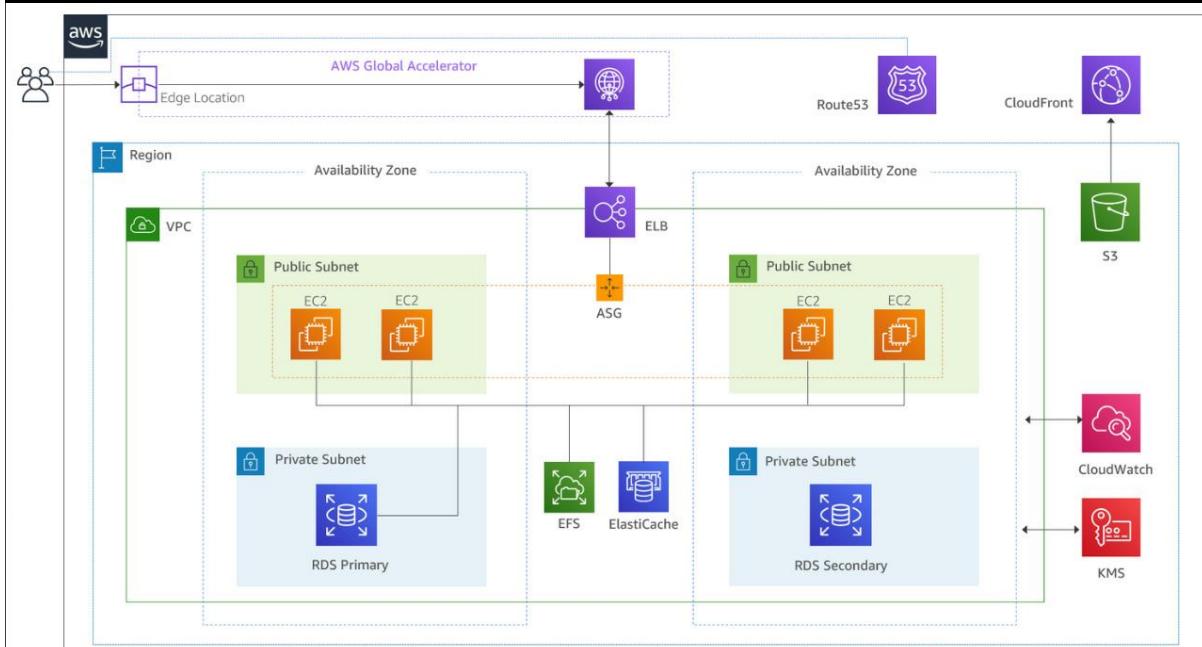


PROJECT-1

Arctitecture



VPC

Your VPCs (1/1) Info						
<input type="button" value="C"/> Actions ▼ Create VPC						
<input type="text"/> Filter VPCs						
<input checked="" type="checkbox"/>	Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	DHCI
<input checked="" type="checkbox"/>	D-VPC	vpc-0f86a7b4f5b69fdf7	Available	172.31.0.0/16	-	dopt-

Subnet used(1a & 1b)

Subnets (3) Info						
<input type="button" value="C"/> Actions ▼ Create subnet						
<input type="text"/> Filter subnets						
<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR
<input type="checkbox"/>	D-PUBLIC-AZ1	subnet-025fe94c95230afa3	Available	vpc-0f86a7b4f5b69fdf7 D-VPC	172.31.32.0/20	-
<input type="checkbox"/>	D-PUBLIC-AZ2	subnet-090968c4da7702e9f	Available	vpc-0f86a7b4f5b69fdf7 D-VPC	172.31.16.0/20	-
<input type="checkbox"/>	D-PUBLIC-AZ3	subnet-093457fcdb33ad850	Available	vpc-0f86a7b4f5b69fdf7 D-VPC	172.31.0.0/20	-

Route table

Route tables (1/1) Info						
<input type="button" value="C"/> Actions ▼ Create route table						
<input type="text"/> Filter route tables						
<input checked="" type="checkbox"/>	Name	Route table ID	Explicit subnet associat...	Edge associations	Main	VPC
<input checked="" type="checkbox"/>	PUBLIC-ROUTE	rtb-07e9d1439e5004003	3 subnets	-	Yes	vpc-0f86a7b4f5b69fdf7 D-VPC

Default Gateway

Internet gateways (1/1) Info						
<input type="button" value="C"/> Actions ▼ Create internet gateway						
<input type="text"/> Filter internet gateways						
<input checked="" type="checkbox"/>	Name	Internet gateway ID	State	VPC ID	Owner	
<input checked="" type="checkbox"/>	D-IGW	igw-086877cd89921363d	Attached	vpc-0f86a7b4f5b69fdf7 D-VPC	659202326636	

PROJECT-1

Default NACL

Network ACLs (1/1) Info						
<input type="checkbox"/> Name		Network ACL ID	Associated with	Default	VPC ID	Actions
<input checked="" type="checkbox"/>	D-NACL	acl-02fc7a596797f570e	3 Subnets	Yes	vpc-0f86a7b4f5b69fdf7 / D-VPC	Edit Delete

Inbound rule

Inbound rules (2)						
<input type="checkbox"/> Filter inbound rules						
Rule number	Type	Protocol	Port range	Source	Allow/Deny	Actions
100	All traffic	All	All	0.0.0.0/0	Allow	Edit
*	All traffic	All	All	0.0.0.0/0	Deny	Edit

Outbound Rule

Outbound rules (2)						
<input type="checkbox"/> Filter outbound rules						
Rule number	Type	Protocol	Port range	Destination	Allow/Deny	Actions
100	All traffic	All	All	0.0.0.0/0	Allow	Edit
*	All traffic	All	All	0.0.0.0/0	Deny	Edit

Security Group

Security Groups (1/1) Info						
<input type="checkbox"/> Filter security groups						
Name	Security group ID	Security group name	VPC ID	Description	Owner	Actions
SG	sg-08b790c8746f05bb3	default	vpc-0f86a7b4f5b69fdf7	default VPC security gr...	659202326636	Edit Delete

Inbound rule

Inbound rules (1/1)						
<input type="checkbox"/> Filter security group rules						
Name	Security group rule...	IP version	Type	Protocol	Port range	Actions
-	sgr-05dc40540275e4b...	IPv4	All traffic	All	All	Edit

Outbound rule

Outbound rules (1/1)						
<input type="checkbox"/> Filter security group rules						
Name	Security group rule...	IP version	Type	Protocol	Port range	Actions
-	sgr-0b576128dfe1cba8c	IPv4	All traffic	All	All	Edit

PROJECT-1

1. Create EFS

The screenshot shows the AWS Services search results for 'EFS'. The search bar at the top has 'EFS' typed into it. Below the search bar, there is a sidebar with various AWS services like IAM, VPC, and EBS. The main area shows a list of services under 'Services (11)'. The 'EFS' service is highlighted with a blue border and a star icon. It is described as 'Managed File Storage for EC2'. Other services listed include Features (15), Blogs (1,013), Documentation (40,641), Knowledge Articles (30), and Tutorials (11). A link to 'See all 11 results' is also present.

The screenshot shows the Amazon Elastic File System (Amazon EFS) landing page. The title is 'Amazon Elastic File System'. Below the title, it says 'Scalable, elastic, cloud-native NFS file system'. A description states: 'Amazon Elastic File System (Amazon EFS) provides a simple, scalable, elastic file system for general purpose workloads for use with AWS Cloud services and on-premises resources.' To the right, there is a 'Create file system' button. A tooltip for the button says: 'Create an EFS file system with service recommended settings.'

The screenshot shows the 'Create file system' dialog box. It asks for a 'Name - optional' (EFS-VIVEK) and a 'Virtual Private Cloud (VPC)' (vpc-0f86a7b4f5b69fdf7). It also includes options for 'Storage class' (Standard or One Zone). At the bottom are 'Cancel', 'Customize', and 'Create' buttons. A sidebar on the right shows storage pricing for various classes.

The screenshot shows the 'File systems (1)' list. It displays a single file system named 'EFS-VIVEK' with ID 'fs-046fe96d37d0c50d8'. The file is encrypted ('Encrypted') and has a total size of 6.00 KiB. It is currently 'Available'. The list includes columns for Name, File system ID, Encrypted, Total size, Size in Standard / One Zone, Size in Standard-IA / One Zone-IA, Provisioned Throughput (MiB/s), File system state, and Creation time.

PROJECT-1

2. Create KMS (if configure Autoscaling not create instance)

OPEN KMS option

The screenshot shows the AWS CloudSearch interface with a search bar containing 'kms'. Below the search bar, there are filters for 'Services' (selected), 'Features', 'Blogs', 'Documentation', 'Knowledge Articles', 'Tutorials', and 'Events'. The main results section is titled 'Services' and lists 'Key Management Service' as the top result. A callout box highlights the 'Key Management Service' entry, which includes a star icon, the service name, and a brief description: 'Securely Generate and Manage AWS Encryption Keys'. Below this, there's a 'Top features' section with links to 'AWS managed keys', 'Customer managed keys', and 'Custom key stores'. On the left sidebar, there are links for 'EC2 Dashboard', 'EC2 Global View', 'Events', 'Tags', 'Limits', and 'Instances'.

Select option create KMS

The screenshot shows the AWS KMS landing page. The main heading is 'AWS Key Management Service' with the subtitle 'Easily create keys and control encryption across AWS and beyond'. Below this, a paragraph explains what KMS is: 'AWS Key Management Service (KMS) is a managed service that makes it easy for you to create and manage keys and control the use of encryption across a wide range of AWS services. KMS is a secure and resilient service that uses FIPS 140-2 validated hardware security modules to isolate and protect your keys.' To the right, there is a 'Get started now' section with a 'Create a key' button.

CONFIGURE STEPS

The screenshot shows the 'Configure key' step in the 'Create key' wizard. On the left, a sidebar lists steps: Step 1 'Configure key' (selected), Step 2 'Add labels', Step 3 'Define key administrative permissions', Step 4 'Define key usage permissions', and Step 5 'Review'. The main area is titled 'Configure key' and contains two sections: 'Key type' and 'Key usage'. Under 'Key type', 'Symmetric' is selected. Under 'Key usage', 'Encrypt and decrypt' is selected. At the bottom, there is a link to 'Advanced options'.

PROJECT-1

Enter alias name

KMS > Customer managed keys > Create key

Step 1 Configure key

Step 2 Add labels

Step 3 Define key administrative permissions

Step 4 Define key usage permissions

Step 5 Review

Add labels

Alias
You can change the alias at any time. [Learn more](#)

Alias
VIVEK-KMS

Description - optional
You can change the description at any time.

Description - optional
VIVEK-KMS

Tags - optional
You can use tags to categorize and identify your KMS keys and help you track your AWS costs. When you add tags to AWS resources, AWS generates a cost allocation report for each tag. [Learn more](#)

Tag key Tag value - optional

NAME KMS

You can add up to 49 more tags.

Cancel Previous Next

Select user

KMS > Customer managed keys > Create key

Step 1 Configure key

Step 2 Add labels

Step 3 Define key administrative permissions

Step 4 Define key usage permissions

Step 5 Review

Define key administrative permissions

Key administrators
Choose the IAM users and roles who can administer this key through the KMS API. You may need to add additional permissions for the users or roles to administer this key from this console. [Learn more](#)

Name	Path	Type
admin1	/	User
admin2	/	User
cli1	/	User

Create successfully

Success
Your AWS KMS key was created with alias VIVEK-KMS and key ID 9cf14ef3-1374-48b4-b430-15bbc3747bdb.

View key

KMS > Customer managed keys

Customer managed keys (1/1)

Aliases	Key ID	Status	Key spec	Key usage
VIVEK-KMS	9cf14ef3-1374-48b4-b430-15bbc3747bdb	Enabled	SYMMETRIC_DEFAULT	Encrypt and decrypt

Enable KMS

KMS > Customer managed keys (1/1)

Aliases	Key ID	Status	Key spec	Key usage
VIVEK-KMS	9cf14ef3-1374-48b4-b430-15bbc3747bdb	Enabled	SYMMETRIC_DEFAULT	Encrypt and decrypt

Key actions ▲ Create key

Enable

Disable

Schedule key deletion

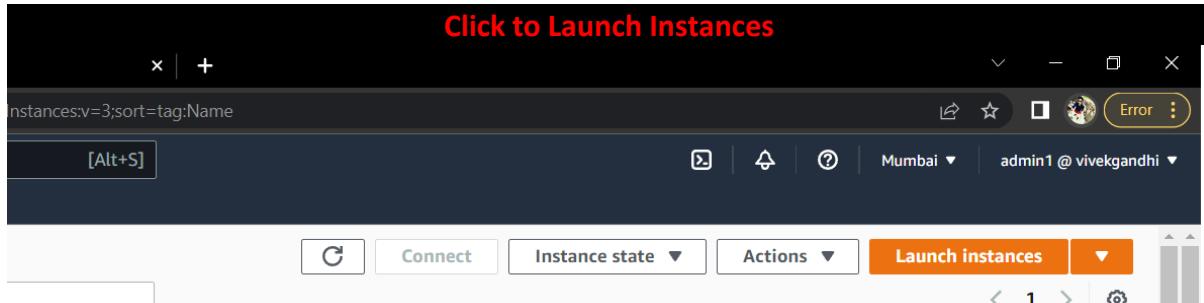
Cancel key deletion

Delete key material

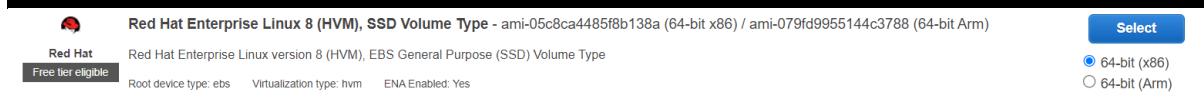
Add or edit tags

PROJECT-1

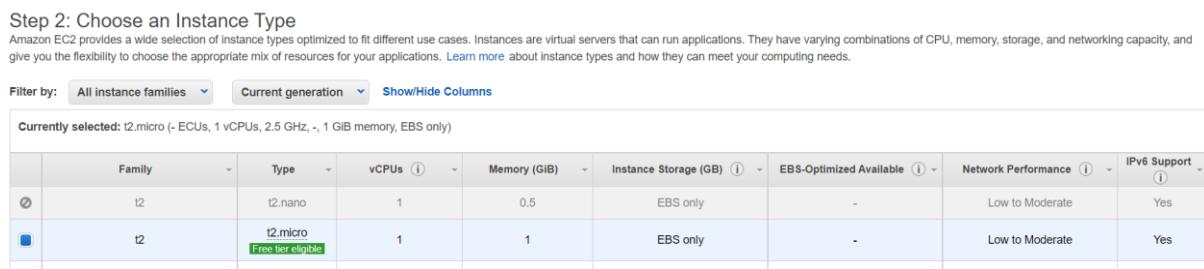
3. Create EC2 INSTANCES



Select Redhat Linux



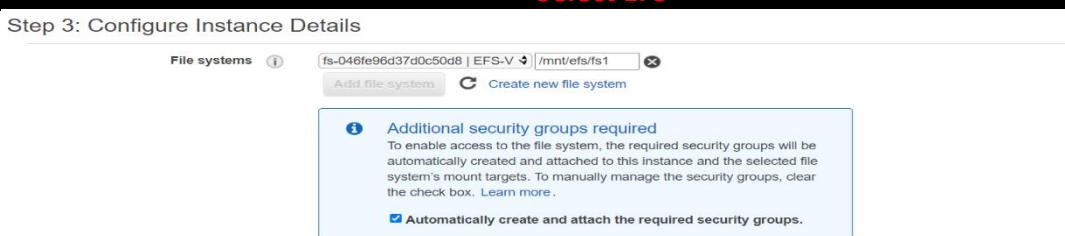
Select instance type T2 micro



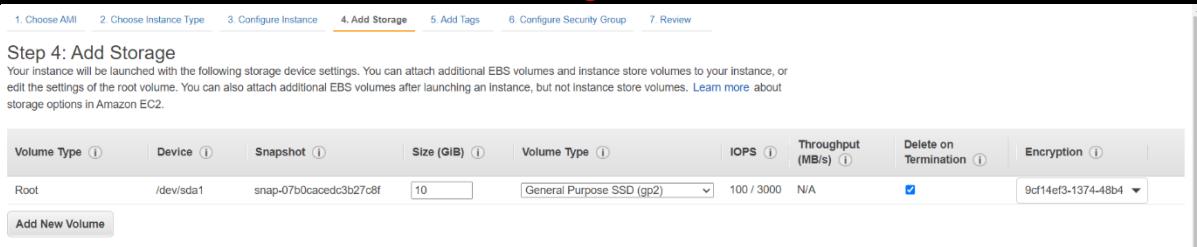
Select subnet and make sure auto-assign is public



Select EFS



Add storage with KMS



PROJECT-1

Add Tags

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. A copy of a tag can be applied to volumes, instances or both.

Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key	(128 characters maximum)	Value	(256 characters maximum)	Instances	Volumes	Network Interfaces
Name	Main Copy	<input checked="" type="checkbox"/>				

[Add another tag](#) (Up to 50 tags maximum)

SELECT SG

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: Create a new security group

Select an existing security group

Security group name:

EC2-Main-SG

Description:

launch-wizard-1 created 2022-07-13T14:50:54.387+05:30

Type	Protocol	Port Range	Source	Description
All traffic	All	0 - 65535	Anywhere	0.0.0.0/0, ::/0 e.g. SSH for Admin Desktop

[Add Rule](#)

Download Key

Create a new key pair

Key pair type
 RSA ED25519

Key pair name
EC2-MAIN

[Download Key Pair](#)

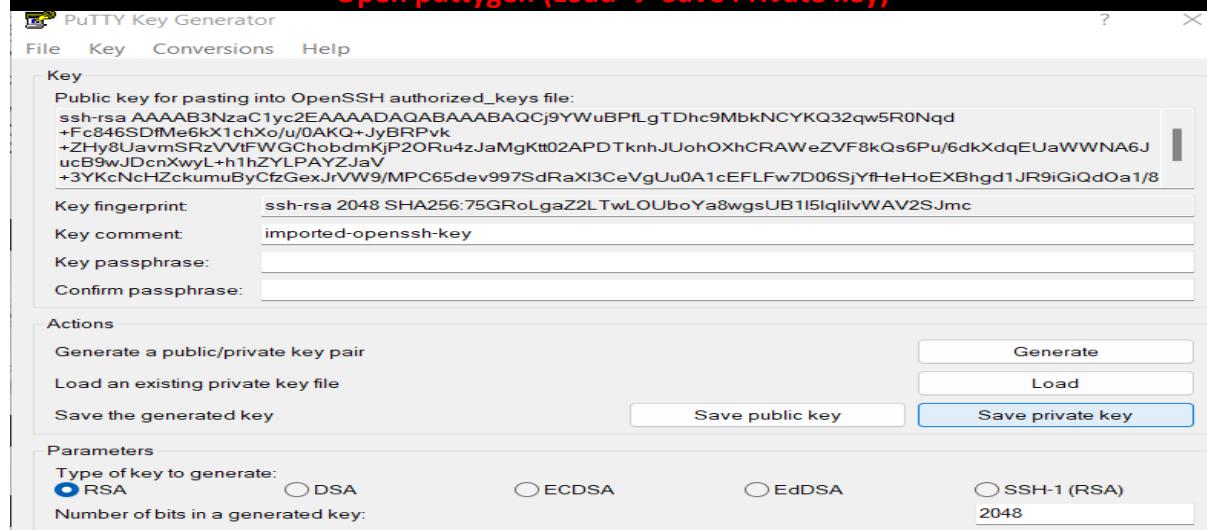
Create successfully

Instances (1) Info		Connect	Actions	Launch instances
Search				
Instance state = running	X	Clear filters		

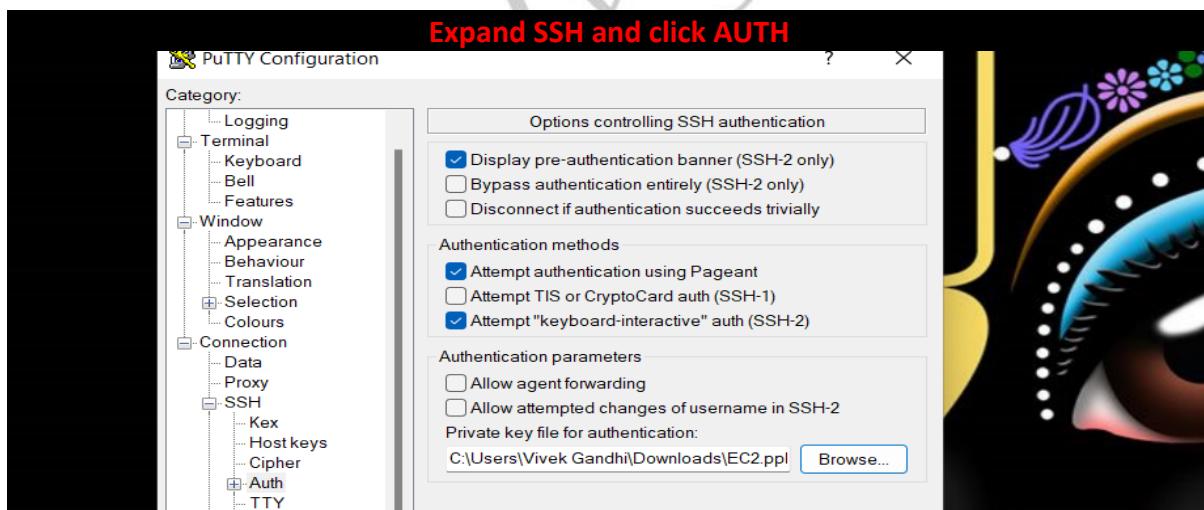
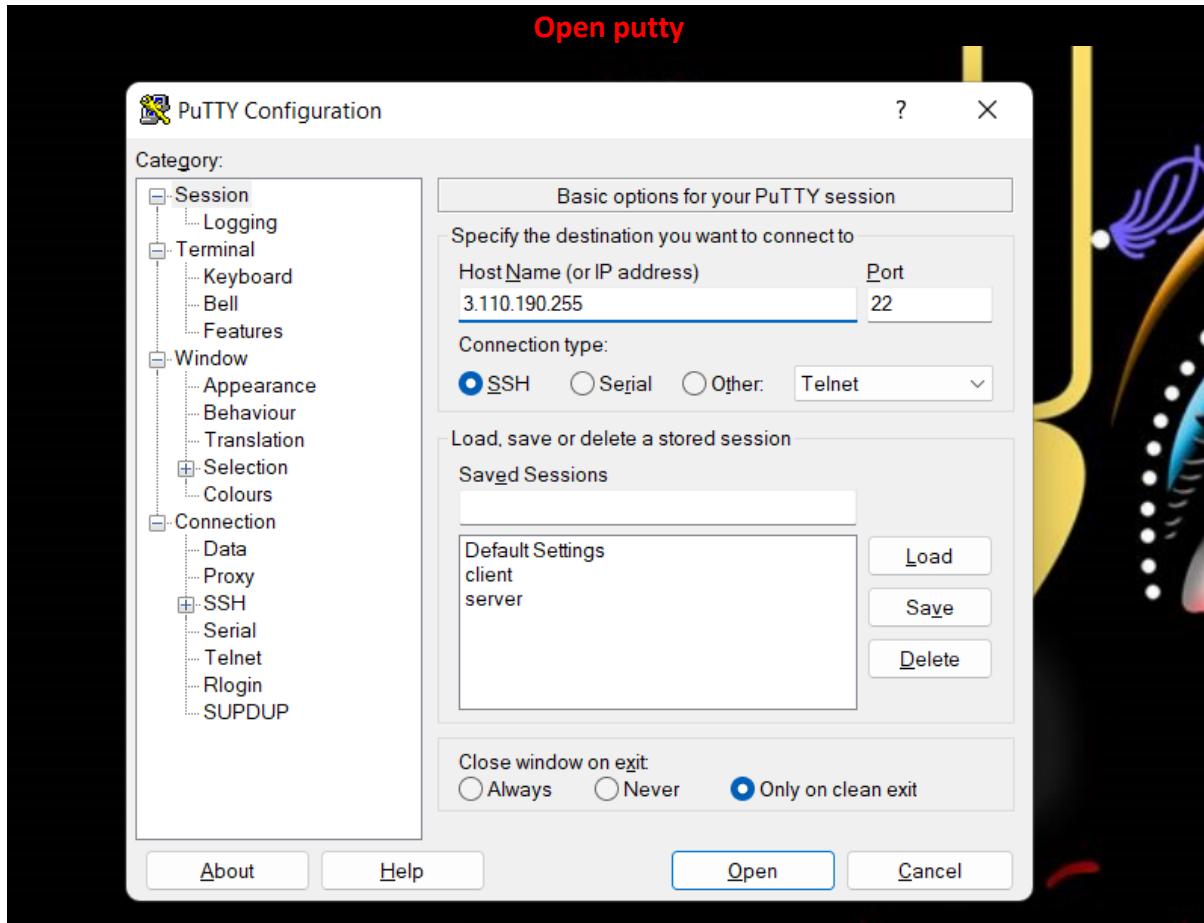
Instance state: Running Instance type: t2.micro Status check: 2/2 checks passed Alarm status: No alarms Availability Zone: ap-south-1a Public IPv4 DNS: ec2-3-110-190

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
Main Copy	i-0bc12764930795c99	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	ec2-3-110-190

Open puttygen (Load → Save Private key)



PROJECT-1



Enter User name

```
root@ip-172-31-35-217:/home/ec2-user
[ec2-user@ip-172-31-35-217 ~]$ login as: ec2-user
[ec2-user@ip-172-31-35-217 ~]$ Authenticating with public key "imported-openssh-key"
[ec2-user@ip-172-31-35-217 ~]$ sudo su
[root@ip-172-31-35-217 ec2-user]#
```

PROJECT-1

Install httpd

```
[root@ip-172-31-35-217 ec2-user]# yum install httpd
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Last metadata expiration check: 0:26:54 ago on Wed 13 Jul 2022 09:46:13 AM UTC.
Dependencies resolved
```

Start services

```
[root@ip-172-31-35-217 ~]# systemctl start httpd
[root@ip-172-31-35-217 ~]# systemctl enable httpd
Created symlink /etc/systemd/system/multi-user.target.wants/httpd.service → /usr/lib/systemd/system/httpd.service.
[root@ip-172-31-35-217 ~]#
```



This page is used to test the proper operation of the HTTP server after it has been installed. If you can read this page, it means that the HTTP server installed at this site is working properly.

If you are a member of the general public:

The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.

If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting www.example.com, you should send e-mail to "webmaster@example.com".

For information on Red Hat Enterprise Linux, please visit the [Red Hat, Inc.](#) website. The documentation for Red Hat Enterprise Linux is [available on the Red Hat, Inc. website](#).

If you are the website administrator:

You may now add content to the webroot directory. Note that until you do so, people visiting your website will see this page, and not your content.

For systems using the Apache HTTP Server: You may now add content to the directory `/var/www/html/`. Note that until you do so, people visiting your website will see this page, and not your content. To prevent this page from ever being used, follow the instructions in the file `/etc/httpd/conf.d/welcome.conf`.

For systems using NGINX: You should now put your content in a location of your choice and edit the `root` configuration directive in the `nginx` configuration file `/etc/nginx/nginx.conf`.



Apache™ is a registered trademark of the Apache Software Foundation in the United States and/or other countries.
NGINX™ is a registered trademark of F5 Networks, Inc.



Install redis service

```
[root@ip-172-31-35-217 ~]# yum install redis
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Last metadata expiration check: 0:30:16 ago on Wed 13 Jul 2022 09:46:13 AM UTC.
Dependencies resolved
```

SEE EFS

```
[root@ip-172-31-35-217 ~]# df -hT
Filesystem          Type      Size  Used Avail Use% Mounted on
devtmpfs            devtmpfs  368M   0  368M  0% /dev
tmpfs               tmpfs    401M   0  401M  0% /dev/shm
tmpfs               tmpfs    401M  16M  386M  4% /run
tmpfs               tmpfs    401M   0  401M  0% /sys/fs/cgroup
/dev/xvda2           xfs     10G  2.7G  7.4G  27% /
fs-046fe96d37d0c50d8.efs.ap-south-1.amazonaws.com:/ nfs4    8.0E   0  8.0E  0% /mnt/efs/efs1
tmpfs               tmpfs    81M   0  81M  0% /run/user/1000
[root@ip-172-31-35-217 ~]#
```

PROJECT-1

4. Create Elastic Cache

Open Elastic cache open

Search results for 'elastic ca'

See all 104 results ▾

Services (104)

Features (182)

Blogs (16,425)

Documentation (455)

Knowledge Articles (30)

ElastiCache In-Memory Cache

Get started

Database and analytics

Amazon ElastiCache

Launch, manage, and scale a distributed in-memory cache

It provides a high performance, resizable, and cost effective in-memory cache, while removing complexity associated with deploying and managing a distributed cache environment. ElastiCache works with both the Redis and Memcached engines.

With a few clicks, you can get started with an Amazon ElastiCache cluster.

Get started

Select redis

ElastiCache dashboard Info

▼ Getting started with ElastiCache
Get started with ElastiCache by following these steps.

1. Initial setup
Before you create an ElastiCache cluster determine the requirements for the cluster and set up VPC.
Learn more Info

2. Create a cluster
Create a Redis or Memcached cluster with just a few clicks. To see which engine works best for you.
Learn more Info

3. Connect with your application
When your cluster is in the available state, you can log into an Amazon EC2 instance and connect to the cluster. Learn more Info

Create VPC Info

Create cluster Info

Create Redis cluster

Create Memcached cluster

Select configure

ElastiCache > Redis clusters > Create

Step 1 Cluster settings Info

Step 2 Advanced settings

Step 3 Review and create

Choose a cluster creation method
Choose one of the following options to create a new cluster.

Configure and create a new cluster
Set all of the configuration options for your new cluster.

Restore from backups
Use an existing backup or .rdb file to restore a cluster.

PROJECT-1

Enabled

Cluster mode

Scale your cluster dynamically with no downtime.

Enabled

Cluster mode enables replication across multiple shards for enhanced scalability and availability.

Disabled

The Redis cluster will have a single shard (node group) with one primary node and up to 5 read replica.

- ⓘ** Enabling cluster mode supports partitioning your data across up to 500 node groups and improves performance of Redis clusters. Some commands are unavailable in this mode. [Learn more](#) ↗

Enter name

Cluster info

Use the following options to configure the cluster.

Name

cache-vivek

The name is required, can have up to 40 characters, and must begin with a letter. It should not end with a hyphen or contain two consecutive hyphens. Valid characters: A-Z, a-z, 0-9, and - (hyphen).

Description - optional

cache-vivek

Add location

Location

Choose whether to host the cluster in the AWS Cloud or on premises.

Location

AWS Cloud

Use the AWS Cloud for your ElastiCache instances.

On premises

Create your ElastiCache instances on an Outpost (through AWS Outposts). You need to create a subnet ID on an Outpost first.

Multi-AZ

Enable

Multi-AZ provides enhanced high availability through automatic failover to a read replica, cross AZs, in case of a primary node failover.

Auto-failover

Enable

ElastiCache Auto Failover provides enhanced high availability through automatic failover to a read replica in case of a primary node failover.

Cluster setting check

Cluster settings

Use the following options to configure the cluster.

Engine version

Version compatibility of the Redis engine that will run on your nodes.

6.2



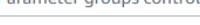
Port

The port number that nodes accept connections on.

6379

Parameter groups

Parameter groups control the runtime properties of your nodes and clusters.



PROJECT-1

Subnet select

Subnet group settings

A subnet group is a collection of subnets (typically private). Designate a subnet group for your clusters running in an Amazon Virtual Private Cloud (VPC) environment.

Subnet groups

Choose existing subnet group

Create a new subnet group

Subnet groups

A collection of subnets that you can designate for your clusters running in an Amazon VPC.

cache (vpc-0f86a7b4f5b69fdf7)

Select placements

Availability Zone placements

Use the following fields to configure placements for Availability Zones.

Slots and keyspaces

Distribution of the 16,384 Redis cluster keyspace slots across shards.

Equal distribution

Availability Zone placements

HA mode - Globally, distribute AZs to maximize AZ spread across shard masters. At the second level, spread nodes within a shard across AZs for within-shard HA. Low latency mode - For fast writes, put all shard masters in the same AZ.

No preference

Shards	Slots/keyspaces	Primary	Replica 1	Replica 2
Shard 1	Equal distribution	No preference	No preference	No preference
Shard 2	Equal distribution	No preference	No preference	No preference
Shard 3	Equal distribution	No preference	No preference	No preference

Cancel

Next

Check file

Step 1
Cluster settings

Advanced settings Info

Step 2
Advanced settings

Security

Use the following section to configure network security and data security for your cluster.

Encryption at rest

Enable

Enables encryption of data stored on disk.

Encryption in transit

Enable

Enables encryption of data that moves between the service and client.

Selected SG

Selected security groups (1)

A security group acts like a firewall that controls network access to your clusters.

Manage

Group ID

▲ Name ▼

sg-08b790c8746f05bb3

default

PROJECT-1

Create successfully

ElastiCache > Redis clusters

Redis clusters (1) [Info](#)

[View details](#) [View metrics](#) [Actions](#) [Create Redis cluster](#)

Find Redis clusters

Cluster name	Status	Description	Cluster mode	Engine versi...	Node type	Shards
cache-vivek	Available...	cache-vivek	On	6.2.6	cache.t2.micro	3

Service start

```
[root@ip-172-31-35-217 ec2-user]# systemctl start redis
[root@ip-172-31-35-217 ec2-user]# systemctl enable redis
Created symlink /etc/systemd/system/multi-user.target.wants/redis.service → /usr/lib/systemd/system/redis.service.
[root@ip-172-31-35-217 ec2-user]#
```

Create and cache create successfully

```
Created symlink /etc/systemd/system/multi-user.target.wants/redis.service → /usr/lib/systemd/system/redis.service.
[root@ip-172-31-35-217 ec2-user]# redis-cli
127.0.0.1:6379> set name vivek
OK
127.0.0.1:6379> get name
"vivek"
127.0.0.1:6379>
```



PROJECT-1

5. CREATE RDS

CREATE DATABASE



Amazon Aurora
Amazon Aurora is a MySQL- and PostgreSQL-compatible enterprise-class database, starting at <\$1/day. Aurora supports up to 64TB of auto-scaling storage capacity, 6-way replication across three availability zones, and 15 low-latency read replicas. [Learn more](#)

Create database

Or, Restore Aurora DB cluster from S3

X

SELECT DB

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](#)

Amazon Aurora



MySQL



MariaDB



PostgreSQL



Oracle

ORACLE®

Microsoft SQL Server



SELECT templates

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](#)

PROJECT-1

Db user name: - vivekdb pw: admin123

DB instance identifier [Info](#)

Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

vivekdb

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

Credentials Settings

Master username [Info](#)

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

vivekdb

1 to 16 alphanumeric characters. First character must be a letter.

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 @ (at sign).

Confirm password [Info](#)

.....

Select instance

Instance configuration

The DB instance configuration options below are limited to those supported by the engine that you selected above.

DB instance class [Info](#)

- Standard classes (includes m classes)
- Memory optimized classes (includes r and x classes)
- Burstable classes (includes t classes)

db.t2.micro

1 vCPUs 1 GiB RAM Not EBS Optimized

Include previous generation classes

Storage

Storage

Storage type [Info](#)

General Purpose SSD (gp2)

Baseline performance determined by volume size

Allocated storage

20

GiB

(Minimum: 20 GiB. Maximum: 16,384 GiB) Higher allocated storage can improve IOPS performance.

i Provisioning less than 100 GiB of General Purpose (SSD) storage for high throughput workloads could result in higher latencies upon exhaustion of the initial General Purpose (SSD) IO credit balance. [Learn more](#) 

Storage autoscaling [Info](#)

Provides dynamic scaling support for your database's storage based on your application's needs.

Enable storage autoscaling

Enabling this feature will allow the storage to increase after the specified threshold is exceeded.

PROJECT-1

Select multi-AZ

Availability & durability

Multi-AZ deployment [Info](#)

- Create a standby instance (recommended for production usage)
Creates a standby in a different Availability Zone (AZ) to provide data redundancy, eliminate I/O freezes, and minimize latency spikes during system backups.
- Do not create a standby instance

SELECT SUBNETS

Connectivity



Virtual private cloud (VPC) [Info](#)

VPC that defines the virtual networking environment for this DB instance.

Default VPC (vpc-0f86a7b4f5b69fdf7)



Only VPCs with a corresponding DB subnet group are listed.

After a database is created, you can't change its VPC.

Subnet group [Info](#)

DB subnet group that defines which subnets and IP ranges the DB instance can use in the VPC you selected.

default-vpc-0f86a7b4f5b69fdf7



PUBLIC ACCESS NO AND SELECT SG

Public access [Info](#)

Yes

Amazon EC2 instances and devices outside the VPC can connect to your database. Choose one or more VPC security groups that specify which EC2 instances and devices inside the VPC can connect to the database.

No

RDS will not assign a public IP address to the database. Only Amazon EC2 instances and devices inside the VPC can connect to your database.

VPC security group

Choose a VPC security group to allow access to your database. Ensure that the security group rules allow the appropriate incoming traffic.

Choose existing

Choose existing VPC security groups

Create new

Create new VPC security group

Existing VPC security groups

Choose VPC security groups



default

► Additional configuration

PROJECT-1

Select Database authentication

Database authentication

Database authentication options [Info](#)

Password authentication

Authenticates using database passwords.

Password and IAM database authentication

Authenticates using the database password and user credentials through AWS IAM users and roles.

Configuration db

▼ Additional configuration

Database options, backup turned off, backtrack turned off, Enhanced Monitoring turned off, maintenance, CloudWatch Logs, delete protection turned off.

Database options

Initial database name [Info](#)

vivekdb

If you do not specify a database name, Amazon RDS does not create a database.

DB parameter group [Info](#)

default.mariadb10.6

Option group [Info](#)

default:mariadb-10-6

Create successfully

Databases

<input checked="" type="radio"/> Group resources		Modify	Actions ▾	Restore from S3	Create database
<input type="text"/> Filter by databases					
DB identifier	Role	Engine	Region & AZ	Size	Status
vivekdb	Instance	MariaDB	ap-south-1b	db.t2.micro	Available

Primary DB

vivekdb

[Modify](#) [Actions ▾](#)

Summary

DB identifier vivekdb	CPU 	Status Available	Class db.t2.micro
Role Instance	Current activity 	Engine MariaDB	Region & AZ ap-south-1b

PROJECT-1

Secondary DB

Amazon Resource Name (ARN)	Not enabled
arn:aws:rds:ap-south-1:659202326636:db:vivekdb	Multi-AZ
Resource ID	Yes
db-DS5XRC7OOPSUWD3A4F7TWJNEAY	Secondary Zone ap-south-1a

Created time
July 13, 2022, 04:38 (UTC+4:38)

Install MariaDB

```
root@ip-172-31-35-217:/home/ec2-user
[root@ip-172-31-35-217 ec2-user]# yum install mariadb
```

Connected successfully

```
root@ip-172-31-35-217:/home/ec2-user
[root@ip-172-31-35-217 ec2-user]# mysql -h vivekdb.c003vi2z6ea3.ap-south-1.rds.amazonaws.com -u vivekdb -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 41
Server version: 10.6.7-MariaDB managed by https://aws.amazon.com/rds/

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| innodb |
| mysql |
| performance_schema |
| sys |
| vivekdb |
+-----+
6 rows in set (0.001 sec)

MariaDB [(none)]>
```

PROJECT-1

6. Create AMI

CREATE IMAGE OPTION

The screenshot shows the AWS EC2 Instances page. A single instance, 'Main Copy' (i-0bc12764930795c99), is listed as 'Running'. The 'Actions' menu is open, and the 'Create image' option is selected.

ENTER NAME

The screenshot shows the 'Create image' configuration page. It includes fields for Instance ID (i-0bc12764930795c99), Image name (VIVEK-AMI), Image description (VIVEK-AMI), and options for 'No reboot' and 'Enable'.

CREATE image

The screenshot shows the 'Create image' confirmation page. It displays volume configuration (EBS, size 10, EBS General Purpose SSD, IOPS 100, Throughput 100, Delete on termination checked, Encrypted checked), a note about snapshot creation, and tag options (Tag image and snapshots together selected).

Create successfully

The screenshot shows the 'Amazon Machine Images (AMIs)' page. A new AMI, 'VIVEK-AMI' (ami-061d44a8f07b23704), has been successfully created and is listed in the table.

Name	AMI ID	AMI name	Source	Owner	Visibility
VIVEK-AMI	ami-061d44a8f07b23704	VIVEK-AMI	659202326636/VIVEK-AMI	659202326636	Private

PROJECT-1

7. Create Application LB for Global Accelerator

Open LB and select create

The screenshot shows the AWS Lambda console with a list of functions. The function 'VIVEK-CLB' is selected, highlighted with a blue border. The table columns include Name, DNS name, State, VPC ID, Availability Zones, and Type. The function details are as follows:

Name	DNS name	State	VPC ID	Availability Zones	Type
VIVEK-CLB	VIVEK-CLB-1553211201.ap...	Active	vpc-0f86a7b4f5b69fd7	ap-south-1a, ap-south-1b	classic

ENTER NAME select Application LB

Create Application Load Balancer Info

The Application Load Balancer distributes incoming HTTP and HTTPS traffic across multiple targets such as Amazon EC2 instances, microservices, and containers, based on request attributes. When the load balancer receives a connection request, it evaluates the listener rules in priority order to determine which rule to apply, and if applicable, it selects a target from the target group for the rule action.

▶ How Application Load Balancers work

Basic configuration

Load balancer name

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

VIVEK-ALB

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

SELECT INTERNET FACING

Scheme Info

Scheme cannot 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.

IP address type Info

Select the type of IP addresses that your subnets use.

IPv4

Recommended for internal load balancers.

Dualstack

Includes IPv4 and IPv6 addresses.

Select AZ

Mappings Info

Select at least one Availability Zone and one subnet for each zone. We recommend selecting at least two Availability Zones. The load balancer will route traffic only to targets in the selected Availability Zones. Zones that are not supported by the load balancer or VPC cannot be selected. Subnets can be added, but not removed, once a load balancer is created.

ap-south-1a

Subnet

subnet-025fe94c95230afa3

D-PUBLIC-AZ1 ▾

IPv4 settings

Assigned by AWS

ap-south-1b

Subnet

subnet-093457fcdb33ad850

D-PUBLIC-AZ3 ▾

IPv4 settings

Assigned by AWS

PROJECT-1

SELECT SG

Security groups [Info](#)

A security group is a set of firewall rules that control the traffic to your load balancer.

Security groups

Select up to 5 security groups



Create new security group [Create](#)

default sg-08b790c8746f05bb3 [X](#)
VPC: vpc-0f86a7b4f5b69fdf7

Create target group

Listeners and routing [Info](#)

A listener is a process that checks for connection requests, using the protocol and port you configure. Traffic received by the listener is then routed per your specification. You can specify multiple rules and multiple certificates per listener after the load balancer is created.

▼ Listener HTTP:80

[Remove](#)

Protocol Port
HTTP : 80
1-65535

Default action [Info](#)
Forward to Select a target group
[Create target group](#)



Select instance

Specify group details

Your load balancer routes requests to the targets in a target group and performs health checks on the targets.

Basic configuration

Settings in this section cannot be changed after the target group is created.

Choose a target type

Instances

- Supports load balancing to instances within a specific VPC.
- Facilitates the use of [Amazon EC2 Auto Scaling](#) to manage and scale your EC2 capacity.

Enter name and select configure

Target group name

vivek-alb

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

Protocol Port

HTTP : 80

VPC

Select the VPC with the instances that you want to include in the target group.

-
vpc-0f86a7b4f5b69fdf7
IPv4: 172.31.0.0/16



Protocol version

HTTP1

Send requests to targets using HTTP/1.1. Supported when the request protocol is HTTP/1.1 or HTTP/2.

HTTP2

Send requests to targets using HTTP/2. Supported when the request protocol is HTTP/2 or gRPC, but gRPC-specific features are not available.

gRPC

Send requests to targets using gRPC. Supported when the request protocol is gRPC.

PROJECT-1

Enter path

Health checks

The associated load balancer periodically sends requests, per the settings below, to the registered targets to test their status.

Health check protocol

HTTP ▾

Health check path

Use the default path of "/" to ping the root, or specify a custom path if preferred.

/index.html

Up to 1024 characters allowed.

Create successfully Target Group

Successfully created target group: vivek-alb

EC2 > Target groups

Target groups (1) [Info](#)

Name	ARN	Port	Protocol	Target type	Load balancer
vivek-alb	arn:aws:elasticloadbalancing:ap-south-1:1565920966:targetgroup/vivek-alb/1-65535	80	HTTP	Instance	None associated

Select Target group

Listeners and routing [Info](#)

A listener is a process that checks for connection requests, using the protocol and port you configure. Traffic received by the listener is then routed per your specification. You can specify multiple rules and multiple certificates per listener after the load balancer is created.

▼ Listener HTTP:80

Protocol	Port	Default action
HTTP	80	Forward to vivek-alb Target type: Instance, IPv4

[Create target group](#)

Create successfully

Create Load Balancer Actions ▾

Filter by tags and attributes or search by keyword

Name	DNS name	State	VPC ID	Availability Zones	Type	Create
VIVEK-ALB	VIVEK-ALB-1565920966.ap...	Active	vpc-0f86a7b4f5b69fdf7	ap-south-1a, ap-south-1b	application	July 14

Summary

Review and confirm your configurations. [Estimate cost](#)

Basic configuration Edit VIVEK-ALB • Internet-facing • IPv4	Security groups Edit alb sg-0a6a8324a4c84e112	Network mapping Edit VPC vpc-0f86a7b4f5b69fdf7 • ap-south-1a subnet-025f94c95230afa3 D-PUBLIC-AZ1 • ap-south-1b subnet-093457fcdb33ad850 D-PUBLIC-AZ3	Listeners and routing Edit • HTTP:80 defaults to vivek-alb
Add-on services Edit AWS Global Accelerator vivek-global	Tags Edit None		
Attributes	<p>Certain default attributes will be applied to your load balancer. You can view and edit them after creating the load balancer.</p>		

[Cancel](#) [Create load balancer](#)

PROJECT-1

8. Create Auto scaling

OPEN launch configuration

EC2 > Launch configurations

Launch configurations (0) [Info](#) [Actions](#) [Copy to launch template](#) [Create launch configuration](#)

Search launch configurations

Name AMI ID Instance type Spot price Creation time

Enter name

Launch configuration name

Name

Select AMI

Amazon machine image (AMI) [Info](#)

AMI

Select instance

Instance type [Info](#)

Instance type [Choose instance type](#)

Create or select SG

Security groups

Search security groups

Security group ID	Name	VPC ID	Description
sg-039fed4b7d2c8a553	instance-sg-1	vpc-0f86a7b4f5b69fdf7	Created by the LIW for EFS at 2022-07-13T14:53:25.487+05:30
sg-04fee8ec6d2104e66	efs-sg-1	vpc-0f86a7b4f5b69fdf7	Created by the LIW for EFS at 2022-07-13T14:53:25.486+05:30
<input checked="" type="checkbox"/> sg-08b790c8746f05bb3	default	vpc-0f86a7b4f5b69fdf7	default VPC security group
sg-0a2c6b95a82269f30	EC2-Main-SG	vpc-0f86a7b4f5b69fdf7	launch-wizard-1 created 2022-07-13T14:50:54.387+05:30

Key pair select

Key pair (login) [Info](#)

Key pair options
Choose an existing key pair

Existing key pair
EC2-MAIN

I acknowledge that I have access to the selected private key file (EC2-MAIN.pem), and that without this file, I won't be able to log into my instance.

[Cancel](#) [Create launch configuration](#)

PROJECT-1

Create successfully and select to create auto scaling

The screenshot shows the AWS EC2 Launch configurations page. A success message at the top says "Create successfully and select to create auto scaling". Below it, the "Launch configurations (1/1)" section displays one entry: "vivek-lc" (Name), "ami-061d44a8f0..." (AMI ID), "t2.micro" (Instance type). The "Actions" dropdown menu is open, showing options like "Create Auto Scaling group", "Delete launch configuration", and "Copy launch configuration". A "Create launch configuration" button is also visible.

Enter name

This is the "Enter name" step in the Auto Scaling Group creation wizard. It asks for the "Auto Scaling group name" and provides a placeholder "Enter a name to identify the group.". The input field contains "vivek-ASG". Below the input field is a note: "Must be unique to this account in the current Region and no more than 255 characters."

Select launch config

This is the "Select launch config" step. It shows a "Launch configuration" section with a dropdown menu set to "vivek-launch". Below this, there's a "Create a launch configuration" link and a table with details: AMI ID (ami-061d44a8f07b23704), Date created (Wed Jul 13 2022 19:23:48 GMT+0530 (India Standard Time)), Instance type (t2.micro), Key pair name (EC2-MAIN), and Security groups (sg-08b790c8746f05bb3). At the bottom are "Cancel" and "Next" buttons.

Select load balance

This is the "Select load balance" step. It has a "Load balancing - optional" section with a note: "Use the options below to attach your Auto Scaling group to an existing load balancer, or to a new load balancer that you define." Three radio button options are shown: "No load balancer" (selected), "Attach to an existing load balancer" (selected), and "Attach to a new load balancer".

PROJECT-1

Select target application

Load balancers

- Application, Network or Gateway Load Balancer target groups

Only instance target groups that belong to the same VPC as your Auto Scaling group are available for selection.

Select target groups

C

vivek-alb | HTTP

Application Load Balancer: VIVEK-ALB



Classic Load Balancers

Next

Health checks - optional

Health check type Info

EC2 Auto Scaling automatically replaces instances that fail health checks. If you enabled load balancing, you can enable ELB health checks in addition to the EC2 health checks that are always enabled.

EC2 ELB

Health check grace period

The amount of time until EC2 Auto Scaling performs the first health check on new instances after they are put into service.

10 seconds

Additional settings - optional

Monitoring Info

Enable group metrics collection within CloudWatch

Default instance warmup Info

The amount of time that CloudWatch metrics for new instances do not contribute to the group's aggregated instance metrics, as their usage data is not reliable yet.

Enable default instance warmup

Cancel

Previous

Skip to review

Next

Select capacity

Group size - optional Info

Specify the size of the Auto Scaling group by changing the desired capacity. You can also specify minimum and maximum capacity limits. Your desired capacity must be within the limit range.

Desired capacity

4

Minimum capacity

4

Maximum capacity

4

Check CPU utilization

Scaling policies - optional

Choose whether to use a scaling policy to dynamically resize your Auto Scaling group to meet changes in demand. Info

Target tracking scaling policy

Choose a desired outcome and leave it to the scaling policy to add and remove capacity as needed to achieve that outcome.

None

Scaling policy name

Target Tracking Policy

Metric type

Average CPU utilization

Target value

80

Instances need

10 seconds warm up before including in metric

Disable scale in to create only a scale-out policy

PROJECT-1

Create successfully

vivek-asg, 1 Scaling policy created successfully

EC2 > Auto Scaling groups

Auto Scaling groups (1/1)								
<input type="checkbox"/>		Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max
<input checked="" type="checkbox"/>	vivek-asg	VIVEK-LC		4	-	4	4	4

See activity

Status	Description	Cause	Start time	End time
Successful	Launching a new EC2 instance: i-013096ee25c28212f	At 2022-07-14T07:33:56Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 4. At 2022-07-14T07:33:58Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 4.	2022 July 14, 01:04:00 PM +05:30	2022 July 14, 01:04:00 PM +05:30
Successful	Launching a new EC2 instance: i-05bca8c251712c148	At 2022-07-14T07:33:56Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 4. At 2022-07-14T07:33:58Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 4.	2022 July 14, 01:04:00 PM +05:30	2022 July 14, 01:04:00 PM +05:30

See instance in different AZ

Auto Scaling groups (1/1)								
<input type="checkbox"/>		Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max
<input checked="" type="checkbox"/>	vivek-asg	VIVEK-LC		4	-	4	4	4
Instance ID	Lifecycle	Instance type	Weighted capacity	Launch template/configur...	Availability Zone			
i-013096ee25c28212f	InService	t2.micro	-	VIVEK-LC	ap-south-1a			
i-05bca8c251712c148	InService	t2.micro	-	VIVEK-LC	ap-south-1a			
i-0cc50a9f6eb1db430	InService	t2.micro	-	VIVEK-LC	ap-south-1b			
i-0efbd65b4f5d7fe7e	InService	t2.micro	-	VIVEK-LC	ap-south-1b			

Also working LB

Automatic create Instances EC1-AZa-ASG for testing

Automatic create Instance EC2-AZb-ASG for testing

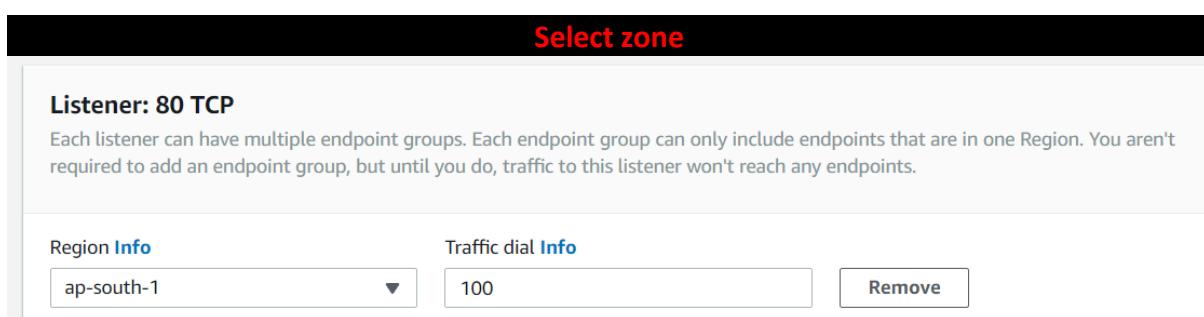
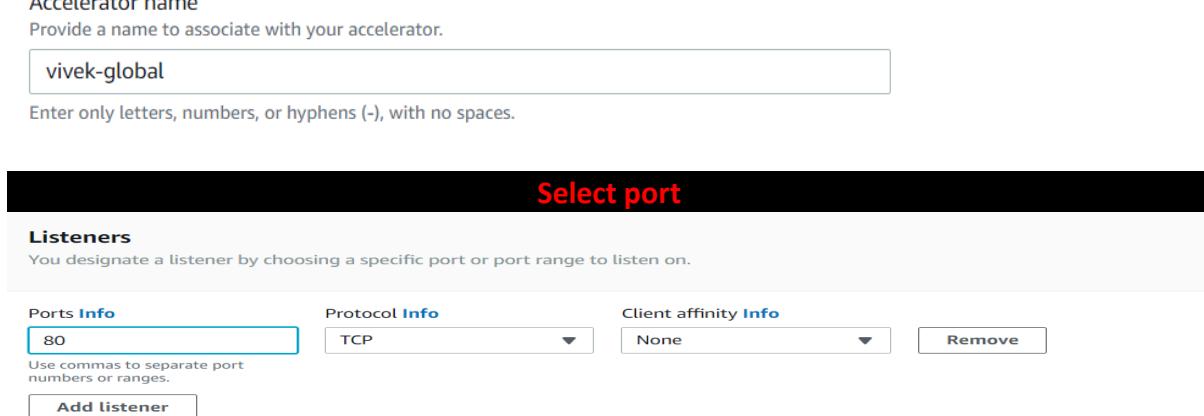
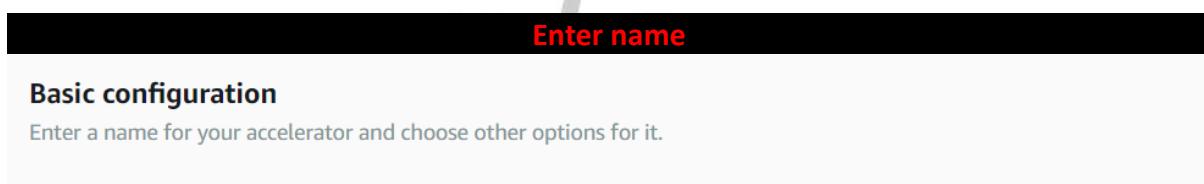
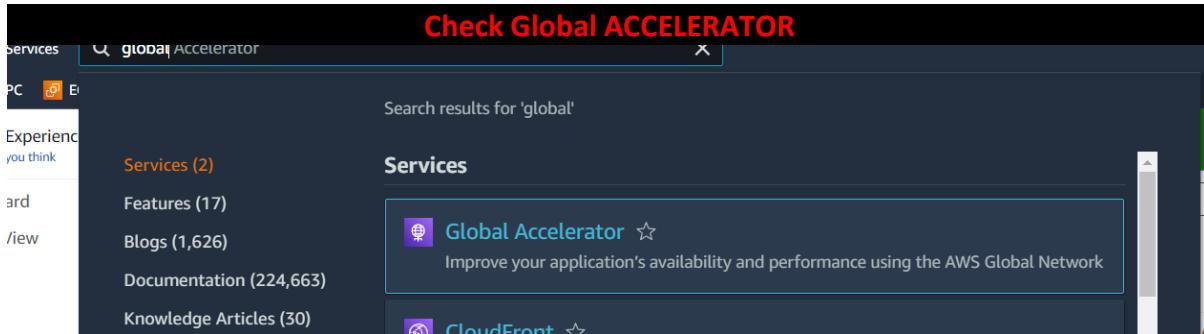
Automatic create Instance EC2-AZa-ASG for testing

Create successfully

Instances (4) Info								
<input type="checkbox"/>		Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
<input type="checkbox"/>		EC1-AZA-ASG	i-013096ee25c28212f	<input checked="" type="radio"/> Running	t2.micro	<input checked="" type="radio"/> 2/2 checks passed	No alarms	+ ap-south-1a ec2-13-126-8'
<input type="checkbox"/>	vivek-asg	i-05bca8c251712c148		<input checked="" type="radio"/> Running	t2.micro	<input checked="" type="radio"/> 2/2 checks passed	No alarms	+ ap-south-1a ec2-52-66-19'
<input type="checkbox"/>	EC1-AZb-ASG	i-0cc50a9f6eb1db430		<input checked="" type="radio"/> Running	t2.micro	<input checked="" type="radio"/> 2/2 checks passed	No alarms	+ ap-south-1b ec2-43-204-2
<input type="checkbox"/>	EC2-AZb-ASG	i-0efbd65b4f5d7fe7e		<input checked="" type="radio"/> Running	t2.micro	<input checked="" type="radio"/> 2/2 checks passed	No alarms	+ ap-south-1b ec2-3-110-42

PROJECT-1

9. Create Global Accelerator



PROJECT-1

Select Endpoint and select Application LB

▼ Endpoint group: ap-south-1

Traffic dial: 100%

Endpoint type Info

Endpoint Info

Weight Info

Application Load Balancer

arn:aws:elasticloadbal...

128

Remove

A number from 0 to 255.

Deployed successfully

Accelerators (1)

View details

Edit

Delete

C

Create accelerator

< 1 > ⌂

vivek-global

Standard

15.197.255.78,
3.33.207.17

On

a55b913f137491036.awsglobalaccelerator.com

Deployed

Thursday, July 14,
2022 10:17 AM
GMT

Copy DNS

vivek-global configuration

Edit

Name
vivek-global

Provisioning status
Deployed

Enabled
On

Static IP address set
IP address
15.197.255.78
3.33.207.17

Address pool
Amazon
Amazon

DNS name Info
a55b913f137491036.awsglobalaccelerator.com

ARN
arn:aws:globalaccelerator::659202326636:accelerat
or/5c139978-47b0-4786-a350-da18bf02069e

Edited
Thursday, July 14, 2022 10:17 AM GMT

Routing type
Standard

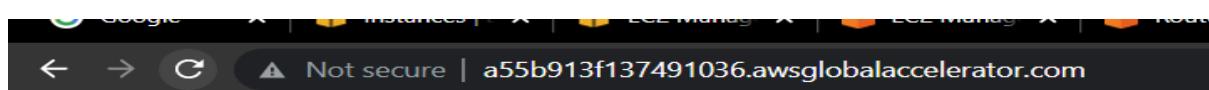
Created
Thursday, July 14, 2022 10:17 AM GMT

Browse and check

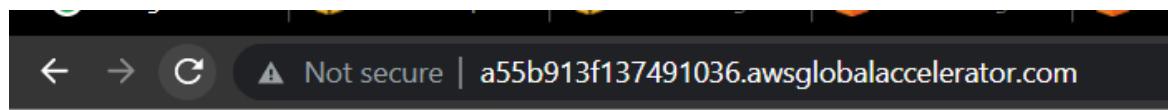


⚠ Not secure | a55b913f137491036.awsglobalaccelerator.com

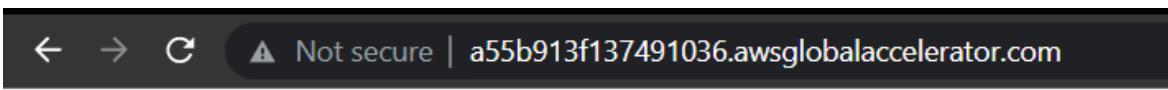
Automatic create Instance EC2-AZb-ASG for testing



Automatic create Instance EC2-AZa-ASG for testing



Automatic create Instance EC1-AZb-ASG for testing



Automatic create Instances EC1-AZa-ASG for testing

PROJECT-1

10. Create ROUTE53

Open Route53

DNS management

A hosted zone tells Route 53 how to respond to DNS queries for a domain such as example.com.

Create hosted zone

Enter domain name

Domain name | [Info](#)
This is the name of the domain that you want to route traffic for.

Valid characters: a-z, 0-9, ! " # \$ % & ' () * + , - / ; < = > ? @ [\] ^ _ ` { } . ~

Description - optional | [Info](#)
This value lets you distinguish hosted zones that have the same name.

Create record select

Public vivekgandhi.tk [Info](#)

Delete zone Test record Configure query logging

Edit hosted zone

Hosted zone details

Records (2) [Info](#)

Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.

Record name	Type	Routing policy	Differentiator	Value/Route traffic to
vivekgandhi.tk	NS	Simple	-	ns-381.awsdns-47.com. ns-1260.awsdns-29.org. ns-765.awsdns-31.net. ns-1853.awsdns-39.co.uk. ns-381.awsdns-47.com. awsdns-hostmaster.amazon.com. 1 7200 900 1209600
vivekgandhi.tk	SOA	Simple	-	

Configure Global ACCELERATOR

Record name | [Info](#)
 vivekgandhi.tk

Keep blank to create a record for the root domain.

Route traffic to [Info](#) Alias

Alias to Global Accelerator

US West (Oregon)

An alias to a Global Accelerator is global and available only in US West (Oregon).

Routing policy | [Info](#)

Evaluate target health
 Yes

PROJECT-1

Create successfully

Record name	Type	Routing policy	Differentiator	Value/Route traffic to
vivekgandhi.tk	A	Simple	-	a55b913f137491036.awsglobalaccelerator.com. ns-381.awsdns-47.com.

By default, create nameserver

vivekgandhi.tk	NS	Simple	-	ns-381.awsdns-47.com. ns-1260.awsdns-29.org. ns-765.awsdns-31.net. ns-1853.awsdns-39.co.uk.
vivekgandhi.tk	SOA	Simple	-	ns-381.awsdns-47.com. awsdns-hostmaster.amazon.com. 1 7200 900 12096

Add nameserver entry

Nameservers

You can change where your domain points to here.
Please be aware changes can take up to 24 hours to propagate.

Use default nameservers (Freenom Nameservers)

Use custom nameservers (enter below)

Nameserver 1
ns-381.awsdns-47.com

Nameserver 2
ns-1260.awsdns-29.org

Nameserver 3
ns-765.awsdns-31.net

Nameserver 4
ns-1853.awsdns-39.co.uk.

Nameserver 5

Change Nameservers

Browse domain

← → ⌂ ▲ Not secure | vivekgandhi.tk

Automatic create Instance EC2-AZb-ASG for testing

← → ⌂ ▲ Not secure | vivekgandhi.tk

Automatic create Instances EC1-AZa-ASG for testing

← → ⌂ ▲ Not secure | vivekgandhi.tk

Automatic create Instance EC2-AZa-ASG for testing

← → ⌂ ▲ Not secure | vivekgandhi.tk

Automatic create Instance EC1-AZb-ASG for testing

PROJECT-1

11. Open S3 in EC2 and put html file

Create Bucket

Storage

Amazon S3

Store and retrieve any amount of data from anywhere

Amazon S3 is an object storage service that offers industry-leading scalability, data availability, security, and performance.

Create a bucket

Every object in S3 is stored in a bucket. To upload files and folders to S3, you'll need to create a bucket where the objects will be stored.

Create bucket

Enter bucket name

General configuration

Bucket name

Bucket name must be unique and must not contain spaces or uppercase letters. [See rules for bucket naming](#)

AWS Region

Copy settings from existing bucket - *optional*

Only the bucket settings in the following configuration are copied.

Choose bucket

ACLs enabled

Object Ownership Info

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

ACLs disabled (recommended)

All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

ACLs enabled

Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

Object Ownership

Bucket owner preferred

If new objects written to this bucket specify the bucket-owner-full-control canned ACL, they are owned by the bucket owner. Otherwise, they are owned by the object writer.

Object writer

The object writer remains the object owner.

PROJECT-1

Access all

Block all public access

Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

Block public access to buckets and objects granted through **new access control lists (ACLs)**

S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.

Block public access to buckets and objects granted through **any access control lists (ACLs)**

S3 will ignore all ACLs that grant public access to buckets and objects.

Block public access to buckets and objects granted through **new public bucket or access point policies**

S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.

Block public and cross-account access to buckets and objects through **any public bucket or access point policies**

S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.



Turning off block all public access might result in this bucket and the objects within becoming public

AWS recommends that you turn on block all public access, unless public access is required for specific and verified use cases such as static website hosting.

I acknowledge that the current settings might result in this bucket and the objects within becoming public.

Create Bucket

► Advanced settings

ⓘ After creating the bucket you can upload files and folders to the bucket, and configure additional bucket settings.

Cancel

Create bucket

Create successfully

Buckets (1) [Info](#)

Buckets are containers for data stored in S3. [Learn more](#)

[Copy ARN](#) [Empty](#) [Delete](#) [Create bucket](#)

Find buckets by name

< 1 >

Name	AWS Region	Access	Creation date
vivekgandhi.tk	Asia Pacific (Mumbai) ap-south-1	Objects can be public	July 14, 2022, 16:23:01 (UTC+05:30)

Open cmd and connected aws

```
C:\Users\Vivek Gandhi>aws configure
AWS Access Key ID [*****PAT]: AKIAZS64FIBWAHKYQPU
AWS Secret Access Key [*****KDUu]: 9Tc1I8lCt4kZLmYRdwyw5dnKs9H2feIIdpjIhhuV
Default region name [us-east-1]:
Default output format [None]:
```

PROJECT-1

Open Object and upload

Objects (0)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

	C	Copy S3 URI	Copy URL	Download	Open	Delete	Actions	Create folder	Upload						
<input type="text"/> Find objects by prefix															
<table border="1"> <thead> <tr> <th><input type="checkbox"/></th> <th>Name</th> <th>Type</th> <th>Last modified</th> <th>Size</th> <th>Storage class</th> </tr> </thead> </table>										<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class										

Upload successful

Objects (2)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

	C	Copy S3 URI	Copy URL	Download	Open	Delete	Actions	Create folder	Upload																		
<input type="text"/> Find objects by prefix																											
<table border="1"> <thead> <tr> <th><input type="checkbox"/></th> <th>Name</th> <th>Type</th> <th>Last modified</th> <th>Size</th> <th>Storage class</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td>error.html</td> <td>html</td> <td>July 14, 2022, 16:44:40 (UTC+05:30)</td> <td>0 B</td> <td>Standard</td> </tr> <tr> <td><input type="checkbox"/></td> <td>index.html</td> <td>html</td> <td>July 14, 2022, 16:44:40 (UTC+05:30)</td> <td>64.0 B</td> <td>Standard</td> </tr> </tbody> </table>										<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class	<input type="checkbox"/>	error.html	html	July 14, 2022, 16:44:40 (UTC+05:30)	0 B	Standard	<input type="checkbox"/>	index.html	html	July 14, 2022, 16:44:40 (UTC+05:30)	64.0 B	Standard
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<input type="checkbox"/>	index.html	html	July 14, 2022, 16:44:40 (UTC+05:30)	64.0 B	Standard																						

Create make public

Objects	Properties	Permissions	Metrics	Management	Access Points																		
Objects (2)																							
Objects are the fundamental entities stored in Amazon S3. You can use Amazon S3 inventory to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. Learn more																							
<table border="1"> <thead> <tr> <th>C</th> <th>Copy S3 URI</th> <th>Copy URL</th> <th>Download</th> <th>Open</th> <th>Delete</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td>error.html</td> <td>html</td> <td>July 14, 2022, 16:44:40 (UTC+05:30)</td> <td>0 B</td> <td>Standard</td> </tr> <tr> <td><input type="checkbox"/></td> <td>index.html</td> <td>html</td> <td>July 14, 2022, 16:44:40 (UTC+05:30)</td> <td>64.0 B</td> <td>Standard</td> </tr> </tbody> </table>						C	Copy S3 URI	Copy URL	Download	Open	Delete	<input type="checkbox"/>	error.html	html	July 14, 2022, 16:44:40 (UTC+05:30)	0 B	Standard	<input type="checkbox"/>	index.html	html	July 14, 2022, 16:44:40 (UTC+05:30)	64.0 B	Standard
C	Copy S3 URI	Copy URL	Download	Open	Delete																		
<input type="checkbox"/>	error.html	html	July 14, 2022, 16:44:40 (UTC+05:30)	0 B	Standard																		
<input type="checkbox"/>	index.html	html	July 14, 2022, 16:44:40 (UTC+05:30)	64.0 B	Standard																		
Actions Create folder Upload																							

Copy URL to check Browse or not

Last modified	https://s3.ap-south-1.amazonaws.com/vivekgandhi.tk/index.html
July 14, 2022, 16:44:40 (UTC+05:30)	
Size	
64.0 B	

Open HTML file

← → C <https://s3.ap-south-1.amazonaws.com/vivekgandhi.tk/index.html>

This is test file S3 index file to connect Cloudfront to route53

Create static website

Click to properties

vivekgandhi.tk [Info](#)

Objects	Properties	Permissions	Metrics	Management	Access Points
-------------------------	----------------------------	-----------------------------	-------------------------	----------------------------	-------------------------------

PROJECT-1

Edit static web

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#)

Edit

Static website hosting

Disabled

configure

Static website hosting

- Disable
- Enable

Hosting type

- Host a static website
Use the bucket endpoint as the web address. [Learn more](#)
- Redirect requests for an object
Redirect requests to another bucket or domain. [Learn more](#)

i For your customers to access content at the website endpoint, you must make all your content publicly readable. To do so, you can edit the S3 Block Public Access settings for the bucket. For more information, see [Using Amazon S3 Block Public Access](#)

Index document

Specify the home or default page of the website.

index.html

Error document - *optional*

This is returned when an error occurs.

error.html

Create successfully

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#)

Edit

Static website hosting

Enabled

Hosting type

Bucket hosting

Bucket website endpoint

When you configure your bucket as a static website, the website is available at the AWS Region-specific website endpoint of the bucket. [Learn more](#)

 <http://vivekgandhi.tk.s3-website.ap-south-1.amazonaws.com>

Browse static

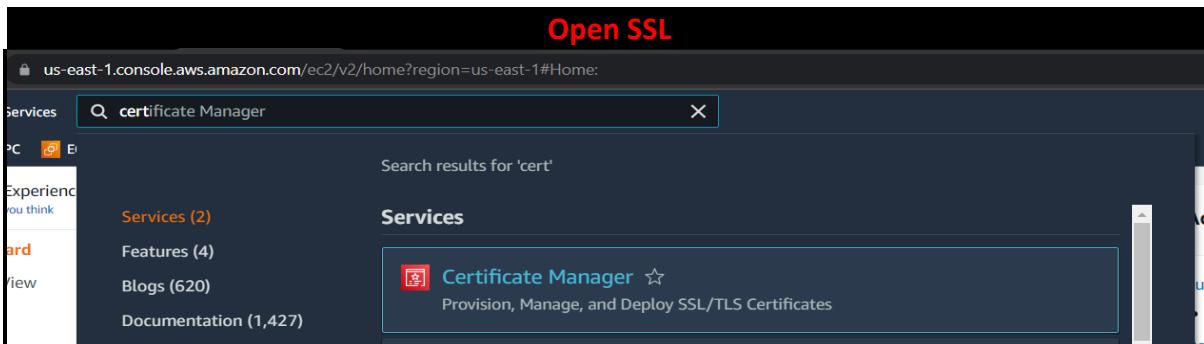


 Not secure | vivekgandhi.tk.s3-website-us-east-1.amazonaws.com

This is test file S3 index file to connect Cloudfront to route53

PROJECT-1

12. Configure SSL



Select public

AWS Certificate Manager > Certificates > Request certificate

Request certificate

Certificate type Info
ACM certificates can be used to establish secure communications access across the internet or within an internal network. Choose the type of certificate for ACM to provide.

Request a public certificate
Request a public SSL/TLS certificate from Amazon. By default, public certificates are trusted by browsers and operating systems.

Request a private certificate
No private CAs available for issuance.

Requesting a private certificate requires the creation of a private certificate authority (CA). To create a private CA, visit [AWS Private Certificate Authority](#)

[Cancel](#) [Next](#)

Enter domain name

Domain names

Fully qualified domain name Info

Add another name to this certificate
You can add additional names to this certificate. For example, if you're requesting a certificate for "www.example.com", you might want to add the name "example.com" so that customers can reach your site by either name.

Select DNS and save

Select validation method Info
Select a method for validating domain ownership

DNS validation - recommended
Choose this option if you are authorized to modify the DNS configuration for the domains in your certificate request.

Email validation
Choose this option if you do not have permission or cannot obtain permission to modify the DNS configuration for the domains in your certificate request.

Tags Info
To help you manage your certificates you can optionally assign your own metadata to each resource in the form of tags.

Tag key Tag value - optional [Remove tag](#)

Add tag
You can add 49 more tag(s).

[Cancel](#) [Previous](#) [Request](#)

PROJECT-1

Create successfully but status pending

Domains (1)

Domain	Status	Renewal status	Type	CNAME name	CNAME value
www.vivekgandhi.tk	Pending validation	-	CNAME	_6984025345ca545763a2bd73a7c884	_634dd951d63ec63c7a955d8b8872cd22.bwfqbhrlkg.acm-validations.aws.

Enter Certificate and click to add route 53

Create DNS records in Amazon Route 53 (1/1)

<input type="checkbox"/>	Domain	Validation status	Type	CNAME name	CNAME value	Is domain in Route 53?
<input checked="" type="checkbox"/>	www.vivekgandhi.tk	Pending validation	CNAME	_6984025345ca545763a2bd73a7c884	_634dd951d63ec63c7a955d8b8872cd22.bwfqbhrlkg.acm-validations.aws.	Yes

[Cancel](#) [Create records](#)

Check Route 53 entry

Records (3) Info

Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.

<input type="checkbox"/>	Record name	Type	Routing policy	Differentiator	Value/Route traffic to
<input type="checkbox"/>	vivekgandhi.tk	NS	Simple	-	ns-381.awsdns-47.com. ns-1260.awsdns-29.org. ns-765.awsdns-31.net. ns-1853.awsdns-39.co.uk.
<input type="checkbox"/>	vivekgandhi.tk	SOA	Simple	-	ns-381.awsdns-47.com. awsdns-hostmaster.amazon.com. 1 7200 900 120960
<input type="checkbox"/>	_6984025345ca...	CNAME	Simple	-	_634dd951d63ec63c7a955d8b8872cd22.bwfqbhrlkg.acm-validations.aws.

Successfully create

AWS Certificate Manager > Certificates

Certificates (2)

<input type="checkbox"/>	Certificate ID	Domain name	Type	Status	In use?	Renewal eligibility
<input type="checkbox"/>	bea18a13-bfda-47f5-907b-cc1c053979c5	www.vivekgandhi.tk	Amazon Issued	Issued	No	Ineligible

PROJECT-1

13. Configure Cloud front

Create

Networking & Content Delivery

Amazon CloudFront

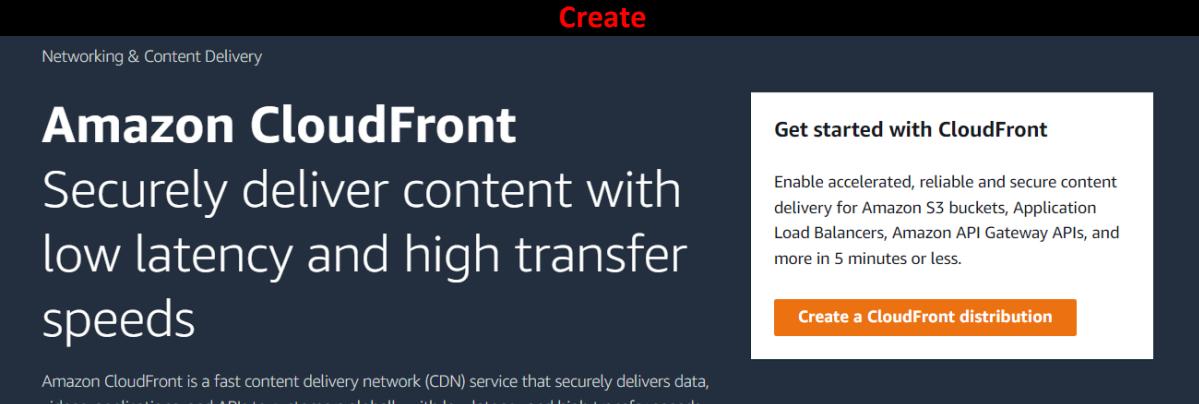
Securely deliver content with low latency and high transfer speeds

Amazon CloudFront is a fast content delivery network (CDN) service that securely delivers data, videos, applications, and APIs to customers globally with low latency and high transfer speeds.

Get started with CloudFront

Enable accelerated, reliable and secure content delivery for Amazon S3 buckets, Application Load Balancers, Amazon API Gateway APIs, and more in 5 minutes or less.

Create a CloudFront distribution



Enter origin S3 domain

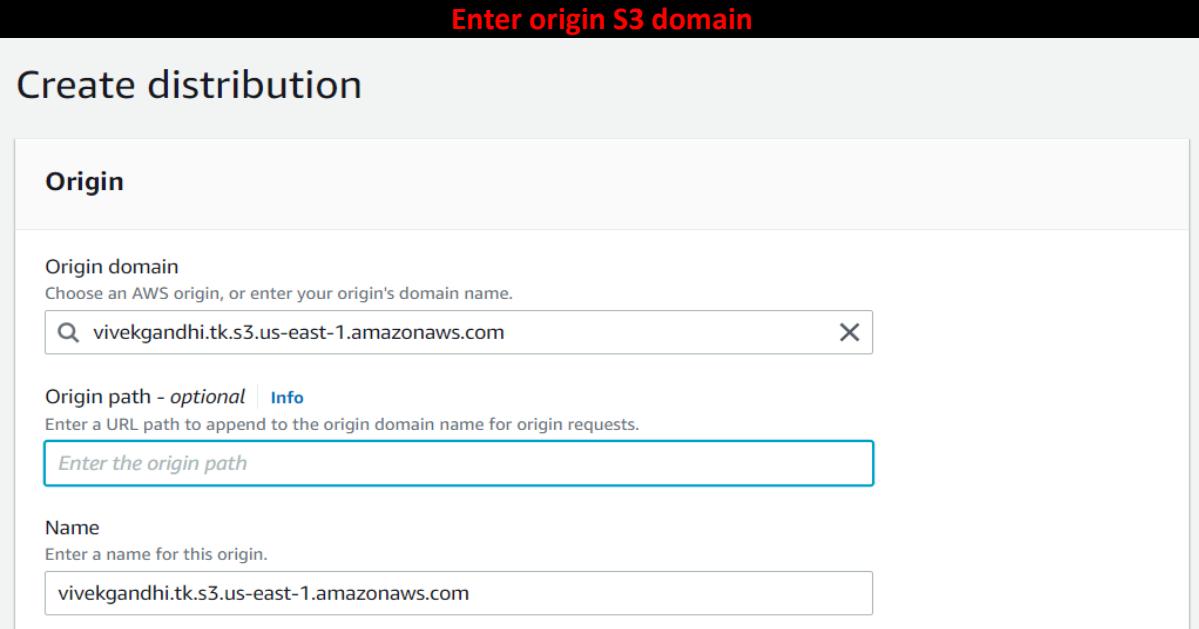
Create distribution

Origin

Origin domain
Choose an AWS origin, or enter your origin's domain name.
 X

Origin path - optional Info
Enter a URL path to append to the origin domain name for origin requests.

Name
Enter a name for this origin.



Redirect secure http

Viewer protocol policy

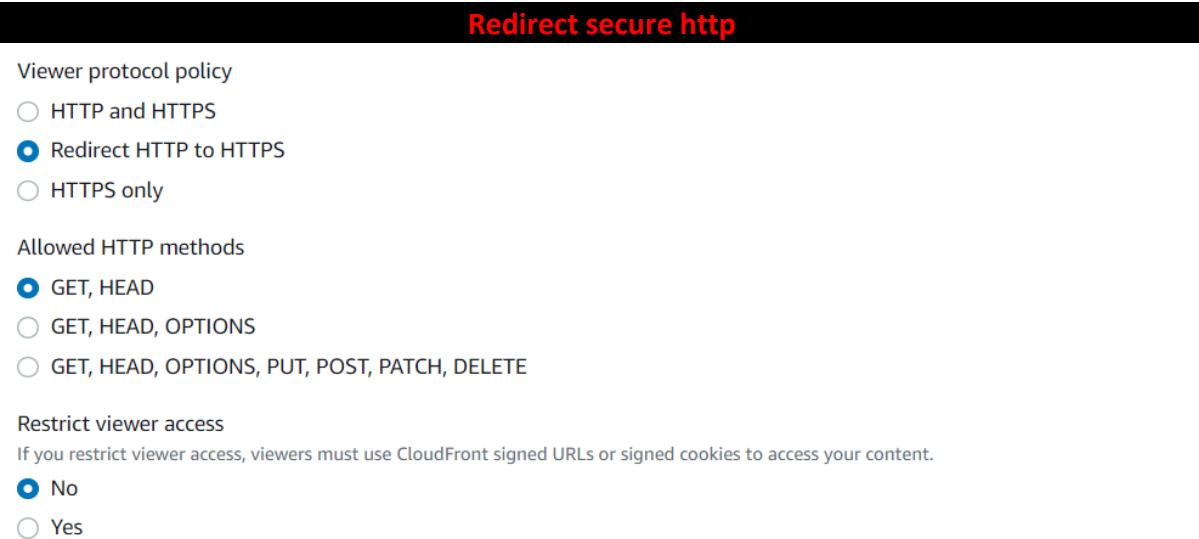
HTTP and HTTPS
 Redirect HTTP to HTTPS
 HTTPS only

Allowed HTTP methods

GET, HEAD
 GET, HEAD, OPTIONS
 GET, HEAD, OPTIONS, PUT, POST, PATCH, DELETE

Restrict viewer access
If you restrict viewer access, viewers must use CloudFront signed URLs or signed cookies to access your content.

No
 Yes



PROJECT-1

Configure as it is

Cache key and origin requests

We recommend using a cache policy and origin request policy to control the cache key and origin requests.

- Cache policy and origin request policy (recommended)
- Legacy cache settings

Cache policy

Choose an existing cache policy or create a new one.

CachingOptimized	Recommended for S3 origins ▾
Default policy when CF compression is enabled	



[Create policy](#) [View policy](#)

Origin request policy - optional

Choose an existing origin request policy or create a new one.

Select origin policy	▼
----------------------	---



[Create policy](#)

Response headers policy - optional

Choose an existing response headers policy or create a new one.

Select response headers	▼
-------------------------	---



[Create policy](#)

► Additional settings

Enter domain name and add ssl

Alternate domain name (CNAME) - optional

Add the custom domain names that you use in URLs for the files served by this distribution.

[Remove](#)

[Add item](#)

To add a list of alternative domain names, use the [bulk editor](#).

Custom SSL certificate - optional

Associate a certificate from AWS Certificate Manager. The certificate must be in the US East (N. Virginia) Region (us-east-1).

www.vivekgandhi.tk (bea18a13-bfda-47f5-907b-cc1c053979c5)	▼
---	---



[www.vivekgandhi.tk](#) [Request certificate](#)

Legacy clients support - \$600/month prorated charge applies. Most customers do not need this.

CloudFront allocates dedicated IP addresses at each CloudFront edge location to serve your content over HTTPS.

Enabled

Security policy

The security policy determines the SSL or TLS protocol and the specific ciphers that CloudFront uses for HTTPS connections with viewers (clients).

TLSv1.2_2021 (recommended)

TLSv1.2_2019

TLSv1.2_2018

TLSv1.1_2016

TLSv1_2016

TLSv1

PROJECT-1

Enter html name

Default root object - *optional*

The object (file name) to return when a viewer requests the root URL (/) instead of a specific object.

index.html

Standard logging

Get logs of viewer requests delivered to an Amazon S3 bucket.

Off

On

IPv6

Off

On

Description - *optional*

Cancel

Create distribution

Create successfully

CloudFront > Distributions

Distributions (1) <small>Info</small>						
	ID	Description	Domain name	Alternate domain ...	Origins	Status
	E12Q3AZQ50WT21	-	d1dblzbmosjjg6.cloud...	www.vivekgandhi.tk	vivekgandhi.tk.s3.us-east-1.amazonaws.com	 Enabled

Copy DNS

E12Q3AZQ50WT21

General | Origins | Behaviors | Error pages | Geographic restrictions | Invalidations | Tags

Details

Distribution domain name
 d1dblzbmosjjg6.cloudfront.net

ARN
 arn:aws:cloudfront::659202326636:distribution/E12Q3AZQ50WT21

Last modified
July 15, 2022 at 2:14:09 AM UTC

BROWSE DNS working or not SSL apply

← → C  https://d1dblzbmosjjg6.cloudfront.net
 AWS LAB  <https://d1dblzbmosjjg6.cloudfront.net>

← → C  d1dblzbmosjjg6.cloudfront.net

This is test file S3 index file to connect Cloudfront to route53

PROJECT-1

14. Integrate Cloud front to route 53

Create Record

Public vivekgandhi.tk [Info](#)

Hosted zone details

Records (4) DNSSEC signing Hosted zone tags (0)

Records (4) [Info](#)
Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.

[C](#) Delete record Import zone file Create record

Configuration

Record 1

Record name [Info](#) .vivekgandhi.tk
Keep blank to create a record for the root domain.

Record type [Info](#) A – Routes traffic to an IPv4 address and some AWS resources

Route traffic to [Info](#) Alias

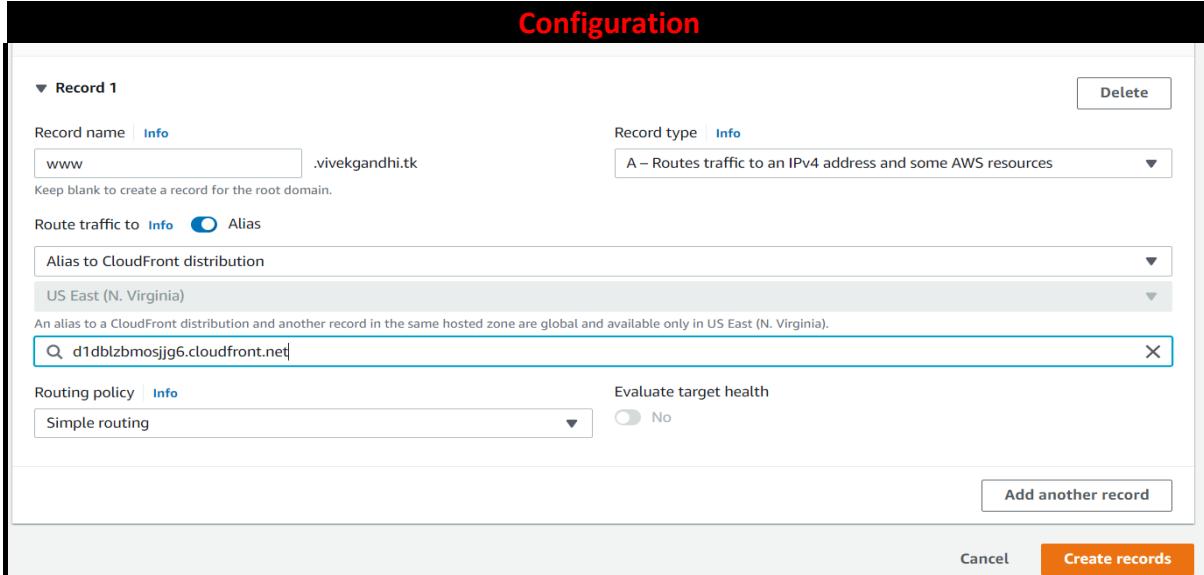
Alias to CloudFront distribution
US East (N. Virginia)
An alias to a CloudFront distribution and another record in the same hosted zone are global and available only in US East (N. Virginia).

Q d1dblzbmosjjg6.cloudfront.net X

Routing policy [Info](#) Evaluate target health
Simple routing No

Add another record

Cancel Create records



Check to browse Domain with SSL used [www.vivekgandhi.tk domain](https://www.vivekgandhi.tk)

← → C 🔒 https://www.vivekgandhi.tk

This is test file S3 index file to connect Cloudfront to route53

Also work Global Route53 without SSL used [vivekgandhi.tk domain](http://vivekgandhi.tk)

← → C ⚠ Not secure | vivekgandhi.tk

Automatic create Instance EC2-AZb-ASG for testing

← → C ⚠ Not secure | vivekgandhi.tk

Automatic create Instances EC1-AZa-ASG for testing

← → C ⚠ Not secure | vivekgandhi.tk

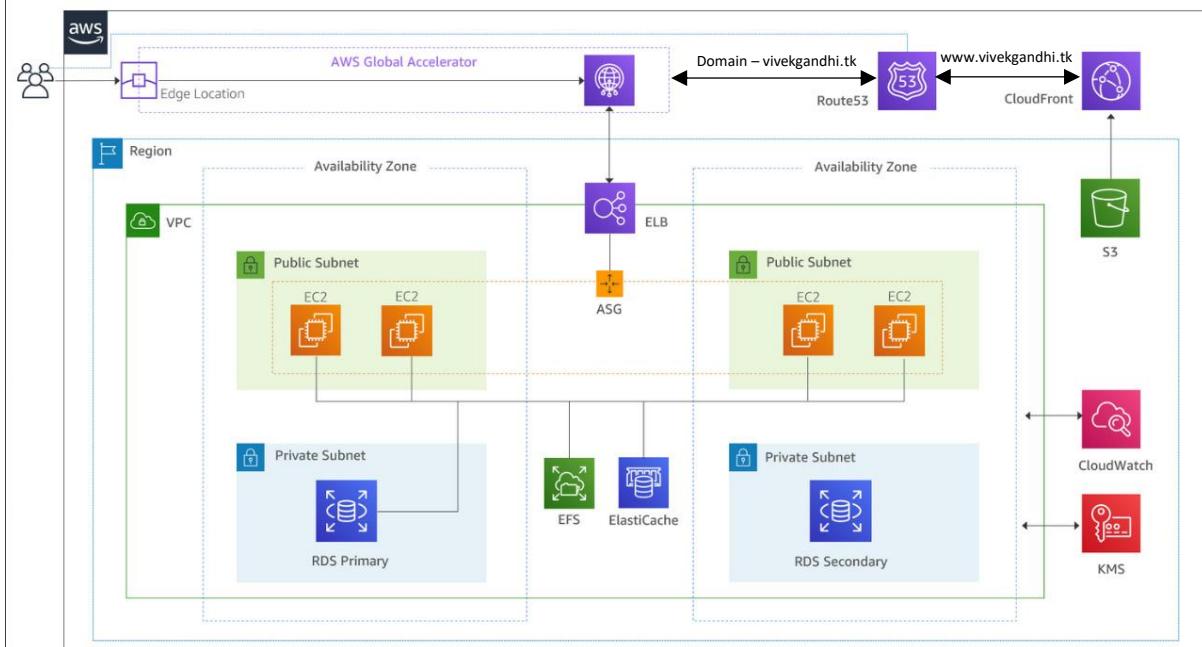
Automatic create Instance EC2-AZa-ASG for testing

← → C ⚠ Not secure | vivekgandhi.tk

Automatic create Instance EC1-AZb-ASG for testing

PROJECT-1

Final Project Summary



All Main Configure Points

1. Create EFS
2. Create KMS (if configure Autoscaling not create instance)
3. Create EC2 INSTANCES with Attached EFS for create Main AMI
4. Create Elastic Cache and configure EC2 instance connectivity checked
5. CREATE RDS and configure EC2 instance connectivity checked
6. Create AMI (Installation service → Httpd, Redis, MariaDB)
7. Create Application LB for global Accelerator
8. Create Auto scaling
9. Create Global Accelerator WITH Integrate Application lb
10. Create ROUTE53 with Integrate Global Accelerator
11. Open S3 in EC2 and put html file
12. Configure SSL attached route53
13. Configure Cloud front attached S3 DNS and SSL certificate
14. Create Route53 Integrate to Cloud front

DOMAIN USED

1. **vivekgandhi.tk** → Redirect Global Accelerator DNS → Redirect ALB → Redirect ASG
2. **www.vivekgandhi.tk** → Redirect Cloud Front → Redirect static website → Redirect S3