

## **Lab 3: Using Auto Scaling**

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IFT 562: Cloud Security & Operations for IT

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Sep 10, 2023

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**Figure 1**

*A screenshot of the console after completing task 1*

```
Cloud SysOps — ec2-user@ip-10-5-10-33:~ — ssh -i labsuser.pem ec2-user@3.89.99.17 — 164x47
~/Desktop/Cloud SysOps — ec2-user@ip-10-5-10-33:~ — ssh -i labsuser.pem ec2-user@3.89.99.17
(base) spurthy@Spurthys-MBP ~ % cd /Users/spurthy/Desktop/Cloud\ SysOps
(base) spurthy@Spurthys-MBP Cloud SysOps % chmod labsuser.pem
usage: chmod [-fhv] [-R [-H | -L | -P]] [-a | +a | =a [il[# [ n]]] mode]entry file ...
        chmod [-fhv] [-R [-H | -L | -P]] [-E | -C | -N | -i | -I] file ...
(base) spurthy@Spurthys-MBP Cloud SysOps % chmod 400 labsuser.pem
(base) spurthy@Spurthys-MBP Cloud SysOps % ssh -i labsuser.pem ec2-user@3.89.99.17
The authenticity of host '3.89.99.17 (3.89.99.17)' can't be established.
ED25519 key fingerprint is SHA256:5JX1zMTx/PPNxjTzY29r/J9QLRRFhkjXQybNSis0cw.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '3.89.99.17' (ED25519) to the list of known hosts.

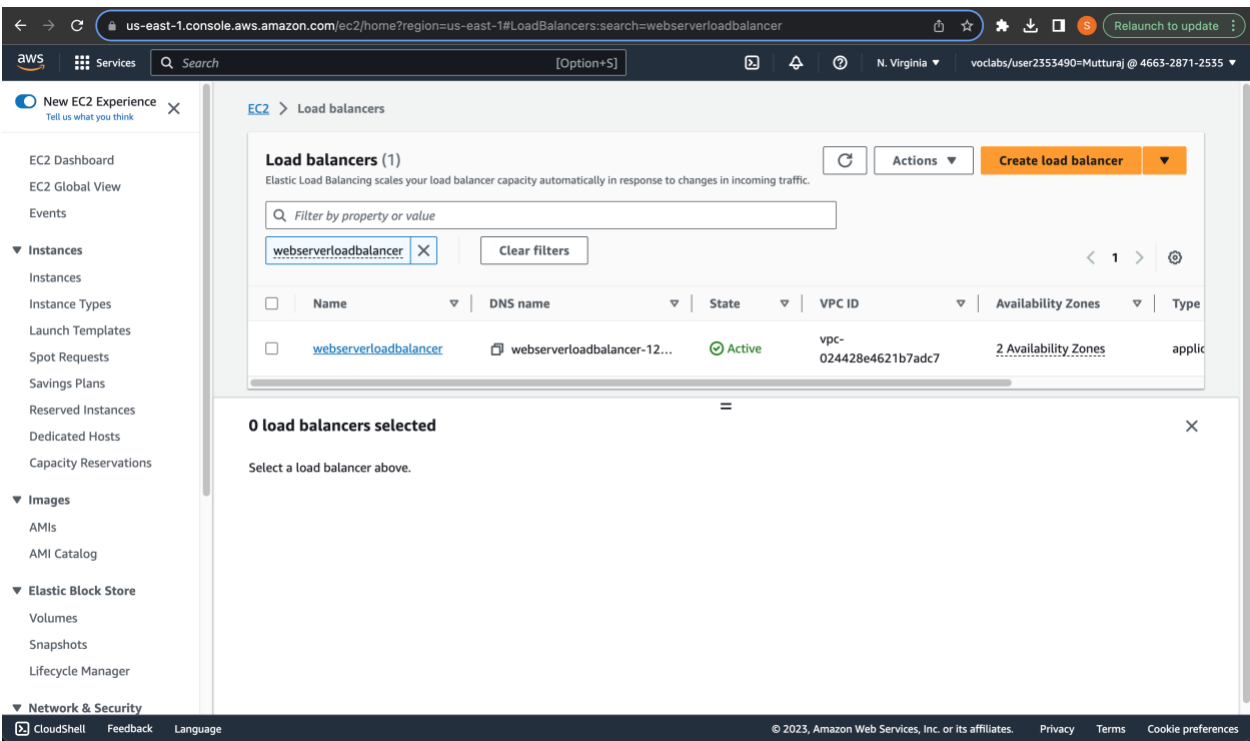
  _ | _ _ | _ )
  _ | ( _ _ /   Amazon Linux 2 AMI
 _ _ | \ _ _ | _ _ |

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-10-5-10-33 ~]$ more UserData.txt
#!/bin/bash
yum update -y --security
yum install -y https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm
yum-config-manager --enable epel
yum -y install httpd php stress
chkconfig httpd on
service httpd start
cd /var/www/html
wget https://aws-logs-1-uk-west-1.s3.amazonaws.com/ILT-TF-200-ACSOPS-1/lab-3-scaling-linux/ec2-stress.zip
unzip ec2-stress.zip

echo 'UserData has been successfully executed. ' >> /home/ec2-user/result
find -wholename /root/.history -wholename /home/.history -exec rm -f {} \;
find / -name 'authorized_keys' -exec rm -f {} \;
rm -rf /var/lib/cloud/data/scripts/*
[ec2-user@ip-10-5-10-33 ~]$
[ec2-user@ip-10-5-10-33 ~]$ aws ec2 run-instances --key-name vockey --instance-type t2.micro --image-id ami-0e1c5d8c23330dee3 --user-data file:///home/ec2-user/UserData.txt --security-group-ids sg-0b4fb6d990ef13cac --subnet-id subnet-01e7465eb5e71ad50 --associate-public-ip-address --tag-specifications 'ResourceType=instance,Tags=[{Key=Name,Value=WebServerBaseImage}]' --output text --query 'Instances[*].InstanceId'
i-04ca5345c63085484
[ec2-user@ip-10-5-10-33 ~]$ aws ec2 wait instance-running --instance-ids <NEW-INSTANCE-ID>
-bash: syntax error near unexpected token 'newline'
[ec2-user@ip-10-5-10-33 ~]$ aws ec2 wait instance-running --instance-ids i-04ca5345c63085484
[ec2-user@ip-10-5-10-33 ~]$ aws ec2 describe-instances --instance-id i-04ca5345c63085484 --query 'Reservations[0].Instances[0].NetworkInterfaces[0].Association.PublicIpAddress'
"ec2-54-221-53-123.compute-1.amazonaws.com"
[ec2-user@ip-10-5-10-33 ~]$ Spurthy Mutturaj
```

**Figure 2**

*Screenshot of the created Application Load Balancer*



**Figure 3**

*Screenshot of the activity page of the ASG.*

The screenshot shows the AWS Management Console interface for an Auto Scaling Group (ASG) in the us-east-1 region. The left sidebar contains navigation links for various AWS services, including Images, Elastic Block Store, Network & Security, Load Balancing, and Auto Scaling. The main content area is titled "Activity history (2)" and displays a table of activities. The table has three columns: Status, Description, and Cause. Two activities are listed, both with a "Successful" status. The first activity describes launching a new EC2 instance, and the second activity describes starting an instance in response to a capacity change. The bottom of the page includes a footer with copyright information and links to CloudShell, Feedback, and Language.

Status	Description	Cause
Successful	Launching a new EC2 instance: i-0ba6897e1513e0e61	At 2023-09-09T04:48:38Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 2. At 2023-09-09T04:48:53Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 2.
Successful	Launching a new EC2 instance: i-0487d67507aba4387	At 2023-09-09T04:48:38Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 2. At 2023-09-09T04:48:53Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 2.