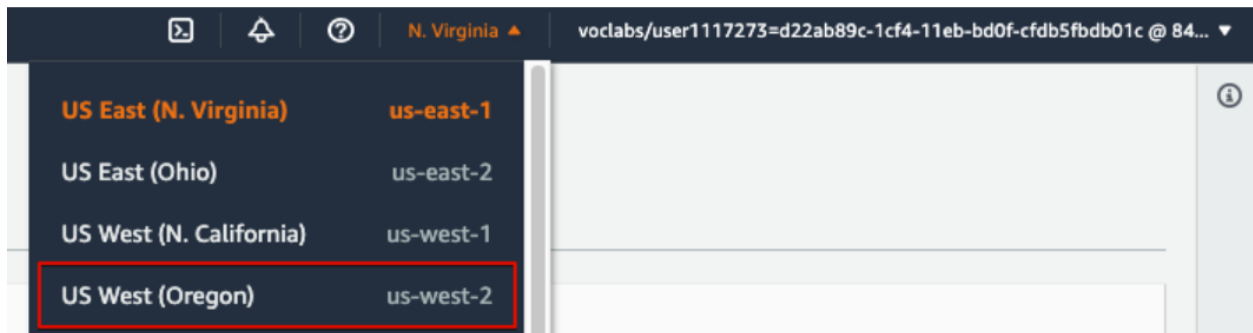
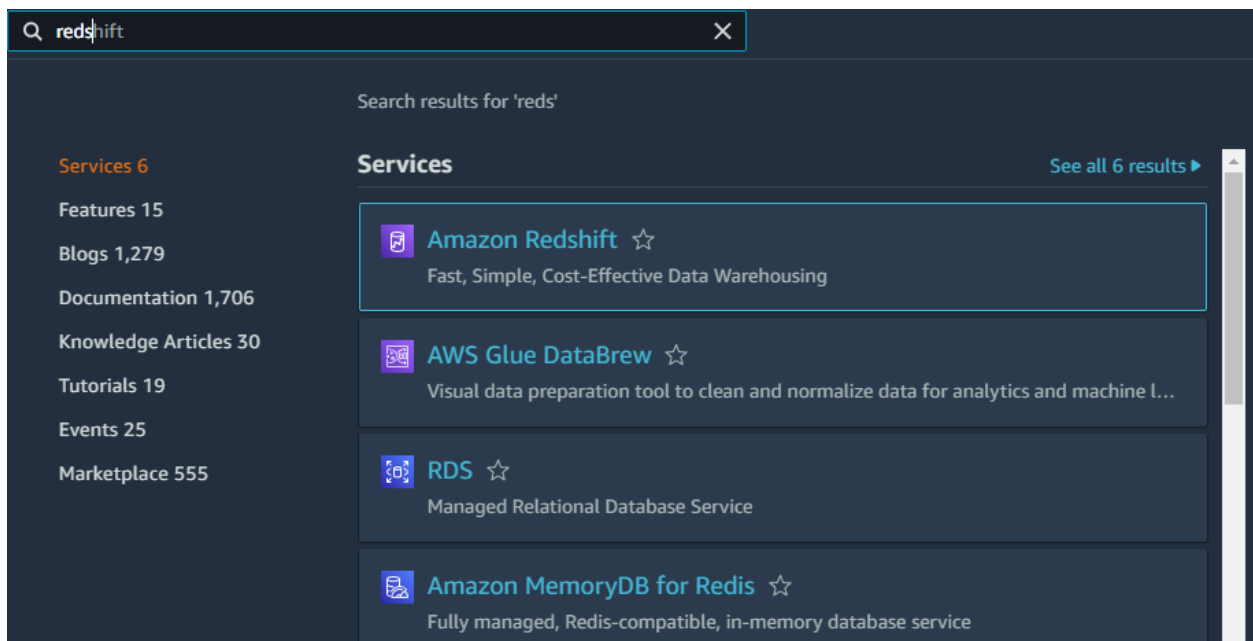


Create an AWS Redshift Cluster

- Open the AWS console by clicking on the **Launch Cloud Gateway** button followed the **Open Cloud Console** button in the classroom.
- Select US West (Oregon) `us-west-2` region.



- Search **Redshift** in the search bar, and then click on **Amazon Redshift**.



- Click on **Create cluster**.

Analytics

Amazon Redshift

Accelerate your time to value with fast, easy, and secure analytics at scale.

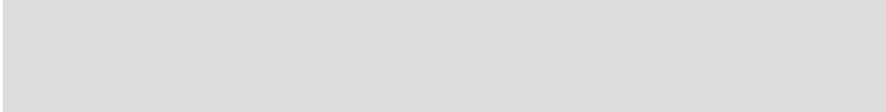
Amazon Redshift makes it easier for you to run and scale analytics without having to manage their data warehouse. Get insights running real-time and predictive analytics on all your data across your operational databases, data lake, data warehouse, and thousands of third-party datasets.

Get to powerful insights fast

The Amazon Redshift serverless experience makes it easy for customers to run and scale analytics without having to provision and manage their data warehouse. Simply load and query data.

Try Amazon Redshift Serverless (Preview)

How it works



Provision and manage clusters

With a few clicks, you can create your first Amazon Redshift provisioned cluster in minutes.

Create cluster

- Input **Cluster Identifier** and select **Free trial**.

Create cluster [Info](#)

Cluster configuration

Cluster Identifier
This is the unique key that identifies a 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.

- Input **Admin user name**. This can be same as the IAM user you created earlier.
- Input **Admin user password**. Keep the username and password saved locally, as they will be needed in Airflow.
- Click on **Create cluster**.

Database configurations

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

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 `@`.

Cancel
Create cluster

- On successful creation of the cluster, you will see Status Available, as shown below:

Amazon Redshift > Clusters

In my account | From other accounts

Connect to Redshift clusters

Clusters (1) [Info](#)

Filter clusters by property or value

Cluster	Status	Storage capacity us...	CPU utilization	Snapshots	Notificati...	Tags
<input type="checkbox"/> redshift-cluster-1 dk2.large 1 node 160 GB	Available					

- Go to **redshift-cluster-1**. Next, we are going to make this cluster publicly accessible as we would like to connect to this cluster via Airflow.
- Click on **Actions** and select **Modify publicly accessible setting**.
- Click on **Enable** and **Save changes**.
- Enable VPC Routing by going to the **Properties** tab and clicking on **Edit** button in the **Network and Security settings** section.

redshift-cluster-1 ▾

Actions ▾ Edit Add partner integration Query data ▾

General information

Cluster identifier redshift-cluster-1	Status Available	Node type dc2.large	Endpoint redshift-cluster-1.cvovrggoq9.us-east-1.redshift.amazonaws.com:54...
Cluster namespace 37355767-c208-4bae-99a1-d3fc246dce7	Date created February 14, 2022, 15:42 (UTC+05:30)	Number of nodes 1	JDBC URL jdbc:redshift://redshift-cluster-1.cvovrggoq9.us-east-1.redshift.ama...
	Storage used 0.21% (0.34 of 160 GB used)	AQUA Not available	ODBC URL Driver=(Amazon Redshift (x64)); Server=redshift-cluster-1.cvovrggoq...

Cluster performance Query monitoring Schedules Maintenance **Properties**

Database configurations

Change admin user password Rotate encryption keys Edit ▾

Database name dev	Parameter group Defines database parameter and query queries for all the databases. default.redshift-1.0	Encryption Disabled	Audit logging Disabled
Port 5439	SSH ingestion setting (cluster public key) ssh-rsa AAAAB3NzaC1yc2EAAAADAQAB...	AWS KMS key ID -	

Network and security settings

Virtual private cloud (VPC)
[vpc-0d5f291374f076211](#)

Availability Zone
us-east-1f

VPC security group
Specify which instances and devices can connect to the cluster.

Publicly accessible
Allow instances and devices outside the VPC to connect to your database through the

Edit

- Enable **Enhanced VPC Routing**.

Edit network and security

▼ Network and security

Virtual private cloud (VPC)

This VPC defines the virtual networking environment for this cluster.

vpc-0d5f291374f076211

VPC security groups

This VPC security group defines which subnets and IP ranges the cluster can use in the VPC.

Choose one or more security groups ▼

default
sg-00c3e40f066d2b48c

Cluster subnet group

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

default

Availability Zone

Specify the Availability Zone that you want the cluster to be created in. Otherwise, Amazon Redshift chooses an Availability Zone for you.

No preference

Enhanced VPC routing

Enabling this option forces network traffic between your cluster and data repositories through a VPC, instead of the internet. [Learn more](#)

- ☐ Disabled
☒ Enabled

Cancel

Save changes

- Choose the link next to **VPC security group** to open the Amazon Elastic Compute Cloud (Amazon EC2) console.

Network and security settings

Virtual private cloud (VPC)
[vpc-0d5f291374f076211](#)

Subnet
[default](#)

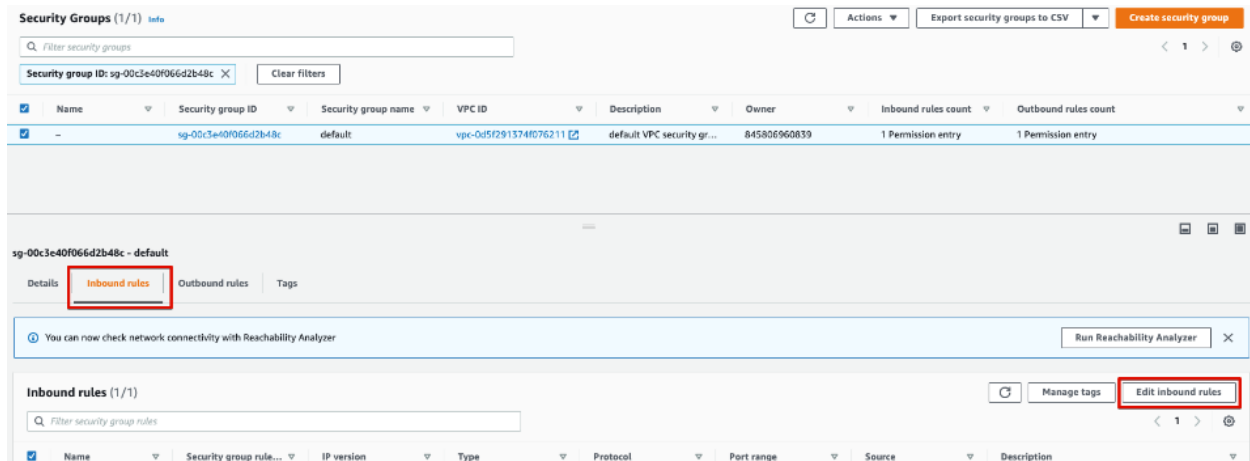
Endpoint URL
-

Availability Zone
[us-east-1f](#)

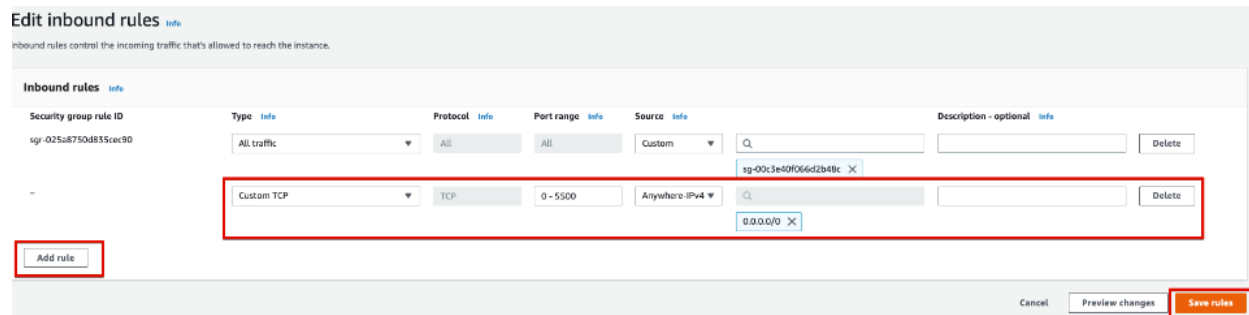
Enhanced VPC routing
Enabled

VPC security group
Specify which instances and devices can connect to the cluster.
[sg-00c3e40f066d2b48c](#)

- Go to **Inbound Rules** tab and click on **Edit inbound rules**.



- Add an inbound rule, as shown in the image below.
 - Type = Custom TCP
 - Port range = 0 - 5500
 - Source = Anywhere-IPv4



- Now our Redshift cluster should be accessible from Airflow.
- Go back to the Redshift cluster and copy the endpoint. Store this locally as we will need this while configuring Airflow.

