

BUILD AMAZON AUTO SCALING

- TASK DETAILS:
 - Sign into AWS Management Console
 - Creating Launch Template
 - Create an Auto Scaling Group
 - Test the Auto Scaling Group
 - Validation of the Lab.
- What is Auto Scaling: Amazon EC2 auto scaling is designed as a fully managed service that controls the number of running instances, in case your workload is higher, it will match by launching more instances instantaneously.

TASK I

- This Task is about signing into the AWS console with my user & password credentials.
- Make sure to select: US East (N.Virginia) us-east-1
- Duration: is 1 hour

TASK 2

- This Task is creating Launch Template
- Make sure it's; US East (N.Virginia) us-east-1
- Launch Template name: awslabsLT
- Launch Template description: Launch Template Version 1
- Amazon machine image(AMI): Amazon Linux 2 AMI(HVM), SSD Volume Type
- Selected the instance type with: t2.micro(Free tier eligible)
- Key pair (Login): Don't include in a Launch template
- Network settings: selected the Default security of Default VPC
- Keep all the other settings as default & click create
- Details are shown in the next slide.

LAUNCH TEMPLATE DETAILS.

New EC2 Experience
Tell us what you think

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

▼ Instances

Instances New

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances New

Dedicated Hosts

Scheduled Instances

Capacity Reservations

▼ Images

AMIs New

AMI Catalog

▼ Elastic Block Store

Volumes New

Snapshots New

Lifecycle Manager New

▼ Network & Security

Security Groups

Elastic IPs

EC2 > Launch templates

Launch templates (1/1) Info

↻

Actions ▼

Create launch template

🔍

Filter by tags or properties or search by keyword

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Launch template ID	Launch template name	Default version	Latest version	Create time
lt-06f1a9860c4fc3a98	awslabsLT	1	1	2022-07-16T16:47:54.000Z

awslabsLT (lt-06f1a9860c4fc3a98)

Actions ▼Delete template

Launch template details

Launch template ID
lt-06f1a9860c4fc3a98

Launch template name
awslabsLT

Default version
1

Owner
arn:aws:iam::843257763552:user/Whiz_User_49218.34701167

Details

Versions

Template tags

Launch template version details

Actions ▼

Delete template version

Version
1 (Default)

Description
Launch Template Version 1

Date created
2022-07-16T16:47:54.000Z

Created by
arn:aws:iam::843257763552:user/Whiz_User_49218.34701167

Instance details

Storage

Resource tags

Network interfaces

Advanced details

TASK 3

- in this Task I will create an Auto Scaling Group
- Go to EC2 and choose auto scaling Groups under Auto scaling
- Create Auto scaling group
 - Step1: choose Launch template or configuration
 - Auto scaling group name: aws-ASG
 - Launch template: awslabsLT
 - Step2: Configure settings
 - VPC: selected the default VPC from the list
 - Subnet: selected 2 subnets for the auto scaling instances
 - Step3: Configure advanced options (this step no changes are needed)
 - Step4: Configure group size and scaling policies
 - Desired capacity:2, Minimum capacity: 2. Maximum capacity: 2.
 - Step5&6: is mainly adding a tag name: Name;ASG-EC2
 - Click create Auto Scaling Group

AUTO SCALING GROUP DETAILS IN THE NEXT FEW SLIDES.

EC2 > Auto Scaling groups

Auto Scaling groups (1/1) [Info](#) Refresh Edit Delete Create an Auto Scaling group

<input checked="" type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
<input checked="" type="checkbox"/>	aws-ASG	awslabsLT Version Default	0	Updating capacity	2	2	2	us-east-1a, us-east-1b

Details | Activity | Automatic scaling | Instance management | Monitoring | Instance refresh

Group details Edit

Desired capacity 2	Auto Scaling group name aws-ASG
Minimum capacity 2	Date created Sat Jul 16 2022 10:58:22 GMT-0600 (Mountain Daylight Time)
Maximum capacity 2	Amazon Resource Name (ARN) arn:aws:autoscaling:us-east-1:843257763552:autoScalingGroup:cb9984b2-5f7d-4d8b-a99a-5423b0493f33:autoScalingGroupName/aws-ASG

THIS SLIDE IS THE EC2 INSTANCES CREATED USING AUTO SCALING GROUP.

New EC2 Experience Tell us what you think

EC2 Dashboard
EC2 Global View
Events
Tags
Limits

Instances
Instances *New*
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances *New*
Dedicated Hosts
Scheduled Instances
Capacity Reservations

Images
AMIs *New*
AMI Catalog

Elastic Block Store
Volumes *New*
Snapshots *New*
Lifecycle Manager *New*

Network & Security
Security Groups
Elastic IPs

Instances (1/2) Info

Search

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
<input checked="" type="checkbox"/> ASG-EC2	i-0ab2879fa4df3b897	Running	t2.micro	Initializing	No alarms +	us-east-1b	-	-	-
<input type="checkbox"/> ASG-EC2	i-02266d060e7052edc	Running	t2.micro	Initializing	No alarms +	us-east-1a	ec2-18-212-112-117.co...	18.212.112.117	-

Instance: i-0ab2879fa4df3b897 (ASG-EC2)

Details Security Networking Storage Status checks Monitoring Tags

Instance summary Info

Instance ID i-0ab2879fa4df3b897 (ASG-EC2)	Public IPv4 address -	Private IPv4 addresses 172.31.140.198
IPv6 address -	Instance state Running	Public IPv4 DNS -
Hostname type IP name: ip-172-31-140-198.ec2.internal	Private IP DNS name (IPv4 only) ip-172-31-140-198.ec2.internal	Elastic IP addresses -
Answer private resource DNS name -	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address -	VPC ID vpc-19c6a364 (Default VPC)	Auto Scaling Group name aws-ASG
IAM Role -	Subnet ID subnet-0679bc1dddfdf1f387	Monitoring disabled
Instance details Info	AMI ID ami-0cff7528ff583bf9a	Termination protection disabled
Platform Amazon Linux (Inferred)	AMI name amazon-linux-2-ami-2023-06-21-01	
Platform details Amazon Linux 2 AMI		

TASK 4

- In this Task, I will test Auto scaling group
 - For testing the ASG, go to the EC2 instance list and select one of the instances
 - Next, click stop instance
 - Once the instance is stopped (after 1-2 minutes) you can see that my instance will be terminating automatically, and a new instance will be launched to fulfill the policy creation.
 - Screenshot details are provided next slides.

AUTO SCALING AUTOMATICALLY CREATED A NEW EC2 INSTANCE.

New EC2 Experience
Tell us what you think

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Tags

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▼ Instances

Instances New

Instance Types

Successfully stopped I-0ab2879fa4df3b897

Instances (3) Info

Search

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<input type="checkbox"/>	Name ▾	Instance ID	Instance state ▾	Instance type ▾	Status check	Alarm status	Availability Zone ▾	Public IPv4 DNS ▾	Public IPv4 ... ▾	Elastic IP ▾
<input type="checkbox"/>	ASG-EC2	I-0ab2879fa4df3b897	⊖ Terminated 🔍	t2.micro	–	No alarms +	us-east-1b	–	–	–
<input type="checkbox"/>	ASG-EC2	I-0140ec8965630b029	✔ Running 🔍	t2.micro	⌚ Initializing	No alarms +	us-east-1b	–	–	–
<input type="checkbox"/>	ASG-EC2	I-02266d060e7052edc	✔ Running 🔍	t2.micro	✔ 2/2 checks passed	No alarms +	us-east-1a	ec2-18-212-112-117.co...	18.212.112.117	–

THREE EC2 INSTANCES ARE
SHOWN, TWO OF THEM ARE
FUNCTIONING PROPERLY
AND THE OTHER ONE IS
TERMINATED.

Successfully stopped i-0ab2879fa4df3b897

Instances (1/3) Info

Search

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
<input type="checkbox"/>	ASG-EC2	i-0ab2879fa4df3b897	Terminated	t2.micro	-	No alarms +	us-east-1b	-	-	-
<input checked="" type="checkbox"/>	ASG-EC2	i-0140ec8965630b029	Running	t2.micro	Initializing	No alarms +	us-east-1b	-	-	-
<input type="checkbox"/>	ASG-EC2	i-02266d060e7052edc	Running	t2.micro	2/2 checks passed	No alarms +	us-east-1a	ec2-18-212-112-117.co...	18.212.112.117	-

Instance: i-0140ec8965630b029 (ASG-EC2)

Details Security Networking Storage Status checks Monitoring Tags

▼ Instance summary Info

Instance ID i-0140ec8965630b029 (ASG-EC2)	Public IPv4 address -	Private IPv4 addresses 172.31.131.88
IPv6 address -	Instance state Running	Public IPv4 DNS -
Hostname type IP name: ip-172-31-131-88.ec2.internal	Private IP DNS name (IPv4 only) ip-172-31-131-88.ec2.internal	
Answer private resource DNS name -	Instance type t2.micro	Elastic IP addresses -
Auto-assigned IP address -	VPC ID vpc-19c6a364 (Default VPC)	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
IAM Role -	Subnet ID subnet-0679bc1dddf1f387	Auto Scaling Group name aws-ASG