL FUNCTION CHA	RTS	Message ACK Timeout	10 Message acknowledgement timeout in seconds (default: 10)			
MQTT DISTRIBUTOR		Number Retries	3 Number of retries to publish a file or a chunk of a file (default: 3)			
MQTT ENGINE		Submit Basic File Attributes	If checked, the metrics will contain basic file attributes (i.e. CreationTime, LastModifiedTime, and LastAccessTime). (default: faise)			

Setup two Ignition systems - a host system installed with MQTT Engine and MQTT Distributor and and edge system installed with MQTT Transmission

By default, MQTT Transmission is configured to connect to MQTT Distributor on tcp://localhost:1883. As the MQTT Distributor is installed on a different server, we will need to edit the configuration to allow MQTT Transmission to connect to the host server.

The MQTT Server must be accessible to the Ignition system running MQTT Transmission. In order for this to work port 1883 must be open to
 outside connections. Make sure this is allowed via your operating system's firewall configuration and any anti-virus software you may have
 installed.

This configuration is not recommended for production systems. If running this in production, you should be using TLS encryption on port 8883. More information on how to configure TLS can be found here.

Navigate to the MQTT Transmission > Settings in the left side bar of the Ignition Gateway UI and select the Servers tab.

Change the server URL to point to the server IP address or domain name of the Ignition system running MQTT Distributor and save the configuration.

Additional Resources

- Inductive Automation's Ignition download with free trial
 ^o Current Ignition Release
- Cirrus Link Solutions Modules for Ignition
- Ignition Strategic Partner Modules
- Support questions
 - Check out the Cirrus Link Forum: https://forum.cirrus-link.com/
 Contact support: support@cirrus-link.com
- Sales questions
 - Email: sales@cirrus-link.com
 - Phone: +1 (844) 924-7787
- About Cirrus Link
 - https://www.cirrus-link.com/about-us/