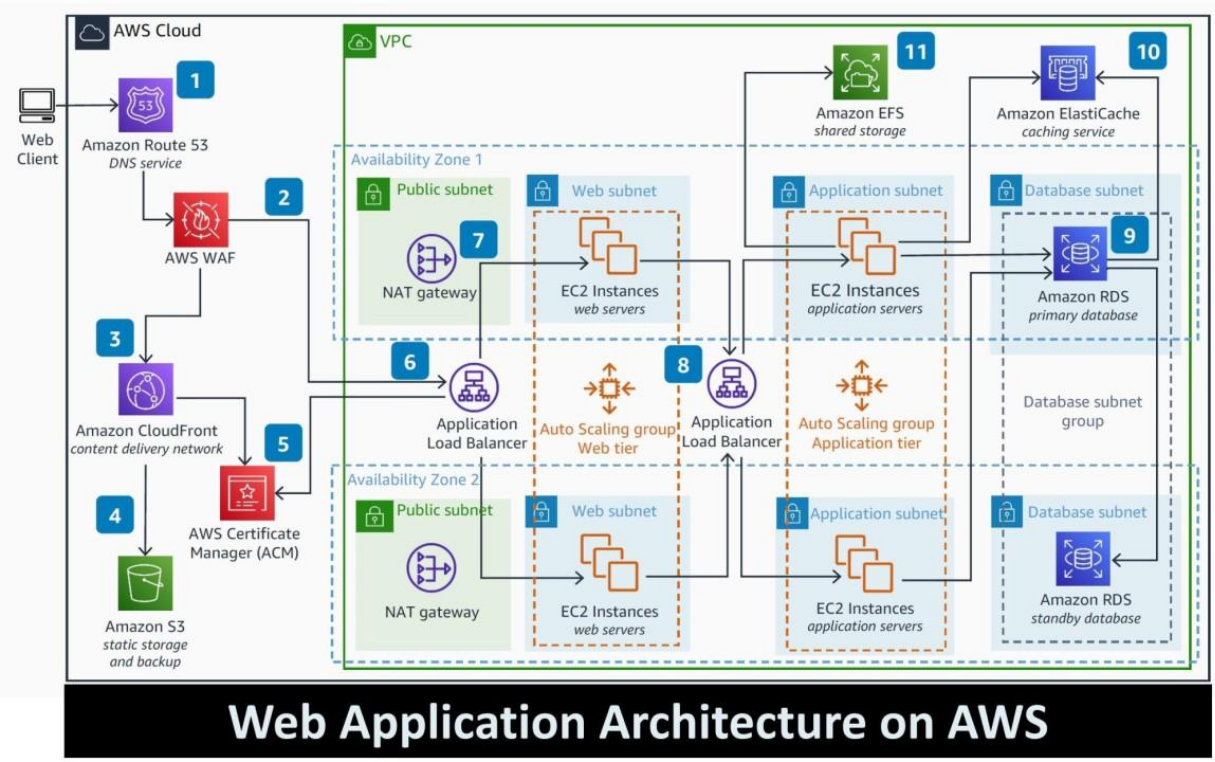
COMPLETE 3 TIER ARCHITECTURE

MODEL DIAGRAM



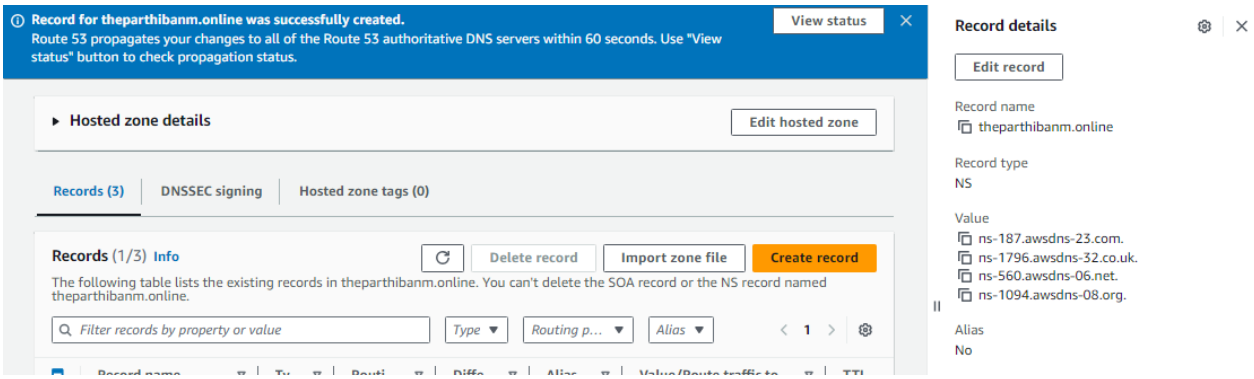
CREATE 1 VPC

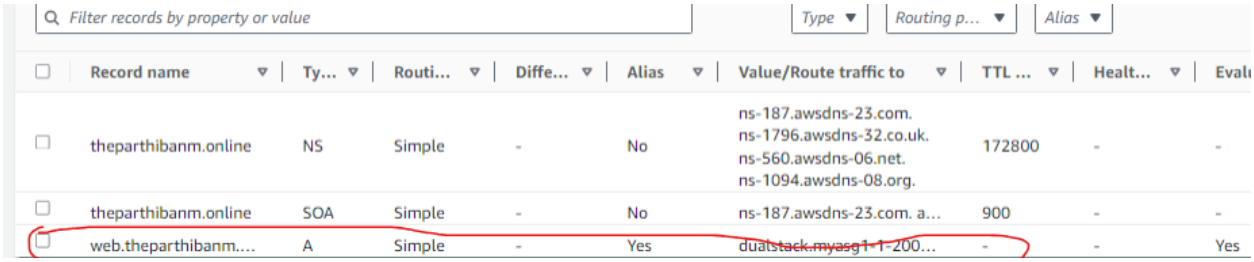
2 PUB , 2 PRIVATE , ANOTHER 2 PRIVATE SUBNET

CREATE AUTO SCALING GROUP FOR PUB SUBNET AND CHECK THE LOAD BALANCER DNS IT WILL WORK

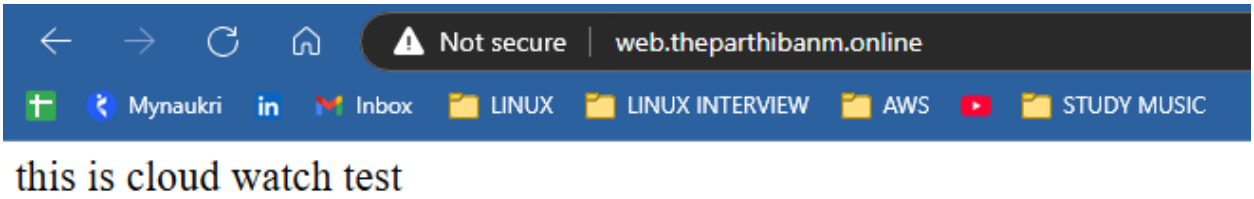
CREATE 2ND AUTO SCALING GROUP FOR PRIVATE SUBNET WITH INTERNAL LOAD BALANCER CHECK THIS DNS WITH THE ROUTE 53

NOW ADD THIS ROUTE 53 4 AWS DNS TO THE HOSTINGER WEBSITE WHERE YOU ALREADY GOT THE DOMAIN NAME



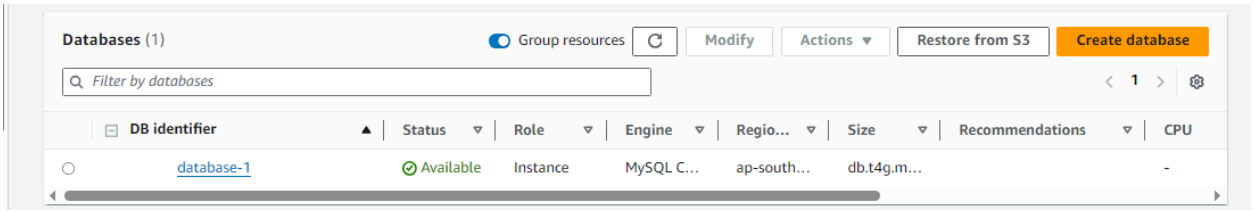


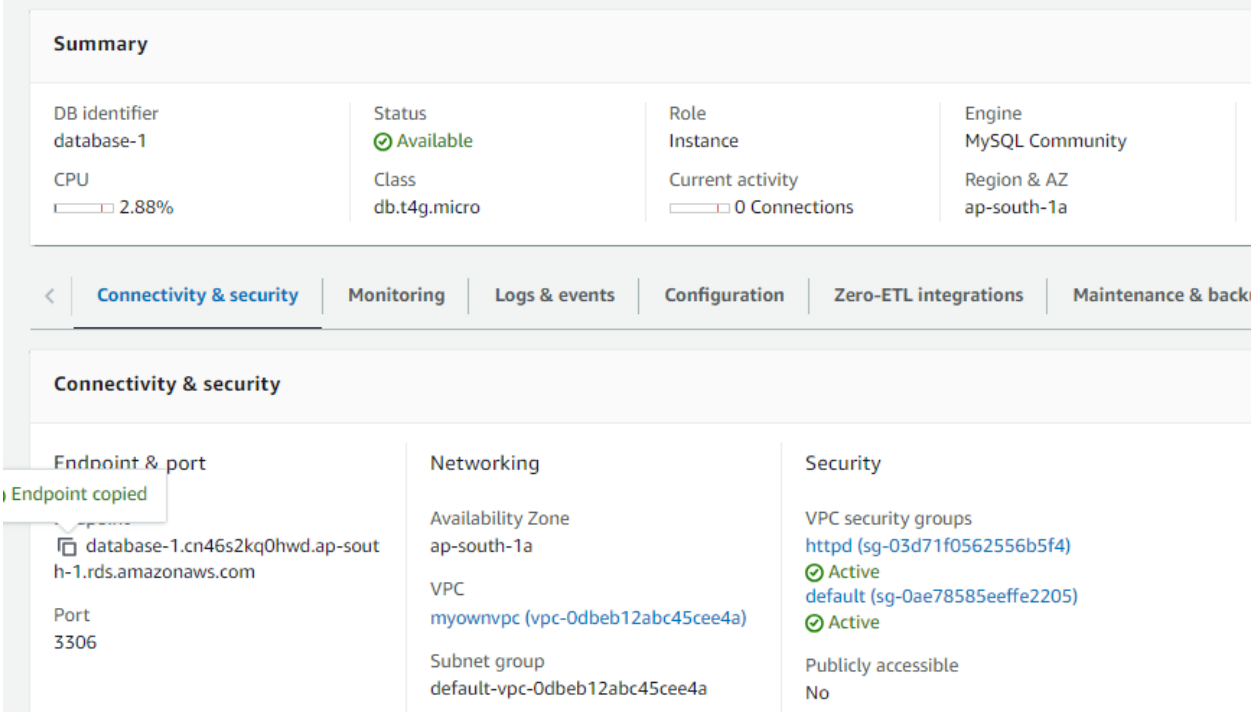
Record name	Ty...	Routi...	Diffe...	Alias	Value/Route traffic to	TTL ...	Healt...	Eval
theparthibanm.online	NS	Simple	-	No	ns-187.awsdns-23.com. ns-1796.awsdns-32.co.uk. ns-560.awsdns-06.net. ns-1094.awsdns-08.org.	172800	-	-
theparthibanm.online	SOA	Simple	-	No	ns-187.awsdns-23.com. a...	900	-	-
web.theparthibanm....	A	Simple	-	Yes	dualstack.myasg1-1-200...	-	-	Yes



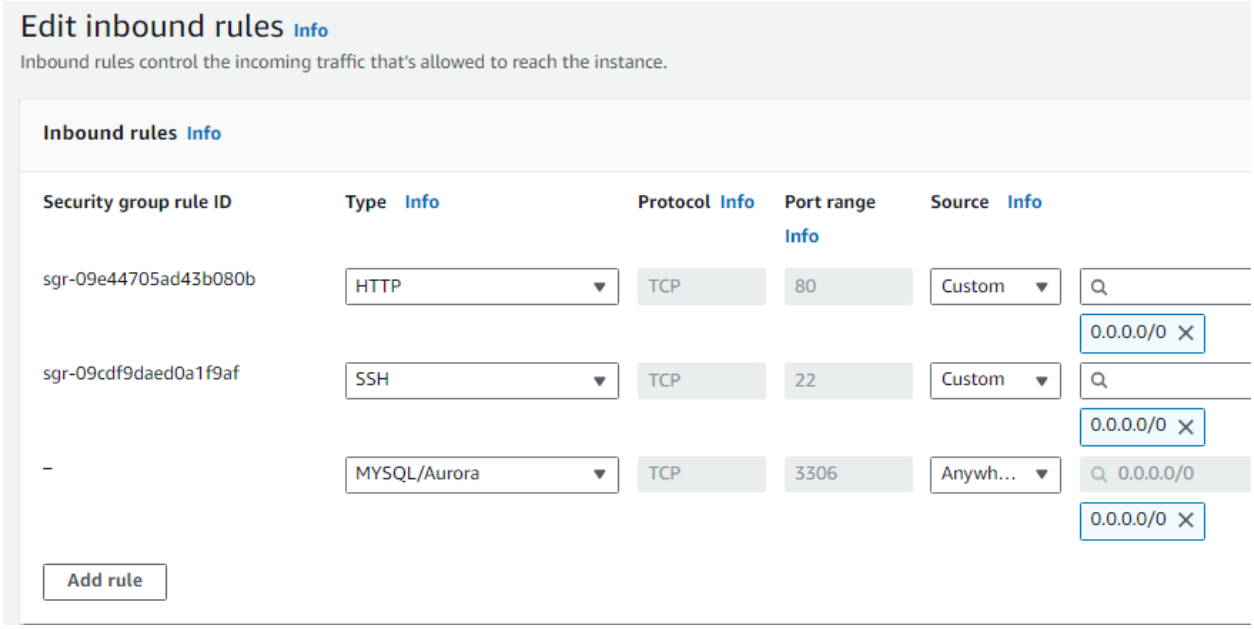
create nat gateway for private subnets

create a db instance in the private subnet 5





enable the mysql port in the security group

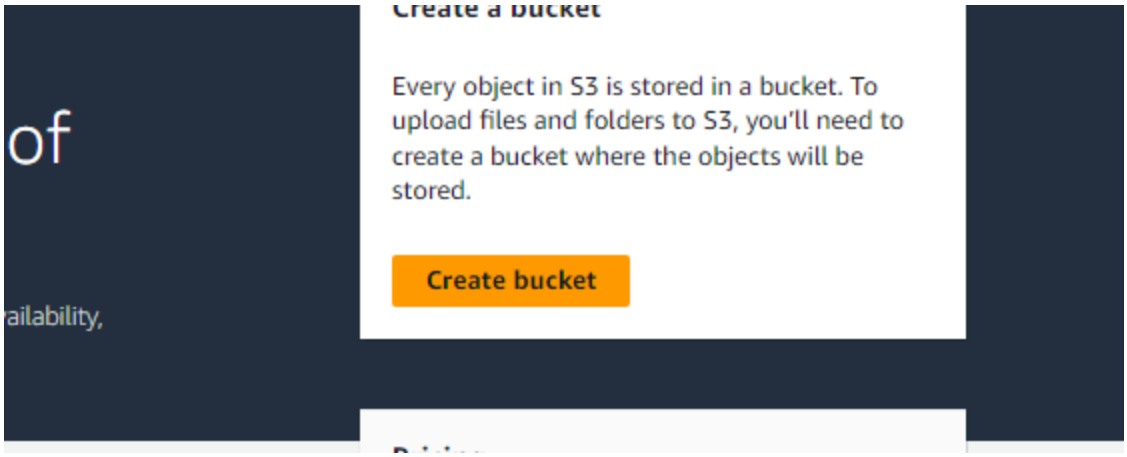


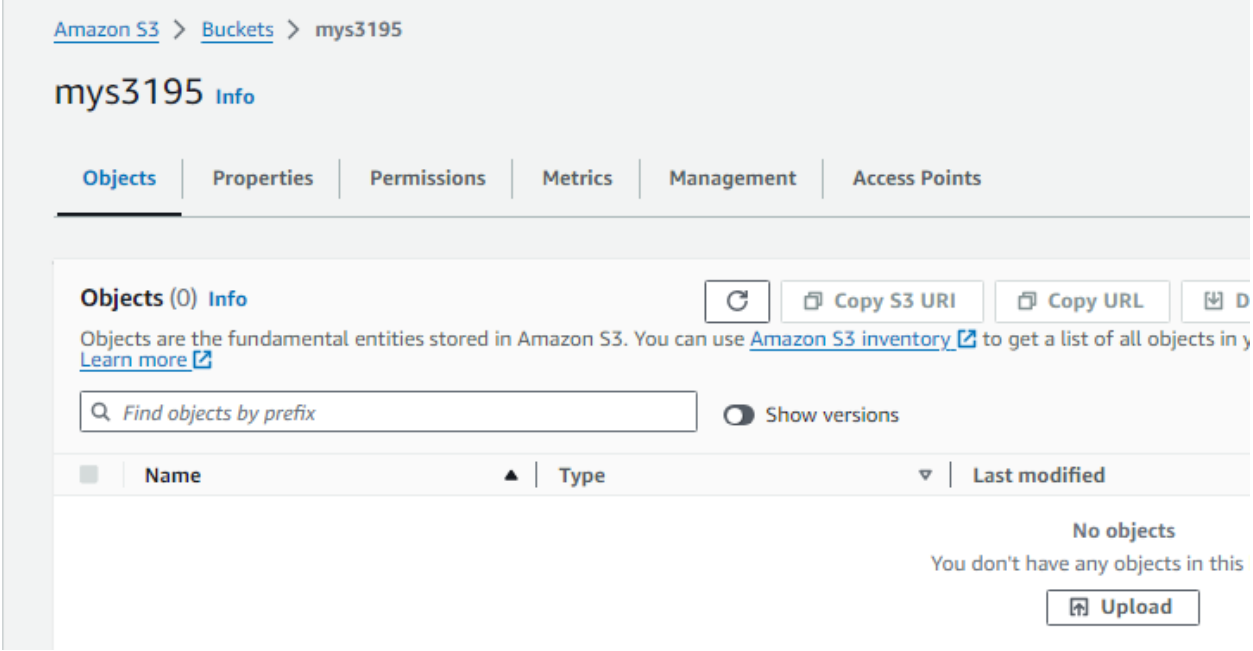
take the public instance connect and take console of private instance and acces the db instance

```
Last login: Thu Oct 24 12:50:36 2024 from 192.168.2.6
[ec2-user@ip-192-168-3-7 ~]$ sudo -i
[root@ip-192-168-3-7 ~]# yum whatprovides mysql
Amazon Linux 2023 repository
Amazon Linux 2023 Kernel Livepatch repository
mariadb105-3:10.5.16-1.amzn2023.0.7.x86_64 : A very fast and robust SQL database server
Repo        : amazonlinux
Matched from:
Filename    : /usr/bin/mysql

mariadb105-3:10.5.18-1.amzn2023.0.1.x86_64 : A very fast and robust SQL database server
Repo        : amazonlinux
Matched from:
Filename    : /usr/bin/mysql

mariadb105-3:10.5.20-1.amzn2023.0.1.x86_64 : A very fast and robust SQL database server
Repo        : amazonlinux
Matched from:
Filename    : /usr/bin/mysql

mariadb105-3:10.5.23-1.amzn2023.0.1.x86_64 : A very fast and robust SQL database server
Repo        : amazonlinux
Matched from:
Filename    : /usr/bin/mysql

mariadb105-3:10.5.25-1.amzn2023.0.1.x86_64 : A very fast and robust SQL database server
Repo        : amazonlinux
Matched from:
Filename    : /usr/bin/mysql

[root@ip-192-168-3-7 ~]# yum install mariadb105-3:10.5.16-1.amzn2023.0.7.x86_64
```

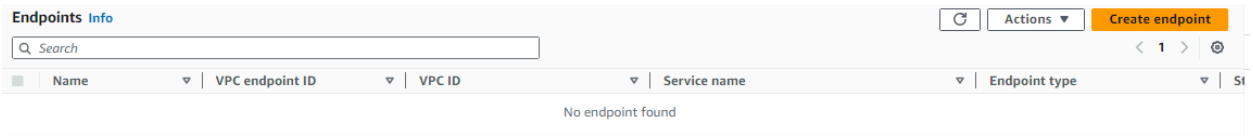
```
Complete!
[root@ip-192-168-3-7 ~]# show databases;
-bash: show: command not found
[root@ip-192-168-3-7 ~]# mysql -u admin -h database-1.cn46s2kq0hwd.ap-south-1.rds.amazonaws.com -pparthi123
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MySQL connection id is 44
Server version: 8.0.39 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 |
| sys                |
+--------------------+
4 rows in set (0.015 sec)

MySQL [(none)]>
```

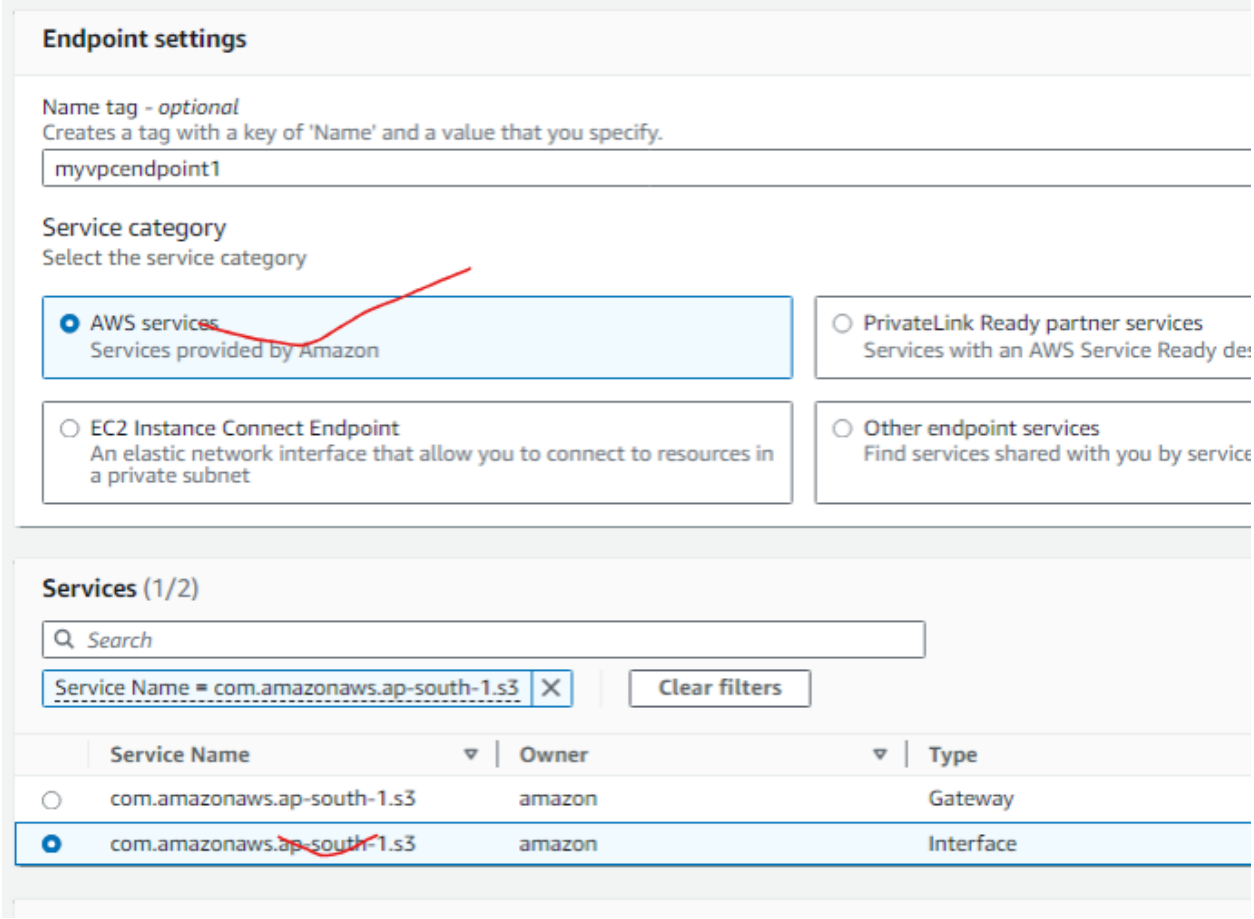
create s3 bucket

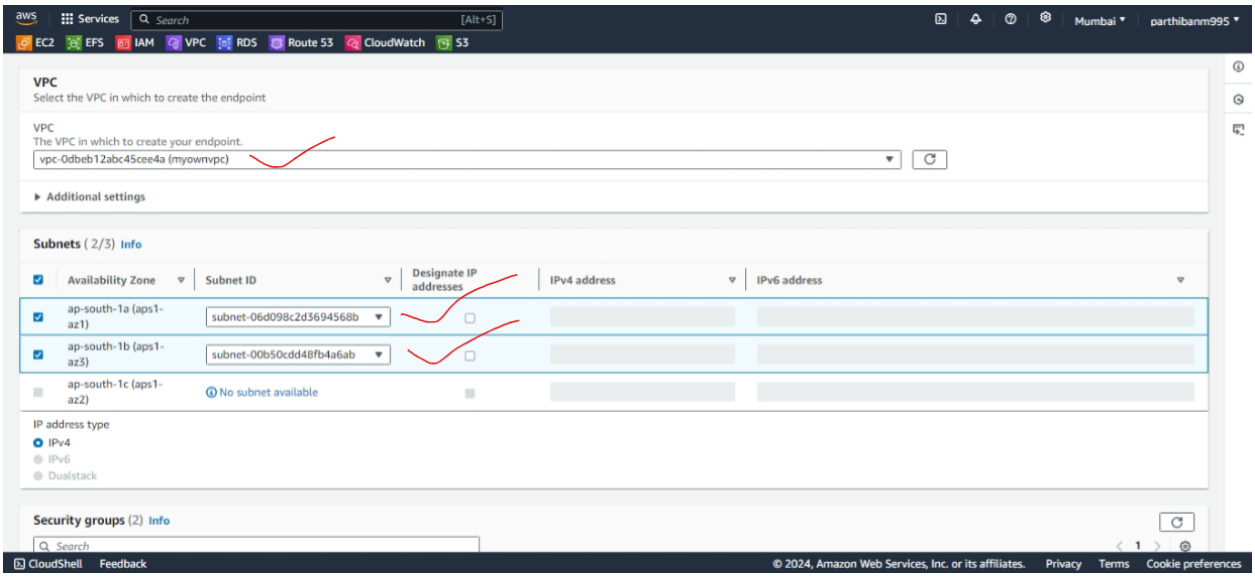


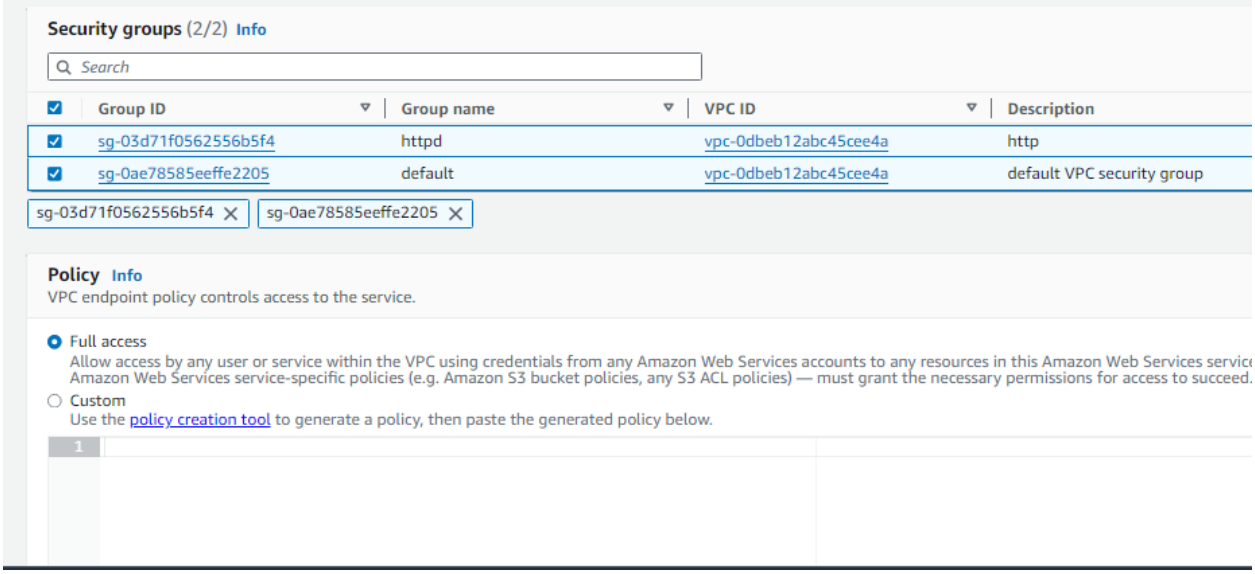


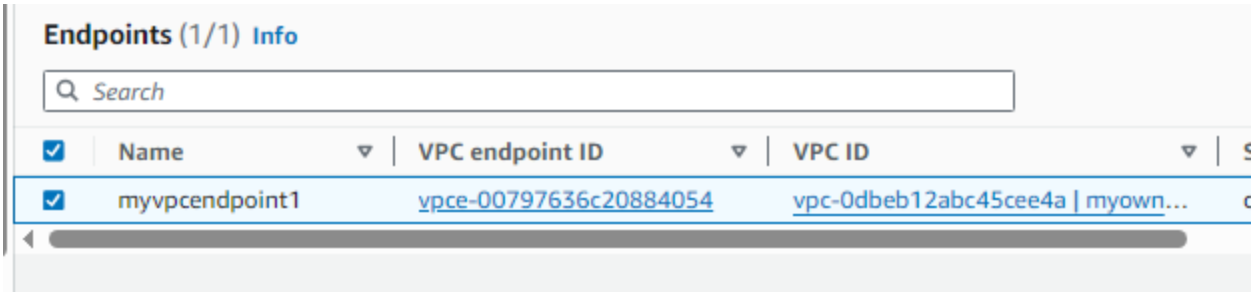
create endpoint for vpc




Endpoint settings
Name tag - optional
Creates a tag with a key of 'Name' and a value that you specify.
myvpcendpoint1
Service category
Select the service category
AWS services
Services provided by Amazon
PrivateLink Ready partner services
Services with an AWS Service Ready des
EC2 Instance Connect Endpoint
An elastic network interface that allow you to connect to resources in a private subnet
Other endpoint services
Find services shared with you by service
Services (1/2)
Search
Service Name = com.amazonaws.ap-south-1.s3
Clear filters
Service Name
Owner
Type
com.amazonaws.ap-south-1.s3
amazon
Gateway
com.amazonaws.ap-south-1.s3
amazon
Interface


Services
Search
[Alt+S]
Mumbai
parthibanm995
EC2
EFS
IAM
VPC
RDS
Route 53
CloudWatch
S3
VPC
Select the VPC in which to create the endpoint
VPC
The VPC in which to create your endpoint.
vpc-0dbeb12abc45cee4a (myownvpc)
Additional settings
Subnets (2/3) Info
Availability Zone
Subnet ID
Designate IP addresses
IPv4 address
IPv6 address
ap-south-1a (aps1-az1)
subnet-06d098c2d3694568b
ap-south-1b (aps1-az3)
subnet-00b50cdd48fb4a6ab
ap-south-1c (aps1-az2)
No subnet available
IP address type
IPv4
IPv6
Dualstack
Security groups (2) Info
Search
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences





upload file to s3 bucket

Amazon S3 > Buckets > mys3195 > Upload

Upload Info

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AW
SDK or Amazon S3 REST API. Learn more

Drag and drop files and folders you want to upload here, or choose **Add files** or **Add folder**.

Files and folders (1 Total, 4.8 KB) Remove Add files Add folder

All files and folders in this table will be uploaded.

Find by name 1

Name	Folder
index.html	-

Destination Info

Destination

s3://mys3195

▶ **Destination details**

Bucket settings that impact new objects stored in the specified destination.

udShell Feedback

Grant public access and access to other AWS accounts.

Access control list (ACL)

Grant basic read/write permissions to other AWS accounts. Learn more

AWS recommends using S3 bucket policies or IAM policies for access control. Learn more

Access control list (ACL)

- (●) Choose from predefined ACLs
- ( ) Specify individual ACL permissions

Predefined ACLs

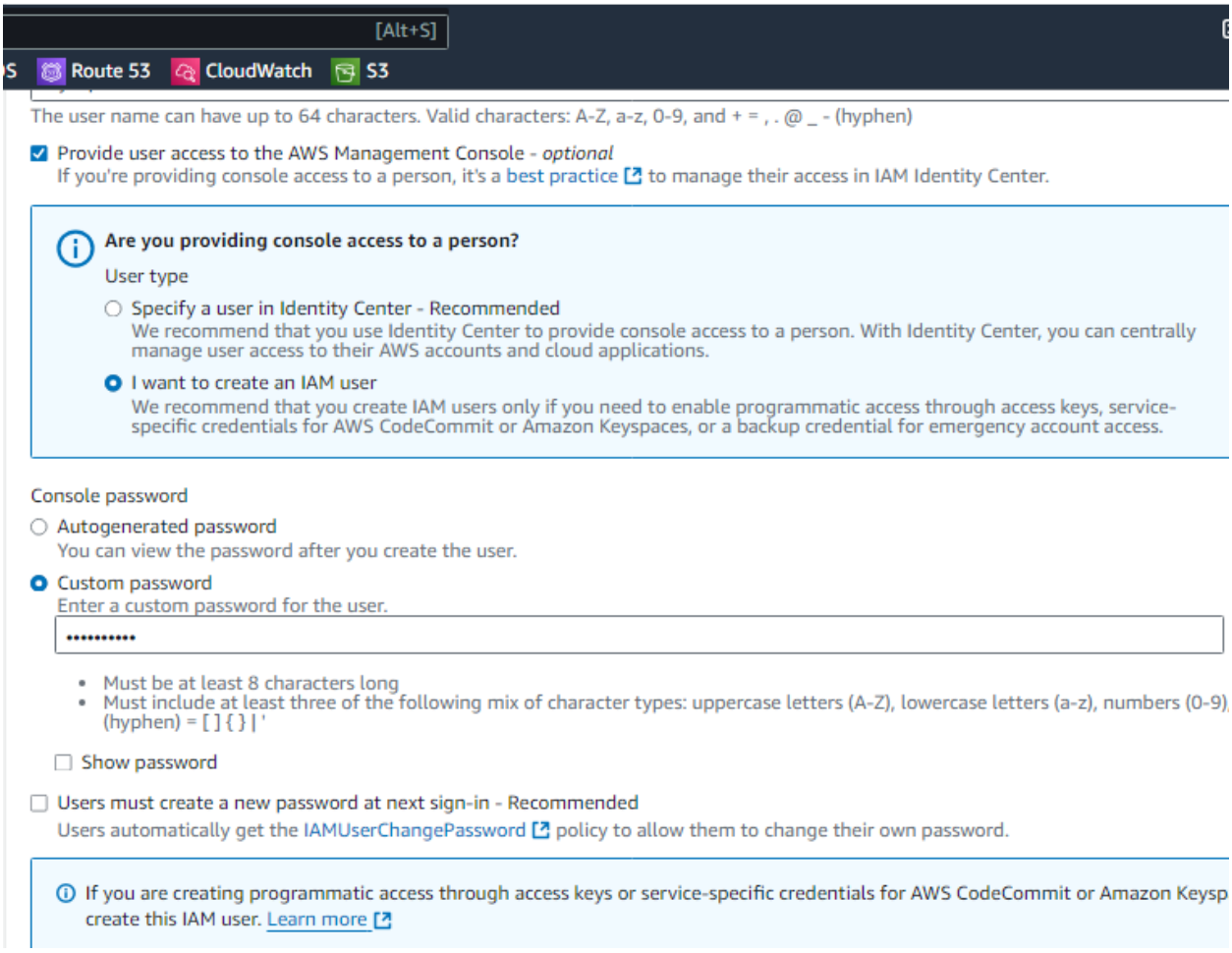
- ( ) Private (recommended)
  Only the object owner will have read and write access.
- (●) Grant public-read access
  Anyone in the world will be able to access the specified objects. The object owner will have read and write access. Learn more

Granting public-read access is not recommended

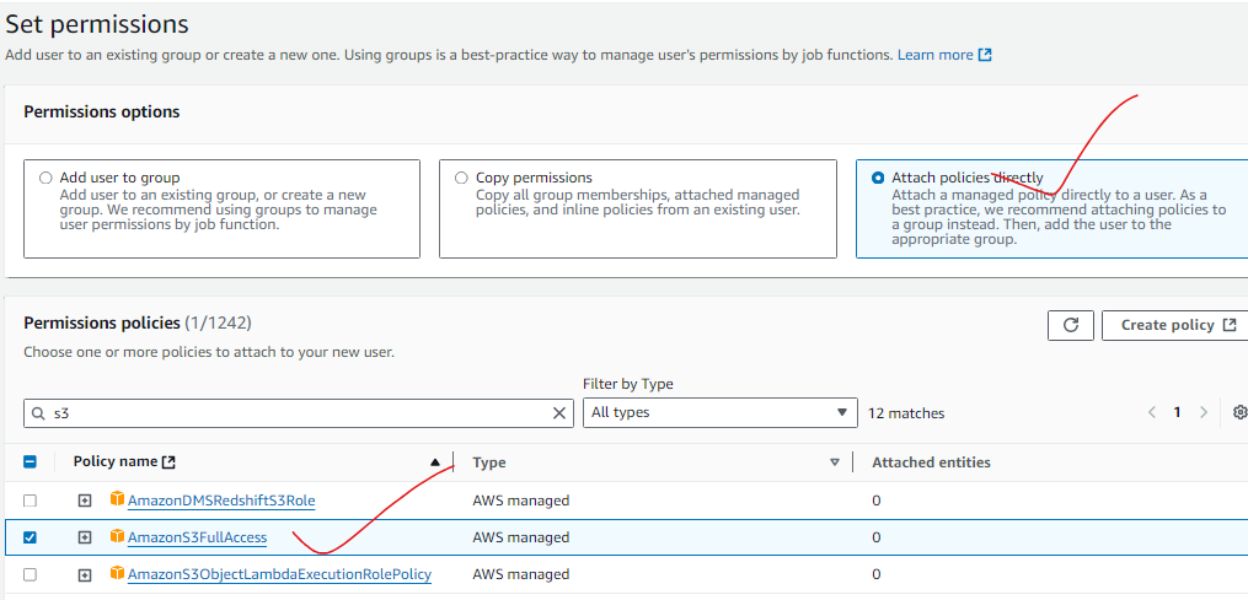
Anyone in the world will be able to access the specified objects. Learn more

☑ I understand the risk of granting public-read access to the specified objects.

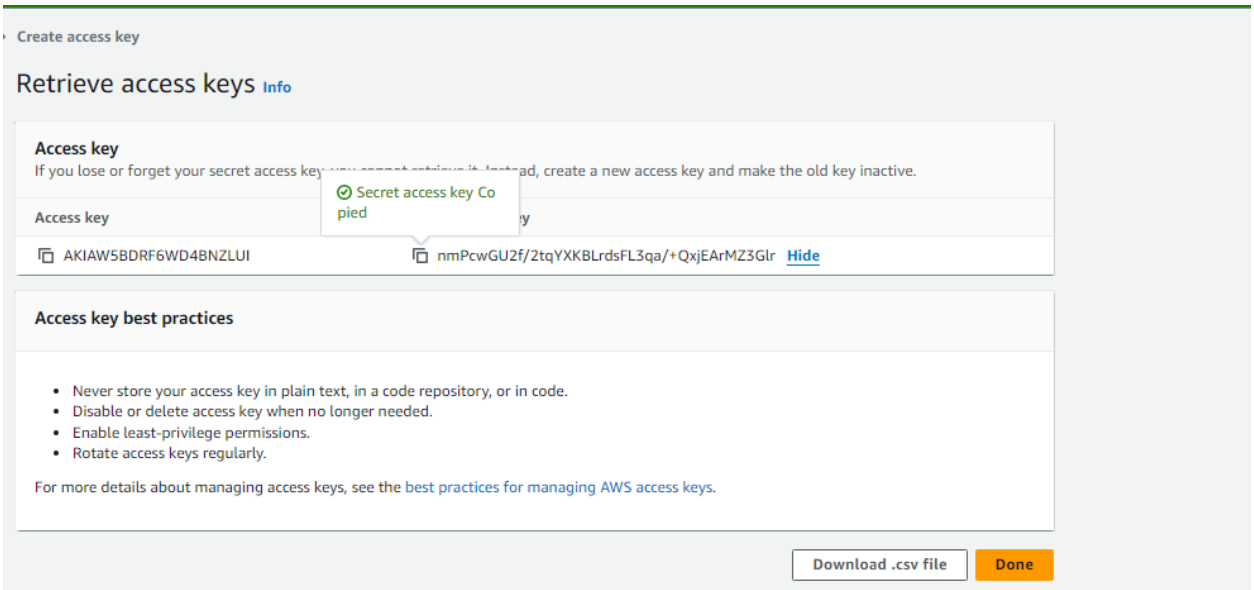
create one IAM user



attach s3 policy for that user



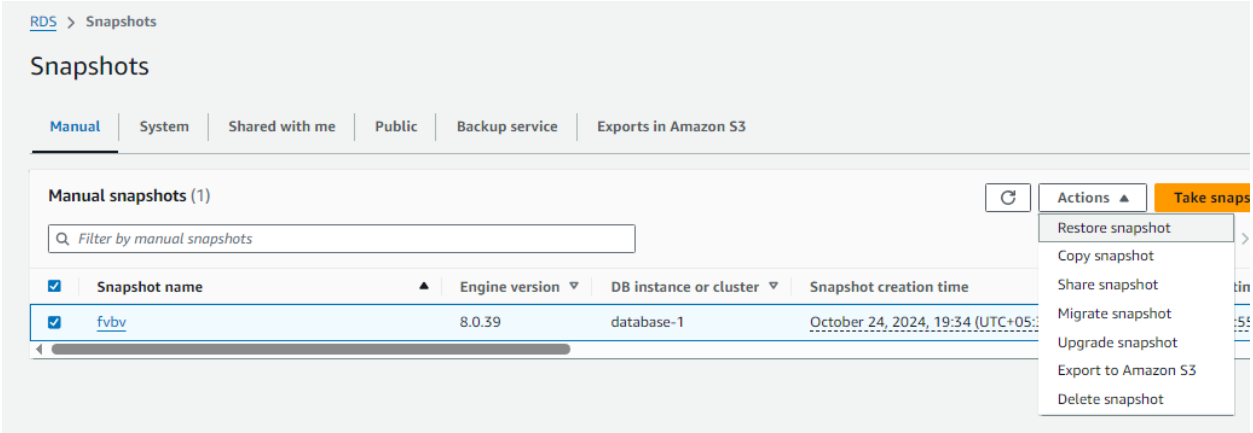
create access key for the user



connect your public instance and check the output

```
   ,     #_
   ~\_  ####_        Amazon Linux 2023
  ~~  \_#####\
  ~~     \###|
  ~~       \#/ ___   https://aws.amazon.com/linux/amazon-linux-2023
   ~~       V~' '->
    ~~~         /
      ~~._.   _/
         _/ _/
       _/m/'
Last login: Thu Oct 24 13:02:49 2024 from 13.233.177.3
[ec2-user@ip-192-168-2-6 ~]$ sudo -i
[root@ip-192-168-2-6 ~]# ssh ec2-user@192.168.3.7 -i file1.pem
   ,     #_
   ~\_  ####_        Amazon Linux 2023
  ~~  \_#####\
  ~~     \###|
  ~~       \#/ ___   https://aws.amazon.com/linux/amazon-linux-2023
   ~~       V~' '->
    ~~~         /
      ~~._.   _/
         _/ _/
       _/m/'
Last login: Thu Oct 24 13:05:29 2024 from 192.168.2.6
[ec2-user@ip-192-168-3-7 ~]$ sudo -i
[root@ip-192-168-3-7 ~]# aws configure
AWS Access Key ID [None]: AKIAW5BDRF6WD4BNZLUI
AWS Secret Access Key [None]: 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
Default region name [None]: ap-south-1
Default output format [None]:
[root@ip-192-168-3-7 ~]# aws s3 ls s3://mys3195
2024-10-24 13:28:50       4957 index.html
[root@ip-192-168-3-7 ~]#
```

now backup the rds database in thes3 bucket using optional group or through rds snapshot



export to amazon s3

RDS > Snapshots > fvbv > Export to Amazon S3

Export to Amazon S3 Info

Use RDS DB snapshot export to Amazon S3 to extract data from snapshots and store it in a compressed, queryable format in an S3 bucket in your AWS account.

Settings

Export identifier
Enter a name to identify the export. The name must be unique across all DB snapshot exports owned by your AWS account in the current AWS Region.

export-identifier

The export identifier is case-insensitive, but is stored as all lowercase (as in "myexport"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

Exported data

Exported data format

Amount of data to be exported

Services | Search [Alt+S]

EC2 | EFS | IAM | VPC | RDS | Route 53 | CloudWatch | S3

○ Partial
Part of the database is exported. You can define which part by using identifiers.

S3 destination

S3 bucket

mys3195

S3 prefix - *optional* Info

To group objects in a bucket, S3 uses a prefix before object names. The forward slash (/) in the prefix represents a folder. For example, use the prefix exports/2019 for a 2019 folder in an exports folder. RDS will append the prefix with a "/".

IAM role

IAM role
Choose or create an IAM role to grant write access to your S3 bucket.

Choose an option

Encryption