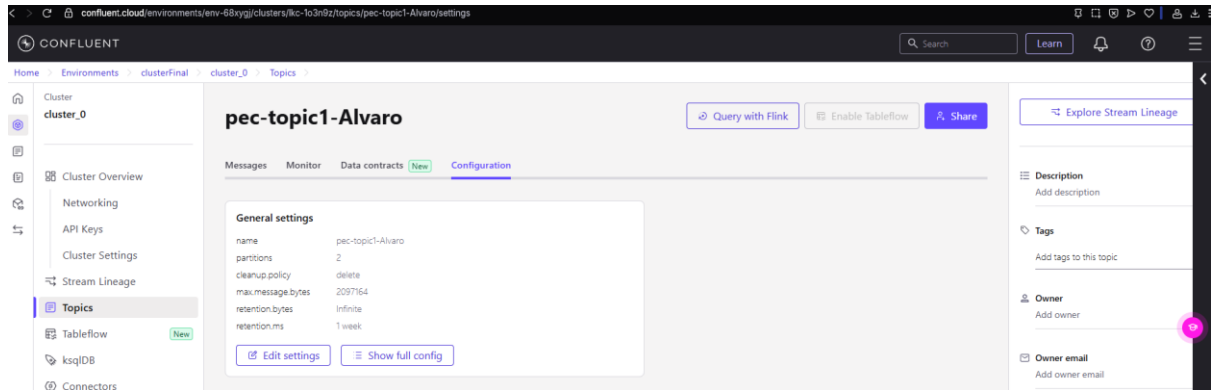


## Actividad de refuerzo nº.8. Kafka refuerzo

1. Crear un nuevo *topic* denominado 'pec-topic1-<NombreAlumno>' con dos particiones y con factor de replicación 1.



Topic creado desde confluent. Con 2 particiones.

A la pregunta del punto 1: ¿Sería posible crearlo en el entorno que tienes con un factor de replicación de 2? ¿Por qué?

Respondemos “NO”. Para crear un entorno con factor de replicación dos necesitas añadir dos broker en la línea de bootstrap server y hacerlo desde la cmd. En confluent de hecho si queremos crear desde ahí el topic nos pone automáticamente el factor de replicación a tres para que el funcionamiento sea el óptimo.

2. Crea un productor que empiece a pasar información desde la línea de comandos al *topic* creado anteriormente y simular el envío de información.

```
Microsoft Windows [Versión 10.0.26100.3775]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Users\alvar>curl -sL --http1.1 https://cnfl.io/cli | sh -s -- latest
"sh" no se reconoce como un comando interno o externo,
programa o archivo por lotes ejecutable.

C:\Users\alvar>confluent login
"confluent" no se reconoce como un comando interno o externo,
programa o archivo por lotes ejecutable.

C:\Users\alvar>confluent cloud-signup
"confluent" no se reconoce como un comando interno o externo,
programa o archivo por lotes ejecutable.

C:\Users\alvar>
```

Intentamos utilizar confluent en cmd pero para ello hay que ir a su carpeta y desde ahí lanzar el .exe y ya los comandos.

```
Símbolo del sistema

C:\Users\alvar\Downloads\confluent_4.26.1_windows_amd64\confluent>confluent login --save
Enter your Confluent Cloud credentials:
Email: alvarotroli891@gmail.com
Logged in as "alvarotroli891@gmail.com" for organization "a8e50913-9ae7-49ad-b084-8dc0b9fc42a2" ("Student").

C:\Users\alvar\Downloads\confluent_4.26.1_windows_amd64\confluent>confluent kafka cluster list
None found.

C:\Users\alvar\Downloads\confluent_4.26.1_windows_amd64\confluent>confluent enviroment use env-68xygj
Error: unknown command "enviroment" for "confluent"

Did you mean this?
    environment

Run 'confluent --help' for usage.

C:\Users\alvar\Downloads\confluent_4.26.1_windows_amd64\confluent>confluent environment use env-68xygj
Using environment env-68xygj.

C:\Users\alvar\Downloads\confluent_4.26.1_windows_amd64\confluent>confluent kafka cluster list
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
Current | ID      | Name      | Type | Cloud | Region  | Availability | Network | Status
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
        | lkc-1o3n9z | cluster_0 | BASIC | gcp   | europe-west1 | low          |         | UP
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+

C:\Users\alvar\Downloads\confluent_4.26.1_windows_amd64\confluent>confluent kafka cluster use lkc-1o3n9z
Set Kafka cluster lkc-1o3n9z as the active cluster for environment env-68xygj.

C:\Users\alvar\Downloads\confluent_4.26.1_windows_amd64\confluent>
```

Iniciada la sesion en confluent desde cmd y entrada en el cluster del enviroment.

```
C:\Users\alvar\Downloads\confluent_4.26.1_windows_amd64\confluent>confluent api-key store MBZFK5PFYOEEO3H bSaWce1NoSzwu
WTFdEIfBE6UE1Gk1gkuSsyYom1EB0YYuMIm7BSOUBtW3315D70V --resource lkc-1o3n9z
Stored secret for API key "MBZFK5PFYOEEO3H".

C:\Users\alvar\Downloads\confluent_4.26.1_windows_amd64\confluent>confluent api-key use MBZFK5PFYOEEO3H --resource lkc-1o3n9z
Using API Key "MBZFK5PFYOEEO3H".

C:\Users\alvar\Downloads\confluent_4.26.1_windows_amd64\confluent>
```

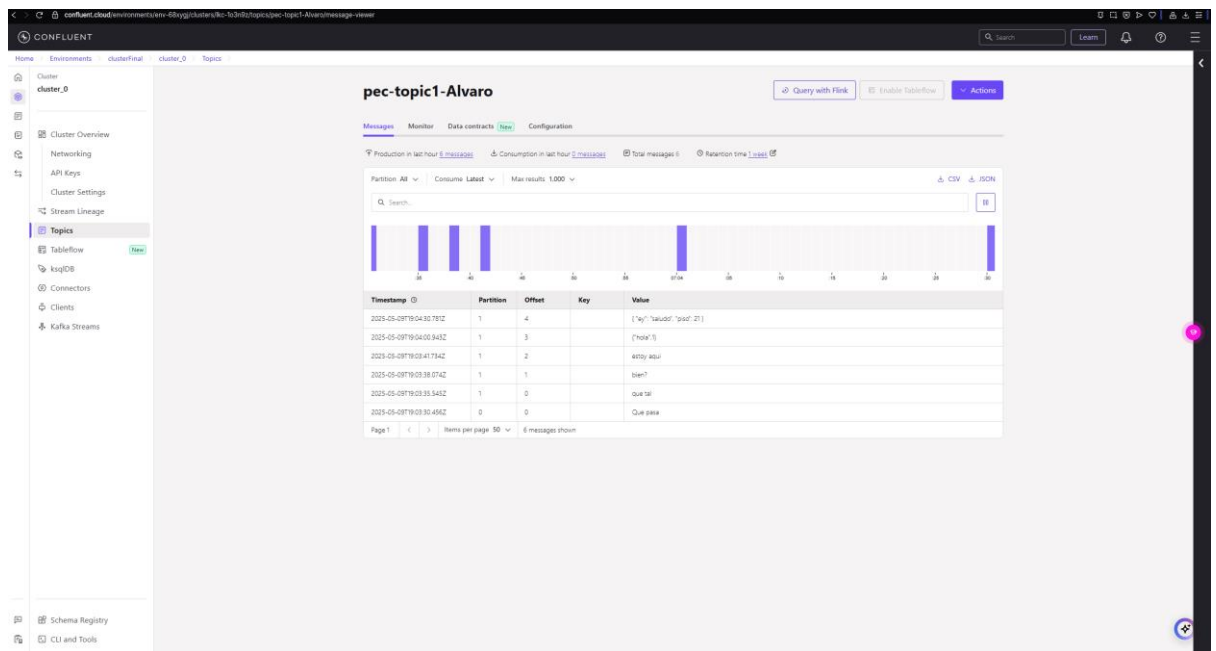
Utilizando la API key que nos da confluent en el proceso de creacion del topic.

```
C:\Users\alvar\Downloads\confluent_4.26.1_windows_amd64\confluent>confluent kafka topic produce pec-topic1-Alvaro
Starting Kafka Producer. Use Ctrl-C to exit.
%6|1746817076.556|GETSUBSCRIPTIONS|Confluent-CLI_v4.26.1#producer-1| [thrd:main]: Telemetry client instance id changed f
rom AAAAAAAAAAAAAAAAAAAAAA to iM/NjPK8SweXpZqvxbqeNw
Que pasa
que tal
bien?
estoy aqui
{"hola",1}
{"ey": "saludo", "piso": 21}
panic: send on closed channel

goroutine 38 [running]:
github.com/confluentinc/cli/v4/internal/kafka.(*command).produceToTopic.func2()
C:/semaphore-agent/cli-release/cli/internal/kafka/command_topic.go:234 +0x36
created by github.com/confluentinc/cli/v4/internal/kafka.(*command).produceToTopic in goroutine 1
C:/semaphore-agent/cli-release/cli/internal/kafka/command_topic.go:232 +0x393

C:\Users\alvar\Downloads\confluent_4.26.1_windows_amd64\confluent>
```

Creamos desde linea de comandos el producer de kafka.



Vemos que el topic recibe las palabras del producer.

3. Crear un consumidor que sea capaz de leer toda la información que contenga el *topic* creado.

```
C:\Users\alvar\Downloads\kafka_2.13-3.9.0\kafka_2.13-3.9.0\bin>bin/zookeeper-server-start.sh config/zookeeper.properties

"bin" no se reconoce como un comando interno o externo,
programa o archivo por lotes ejecutable.

C:\Users\alvar\Downloads\kafka_2.13-3.9.0\kafka_2.13-3.9.0\bin>bin/zookeeper-server-start.sh config/zookeeper.properties
"/zookeeper-server-start.sh" no se reconoce como un comando interno o externo,
programa o archivo por lotes ejecutable.

C:\Users\alvar\Downloads\kafka_2.13-3.9.0\kafka_2.13-3.9.0\bin>zookeeper-server-start.sh config/zookeeper.properties

C:\Users\alvar\Downloads\kafka_2.13-3.9.0\kafka_2.13-3.9.0\bin>bin/zookeeper-server-start.sh config/zookeeper.properties

"bin" no se reconoce como un comando interno o externo,
programa o archivo por lotes ejecutable.

C:\Users\alvar\Downloads\kafka_2.13-3.9.0\kafka_2.13-3.9.0\bin>
```

Para este punto debemos arrancar el servidor de zookeeper de kafka y el propio kafka.

```

PS C:\kafka_2.13-3.9.0\bin\windows> .\zookeeper-server-start.bat ..\..\config\zookeeper.properties
[2025-05-09 22:13:21,994] INFO Reading configuration from: ..\..\config\zookeeper.properties (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2025-05-09 22:13:21,994] WARN ..\..\config\zookeeper.properties is relative. Prepend .\ to indicate that you're sure! (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2025-05-09 22:13:21,994] WARN \tmp\zookeeper is relative. Prepend .\ to indicate that you're sure! (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2025-05-09 22:13:21,994] INFO clientPortAddress is 0.0.0.0:2181 (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2025-05-09 22:13:21,994] INFO secureClientPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2025-05-09 22:13:21,994] INFO observerMasterPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2025-05-09 22:13:21,994] INFO metricsProvider.className is org.apache.zookeeper.metrics.impl.DefaultMetricsProvider (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2025-05-09 22:13:21,994] INFO autopurge.snapRetainCount set to 3 (org.apache.zookeeper.server.DataDirCleanupManager)
[2025-05-09 22:13:21,994] INFO autopurge.purgeInterval set to 0 (org.apache.zookeeper.server.DataDirCleanupManager)
[2025-05-09 22:13:21,994] INFO Purge task is not scheduled. (org.apache.zookeeper.server.DataDirCleanupManager)
[2025-05-09 22:13:21,994] WARN Either no config or no quorum defined in config, running in standalone mode (org.apache.zookeeper.server.quorum.QuorumPeerMain)
[2025-05-09 22:13:21,994] INFO Log4j 1.2 jmx support not found; jmx disabled. (org.apache.zookeeper.jmx.ManagedUtil)
[2025-05-09 22:13:21,994] INFO Reading configuration from: ..\..\config\zookeeper.properties (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2025-05-09 22:13:21,994] WARN ..\..\config\zookeeper.properties is relative. Prepend .\ to indicate that you're sure! (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2025-05-09 22:13:21,994] WARN \tmp\zookeeper is relative. Prepend .\ to indicate that you're sure! (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2025-05-09 22:13:21,994] INFO clientPortAddress is 0.0.0.0:2181 (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2025-05-09 22:13:21,994] INFO secureClientPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2025-05-09 22:13:21,994] INFO observerMasterPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)

```

Zookeeper lanzado. Debemos dejar esto abierto y abrir otra terminal.

```

Seleccionar Windows PowerShell
[2025-05-09 22:59:36,920] INFO [GroupMetadataManager brokerId=0] Group console-consumer-86524 transitioned to Dead in generation 2 (kafka.coordinator.group.GroupMetadataManager)
[2025-05-09 22:59:36,920] INFO [GroupMetadataManager brokerId=0] Group console-consumer-86524 transitioned to Dead in generation 2 (kafka.coordinator.group.GroupMetadataManager)
[2025-05-09 22:59:59,898] INFO [GroupCoordinator 0]: Dynamic member with unknown member id joins group grupo1 in Empty state. Created a new member id console-consumer-dcf1ef5e-46e0-4e6f-a98b-67d021fcc458 and request the member to rejoin with this id. (kafka.coordinator.group.GroupCoordinator)
[2025-05-09 22:59:59,898] INFO [GroupCoordinator 0]: Preparing to rebalance group grupo1 in state PreparingRebalance with old generation 0 (__consumer_offsets=30) (reason: Adding new member console-consumer-dcf1ef5e-46e0-4e6f-a98b-67d021fcc458 with group instance id None; client reason: need to re-join with the given member-id: console-consumer-dcf1ef5e-46e0-4e6f-a98b-67d021fcc458) (kafka.coordinator.group.GroupCoordinator)
[2025-05-09 22:59:59,898] INFO [GroupCoordinator 0]: Stabilized group grupo1 generation 1 (__consumer_offsets=30) with 1 members (kafka.coordinator.group.GroupCoordinator)
[2025-05-09 22:59:59,915] INFO [GroupCoordinator 0]: Assignment received from leader console-consumer-dcf1ef5e-46e0-4e6f-a98b-67d021fcc458 for group grupo1 for generation 1. The group has 1 members, 0 of which are static. (kafka.coordinator.group.GroupCoordinator)
[2025-05-09 23:00:35,753] INFO [GroupCoordinator 0]: Dynamic member with unknown member id joins group grupo1 in Stable state. Created a new member id console-consumer-eaf93c0f-eebb-4718-bf27-046be3d7f890 and request the member to rejoin with this id. (kafka.coordinator.group.GroupCoordinator)
log4j:ERROR Failed to rename [C:\kafka_2.13-3.9.0\logs\server.log] to [C:\kafka_2.13-3.9.0\logs\server.log.2025-05-09-22].
[2025-05-09 23:00:35,756] INFO [GroupCoordinator 0]: Preparing to rebalance group grupo1 in state PreparingRebalance with old generation 1 (__consumer_offsets=30) (reason: Adding new member console-consumer-eaf93c0f-eebb-4718-bf27-046be3d7f890 with group instance id None; client reason: need to re-join with the given member-id: console-consumer-eaf93c0f-eebb-4718-bf27-046be3d7f890) (kafka.coordinator.group.GroupCoordinator)
[2025-05-09 23:00:36,024] INFO [GroupCoordinator 0]: Stabilized group grupo1 generation 2 (__consumer_offsets=30) with 2 members (kafka.coordinator.group.GroupCoordinator)
[2025-05-09 23:00:36,024] INFO [GroupCoordinator 0]: Assignment received from leader console-consumer-dcf1ef5e-46e0-4e6f-a98b-67d021fcc458 for group grupo1 for generation 2. The group has 2 members, 0 of which are static. (kafka.coordinator.group.GroupCoordinator)

```

Kafka lanzado. Otra terminal más hay que abrir.

```

PS C:\kafka_2.13-3.9.0\bin\windows> .\kafka-console-consumer.bat --bootstrap-server localhost:9092 `
> --topic pec-topic1-Alvaro `
> --from-beginning

```

Consumidor para leer todo el contenido del topic.

```

PS C:\kafka_2.13-3.9.0\bin\windows> .\kafka-console-consumer.bat --bootstrap-server localhost:9092 `
> --topic pec-topic1-Alvaro `
> --group grupo1

PS C:\kafka_2.13-3.9.0\bin\windows> .\kafka-console-consumer.bat --bootstrap-server localhost:9092 `
> --topic pec-topic1-Alvaro `
> --group grupo1

```

Creamos un grupo con dos consumidores para ver si funciona todo.

CONFLUENT

Home Environments cluster1 cluster\_0

Cluster Overview  
Networking  
API Keys  
Cluster Settings  
Stream Lineage  
Topics  
tableflow  
ksqldb  
Connectors  
**Clients**  
Kafka Streams

### Clients

Producers Consumers Consumer lag

Clients with activity within the last 10 minutes. Details about Kafka clients [available here](#) >

Search by Type, Client ID or Principal ID Filters 2

1 principal Collapse all Expand all CSV

Client ID	Type	Client Version	Production Rate/min	Number of topics
connector-producer-ks-v0866e-0	Connector	apache-kafka-java-8.0.0-10008-ce	1008/s	1

Vemos que en confluent tenemos un productor.

CONFLUENT

Home Environments cluster1 cluster\_0

Cluster Overview  
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ksqldb  
Connectors  
**Clients**  
Kafka Streams

### Clients

Producers Consumers Consumer lag

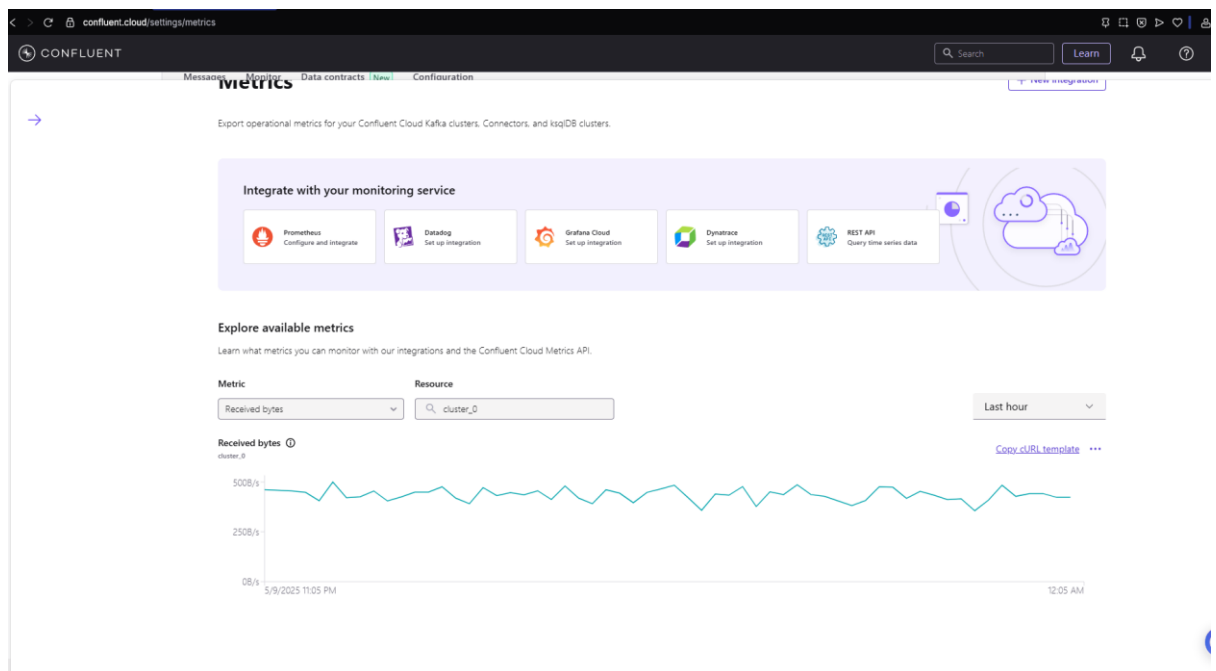
Clients with activity within the last 10 minutes. Details about Kafka clients [available here](#) >

Search by Type, Client ID or Principal ID Filters 2

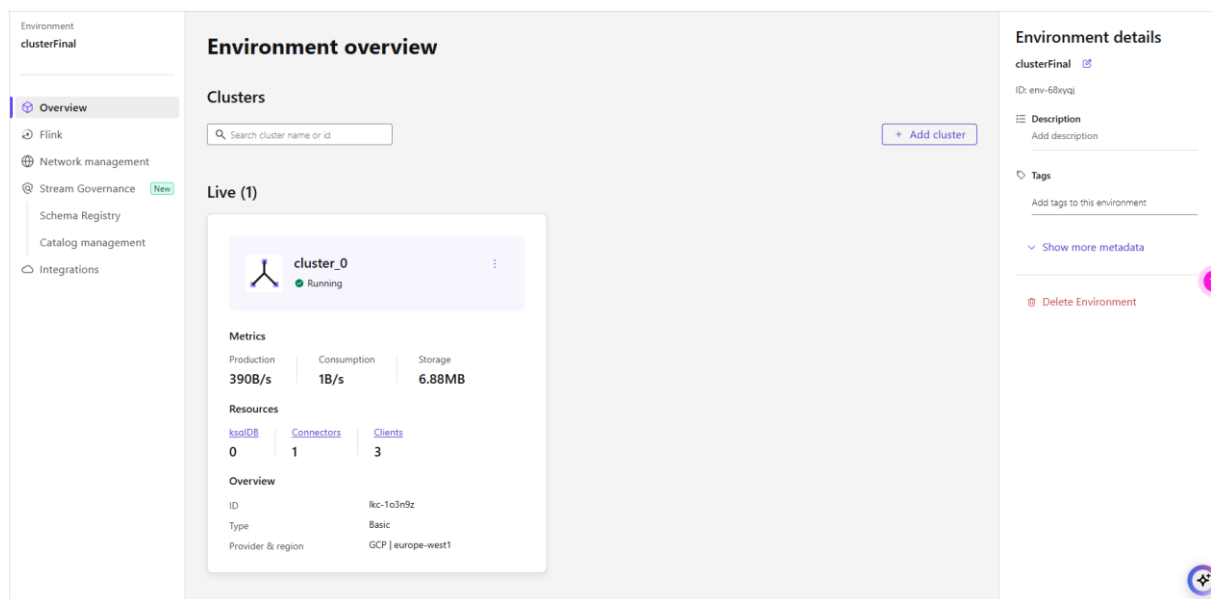
1 principal Collapse all Expand all CSV

Client ID	Type	Client Version	Consumption Rate/min	Number of topics
producer-5738754	REST API Proxy	apache-kafka-java-8.0.0-0-ce	28/s	1

También tenemos datos en la pestaña de consumer.

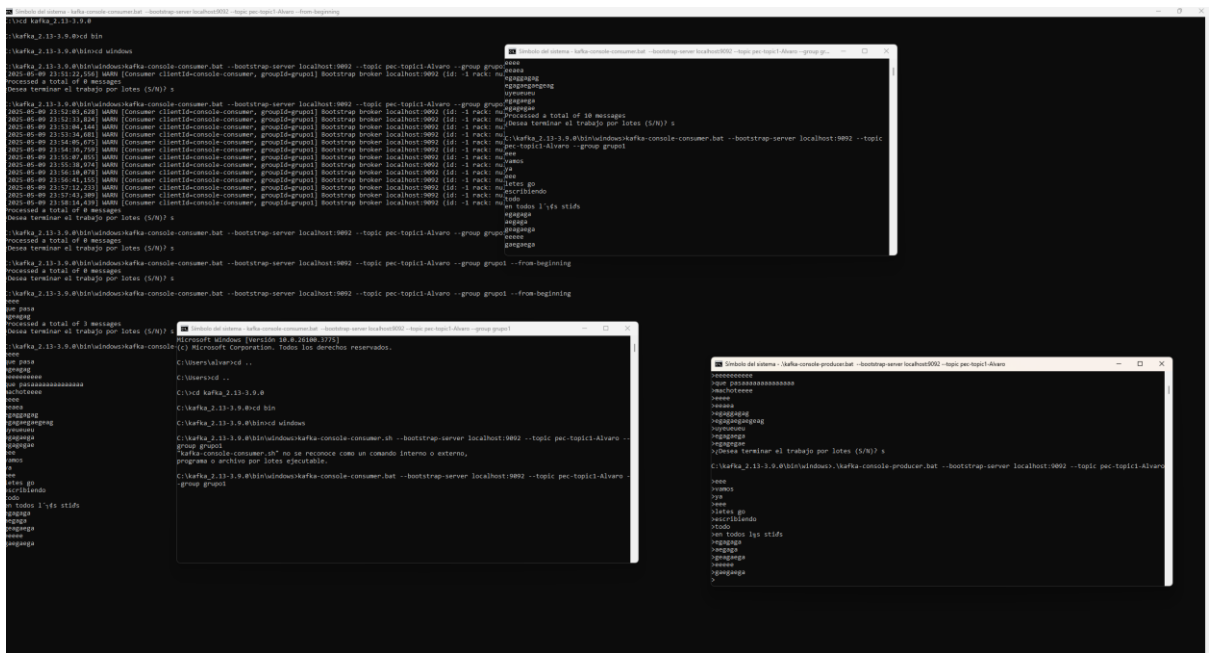


En el apartado de métricas vemos que sí que se están recibiendo datos.

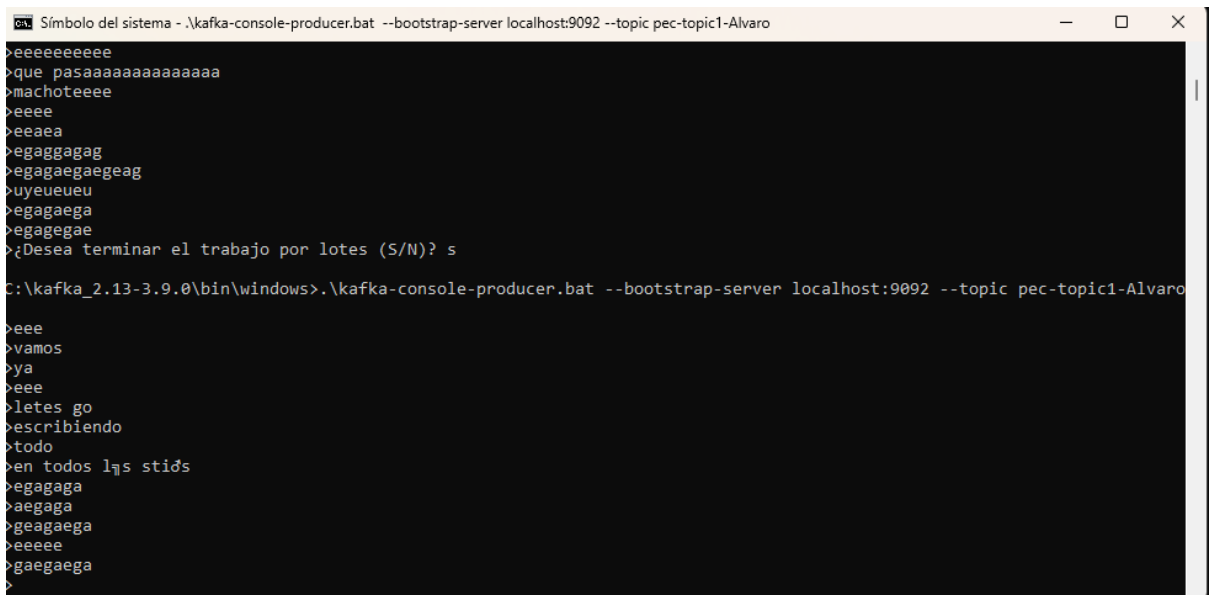


En la vista general del environment vemos que tenemos tres clientes.

Aun así queremos comprobar el funcionamiento desde línea de comandos y como desde el powershell no consigo ver que funcione bien el consumer pasamos a abrir todas las ventanas desde el cmd.



Ahora si conseguimos el resultado esperado. Veamos las ventanas con mas detalle.



Aquí tenemos el producer.

