UDMI Compliance Matrix

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		Description	Test name [1]	References
Software Defined Building				
	Native UDMI			
	Payloads	Native configuration of UDMI payloads - not dependant on manual creation of MQTT message structures		
	Dynamic Point Mapping	Dynamic configuration of points via config		
Connection				
	MQTT 3.1.1 support	Device supports MQTT 3.1.1	protocol.mqtt.baseline	
	MQTT/TLS Support	Device supports connection to an MQTT broker with TLS encryption and at least TLS v1.2		
	Server certificate validation	Device validates MQTT broker server certificates		
	JWT Certificates	Device supports use of JWT for authentication with an MQTT broker		
	GCP IoT Core support	Device is able to succesfuly connect to GCP IoT Core	iot.gcpiot.connection	
	Maintains Connection	Device maintains connection to MQTT Broker/Bridger for > {X} minutes		
	Network resumption reconnection	Device reconnects to MQTT broker when network connection is restored after a distruption		
Endpoint				
	Configurable private keys	Possible to upload private keys onto the device for MQTT authentication		
	Client certificate Rotation	Device can rotate between multiple private keys to use for MQTT broker connection		
	Endpoint remote configuration	Device can be remotely reconfigured to a different GCP Project/MQTT Broker		
	Config subscription	Device subscribes to config topic		
Pointset			iot.udmi.baseline	
	Datapoints mapping			
	Datapoint mapping	Map internal datapoints to UDMI datapoints		
	Pointset Event		iot.udmi.baseline	
	Event Publish	Publishes pointset event messages	iot.udmi.pointset.frequency	
	sample_rate_sec	Valid event payload schema, with complete pointset sent within the sample_rate_min time period		
	Frequency	Telemetry (complete update) sents at a frequency > {X}s		
	Configurable sample rate	Implements sample_limit_sec and sample_rate_sec		
	Partial Updates			
	Partial updates	Supports partial updates (with partial_update flag set to *true)*		
	CoV			
	Supports CoV	Device supports CoV		
	Configurable CoV Increment	Configurable CoV increment from cloud config		
	State		iot.udmi.baseline	
	State publish	Publishes state messages		
	Schema	Valid state payload schema sent by device (individual, gateway and proxied devices) including complete pointset		
	Frequency	State update sent at a frequency > {X}s		
	Rate Limiting	Device publishes state no more than 1 state update per second		
	State after configuration	Device publishes state update after recieving new configuration		
	State last update	last_update field in state is timestamp of last configuration		
Monitoring				
	System Status			
	Publishes status	Device publishes status fields	iot.udmi.system.logging	
	status schema	Status blocks are valid according to the schema	iot.udmi.system.logging	
	min_loglevel	Configurable min log level for publishing status/logging information	iot.udmi.system.logging	
	Log entries			
	system/logentry	Device pubishes log entries to system/log entry		
	logentry schema	Log entries are valid according to the schema		
Gateway				
	IoT Gateway	Device capable of acting as a IoT gateway and can attach to atleast one proxy device	iot.udmi.gateway. attached_devices	
	Device Errors	Reports device errors in gateway state message		
Writeback				
	Basic Writeback	Device implements basic writeback functionality		
	Succesful Writeback			
	Value state applied	point state in state message set to applied	iot.udmi.writeback.set_value	
	Point value updated	point value updated in telemetry	iot.udmi.writeback.set_value	
	Unwriteable/over-ridden points			
	Value not applied	points which are unwriteable or overridden are not updated and state is set to failure		
	Status			
	state.pointset.points.config.failure	point status for failure to apply		
	Invalid writeback			
	Value not applied	Invalid writeback (e.g. out of range) is reported		
	Status			
	state.pointset.points.config.invalid	point status for invalid writeback		
	State etag			
	State etags	Device implements state etags and rejects config updates with invalid etags		
	Status			
	state.pointset.points.config.invalid			
	Config Expiry			
	Config Expiry	Device implements configuration expiry		
	Status			

1. Test name within the DAQ test suite