

# Flink\_tutorial

## I. FLINK TERMINAL

### 1. Terminal

```
docker exec -it flink-sql-client /bin/bash
```

```
/opt/flink/bin/sql-client.sh embedded
```



The screenshot shows a terminal window with the following content:

```
PS C:\Users\sonvuuu> docker exec -it flink-sql-client /bin/bash
root@flink-sql-client:/opt/sql-client# /opt/flink/bin/sql-client.sh embedded
```

The terminal then displays a large, pixelated version of the Flink logo, which is a stylized 'F' composed of many small squares.

At the bottom of the terminal, the Flink SQL CLI prompt is visible:

```
[FlinkSQL]@flinksql:~ BETA
```

Below the prompt, the welcome message is displayed:

```
Welcome! Enter 'HELP;' to list all available commands. 'QUIT;' to exit.
```

And the command history file path is shown:

```
Command history file path: /root/.flink-sql-history
```

# I. FLINK KẾT NỐI KAFKA

## 1. Terminal

```
docker exec -it flink-sql-client /bin/bash
```

```
/opt/flink/bin/sql-client.sh embedded
```

## 2. Tạo bảng

```
CREATE TABLE test_kafka (
    msg STRING
) WITH (
    'connector' = 'kafka',
    'topic' = 'test-topic',
    'properties.bootstrap.servers' = 'broker:29092',
    'properties.group.id' = 'test-group',
    'scan.startup.mode' = 'earliest-offset',
    'format' = 'raw'
);
```

## 3. Kết quả



```
> root@flink-sql-client: /opt/sq X + ▾
PS C:\Users\sonvuuu> docker exec -it flink-sql-client /bin/bash
root@flink-sql-client:/opt/sql-client# /opt/flink/bin/sql-client.sh embedded

The logo is a large, pixelated version of the Flink logo, which is a stylized 'F' composed of many small squares.  
Flink SQL Client BETA  
Welcome! Enter 'HELP;' to list all available commands. 'QUIT;' to exit.  
Command history file path: /root/.flink-sql-history  
Flink SQL> CREATE TABLE test_kafka (  
>   msg STRING  
> ) WITH (  
>   'connector' = 'kafka',  
>   'topic' = 'test-topic',  
>   'properties.bootstrap.servers' = 'broker:29092',  
>   'properties.group.id' = 'test-group',  
>   'scan.startup.mode' = 'earliest-offset',  
>   'format' = 'raw'  
> );  
[INFO] Execute statement succeed.  
Flink SQL> select * from test_kafka;  
[INFO] Result retrieval cancelled.  
Flink SQL>  
> show tables;  
+-----+  
| table name |  
+-----+  
| test_kafka |  
+-----+  
1 row in set  
Flink SQL> |
```

Windows PowerShell  
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Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

```
PS C:\Users\sonvuuu> docker exec -it broker bash
[appuser@broker ~]$ kafka-topics --create \
--topic test-topic \
--bootstrap-server broker:29092 \
--partitions 1 \
--replication-factor 1
Created topic test-topic.
[appuser@broker ~]$ kafka-console-producer --topic test-topic --bootstrap-server broker:29092
>hi
>hello
>
```

root@flink-sql-client:/opt/sql| SQL Query Result (Table)| Refresh: 1 s | Page: Last of 1 | Updated: 02:28:29.621

msg
hi
hello

| Q Quit | R Refresh | Inc Refresh | Dec Refresh | Goto Page | Last Page | N Next Page | P Prev Page | O Open Row |

9:28 AM 11/26/2025