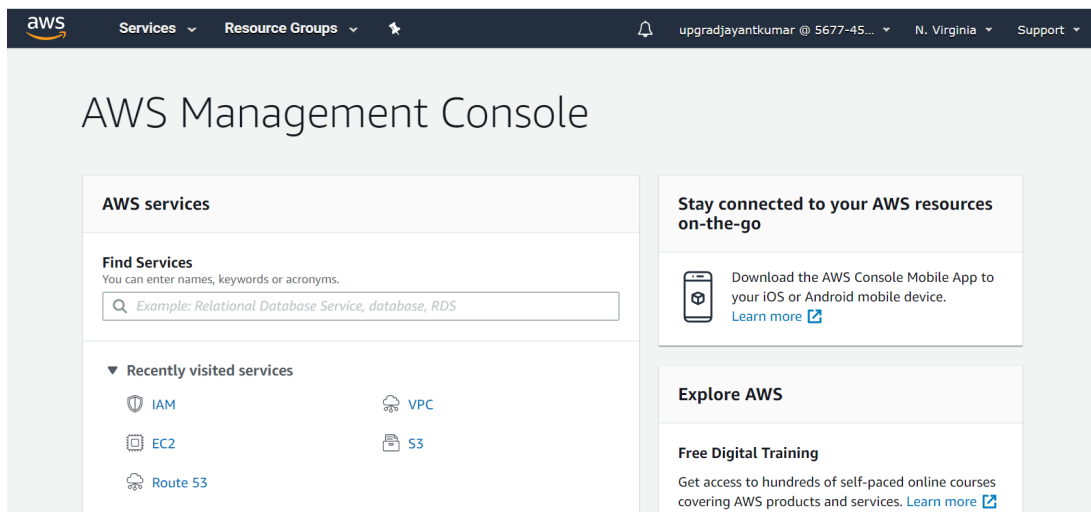
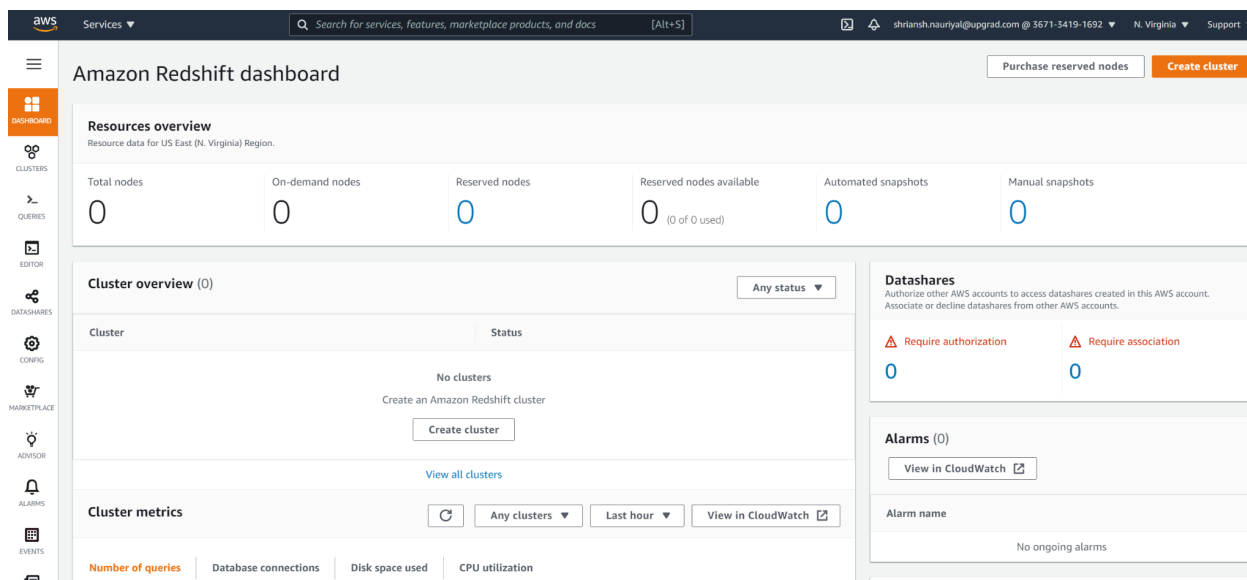


Creating a Redshift Cluster

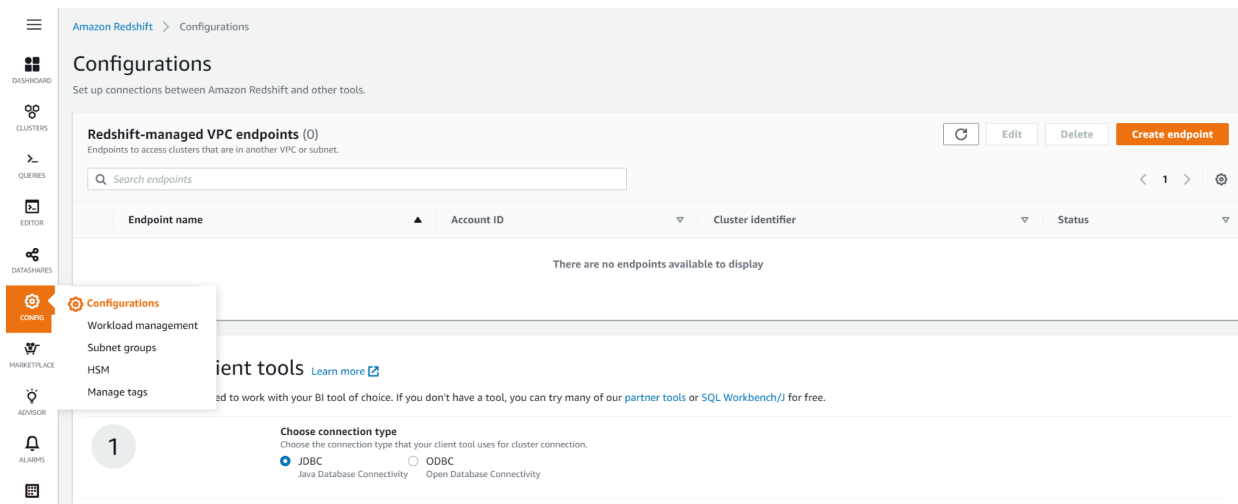
1. Choose the Redshift option from the Amazon Dashboard.



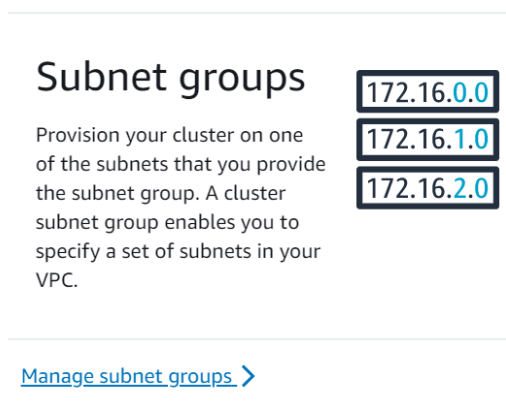
2. You will be redirected to the **AWS Redshift Console**.



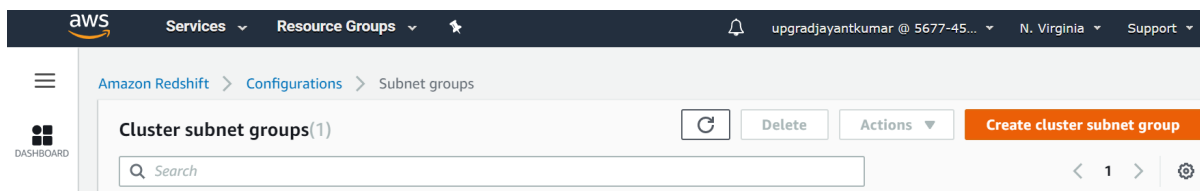
3. Go to **Config**.



4. In the **Config** dashboard, scroll down to the **Subnet Groups**. Click on 'Manage subnet groups'.



5. Click on the 'Create cluster subnet group' button.



- Assign a name for the Redshift cluster along with a brief description.

Amazon Redshift > Configurations > Subnet groups > Create subnet group

Create cluster subnet group

Cluster subnet group details

Name
You can't modify the name after your subnet group has been created.

The name must be from 1 to 255 characters. Valid characters are a-z, A-Z, 0-9 (alphanumeric characters), spaces, - (hyphens), _ (underscores), and . (periods).

Description

- Scroll down until you reach the **Add subnets** option. Select your VPC (that you have created previously) from the drop-down list and then click on the **Add all the subnets for this VPC** button.

Add subnets

VPC
Choose the VPC that contains the subnets that you want to include in your cluster subnet group.

VPC_1
vpc-047380af4297b6dd7

Add all the subnets for this VPC

Availability Zone
Choose an Availability Zone

Subnet
Choose a subnet

Add subnet

Subnets in this cluster subnet group (0) [Remove all](#)

Availability Zone	Subnet ID	CIDR block	Action

- After that an available **Availability Zone** appears; select any one. Then, select the **Subnet** drop-down list that appears. Lastly, click on the **Create cluster subnet group**.

Add subnets

VPC
Choose the identifier for the VPC that contains the subnets that you want to use for your cluster subnet group.

new_vpc_23062020
vpc-0d3ec2d7e87ebc4bd

Add all the subnets for this VPC

Availability Zone
us-east-1d (1)

Subnet
subnet-0f6690c84e9c484e0

Add subnet

Subnets in this cluster subnet group

Remove all

Availability Zone	Subnet ID	CIDR block	Action
us-east-1d	subnet-0f6690c84e9c484e0	10.0.0.0/24	Remove

Cancel

Create cluster subnet group

- The cluster subnet has been created successfully.

Cluster subnet group cluster-subnet-group-2 was create successfully

Amazon Redshift > Configurations > Subnet groups

Cluster subnet groups(2)

Refresh
Delete
Actions
Create cluster subnet group

Search
1

	Name	Status	VPC ID	Description	Tags
<input type="checkbox"/>	cluster-subnet-group-1 1 Subnets	Complete	vpc-0d3ec2d7e87ebc4bd	Demo cluster	
<input type="checkbox"/>	cluster-subnet-group-2 1 Subnets	Complete	vpc-0d3ec2d7e87ebc4bd	Upgrad Demo Redshift ...	

10. Now, you need to go back to the Redshift dashboard. After that, select the **Cluster** option.

▼ Connect to Redshift clusters

Query data using Redshift query editor

Use the query editor to run queries in your Redshift cluster.

Query data

Work with your client tools

You can connect to Amazon Redshift from your client tools, such as SQL clients, business intelligence (BI) tools, and extract, transform, load (ETL) tools, using JDBC or ODBC drivers.

Cluster

Cluster identifier

Copy JDBC URL Copy ODBC URL

Choose your JDBC or ODBC driver

Use JDBC or ODBC drivers to connect to Amazon Redshift from your client tools, such as SQL clients, BI tools, and ETL tools. We recommend using the new Amazon Redshift-specific drivers for better performance and scalability.

Driver

JDBC 4.2 without AWS SDK (jar)

Download driver

Clusters (1) Info

Filter clusters by property or value

Query cluster Actions Create cluster

Cluster	Cluster namespace	Status	Storage capacity us...	CPU utilization	Snapshots	Notificati...	T...
<input type="checkbox"/> <p>redshift-cluster-1</p> <p>dc2.large 2 nodes 320 GB</p>	6141592c-6810-40f8-...	Paused			1 snapshot		

11. Click on **Create Cluster**, assign a name for your cluster and keep the next part as **Production** and then scroll down.

Cluster configuration

Cluster identifier

This is the unique key that identifies a cluster.

upgrad-demo-cluster

The identifier must be from 1-63 characters. Valid characters are a-z (lowercase only) and - (hyphen).

What are you planning to use this cluster for?

☒ Production

Configure for fast and consistent performance at the best price.

☐ Free trial

Configure for learning about Amazon Redshift. This configuration is free for a limited time if your organization has never created an Amazon Redshift cluster.

12. Choose a **Node type**. Here, you need to select the **dc2.large** cluster. After that, set the number of nodes to 2. If, by default, it is set to 2, then do not change it.

Choose the size of the cluster

I'll choose
Help me choose

Node type
Choose a node type that meets your CPU, RAM, storage capacity, and drive type requirements.

dc2.large
▼

Nodes
Enter the number of nodes that you need.

2

Range (1-32)

Configuration summary
dc2.large | 2 nodes

\$360.00/month

Estimated on-demand compute price

Save more than 60% of your costs by purchasing reserved nodes.

[Learn more](#)

320 GB

Total compressed storage

The total storage capacity for the cluster if you deploy the number of nodes that you chose.

13. Scroll down, and perform **Database configuration**. Set a password with the combination of **number**, **lowercase** letter and **uppercase** letter whose length should be **8–64** characters. You can reset the password once your cluster is created successfully.

Database configurations

Admin user name
Enter a login ID for the admin user of your DB instance.

awsuser

The name must be 1-128 alphanumeric characters, and it can't be a [reserved word](#).

☐ Auto generate password
Amazon Redshift can generate a password for you, or you can specify your own password.

Admin user password

.....

☐ Show password

Must be 8-64 characters long. Must contain at least one uppercase letter, one lowercase letter and one number. Can be any printable ASCII character except `/`, `""`, or `@`.

14. Scroll down to the Additional configurations section and click on the button to **deselect Use defaults**.

Additional configurations ☒ Use defaults

These configurations are optional, and default settings have been defined to help you get started with your cluster. Turn off "Use defaults" to modify these settings now.

<p>Network</p> <p>Using default VPC (vpc-069954fb4011801ca) and default subnet.</p>	<p>Security</p> <p>Using default (sg-02cdae40b2f68bea7) cluster security group.</p>
<p>Backup</p> <p>Automated snapshots are created about every eight hours or following every 5 GB per node of data changes, whichever comes first.</p>	<p>Configuration</p> <p>Using default.redshift-1.0 parameter group with no database encryption.</p>
<p>Maintenance</p> <p>Using current maintenance track.</p>	

15. Click on **Network and Security** under Additional configurations. Here, you need to select the **VPC**, followed by the **Security Group** and then the **subnet group** that you created in step 8.

Additional configurations ☐ Use defaults

These configurations are optional, and default settings have been defined to help you get started with your cluster. Turn off "Use defaults" to modify these settings now.

▼ **Network and security**

Virtual private cloud (VPC)
This VPC defines the virtual networking environment for this cluster.

new_vpc_23062020
vpc-0d3ec2d7e87ebc4bd

ⓘ You can't change the VPC associated with this cluster after the cluster has been created. [Learn more](#) ✕

VPC security groups
This VPC security groups define which subnets and IP ranges the cluster can use in the VPC.

Choose one or more security groups

cloudera_23062020 ✕
sg-0b064b108e911d6c3

Cluster subnet group
Choose the Amazon Redshift subnet group to launch the cluster in.

cluster-subnet-group-2

16. Next, click on the Database configurations under additional configurations and here, set a database name. The default port is **5439**, which is known globally. So, the best practice is to change the port number and set it to any one between **1150** and **65535**. This prevents any foreign attack or stops the entrance of intruders to your cluster. Keep all the parameters as the default ones. After this you can click on the **Create Cluster button**.

▼ Database configurations

Database name

Specify a database name to create an additional database.

upgrad

The name must be 1-64 alphanumeric characters (lowercase only), and it can't be a [reserved word](#).

Database port

Port number where the database accepts inbound connections. You can't change the port after the cluster has been created.

5440

The port must be numeric (1150-65535).

Parameter groups

Defines database parameter and query queues for all the databases.

default.redshift-1.0
Default parameter group for redshift-1.0

Encryption

Encrypt all data on your cluster.

☒ Disabled

☐ Use AWS Key Management Service (AWS KMS)

☐ Use a hardware security module (HSM)

17. The creation of the cluster will take some time

▼ Connect to Redshift clusters

Query data using Redshift query editor

Use the query editor to run queries in your Redshift cluster.

Query data

Work with your client tools

You can connect to Amazon Redshift from your client tools, such as SQL clients, business intelligence (BI) tools, and extract, transform, load (ETL) tools, using JDBC or ODBC drivers.

Cluster
Cluster identifier

Copy JDBC URL
Copy ODBC URL

Choose your JDBC or ODBC driver

Use JDBC or ODBC drivers to connect to Amazon Redshift from your client tools, such as SQL clients, BI tools, and ETL tools. We recommend using the new Amazon Redshift-specific drivers for better performance and scalability.

Driver
JDBC 4.2 without AWS SDK (jar)

Download driver

Clusters (2) [Info](#)

Refresh
Query cluster
Actions
Create cluster

<input type="checkbox"/>	Cluster	Cluster namespace	Status	Storage capacity us...	CPU utilization	Snapshots	Notificati...	Tags
<input type="checkbox"/>	redshift-cluster-1 dc2.large 2 nodes 320 GB	6141592c-6810-40f8-...	⏸ Paused			1 snapshot		
<input type="checkbox"/>	upgrad-demo-cluster dc2.large 2 nodes 320 GB	dd3a2a50-403e-4f1d-...	⏸ Modifying Creating			-		

18. While configuring the node type **dc2.large**, you saw that the pricing tag is for per hour. So, as a best practice and for cost-cutting, pause your cluster if you are not using it.

Services
Resource Groups

upgradjayantkumar @ 5677-45...
N. Virginia
Support

DASHBOARD
CLUSTERS
QUERIES
EDITOR
CONFIG
MARKETPLACE
ADVISOR
ALARMS
EVENTS

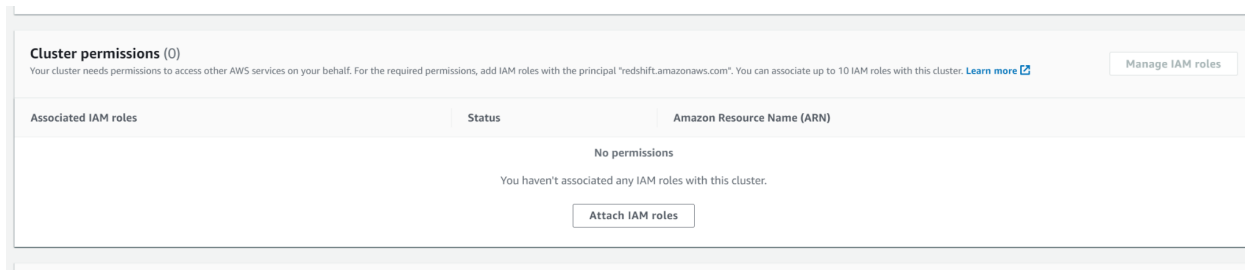
Clusters(2)

Refresh
Query cluster
Actions
Create cluster

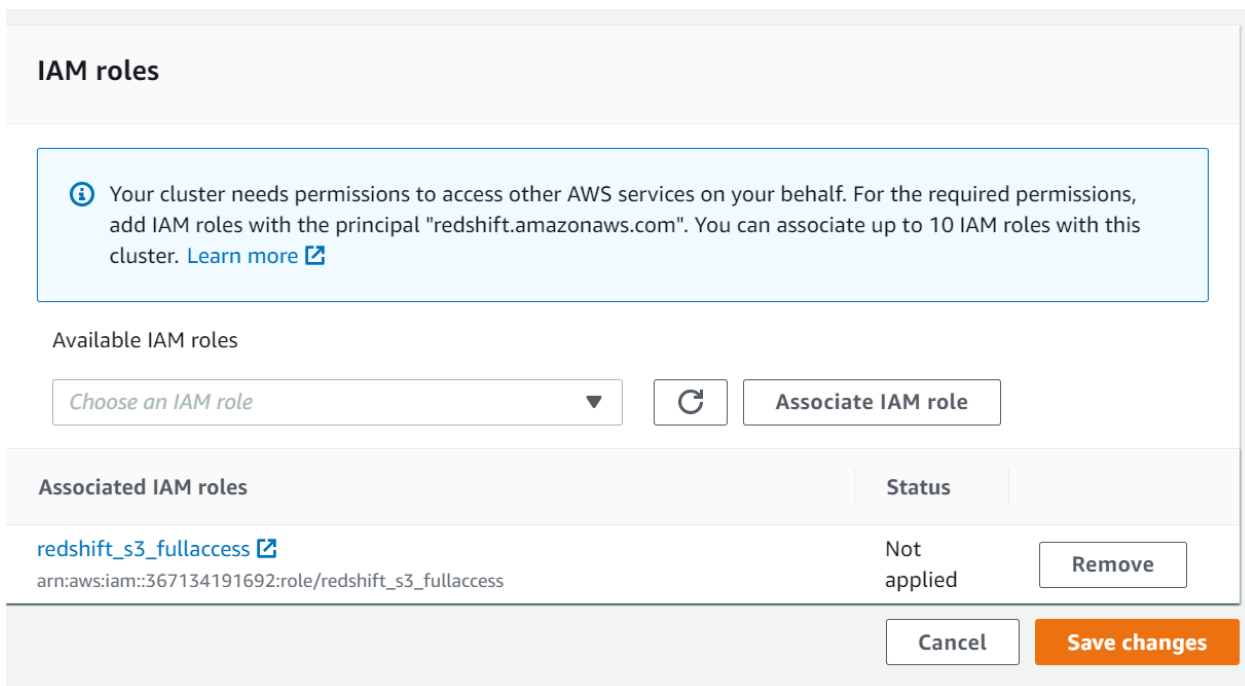
<input type="checkbox"/>	Cluster	Status	Storage capacity us...	CPU ut
<input type="checkbox"/>	upgrad-demo-cluster dc2.large 2 nodes 320 GB	⏸ Paused		
<input checked="" type="checkbox"/>	upgrad-redshift-cluster dc2.large 2 nodes 320 GB	✅ Available		

Resize
Modify
Reboot
Pause
Delete
Restore table
Create snapshot
Configure cross-region snapshot
Manage IAM roles
Change master user password
Manage tags
Rotate encryption
Upgrade cluster version
Roll back cluster version
Modify publicly accessible setting

19. Click on your cluster and Go to the **Properties** tab. There you can scroll down a little and you will get the Attach **IAM Role** button.




20. You will redirect to the IAM Role dashboard. Select the IAM role that you have created for S3 access from the drop-down list of **Available IAM roles** and click on **Associate IAM Role**. Lastly, click on **Save Changes**.





21. If the IAM role is added successfully then you will get status **in-sync**, as shown in below screenshot. This will take a few minutes till the role has been added successfully to the Redshift cluster.

Endpoint URL

 -

Cluster permissions (1)
Your cluster needs permissions to access other AWS services on your behalf. For the required permissions, add IAM roles with the principal "redshift.amazonaws.com". You can associate up to 10 IAM roles.

Associated IAM roles	Status	Amazon Resource Name (ARN)
redshift_s3_fullaccess 	in-sync	 arn:aws:iam::367134191692:role/redshift_s3_fullaccess

Granted accounts (0)
VPCs in other accounts that are allowed to access this cluster. [Learn more](#) 