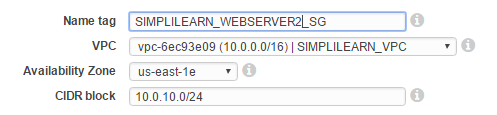
**LESSON 5 PRACTICE ASSIGNMENT**

Your client needs to setup a webserver that offers load balancing in the SIMPLILEARN\_VPC.  
  
ELB needs to launch into at least two subnets in different Availability Zones, so you will need to add a new public subnet to the SIMPLILEARN\_VPC in a different Availability Zone to your existing public subnet. You will need to configure the custom route table so that the new public subnet has Internet access.  
  
Then to launch two Amazon Linux instances, one in each of your public subnets.   
  
Setup a health\_check.html file on each instance and configure ELB to serve both webservers.  
  
BONUS: Rather than configure two webservers, you can launch one, configure it, create an AMI and launch the second webserver from the AMI.

1. Login to AWS and open up VPC.
2. Click on “Subnets” and “Create New Subnet”.
3. Configure the new public subnet as follows and make sure that you select a different availability zone to the existing public subnet. Then click on “Create Subnet”.



1. Click on “Route Tables” and highlight the custom Route Table for your VPC.
2. Click on the “Subnet Associations” tab and click on “Edit”.
3. Highlight the SIMPLILEARN\_WEBSERVER2\_SG subnet and click “Save”.
4. Open up the EC2 section of the AWS Management Console.
5. Select “Launch Instance”.
6. Select the “Amazon Linux AMI”.
7. Select the appropriate Instance Type (t2.nano is fine for this demo).
8. Select “Next: Configure Instance Details”.
9. Ensure that the following sections are completed as follows:

Network: SIMPLILEARN\_VPC  
Subnet: SIMPLILEARN\_WEBSERVER\_SG  
Auto-assign Public IP: Enable

1. Click on “Advanced Details” and in the “User data” section put the following text:

#!/bin/sh  
  
sudo yum update -y  
sudo yum install httpd -y  
sudo service httpd start  
sudo chmod 777 /var/www/html  
echo “this is a healthy webserver” > /var/www/html/health\_check.html

**NB! Do not perform the chmod 777 if you are planning to use this webserver in a production environment.**

1. Either click on “Review and Launch” or move through the EC2 launch screens to customize your instances security group, name tag, storage, etc.
2. Repeat the process to create a new instance in the other public subnet or for the BONUS, create an AMI of this instance and use it to launch a new instance in the other public subnet.
3. Test that the health check files work by opening up a web browser and entering the following:

<instance IP address>/health\_check.html

If this does not work. Login to the instance to ensure that the apache webserver is running and that the healthcheck.html file exists.

1. Click on “Load Balancers” and “Create Load Balancer”.
2. Click on “Classic Load Balancer” and click “Continue”.
3. Give the Load Balancer a name and in the “Create LB Inside” box select your VPC.
4. In the “Select Subnets” section add your two public subnets which the Amazon Linux instances are running. Then click “Next: Assign Security Groups”.
5. Select an appropriate security group or create a new one and then select “Next: Configure Security Settings”.
6. Ignore the warning if you haven’t configured SSL and click “Next, Configure Health Check”.
7. In the “Ping Path” box enter “/health\_check.html”.
8. Configure the “Advanced Details” as appropriate, for example reduce the Interval to “10” and the “Healthy Threshold” to 2 to get a faster response from the Load Balancer.
9. Click on “Next: Add EC2 Instances” and select the instances you created earlier.
10. Click on “Next: Add Tags” and add tags as appropriate.
11. Click on “Review and Create” and then “Create”.
12. On the “Load Balancer” dashboard highlight your new Load Balancer and click on the “Instances” tab. After a period your instances should have a “Status” of “InService”.