



AWS DMS

Prepare the Environment

Creating Endpoints for Source and Target databases

Migrate data from Oracle source to DynamoDB target

Migrate data from Oracle source to Aurora PostgreSQL target

Final Validation of DMS Tasks

▼ Lab2 - Data processing using Amazon DynamoDB and Amazon Aurora

Pre-requisites

Setup AWS Cloud 9 Environment

Enable Amazon DynamoDB Streams

Deploy AWS Lambda Function for DynamoDB Stream Integration

Deploy AWS Lambda Functions for Taxi Ride workflow

Create and Deploy API for Taxi Ride workflow

Taxi Ride Workflow

▼ Lab3 - Query multiple data sources using Amazon Athena federated query

Pre-requisites

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Setup Athena Connectors and Catalogs

Query multiple data sources using Athena Federated Query

► Lab4 - High performance and scale with Amazon DynamoDB

► Lab5 - Integrating Amazon MemoryDB for GeoSpatial implementation

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▼ AWS account access

Open AWS console (us-east-1)

Get AWS CLI credentials

Exit event

Event ends in 5 hours 45 minutes.

[Event dashboard](#) > [Lab3 - Query multiple data sources using Amazon Athena federated query](#) >**Prepare the Environment**

Prepare the Environment

Setup environment variables on Cloud9 terminal window

1. Go to Cloud9 IDE terminal window and set the following environment variables if not done already as part of Lab2. Substitute the string **substitute-name-of-copied-cf-stack-name** in the command below with the name of the Amazon CloudFormation parent stack starting with **cfn**.

```

1 #replace substitute-name-of-copied-cf-stack-name below if cloudformation name is
2 AWSDBWORKSHOP_CFSTACK_NAME="cfn"
3 AURORADB_NAME=$(aws cloudformation describe-stacks --stack-name $AWSDBWORKSHOP_C
4 echo $AURORADB_NAME
5 AURORACLUSTERENDPOINT_NAME=$(aws cloudformation describe-stacks --stack-name $AW
6 echo $AURORACLUSTERENDPOINT_NAME
7 AURORADBMASERUSER_NAME=$(aws cloudformation describe-stacks --stack-name $AWSDB
8 echo $AURORADBMASERUSER_NAME

```

2. Connect to the Aurora PostgreSQL cluster using the below command. Enter the output of **echo \$PGPASSWORD** command as password when prompted.

```

1 psql -h $AURORACLUSTERENDPOINT_NAME -U $AURORADBMASERUSER_NAME -d $AURORADBDATABASENAME

```

Create a copy of trips table for federated query

Run the below SQL Command to check the trips table Aurora PostgreSQL. We will be using this table for federated query using Athena.

```

1
2 select * from trips;
3
4 select rider_email, trip_info from trips;

```

Update primary workgroup

1. Open the [AWS Management Console for Athena](#).
2. If this is your first time visiting the AWS Management Console for Athena, you will get a Getting Started page. Choose **Get Started** to open the Query Editor. If this isn't your first time, the AthenaQuery Editor opens.
3. Select **Workgroup:primary** tab at the top, choose the primary workgroup and click **View details**.

The screenshot shows the AWS Athena Workgroups console. The 'primary' workgroup is selected, and its details are displayed. The 'Actions' menu is open, showing 'Edit' and 'Delete' options. A red arrow points to the 'Edit' button.

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1. In **Query result location** field, specify the S3 bucket name with a **s3://** prefix and **/** suffix that was created as part of the CloudFormation Stack (Look for **S3bucketName** in the parent CloudFormation stack Outputs section) e.g. **s3://cfn-dbworkshops3bucket-1xihfupnzuugu/**.
2. For **Update query engine**, select **Manually choose an engine version now** and choose **Athena engine version 3 (recommended)** option.
3. Under **Settings** section, choose **Publish query metrics to AWS CloudWatch**.

Amazon Athena > Workgroups > Edit primary

Edit primary

Workgroup details

Enter a unique name for your workgroup. To change the workgroup name, delete the workgroup and recreate it with a new name.


Workgroup name
primary
Workgroup name must be from 1-128 characters and must be unique per region of your account. Valid characters are a-z, A-Z, 0-9, _ (underscore), . (period) and - (hyphen). This value cannot be changed after creation.


Description - optional

Workgroup description must be from 1-1024 characters. 1024 characters remaining.

Analytics engine - new [Info](#)

Choose the type of engine

☒ **Athena SQL**
Athena SQL engine for interactive queries.


☐ **Apache Spark**
Highly-scalable serverless Spark engine.


Upgrade query engine

☐ Automatic
Let Athena choose when to upgrade your workgroup. [Info](#)

☒ **Manual**
Manually choose an engine version now.


Query engine version


Athena engine version 3 (recommended) ▼

This version includes additional improvements to support ANSI SQL compliance. Certain changes in syntax, data processing, and timestamps in the new engine version might cause errors when you run existing queries. For more information, see [Athena engine version 3 Breaking changes](#).

▼ Query result configuration - optional

Location of query result - optional
Enter an S3 prefix in the current region where the query result will be saved as an object.

s3://cfn-dbworkshops3bucket-27w...  [View](#) [Browse S3](#)

 **You can create and manage lifecycle rules for this bucket**
Use Amazon S3 lifecycle rules to store your query results and metadata cost effectively or to delete them after a period of time.
[Learn more](#)

[Lifecycle configuration](#)

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▼ Settings - optional

☒ Publish query metrics to AWS CloudWatch

View metrics about query success, runtime, and the amount of data scanned in the Metrics tab. Athena also sends these metrics to CloudWatch.

☐ Override client-side settings [Info](#)

If checked, workgroup settings apply to all queries in the workgroup.

☐ Turn on queries on requester pays buckets in Amazon S3 [Info](#)

When turned on, workgroup users can query requester pays buckets, and the user's account will pay for any data requests and transfers. When turned off, queries on requester pays buckets will fail for workgroup users.

► Manage per query data usage control [Info](#)


Sets the limit for the maximum amount of data a query is allowed to scan. You can set only one per query limit for a workgroup. The limit applies to all queries in the workgroup and if query exceeds the limit, it will be cancelled.

► Workgroup data usage alerts - optional [Info](#)Set multiple alert thresholds when queries running in this workgroup scan a specified amount of data within a specific period. Alerts are implemented using [Amazon CloudWatch alarms](#) and applies to all queries in the workgroup.► Tags - optional [Info](#)

You can edit tag keys and values, and you can remove tags from a workgroup at any time. Tag keys and values are case-sensitive. For each tag, a tag key is required, but tag value is optional. Do not use duplicate tag keys.

Cancel

Save changes4. Click **Save**.

Now, you are ready to deploy the Athena connectors in your AWS account. To learn more about Athena connectors, please see documentation [connect-to-a-data-source-lambda.html](#) .

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