Amazon Redshift

Getting Started Guide

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Amazon Redshift: Getting Started Guide

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Getting Started with Amazon Redshift

Welcome to the *Amazon Redshift Getting Started*. Amazon Redshift is a fully managed, petabyte-scale data warehouse service in the cloud. An Amazon Redshift data warehouse is a collection of computing resources called *nodes*, which are organized into a group called a *cluster*. Each cluster runs an Amazon Redshift engine and contains one or more databases.

If you are a first-time user of Amazon Redshift, we recommend that you begin by reading the following sections:

- Amazon Redshift Management Overview – This topic provides an overview of Amazon Redshift.
- Service Highlights and Pricing – This product detail page provides the Amazon Redshift value proposition, service highlights, and pricing.
- Amazon Redshift Getting Started (*this guide*) – This guide provides a tutorial of using Amazon Redshift to create a sample cluster and work with sample data.

This guide is a tutorial designed to walk you through the process of creating a sample Amazon Redshift cluster. You can use this sample cluster to evaluate the Amazon Redshift service. In this tutorial, you'll perform the following steps:

- Step 1: Set Up Prerequisites (p. 2)
- Step 2: Create an IAM Role (p. 3)
- Step 3: Launch a Sample Amazon Redshift Cluster (p. 3)
- Step 4: Authorize Access to the Cluster (p. 10)
- Step 5: Connect to the Sample Cluster (p. 12)
- Step 6: Load Sample Data from Amazon S3 (p. 15)
- Step 7: Find Additional Resources and Reset Your Environment (p. 19)

After you complete this tutorial, you can find more information about Amazon Redshift and next steps in Where Do I Go From Here? (p. 19)

Important
The sample cluster that you create will be running in a live environment. The on-demand rate is $0.25 per hour for using the sample cluster that is designed in this tutorial until you delete it. For more pricing information, go to the Amazon Redshift pricing page. If you have questions or get stuck, you can reach out to the Amazon Redshift team by posting on our Discussion Forum.

This tutorial is not meant for production environments, and does not discuss options in depth. After you complete the steps in this tutorial, you can use the Additional Resources (p. 19) section to locate more in-depth information to plan, deploy, and maintain your clusters, and to work with the data in your data warehouse.

Step 1: Set Up Prerequisites

Before you begin setting up an Amazon Redshift cluster, make sure that you complete the following prerequisites in this section:

- Sign Up for AWS (p. 2)
- Install SQL Client Drivers and Tools (p. 2)
- Determine Firewall Rules (p. 3)

Sign Up for AWS

If you don't already have an AWS account, you must sign up for one. If you already have an account, you can skip this prerequisite and use your existing account.

1. Open http://aws.amazon.com/, and then choose **Create an AWS Account**.
2. Follow the online instructions.

   Part of the sign-up procedure involves receiving a phone call and entering a PIN using the phone keypad.

Install SQL Client Drivers and Tools

You can use most SQL client tools with Amazon Redshift JDBC or ODBC drivers to connect to an Amazon Redshift cluster. In this tutorial, we show you how to connect using SQL Workbench/J, a free, DBMS-independent, cross-platform SQL query tool. If you plan to use SQL Workbench/J to complete this tutorial, follow the steps below to get set up with the Amazon Redshift JDBC driver and SQL Workbench/J. For more complete instructions for installing SQL Workbench/J, go to Setting Up the SQL Workbench/J Client in the *Amazon Redshift Cluster Management Guide*. If you use an Amazon EC2 instance as your client computer, you will need to install SQL Workbench/J and the required drivers on the instance.

Note
You must install any third-party database tools that you want to use with your clusters; Amazon Redshift does not provide or install any third-party tools or libraries.

To Install SQL Workbench/J on Your Client Computer

1. Review the SQL Workbench/J software license.
2. Go to the SQL Workbench/J website and download the appropriate package for your operating system.
3. Go to the Installing and starting SQL Workbench/J page and install SQL Workbench/J.

   Important
   Note the Java runtime version prerequisites for SQL Workbench/J and ensure you are using that version, otherwise, this client application will not run.
4. Go to Configure a JDBC Connection and download an Amazon Redshift JDBC driver to enable SQL Workbench/J to connect to your cluster.

For more information about using the Amazon Redshift JDBC or ODBC drivers, see Configuring Connections in Amazon Redshift.

Determine Firewall Rules

As part of this tutorial, you will specify a port when you launch your Amazon Redshift cluster. You will also create an inbound ingress rule in a security group to allow access through the port to your cluster.

If your client computer is behind a firewall, you need to know an open port that you can use so you can connect to the cluster from a SQL client tool and run queries. If you do not know this, you should work with someone who understands your network firewall rules to determine an open port in your firewall. Though Amazon Redshift uses port 5439 by default, the connection will not work if that port is not open in your firewall. Because you cannot change the port number for your Amazon Redshift cluster after it is created, make sure that you specify an open port that will work in your environment during the launch process.

Step 2: Create an IAM Role

For any operation that accesses data on another AWS resource, such as using a COPY command to load data from Amazon S3, your cluster needs permission to access the resource and the data on the resource on your behalf. You provide those permissions by using AWS Identity and Access Management, either through an IAM role that is attached to your cluster or by providing the AWS access key for an IAM user that has the necessary permissions.

To best protect your sensitive data and safeguard your AWS access credentials, we recommend creating an IAM role and attaching it to your cluster. For more information about providing access permissions, see Permissions to Access Other AWS Resources.

In this step, you will create a new IAM role that enables Amazon Redshift to load data from Amazon S3 buckets. In the next step, you will attach the role to your cluster.

To Create an IAM Role for Amazon Redshift

1. Sign in to the Identity and Access Management (IAM) console at https://console.aws.amazon.com/iam/.
2. In the left navigation pane, choose **Roles**.
3. Choose **Create New Role**
4. For **Role Name**, type a name for your role. For this tutorial, type `myRedshiftRole`. Choose **Next Step**.
5. Choose **AWS Service Roles**, and then choose **Amazon Redshift**.
6. On the **Attach Policy** page, choose **AmazonS3ReadOnlyAccess**, and then choose **Next Step**.
7. Review the information, and then choose **Create Role**.
8. Copy the **Role ARN** to your clipboard—this value is the Amazon Resource Name (ARN) for the role that you just created. You will use that value in the next step when you launch a new cluster, and again in Step 6: Load Sample Data from Amazon S3 (p. 15).

Step 3: Launch a Sample Amazon Redshift Cluster

Now that you have the prerequisites completed, you can launch your Amazon Redshift cluster.

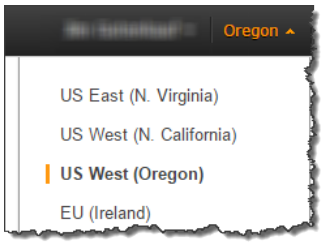
Important
The cluster that you are about to launch will be live (and not running in a sandbox). You will incur the standard Amazon Redshift usage fees for the cluster until you delete it.
If you complete the tutorial described here in one sitting and delete the cluster when you are finished, the total charges will be minimal.

To Launch an Amazon Redshift Cluster

1. Sign in to the AWS Management Console and open the Amazon Redshift console at https://console.aws.amazon.com/redshift/.

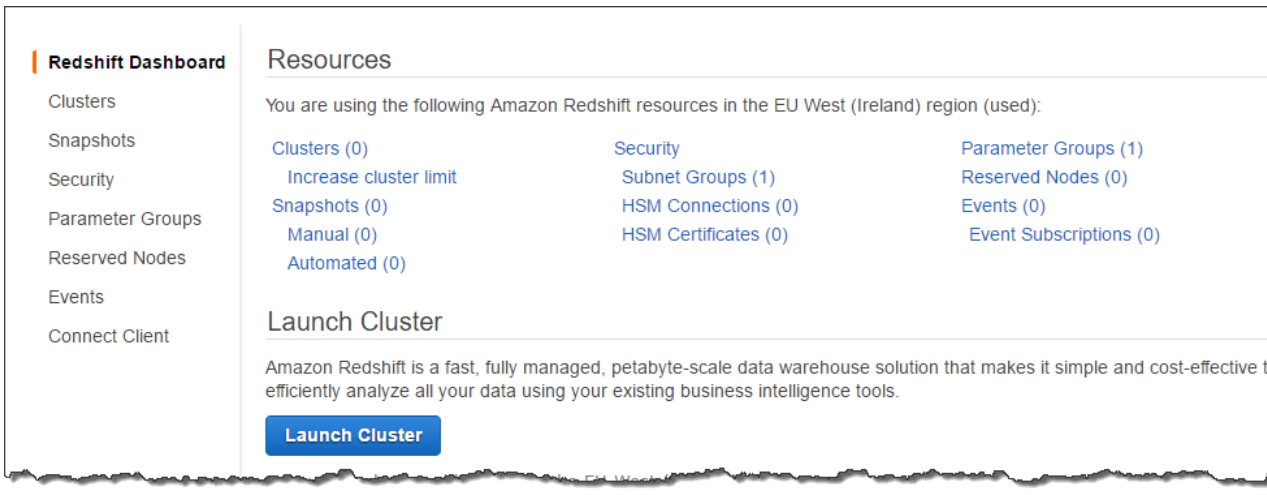
   Important
   If you use IAM user credentials, ensure that the user has the necessary permissions to perform the cluster operations. For more information, go to Controlling Access to IAM Users in the *Amazon Redshift Cluster Management Guide*.

2. In the main menu, select the region in which you want to create the cluster. For the purposes of this tutorial, select **US West (Oregon)**.



3. On the Amazon Redshift Dashboard, choose **Launch Cluster**.

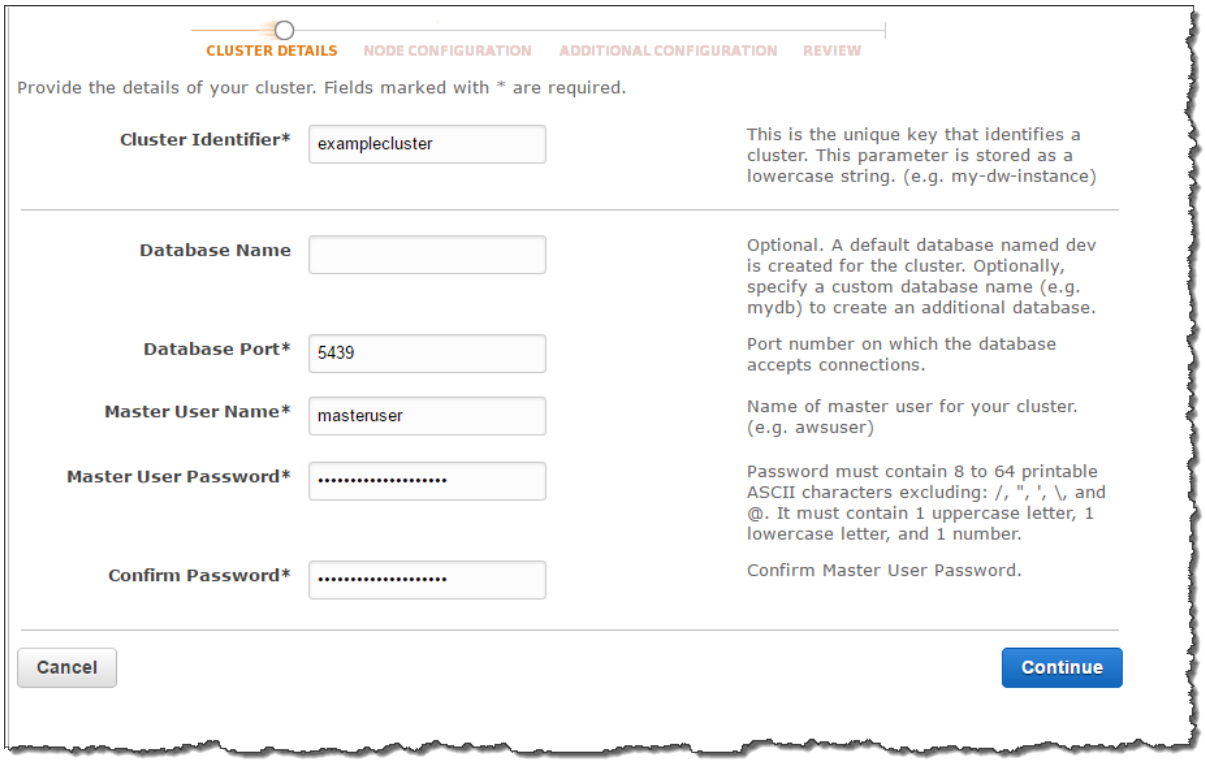
   The Amazon Redshift Dashboard looks similar to the following:



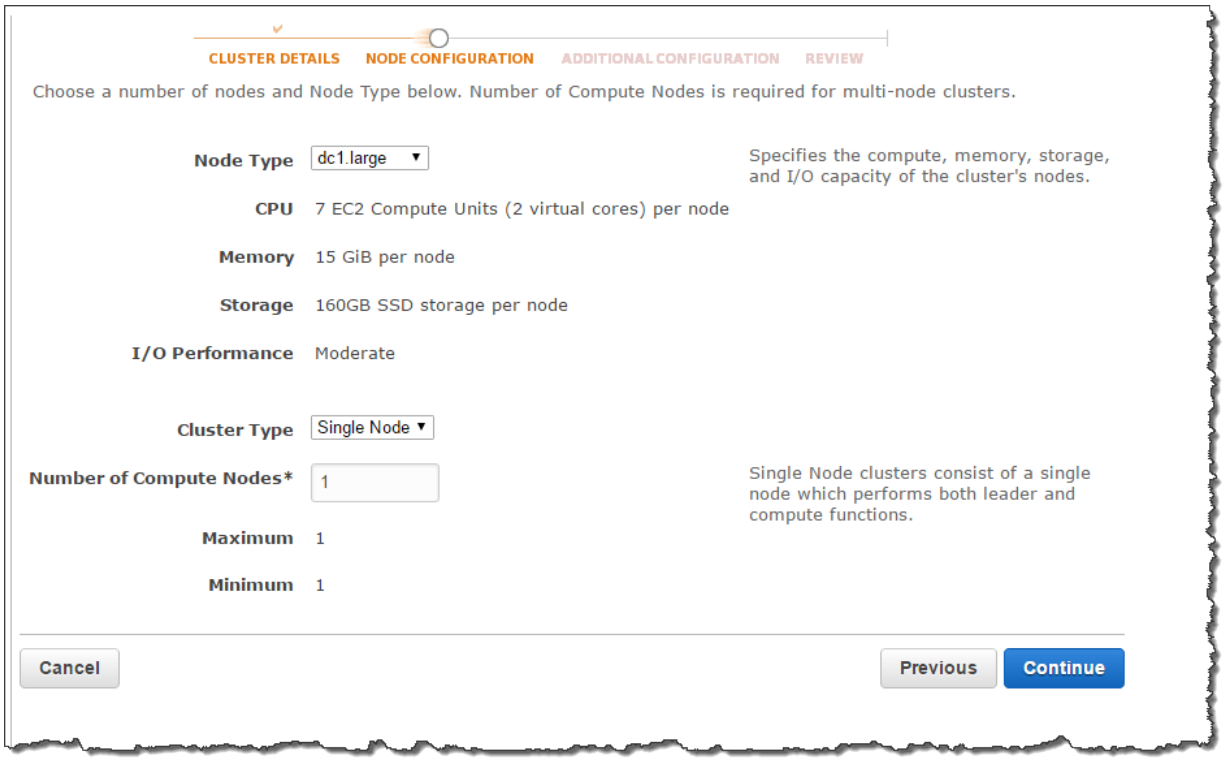
4. On the Cluster Details page, enter the following values and then choose **Continue**:

   - **Cluster Identifier**: type `examplecluster`.
   - **Database Name**: leave this box blank. Amazon Redshift will create a default database named `dev`.
   - **Database Port**: type the port number on which the database will accept connections. You should have determined the port number in the prerequisite step of this tutorial. You cannot change the port after launching the cluster, so make sure that you have an open port number in your firewall so that you can connect from SQL client tools to the database in the cluster.

- **Master User Name**: type `masteruser`. You will use this username and password to connect to your database after the cluster is available.
- **Master User Password** and **Confirm Password**: type a password for the master user account.



5. On the Node Configuration page, select the following values and then choose **Continue**:
   - **Node Type**: **dc1.large**
   - **Cluster Type**: **Single Node**



6. On the Additional Configuration page, you will see different options depending on your AWS account, which determines the type of platform the cluster uses. To keep things simple for this tutorial, you do not need to understand the distinction between these platforms, EC2-Classic and EC2-VPC. You can use the information in Additional Resources (p. 19) to locate the *Amazon Redshift Cluster Management Guide* and learn more after the tutorial.

   EC2-VPC

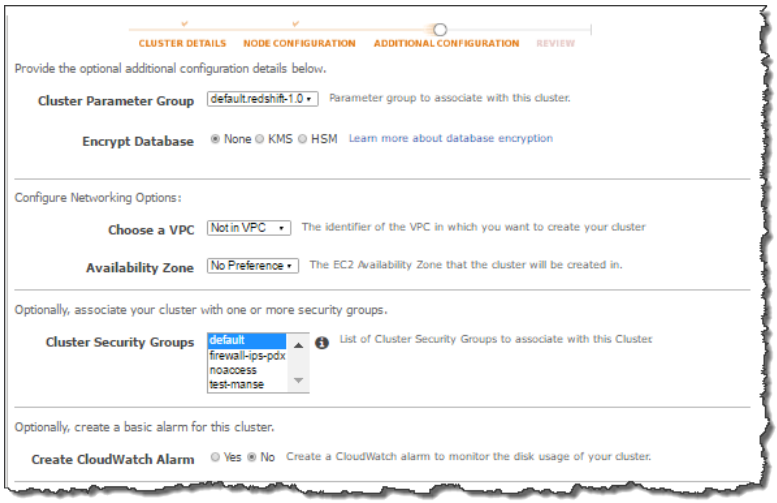
   If you have a default VPC in the region you've selected, you will use the EC2-VPC platform to launch your cluster. You screen will look similar to the following:

Use the following values if you are launching your cluster in the EC2-VPC platform:

- **Cluster Parameter Group**: select the default parameter group.
- **Encrypt Database**: **None**.
- **Choose a VPC**: **Default VPC (vpc-xxxxxxxx)**
- **Cluster Subnet Group**: **default**
- **Publicly Accessible**: **Yes**
- **Choose a Public IP Address**: **No**
- **Enhanced VPC Routing**: **No**
- **Availability Zone**: **No Preference**
- **VPC Security Groups**: **default (sg-xxxxxxxx)**
- **Create CloudWatch Alarm**: **No**

EC2-Classic

If you do not have a VPC, you will use the EC2-Classic platform to launch your cluster. Your screen will look similar to the following:

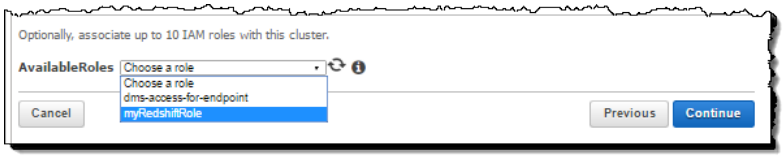


Use the following values if you are launching your cluster in the EC2-Classic platform:

- **Cluster Parameter Group**: select the default parameter group.
- **Encrypt Database**: **None**.
- **Choose a VPC**: **Not in VPC**
- **Availability Zone**: **No Preference**
- **Cluster Security Groups**: **default**
- **Create CloudWatch Alarm**: **No**

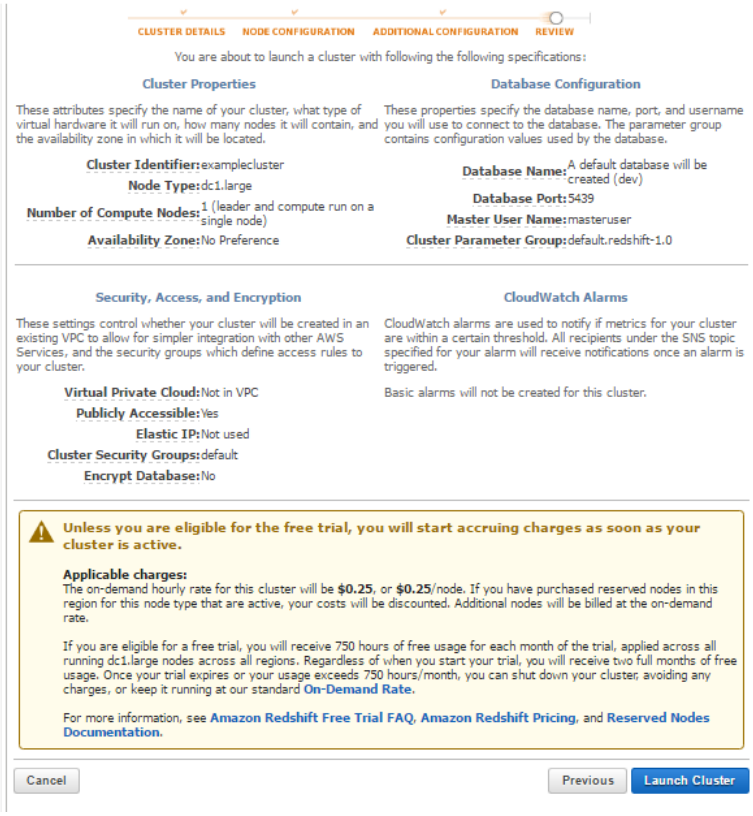
7. Associate an IAM role with the cluster.

   For **AvailableRoles**, choose **myRedshiftRole** and then choose **Continue**.

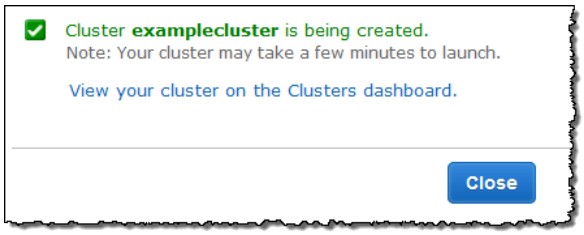


8. On the Review page, review the selections that you've made and then choose **Launch Cluster**.

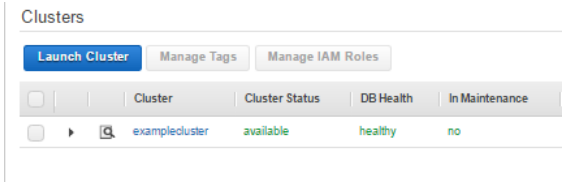
   Your screen will look similar to the following:



9. A confirmation page appears and the cluster will take a few minutes to finish. Choose **Close** to return to the list of clusters.



10. On the Clusters page, choose the cluster that you just launched and review the **Cluster Status** information. Make sure that the **Cluster Status** is **available** and the **Database Health** is **healthy** before you try to connect to the database later in this tutorial.



Step 4: Authorize Access to the Cluster

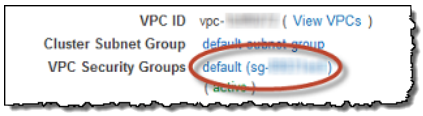
In the previous step, you launched your Amazon Redshift cluster. Before you can connect to the cluster, you need to configure a security group to authorize access:

- If you launched your cluster in the EC2-VPC platform, follow the steps in To Configure the VPC Security Group (EC2-VPC Platform) (p. 10).
- If you launched your cluster in the EC2-Classic platform, follow the steps in To Configure the Amazon Redshift Security Group (p. 11).

Note
You only need to configure one of these two types of security groups. Follow the steps that correspond to the platform in which you launched your cluster.

To Configure the VPC Security Group (EC2-VPC Platform)

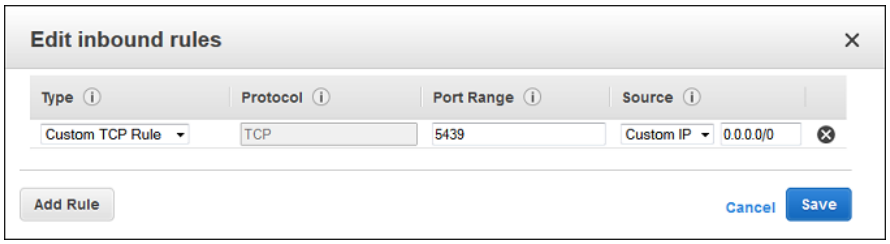
1. In the Amazon Redshift console, in the navigation pane, choose **Clusters**.
2. Choose `examplecluster` to open it, and make sure you are on the **Configuration** tab.
3. Under **Cluster Properties**, for **VPC Security Groups**, choose your security group.



4. After your security group opens in the Amazon EC2 console, choose the **Inbound** tab.

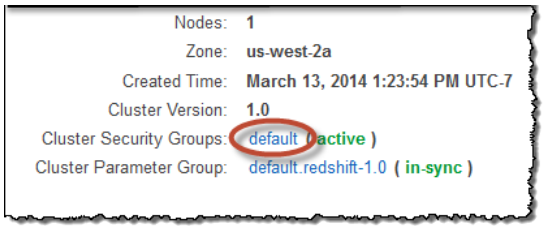
5. Choose **Edit**, and enter the following, then choose **Save**:
   - **Type**: **Custom TCP Rule**.
   - **Protocol**: **TCP**.
   - **Port Range**: type the same port number that you used when you launched the cluster. The default port for Amazon Redshift is `5439`, but your port might be different.
   - **Source**: select **Custom IP**, then type `0.0.0.0/0`.

     Important
     Using 0.0.0.0/0 is not recommended for anything other than demonstration purposes because it allows access from any computer on the internet. In a real environment, you would create inbound rules based on your own network settings.



To Configure the Amazon Redshift Security Group

1. In the Amazon Redshift console, in the navigation pane, choose **Clusters**.
2. Choose `examplecluster` to open it, and make sure you are on the **Configuration** tab.
3. Under **Cluster Properties**, for **Cluster Security Groups**, choose **default** to open the default security group.

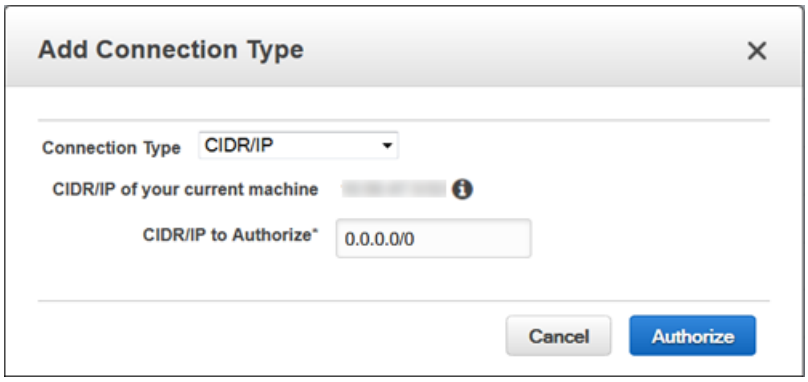


4. On the **Security Groups** tab, in the cluster security group list, choose the cluster security group whose rules you want to manage.
5. On the **Security Group Connections** tab, choose **Add Connection Type**.

6. In the **Connection Type** box, choose **CIDR/IP**.

   In **CIDR/IP to Authorize**, type `0.0.0.0/0` and choose **Authorize**.

   Important
   Using 0.0.0.0/0 is not recommended for anything other than demonstration purposes because it allows access from any computer on the Internet. In a real environment, you would create inbound rules based on your own network settings.



Step 5: Connect to the Sample Cluster

Now you will connect to your cluster by using a SQL client tool and run a simple query to test the connection. You can use most SQL client tools that are compatible with PostgreSQL. For this tutorial, you'll use the SQL Workbench/J client that you installed in the prerequisites section of this tutorial. Complete this section by performing the following steps:

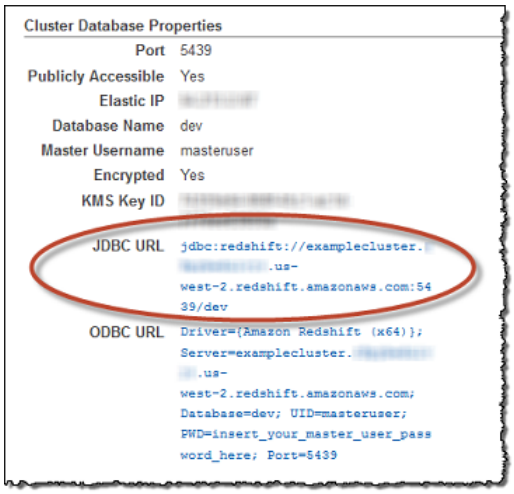
- To Get Your Connection String (p. 12)
- To Connect from SQL Workbench/J to Your Cluster (p. 13)

After you complete this step, you can determine whether you want to load sample data from Amazon S3 in Step 6: Load Sample Data from Amazon S3 (p. 15) or find more information about Amazon Redshift and reset your environment at Where Do I Go From Here? (p. 19).

To Get Your Connection String

1. In the Amazon Redshift console, in the navigation pane, choose **Clusters**.
2. Choose `examplecluster` to open it, and make sure you are on the **Configuration** tab.
3. On the **Configuration** tab, under **Cluster Database Properties**, copy the JDBC URL of the cluster.

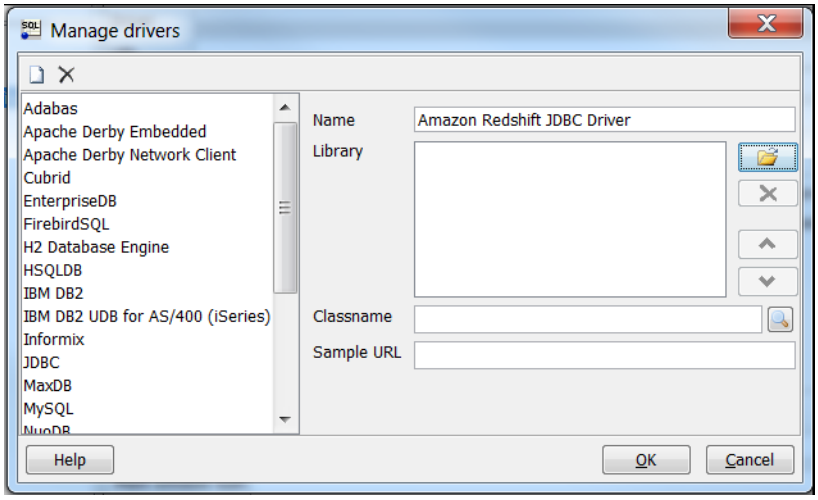
   Note
   The endpoint for your cluster is not available until the cluster is created and in the available state.



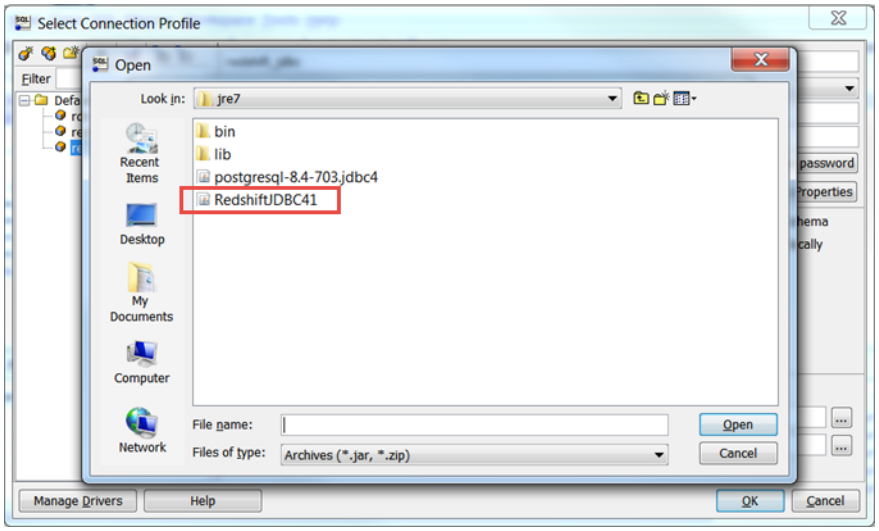
To Connect from SQL Workbench/J to Your Cluster

This step assumes you installed SQL Workbench/J in Step 1: Set Up Prerequisites (p. 2).

1. Open SQL Workbench/J.
2. Choose **File**, and then choose **Connect window**.
3. Choose **Create a new connection profile**.
4. In the **New profile** text box, type a name for the profile.
5. Choose **Manage Drivers**. The **Manage Drivers** dialog opens.
6. Choose the **Create a new entry** button. In the **Name** text box, type a name for the driver.

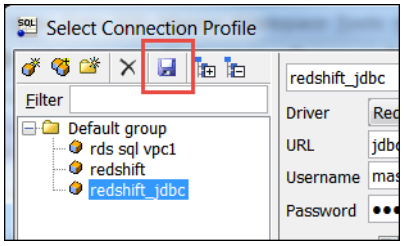


   Choose the folder icon next to the **Library** box, navigate to the location of the driver, select it, and then choose **Open**.

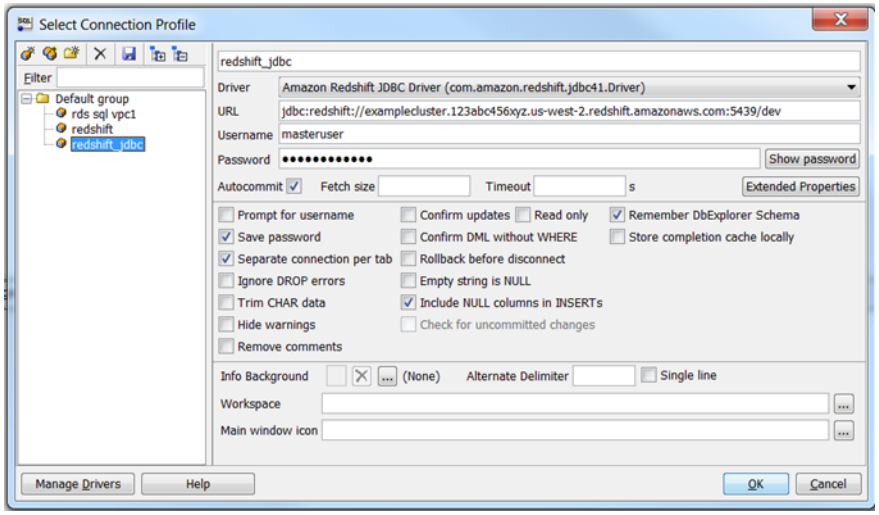


If the **Please select one driver** dialog box displays, select **com.amazon.redshift.jdbc4.Driver** or **com.amazon.redshift.jdbc41.Driver** and choose **OK**. SQL Workbench/J automatically completes the **Classname** box. Leave the **Sample URL** box blank, and then choose **OK**.

7. In the **Driver** box, choose the driver you just added.
8. In **URL**, copy the JDBC URL from the Amazon Redshift console and paste it here.
9. In **Username**, type *masteruser*.
10. In **Password**, type the password associated with the master user account.
11. Choose the **Autocommit** box.
12. Choose the **Save profile list** icon, as shown below:



13. Choose **OK**.



Step 6: Load Sample Data from Amazon S3

At this point you have a database called dev and you are connected to it. Now you will create some tables in the database, upload data to the tables, and try a query. For your convenience, the sample data you will load is available in an Amazon S3 bucket.

Note
Before you proceed, ensure that your SQL Workbench/J client is connected to the cluster.

After you complete this step, you can find more information about Amazon Redshift and reset your environment at Where Do I Go From Here? (p. 19).

1. Create tables.

   Copy and execute the following create table statements to create tables in the dev database. For more information about the syntax, go to CREATE TABLE in the *Amazon Redshift Database Developer Guide*.

```
create table users(
 userid integer not null distkey sortkey,
 username char(8),
 firstname varchar(30),
 lastname varchar(30),
 city varchar(30),
 state char(2),
 email varchar(100),
 phone char(14),
 likesports boolean,
 liketheatre boolean,
 likeconcerts boolean,
 likejazz boolean,
 likeclassical boolean,
 likeopera boolean,
 likerock boolean,
 likevegas boolean,
 likebroadway boolean,
 likemusicals boolean);

create table venue(
 venueid smallint not null distkey sortkey,
 venuename varchar(100),
 venuecity varchar(30),
 venuestate char(2),
 venueseats integer);

create table category(
 catid smallint not null distkey sortkey,
 catgroup varchar(10),
 catname varchar(10),
 catdesc varchar(50));

create table date(
 dateid smallint not null distkey sortkey,
 caldate date not null,
 day character(3) not null,
 week smallint not null,
 month character(5) not null,
 qtr character(5) not null,
```

```
 year smallint not null,
 holiday boolean default('N'));

create table event(
 eventid integer not null distkey,
 venueid smallint not null,
 catid smallint not null,
 dateid smallint not null sortkey,
 eventname varchar(200),
 starttime timestamp);

create table listing(
 listid integer not null distkey,
 sellerid integer not null,
 eventid integer not null,
 dateid smallint not null  sortkey,
 numtickets smallint not null,
 priceperticket decimal(8,2),
 totalprice decimal(8,2),
 listtime timestamp);

create table sales(
 salesid integer not null,
 listid integer not null distkey,
 sellerid integer not null,
 buyerid integer not null,
 eventid integer not null,
 dateid smallint not null sortkey,
 qtysold smallint not null,
 pricepaid decimal(8,2),
 commission decimal(8,2),
 saletime timestamp);
```

2. Load sample data from Amazon S3 by using the COPY command.

   Note
   We recommend using the COPY command to load large datasets into Amazon Redshift from Amazon S3 or DynamoDB. For more information about COPY syntax, see COPY in the *Amazon Redshift Database Developer Guide*.

   The sample data for this tutorial is provided in an Amazon S3 bucket that is owned by Amazon Redshift. The bucket permissions are configured to allow all authenticated AWS users read access to the sample data files.

   To load the sample data, you must provide authentication for your cluster to access Amazon S3 on your behalf. You can provide either role-based authentication or key-based authentication. We recommend using role-based authentication. For more information about both types of authentication, see CREDENTIALS in the Amazon Redshift Database Developer Guide.

   For this step, you will provide authentication by referencing the IAM role you created and then attached to your cluster in previous steps.

   Note
   If you don't have proper permissions to access Amazon S3, you receive the following error message when running the COPY command: `S3ServiceException: Access Denied`.

   The COPY commands include a placeholder for the IAM role ARN, as shown in the following example.

```
copy users from 's3://awssampledbuswest2/tickit/allusers_pipe.txt'
credentials 'aws_iam_role=<iam-role-arn>'
delimiter '|' region 'us-west-2';
```

To authorize access using an IAM role, replace *<iam-role-arn>* in the CREDENTIALS parameter string with the role ARN for the IAM role you created in Step 2: Create an IAM Role (p. 3).

Your COPY command will look similar to the following example.

```
copy users from 's3://awssampledbuswest2/tickit/allusers_pipe.txt'
credentials 'aws_iam_role=arn:aws:iam::123456789012:role/myRedshiftRole'
delimiter '|' region 'us-west-2';
```

To load the sample data, replace *<iam-role-arn>* in the following COPY commands with your role ARN. Then run the commands in your SQL client tool.

```
copy users from 's3://awssampledbuswest2/tickit/allusers_pipe.txt'
credentials 'aws_iam_role=<iam-role-arn>'
delimiter '|' region 'us-west-2';

copy venue from 's3://awssampledbuswest2/tickit/venue_pipe.txt'
credentials 'aws_iam_role=<iam-role-arn>'
delimiter '|' region 'us-west-2';

copy category from 's3://awssampledbuswest2/tickit/category_pipe.txt'
credentials 'aws_iam_role=<iam-role-arn>'
delimiter '|' region 'us-west-2';

copy date from 's3://awssampledbuswest2/tickit/date2008_pipe.txt'
credentials 'aws_iam_role=<iam-role-arn>'
delimiter '|' region 'us-west-2';

copy event from 's3://awssampledbuswest2/tickit/allevents_pipe.txt'
credentials 'aws_iam_role=<iam-role-arn>'
delimiter '|' timeformat 'YYYY-MM-DD HH:MI:SS' region 'us-west-2';

copy listing from 's3://awssampledbuswest2/tickit/listings_pipe.txt'
credentials 'aws_iam_role=<iam-role-arn>'
delimiter '|' region 'us-west-2';

copy sales from 's3://awssampledbuswest2/tickit/sales_tab.txt'
credentials 'aws_iam_role=<iam-role-arn>'
delimiter '\t' timeformat 'MM/DD/YYYY HH:MI:SS' region 'us-west-2';
```

3. Now try the example queries. For more information, go to SELECT in the *Amazon Redshift Developer Guide*.

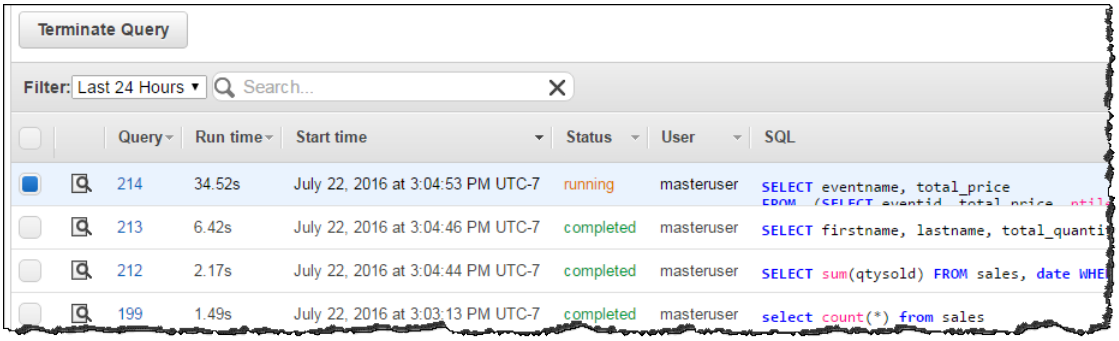
```
-- Get definition for the sales table.
SELECT *
FROM pg_table_def
WHERE tablename = 'sales';

-- Find total sales on a given calendar date.
SELECT sum(qtysold)
```

```
FROM   sales, date
WHERE  sales.dateid = date.dateid
AND    caldate = '2008-01-05';

-- Find top 10 buyers by quantity.
SELECT firstname, lastname, total_quantity
FROM   (SELECT buyerid, sum(qtysold) total_quantity
        FROM  sales
        GROUP BY buyerid
        ORDER BY total_quantity desc limit 10) Q, users
WHERE Q.buyerid = userid
ORDER BY Q.total_quantity desc;

-- Find events in the 99.9 percentile in terms of all time gross sales.
SELECT eventname, total_price
FROM  (SELECT eventid, total_price, ntile(1000) over(order by total_price
 desc) as percentile
       FROM (SELECT eventid, sum(pricepaid) total_price
             FROM   sales
             GROUP BY eventid)) Q, event E
       WHERE Q.eventid = E.eventid
       AND percentile = 1
ORDER BY total_price desc;
```

4. You can optionally go the Amazon Redshift console to review the queries you executed. The **Queries** tab shows a list of queries that you executed over a time period you specify. By default, the console displays queries that have executed in the last 24 hours, including currently executing queries.

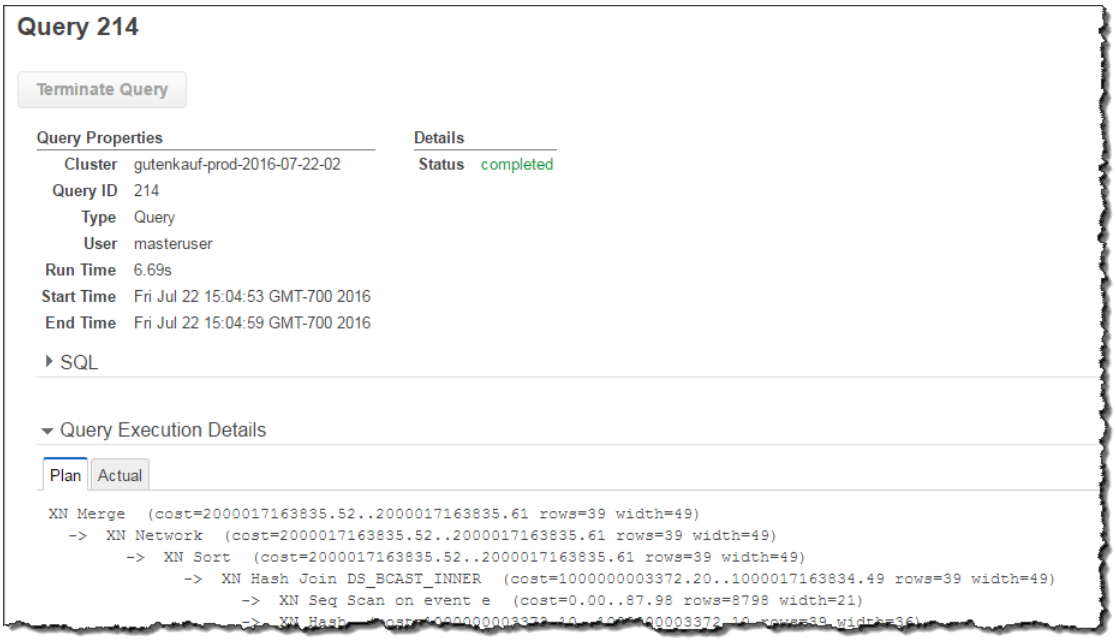
   - Sign in to the AWS Management Console and open the Amazon Redshift console at https://console.aws.amazon.com/redshift/.
   - In the cluster list in the right pane, choose `examplecluster`.
   - Choose the **Queries** tab.

     The console displays list of queries you executed as shown in the example below.



   - To view more information about a query, choose the query ID link in the **Query** column or choose the magnifying glass icon.

     The following example shows the details of a query you ran in a previous step.



Step 7: Find Additional Resources and Reset Your Environment

When you have completed this tutorial, you can go to other Amazon Redshift resources to learn more about the concepts introduced in this guide or you can reset your environment to the previous state. You might want to keep the sample cluster running if you intend to try tasks in other Amazon Redshift guides. However, remember that **you will continue to be charged for your cluster as long as it is running**. You should revoke access to the cluster and delete it when you no longer need it so that you stop incurring charges.

Where Do I Go From Here?

Additional Resources

We recommend that you continue to learn more about the concepts introduced in this guide with the following resources:

- Amazon Redshift Management Overview: This topic provides an overview of Amazon Redshift.
- Amazon Redshift Cluster Management Guide: This guide builds upon this *Amazon Redshift Getting Started* and provides in-depth information about the concepts and tasks for creating, managing, and monitoring clusters.
- Amazon Redshift Database Developer Guide: This guide builds upon this *Amazon Redshift Getting Started* by providing in-depth information for database developers about designing, building, querying, and maintaining the databases that make up your data warehouse.

Resetting Your Environment

When you have completed this tutorial, you should reset your environment to the previous state by doing the following:

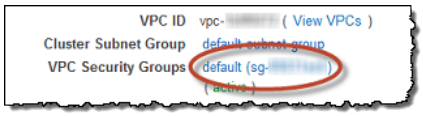
- Revoke access to the port and CIDR/IP address for which you authorized access:

  If you used the EC2-VPC platform to launch your cluster, perform the steps in To Revoke Access from the VPC Security Group (p. 20).

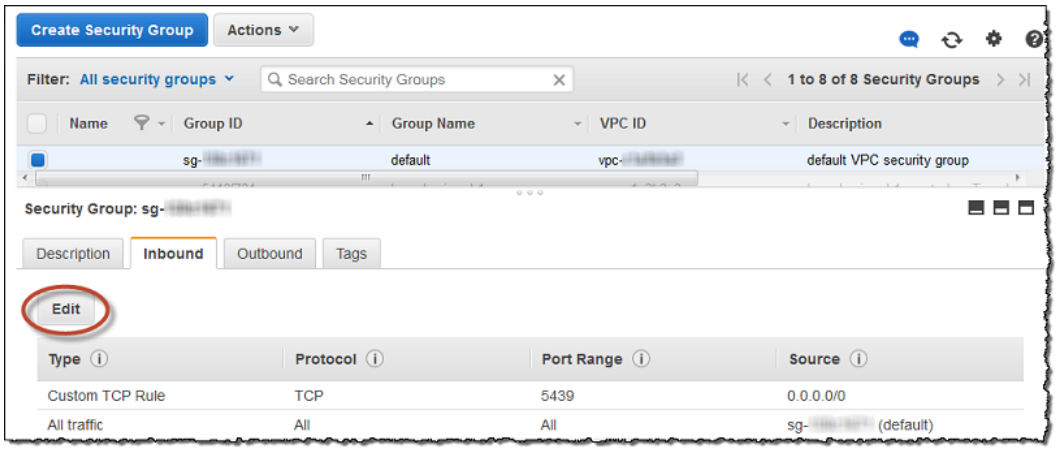
  If you used the EC2-Classic platform to launch your cluster, perform the steps in To Revoke Access from the Cluster Security Group (p. 21).
- Delete your sample cluster. **You will continue to incur charges for the Amazon Redshift service until you delete the cluster**. Perform the steps in To Delete the Sample Cluster (p. 21).

To Revoke Access from the VPC Security Group

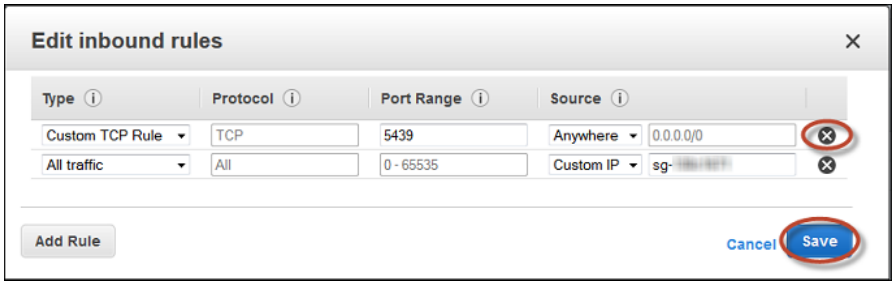
1. In the Amazon Redshift console, in the navigation pane, choose **Clusters**.
2. Choose **examplecluster** to open it, and make sure you are on the **Configuration** tab.
3. Under **Cluster Properties**, choose the vpc security group.



4. With the default security group selected, choose the **Inbound** tab and then choose **Edit**.

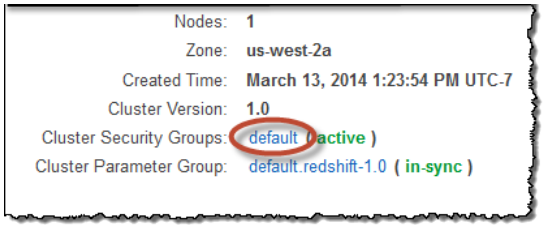


5. Delete the custom TCP/IP ingress rule that you created for your port and CIDR/IP address 0.0.0.0/0. Do not remove any other rules, such as the **All traffic** rule that was created for the security group by default. Choose **Save**.

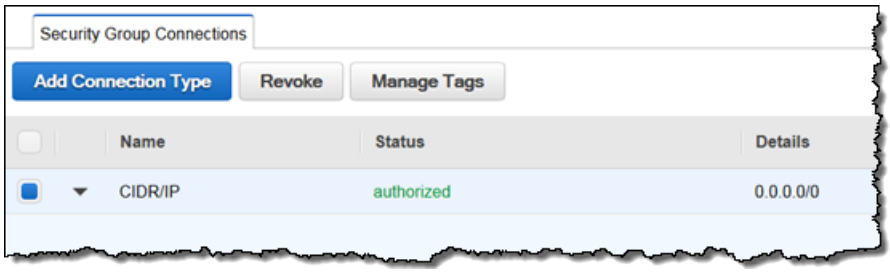


To Revoke Access from the Cluster Security Group

1. In the Amazon Redshift console, in the navigation pane, choose **Clusters**.
2. Choose examplecluster to open it, and make sure you are on the **Configuration** tab.
3. Under **Cluster Properties**, for **Cluster Security Groups**, choose **default** to open the default security group.



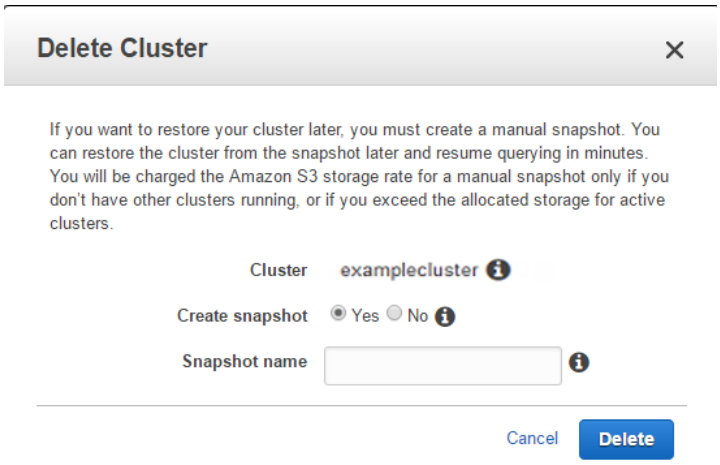
4. On the **Security Groups** tab, in the cluster security group list, choose the default cluster security group .
5. On the **Security Group Connections** tab, select the custom CIDR/IP ingress rule that you created for CIDR/IP address 0.0.0.0/0 and choose **Revoke**.



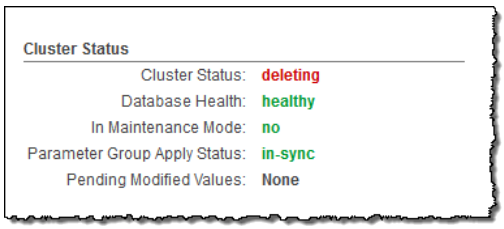
To Delete the Sample Cluster

1. In the Amazon Redshift console, in the navigation pane, choose **Clusters**.
2. Choose examplecluster to open it, and make sure you are on the **Configuration** tab.
3. In the **Cluster** menu, choose **Delete**.

4. In the **Delete Cluster** window, for **Create snapshot**, choose **No** and then choose **Delete**.



5. On the cluster details window, the **Cluster Status** will display that the cluster being deleted.



Document History

The following table describes the important changes since the last release of the *Amazon Redshift Getting Started Guide*.

Latest documentation update: July 28, 2015

Change	Description	Release Date
New Feature	Updated the guide to launch clusters from the Amazon Redshift Dashboard.	July 28, 2015
New Feature	Updated the guide to use new node type names.	June 9, 2015
Documentation Update	Updated screenshots and procedure for configuring VPC security groups.	April 30, 2015
Documentation Update	Updated screenshots and procedures to match the current console.	November 12, 2014
Documentation Update	Moved loading data from Amazon S3 information into its own section and moved next steps section into the final step for better discoverability.	May 13, 2014
Documentation Update	Removed the Welcome page and incorporated the content into the main Getting Started page.	March 14, 2014
Documentation Update	This is a new release of the *Amazon Redshift Getting Started Guide* that addresses customer feedback and service updates.	March 14, 2014
New Guide	This is the first release of the *Amazon Redshift Getting Started Guide*.	February 14, 2013