











Project 1 - Deploying a Multi-Tier Website Using AWS EC2

EC2- CREATED

	Name 	Instance ID	Instance state 	Instance type 	Status check	Alarm status	Availability Zone 
		i-0ca3e01c482b23241	 Running  	t2.micro	 Initializing	No alarms 	ap-south-1a

Code to set up ec2





















```
$ sudo su
me/ubuntu# apt update -
```

```
in 'apt list --upgradable' to se
ntu# apt install apache2
```

```
ervisor (qemu) binaries on this host.
d-apt-repository -y ppa:ondrej/php
o include 'main/debug' component
```

```
1 apt update -
2 apt update -y
3 apt install apache2
4 add-apt-repository -y ppa:ondrej/php
5 apt install php5.6 mysql-client php5.6-mysqli
6 history
ot@ip-172-31-47-66: /home/ubuntu#
```

Database created

Databases (2)      								
<input type="text" value="Filter by databases"/>								
	DB identifier 	Status 	Role 	Engine 	Region & AZ 	Size 	CPU 	Current activ
	awsproject1	 Deleting	Instance	MySQL Community	ap-south-1b	db.t2.micro	 6.50%	 0 Cor
	intellipaat	 Creating	Instance	MySQL Community	ap-south-1b	db.t2.micro	-	

Connectivity & security

Endpoint & port

Endpoint

intelipaat.ceptinmqhym.ap-south-1.rds.amazonaws.com

Port

3306

Networking

Availability Zone

ap-south-1b

VPC

vpc-0bf1d925747f87ced

Subnet group

default-vpc-0bf1d925747f87ced

Subnets

subnet-08c2fa855dea5875b

subnet-0bd0975bd0d16cbf7

subnet-084cbf077d4583b48

Network type

IPv4

Security

VPC security groups

default (sg-0c7ba7eec3f8cf418)

✔ Active

Publicly accessible

Yes

Certificate authority

rds-ca-2019

Certificate authority date

August 22, 2024, 22:38

(UTC+05:30)

DB instance certificate expiration date

⚠ August 22, 2024, 22:38 (UTC+05:30)

Inbound rules (3)

Q Search



Manage tags

Edit inbound rules

< 1 > ⚙

<input type="checkbox"/>	Name	Security group rule...	IP version	Type	Protocol	Port range
<input type="checkbox"/>	-	sgr-0af1b6c117715370a	IPv4	MYSQL/Aurora	TCP	3306
<input type="checkbox"/>	-	sgr-08f742970553d2bac	-	MYSQL/Aurora	TCP	3306
<input type="checkbox"/>	-	sgr-0ead92dd14fca2f6f	-	All traffic	All	All

Mysql setup on ec2

```
Last login: Fri Dec 15 12:07:59 2023 from 13.233.177.3
ubuntu@ip-172-31-47-66:~$ mysql -h intelipaat.ceptinmqhym.ap-south-1.rds.amazonaws.com -u admin -p 12345678
```

```

Last login: Fri Dec 15 12:07:59 2023 from 13.233.177.3
ubuntu@ip-172-31-47-66:~$ mysql -h intelipaat.cceptinmqhym.ap-south-1.rds.amazonaws.com -u admin -p 12345678
Enter password:
ERROR 1049 (42000): Unknown database '12345678'
ubuntu@ip-172-31-47-66:~$ mysql -h intelipaat.cceptinmqhym.ap-south-1.rds.amazonaws.com -u admin -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 30
Server version: 8.0.33 Source distribution

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>

```

i-Oca3e01c482b23241

PublicIPs: 13.201.9.212 PrivateIPs: 172.31.47.66

Filezilla setup and add new folder

The screenshot shows the FileZilla interface with the following details:

- Host:** sftp://13.201.9.21; **Username:** ubuntu **Password:** [redacted] **Port:** [redacted] **Quickconnect** button.
- Status:** Connected to 13.201.9.212, Retrieving directory listing..., Listing directory /home/ubuntu, Directory listing of "/home/ubuntu" successful.
- Local site:** C:\Users\mobil\
 - 127D3500
 - 2022-23 audit budget
 - 2nd installment
 - abc
 - admit card
 - Android-Chat-App-main
 - ASP
 -
- Remote site:** /home/ubuntu
 - home
 - ubuntu
- Local File List:**

Filename	Filesize	Filetype	Last modified
..			
.android		File folder	21-03-2023 12:...
.AndroidStudio4.0		File folder	05-10-2022 22:...
.config		File folder	05-10-2022 19:...
.dotnet		File folder	08-04-2023 12:...
.gradle		File folder	06-10-2022 21:...
.Jccream Screen Re...		File folder	20-12-2020 23:...
.librarymanager		File folder	22-04-2023 11:...
.m2		File folder	09-09-2022 09:...
.nbi		File folder	21-11-2022 09:...
.ssh		File folder	01-12-2023 12:...

47 files and 61 directories. Total size: 41,790,387 bytes
- Remote File List:**

Filename	Filesize	Filetype	Last modified	Permissi...	Owner/Gr...
..					
.cache		File folder	15-12-2023...	drwx-----	ubuntu u...
.ssh		File folder	15-12-2023...	drwx-----	ubuntu u...
.bash_history	14	BASH_HI...	15-12-2023...	-rw-----	ubuntu u...
.bash_logout	220	Bash Lo...	06-01-2022...	-rw-r--r--	ubuntu u...
.bashrc	3,771	Bash RC ...	06-01-2022...	-rw-r--r--	ubuntu u...
.profile	807	Profile S...	06-01-2022...	-rw-r--r--	ubuntu u...
.sudo_as_admin_...	0	SUDO_A...	15-12-2023...	-rw-r--r--	ubuntu u...

5 files and 2 directories. Total size: 4,812 bytes
- Transfer Queue:** Queued files, Failed transfers, Successful transfers. Queue: empty.

Php page hosted on public ip of ec2

← ↻ 🏠 ⚠ Not secure | 13.201.9.212/new%20folder/index.php

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Data successfully inserted into the database.

PHP Form to Database

Name:

Email:

Data inserted done

```
mysql> create database intelipaat
-> ;
Query OK, 1 row affected (0.01 sec)

mysql> use intelipaat
Database changed
mysql> CREATE TABLE users (
->         id INT AUTO INCREMENT PRIMARY KEY,
->         name VARCHAR(255) NOT NULL,
->         email VARCHAR(255) NOT NULL
-> );
Query OK, 0 rows affected (0.06 sec)

mysql> select * from users
-> ;
+----+-----+-----+
| id | name  | email                |
+----+-----+-----+
| 1  | param | sujit@gmail.com      |
+----+-----+-----+
1 row in set (0.00 sec)

mysql>
```

i-0ca3e01c482b23241

Load balancer

Create Classic Load Balancer [Info](#)

The Classic Load Balancer distributes incoming application traffic across multiple EC2 instance targets in multiple Availability Zones. This increases the fault tolerance of your applications. Elastic Load Balancing detects unhealthy instances and routes traffic only to healthy instances.

► How Classic Load Balancers work

Basic configuration

Load balancer name

Name must be unique within your AWS account and can't be changed after the load balancer is created.

awsproject1

A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Scheme [Info](#)

Scheme can't be changed after the load balancer is created.

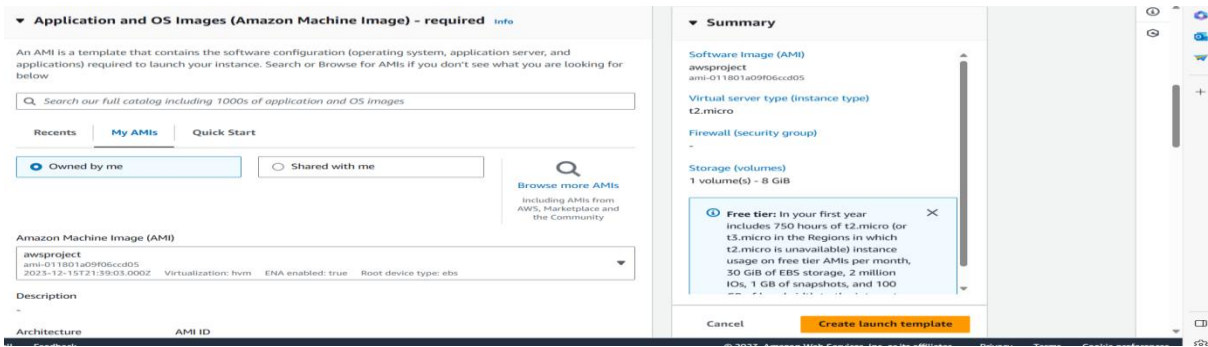
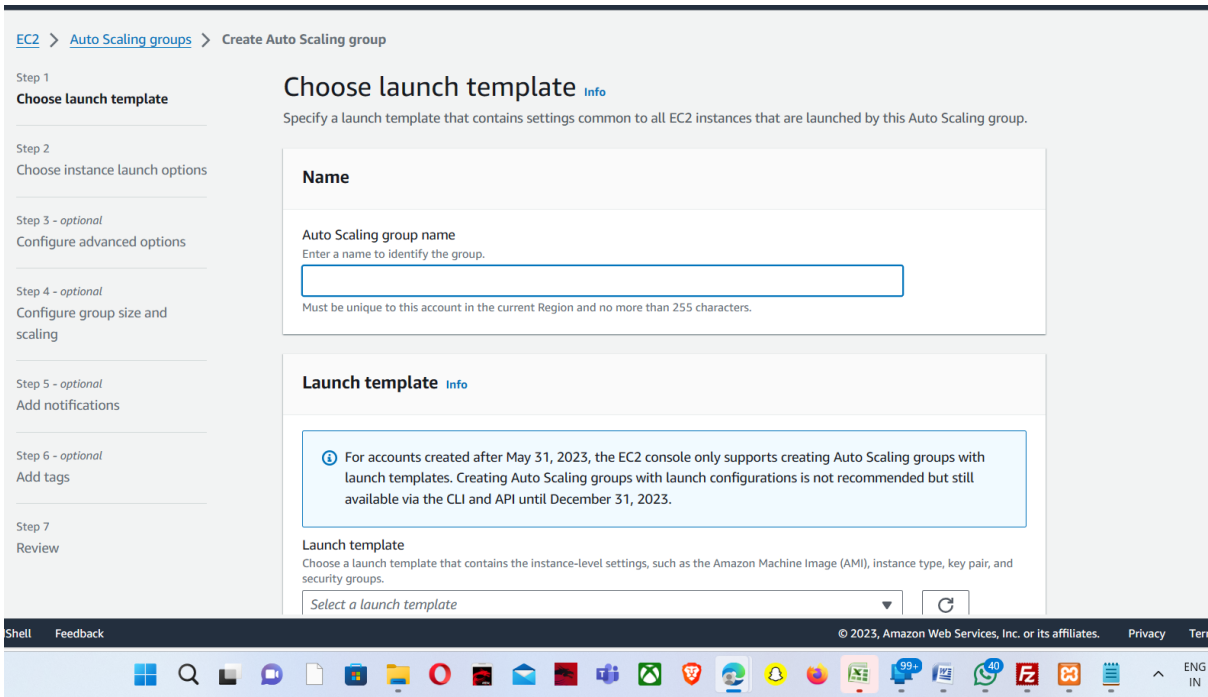
☒ Internet-facing

An internet-facing load balancer routes requests from clients over the internet to targets. Requires a public subnet. [Learn more](#)

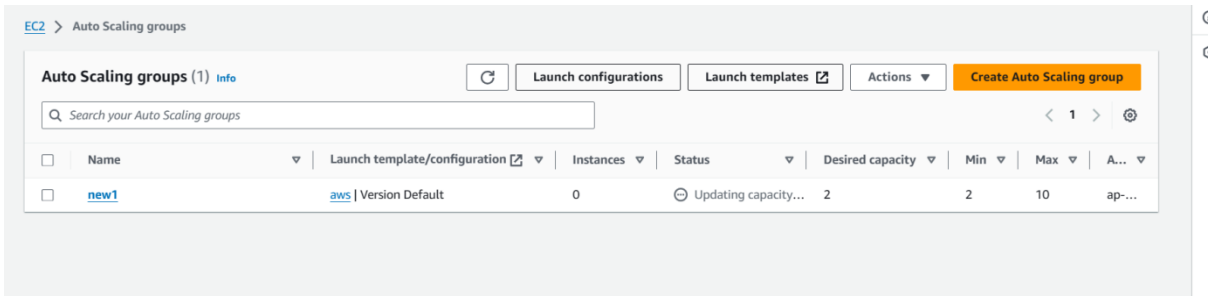
☐ Internal

An internal load balancer routes requests from clients to targets using private IP addresses.

Lunch configuration



Auto scaling group



Automatic assign of instaces

Find Instance by attribute or tag (case-sensitive)

< 1 >

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
<input type="checkbox"/>		i-0ca3e01c482b23241	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	ec2-
<input type="checkbox"/>		i-0eeb85fb540e27de6	Running	t2.micro	Initializing	No alarms	ap-south-1b	ec2-
<input type="checkbox"/>		i-05d964635436065f5	Running	t2.micro	Initializing	No alarms	ap-south-1a	ec2-

Select an instance

Auto Scaling groups (1)

Launch configurations

Launch templates

Actions

Create Auto Scaling group

Search your Auto Scaling groups

< 1 >

<input type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity
<input type="checkbox"/>	newtest	aws Version 3	1	-	1

Terminate instance?

On an EBS-backed instance, the default action is for the root EBS volume to be deleted when the instance is terminated. Storage on any local drives will be lost.

Are you sure you want to terminate these instances?

Instance ID

i-04fc00c6cacbec4c3

Termination protection

Disabled

To confirm that you want to terminate the instances, choose the terminate button below. Instances with termination protection enabled will not be terminated. Terminating the instance cannot be undone.

Cancel Terminate

Instances (1/1)

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-sensitive)

< 1 >

Instance state = running

Clear filters

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
<input checked="" type="checkbox"/>		i-04fc00c6cacbec4c3	Shutting-d...	t2.micro	2/2 checks passed	No alarms	ap-south-1a	ec2-65-0-

Instance: i-04fc00c6cacbec4c3

Find Instance by attribute or tag (case-sensitive)

Instance state = running

Clear filters

< 1 >

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
<input type="checkbox"/>		i-00d64192318eb2a85	Running	t2.micro	Initializing	No alarms	ap-south-1a	ec2-13-1

←
↻
🏠
⚠ Not secure | new1-1751123764.ap-south-1.elb.amazonaws.com/new%20folder/

📺 YouTube
📧 Gmail
📄 front pata.pdf
📍 Maps
🔍 Google
📁 mivi
📄 New Tab
👤 eMSJE NGO Home
📄 ilovepdf_mer

PHP Form to Database

Name:

Email:

Project 2 – Website Orchestration

Rds console – mysql db creation

Create database


Choose a database creation method [Info](#)


☒ **Standard create**
You set all of the configuration options, including ones for availability, security, backups, and maintenance.

☐ **Easy create**
Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Engine options

Engine type [Info](#)

☐ **Aurora (MySQL Compatible)**


☐ **Aurora (PostgreSQL Compatible)**


☒ **MySQL**

☐ **MariaDB**

Templates

Choose a sample template to meet your use case.

☐ **Production**
Use defaults for high availability and fast, consistent performance.

☒ **Dev/Test**
This instance is intended for development use outside of a production environment.

☐ **Free tier**
Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS. [Info](#)

Availability and durability

Deployment options [Info](#)
The deployment options below are limited to those supported by the engine you selected above.

☐ **Multi-AZ DB Cluster**
Creates a DB cluster with a primary DB instance and two readable standby DB instances, with each DB instance in a different Availability Zone (AZ). Provides high availability, data redundancy and increases capacity to serve read workloads.

☒ **Multi-AZ DB instance**
Creates a primary DB instance and a standby DB instance in a different AZ. Provides high availability and data redundancy, but the standby DB instance doesn't support connections for read workloads.

☐ **Single DB instance**
Creates a single DB instance with no standby DB instances.

▼ Credentials Settings

Master username [Info](#)

Type a login ID for the master user of your DB instance.

1 to 16 alphanumeric characters. The first character must be a letter.

☐ Manage master credentials in AWS Secrets Manager

Manage master user credentials in Secrets Manager. RDS can generate a password for you and manage it throughout its lifecycle.

[i](#) If you manage the master user credentials in Secrets Manager, some RDS features aren't supported. [Learn more](#)

☐ Auto generate a password

Amazon RDS can generate a password for you, or you can specify your own password.

Master password [Info](#)

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), ' (single quote), " (double quote) and @

← ↻ 🔍 <https://ap-south-1.console.aws.amazon.com/elasticbeanstalk/home?region=ap-south-1#/environment/dashboard?environmentId=e-bvutm98u...> A ☆ 🔄 📄 📌 📁

YouTube Gmail front pata.pdf Maps Google mivi New Tab eMS/E NGO Home ilovepdf_merged_6... https://www.kristuj... new id_removed (1)... ngo Inbox (8) - dashbilib

aws Services 🔍 Search [Alt+S] 📧 🔔 ⓘ ⚙️ Mumbai ▼ 5

☰ Elastic Beanstalk is updating your environment. To cancel this operation select **Abort Current Operation** from the Actions dropdown.

🟢 Environment update successfully completed.

🟢 Successfully uploaded file index.zip to S3, created application version and started deployment with new application version (2)

December 18, 2023 15:41:11 (UTC+5:30)	🕒 INFO	Updating environment Pro2-env-1's configuration settings.
December 18, 2023 15:41:04 (UTC+5:30)	🕒 INFO	Environment update is starting.
December 18, 2023 15:27:34 (UTC+5:30)	🕒 INFO	Environment health has transitioned from Info to Ok. Application update completed 63 seconds ago and took 48 seconds.
December 18, 2023 15:26:06 (UTC+5:30)	🕒 INFO	Environment update completed successfully.
December 18, 2023 15:26:06 (UTC+5:30)	🕒 INFO	Successfully deployed new configuration to environment.
December 18, 2023 15:26:06 (UTC+5:30)	🕒 INFO	New application version was deployed to running EC2 instances.
December 18, 2023 15:25:47 (UTC+5:30)	🕒 INFO	Instance deployment completed successfully.
December 18, 2023 15:25:40 (UTC+5:30)	🕒 INFO	Instance deployment: You didn't include a 'composer.json' file in your source bundle. The deployment didn't install Composer dependencies.
December 18, 2023 15:25:37 (UTC+5:30)	🕒 INFO	Deploying new version to instance(s).
December 18, 2023 15:25:34 (UTC+5:30)	🕒 INFO	Environment health has transitioned from Ok to Info. Application update in progress (running for 12 seconds).
December 18, 2023 15:25:19 (UTC+5:30)	🕒 INFO	Updating environment Pro2-env-1's configuration settings.
December 18, 2023 15:25:10 (UTC+5:30)	🕒 INFO	Environment update is starting.

☰ Elastic Beanstalk is updating your environment. To cancel this operation select **Abort Current Operation** from the Actions dropdown. ⓘ

🟢 Environment update successfully completed. 🕒

🟢 Successfully uploaded file index.zip to S3, created application version and started deployment with new application version (2) ✕

[Elastic Beanstalk](#) > [Environments](#) > Pro2-env-1

Pro2-env-1 [Info](#)

🔄 Actions **Upload and deploy**

Environment overview

Health
🟢 Ok - [View causes](#)

Domain
Pro2-env-1.eba-hs3hpccf.ap-south-1.elasticbeanstalk.com

Environment ID
e-bvutm98unb

Application name
Pro2

Platform

Platform
PHP 8.2 running on 64bit Amazon Linux 2023/4.0.3

Running version
1.3

Platform state
🟢 Supported

[Change version](#)

[Events](#) [Health](#) [Logs](#) [Monitoring](#) [Alarms](#) [Managed updates](#) [Tags](#)

Personal

Not secure | pro2-env-1.eba-hs3hpcf.ap-south-1.elasticbeanstalk.com

YouTube Gmail front pata.pdf Maps Google mivi New Tab eMSJE NGO Home ilovepdf_merged_6... https://

PHP Form to Database

Name:

Email:

Submit

Consider creating a Blue/Green Deployment to minimize downtime during upgrades

You may want to consider using Amazon RDS Blue/Green Deployments and minimize your downtime during upgrades. A Blue/Green Deployment provides a staging environment for changes to production databases. [RDS User Guide](#) [Aurora User Guide](#)

Databases (2)

Group resources

Modify

Actions

Restore from S3

Create databases

Filter by databases

< 1 >

DB identifier	Status	Role	Engine	Region & AZ
<div><div></div><div>awseb-e-bvutm98unb-stack-awsebrdsdatabase-iythnhs0dsb8</div></div>	Available	Instance	MySQL Community	ap-south-1b
<div><div></div><div>database-1</div></div>	Available	Instance	MySQL Community	ap-south-1a

PHP Form to Database

Name:

Email:

← ↻ 🏠 ⚠ Not secure | pro2-er

📺 YouTube 📧 Gmail 📄 front pata.pdf 📍 Ma

Data successfully inserted into the database.

PHP Form to Database

Name:

Email:

Query 1

```
1 • select * from users;
2 |
```

Limit to 1000 rows

Result Grid

	id	name	email
▶	1	SUJIT KUMAR DASH	sujitkumardash2022@vitbhopal.ac.in
	2	SUJIT KUMAR DASH	sujitkumardash2022@vitbhopal.ac.in
	3	IVDO NGO	sujit.kumardash002@gmail.com
*	NULL	NULL	NULL

Automatic context help is disabled. Use the manual icon to manually get help for a specific object or function. Use the caret position or the automatic help icon to get automatic help.

Load balancers

Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

Filter load balancers

Name	DNS name	State	VPC ID	Availability Zones	Type
awseb--AWSEB-2pjZtb...	awseb--AWSEB-2pjZtb8jG...	Active	vpc-0bf1d925747f87ced	3 Availability Zones	application

0 load balancers selected

Select a load balancer above.

EC2 > Auto Scaling groups

Auto Scaling groups (1) [Info](#)

Launch configurations

Launch templates

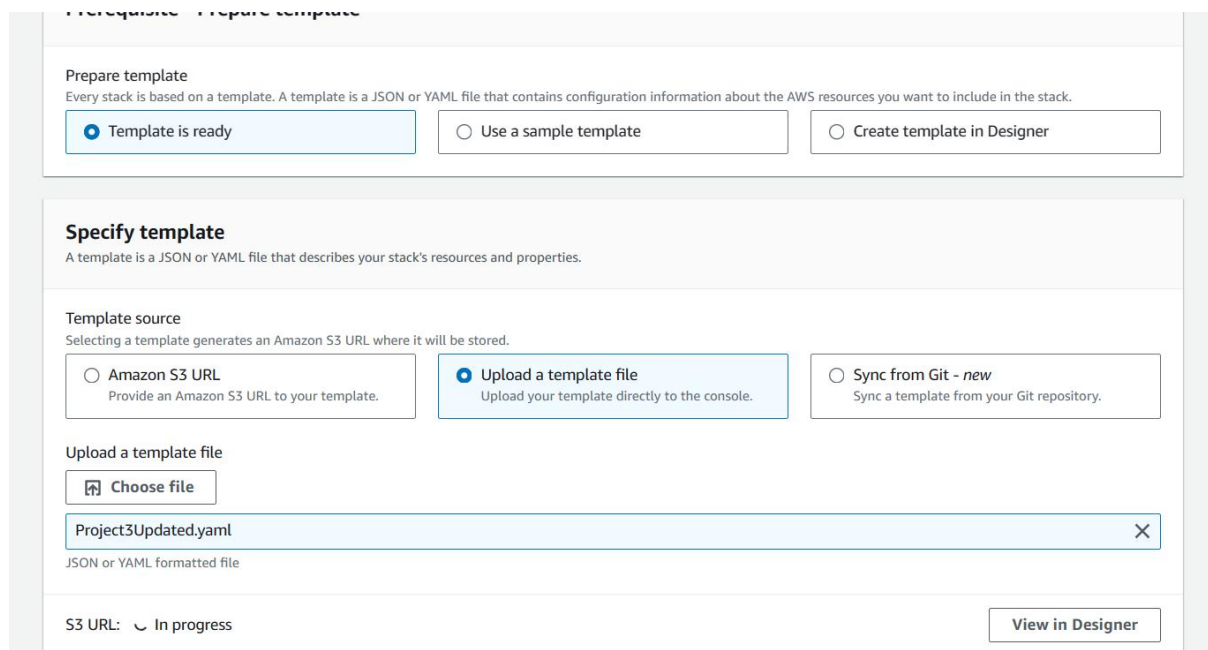
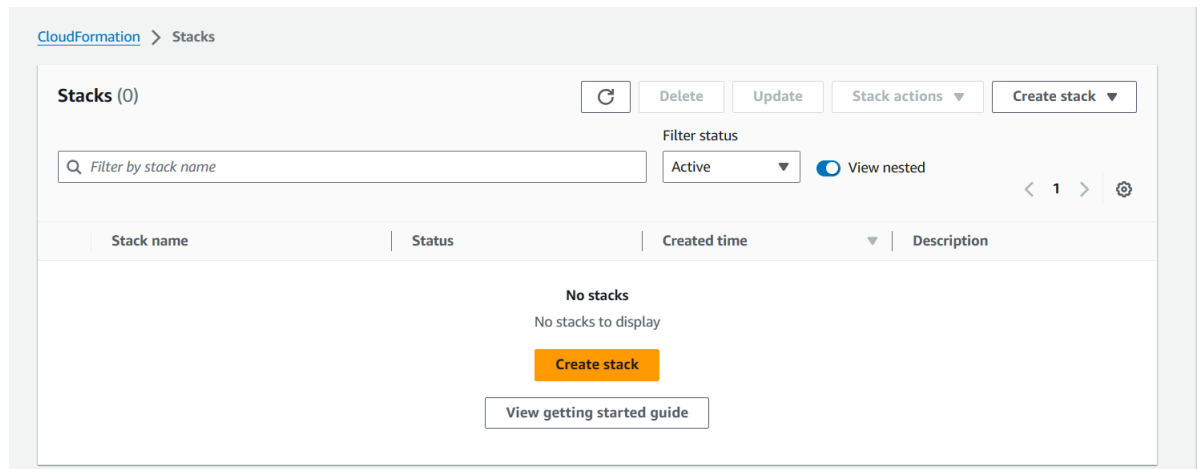
Actions

Create Auto Scaling group

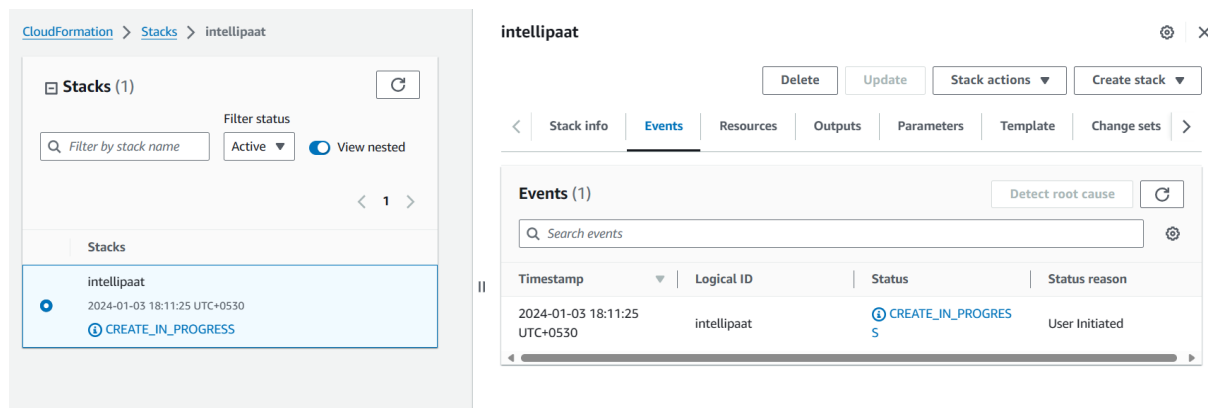
< 1 >

<input type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min
<input type="checkbox"/>	awseb-e-bvutm98unb-stack-AWSEBAutoScalingGroup-oXBHef1kYTPu	awseb-e-bvutm98unb-stack-AWSEB...	1	-	1	1

Project 3 – Publishing Amazon SNS Messages Privately



Stack And resources Created



Stack is in progress state

Stack name		Status
intellipa		CREATE_IN_PROGRESS

```
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-10-0-0-154 ~]$ ping amazon.com
PING amazon.com (52.94.236.248) 56(84) bytes of data.
```

Details

Name	Display name
VPCE-Tutorial-Topic	VPCE-Tutorial-Topic
ARN	Topic owner
arn:aws:sns:us-east-1:498447628870:VPCE-Tutorial-Topic	498447628870
Type	
Standard	

End point create for sns

Endpoints (1/1) [Info](#)

<input checked="" type="checkbox"/>	Name	VPC endpoint ID	VPC ID	Service name
<input checked="" type="checkbox"/>	my-sns-endpoint	vpce-0c22f49cc87f729b1	vpce-0fa1da65b60a3852d VPCE-Tutori...	com.amazonaws.us-east-1.sns

```
[ec2-user@ip-10-0-0-154 ~]$ aws sns publish --region us-east-1 --topic-arn arn:aws:sns:us-east-1:498447628870:VPCE-Tutorial-Topic --message "Hello from SNS"
{"MessageId": "17212499-c185-51d9-91c6-7a96a17ccef5"}
```

Log events

You can use the filter bar below to search for and match terms, phrases, or values in your log events. [Learn more about filter patterns](#)

Actions ▼

Start tailing

Create metric filter

Q Filter events

Clear1m30m1h12hCustomLocal timezoneDisplay

	Timestamp	Message
	No more records within selected time range Retry	
▶	2024-01-03T18:48:50.158+05:30	INIT_START Runtime Version: python:3.9.v42 Runtime Version ARN: arn:aws:lambda:us-east-1::runtime:6e41a7fdab7b2f91b16df6...
▶	2024-01-03T18:48:50.268+05:30	Loading function
▶	2024-01-03T18:48:50.270+05:30	START RequestId: f5472387-08c4-413e-b2e3-d406566e5541 Version: \$LATEST
▶	2024-01-03T18:48:50.271+05:30	From SNS: hellow
▶	2024-01-03T18:48:50.272+05:30	END RequestId: f5472387-08c4-413e-b2e3-d406566e5541
▶	2024-01-03T18:48:50.272+05:30	REPORT RequestId: f5472387-08c4-413e-b2e3-d406566e5541 Duration: 1.57 ms Billed Duration: 2 ms Memory Size: 128 MB Max M...
	No more records within selected time range <i>Auto retry paused.</i> Resume	