

Question 1:

Working with RDS

Task 1: Create an RDS Database Instance

Screenshot 1: Db instance page

The screenshot displays the AWS Management Console interface for an RDS database instance. The breadcrumb navigation shows 'RDS > Databases > mydatabaseinstance'. The instance name 'mydatabaseinstance' is highlighted with a purple box. The 'Summary' tab is active, showing the following details:

DB identifier	CPU	Status	Class
mydatabaseinstance	2.00%	Available	db.t2.micro

Role	Current activity	Engine	Region & AZ
Instance	3 Connections	MySQL Community	us-east-1f

Below the summary, the 'Connectivity & security' tab is selected. It contains three sub-sections:

- Endpoint & port:** Endpoint is 'mydatabaseinstance.crt8j734kq4l.us-east-1.rds.amazonaws.com' and Port is '3306'.
- Networking:** Availability zone is 'us-east-1f', VPC is 'vpc-0cc08cab290f63595', Subnet group is 'default', and Subnets include 'subnet-004296b4c86807eff', 'subnet-01394a59af55ee02c', 'subnet-0d9333645149abee7', 'subnet-0e70a46dc6deb073f', 'subnet-0048dc16b7311921c', and 'subnet-06bef07655ced38ea'.
- Security:** VPC security groups include 'ganesh_RDS_lab_sg (sg-064e75dfcca4efcfe) (active)', Public accessibility is 'Yes', Certificate authority is 'rds-ca-2019', and Certificate authority date is 'Aug 22nd, 2024'.

Below these sections, there are three tables:

- Security group rules (2):** A table with 3 columns: Security group, Type, and Rule. It lists two rules for 'ganesh_RDS_lab_sg (sg-064e75dfcca4efcfe)' with Type 'CIDR/IP - Inbound' and Rule '0.0.0.0/0'.
- Replication (1):** A table with 3 columns: Security group, Type, and Rule. It lists one rule for 'ganesh_RDS_lab_sg (sg-064e75dfcca4efcfe)' with Type 'CIDR/IP - Inbound' and Rule '0.0.0.0/0'.
- Replication (1):** A table with 6 columns: DB instance, Role, Region & AZ, Replication source, Replication state, and Lag. It lists one replication instance for 'mydatabaseinstance' with Role 'Instance', Region & AZ 'us-east-1f', Replication source '-', Replication state '-', and Lag '-'.

At the bottom, there is a 'Proxies (0)' section with a 'Create proxy' button.

Screenshot 2: DB instance details

The screenshot displays the AWS RDS console interface for a specific DB instance named 'mydatabaseinstance'. The breadcrumb navigation shows 'RDS > Databases > mydatabaseinstance'. The instance name is highlighted with a purple box. The 'Summary' tab is active, showing a table with instance details: DB identifier (mydatabaseinstance), CPU (2.00%), Status (Available), Class (db.t2.micro), Role (Instance), Current activity (3 Connections), Engine (MySQL Community), and Region & AZ (us-east-1f). Below the summary, the 'Connectivity & security' tab is selected and highlighted with a purple box. This section contains three sub-sections: 'Endpoint & port' (Endpoint: mydatabaseinstance.crt8j734kq4l.us-east-1.rds.amazonaws.com, Port: 3306), 'Networking' (Availability zone: us-east-1f, VPC: vpc-0cc08cab290f63595, Subnet group: default, Subnets: subnet-004296b4c86807eff, subnet-01394a59af55ee02c, subnet-0d9333645149abee7, subnet-0e70a46dc6deb073f, subnet-0048dc16b7311921c, subnet-06bef07655ced38ea), and 'Security' (VPC security groups: ganesh_RDS_lab_sg (sg-064e75dfcca4efcfe) (active), Public accessibility: Yes, Certificate authority: rds-ca-2019, Certificate authority date: Aug 22nd, 2024). Below this, the 'Security group rules (2)' section shows two rules for the 'ganesh_RDS_lab_sg' security group: an inbound rule for CIDR/IP 0.0.0.0/0 and an outbound rule for CIDR/IP 0.0.0.0/0. The 'Replication (1)' section shows one replication rule for the same security group: an inbound rule for CIDR/IP 0.0.0.0/0. The 'Replication (1)' section shows one replication rule for the same security group: an inbound rule for CIDR/IP 0.0.0.0/0. The 'Proxies (0)' section shows no proxies. The user's name 'Ganesh Subramanian' and location 'N. Virginia' are visible in the top right corner.

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RDS > Databases > mydatabaseinstance

mydatabaseinstance Modify Actions

Summary

DB identifier mydatabaseinstance	CPU 2.00%	Status Available	Class db.t2.micro
Role Instance	Current activity 3 Connections	Engine MySQL Community	Region & AZ us-east-1f

Connectivity & security Monitoring Logs & events Configuration Maintenance & backups Tags

Connectivity & security

Endpoint & port Endpoint mydatabaseinstance.crt8j734kq4l.us-east-1.rds.amazonaws.com Port 3306	Networking Availability zone us-east-1f VPC vpc-0cc08cab290f63595 Subnet group default Subnets subnet-004296b4c86807eff subnet-01394a59af55ee02c subnet-0d9333645149abee7 subnet-0e70a46dc6deb073f subnet-0048dc16b7311921c subnet-06bef07655ced38ea	Security VPC security groups ganesh_RDS_lab_sg (sg-064e75dfcca4efcfe) (active) Public accessibility Yes Certificate authority rds-ca-2019 Certificate authority date Aug 22nd, 2024
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Security group rules (2)

Security group	Type	Rule
ganesh_RDS_lab_sg (sg-064e75dfcca4efcfe)	CIDR/IP - Inbound	0.0.0.0/0
ganesh_RDS_lab_sg (sg-064e75dfcca4efcfe)	CIDR/IP - Outbound	0.0.0.0/0

Replication (1)

Security group	Type	Rule
ganesh_RDS_lab_sg (sg-064e75dfcca4efcfe)	CIDR/IP - Inbound	0.0.0.0/0
ganesh_RDS_lab_sg (sg-064e75dfcca4efcfe)	CIDR/IP - Outbound	0.0.0.0/0

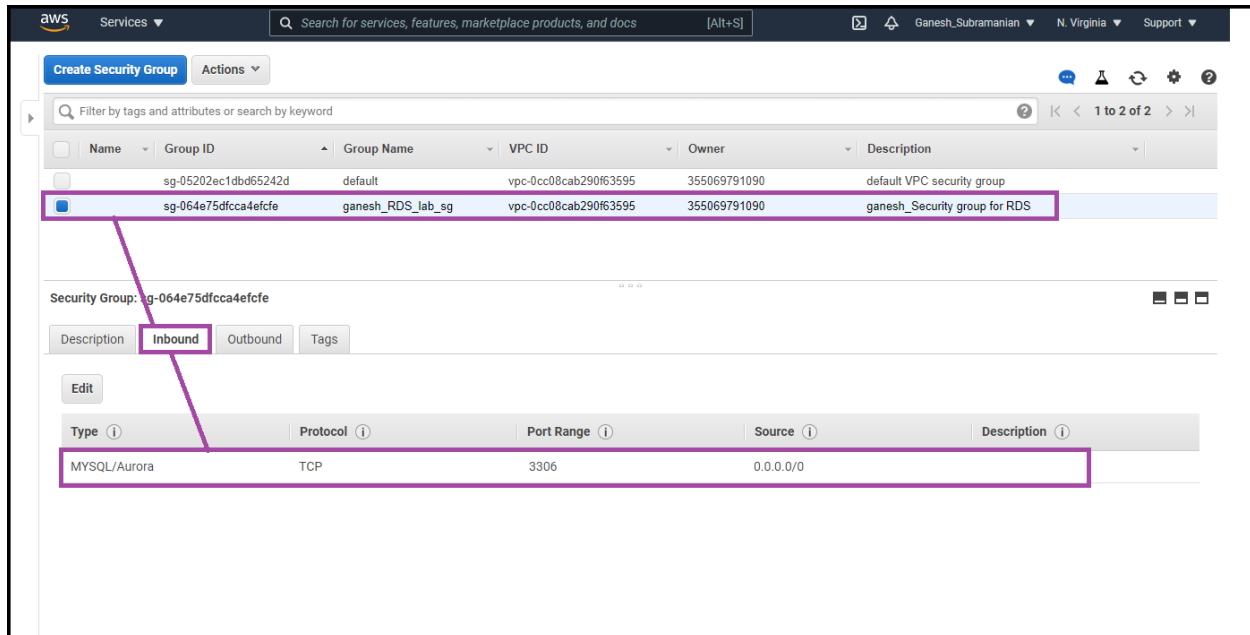
Replication (1)

DB instance	Role	Region & AZ	Replication source	Replication state	Lag
mydatabaseinstance	Instance	us-east-1f	-	-	-

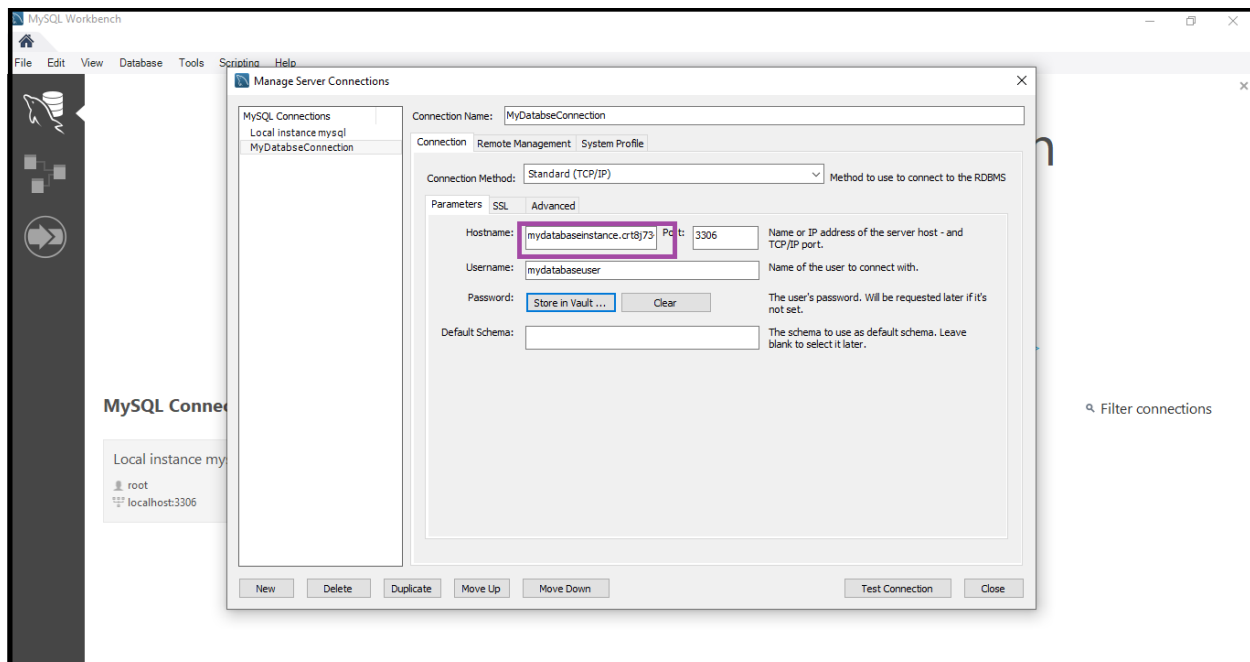
Proxies (0)

Proxy identifier	Status	Engine compatibility
No proxies		

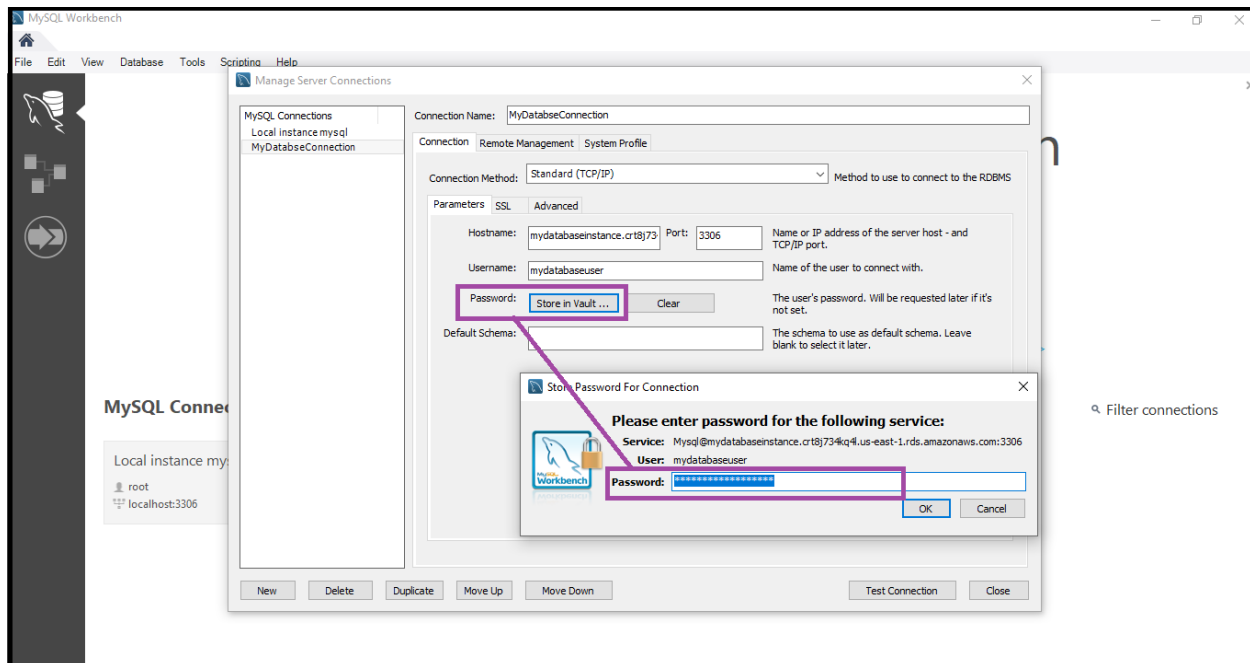
Screenshot 3: security group inbound rules+ multiple changes made to a security group



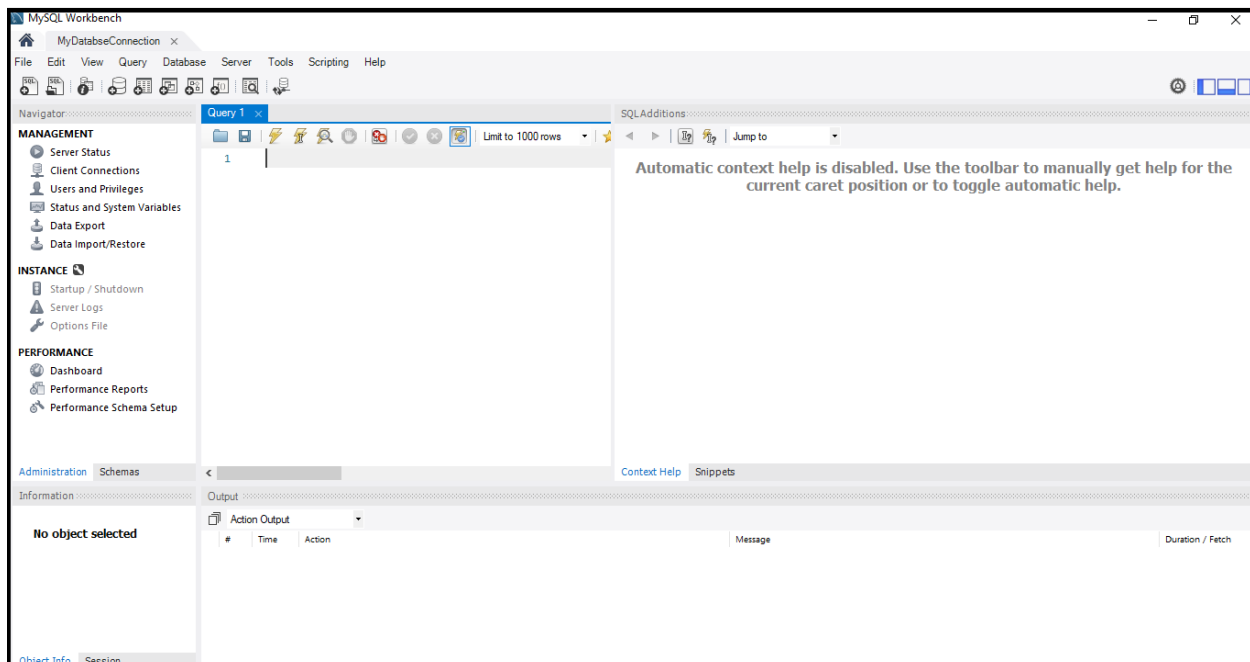
Screenshot 4: sql workbench endpoint added



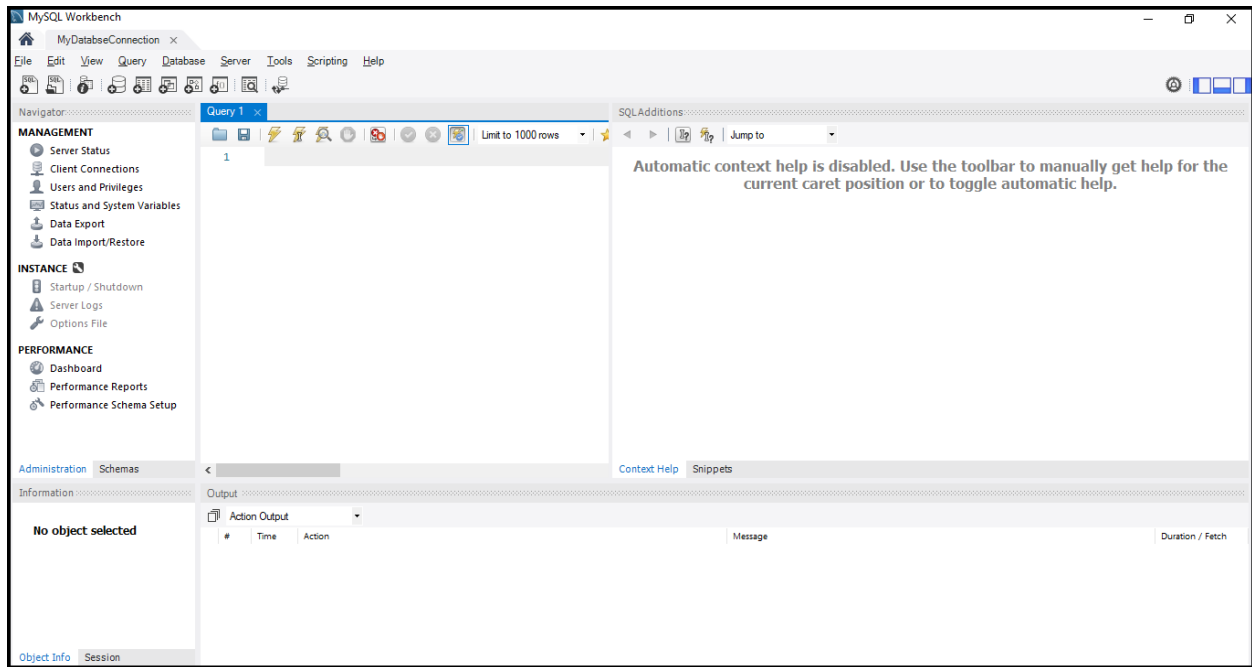
Screenshot 5: secret vault entry



Screenshot 6: confirm connectivity screen



Task 2: Connecting to RDS Database on a DB Instance using the MySQL Workbench



Task 3: Test Connection

