


How to setup Amazon's Relational Data Store (RDS)

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This is in the main AWS console page






 **AWS** ▾ **Services** ▾ **Edit** ▾

Amazon Web Services



Compute



-  **EC2**
Virtual Servers in the Cloud
-  **Lambda**
Run Code in Response to Events
-  **EC2 Container Service**
Run and Manage Docker Containers

Storage & Content Delivery




-  **S3**
Scalable Storage in the Cloud
-  **Elastic File System** **PREVIEW**
Fully Managed File System for EC2
-  **Storage Gateway**
Integrates On-Premises IT Environments with Cloud Storage
-  **Glacier**
Archive Storage in the Cloud
-  **CloudFront**
Global Content Delivery Network

Database








-  **RDS**
MySQL, Postgres, Oracle, SQL Server, and Amazon Aurora
-  **DynamoDB**

-  **ElastiCache**
In-Memory Cache
-  **Redshift**
Managed Petabyte-Scale Data Warehouse Service







Networking

-  **VPC**
Isolated Cloud Resources
-  **Direct Connect**
Dedicated Network Connection to AWS
-  **Route 53**
Scalable DNS and Domain Name Registration





Administration & Security

-  **Directory Service**
Managed Directories in the Cloud
-  **Identity & Access Management**
Access Control and Key Management
-  **Trusted Advisor**
AWS Cloud Optimization Expert
-  **CloudTrail**
User Activity and Change Tracking
-  **Config**
Resource Configurations and Inventory
-  **CloudWatch**
Resource and Application Monitoring
-  **Service Catalog**
Personalized Catalog of AWS Resources








Deployment & Management

-  **Elastic Beanstalk**
AWS Application Container
-  **OpsWorks**
DevOps Application Management Service
-  **CloudFormation**
Templated AWS Resource Creation
-  **CodeDeploy**
Automated Deployments
-  **CodeCommit**
Managed Git Repositories
-  **CodePipeline**
Continuous Delivery





Analytics

-  **EMR**
Managed Hadoop Framework
-  **Kinesis**
Real-time Processing of Streaming Big Data
-  **Data Pipeline**
Orchestration for Data-Driven Workflows
-  **Machine Learning**
Build Smart Applications Quickly and Easily




Application Services

-  **SQS**
Message Queue Service
-  **SWF**
Workflow Service for Coordinating Application Components
-  **AppStream**
Low Latency Application Streaming
-  **Elastic Transcoder**
Easy-to-use Scalable Media Transcoding
-  **SES**
Email Sending Service
-  **CloudSearch**
Managed Search Service
-  **API Gateway**
Build, Deploy and Manage APIs

Mobile Services

-  **Cognito**
User Identity and App Data Synchronization
-  **Device Farm**
Test Android, Fire OS, and iOS apps on real devices in the Cloud
-  **Mobile Analytics**
Collect, View and Export App Analytics
-  **SNS**
Push Notification Service

Enterprise Applications

-  **WorkSpaces**
Desktops in the Cloud
-  **WorkDocs**
Secure Enterprise Storage and Sharing Service
-  **WorkMail** **PREVIEW**
Secure Email and Calendaring Service



AWS ▾

Services ▾

Edit ▾

RDS Dashboard

Instances

Reserved Purchases

Snapshots

Security Groups

Parameter Groups

Option Groups

Subnet Groups

Events

Event Subscriptions

Notifications



Amazon RDS for Aurora

Amazon RDS for Aurora is available in the following regions: Resources:

- **US East (N. Virginia)**
- **US West (Oregon)**
- **EU (Ireland)**
- **Getting Started Guide**
- **Documentation**
- **Aurora Forum**

[Launch an Aurora DB Instance](#)

Resources



You are using the following Amazon RDS resources in the US West (Oregon) region (used/quota):

DB Instances (1/40)

Allocated Storage (10.00 GB/100.00 TB)

[Click here to increase DB instances limit](#)

Reserved DB Purchases (0/40)

Snapshots (1)

Manual (0/50)

Automated (1)

Recent Events (3)

Event Subscriptions (0/20)

Parameter Groups (1)

Default (1)

Custom (0/100)

Option Groups (1)

Default (1)

Custom (0/20)

Subnet Groups (1/20)

Supported Platforms VPC

Default Network vpc-81ebcbe9

Create Instance

Amazon Relational Database Service (RDS) makes it easy to set up, operate, and scale a relational database in the cloud.

[Launch a DB Instance](#)

Note: Your DB Instances will launch in the US West (Oregon) region:

Service Health

Current Status

Details

Additional Information

[Getting Started with RDS](#)[Overview and Features](#)[Documentation](#)[Articles and Tutorials](#)[Data import guide for MySQL](#)[Data import guide for Oracle](#)[Data import guide for SQL Server](#)[Pricing](#)[Forums](#)

Related Services

Amazon ElastiCache

Add a managed Redis or Memcached-compatible in-memory cache to speed up your database access.

[Click here to learn more and launch your Cache Cluster](#)

Service Messages

[New RDS Feature Announcements](#)

Select Engine

To get started, choose a DB Engine below and click Select.

Amazon
Aurora

PostgreSQL
PostgreSQL

Select

MySQL



PostgreSQL

ORACLE

Microsoft
SQL Server

Do you plan to use this database for production purposes?



For databases used in production or pre-production we recommend:

- **Multi-AZ Deployment** for high availability (99.95% monthly up time **SLA**)
- **Provisioned IOPS Storage** for fast, consistent performance

Billing is based upon the **RDS pricing** table.

An instance which uses these features is not eligible for the **RDS Free Usage Tier**.

☐ **Yes**, use **Multi-AZ Deployment** and **Provisioned IOPS Storage** as defaults while creating this instance

☒ **No**, this instance is intended for use outside of production or under the **RDS Free Usage Tier**

[Cancel](#)

[Previous](#)

[Next Step](#)

Specify DB Details

Instance Specifications

DB Engine postgres

License Model postgresql-license

DB Engine Version 9.4.1

DB Instance Class ✓ - Select One -

Multi-AZ Deployment

Storage Type

Allocated Storage*



Provisioning less than 100 GB for high throughput workloads may result in exhaustion of the initial Google Cloud Storage quota. [Click here](#) for more details.

Settings

DB Instance Identifier*

Master Username*

Master Password*

Confirm Password*

Select the instance class that allocates the appropriate amount of compute engine memory capacity for the workload planned with the database instance.

- ✓ - Select One -
- db.t2.micro — 1 vCPU, 1 GiB RAM
- db.t2.small — 1 vCPU, 2 GiB RAM
- db.t2.medium — 2 vCPU, 4 GiB RAM
- db.m3.medium — 1 vCPU, 3.75 GiB RAM
- db.m3.large — 2 vCPU, 7.5 GiB RAM
- db.m3.xlarge — 4 vCPU, 15 GiB RAM
- db.m3.2xlarge — 8 vCPU, 30 GiB RAM
- db.r3.large — 2 vCPU, 15 GiB RAM
- db.r3.xlarge — 4 vCPU, 30.5 GiB RAM
- db.r3.2xlarge — 8 vCPU, 61 GiB RAM
- db.r3.4xlarge — 16 vCPU, 122 GiB RAM
- db.r3.8xlarge — 32 vCPU, 244 GiB RAM
- db.m2.xlarge — 2 vCPU, 17.1 GiB RAM
- db.m2.2xlarge — 4 vCPU, 34 GiB RAM
- db.m2.4xlarge — 8 vCPU, 68 GiB RAM
- db.cr1.8xlarge — 32 vCPU, 244 GiB RAM
- db.m1.small — 1 vCPU, 1.7 GiB RAM
- db.m1.medium — 1 vCPU, 3.75 GiB RAM
- db.m1.large — 2 vCPU, 7.5 GiB RAM
- db.m1.xlarge — 4 vCPU, 15 GiB RAM
- db.t1.micro — 1 vCPU, 0.613 GiB RAM

db.t2.micro — 1 vCPU, 1 GiB RAM

Make sure to set options like the picture →

DB Instance: db.t2.micro
Multi-AZ Deployment: NO
Storage Type: General Purpose
Allocated Storage: 5GB

PLEASE BE CAREFUL: any other option can be
VERY expensive (>\$200/month)!!

Instance Specifications

DB Engine	postgres
License Model	postgresql-license
DB Engine Version	9.4.1
DB Instance Class	db.t2.micro — 1 vCPU, 1 GiB RAM
Multi-AZ Deployment	<div>✓ - Select One - No Yes</div>
Storage Type	General Purpose (SSD)
Allocated Storage*	5 GB

Make sure to set:

Publically accessible: yes

Availability Zone: No preference

Pick a database name and remember it

The defaults are fine for everything else

VPC*	Default VPC (vpc-81ebcbe9) ▾
Subnet Group	default ▾
Publicly Accessible	Yes ▾
Availability Zone	No Preference ▾
VPC Security Group(s)	<div>Create new Security Group default (VPC) quick-start-1 (VPC) rds-launch-wizard (VPC)</div>

Database Options

Database Name	<input type="text"/>
Database Port	5432
DB Parameter Group	default.postgres9.4 ▾
DB Cluster Parameter Group	▾
Option Group	default:postgres-9-4 ▾
Copy Tags To Snapshots	<input type="checkbox"/>
Enable Encryption	No ▾

 The selected Engine or DB Instance Class does not support storage encryption.

Backup

Backup Retention Period	7 ▾ days
Backup Window	No Preference ▾

Maintenance

Auto Minor Version Upgrade	Yes ▾
Maintenance Window	No Preference ▾

This is where you can find your database host name and port
For example, the staff's database has the following information:

Host: w4111.cbegsm1stx70.us-west-2.rds.amazonaws.com
Port: 5432

The screenshot shows the AWS Management Console interface for an Amazon RDS instance. At the top, there are buttons for "Launch DB Instance", "Show Monitoring", and "Instance Actions". Below these is a filter set to "All Instances" and a search bar. The instance list shows a PostgreSQL instance named "w4111" with a status of "available", 0.68% CPU usage, 2 connections, and no maintenance. The endpoint is highlighted with a red box: `w4111.cbegsm1stx70.us-west-2.rds.amazonaws.com:5432 (authorized)`. Below the instance list, there are two sections: "Alarms and Recent Events" and "Monitoring".

Alarms and Recent Events

TIME (UTC-4)	EVENT
Aug 7 8:13 PM	Finished DB Instance backup
Aug 7 8:12 PM	Backing up DB instance
Aug 7 8:11 PM	DB instance created


Monitoring

	CURRENT VALUE	THRESHOLD	LAST HOUR
CPU	0.68%		
Memory	553 MB		
Storage	9,670 MB		
Read IOPS	0.55/sec		
Write IOPS	0.883/sec		
Swap Usage	0 MB		

At the bottom, there are buttons for "Instance Actions", "Tags", and "Logs".

In the details section, it will also tell you the database name and your user name

Filter: All Instances ▾ Search DB Instances... X

	Engine	DB Instance	Status	CPU	Current Activity	Maintenance	Class
	PostgreSQL	w4111	available	0.68%	2 Connections	None	db.t2.micro

Endpoint: w4111.cbsgsm1ntx70.us-west-2.rds.amazonaws.com:5432 (authorized) ⓘ

Configuration Details

Engine PostgreSQL 9.4.1

License Model Postgresql License

Created Time August 7, 2015 at 8:11:08 PM UTC-

DB Name w4111

Username ewu

Option Group default.postgres-9.4 (in-sync)

Parameter Group default.postgres9.4 (in-sync)

Copy Tags To Snapshots No

Security and Network

Availability Zone us-west-2c

VPC vpc-81ebcbe9

Subnet Group default (Complete)

Subnets subnet-84ebcbec
subnet-83ebcbeb
subnet-82ebcbea

Security Groups rds-launch-wizard (sg-59f32d3d)
(active)

Publicly Accessible Yes

Endpoint w4111.cbsgsm1ntx70.us-west-2.rds.amazonaws.com

Port 5432

Certificate Authority rds-ca-0015 (Mar 5, 2009)

Instance and IOPS

Instance Class db.t2.micro ⓘ

Storage Type General Purpose (SS)

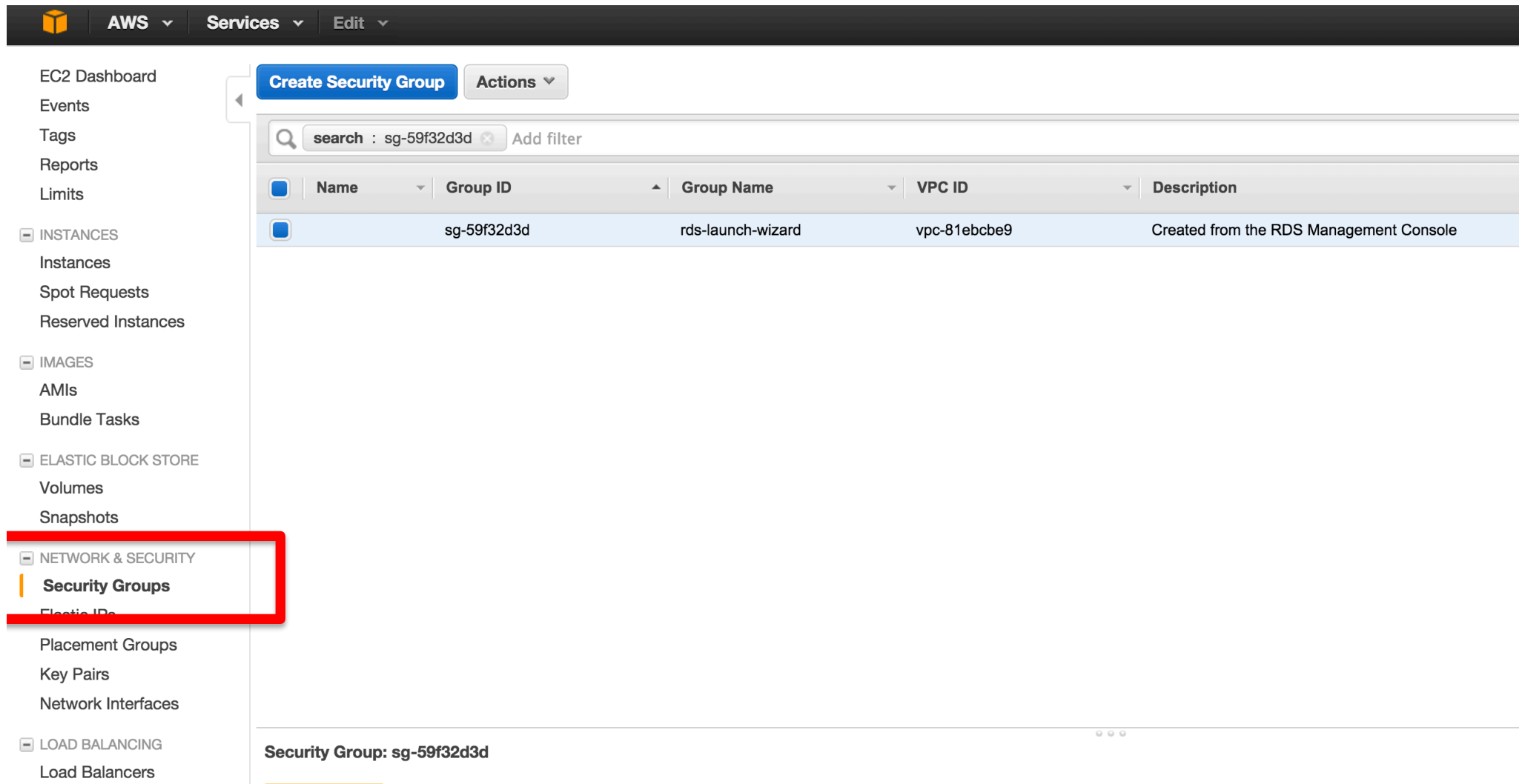
IOPS disabled

Storage 10 GB

Instance Actions ▾ Tags Logs

Amazon is strict about security, so the firewall will not let you access the database yet.

Click on **Security Groups** to let database connections through the firewall.

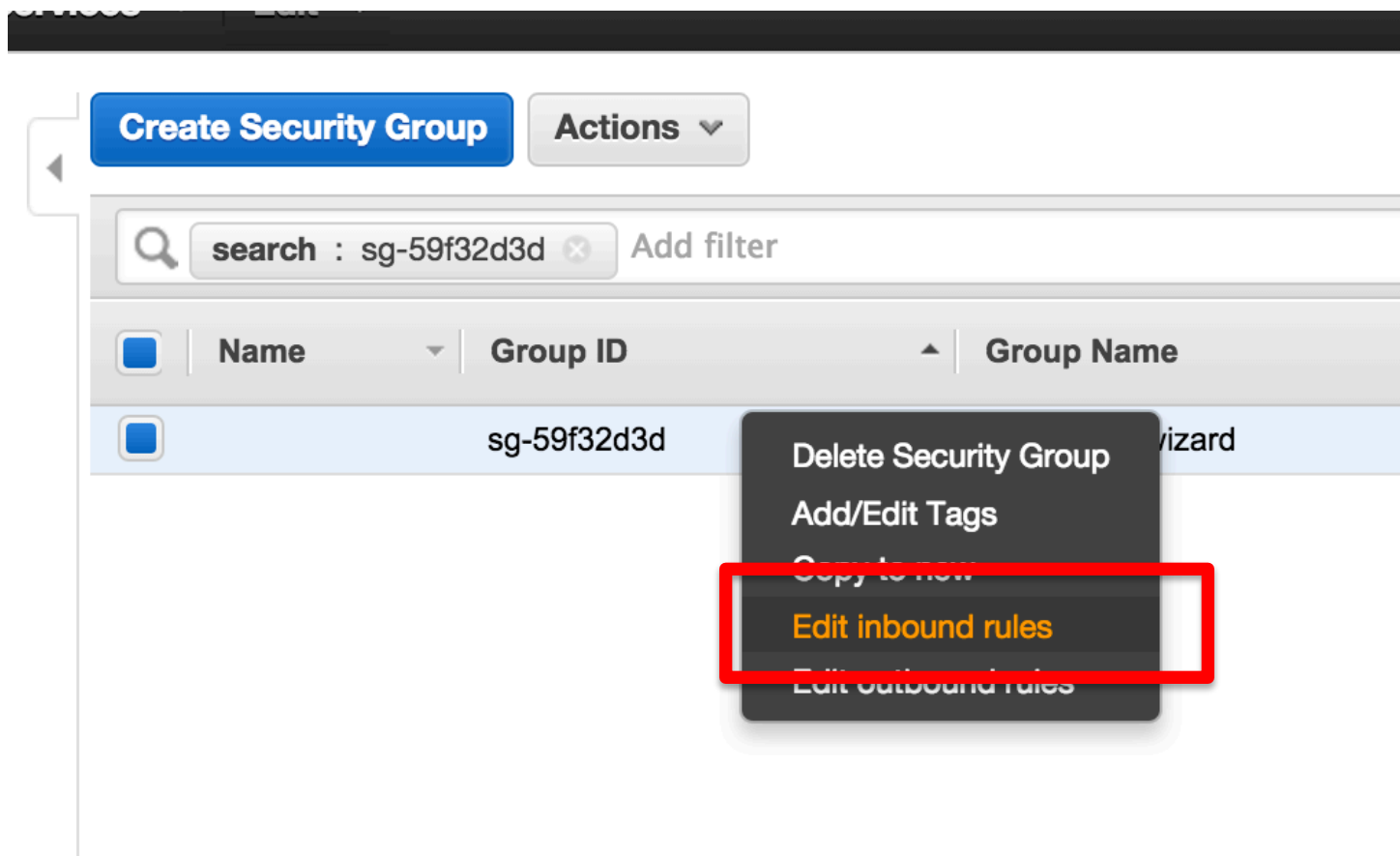


The screenshot displays the AWS Management Console interface. On the left, the navigation menu includes categories like EC2 Dashboard, INSTANCES, IMAGES, ELASTIC BLOCK STORE, NETWORK & SECURITY, and LOAD BALANCING. The 'Security Groups' link under 'NETWORK & SECURITY' is highlighted with a red rectangle. The main content area shows the 'Create Security Group' button and an 'Actions' dropdown. Below this is a search bar with the text 'search : sg-59f32d3d' and an 'Add filter' button. A table lists the security groups, with the following data:

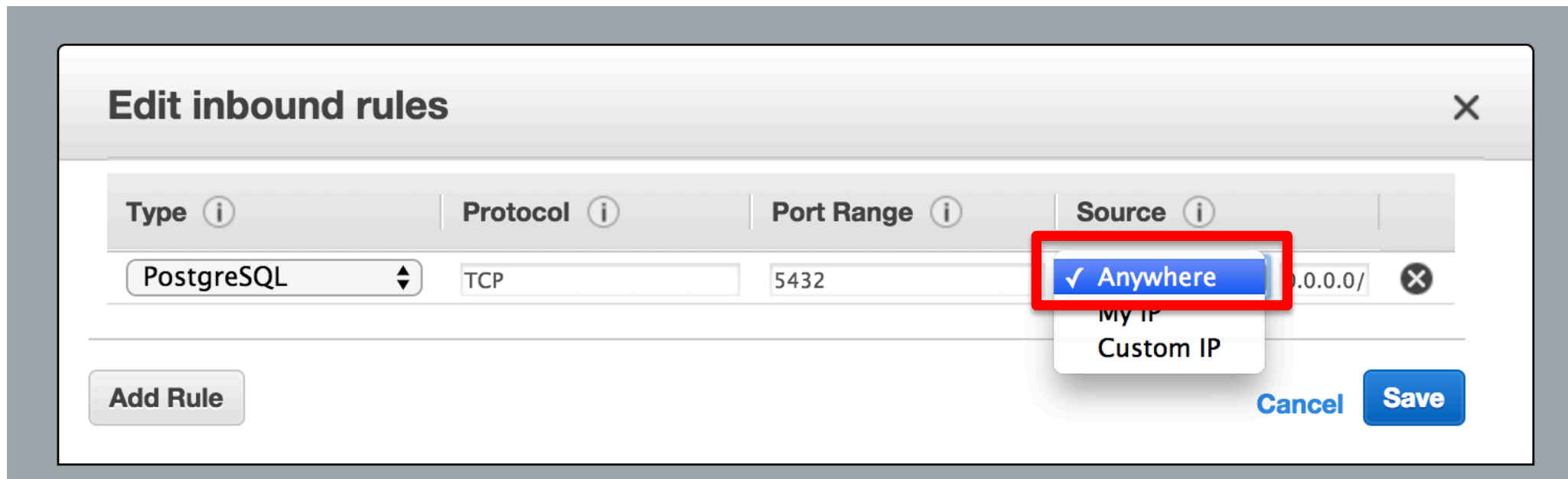
	Name	Group ID	Group Name	VPC ID	Description
<input type="checkbox"/>		sg-59f32d3d	rds-launch-wizard	vpc-81ebcbe9	Created from the RDS Management Console

At the bottom, the title 'Security Group: sg-59f32d3d' is visible.

Right click on the security group and click **Edit inbound rules**



Set the Source to **Anywhere** so you can access the database from..anywhere



The screenshot shows a window titled "Edit inbound rules" with a close button (X) in the top right corner. The window contains a table with four columns: "Type", "Protocol", "Port Range", and "Source". Each column has an information icon (i) to its right. The "Type" column has a dropdown menu currently showing "PostgreSQL". The "Protocol" column has a text input field containing "TCP". The "Port Range" column has a text input field containing "5432". The "Source" column has a dropdown menu that is open, showing three options: "✓ Anywhere" (which is highlighted with a blue background and a red rectangular border), "My IP", and "Custom IP". To the right of the "Source" dropdown, there is a text input field containing ".0.0.0.0/" and a close button (X). At the bottom left of the window is a button labeled "Add Rule". At the bottom right are two buttons: "Cancel" and "Save".

Type <small>i</small>	Protocol <small>i</small>	Port Range <small>i</small>	Source <small>i</small>
PostgreSQL	TCP	5432	✓ Anywhere My IP Custom IP

Buttons: Add Rule, Cancel, Save

Now you can access your RDS database!

On your Amazon EC2 machine, you can use the **psql** command to connect to databases:

```
psql -h <database host> -U <your username> -W <your database (not RDS) name>
```

For example, to access the staff RDS instance for project 1 part 2

```
psql -U myuni -h w4l1l1db1.cloudapp.net proj1part2
```