# Step 5 Send commands from google cloud to Niagara

Google Connector supports cloud to niagara communication via mqtt messages to control points remotely.

## Send a point action command

1. Go to the Google IoT Core view then choose the name of the device you want to send commands to. (make sure to use the commands topic not the config topic)

<b>m</b>	IoT Core	Devices CREATE A DEVICE 👕 DELETE					
⊞	Registry details	Registry ID: btibtest					
0	Devices	europe-west1					
	Gateways	Devices are things that connect to the internet directly or through a gateway. Learn more					
<b>m</b>	Monitoring						
		Device ID     AHU_01_u0SAYCUHda9VUZ5h5Z7nR     alarms     dev201010     test					
		Cloud IoT Core documentation					

You can change the command topic name in the connector configuration.

Advanced Config	Advanced Config
Commands Topic	Commands Topic 🚽
📔 State Update Delay	Commands Topic
Project Id	Config Topic

2. By default we use this message template for **POINT\_ACTION** command. by you can use any format that meat your needs. check the connector advanced settings.

-

b. This is the default connector point action command configuration.

Commands Policy	Single Point Command 🗸
Message Type	<pre>{json('type')}</pre>
Command Set Object	<pre>{json('').escape}</pre>
Command Device Id	<pre>{json('deviceId')}</pre>
Command Point Id	<pre>{json('pointId')}</pre>
Command Action	<pre>{json('payload.action')}</pre>
Command Value	<pre>{json('payload.value')}</pre>
Command Duration	<pre>{json('payload.duration')}</pre>

3. On the left chose send command.

a. This is the default command template.

Device ID: AHU_01_u0SA	YCUHda9VUZ5h5Z7nR	7'
Numeric ID Registry Cl	loud Logging Communic	cation
2932532456365771 btibtest Re	egistry default View logs Allowed	
DETAILS CONFIGURATION & S		
Latest activity		
Heartbeat (MQTT only)	Oct 20, 2020, 2:11:23 PM	
Telemetry event received	Oct 20, 2020, 11:58:23 AM	Send command
Device state event received	Oct 20, 2020, 11:53:36 AM	
Config sent	-	Enter a one-time directive in the field below. Devices must be connected to MQTT and
Zone Config ACK (MQTT only)	-	subscribed to the commands topic at the time your directive is sent.
Error	-	Format
		Text
Device metadata		O Base64
You can add or edit metadata in device	settings. Edit device	- Command data *
		"type": "POINT_ACTION",
ahu	м 🖻	"deviceId": "AHU_01_u0SAYCUHda9VUZ5h5Z7nR",
building	Headquarters 🛅	"pointid": "Setpoint_vUSAYCUEtoUyS3P0d15kd", "navload": /
category	Air Handling 👩	"action": "SET",
description	-	"value": 23
device	м 💼	→ →
deviceId	AHU_01_u0SAYCUHda9VUZ	
displayName	AHU_01 🔽	Cubéndor
equip	M	
equipment	AHU 🗖	i ne command will be delivered to the commands topic tolder if no subfolder is specified.
family	IO Module 🛅	
floor	Level 2 T	
hvac	M	CANCEL SEND COMMAND
	-	
id	u0SAYCUHda9VUZ5h5Z7nR	

#### 4. Then hit Send command.

5. On the niagara you should see the point value applied successfully.

Property Sneet	
🔇 Setpoint (Numeric Writable)	
Facets	units=null,precision=1,min=-inf,max=+inf 📎 🤇
Proxy Ext	null
— Out	23.0 {ok} @ def
In1	- {null}
In2	- {null}
In3	- {null}
— In4	- {null}
In5	- {null}
- 1-0	7 333

6. And the new value sent to the cloud.

➡ Filter table		
Publish time 🔸	Attribute keys	Message body
Oct 20, 2020, 2:15:29 PM	deviceId	{
	deviceNumId	"pointId": "Setpoint_v0SAYCUEtoUyS3P0df5kd",
	deviceRegistryId	"timestamp", "2020-10-20114.15:28.464+02:00", "value": 23.00
	deviceRegistryLocation	"status": "{ok} @ def"
	projectId	}
	subFolder	

## Send a send history command

You can pull historical value for any point that has a history associated by sending a SEND\_HISTORY command.

1. Add a history. extension to the point.

✓ ▲ AHU_01	: activeBAS : Setpoint				
Alarm Source Info	Time Range 19-Oct-20 1:55 PM CEST to ? (5)				
The Points	activeBAS/Setpoint				
	Timestamp Trend Flags Status Value     Theorem Contemporation of the second secon				
Proxy Ext	19-Oct-20 442:30 PM CEST [] [ot] 23.0				
InfoSource	19-Oct-20 44240 PM CEST [] {ok} 23.0				
NumericInterval	19-Oct-20 4x2:50 PM CEST [] {ok} 23.0 19-Oct-20 4x43:00 PM CEST [] {ok} 23.0				
GoogleloTCorePointExt	19-Oct-20 4443:10 PM CEST [] {ok} 23.0				
	10.0ct.00.443/00.DM CEST 11 Jok1 03.0				

2. Go to the cloud console and send the command to the device.



- 3. By default we use this message template for send history command. by you can use any format that meat your needs. check the connector advanced settings.
  - a. This is the default command template.

{	
	"type": "SEND_HISTORY",
	"deviceId": "AHU_01_u0SAYCUHda9VUZ5h5Z7nR",
	"pointId": "Setpoint_v0SAYCUEtoUyS3P0df5kd",
	"payload": {
	"startDate": "2020-10-20T00:40:00.000+02:00",
	"endDate": "2020-10-20T23:50:00.000+02:00"
	}
}	
,	

b. This is the default connector send history command configuration.

Commands Policy	Single Point Command 👻	
📔 Message Type	{json('type')}	()
📔 Command Set Object	<pre>{json('').escape}</pre>	()
Command Device Id	<pre>{json('deviceId')}</pre>	()
Command Point Id	{json('pointId')}	()
Command Action	<pre>{json('payload.action')}</pre>	()
Command Value	<pre>{json('payload.value')}</pre>	0
Command Duration	<pre>{json('payload.duration')}</pre>	0
📔 Start Date	<pre>{json('payload.startDate')}</pre>	0
📔 End Date	<pre>{json('payload.endDate')}</pre>	0
📔 Delta	<pre>{json('payload.delta')}</pre>	0
🗎 Roll Up	<pre>{json('payload.rollup')}</pre>	1

4. And you should see the messages being sent.

### PULL Enable ack messages

Publish time 🛛 🕹	Attribute keys	Message body	Ack
Oct 20, 2020, 2:22:22 PM	deviceId deviceNumId deviceRegistryId deviceRegistryLocation projectId subFolder	<pre>{     'startTimestamp': "2020-10-20T13:01:30.479+02:00",     "endTimestamp': "hull",     'deviceld': "AHU_01_u0SAYCUHda9VUZ5h527nR",     "pointid": "Setpoint_v0SAYCUEtoUyS3P0df5kd",     "trendsFlags": "0,     "status": "(overridden)",     "value": 10.0,     "count": null,     "min": null,     "max": null,     "avg": null,     "say": null }</pre>	Deadline exceeded
Oct 20, 2020, 2:22:22 PM	deviceId deviceNumId deviceRegistryId deviceRegistryLocation projectId subFolder	<pre>{     'startTimestamp': "2020-10-20T13:01:40.325+02:00',     'endTimestamp': "null",     'deviceld': "AHU_01_u0SAYCUHda9VUZ5h5Z7nR",     'pointId': "Setpoint_v0SAYCUEtoUyS3P0df5kd",     ''trendsFlagst: "0',     ''statust': "(overridden)",     'value': 10.0,     'count': null,     ''mix': null,     ''max': null,     'avg': null,     'sum': null }</pre>	Deadline exceeded
Oct 20, 2020, 2:22:22 PM	deviceId	,	Deadline exceeded

To change the message format check the connector advanced setting then history message template



### Send ack alarm command

You can ack alarms by sending an ACK\_ALARM command to any alarm recipient device.

- 1. By default we use this message template for ack alarm command. by you can use any format that meat your needs. check the connector advanced settings.

  - b. This is the default connector send history command configuration.

	"min": \$(min),	<b>T</b>
📔 Alarm Uuid	<pre>{json('payload.uuid')}</pre>	

2. Go the alarms console and pick an unacked alarm id.

}

}

Today 💌								
Alarm History								
Timestamp	Sou	rce State	Ack State	Source	Alarm Class	Priority	Message Text	
💭 20-Oct-20 9:32:49 AM CEST		mal	Acked	Active Power A	HVAC_Level1	255	To Normal Power Pł	
🌲 20-Oct-20 9:35:21 AM CEST		mal	Unacked	Active Power A	HVAC_Level1	255	To Normal Power Pł	
🜲 20-Oct-20 9:43:19 AM CEST	No	4 Alarmal	Pacard					
🌲 20-Oct-20 9:53:50 AM CEST	Nc	Aldrift	Record					
🜲 20-Oct-20 9:59:19 AM CEST	Nc	Timesta	mp	20-Oct-20 9:	:35:21 AM CE	ST		
🌲 20-Oct-20 10:01:51 AM CEST	No	Uuid		f698beca-c625-44ce-a8d8-5af9b9f46b1b				
20-Oct-20 10:07:19 AM CEST	No	Source State		Normal				
-		Ack Stat	te	Unacked				
20-Oct-20 10:12:49 AM CEST	Nc	Ack Req	uired	true				
20-Oct-20 10:15:21 AM CEST	No	Source		Active Power	c A			

3. Go to the alarm device and send the command.

Device details	EDIT DEVICE 💠 UPDATE CON	FIG A SEND COMMAND EBLOCK COMMUNICATION			
	1				
Device ID: alarms					
lumeric ID Registry (	Cloud Logging Commu	nication			
2857530869906684 btibtest F	Registry default View logs Allowed				
CONFIGURATION &	STATE AUTHENTICATION				
Latest activity					
Heartbeat (MQTT only)	Oct 20, 2020, 2:26:08 PM				
elemetry event received	Oct 20, 2020, 12:09:07 PM	Send command			
Device state event received	-				
Config sent	-	Enter a one-time directive in the field below. Devices must be connected to MQTT and			
Zone Config ACK (MQTT only)	-	subscribed to the commands topic at the time your directive is sent.			
Error	-	Format			
		Text			
Device metadata		O Base64			
/ou can add or edit metadata in devic	e settings. Edit device.	Command data *			
		{			
		"type": "ACK_ALARM",			
		payroau . { "uuid": "f698beca-c625-44ce-a8d8-5af9b9f46b1b"			
		}			
		}			
		Subfolder			
		i ne command will be delivered to the commands topic folder if no subfolder is specified.			
		CANCEL SEND COMMAND			

4. Go back to the console and you should see that the alarm has been acked.

Today								
Alarm History								
Timestamp	Source State	Ack State	Source	Alarm Class	Priority	Message Text		
💭 20-Oct-20 9:32:49 AM CEST	Normal	Acked	Active Power A	HVAC_Level1	255	To Normal Powe		
💭 20-Oct-20 9:35:21 AM CEST	Normal	Acked	Active Power A	HVAC_Level1	255	To Normal Powe		
20-Oct-20 9:43:19	- Record							
20-Oct-20 9:53:50								
🜲 20-Oct-20 9:59:19 Times	Timestamp 20-Oct-20 9:35:21 AM CEST							
🔔 20-Oct-20 10:01:5 Uuid	Uuid		f698beca-c625-44ce-a8d8-5af9b9f46b1b					
Source	Source State		Normal					
Ack St	Ack State		Acked					
🜲 20-Oct-20 10:12:4 Ack Re	equired	false						
Source		Active Power A						

# Next Step

Step 6 Consume Data from IoT Core to Google BigQuery