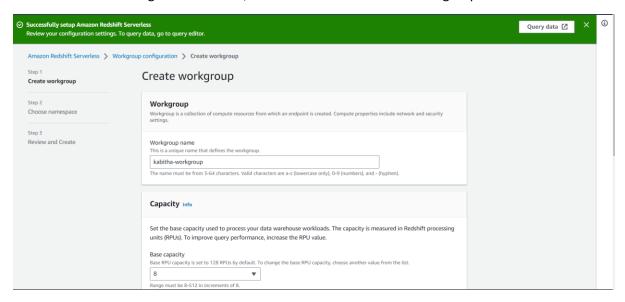**Problem Statement**:

You work for XYZ Corporation. Their application requires a database service that can store data which can be retrieved if required. Implement suitable service for the same. While migrating, you are asked to perform the following tasks:

1. Create a Redshift data warehouse.

2. Using the query editor:

    a. Load some data

    b. Query the data

Procedure: -

- Search for redshift and use **Try Redshift serverless free trial** to avoid charges. Let everything be default and click on **Save configuration**.
- Once the configuration is done, we need to click on create work group.

- Let everything be default and click on next.

- Let everything be default and click on next.
- Review everything and create workgroup.

- We already had the default workgroup. Click ono the default namespaces

- Click on Query data.

- Click on default work group and click on create connection.
- Now we have to create an IAM role in order to access the data from the s3.
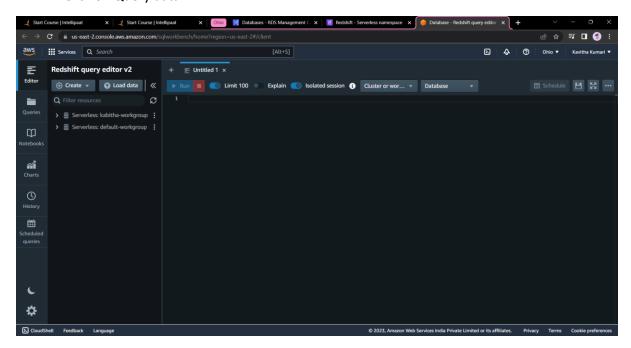- Goto IAM and click on roles then create roles.

Use case
Allow an AWS service like EC2, Lambda, or others to perform actions in this account.

Common use cases

○ EC2
   Allows EC2 instances to call AWS services on your behalf.

○ Lambda
   Allows Lambda functions to call AWS services on your behalf.

Use cases for other AWS services:

Redshift	▼

● Redshift - Customizable
   Allows Redshift clusters to call AWS services on your behalf.

○ Redshift
   Allows Redshift clusters to call AWS services on your behalf.

○ Redshift - Scheduler
   Allow Redshift Scheduler to call Redshift on your behalf.

Cancel   Next

Add permissions Info

Permissions policies (Selected 1/865) Info
Choose one or more policies to attach to your new role.

Create policy

Q Filter policies by property or policy name and press enter.	12 matches	‹ 1 › ⚙

"s3" ✕   Clear filters

	Policy name	Type	Description
☐	⊞ s3crr_for_onebucketbiryani_cf70b5	Custom…	
☐	⊞ S3RdsEc2--Policy	Custom…	
☐	⊞ s3replicate_for_onebucketbiryani_c6abca	Custom…	
☑	⊞ 📦 AmazonS3FullAccess	AWS m…	Provides full access to all buckets via the AWS Management Console.

Name, review, and create

Role details

Role name
Enter a meaningful name to identify this role.

Redshift_s3_access

Maximum 64 characters. Use alphanumeric and '+=,.@-_' characters.

Description
Add a short explanation for this role.

Allows Redshift clusters to call AWS services on your behalf.

Maximum 1000 characters. Use alphanumeric and '+=,.@-_' characters.

Step 1: Select trusted entities   Edit

- Then create a role.
- Now in the default namesspaces goto to **security and encryption** and **manage IAM roles** and **associated IAM roles.** Then select the IAM role which we created.

Namespace ID	**Date created**
a87f8471-1fe3-49f6-a539-791a0632356c	July 23, 2023, 04:01 (UTC+05:30)
Namespace ARN	**Storage used**
⬚ arn:aws:redshift-serverless:us-east-2:049198078472:namespace/a87f8471-1fe3-49f6-a539-791a0632356c	803 MB

Database name
dev

Total table count
-

Workgroup | Data backup | **Security and encryption** | Datashares | Tags

Permissions Info

Manage IAM roles

IAM roles ▽	Status ▽	Amazon Resource Name (ARN) ▽	Role type ▽
		No roles present	
		There are no resources to display.	
		Manage IAM roles	

Associate IAM roles ✕

IAM roles

Choose from existing IAM roles. You can associate up to 50 IAM roles.

🔍 *Search for IAM role to associate*

‹ **1** ›

☐	**IAM roles** 🗗	▽
☐	**AWSServiceRoleForRedshift**	
☑	**Redshift_s3_access**	

Cancel   **Associate IAM roles**

2:049198078472:namespace/a87f8471-1fe3-49f6-a539-791a0632356c   ⓘ

Workgroup | Data backup | **Security and encryption** | Datashares | Tags

Permissions Info

Manage IAM roles

IAM roles ▽	Status ▽	Amazon Resource Name (ARN) ▽	Role type ▽
Redshift_s3_access	⊘ in-sync	⬚ arn:aws:iam::049198078472:role/Redshift_s3_access	-

- Now I have uploaded a CSV type of file in the s3.

⊘ **Upload succeeded**
View details below.

ⓘ The information below will no longer be available after you navigate away from this page.

Summary

Destination	Succeeded	Failed
s3://onebucketbiryani	⊘ 1 file, 32.6 KB (100.00%)	⊖ 0 files, 0 B (0%)

Files and folders | Configuration

Files and folders (1 Total, 32.6 KB)

🔍 *Find by name*   ‹ 1 ›

Name ▽	Folder ▽	Type ▽	Size ▽	Status ▽	Error ▽
sampledatainsurance.csv	-	text/csv	32.6 KB	⊘ Succeeded	-

- Now in the serverless redshift click on load data and click **browse s3**

- Click on choose and next. Then click on **choose an IAM role.**
- Choose **load new table** and select the schema as **public** and give the name to the table as **kabi-table.**

Load data

Table options

Load existing table
Load data into an existing table

Load new table
Create table with detected schema

Cluster or workgroup	Database	Schema	Table
Serverless: def...	dev	No selection	No selection

IAM role ⓘ   arn:aws:iam::049198078472:role/Redshift_s3_access

Column mapping

Selected S3 file: sampledatainsurance.csv

Back

Cancel   Load data

Load data

IAM role ⓘ arn:aws:iam::049198078472:role/Redshift_s3_access ▼ ⟳

Columns   Table details

Selected S3 file: sampledatainsurance.csv   [+ Add column]

	Column name	Data type	Encoding	
⠿	Policy	INTEGER	No selection	🗑
⠿	Expiry	VARCHAR	No selection	🗑
⠿	Location	VARCHAR	No selection	🗑
⠿	State	VARCHAR	No selection	🗑
⠿	Region	VARCHAR	No selection	🗑
⠿	InsuredValue	VARCHAR	No selection	🗑
⠿	Construction	VARCHAR	No selection	🗑
⠿	BusinessType	VARCHAR	No selection	🗑
⠿	Earthquake	VARCHAR	No selection	🗑
⠿	Flood	VARCHAR	No selection	🗑

The value must be 1-127 characters.

Column options

Default value

○ Custom

○ Empty string

○ NULL

● No default value

Size

0	^ ⌄

☐ Primary key

☐ Unique key

☐ Not NULL

☐ Automatically increment

[Back]   Restore to defaults   [Cancel]   [Create table]

Unable to click on the create table and it is giving me the error "The value must be 1-127 characters.

Load data

Table options

○ Load existing table	● Load new table
Load data into an existing table	Create table with detected schema

Cluster or workgroup	Database	Schema	Table
Serverless: def... ▼	dev ▼	public ▼	kabit-table

IAM role ⓘ arn:aws:iam::049198078472:role/Redshift_s3_access ▼ ⟳

Columns   Table details

Selected S3 file: sampledatainsurance.csv   **+ Add column**

Column options

Default value

	Column name	Data type	Encoding	
⠿	Policy	INTEGER	No selection	🗑
⠿	Expiry	VARCHAR	No selection	🗑
⠿	Location	VARCHAR	No selection	🗑
⠿	State	VARCHAR	No selection	🗑
⠿	Region	VARCHAR	No selection	🗑
⠿	InsuredValue	VARCHAR	No selection	🗑
⠿	Construction	VARCHAR	No selection	🗑
⠿	BusinessType	VARCHAR	No selection	🗑
⠿	Earthquake	VARCHAR	No selection	🗑

○ Custom

○ Empty string

○ NULL

● No default value

Size

Back   Restore to defaults   Cancel   **Create table**