AWS

Labs 4-7

Reed Holman | CCNP | 3/30/2023



Purpose: To learn the basics of AWS

Background Information:

AWS or Amazon web services is one of the biggest cloud computing services there is. Usually, you must purchase physical IT management devices like routers and switches. These cost money and lots of space which also costs money. Cloud computing is the ability to do everything you need to do without actually having to own a physical device. At the time of AWS’s creation Amazon claimed that 70% of their network engineers’ time was spent fixing IT infrastructure problems. Having a way to use cloud computing would allow the engineers to have more time to fix more important issues.

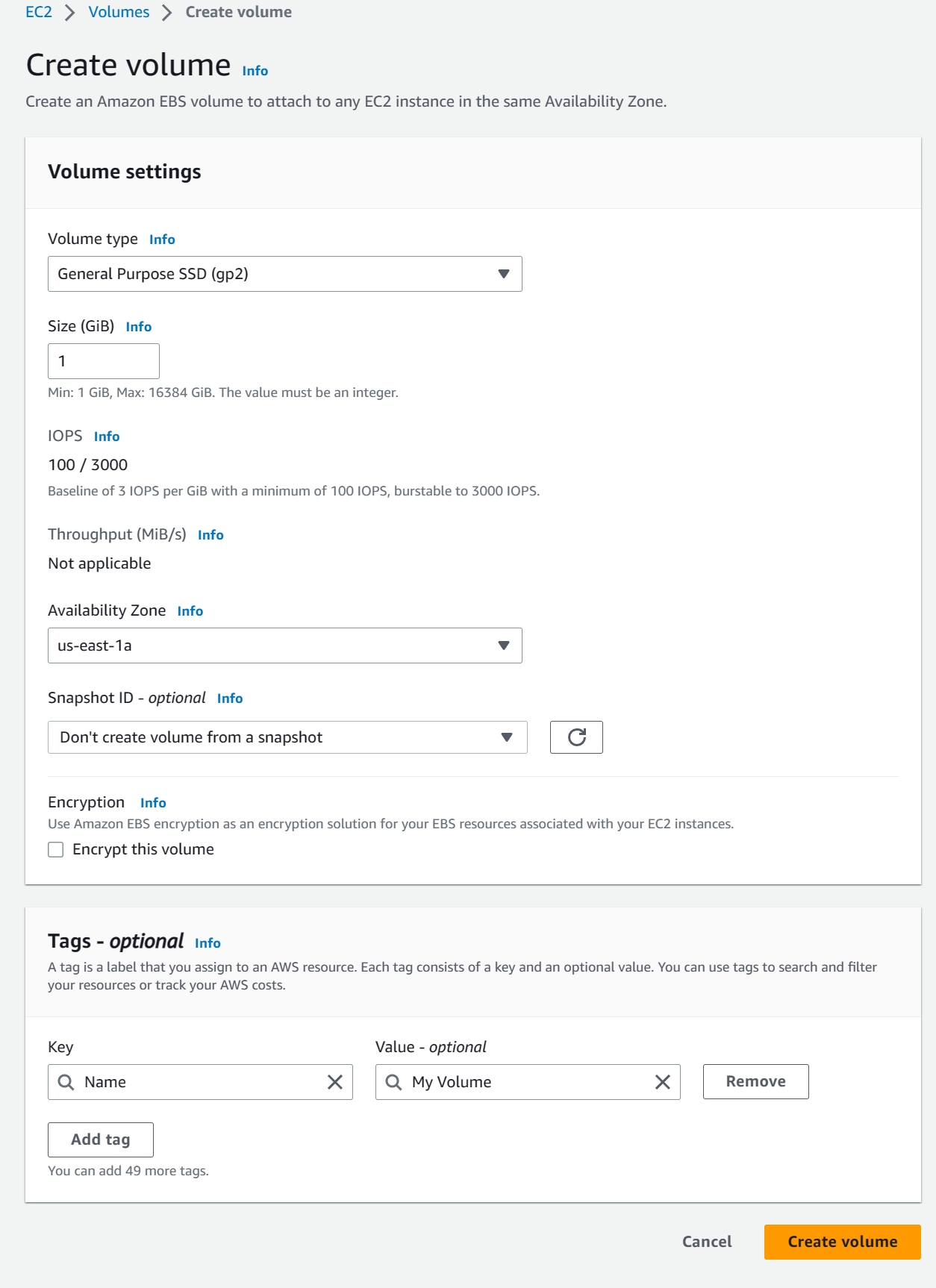
AWS uses a pay-as-you-go system when charging its customers. Combined with autoscaling AWS can greatly save a user money. Autoscaling is the process in which a client will use more resources when traffic is high and will use less during times of low traffic, meaning they are only using/paying for what necessary at that time.

An important part of AWS is the Amazon Elastic Block Store (EBS) volume, they are attached to your EC2 instance and are able encrypt and store data. You have multiple EBS attached to a single EC2 instance, and they are very customizable allowing you to store several types of data.

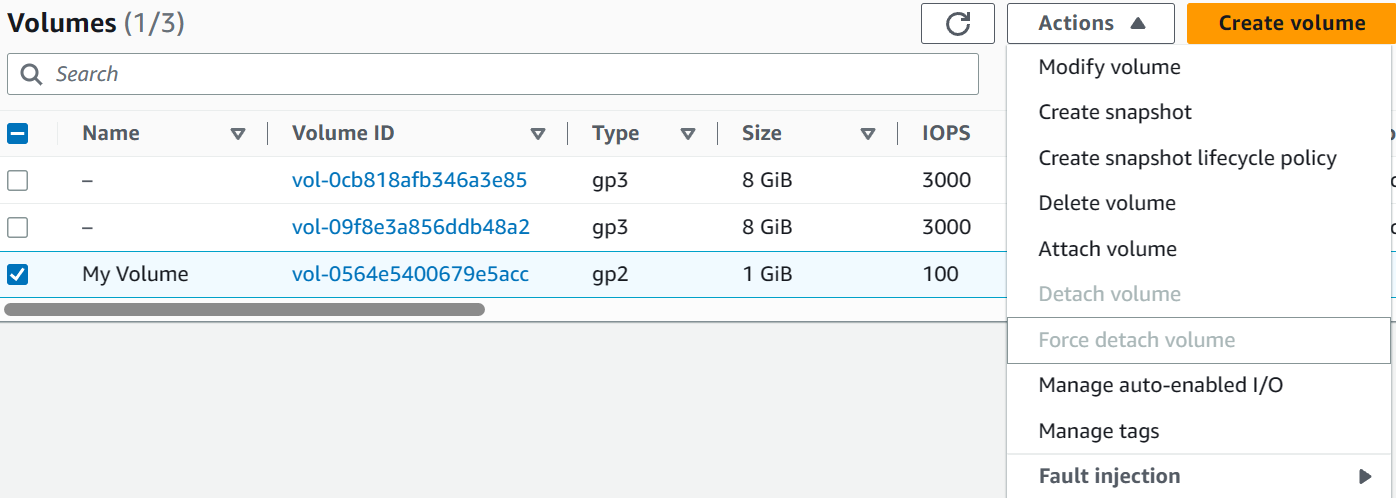
Amazon also had the Amazon Relational Database Service (Amazon RDS) which is the way you are able to set up a database in the cloud. Specifically, we used a Multi-AZ Amazon RDS that means one primary DB instance is created and replicated to a standby instance located in a different Availability Zone. Things like Elastic Load Balancing (ELB) and Auto Scaling help improve the stability of your architecture.

LAB 4: Working with EBS

Create a new Volume with these setting and adding a tag

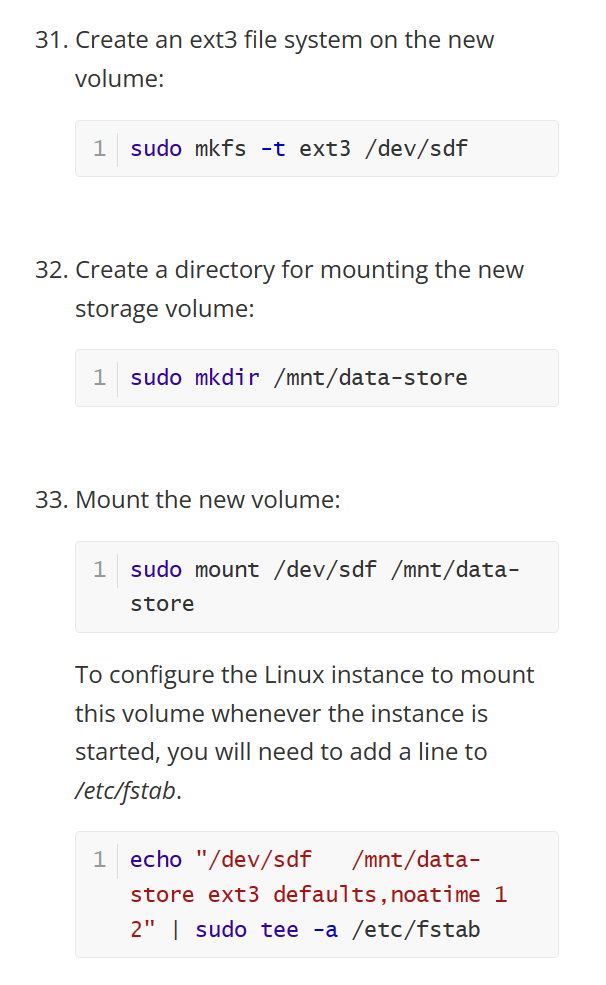


Add the volume to the Ec2 instance

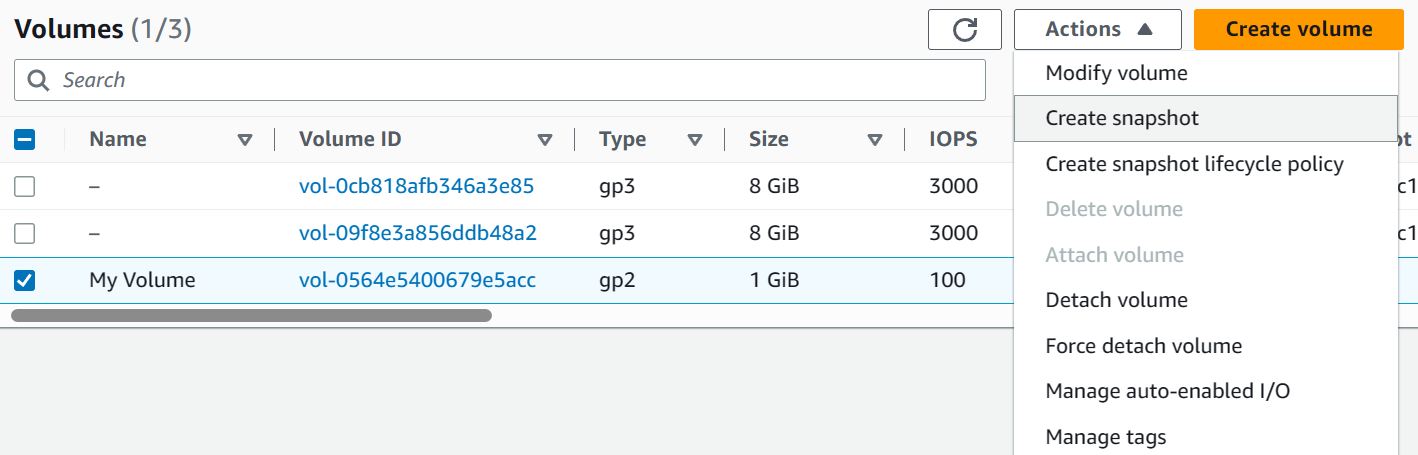


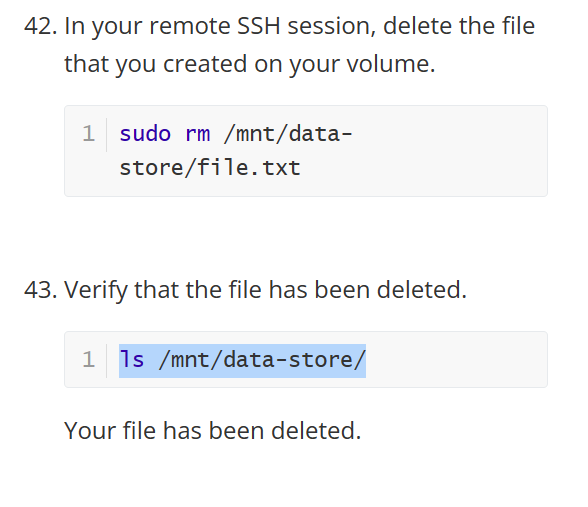
Login using putty



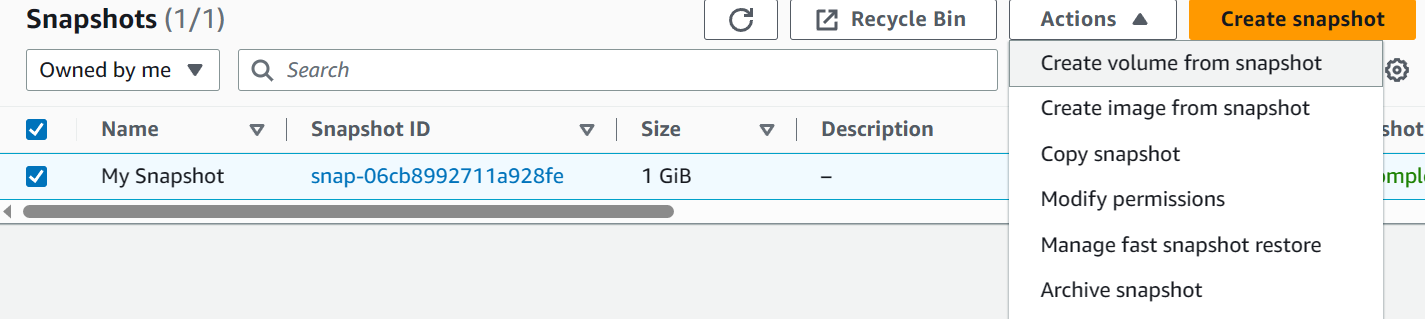


Create a snapshot on the Volume

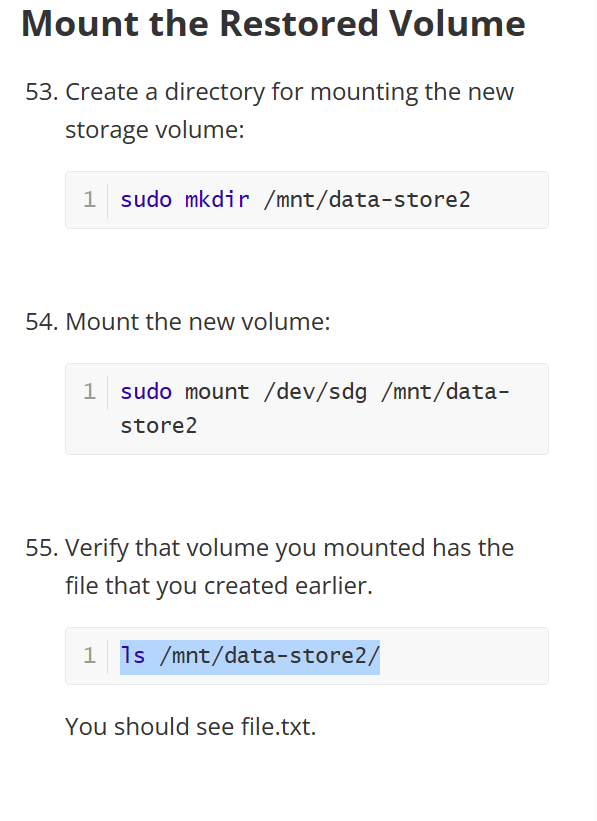




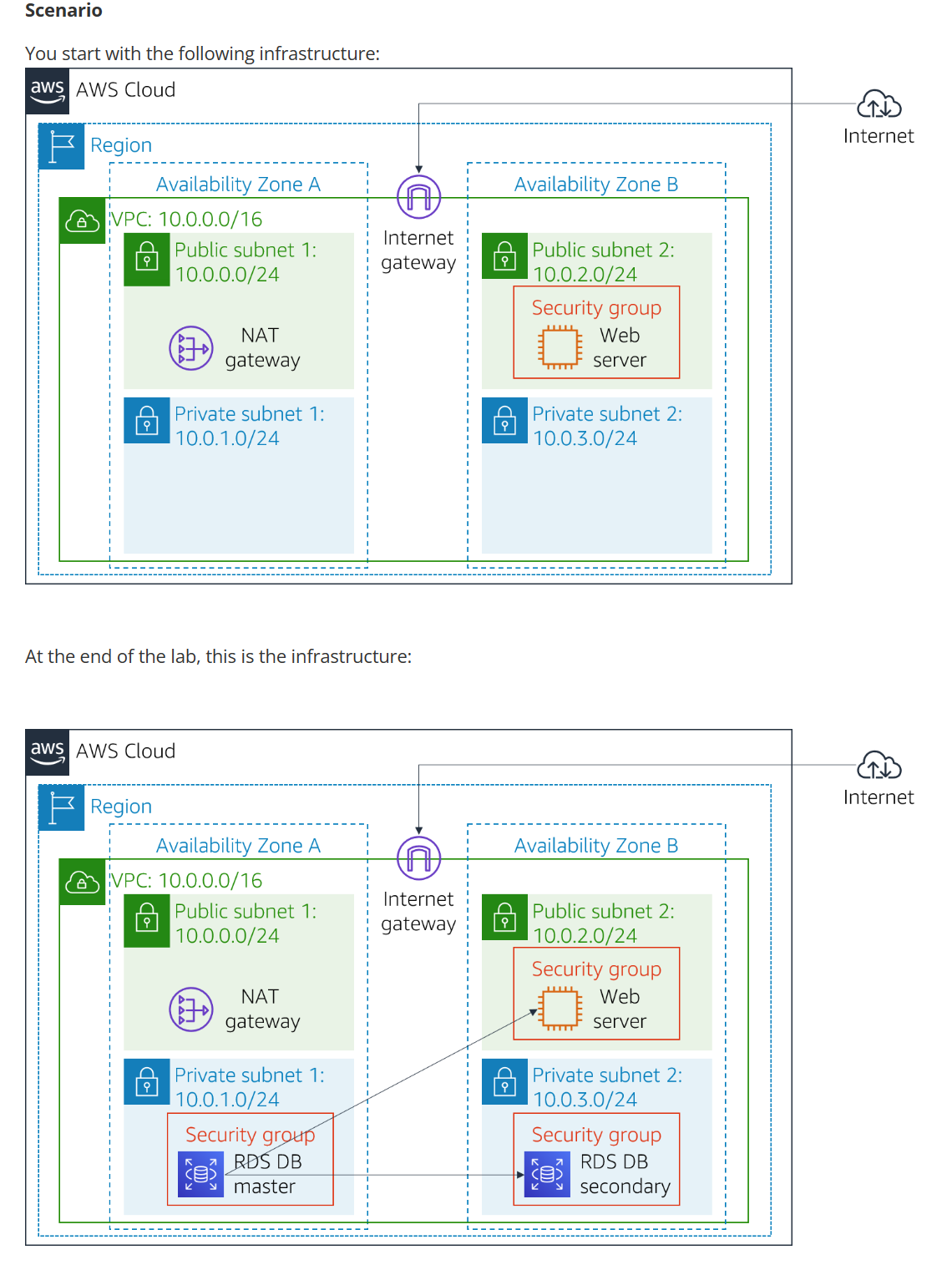
Create volume from snapshot



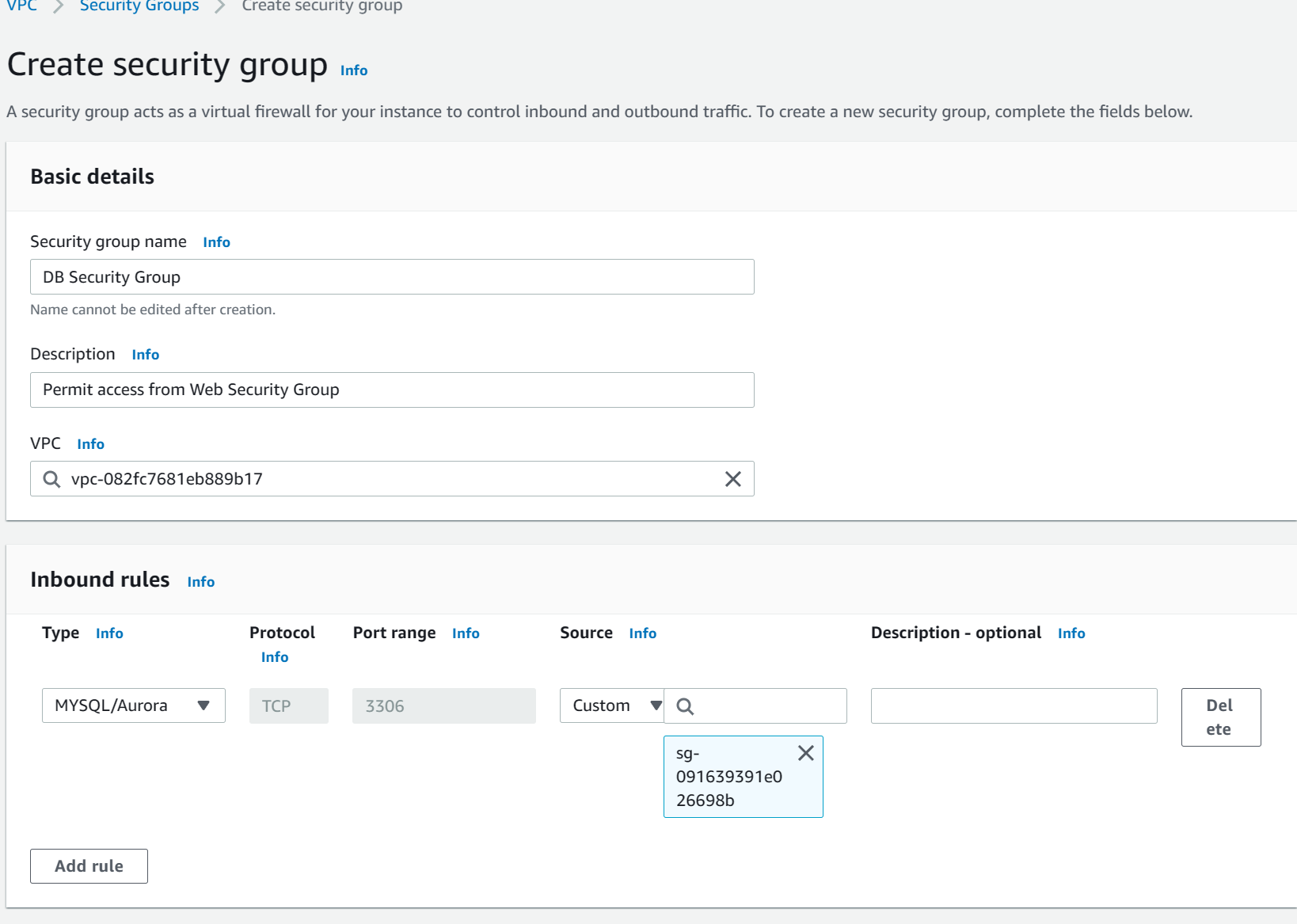
Then attached the restored volume to the instance



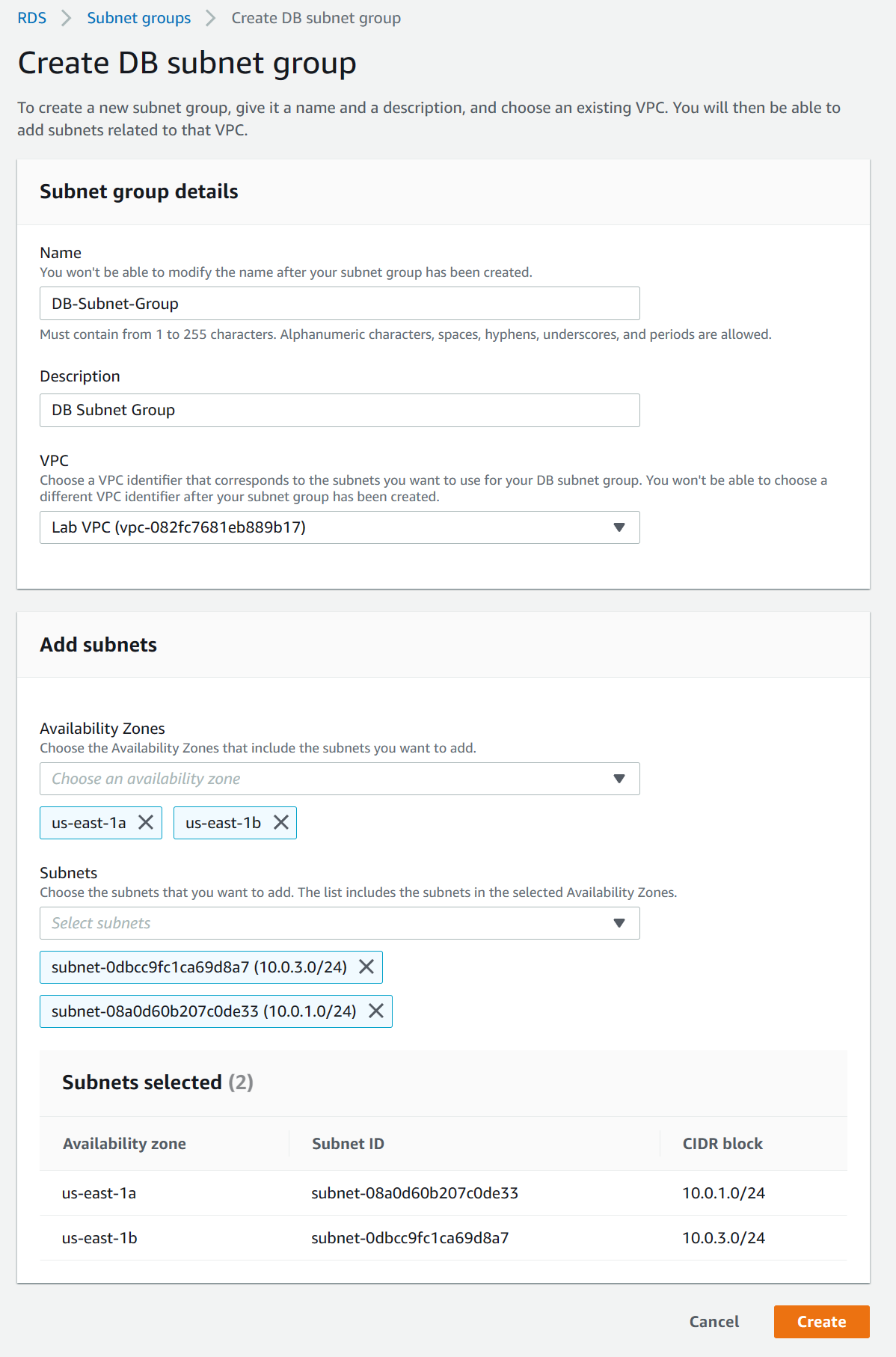
Lab 5: Build Your DB Server and Interact With Your DB Using an App



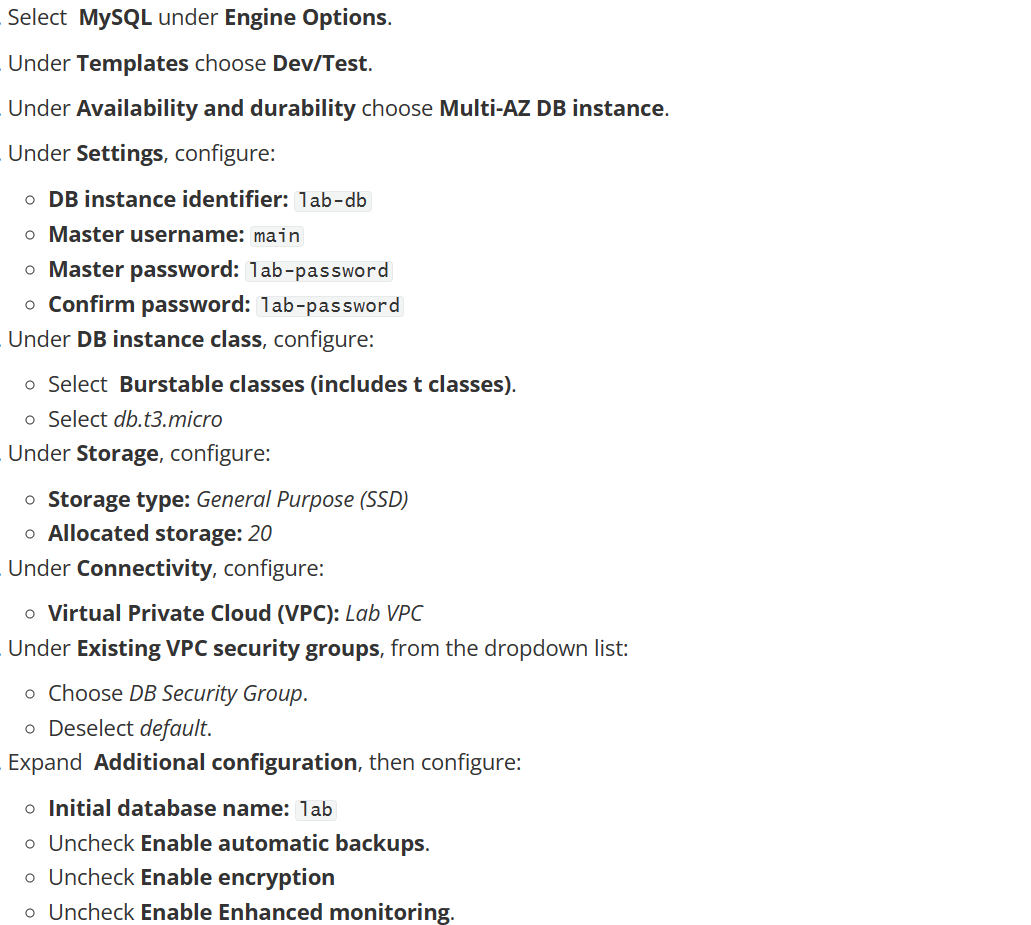
Create a new security group and add an inbound rule



Create a new DB subnet group and add the correct subnets

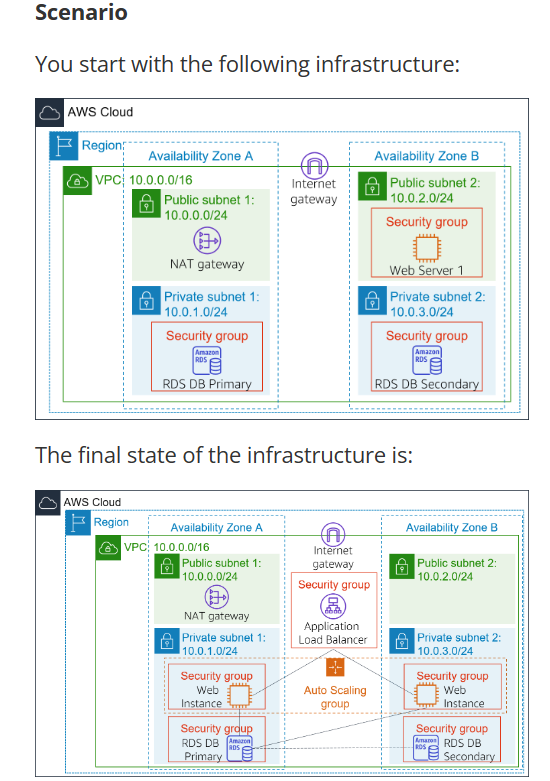


We create a new database using these settings



Then you should be able to go the webserver and interact with your database

Lab 6: Lab 6: Scale and Load Balance Your Architecture



Create new AMI for your webserver so you can use auto scaling

Graphical user interface, text, application, email

Description automatically generated

Create a target group, they respond to requests from the load balancer

Graphical user interface, text, application, email

Description automatically generated

Then create the load balancer, using both public subnets

Graphical user interface, application, email

Description automatically generated

Create a launch configuration

Graphical user interface, text, application, email

Description automatically generated

Put it in the web server security group

Graphical user interface, text, application, email

Description automatically generated

Create an auto scaling group

Graphical user interface, text, application

Description automatically generated

Put it in the LAB VPC network

Graphical user interface, text, application

Description automatically generated

Control the number of instances to be between 2 and 6

Graphical user interface, application

Description automatically generated