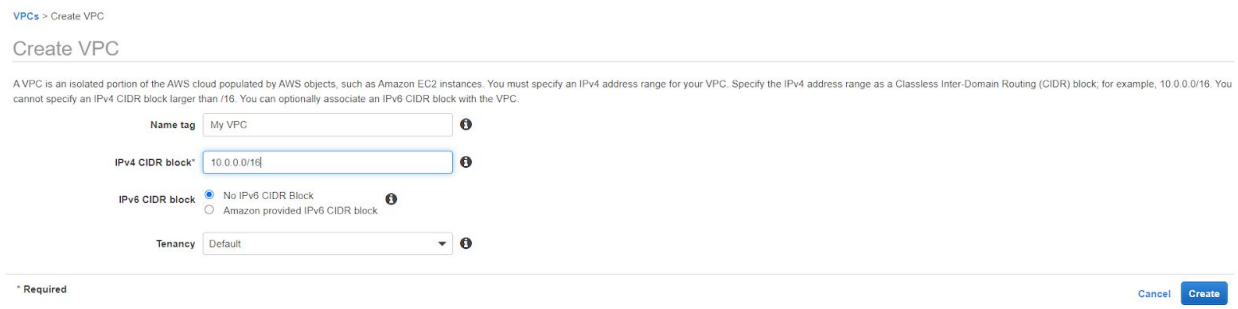
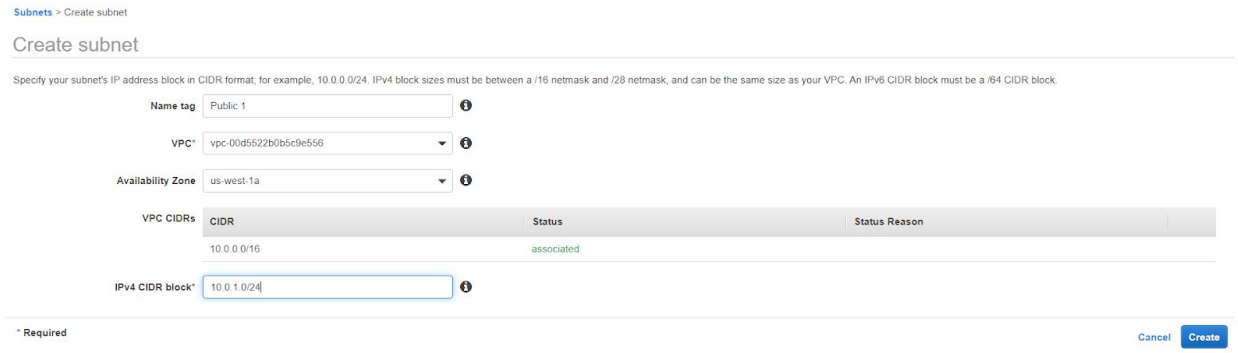
Module 7 Lab 2: VPC NAT

VPCs - Create VPC



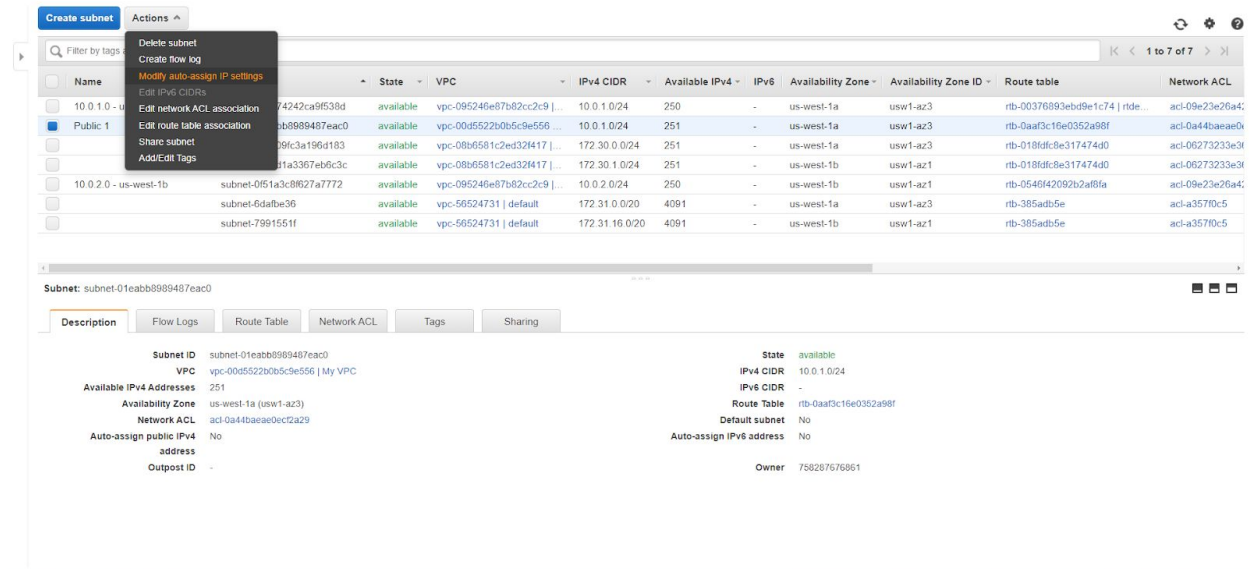
A new VPC, My VPC was created. This VPC will be home to two subnets.

Subnets - Create subnet



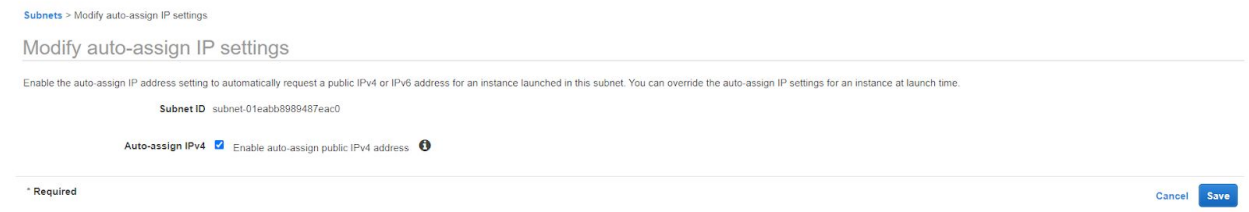
The subnet will be based in the “My VPC” VPC, with the AZ us-west-1a.

VPC - Subnets



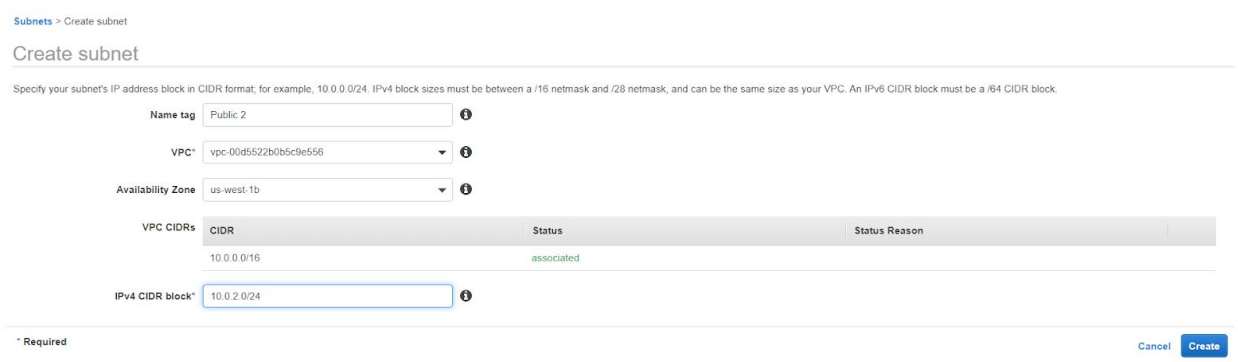
The public subnet will need to be auto-assigned a public IPv4 address.

Subnets - Modify auto-assign IP settings



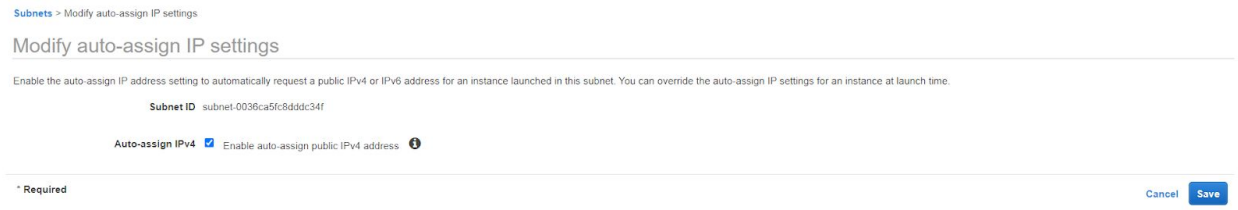
This setting allows all instances launched in this public subnet to be auto-assigned a IPv4.

Subnets - Create subnet



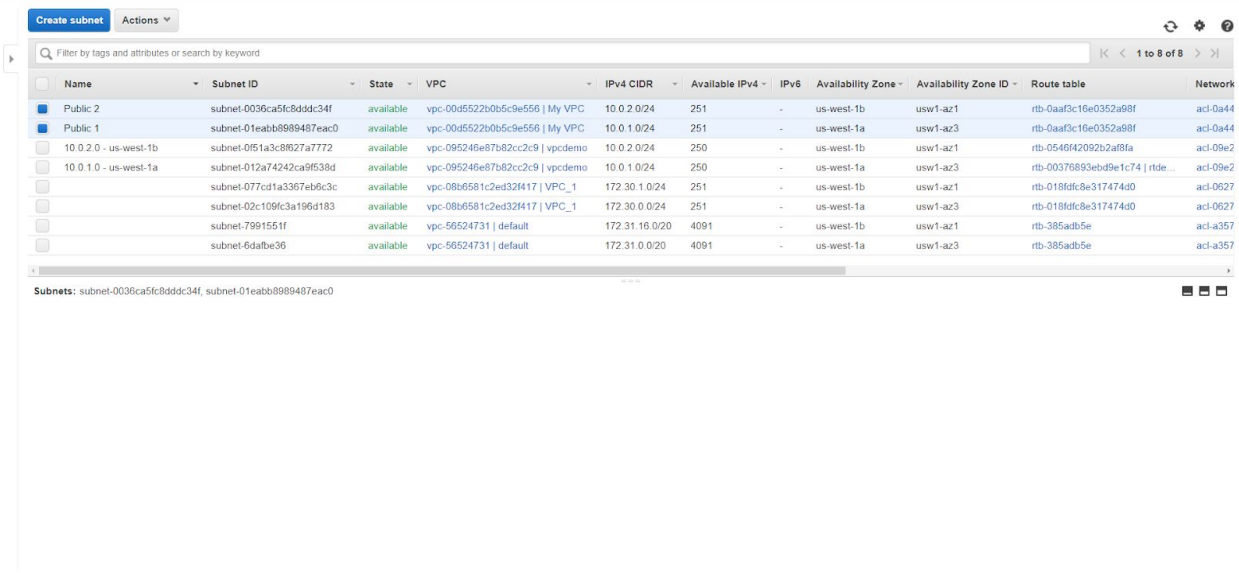
The second public subnet is assigned to the “My VPC” VPC.

Subnets - Modify auto-assign IP settings



The second public subnet will also need auto-assigned IP addresses.

VPC - Subnets

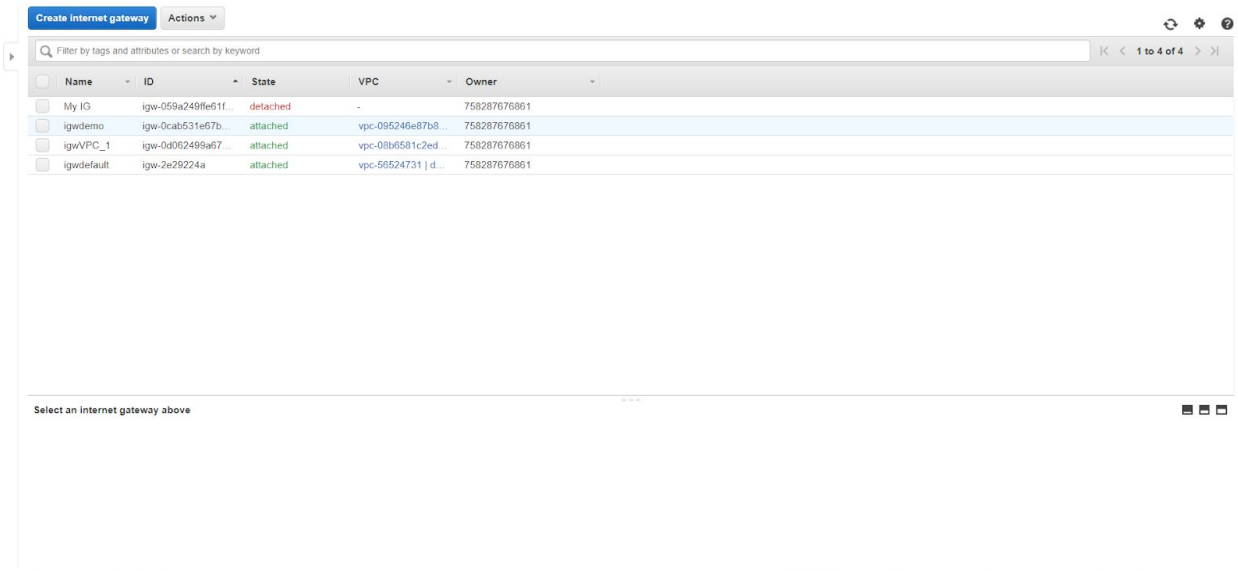


Two public subnets within the “My VPC” VPC have been created.

Internet gateways - Create internet gateway

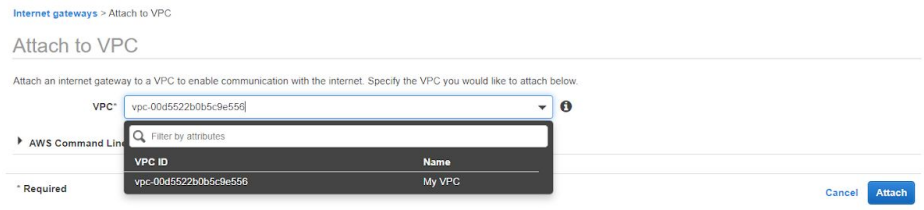
An Internet Gateway (IG) is required to provide a route table target for internet traffic and performs network address translation (NAT) for instances assigned IPv4 addresses.

VPC - Internet Gateways



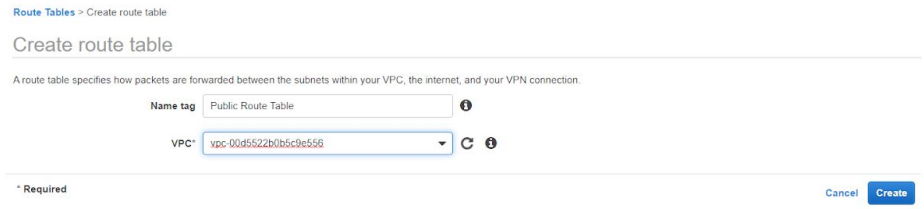
Note that “My IG” is detached and needs to be assigned a VPC.

VPC - Internet Gateways



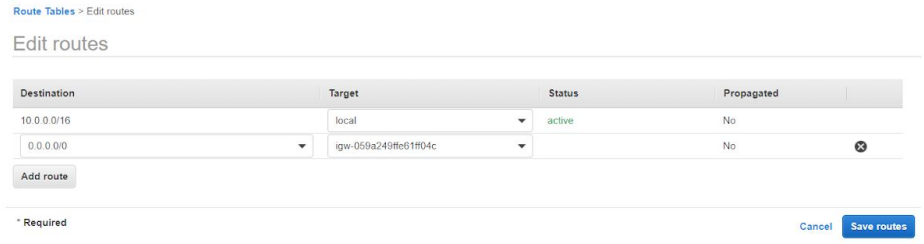
Note that only one IG can be attached to a VPC at any given time. Thus, other VPC’s are not available for attaching.

Route Tables - Create route table



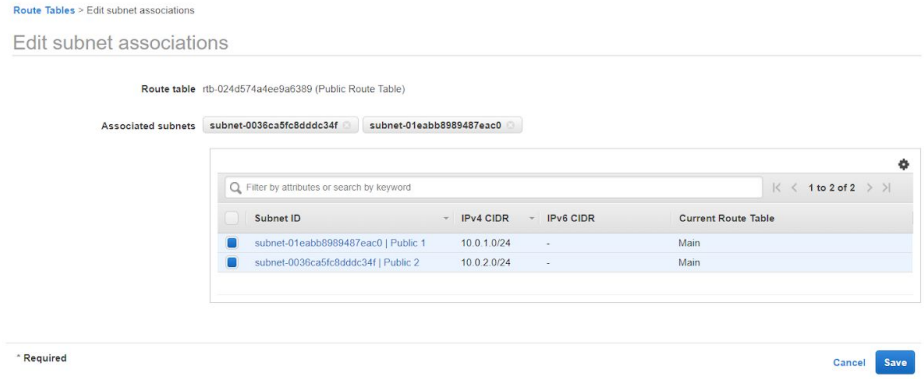
A route table will determine where network traffic is directed. A new one route table is created.

Route Tables - Edit routes



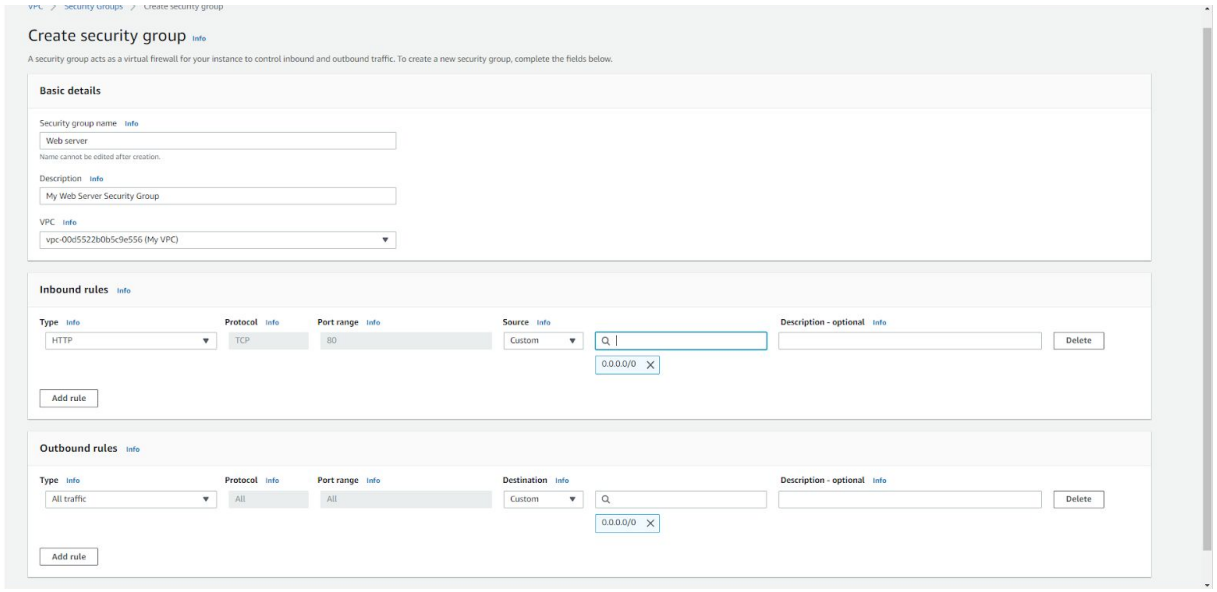
The route for My IG is updated to route traffic from outside the network.

Route Tables - Edit subnet associations



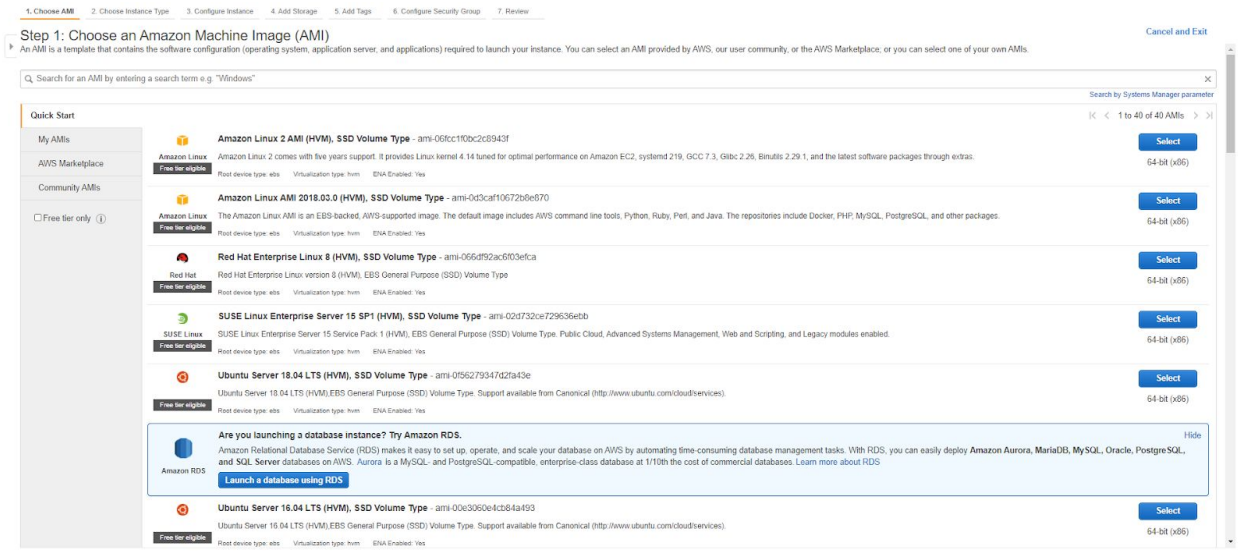
For this lab, both subnets are associated with “Public Route Table”. This will allow both subnets to connect to the Internet via the “My IG” Internet Gateway.

VPC - Create security group



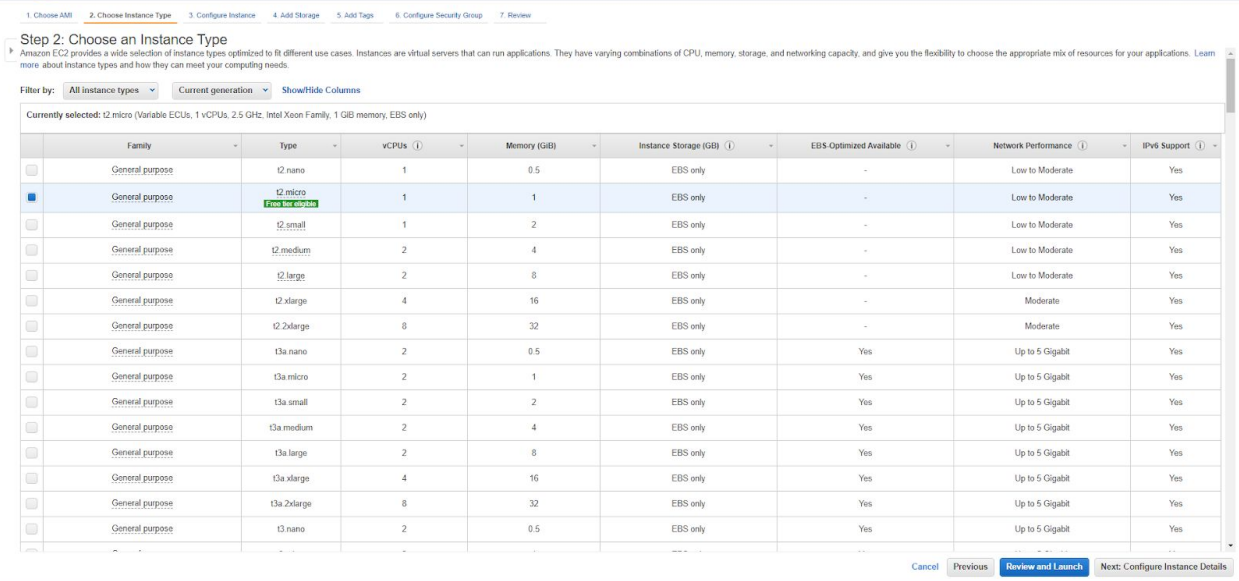
A new security group for Web server access.

EC2 - Choose a AMI



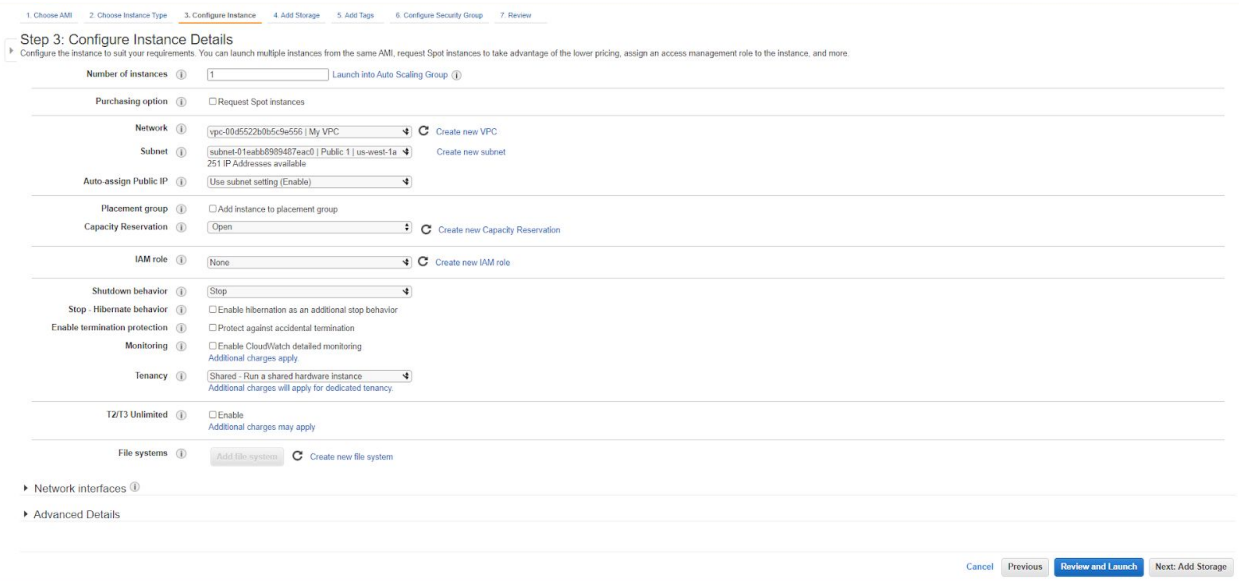
A EC2 instance will provide the basis for a web server that connects to Amazon RDS.

EC2 - Instance Type



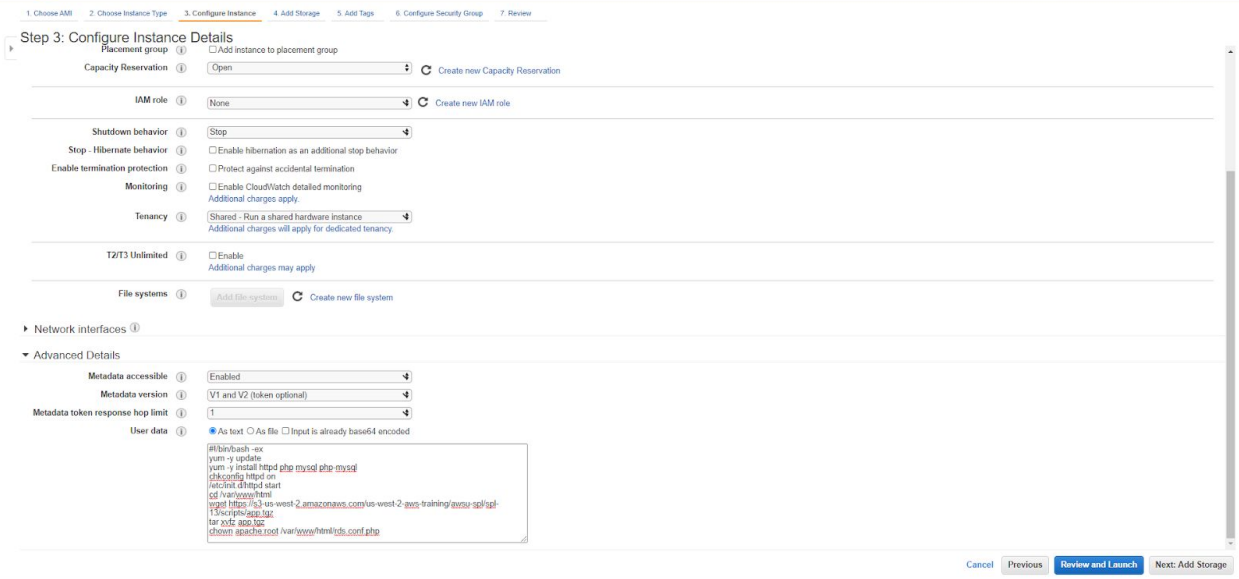
A t2.micro instance is selected.

EC2 - Configure Instance Details



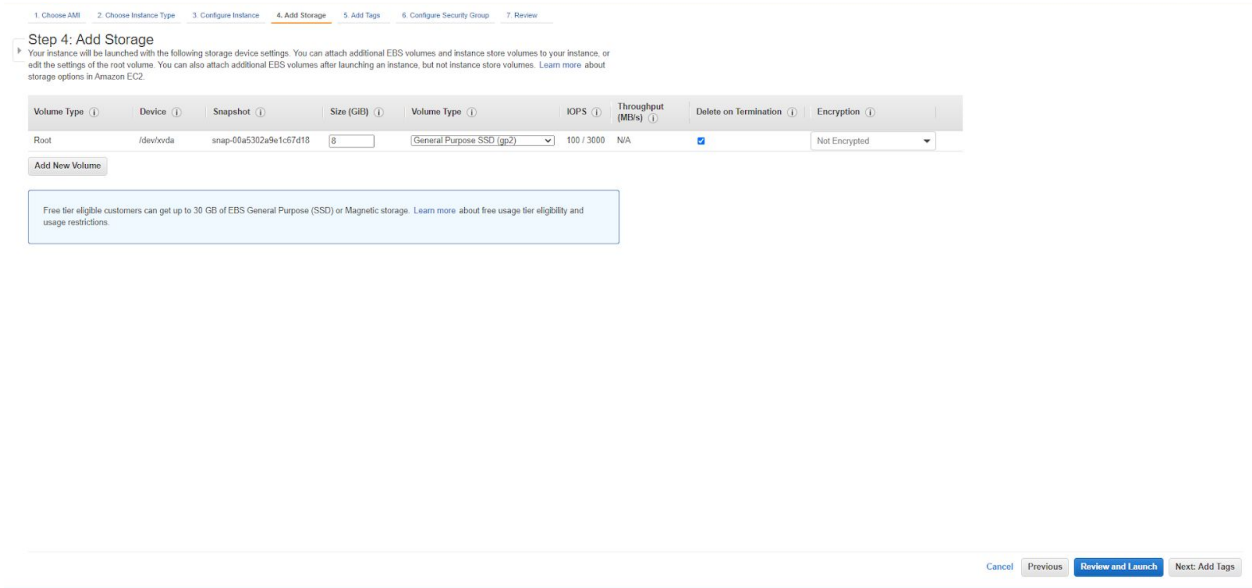
The network selected is “My VPC”.

EC2 - Configure Instance Details



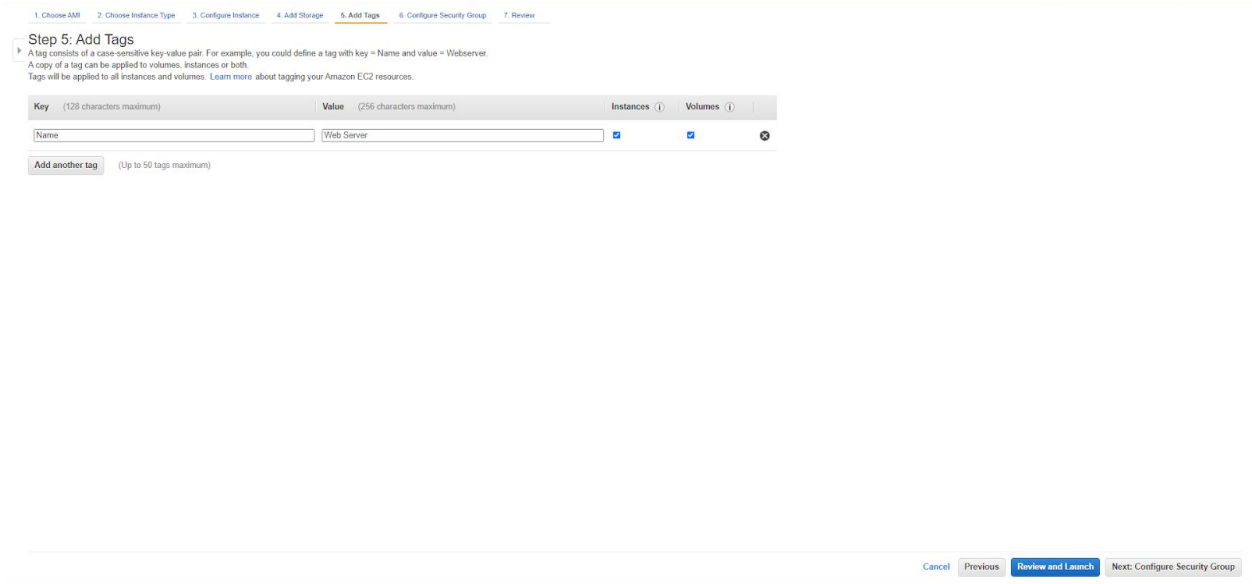
The script provided in User data will install a web server on the EC2 instance and runs an app configured to point to Amazon RDS.

EC2 - Add Storage



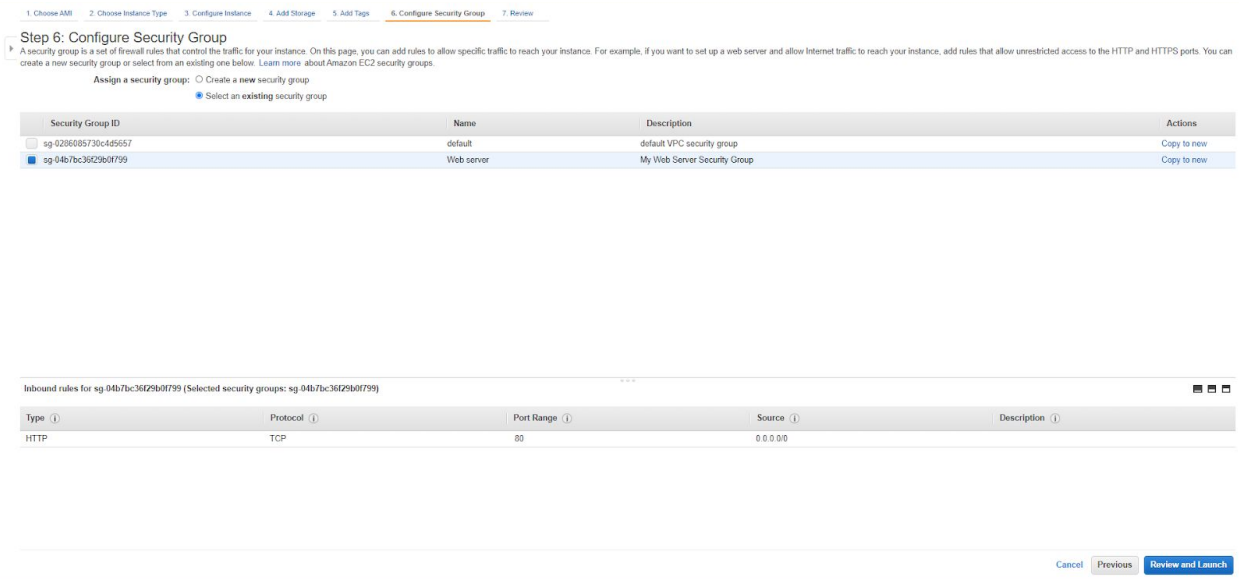
Default storage was selected.

EC2 - Add Tags



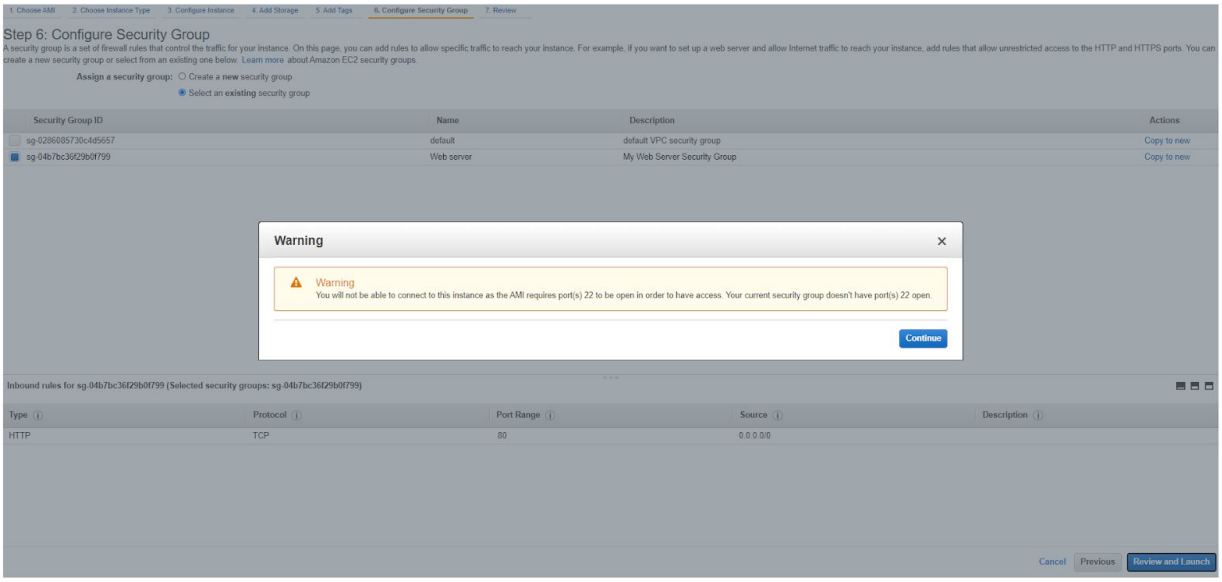
Tags established for the EC2 instance.

EC2 - Configure Security Group



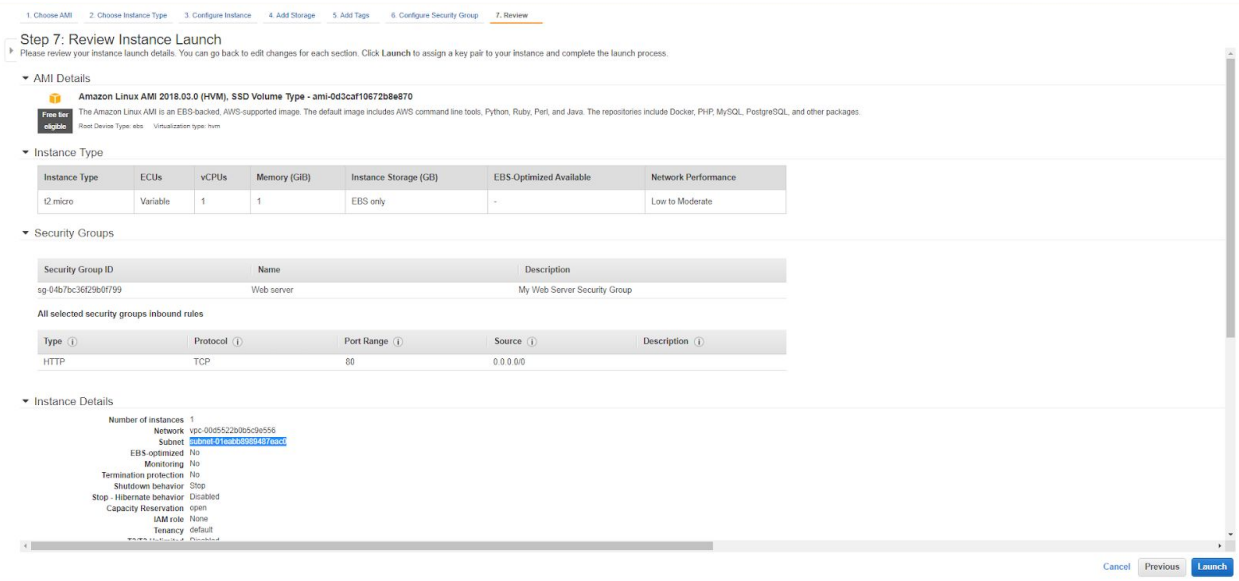
The preconfigured Web server security group is selected.

EC2 - Warning



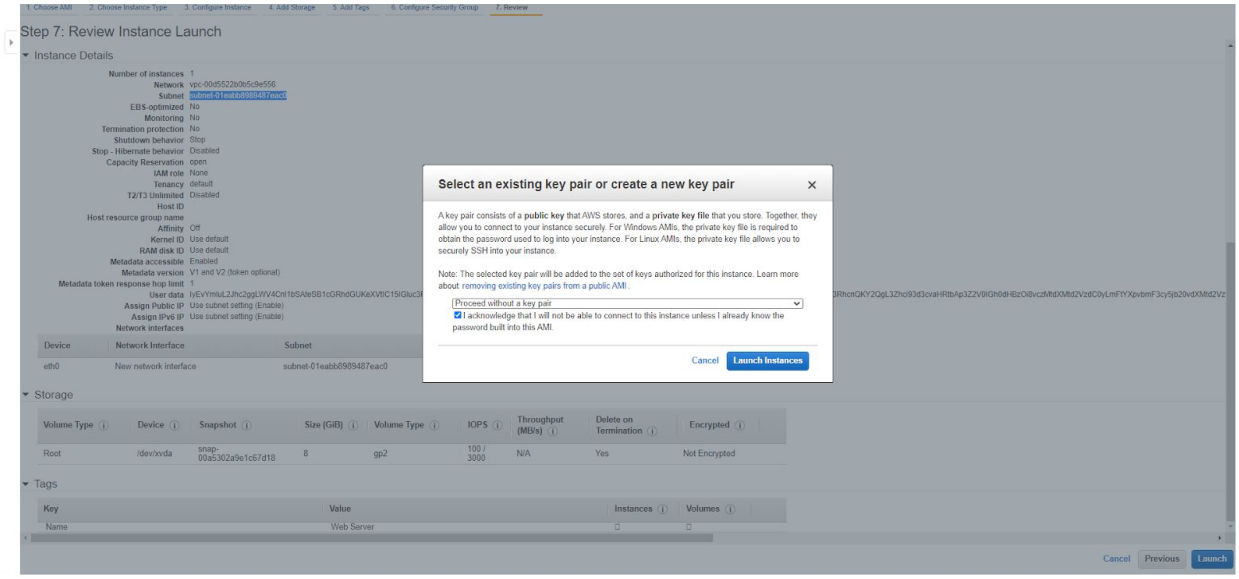
This security warning is expected but okay for this lab as SSH will not be used to administrate.

EC2 - Review Instance Launch



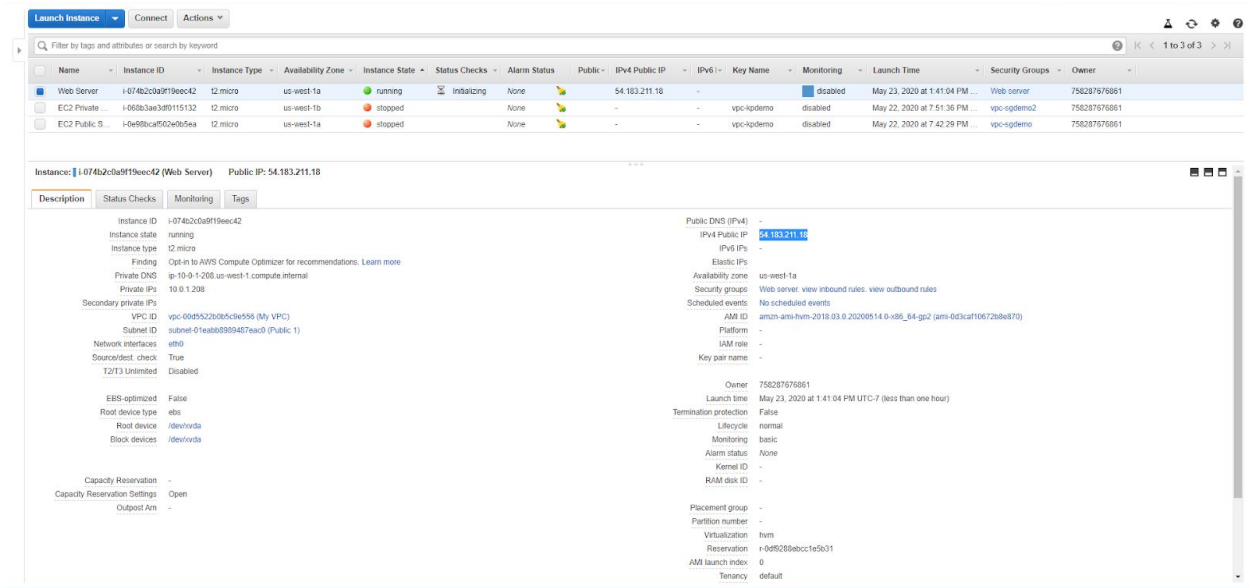
The correct subnet has been set.

EC2 - Launch Instances



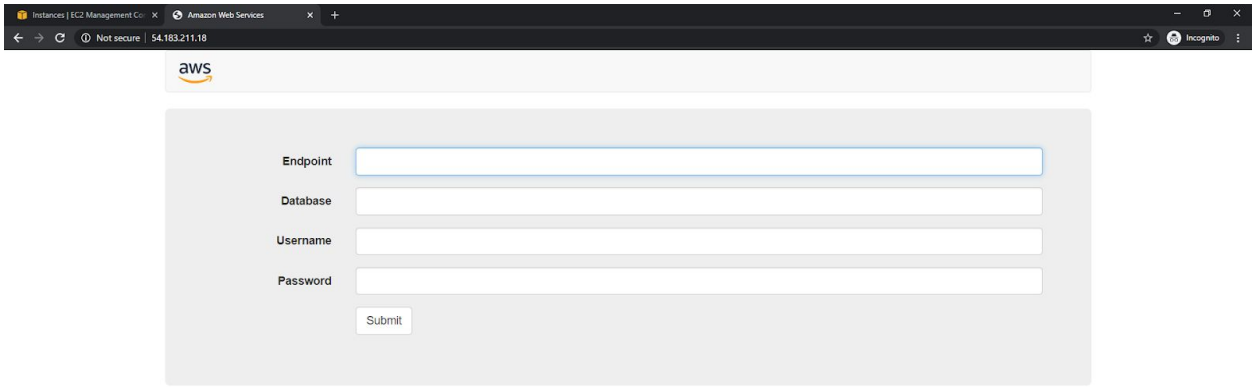
Proceeding without a key pair is okay for this lab.

EC2 Dashboard



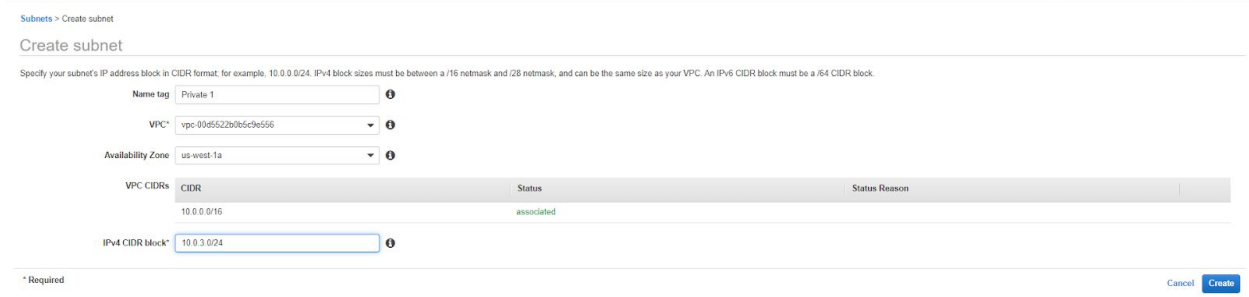
An IPv4 public IP has been assigned.

Chrome Browser - Web server



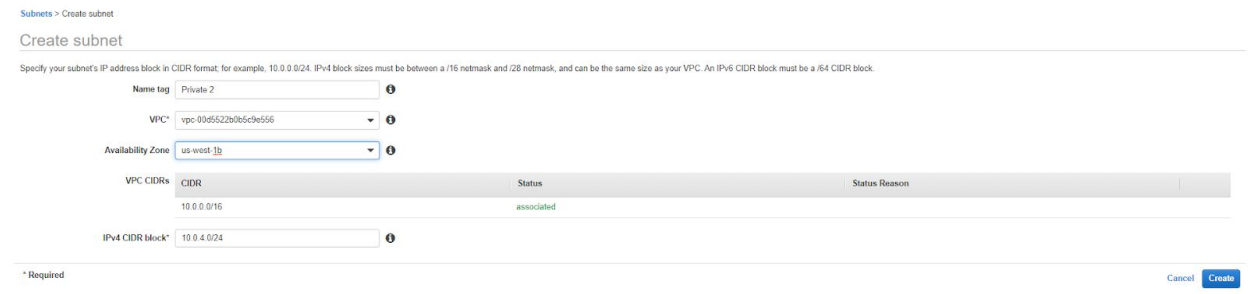
The public facing subnet attached web server is ready for the Amazon RDS endpoint.

Subnets - Create subnet



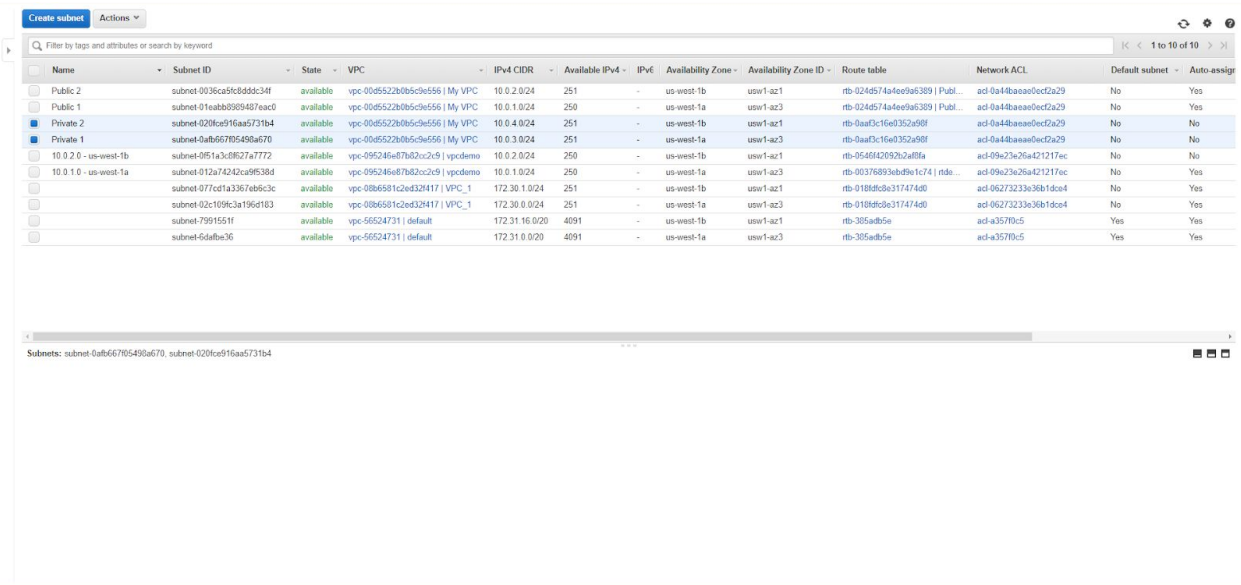
A private subnet that will be used for the backend web server.

Subnets - Create subnet



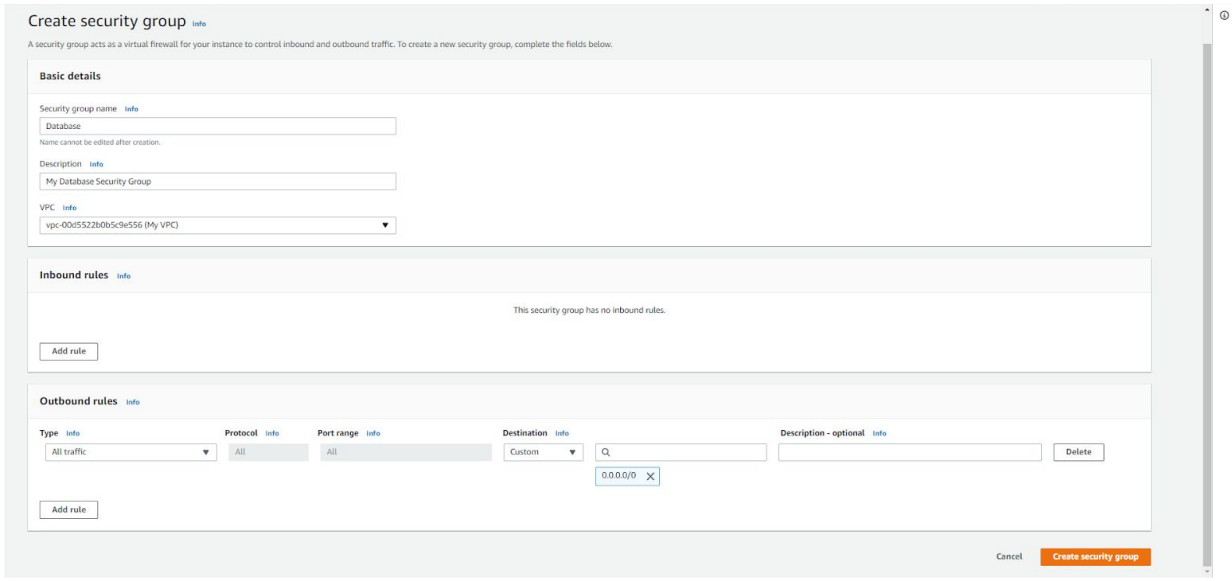
The second and final private subnet.

VPC - Subnets



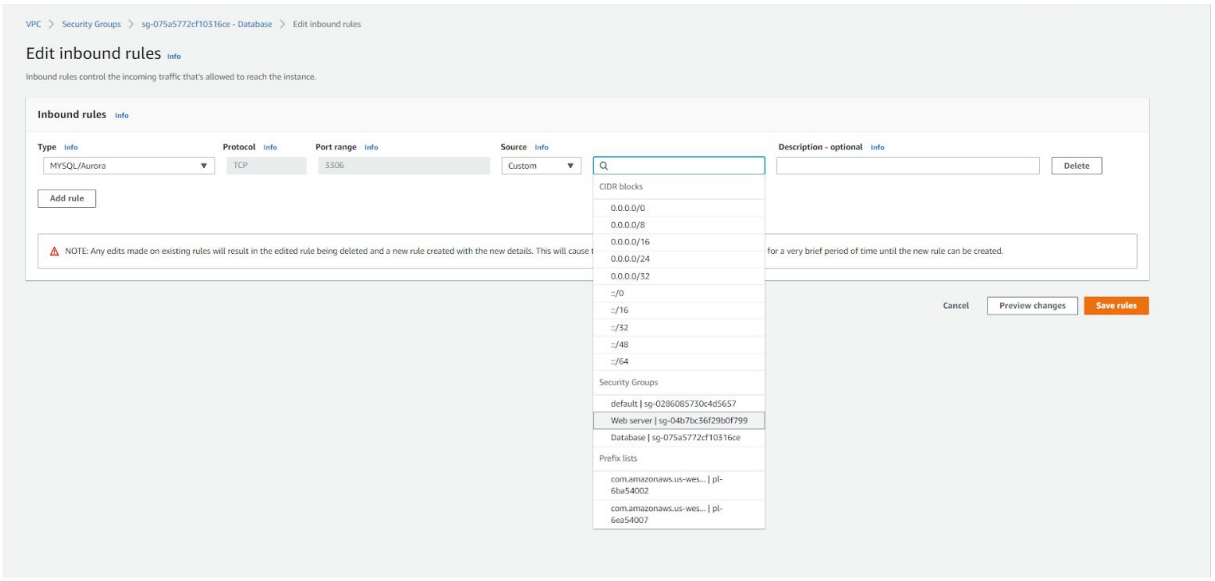
Both private subnets have been created.

Security Groups - Create security group



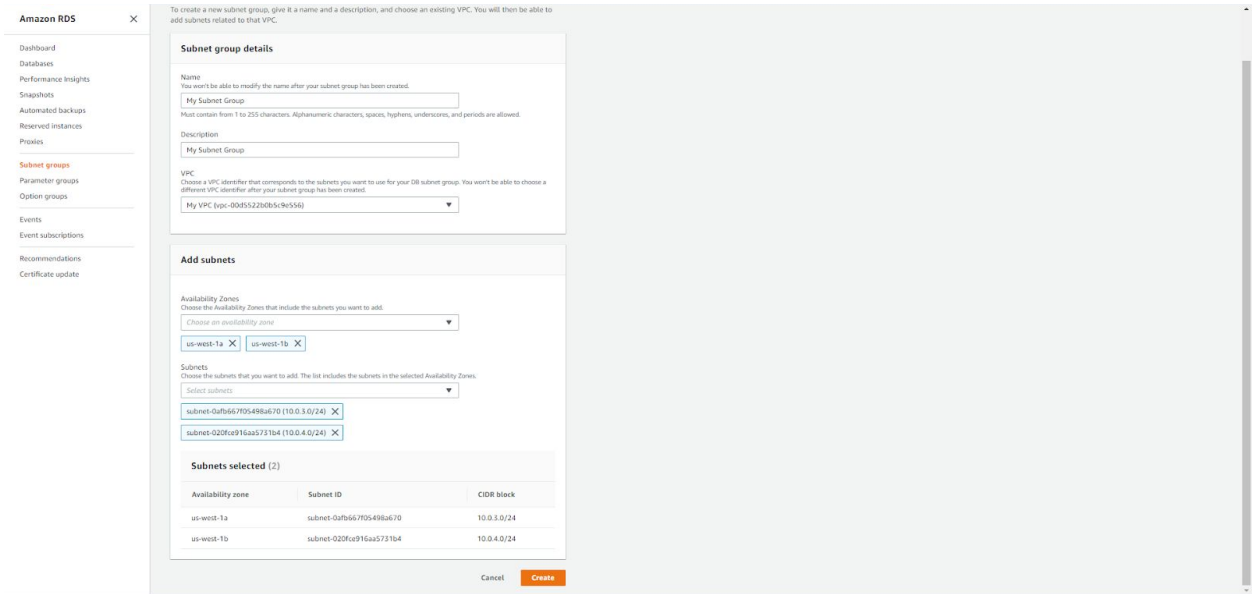
A new security group will allow MySQL traffic from the web server.

VPC - Edit inbound rules



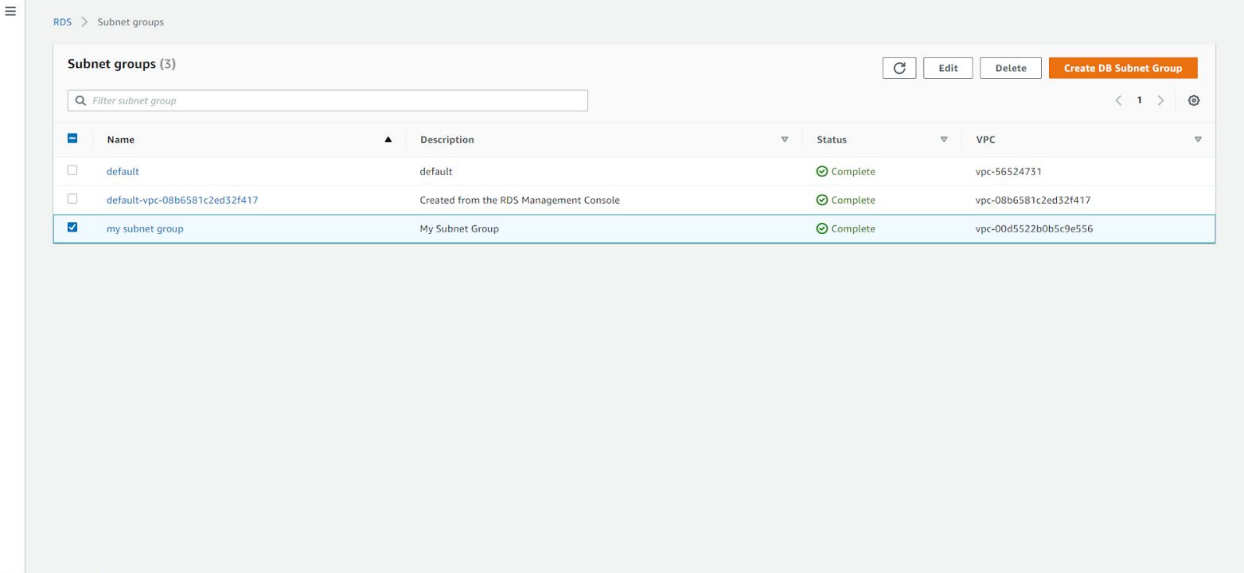
This will allow the web server (as per defined by the security group) to communicate to the database.

Amazon RDS - Create DB subnet



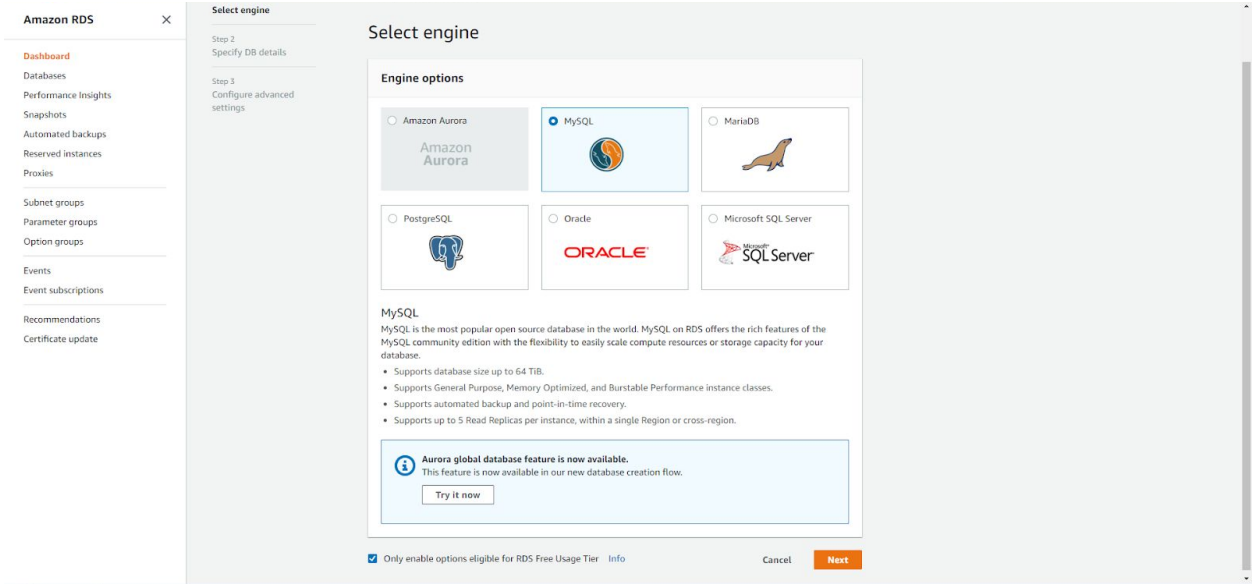
A DB subnet group is required for the Amazon RDS instances to work. Note that two AZ's are selected and required.

RDS - Subnet groups



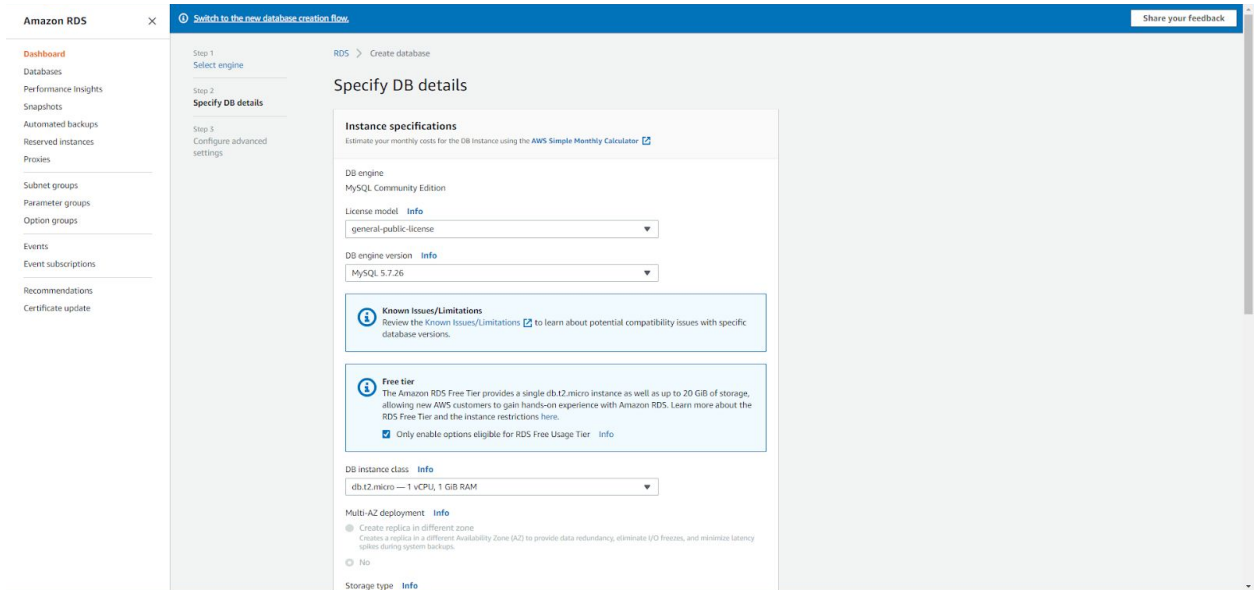
The subnet group for RDS is created.

Amazon RDS - Select engine



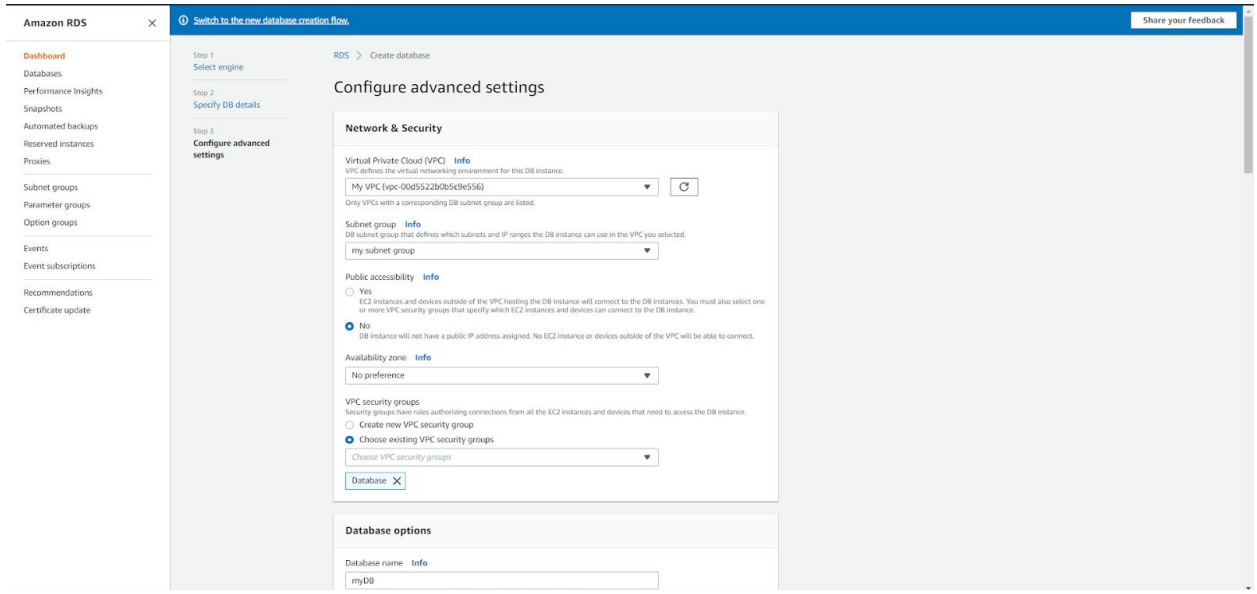
Setting up the database instance as a MySQL engine type.

Amazon RDS - Specify DB details



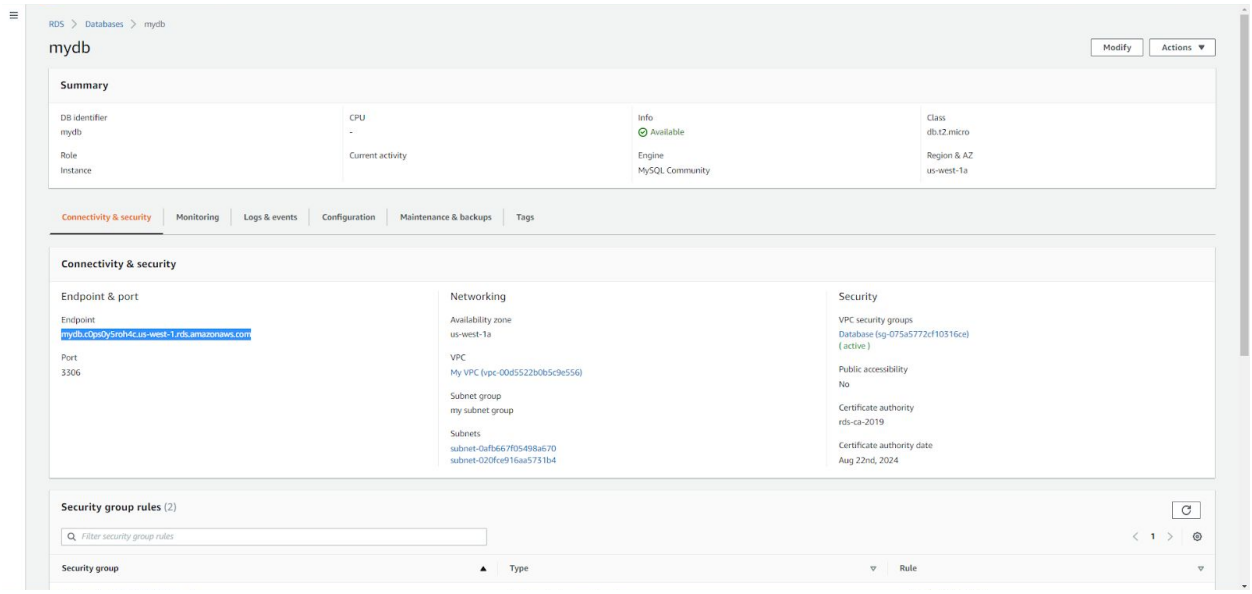
The Amazon RDS instance will be a t2.micro type.

Amazon RDS - Configure advanced settings



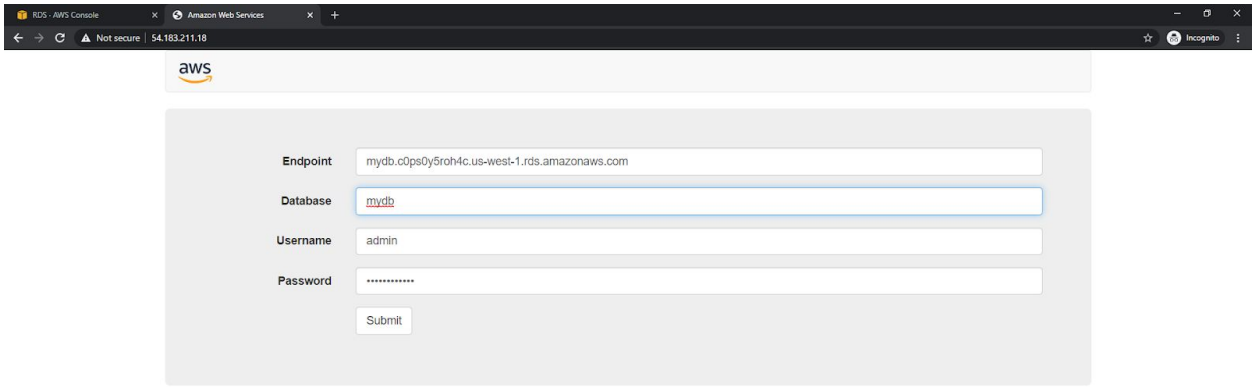
The DB instance is assigned the “My VPC” VPC, “my subnet group” subnet group, and the “Database” security group. All of which have been created in the lab.

Amazon RDS - myDB



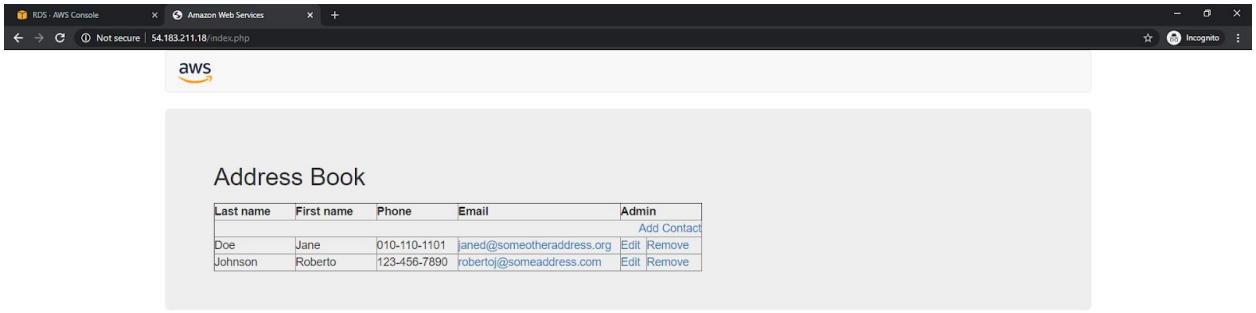
The Amazon RDS instance is now running, to connect to it the endpoint must be copied.

Google Chrome



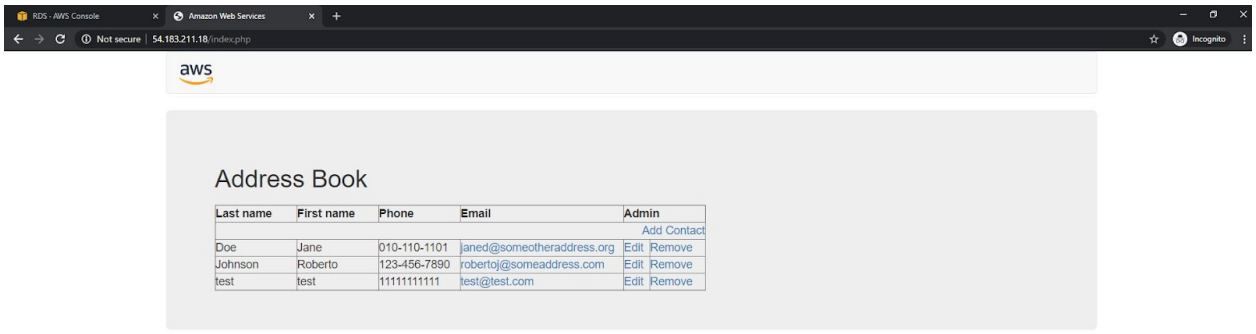
The RDS endpoint and credentials applied to the web server EC2 instance.

Google Chrome



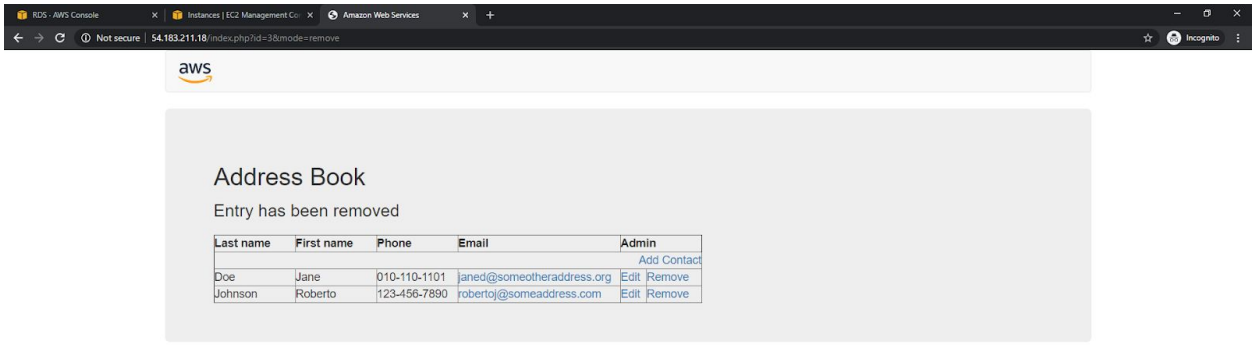
A successful connection to the Amazon RDS endpoint has been established.

Google Chrome



A test entry has been submitted and saved.

Google Chrome



The test entry has been successfully removed.