

# AWS Services Lambda & Glue & Athena : Serverless ETL Pipeline






## i) S3 file upload

The screenshot shows the AWS S3 console interface for the bucket 'usha-cloudhandson'. The 'Objects' tab is selected, displaying a list of three folders: 'analysis\_results/', 'processed/', and 'raw/'. The console includes a search bar, a list of actions (Copy S3 URI, Copy URL, Download, Open, Delete, Actions, Create folder, Upload), and a table of objects. The table has columns for Name, Type, Last modified, Size, and Storage class.

Name	Type	Last modified	Size	Storage class
analysis_results/	Folder	-	-	-
processed/	Folder	-	-	-
raw/	Folder	-	-	-

## ii) Lambda execution

The screenshot shows the AWS Lambda console interface for the function 'ecomm\_analysis'. The 'Function overview' tab is selected, displaying a diagram of the function's configuration. The function is named 'ecomm\_analysis' and is configured to run on an S3 trigger. The console includes a search bar, a list of actions (Throttle, Copy ARN, Actions, Export to Infrastructure Composer, Download), and a table of function details.

Function overview
<b>Diagram</b>   Template
 ecomm_analysis
 Layers (0)
 S3
 + Add trigger
 + Add destination

**Description**  
-

**Last modified**  
40 minutes ago

**Function ARN**  
[arn:aws:lambda:us-east-1:86401635:8461:function:ecomm\\_analysis](#)

**Function URL** [Info](#)

### iii) Glue crawler

The screenshot shows the AWS Glue console for the 'orders\_crawler'. The left sidebar contains navigation links for Data Catalog, Data Integration and ETL, and Legacy pages. The main content area displays the crawler's configuration, including Description, Security configuration, Lake Formation configuration, and Table prefix. Below this, the 'Advanced settings' section is expanded, showing the 'Crawler runs' tab. A table lists the crawler runs, with one run completed on April 22, 2025, at 17:34:49 UTC, with a duration of 01 min 03 s and 0.042 DPU hours.

Start time (UTC)	End time (UTC)	Current/last duration	Status	DPU hours
April 22, 2025 at 17:34:49	April 22, 2025 at 17:35:53	01 min 03 s	Completed	0.042

### iv) Athena Queries

The screenshot shows the AWS Athena console with a query result table. The table has 10 rows and 7 columns: #,orderid, customer, amount, status, and orderdate. The data is as follows:

#	orderid	customer	amount	status	orderdate
1	O0003	Diana	230.68	confirmed	2025-04-21
2	O0063	Diana	305.64	cancelled	2025-04-21
3	O0129	Alice	206.43	shipped	2025-04-21
4	O0014	Charlie	383.52	confirmed	2025-04-21
5	O0030	Alice	157.44	shipped	2025-04-19
6	O0103	Alice	226.29	cancelled	2025-04-19
7	O0197	Diana	186.6	pending	2025-04-19
8	O0168	Eve	312.9	confirmed	2025-04-18
9	O0134	Eve	65.21	pending	2025-04-16
10	O0051	Diana	255.48	pending	2025-04-16

us-east-1.console.aws.amazon.com/athena/home?region=us-east-1#/query-editor/history/338b53b4-6eeb-4385-92a8-84a48e36b853

Amazon Athena > Query editor

Typeahead suggestions are turned on by default. You can change this setting in query editor preferences.

**Data**

Data source: AwsDataCatalog

Catalog: None

Database: ecomm

Tables and views: [Create](#)

Filter tables and views

Tables (1): processed

**Query 1**

```
1 SELECT SUM(amount) AS total_revenue
2 FROM processed
3 WHERE status IN ('confirmed', 'shipped');
```

SQL Ln 2, Col 10

[Run again](#) [Explain](#) [Cancel](#) [Clear](#) [Create](#)

☐ Reuse query results

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us-east-1.console.aws.amazon.com/athena/home?region=us-east-1#/query-editor/history/338b53b4-6eeb-4385-92a8-84a48e36b853

Amazon Athena > Query editor

Filter tables and views

Tables (1): processed

Views (0)

SQL Ln 2, Col 10

[Run again](#) [Explain](#) [Cancel](#) [Clear](#) [Create](#)

☐ Reuse query results up to 60 minutes ago

**Query results** **Query stats**

Completed Time in queue: 126 ms Run time: 440 ms Data scanned: 5.38 KB

[Copy](#) [Download results CSV](#)

Results (1)

Search rows

#	total_revenue
1	30205.100000000013

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## v) CloudWatch logs

Rate your experience with this CloudWatch console. ☆ ☆ ☆ ☆ ☆

aws Search [Alt+S] United States (N. Virginia) Ushakundar

CloudWatch > Log groups > /aws/lambda/ecomm\_analysis > 2025/04/22/[\$LATEST]09d5ff0bc5594c6caa7dee80cf609117

**CloudWatch**

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**Log events**

You can use the filter bar below to search for and match terms, phrases, or values in your log events. [Learn more about filter patterns](#)

Filter events - press enter to search 1m 1h UTC timezone

Display

Timestamp	Message
2025-04-22T17:19:48.934Z	Records kept: 139
2025-04-22T17:19:49.015Z	Filtered file successfully written to S3: processed/filtered_orders.csv
2025-04-22T17:19:49.035Z	END RequestId: a5feb48f-26c3-490e-b822-a5e166ab1996
2025-04-22T17:19:49.035Z	REPORT RequestId: a5feb48f-26c3-490e-b822-a5e166ab1996 Duration: 556.43 ms Billed Duration: 557 ...

No newer events at this moment. Auto retry paused. [Resume](#)

Back to top

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us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#logsV2-log-groups/log-group/%2Faws-glue%2Fcrawlers/log-...

aws Search [Alt+S] United States (N. Virginia) Ushakundar

CloudWatch > Log groups > /aws-glue/crawlers > orders\_crawler

**CloudWatch**

Favorites and recents

Dashboards

AI Operations [Preview](#)

Alarms 0 0 0 0

Logs

Log groups [New](#)

Log Anomalies

Live Tail

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Contributor Insights

Metrics

X-Ray traces [New](#)

**Log events**

You can use the filter bar below to search for and match terms, phrases, or values in your log events. [Learn more about filter patterns](#)

\*7267fee8-1fc2-4b9d-959f-3b9aa67214cf" 1m 1h UTC timezone

Display

Timestamp	Message
2025-04-22T17:35:13.546Z	[7267fee8-1fc2-4b9d-959f-3b9aa67214cf] BENCHMARK : Running Start crawl for crawler orders_cr...
2025-04-22T17:35:51.630Z	[7267fee8-1fc2-4b9d-959f-3b9aa67214cf] BENCHMARK : Classification complete, writing results ...
2025-04-22T17:35:51.646Z	[7267fee8-1fc2-4b9d-959f-3b9aa67214cf] INFO : crawler configured with configuration {"Versio...
2025-04-22T17:35:53.129Z	[7267fee8-1fc2-4b9d-959f-3b9aa67214cf] INFO : Created table processed in database ecomm
2025-04-22T17:36:04.953Z	[7267fee8-1fc2-4b9d-959f-3b9aa67214cf] BENCHMARK : Finished writing to catalog
2025-04-22T17:36:04.976Z	[7267fee8-1fc2-4b9d-959f-3b9aa67214cf] INFO : Run Summary For TABLE:
2025-04-22T17:36:04.976Z	[7267fee8-1fc2-4b9d-959f-3b9aa67214cf] INFO : ADD: 1

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