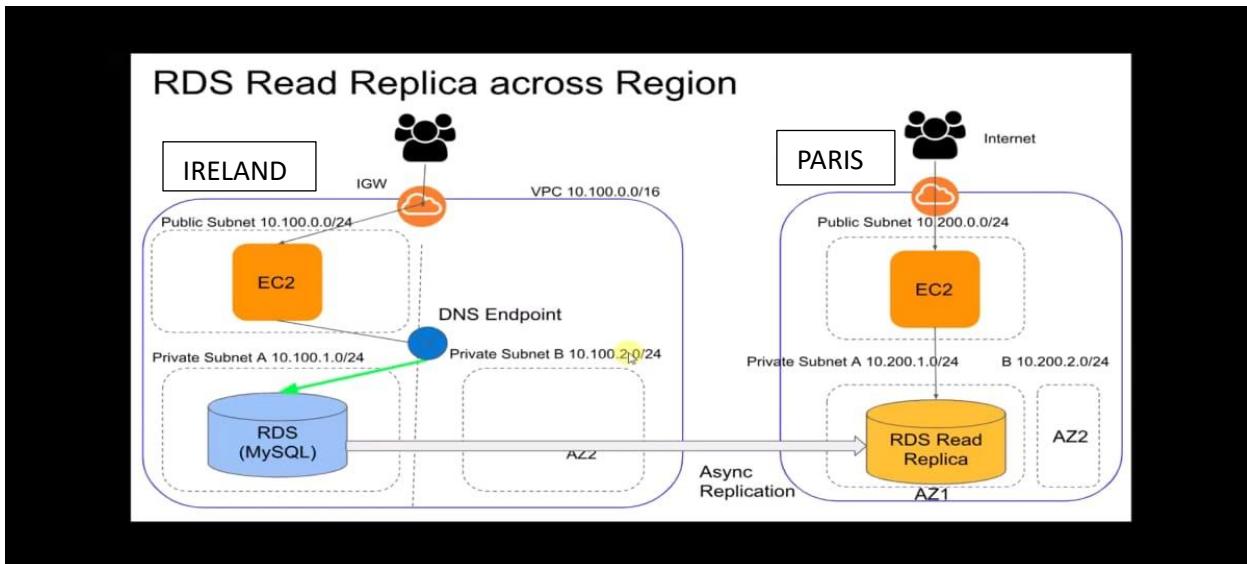


## RDS READ REPLICA ACROSS REGION :



## RDS MASTER SET UP:

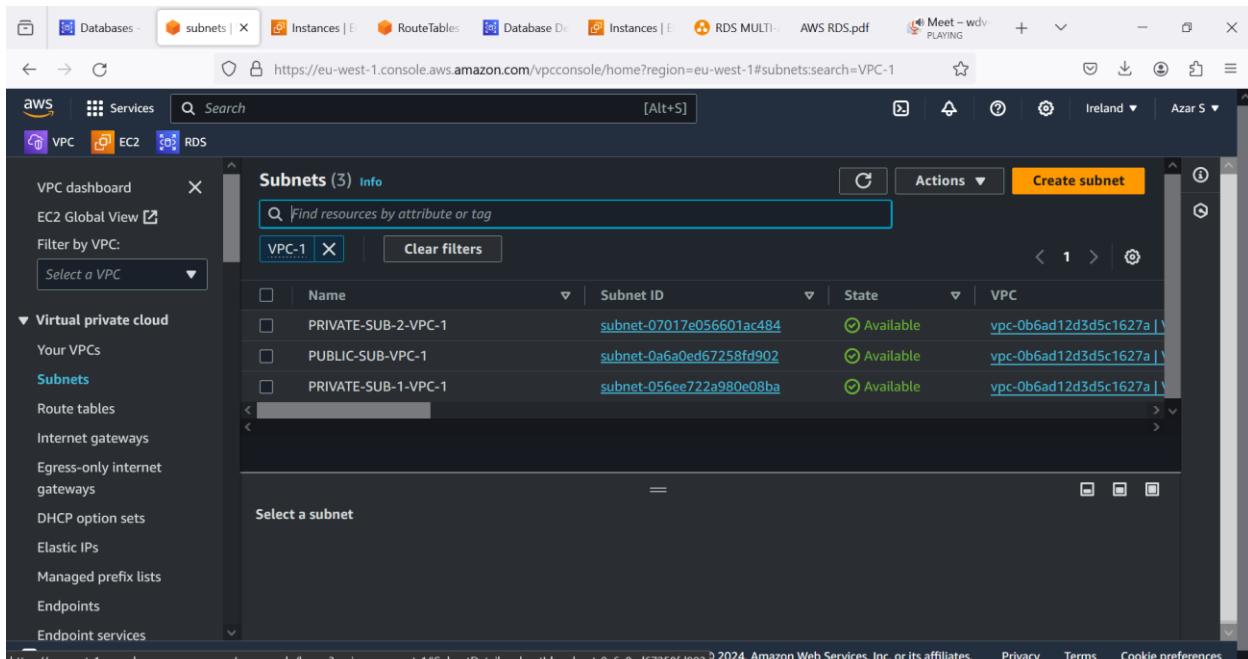
The image displays two screenshots of the AWS VPC console interface.

**Top Screenshot:** Shows the "Your VPCs" list. There is one entry named "VPC-1" with the following details:

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR
VPC-1	vpc-0b6ad12d3d5c1627a	Available	10.100.0.0/16	-

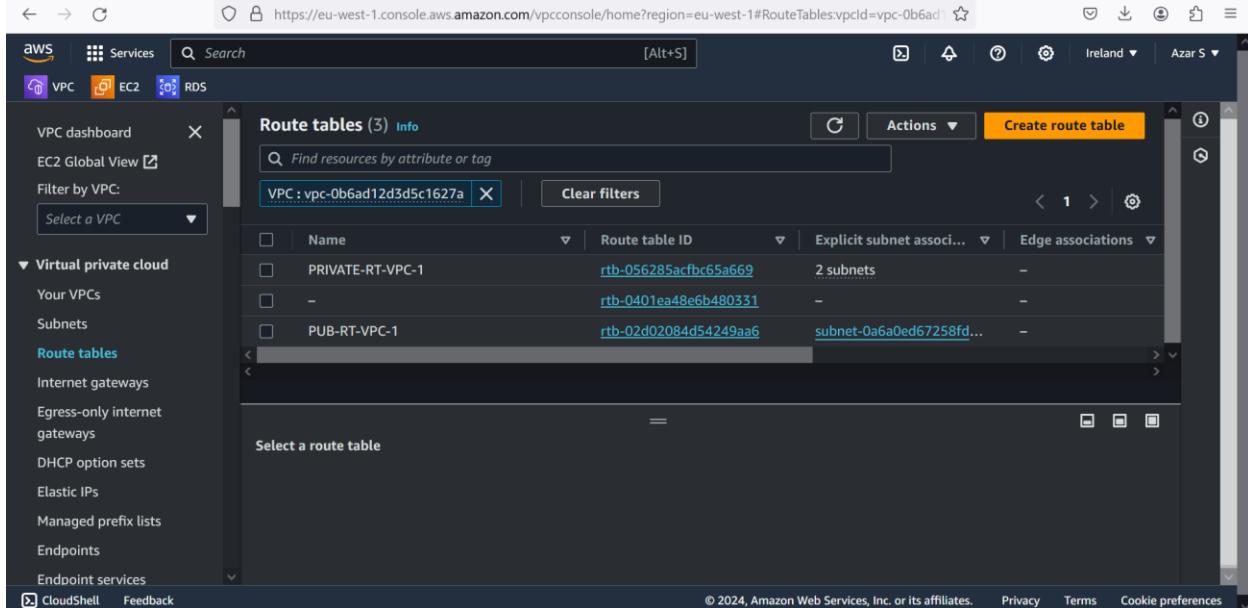
**Bottom Screenshot:** Shows the "Internet gateways" list. There are two entries:

Name	Internet gateway ID	State	VPC ID
-	igw-069e3762e0aea31fc	Attached	vpc-08ba9049fb518b1
VPC-1-IGW	igw-0a8ec9011d9ae75b6	Attached	vpc-0b6ad12d3d5c1627a



**Subnets (3) Info**

Name	Subnet ID	State	VPC
PRIVATE-SUB-2-VPC-1	subnet-07017e056601ac484	Available	vpc-0b6ad12d3d5c1627a
PUBLIC-SUB-VPC-1	subnet-0a6a0ed67258fd902	Available	vpc-0b6ad12d3d5c1627a
PRIVATE-SUB-1-VPC-1	subnet-056ee722a980e08ba	Available	vpc-0b6ad12d3d5c1627a

**Route tables (3) Info**

Name	Route table ID	Explicit subnet associations	Edge associations
PRIVATE-RT-VPC-1	rtb-056285acfbc65a669	2 subnets	-
-	rtb-0401ea48e6b480331	-	-
PUB-RT-VPC-1	rtb-02d02084d54249aa6	subnet-0a6a0ed67258fd...	-

The screenshot shows the AWS VPC Route Tables page. The left sidebar is collapsed. The main area displays a table for 'Route tables (1/3)'. A single route table named 'PUB-RT-VPC-1' is listed. The 'Routes' tab is selected, showing two routes:

Destination	Target	Status	Propagated
0.0.0.0/0	igw-0a8ec9011d9ae75b6	Active	No
10.100.0.0/16	local	Active	No

The screenshot shows the AWS VPC Route Tables page. The left sidebar is collapsed. The main area displays a table for 'Route tables (1/3)'. The 'Subnet associations' tab is selected, showing one explicit subnet association:

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
PUBLIC-SUB-VPC-1	subnet-0a6a0ed67258fd902	10.100.0.0/24	-

The screenshot shows the AWS VPC Route Tables page. A single route table named "PRIVATE-RT-VPN-1" is listed. The table has a Route table ID of "rtb-056285acfb65a669" and is associated with 2 subnets. One route entry is present, with a Destination of "10.100.0.0/16", a Target of "local", and a Status of "Active".

Name	Route table ID	Explicit subnet associations	Edge associations
PRIVATE-RT-VPN-1	rtb-056285acfb65a669	2 subnets	-

The screenshot shows the "Subnet associations" tab for the PRIVATE-RT-VPN-1 route table. It lists two explicit subnet associations: "PRIVATE-SUB-2-VPN-1" and "PRIVATE-SUB-1-VPN-1". Both are associated with the subnet "subnet-07017e056601ac484" and have an IPv4 CIDR of "10.100.2.0/24".

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
PRIVATE-SUB-2-VPN-1	subnet-07017e056601ac484	10.100.2.0/24	-
PRIVATE-SUB-1-VPN-1	subnet-056ee722a980e08ba	10.100.1.0/24	-

Security group name	Security group ID	Description	VPC ID
VPC-1-SG	sg-0ddabaa12c4515761	VPC 1 SECURITY GROUP	vpc-0b6ad12d3d5c1627a
Owner	Inbound rules count	Outbound rules count	
709398145454	1 Permission entry	1 Permission entry	

**Inbound rules**    **Outbound rules**    **Tags**

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-01e0ccfe85b60b96b	MySQL/Aurora	TCP	3306	Cu... ▾	MASTER RDS SG
<input type="text" value="10.100.0.0/24"/> <input type="button" value="Delete"/>					

**Add rule**

**Cancel**    **Preview changes**    **Save rules**

The screenshot shows the AWS RDS Subnet groups page. On the left sidebar, under the 'Subnet groups' section, there is a link to 'Create DB subnet group'. The main content area displays a table titled 'Subnet groups (1)'. The table has columns for Name, Description, Status, and VPC. One row is listed: 'vpc-1-subnet-group-multi-az' with 'vpc-1-subnet-group-multi-az' in the Description column, 'Complete' in the Status column, and 'vpc-0b6ad12d3d5c1627a' in the VPC column.

The screenshot shows the 'Create DB subnet group' wizard. The current step is 'Subnet group details'. It has three fields: 'Name' (containing 'RDS-MASTER-DATABASE-SECURITY-GROUP'), 'Description' (containing 'SECURITY GROUP FOR RDS DATABASE'), and 'VPC' (containing 'Choose a VPC identifier...'). A note below the 'Name' field states: 'You won't be able to modify the name after your subnet group has been created.' Another note below the 'Description' field states: 'Must contain from 1 to 255 characters. Alphanumeric characters, spaces, hyphens, underscores, and periods are allowed.'

The screenshot shows two consecutive steps in the AWS RDS console for creating a DB subnet group.

**Step 1: Selecting VPC**

In the first step, the user is prompted to choose a VPC identifier. The dropdown menu shows "VPC-1 (vpc-0b6ad12d3d5c1627a)".

**Step 2: Adding Subnets**

In the second step, the user adds subnets from the selected Availability Zones. The "Subnets" section shows two selected subnets: "subnet-07017e056601ac484 (10.100.2.0/24)" and "subnet-056ee722a980e08ba (10.100.1.0/24)". A note indicates that for Multi-AZ DB clusters, 3 subnets in 3 different Availability Zones must be selected.

**Summary Table:**

Availability zone	Subnet ID	CIDR block
eu-west-1b	subnet-07017e056601ac484	10.100.2.0/24
eu-west-1a	subnet-056ee722a980e08ba	10.100.1.0/24

**Buttons:**

- Cancel
- Create

The image displays two screenshots of the AWS RDS console interface.

**Screenshot 1: Subnet groups**

This screenshot shows the "Subnet groups" section of the RDS console. The left sidebar includes links for Dashboard, Databases, Query Editor, Performance insights, Snapshots, Exports in Amazon S3, Automated backups, Reserved instances, Proxies, Subnet groups, Parameter groups, and Option groups. The main content area shows a table titled "Subnet groups (1)".

Name	Description	Status	VPC
vpc-1-subnet-group-multi-az	vpc-1-subnet-group-multi-az	Complete	vpc-0b6ad12d3d5c1627a

**Screenshot 2: Databases**

This screenshot shows the "Databases" section of the RDS console. The left sidebar includes links for Dashboard, Databases, Query Editor, Performance insights, Snapshots, Exports in Amazon S3, Automated backups, Reserved instances, Proxies, Subnet groups, Parameter groups, and Option groups. The main content area shows a table titled "Databases (1)".

DB identifier	Status	Role	Engine	Region & AZ	Size
rds-database	Available	Primary	MySQL Community	eu-west-1b	db.m6gd.large

The screenshot shows the 'Create database' wizard in the AWS RDS console. The first section, 'Choose a database creation method', offers two options: 'Standard create' (selected) and 'Easy create'. The second section, 'Engine options', displays various database engines. The 'MySQL' option is highlighted with a blue border and a detailed description on the right side of the screen. Other engines shown include Aurora (MySQL Compatible), Aurora (PostgreSQL Compatible), MariaDB, PostgreSQL, and Oracle.

**Create database**

**Choose a database creation method** Info

Standard create  
You set all of the configuration options, including ones for availability, security, backups, and maintenance.

Easy create  
Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

**Engine options**

**Engine type** Info

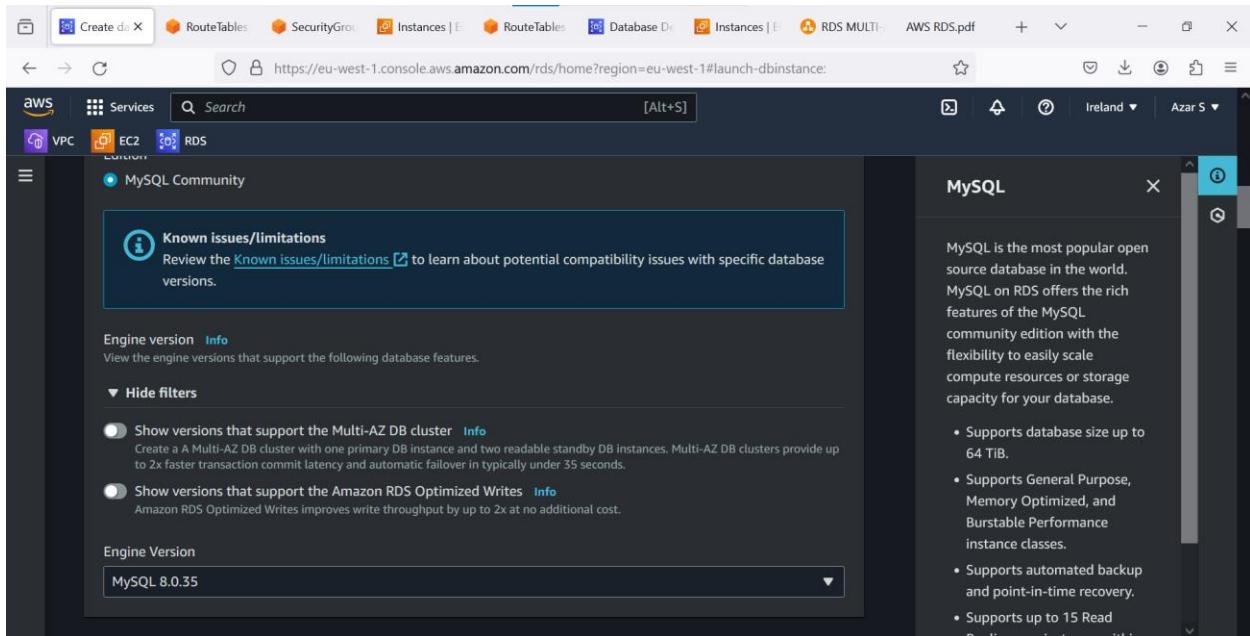
Aurora (MySQL Compatible)

Aurora (PostgreSQL Compatible)

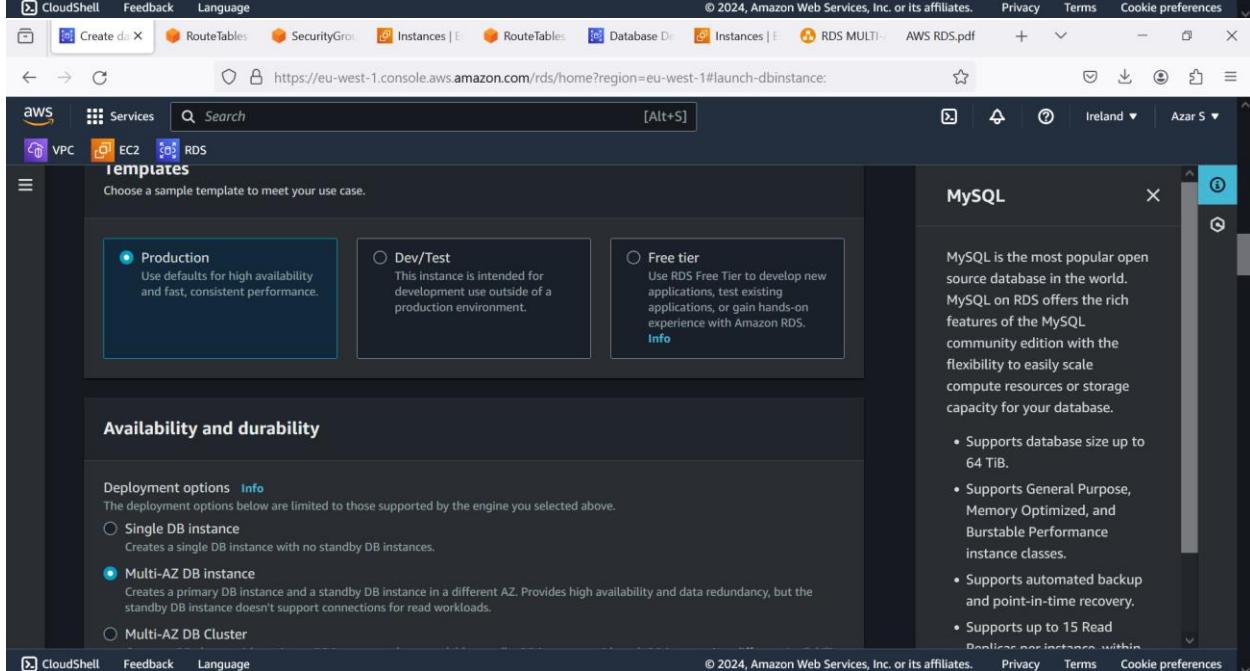
**MySQL**

MySQL is the most popular open source database in the world. MySQL on RDS offers the rich features of the MySQL community edition with the flexibility to easily scale compute resources or storage capacity for your database.

- Supports database size up to 64 TiB.
- Supports General Purpose, Memory Optimized, and Burstable Performance instance classes.
- Supports automated backup and point-in-time recovery.
- Supports up to 15 Read Replicas per instance, within



The screenshot shows the AWS RDS console for creating a new database instance. The top navigation bar includes links for RouteTables, SecurityGroups, Instances, RouteTables, Database D, Instances, RDS MULT, and AWS RDS.pdf. The main menu has options for VPC, EC2, and RDS, with RDS selected. The left sidebar shows 'MySQL Community' is chosen. A 'Known issues/limitations' section contains a note to review the [Known issues/limitations](#). Below this, under 'Engine version' (set to MySQL 8.0.35), there are two filter options: 'Show versions that support the Multi-AZ DB cluster' (selected) and 'Show versions that support the Amazon RDS Optimized Writes'. The right panel displays detailed information about MySQL, including its popularity as the most popular open source database, its features like automated backup, and its support for up to 15 Read Replicas per instance.

The screenshot shows the 'Templates' section of the AWS RDS creation wizard. It offers three options: 'Production' (selected), 'Dev/Test', and 'Free tier'. The 'Production' option is described as using defaults for high availability and fast, consistent performance. The 'Dev/Test' option is for development use outside of a production environment. The 'Free tier' option is for developing new applications, testing existing ones, or gaining hands-on experience. The right panel provides general information about MySQL, including its support for up to 64 TiB of database size and various instance classes.

The screenshot shows the AWS RDS MySQL settings page for creating a new DB instance. The 'Master username' field is set to 'admin'. The 'Credentials management' section shows 'Managed in AWS Secrets Manager - most secure' selected. A tooltip for 'Self managed' indicates it allows creating your own password or having RDS generate one. Other fields include 'Master password' and 'Confirm master password', both containing masked values.

**MySQL**

MySQL is the most popular open source database in the world. MySQL on RDS offers the rich features of the MySQL community edition with the flexibility to easily scale compute resources or storage capacity for your database.

- Supports database size up to 64 TiB.
- Supports General Purpose, Memory Optimized, and Burstable Performance instance classes.
- Supports automated backup and point-in-time recovery.
- Supports up to 15 Read Replicas per instance, within

The screenshot shows two side-by-side views of the AWS RDS MySQL setup wizard.

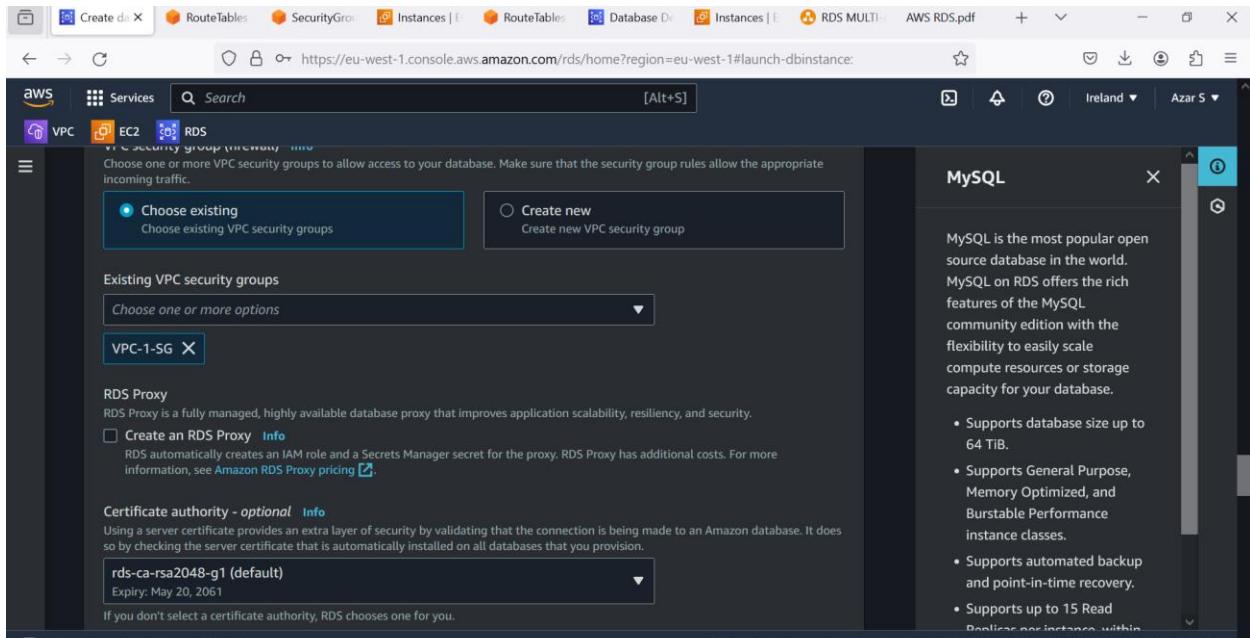
**Left Panel (Compute resource):**

- Compute resource:** Choose whether to set up a connection to a compute resource for this database. Setting up a connection will automatically change connectivity settings so that the compute resource can connect to this database.
  - Don't connect to an EC2 compute resource**: Don't set up a connection to a compute resource for this database. You can manually set up a connection to a compute resource later.
  - Connect to an EC2 compute resource**: Set up a connection to an EC2 compute resource for this database.
- Virtual private cloud (VPC) Info:** Choose the VPC. The VPC defines the virtual networking environment for this DB instance.
  - VPC-1 (vpc-0b6ad12d3d5c1627a)**: 3 Subnets, 2 Availability Zones
  - Only VPCs with a corresponding DB subnet group are listed.

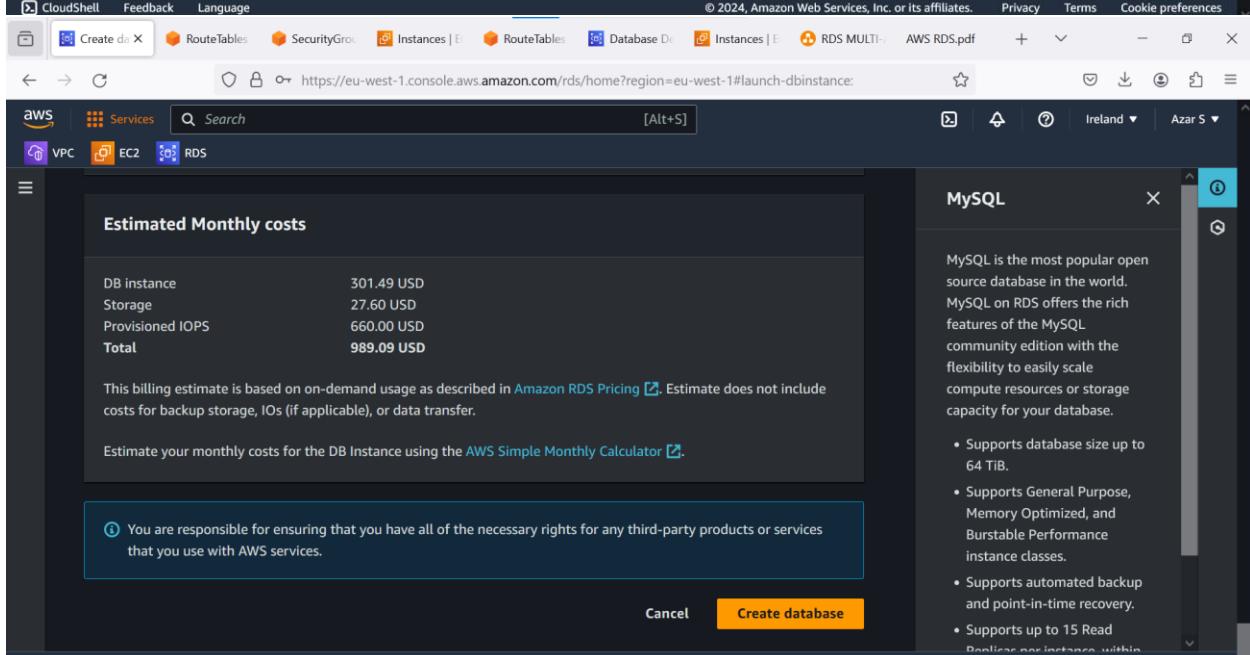
**Note:** After a database is created, you can't change its VPC.
- DB subnet group Info:** Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB instance can use in the VPC that you selected.
  - vpc-1-subnet-group-multi-az**: 2 Subnets, 2 Availability Zones

**Right Panel (MySQL Overview):**

- MySQL**: MySQL is the most popular open source database in the world. MySQL on RDS offers the rich features of the MySQL community edition with the flexibility to easily scale compute resources or storage capacity for your database.
  - Supports database size up to 64 TiB.
  - Supports General Purpose, Memory Optimized, and Burstable Performance instance classes.
  - Supports automated backup and point-in-time recovery.
  - Supports up to 15 Read Replicas per instance within a region.



The screenshot shows the AWS RDS console with the URL <https://eu-west-1.console.aws.amazon.com/rds/home?region=eu-west-1#launch-dbinstance>. The 'Services' tab is selected, and the 'RDS' icon is highlighted. On the left, there's a sidebar with 'VPC Security group (firewall)'. The main area has two options: 'Choose existing' (selected) and 'Create new'. Under 'Choose existing', 'VPC-1-SG' is listed. Other sections include 'RDS Proxy' (unchecked), 'Certificate authority - optional' (set to 'rds-ca-rsa2048-g1 (default)', expiring May 20, 2061), and a note about selecting a certificate authority.

The screenshot shows the same AWS RDS console interface. A modal window titled 'Estimated Monthly costs' displays the following breakdown:

	Cost
DB instance	301.49 USD
Storage	27.60 USD
Provisioned IOPS	660.00 USD
<b>Total</b>	<b>989.09 USD</b>

A note below states: 'This billing estimate is based on on-demand usage as described in [Amazon RDS Pricing](#). Estimate does not include costs for backup storage, IOs (if applicable), or data transfer.' There is also a link to 'Estimate your monthly costs for the DB Instance using the [AWS Simple Monthly Calculator](#)'.

At the bottom of the modal, a note says: 'You are responsible for ensuring that you have all of the necessary rights for any third-party products or services that you use with AWS services.' Buttons for 'Cancel' and 'Create database' are at the bottom right.

The image displays two screenshots of the AWS Management Console interface.

**Screenshot 1: Amazon RDS - Databases**

This screenshot shows the RDS service dashboard under the 'Databases' section. It lists one database named 'rds-database' with the following details:

DB identifier	Status	Role	Engine	Region & AZ	Size
rds-database	Available	Primary	MySQL Community	eu-west-1b	db.m6gd.large

**Screenshot 2: EC2 Instances**

This screenshot shows the EC2 service dashboard under the 'Instances' section. It lists one instance named 'RDS-CLIE...' with the following details:

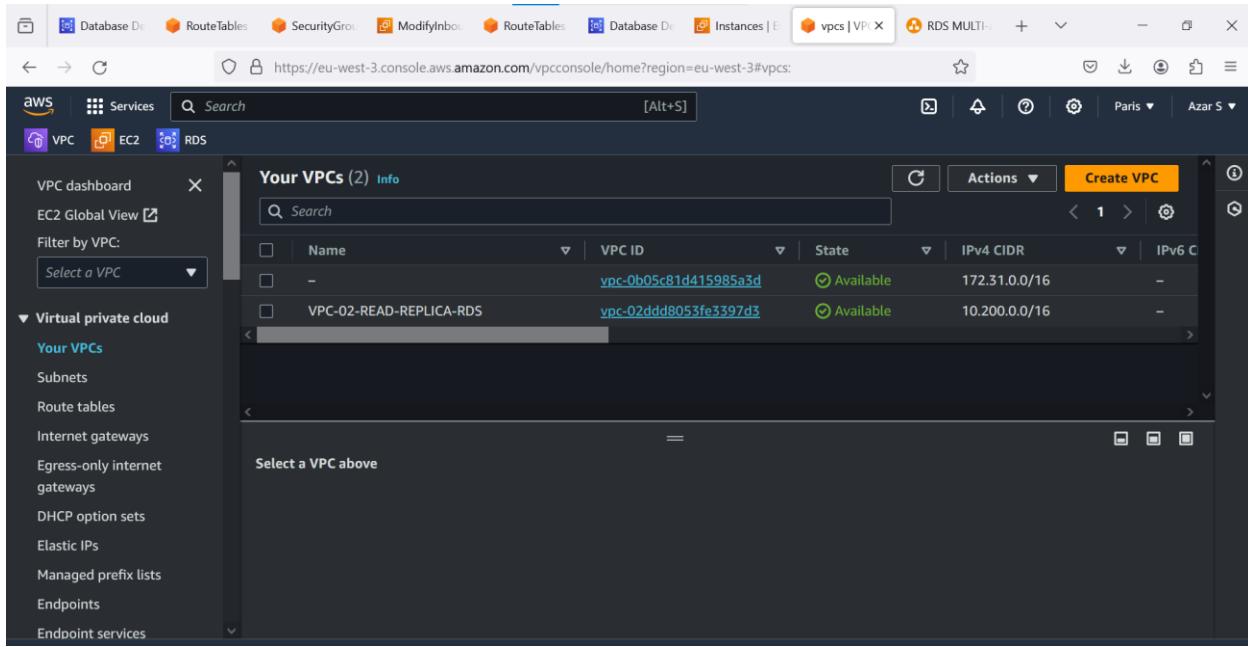
Name	Instance ID	Instance state	Instance type	Status check	Alarm status
RDS-CLIE...	i-0ae5af32e0fb9160e	Running	t2.micro	2/2 checks passed	View alarms +

The screenshot shows the AWS Management Console interface for modifying inbound security group rules. The URL in the browser is [https://eu-west-1.console.aws.amazon.com/ec2/home?region=eu-west-1#ModifyInboundSecurityGroupRules:sec\\_id=sgr-09a7fe3d57bf8cff9](https://eu-west-1.console.aws.amazon.com/ec2/home?region=eu-west-1#ModifyInboundSecurityGroupRules:sec_id=sgr-09a7fe3d57bf8cff9). The page title is "ModifyInboundSecurityGroupRules". The top navigation bar includes links for Database Deletion, RouteTables, SecurityGroups, ModifyInboundSecurityGroupRules, RouteTables, Database Deletion, Instances, RDS Multi-AZ, and AWS RDS.pdf. The left sidebar shows VPC, EC2, and RDS services. The main content area displays an inbound rule for security group sgr-09a7fe3d57bf8cff9. The rule details are:

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-09a7fe3d57bf8cff9	SSH	TCP	22	Cu... ▾	SG-EC2 0.0.0.0/0

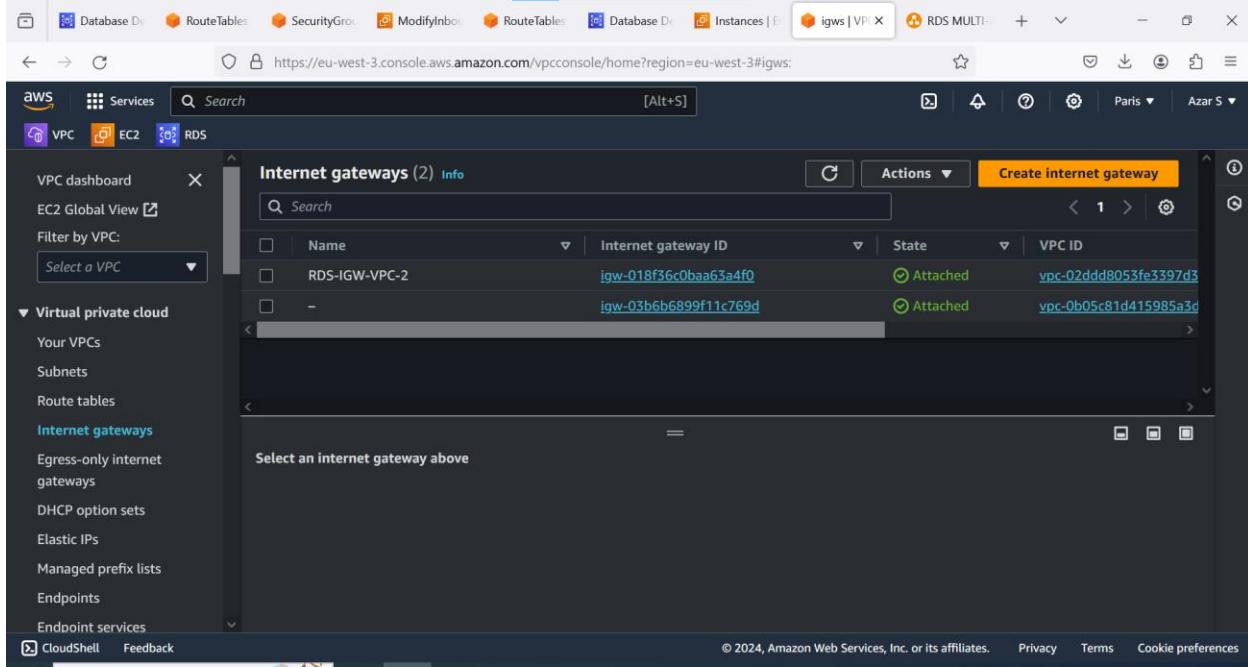
A warning message at the bottom states: "⚠ Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only." Buttons for "Cancel", "Preview changes", and "Save rules" are visible at the bottom right.

## READ-REPLICA SET UP:



Your VPCs (2) Info

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR
-	vpc-0b05c81d415985a3d	Available	172.31.0.0/16	-
VPC-02-READ-REPLICA-RDS	vpc-02ddd8053fe3397d3	Available	10.200.0.0/16	-

Internet gateways (2) Info

Name	Internet gateway ID	State	VPC ID
RDS-IGW-VPC-2	igw-018f36c0baa63a4f0	Attached	vpc-02ddd8053fe3397d3
-	igw-03b6b6899f11c769d	Attached	vpc-0b05c81d415985a3d

The screenshot shows two separate views of the AWS VPC console. The top view displays the 'Subnets' list for VPC-2, showing three subnets: PRI-2-SUB-VPC-2, PUB-SUB-VPC-2, and PRI-1-SUB-VPC-2. The bottom view displays the 'Route tables' list for VPC-2, showing two route tables: PUB-RT-VPC-2 and PRI-RT-VPC-2.

Name	Subnet ID	State	VPC
PRI-2-SUB-VPC-2	subnet-07e09dfb81f35d9e9	Available	vpc-02ddd8053fe3397d3   VPC-2
PUB-SUB-VPC-2	subnet-02a6677a15c7741dc	Available	vpc-02ddd8053fe3397d3   VPC-2
PRI-1-SUB-VPC-2	subnet-01714114ae22c24f6	Available	vpc-02ddd8053fe3397d3   VPC-2

Name	Route table ID	Explicit subnet assoc...	Edge associations
PUB-RT-VPC-2	rtb-0a61ab2355809b1a0	subnet-02a6677a15c774...	-
PRI-RT-VPC-2	rtb-0749223fbe0333d74	2 subnets	-

The screenshot shows the AWS VPC Route Tables page. The URL is <https://eu-west-3.console.aws.amazon.com/vpcconsole/home?region=eu-west-3#RouteTables>. The page displays two route tables: 'PUB-RT-VPC-2' and 'PRIV-RT-VPC-2'. The 'Routes' tab is selected for 'PUB-RT-VPC-2', showing two routes: one to 'igw-018f36c0baa63a4f0' and another to 'local'. The 'Subnet associations' tab is selected for 'PUB-RT-VPC-2', showing one explicit subnet association to 'subnet-02a6677a15c7741dc'.

Route Table	Destination	Target	Status	Propagated
PUB-RT-VPC-2	0.0.0.0/0	igw-018f36c0baa63a4f0	Active	No
PUB-RT-VPC-2	10.200.0.0/16	local	Active	No

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
PUB-SUB-VPC-2	subnet-02a6677a15c7741dc	10.200.0.0/24	-

The screenshot shows the AWS VPC Route Tables page. The left sidebar is collapsed. The main content area displays a table titled "Route tables (1/2) Info". A single row is selected: "PRI-RT-VC-2" (rtb-0749223fbe0333d74). Below the table, there are tabs for "Details", "Routes", "Subnet associations" (which is active), "Edge associations", "Route propagation", and "Tags". Under "Subnet associations", there is a table titled "Explicit subnet associations (2)".

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
PRI-2-SUB-VC-2	subnet-07e09dfb81f35d9e9	10.200.2.0/24	-
PRI-1-SUB-VC-2	subnet-01714114ae22c24f6	10.200.1.0/24	-

The screenshot shows the AWS Security Groups page. The left sidebar is collapsed. The main content area displays a table titled "sg-081535926d9d8fc6a - RDS-READ-REPLICA-SG". Below the table, there are tabs for "Inbound rules", "Outbound rules", and "Tags".

Security group name	Security group ID	Description	VPC ID
RDS-READ-REPLICA-SG	sg-081535926d9d8fc6a	SECURITY GROUP FOR READ REPLICA	vpc-02ddd8053fe3397d3

**Edit inbound rules**

Inbound rules control the incoming traffic that's allowed to reach the instance.

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-032811b0ac407a4d9	MySQL/Aurora	TCP	3306	Cu... <input type="button" value="Delete"/>	SG-RDS-READ-REPLICA
<input type="button" value="Add rule"/>					

**Subnet groups**

Name	Description	Status	VPC
read-replica-subnet-group	SUBNET GROUP FOR READ REPLICA IN RDS	Complete	vpc-02ddd8053fe339;

The screenshot shows the AWS RDS console interface for creating a new DB subnet group. The top navigation bar includes links for Database, RouteTable, SecurityGr, ModifyInb, RouteTable, Instances, RouteTable, SecurityGr, RDS MULT, and a search bar. The main navigation menu on the left lists Services, VPC, EC2, and RDS, with RDS selected. The current page is "Create DB subnet group".

**Subnet group details:**

- Name:** READ-REPICA-SUBNET-GROUP (highlighted in blue)
- Description:** SUBNET GROUP FOR READ-REPLICA
- VPC:** VPC-02-READ-REPLICA-RDS (highlighted in blue)

**Add subnets:**

- Availability Zones:** eu-west-3a, eu-west-3b (selected)
- Subnets:** subnet-07e09dfb81f35d9e9 (10.200.2.0/24) (selected)

At the bottom of the interface, there are links for CloudShell, Feedback, Language, and a footer with copyright information: © 2024, Amazon Web Services, Inc. or its affiliates.

The screenshot shows two consecutive screenshots of the AWS RDS console.

**Screenshot 1: Creating a DB Subnet Group**

- The URL is <https://eu-west-3.console.aws.amazon.com/rds/home?region=eu-west-3#create-db-subnet-group>.
- The "Subnets selected (2)" table shows two subnets:
 

Availability zone	Subnet ID	CIDR block
eu-west-3b	subnet-07e09dfb81f35d9e9	10.200.2.0/24
eu-west-3a	subnet-01714114ae22c24f6	10.200.1.0/24
- A note at the bottom says: "For Multi-AZ DB clusters, you must select 3 subnets in 3 different Availability Zones."
- Buttons: "Cancel" and "Create".

**Screenshot 2: Subnet Groups List**

- The URL is <https://eu-west-3.console.aws.amazon.com/rds/home?region=eu-west-3#db-subnet-groups-list>.
- The sidebar shows the "Subnet groups" section is selected.
- The "Subnet groups (1)" table lists one group:
 

Name	Description	Status	VPC
read-replica-subnet-group	SUBNET GROUP FOR READ REPLICA IN RDS	Complete	vpc-02ddd8053fe339;
- Buttons: "Edit", "Delete", and "Create DB subnet group".

**GO TO IRELAND REGION, IN DATABASE, CLICK ON ACTION & CREATE READ REPLICAS.**

**rds-database**

**Summary**

DB identifier	Status	Role	Engine
rds-database	Available	Primary	MySQL
CPU	Class	Current activity	Commodity
2.52%	db.m6gd.large	0.00	Region

**Actions**

- Quick Actions - New
- Convert to Multi-AZ deployment
- Stop temporarily
- Reboot
- Delete
- Set up EC2 connection
- Set up Lambda connection
- Create read replica**
- Create Aurora read replica
- Create Blue/Green Deployment - new
- Promote
- Take snapshot
- Restore to point in time

**Create read replica**

You are creating a replica DB instance from a source DB instance. This new DB instance will have the source DB instance's DB security groups and DB parameter groups.

**Settings**

**Replica source**  
Source DB instance identifier  
 Role: Primary

**DB instance identifier**  
This is the unique key that identifies a DB instance. This parameter is stored as a lowercase string (for example, mydbinstance).

**Instance configuration**

The screenshot displays the AWS RDS console interface for creating a new database instance. It is divided into three main sections:

- AWS Region:** This section is titled "Destination Region" and specifies the region where the replica will be launched. The dropdown menu shows "EU (Paris)".
- Storage:** This section includes fields for "Storage type" (set to "Provisioned IOPS SSD (io1)"), "Allocated storage" (set to 100 GiB), and "Provisioned IOPS" (set to 100).
- Availability:** This section allows selecting deployment options. The "Multi-AZ DB instance" option is selected, which creates a primary DB instance and a standby DB instance in a different AZ, providing high availability and data redundancy.
- Connectivity:** This section specifies the network type. The "IPv4" option is selected, indicating that an IPv6 CIDR block will be associated with a subnet in the VPC.

At the bottom of each section, there are "Info" links for more details. The footer of the page includes standard AWS navigation links like CloudShell, Feedback, Language, and links to other services like RouteTables, SecurityGroups, ModifyInb, Instances, and RouteTables.

The screenshot shows the AWS RDS Create Read Replica wizard. The first section, "Connectivity", is displayed. It includes settings for "Network type" (IPv4 selected), "DB subnet group" (read-replica-subnet-group selected), and "Public access" (Not publicly accessible selected). The second section, "Database authentication", is also visible, showing "Password authentication" selected.

**Connectivity**

**Network type** [Info](#)  
To use dual-stack mode, make sure that you associate an IPv6 CIDR block with a subnet in the VPC you specify.

**IPv4**  
Your resources can communicate only over the IPv4 addressing protocol.

**Dual-stack mode**  
Your resources can communicate over IPv4, IPv6, or both.

**DB subnet group** [Info](#)  
Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB instance can use in the VPC that you selected.

read-replica-subnet-group

**Public access**

**Publicly accessible**  
RDS assigns a public IP address to the database. Amazon EC2 instances and other resources outside of the VPC can connect to your database. Resources inside the VPC can also connect to the database. Choose one or more VPC security groups that specify which resources can connect to the database.

**Not publicly accessible**

**Existing VPC security groups**  
Choose VPC security groups ▾  
RDS-READ-REPLICA-SG X

**Additional configuration**

**Database authentication**

**Database authentication options** [Info](#)

**Password authentication**  
Authenticates using database passwords.

**Password and IAM database authentication**  
Authenticates using the database password and user credentials through AWS IAM users and roles.

The screenshot shows the AWS RDS console interface. At the top, there's a navigation bar with tabs like 'Create', 'RouteTable', 'SecurityGr...', 'ModifyInb...', 'RouteTable', 'Databases', 'Instances', 'RouteTable', 'SecurityGr...', 'RDS MULT...', and a search bar. Below the navigation bar, the main menu includes 'VPC', 'EC2', and 'RDS'. A sidebar on the left lists 'error log', 'General log', and 'Slow query log'. Under 'IAM role', it says 'The following service-linked role is used for publishing logs to CloudWatch Logs.' followed by 'RDS service-linked role'.

**Maintenance**

- Auto minor version upgrade [Info](#)
- Enable auto minor version upgrade
 

Enabling auto minor version upgrade will automatically upgrade to new minor versions as they are released. The automatic upgrades occur during the maintenance window for the database.

**Deletion protection**

- Enable deletion protection
 

Protects the database from being deleted accidentally. While this option is enabled, you can't delete the database.

At the bottom right, there are 'Cancel' and 'Create read replica' buttons.

The screenshot shows the 'Databases' section of the AWS RDS console. The left sidebar has links for 'Dashboard', 'Databases', 'Query Editor', 'Performance insights', 'Snapshots', 'Exports in Amazon S3', 'Automated backups', 'Reserved instances', 'Proxies', 'Subnet groups', 'Parameter groups', and 'Option groups'. The main area shows a table titled 'Databases (1)'. The table has columns: DB identifier, Status, Role, Engine, Region & AZ, and Size. One row is listed: 'read-replica' (Status: Available, Role: Replica, Engine: MySQL Community, Region & AZ: eu-west-3a, Size: db.m6gd.large). There are buttons for 'Group resources', 'Modify', 'Actions', 'Restore from S3', and 'Create database'. A modal window at the top right suggests creating a Blue/Green deployment.

**Instances (1/1) Info**

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
READ-REPLICA...	i-0db82218775f1215f	Running	t2.micro	Initializing	View alarms +

**Instance: i-0db82218775f1215f (READ-REPLICA-CLIENT)**

**Details** | Status and alarms New | Monitoring | Security | Networking | Storage | Tags

**Instance summary**

Instance ID: i-0db82218775f1215f (READ-REPLICA-CLIENT)

Public IPv4 address copied: 15.237.191.121 [open address]

Private IPv4 addresses: 10.200.0.8

Public IPv4 DNS:

**EC2 > Security Groups > sg-0a4ac3f0351e0640e - EC2-SG-READ-REPLICA**

**Details**

Security group name	Security group ID	Description	VPC ID
EC2-SG-READ-REPLICA	sg-0a4ac3f0351e0640e	EC2-SG-READ-REPLICA	vpc-02ddd8053fe3397d3

Owner: 709398145454

Inbound rules count: 1 Permission entry

Outbound rules count: 1 Permission entry

**Inbound rules** | **Outbound rules** | **Tags**

The screenshot shows two windows side-by-side. The top window is a browser-based interface for modifying inbound rules for an EC2 security group. It lists one rule: 'sg-099444285eaa3dd83' (Type: SSH, Protocol: TCP, Port range: 22, Source: 0.0.0.0/0, Description: EC2-SG-READ-REPLICA). The bottom window is a terminal session in CloudShell titled 'Master RDS CLIENT'. It shows a MySQL prompt connected to an Amazon RDS instance, displaying database information and running a query.

**AWS CloudShell - Edit inbound rules**

Inbound rules control the incoming traffic that's allowed to reach the instance.

**Inbound rules**

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-099444285eaa3dd83	SSH	TCP	22	Cu... 0.0.0.0/0	EC2-SG-READ-REPLICA

**Master RDS CLIENT**

Terminal Sessions View X server Tools Games Settings Macros Help

Quick connect...

4. Master RDS CLIENT https://aws.amazon.com/linux/amazon-linux-2023/

```
[ec2-user@ip-10-100-0-63 ~]$ sudo su
[root@ip-10-100-0-63 ec2-user]# mysql -h rds-database.c32eu206cqj3.eu-west-1.rds.amazonaws.com -u admin -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MySQL connection id is 61
Server version: 8.0.35 Source distribution

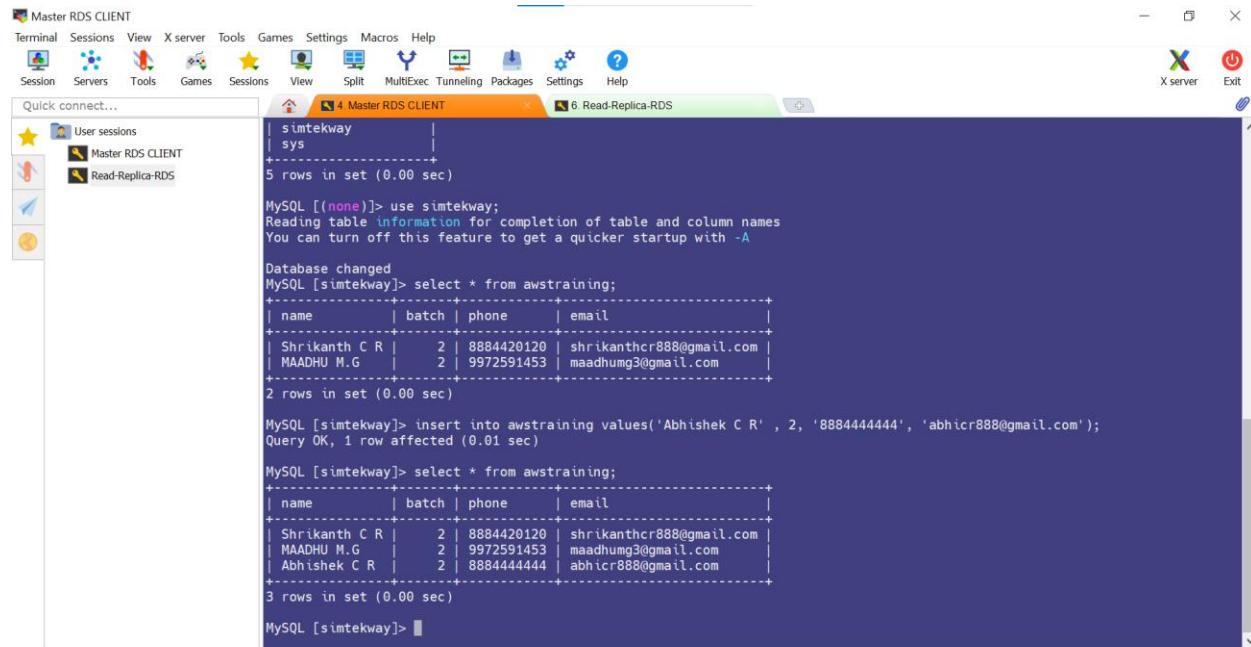
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MySQL [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| simtekway |
| sys |
+-----+
5 rows in set (0.00 sec)

MySQL [(none)]> use simtekway;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MySQL [simtekway]> select * from awstraining;
+-----+-----+-----+
| name | batch | phone | email |
+-----+-----+-----+
```



```

Master RDS CLIENT
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help
Quick connect...
4 Master RDS CLIENT 6 Read-Replica-RDS
simtekway |
sys |
+-----+
5 rows in set (0.00 sec)

MySQL [(none)]> use simtekway;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MySQL [simtekway]> select * from awstraining;
+-----+-----+-----+
| name | batch | phone | email
+-----+-----+-----+
| Shrikant C R | 2 | 8884420120 | shrikantcr888@gmail.com |
| MAADHU M.G | 2 | 9972591453 | maadhumg3@gmail.com |
+-----+-----+-----+
2 rows in set (0.00 sec)

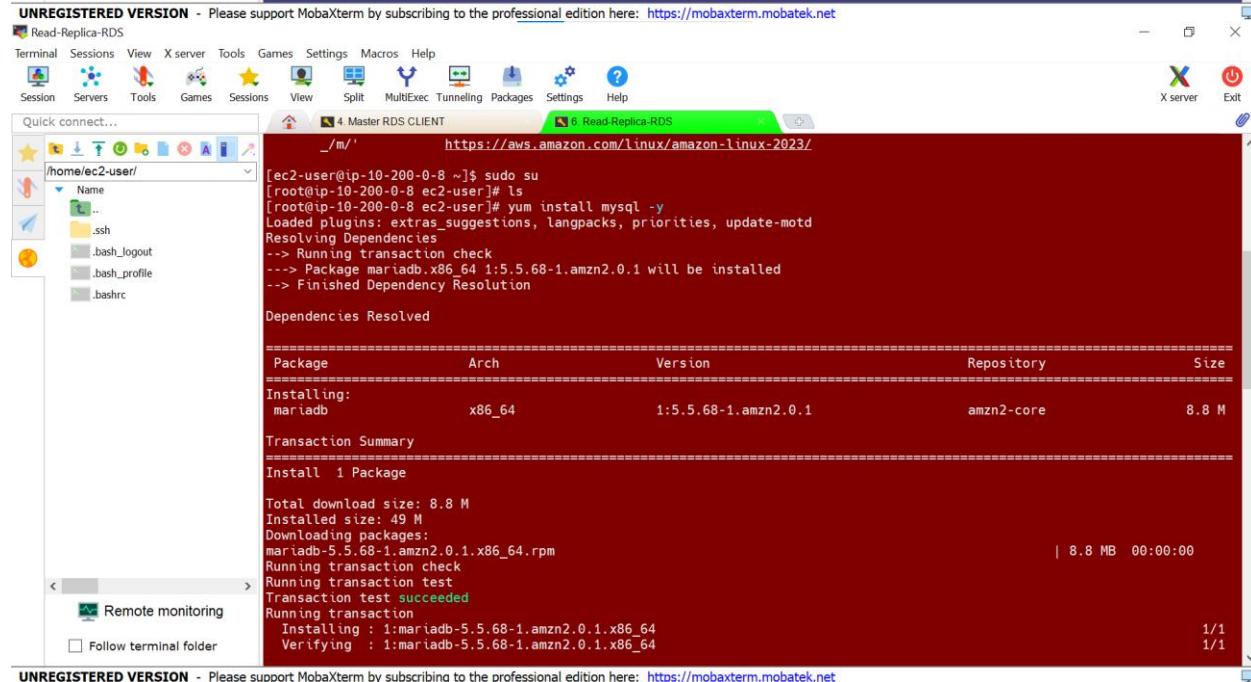
MySQL [simtekway]> insert into awstraining values('Abhishek C R' , 2, '8884444444', 'abhicr888@gmail.com');
Query OK, 1 row affected (0.01 sec)

MySQL [simtekway]> select * from awstraining;
+-----+-----+-----+
| name | batch | phone | email
+-----+-----+-----+
| Shrikant C R | 2 | 8884420120 | shrikantcr888@gmail.com |
| MAADHU M.G | 2 | 9972591453 | maadhumg3@gmail.com |
| Abhishek C R | 2 | 8884444444 | abhicr888@gmail.com |
+-----+-----+-----+
3 rows in set (0.00 sec)

MySQL [simtekway]>

```

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```

Read-Replica-RDS
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help
Quick connect...
4 Master RDS CLIENT 6 Read-Replica-RDS
~/m/
https://aws.amazon.com/linux/amazon-linux-2023/
[ec2-user@ip-10-200-0-8 ~]$ sudo su
[root@ip-10-200-0-8 ec2-user]# ls
[root@ip-10-200-0-8 ec2-user]# yum install mysql -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package mariadb.x86_64 1:5.5.68-1.amzn2.0.1 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package           Arch      Version          Repository        Size
=====
Installing:
  mariadb         x86_64   1:5.5.68-1.amzn2.0.1    amzn2-core     8.8 M

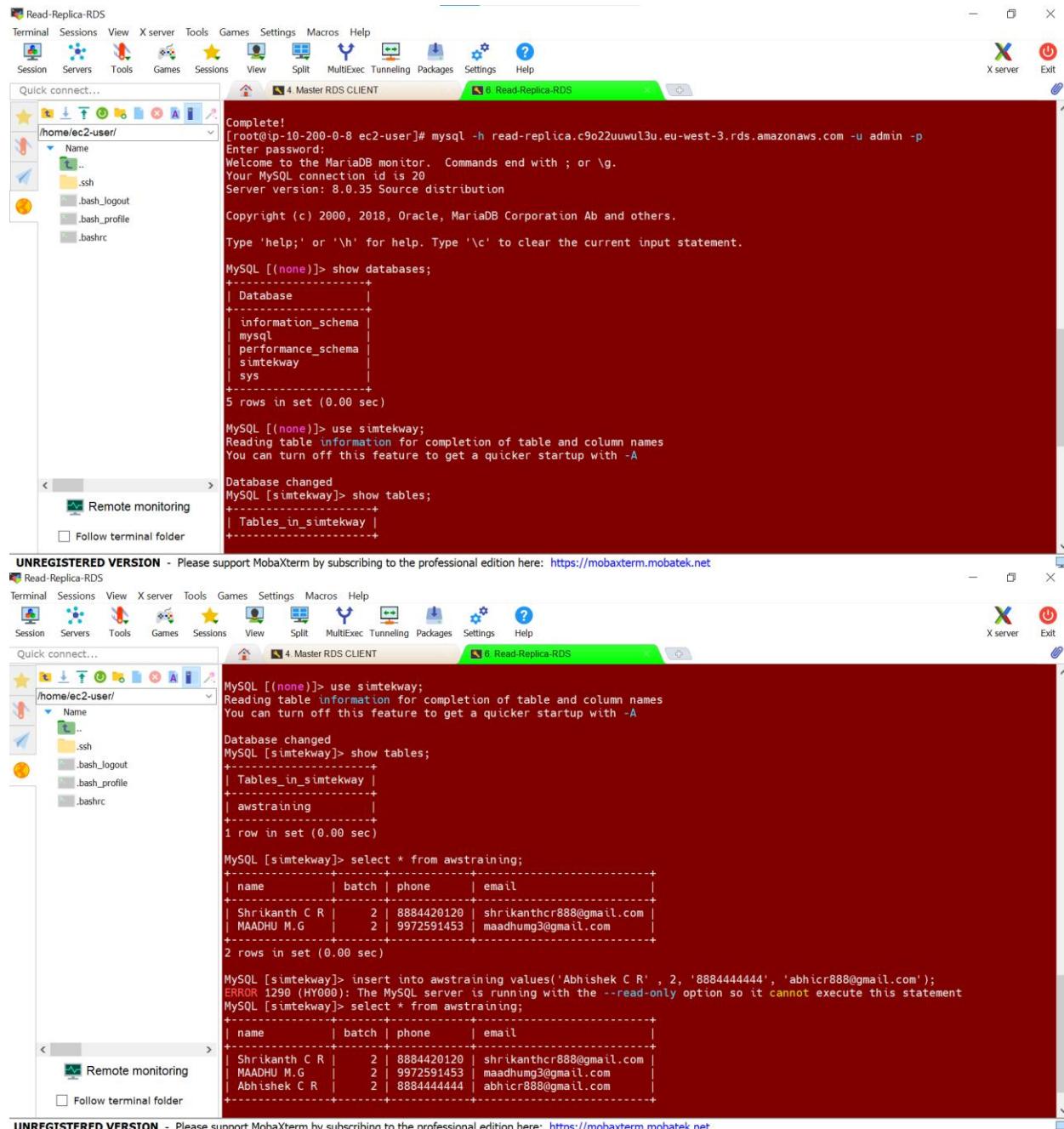
Transaction Summary
=====
Install 1 Package

Total download size: 8.8 M
Installed size: 49 M
Downloading packages:
mariadb-5.5.68-1.amzn2.0.1.x86_64.rpm
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : 1:mariadb-5.5.68-1.amzn2.0.1.x86_64
  Verifying   : 1:mariadb-5.5.68-1.amzn2.0.1.x86_64
                                                               | 8.8 MB  00:00:00
                                                               1/1
                                                               1/1

Remote monitoring
Follow terminal folder

```

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```

[Complete!
[root@ip-10-200-0-8 ec2-user]# mysql -h read-replica.c9o2uuuw13u.eu-west-3.rds.amazonaws.com -u admin -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MySQL connection id is 20
Server version: 8.0.35 Source distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MySQL [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| simtekway |
| sys |
+-----+
5 rows in set (0.00 sec)

MySQL [(none)]> use simtekway;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MySQL [simtekway]> show tables;
+-----+
| Tables_in_simtekway |
+-----+
1 row in set (0.00 sec)

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```

```

[MySQL [(none)]> use simtekway;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MySQL [simtekway]> show tables;
+-----+
| Tables_in_simtekway |
+-----+
| awstraining |
+-----+
1 row in set (0.00 sec)

MySQL [simtekway]> select * from awstraining;
+-----+-----+-----+
| name | batch | phone | email
+-----+-----+-----+
| Shrikant C R | 2 | 8884420120 | shrikanthcr888@gmail.com
| MAADHU M.G | 2 | 9972591453 | maadhung3@gmail.com
+-----+-----+-----+
2 rows in set (0.00 sec)

MySQL [simtekway]> insert into awstraining values('Abhishek C R', 2, '8884444444', 'abhicr888@gmail.com');
ERROR 1290 (HY000): The MySQL server is running with the --read-only option so it cannot execute this statement
MySQL [simtekway]> select * from awstraining;
+-----+-----+-----+
| name | batch | phone | email
+-----+-----+-----+
| Shrikant C R | 2 | 8884420120 | shrikanthcr888@gmail.com
| MAADHU M.G | 2 | 9972591453 | maadhung3@gmail.com
| Abhishek C R | 2 | 8884444444 | abhicr888@gmail.com
+-----+-----+-----+
3 rows in set (0.00 sec)

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```

The screenshot shows a terminal window titled "Master RDS CLIENT" running on a "Read-Replica-RDS" session. The terminal displays the following MySQL commands and their results:

```
You can turn off this feature to get a quicker startup with -A
Database changed
MySQL [simtekway]> show tables;
+-----+
| Tables_in_simtekway |
+-----+
| awstraining |
+-----+
1 row in set (0.00 sec)

MySQL [simtekway]> select * from awstraining;
+-----+-----+-----+
| name | batch | phone | email
+-----+-----+-----+
| Shrikanth C R | 2 | 8884420120 | shrikanthcr888@gmail.com |
| MAADHU M.G | 2 | 9972591453 | maadhung3@gmail.com |
+-----+-----+-----+
2 rows in set (0.00 sec)

MySQL [simtekway]> insert into awstraining values('Abhishek C R' , 2, '8884444444', 'abhicr888@gmail.com');
ERROR 1290 (HY000): The MySQL server is running with the --read-only option so it cannot execute this statement
MySQL [simtekway]> select * from awstraining;
+-----+-----+-----+
| name | batch | phone | email
+-----+-----+-----+
| Shrikanth C R | 2 | 8884420120 | shrikanthcr888@gmail.com |
| MAADHU M.G | 2 | 9972591453 | maadhung3@gmail.com |
| Abhishek C R | 2 | 8884444444 | abhicr888@gmail.com |
+-----+-----+-----+
3 rows in set (0.00 sec)

MySQL [simtekway]>
```

At the bottom of the terminal, there is a message: "UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>".

S