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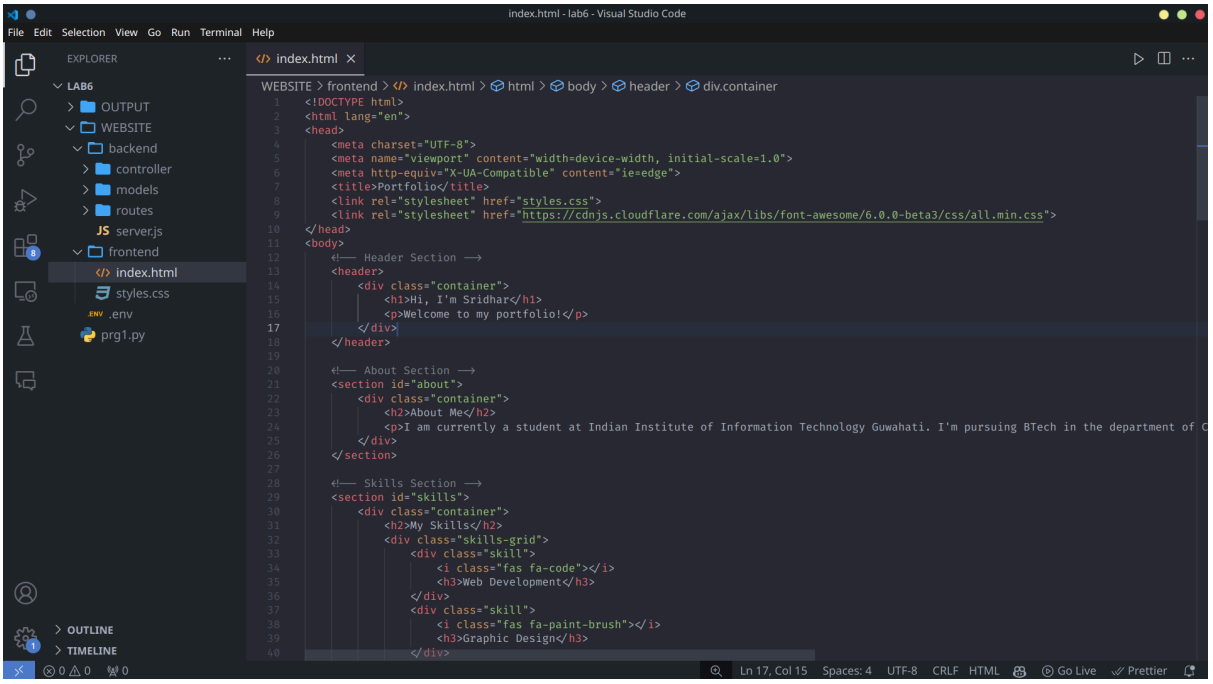
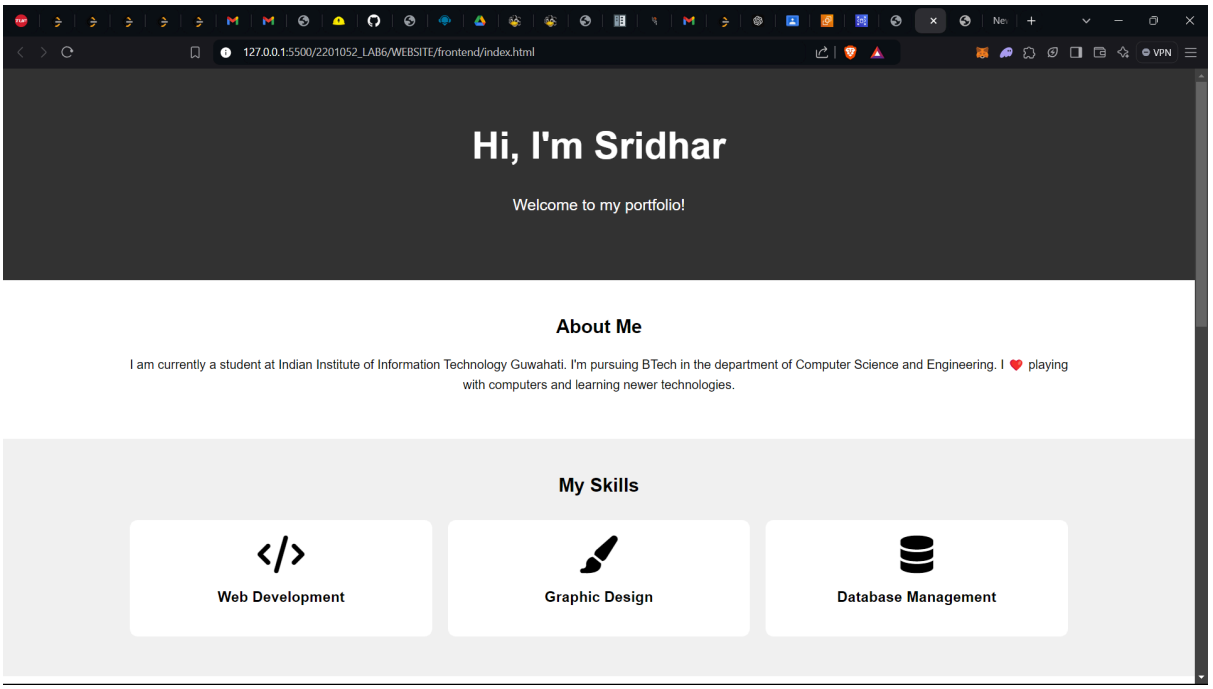
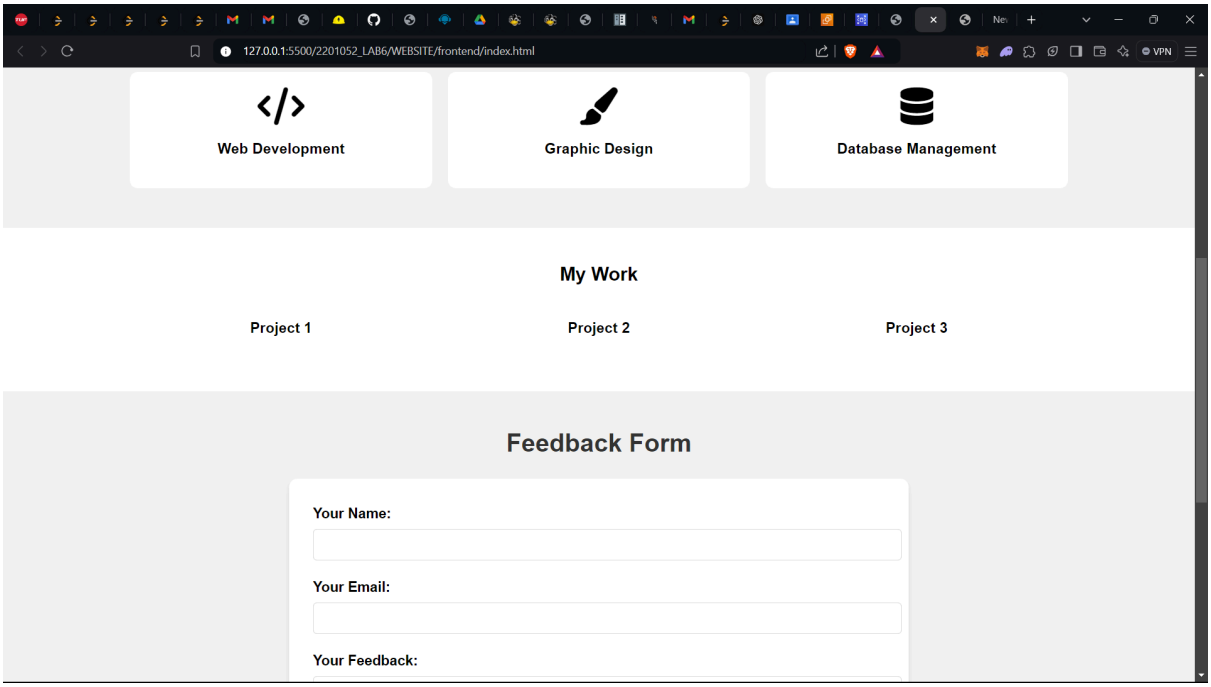
2201202
Cloud Computing Assignment 6

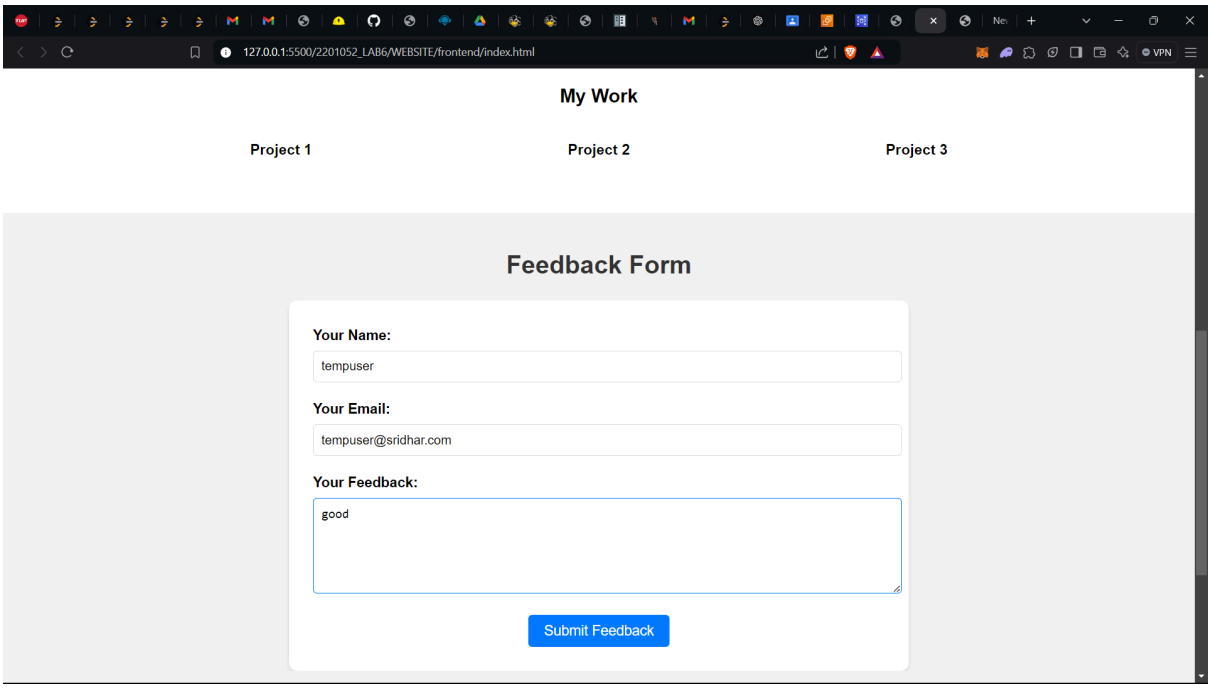
You need to create a RDS instance for a cloud application. Follow the steps below.

● Create an application for feedback on the personal website that you have developed as part of an earlier assignment.

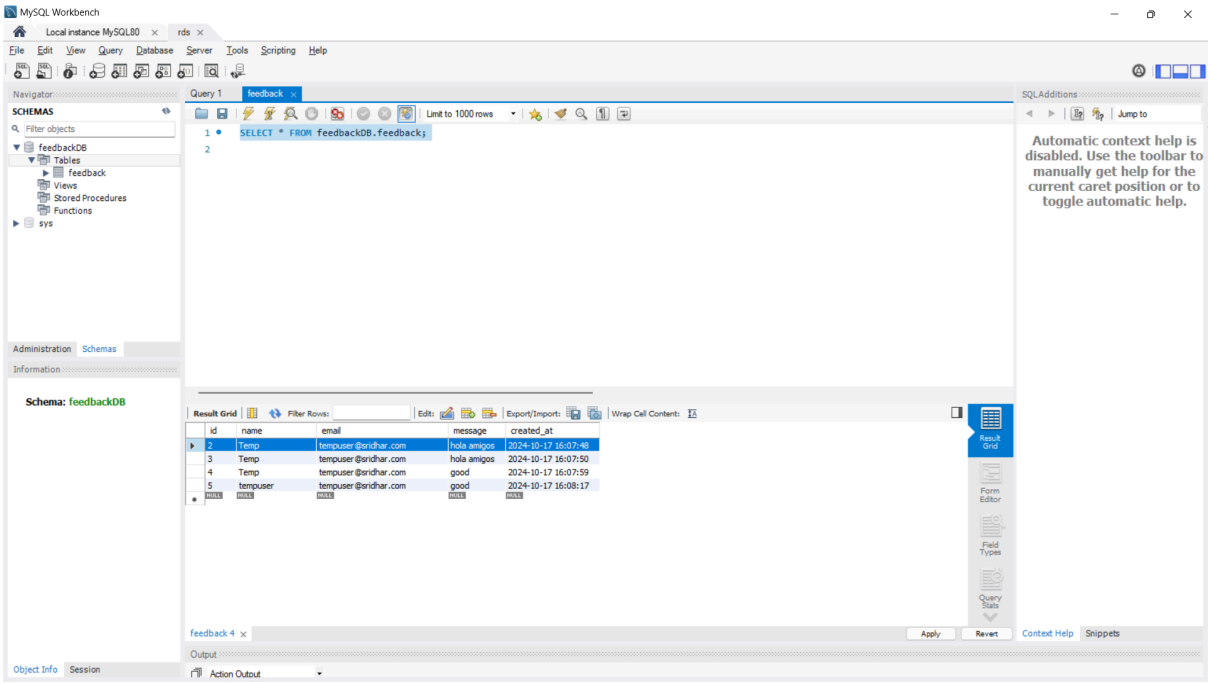





127.0.0.1:5500/2201052_LAB6/WEBSITE/frontend/index.html
Web Development
Graphic Design
Database Management
My Work
Project 1
Project 2
Project 3
Feedback Form
Your Name:
Your Email:
Your Feedback:


127.0.0.1:5500/2201052_LAB6/WEBSITE/frontend/index.html
My Work
Project 1
Project 2
Project 3
Feedback Form
Your Name:
tempuser
Your Email:
tempuser@sridhar.com
Your Feedback:
good
Submit Feedback

● When someone visits the site, they should be able to add a comment/message. Store these messages into RDBMS tables.

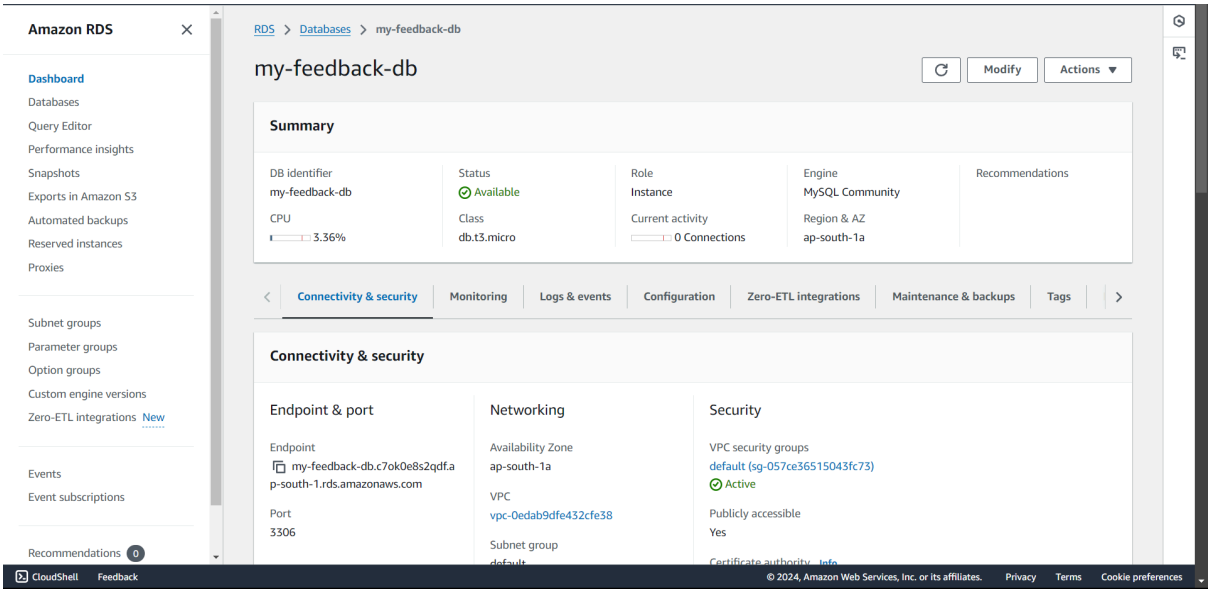


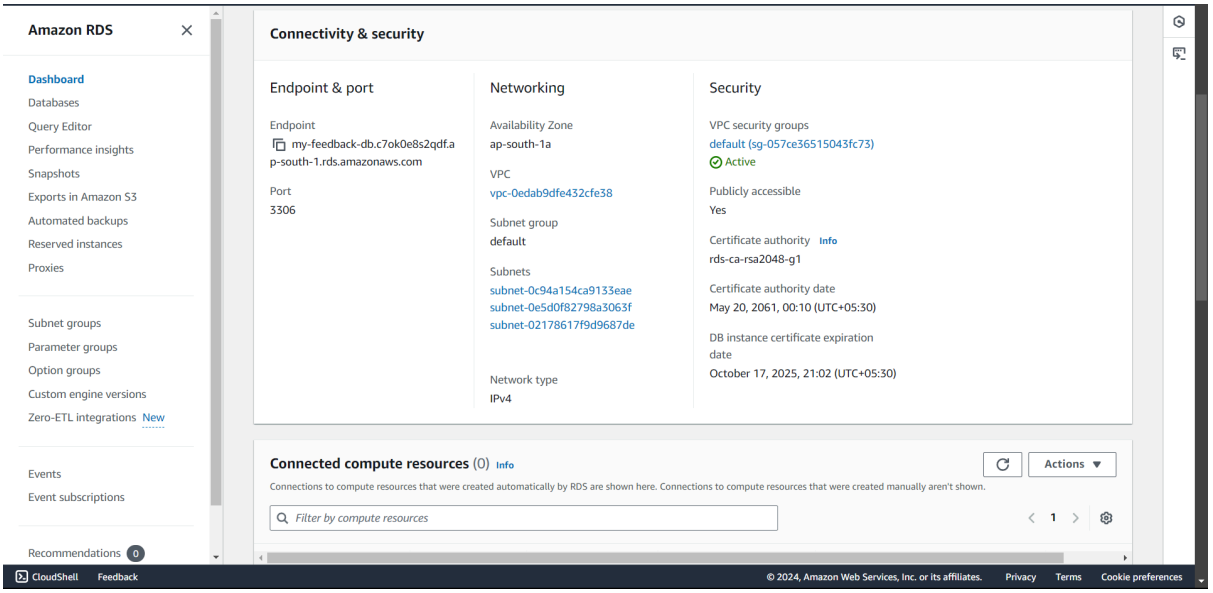
● Write a Python program using boto that creates the RDS instance with MySQL as database and the corresponding tables. Use a security group with appropriate ports open.

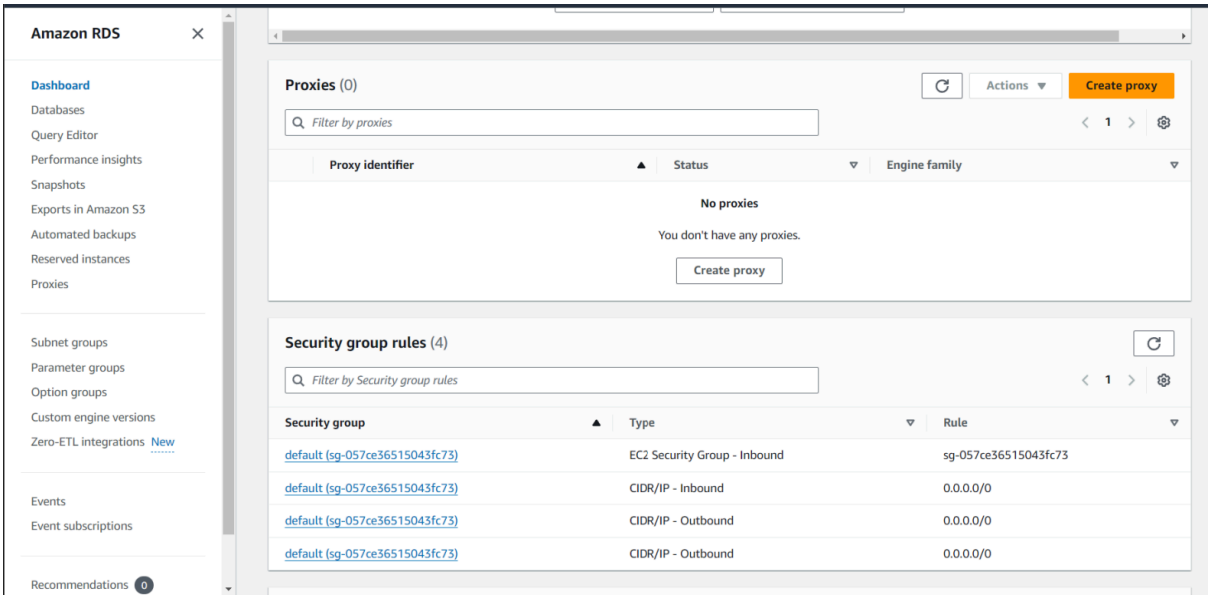
```python
import boto3

# AWS configuration
ACCESS_KEY = ""
SECRET_KEY = ""
REGION = "ap-south-1"
INSTANCE_TYPE = "db.t3.micro"
ID = "my-feedback-db"  # DB instance identifier
USERNAME = "temp_1234089"
PASSWORD = "temp"
DB_PORT = 3306
DB_SIZE = 20
DB_ENGINE = "mysql"
DB_NAME = "feedbackDB"  # Name of the database

# Connect to AWS RDS
client = boto3.client(
    'rds',
    region_name=REGION,
    aws_access_key_id=ACCESS_KEY,
    aws_secret_access_key=SECRET_KEY
)

# Check if the RDS instance already exists
def check_rds_instance_exists(db_identifier):
    try:
        response = client.describe_db_instances(DBInstanceIdentifier=db_identifier)
        if response['DBInstances']:
            return True
    except client.exceptions.DBInstanceNotFoundFault:
        return False
    except Exception as e:
        print(f"Error checking RDS instance: {e}")
        return None
```

```python
def create_rds_instance():
    if check_rds_instance_exists(ID):
        print(f"RDS instance '{ID}' already exists. Skipping creation.")
    else:
        try:
            db_instance = client.create_db_instance(
                DBInstanceIdentifier=ID,
                AllocatedStorage=DB_SIZE,
                DBInstanceClass=INSTANCE_TYPE,
                Engine=DB_ENGINE,
                MasterUsername=USERNAME,
                MasterUserPassword=PASSWORD,
                Port=DB_PORT,
                DBName=DB_NAME,
                PubliclyAccessible=True,
                BackupRetentionPeriod=7,
                StorageType="gp2",
                Tags=[
                    {
                        'Key': 'Name',
                        'Value': 'MyRDSInstance'
                    }
                ]
            )
            print(f"RDS instance creation initiated: {db_instance}")
        except Exception as e:
            print(f"Error creating RDS instance: {e}")

# Call the function to create the RDS instance
create_rds_instance()
```

- Open the public DNS of the newly launched instance in a browser and verify whether the application works.




Amazon RDS
Dashboard
Databases
Query Editor
Performance insights
Snapshots
Exports in Amazon S3
Automated backups
Reserved instances
Proxies
Subnet groups
Parameter groups
Option groups
Custom engine versions
Zero-ETL integrations New
Events
Event subscriptions
Recommendations 0
Connectivity & security
Endpoint & port
Endpoint
my-feedback-db.c7ok0e8s2qdf.ap-south-1.rds.amazonaws.com
Port
3306
Networking
Availability Zone
ap-south-1a
VPC
vpc-0edab9dfe432cfe38
Subnet group
default
Subnets
subnet-0c94a154ca9133eae
subnet-0e5d0f82798a3063f
subnet-02178617f9d9687de
Network type
IPv4
Security
VPC security groups
default (sg-057ce36515043fc73)
Active
Publicly accessible
Yes
Certificate authority Info
rds-ca-rsa2048-g1
Certificate authority date
May 20, 2061, 00:10 (UTC+05:30)
DB instance certificate expiration date
October 17, 2025, 21:02 (UTC+05:30)
Connected compute resources (0) Info
Actions
Connections to compute resources that were created automatically by RDS are shown here. Connections to compute resources that were created manually aren't shown.
Filter by compute resources
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences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Reserved instances
Proxies
Subnet groups
Parameter groups
Option groups
Custom engine versions
Zero-ETL integrations New
Events
Event subscriptions
Recommendations 0
Proxies (0)
Actions
Create proxy
Filter by proxies
Proxy identifier
Status
Engine family
No proxies
You don't have any proxies.
Create proxy
Security group rules (4)
Filter by Security group rules
Security group
Type
Rule
default (sg-057ce36515043fc73)
EC2 Security Group - Inbound
sg-057ce36515043fc73
default (sg-057ce36515043fc73)
CIDR/IP - Inbound
0.0.0.0/0
default (sg-057ce36515043fc73)
CIDR/IP - Outbound
0.0.0.0/0
default (sg-057ce36515043fc73)
CIDR/IP - Outbound
0.0.0.0/0

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