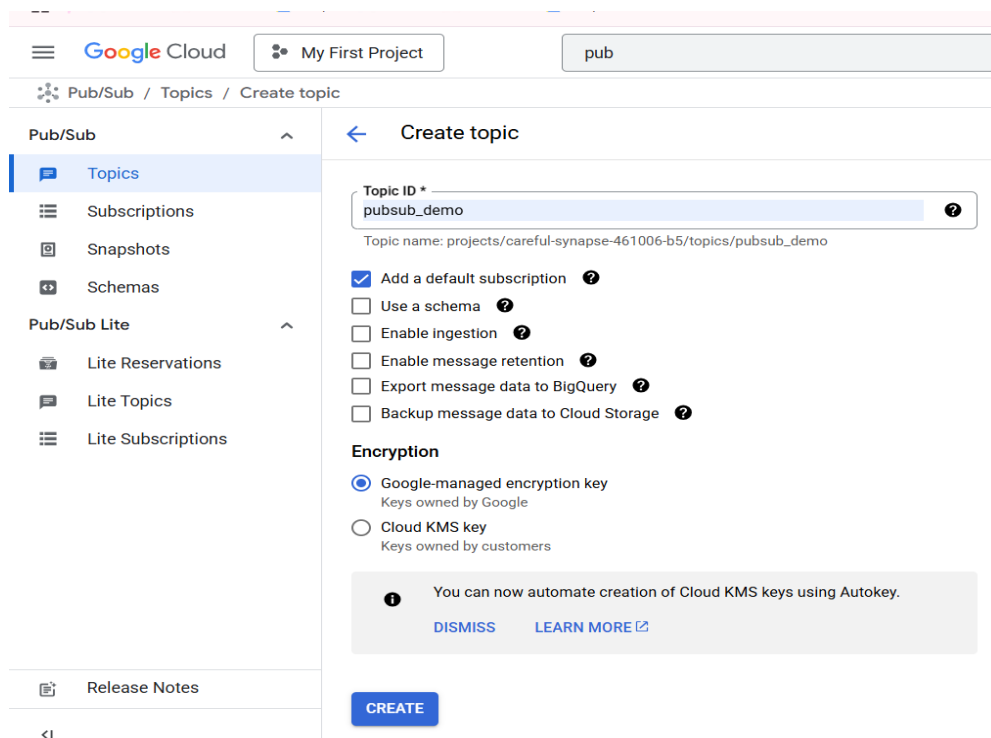


GCP Pub/Sub Implementation

This document provides a step-by-step guide to implementing Google Cloud Pub/Sub to Pub/Sub "GCP Pub/Sub Introduction | Create Topic, Subscription and Publish Messages, GCP Console and Cloud shell"

1. CREATE A PUB/SUB TOPIC:

- In the Google Cloud Console, go to the Pub/Sub section.
- Click on Create Topic.
- Enter a name for your topic (e.g. Pubsub_demo).
- Click Create to finalize the topic creation.



The screenshot shows the Google Cloud Console interface for creating a new Pub/Sub topic. The top navigation bar includes the Google Cloud logo, the project name 'My First Project', and a search bar with 'pub' entered. The left sidebar shows the 'Pub/Sub' section expanded, with 'Topics' selected. The main content area is titled 'Create topic' and contains the following fields and options:

- Topic ID ***: A text input field containing 'pubsub_demo'. Below it, the full topic name is displayed: 'projects/careful-synapse-461006-b5/topics/pubsub_demo'.
- Options**: A list of checkboxes with labels and help icons:
 - ☒ Add a default subscription
 - ☐ Use a schema
 - ☐ Enable ingestion
 - ☐ Enable message retention
 - ☐ Export message data to BigQuery
 - ☐ Backup message data to Cloud Storage
- Encryption**: Two radio button options:
 - ☒ Google-managed encryption key (Keys owned by Google)
 - ☐ Cloud KMS key (Keys owned by customers)

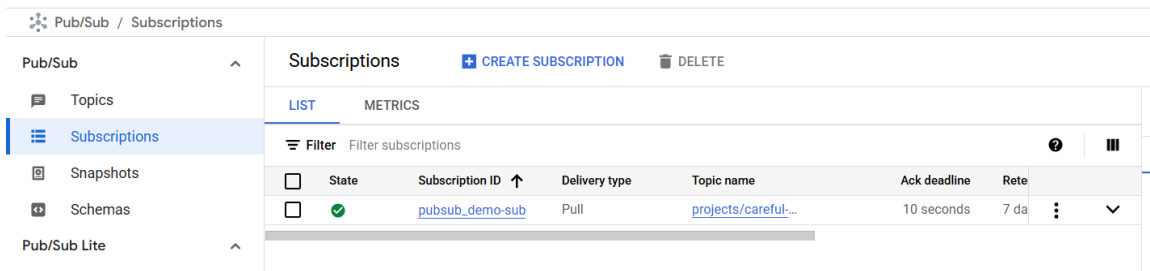
At the bottom, there is a blue 'CREATE' button. A notification banner at the bottom of the form states: 'You can now automate creation of Cloud KMS keys using Autokey.' with 'DISMISS' and 'LEARN MORE' links.

2. CREATE A SUBSCRIPTION:

- Within the same Pub/Sub section, select your newly created topic.
- Click on Create Subscription.
- Provide a name for the subscription (e.g., your-subscription-name).
- Choose the delivery type (Pull or Push).
- Configure other settings as needed, then click Create.

OR:

- In previously we creating topic there we select “add a default subscription”
- Go to Subscription
- View the default subscription are created.

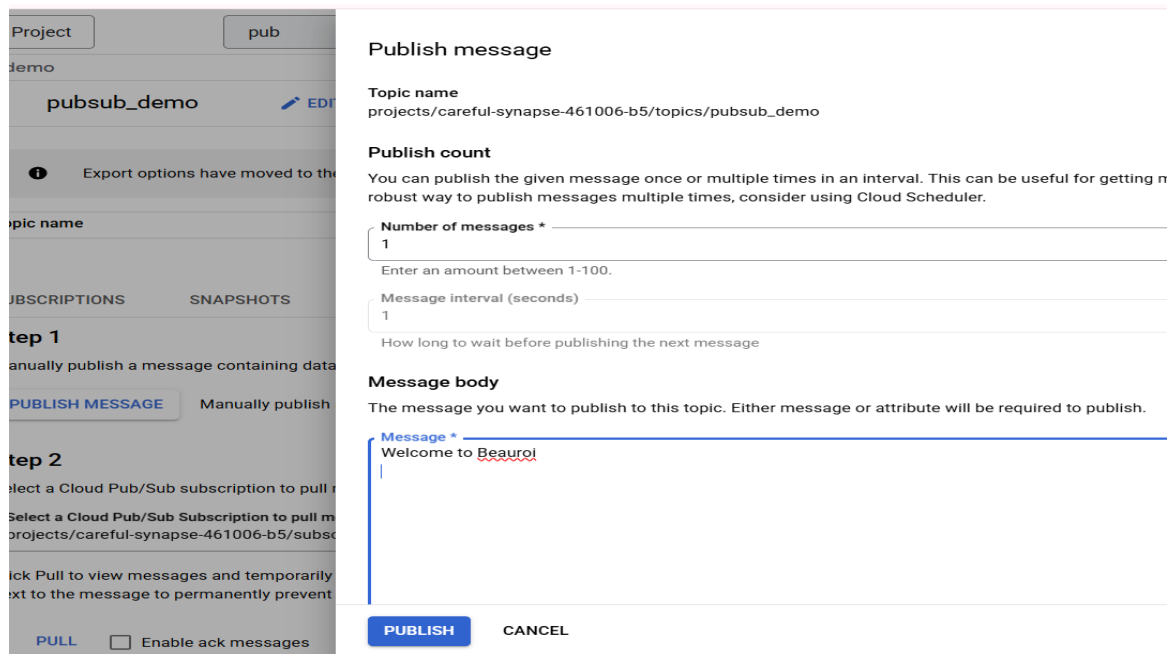


3. PUBLISH MESSAGES TO THE TOPIC:

We can publish messages using the Google Cloud Console.

Using Google Cloud Console:

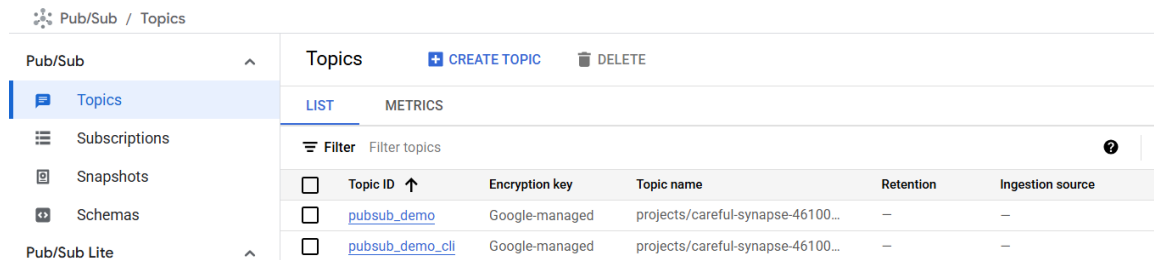
- Navigate to your topic in the Pub/Sub section.
- Choose subscription path
- Click on Publish Message
- Enter a message in the Message Body field.
- Click Publish to send the message to the topic.
- Click the Pull icon.
- View the output.



4. IMPLEMENTING GOOGLE CLOUD PUB/SUB IN THE COMMAND-LINE INTERFACE (CLI).

I. CREATE TOPIC:

COMMAND: `gcloud pubsub topics create pubsub_demo_cli`

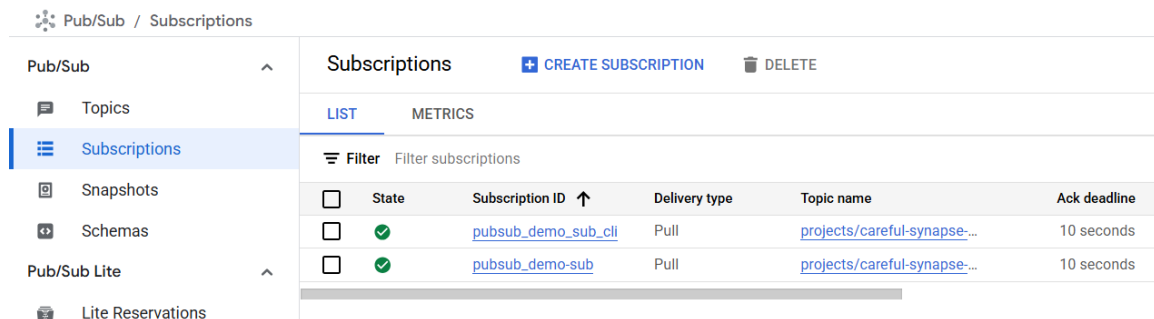


The screenshot shows the Google Cloud Pub/Sub console. The left sidebar has a menu with 'Topics' selected. The main area shows a table of topics. There are two topics listed: 'pubsub_demo' and 'pubsub_demo_cli'. Both are Google-managed and have a retention of 10 seconds.

Topic ID	Encryption key	Topic name	Retention	Ingestion source
pubsub_demo	Google-managed	projects/careful-synapse-46100...	10 seconds	—
pubsub_demo_cli	Google-managed	projects/careful-synapse-46100...	10 seconds	—

II. CREATE SUBSCRIPTION:

COMMAND: `gcloud pubsub subscriptions create pubsub_demo_sub_cli --topic=pubsub_demo_cli`



The screenshot shows the Google Cloud Pub/Sub console with the 'Subscriptions' tab selected. A table lists two subscriptions: 'pubsub_demo_sub_cli' and 'pubsub_demo_sub'. Both are in a 'READY' state and have an acknowledgment deadline of 10 seconds.

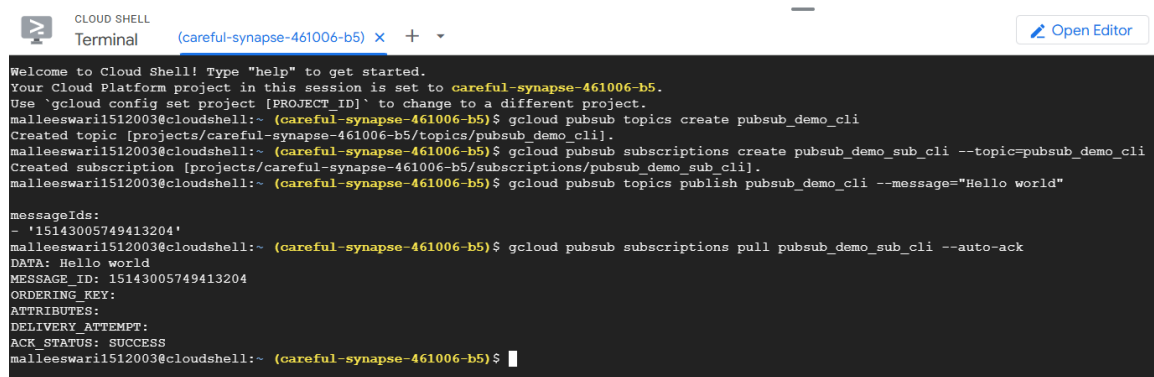
State	Subscription ID	Delivery type	Topic name	Ack deadline
READY	pubsub_demo_sub_cli	Pull	projects/careful-synapse-46100...	10 seconds
READY	pubsub_demo_sub	Pull	projects/careful-synapse-46100...	10 seconds

III. PUBLISH MESSAGE TO TOPIC:

COMMAND: `gcloud pubsub topics publish pubsub_demo_cli --message="Hello world"`

IV. RECEIVE MESSAGES:

COMMAND: `gcloud pubsub subscriptions pull pubsub_demo_sub_cli --auto-ack`



```
WELCOME TO CLOUD SHELL! Type "help" to get started.
Your Cloud Platform project in this session is set to careful-synapse-461006-b5.
Use 'gcloud config set project [PROJECT_ID]' to change to a different project.
malleeswari1512003@cloudshell:~ (careful-synapse-461006-b5)$ gcloud pubsub topics create pubsub_demo_cli
Created topic [projects/careful-synapse-461006-b5/topics/pubsub_demo_cli].
malleeswari1512003@cloudshell:~ (careful-synapse-461006-b5)$ gcloud pubsub subscriptions create pubsub_demo_sub_cli --topic=pubsub_demo_cli
Created subscription [projects/careful-synapse-461006-b5/subscriptions/pubsub_demo_sub_cli].
malleeswari1512003@cloudshell:~ (careful-synapse-461006-b5)$ gcloud pubsub topics publish pubsub_demo_cli --message="Hello world"

messageIds:
- '15143005749413204'
malleeswari1512003@cloudshell:~ (careful-synapse-461006-b5)$ gcloud pubsub subscriptions pull pubsub_demo_sub_cli --auto-ack
DATA: Hello world
MESSAGE_ID: 15143005749413204
ORDERING_KEY:
ATTRIBUTES:
DELIVERY_ATTEMPT:
ACK_STATUS: SUCCESS
malleeswari1512003@cloudshell:~ (careful-synapse-461006-b5)$
```

