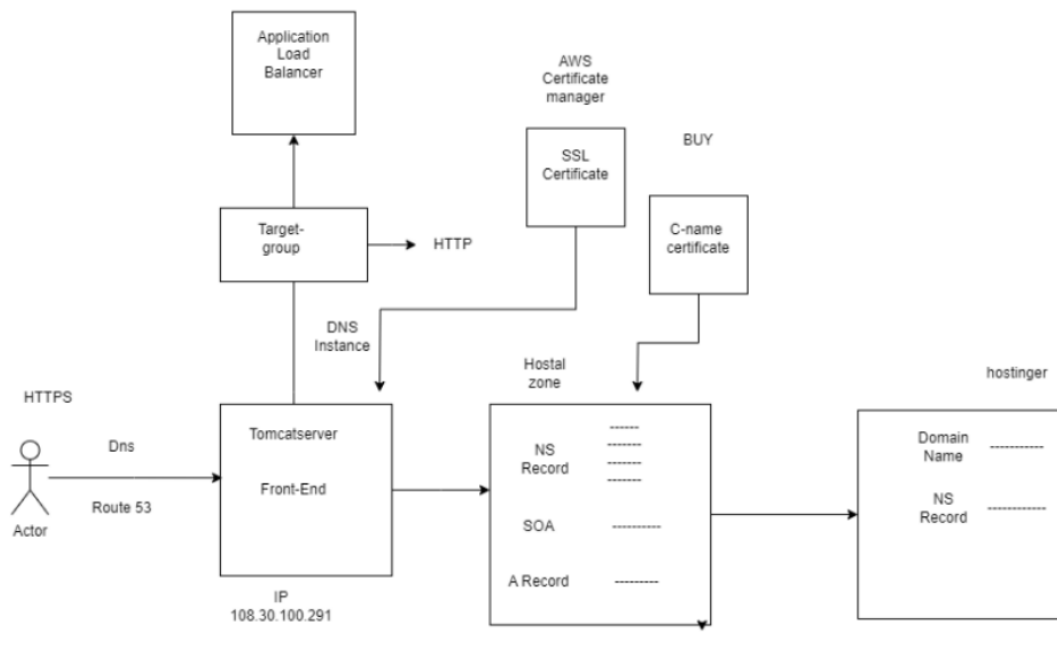


Route 53

Amazon Route 53 is a highly available and scalable cloud domain name system (DNS) service. Enables to customize DNS routing policies to reduce latency.

With Amazon Route 53, you can create and manage your public DNS records.

It is essential for conversion of user-friendly domain names into IP addresses so that internet communication can proceed without difficulties.



Create EC2 Instance

Make changes in security group → Whitelist SSH, HTTP & HTTPS

The screenshot shows the AWS Management Console interface for editing inbound rules on a security group. The page title is "Edit inbound rules" and it includes a sub-header "Inbound rules control the incoming traffic that's allowed to reach the instance." Below this, there is a table of inbound rules. The table has columns for Security group rule ID, Type, Protocol, Port range, Source, and Description - optional. There are three rules listed: one for SSH (port 22), one for HTTPS (port 443), and one for HTTP (port 80). Each rule has a "Delete" button next to it. At the bottom of the table, there is an "Add rule" button. A warning message at the bottom of the page states: "Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only."

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-02b31f541dbaadb8	SSH	TCP	22	Custom	
sgr-0e60c2b3ad795717c	HTTPS	TCP	443	Custom	
sgr-0d0540144ca04fe9b	HTTP	TCP	80	Custom	

Connect to Instance Terminal

Install server-

```
$ sudo apt install apache2
```

Now change path to **/var/www/html** & **remove (delete) index.html** file that already presented.

```
$ sudo rm index.html
```

```
ubuntu@ip-172-31-2-121:~$ cd /var/www/html/  
ubuntu@ip-172-31-2-121:/var/www/html$ ls  
index.html  
ubuntu@ip-172-31-2-121:/var/www/html$ sudo rm index.html  
ubuntu@ip-172-31-2-121:/var/www/html$
```

Go to Home directory & download CSS Template-

```
$ wget https://www.free-css.com/assets/files/free-css-templates/download/page288/global.zip
```

Install Unzip-

```
$ sudo apt install unzip
```

Now, unzip CSS Template-

```
$ unzip global.zip
```

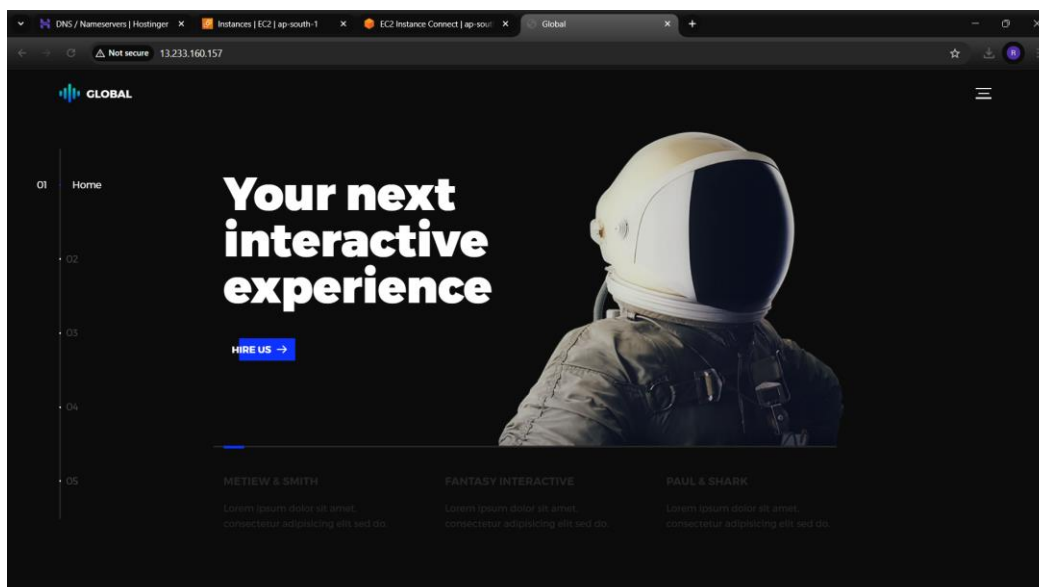
Then move unzipped file **contains only** to /var/www/html/

```
$ sudo mv global-master/* /var/www/html/
```

Check for files-

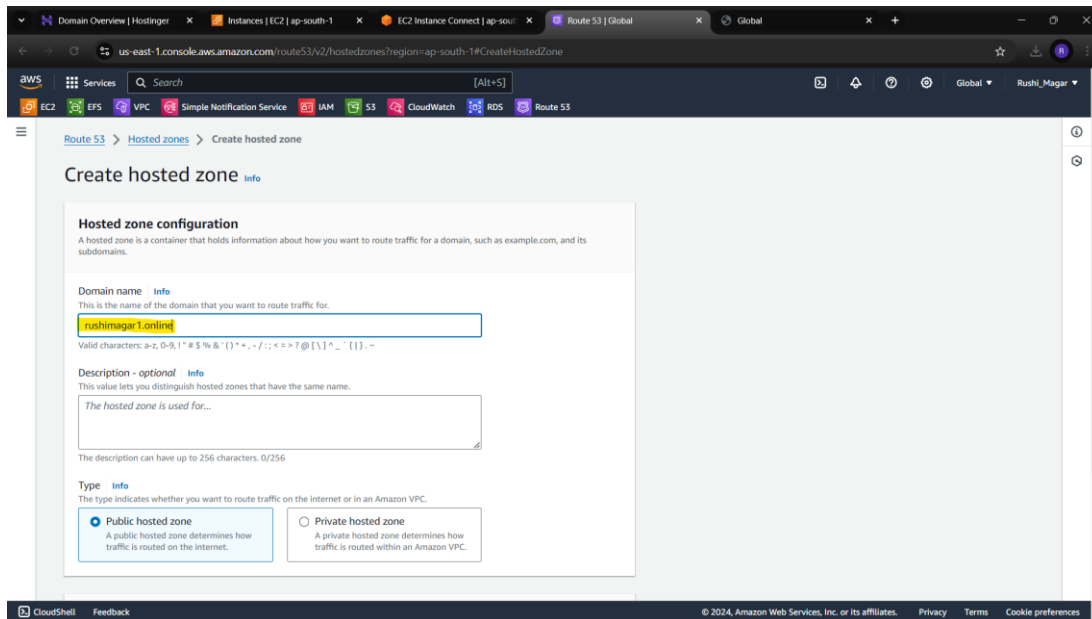
```
cd /var/www/html/
```

Finally, with public IP check its working properly or not-

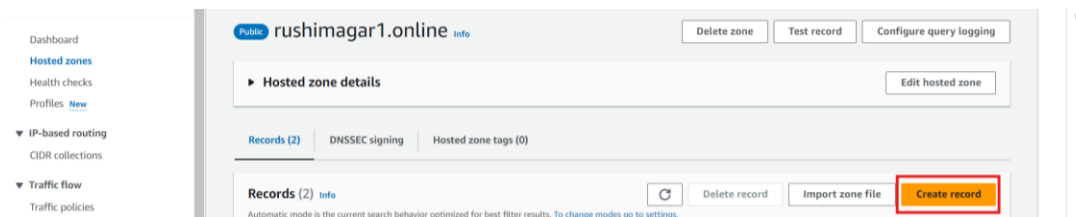


Route 53 service

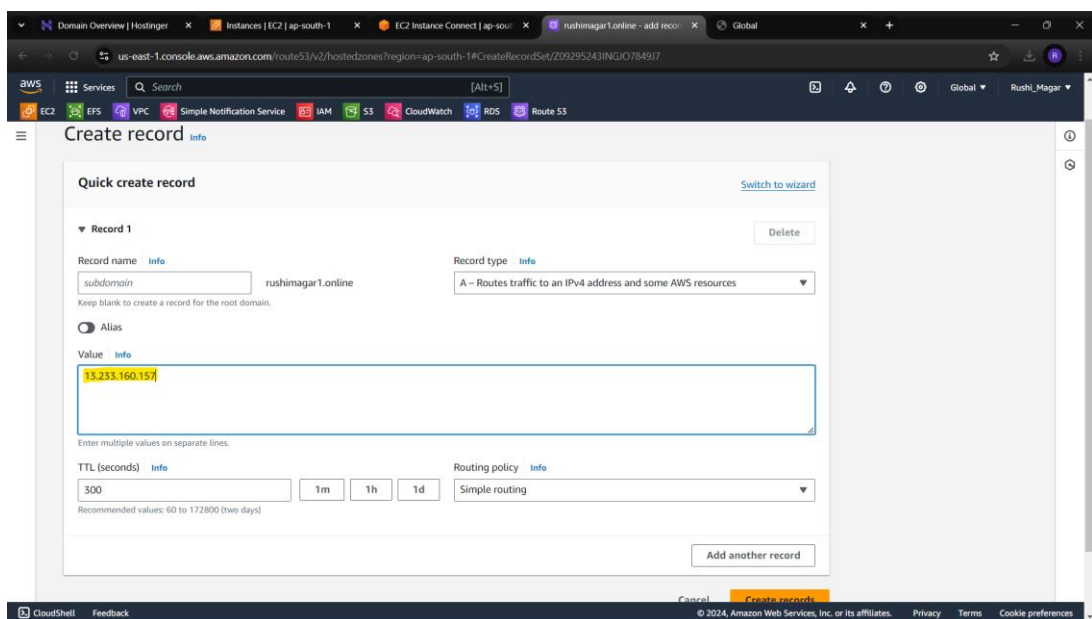
Create Hosted Zone → mention only your Domain Name → Create



Create a new record



Add Public IP only → Create Record (A certificate)



NS (Name Server) Records-

Records (3)

DNSSEC signing

Hosted zone tags (0)

Records (1/3) Info

Refresh

Delete record

Import zone file

Create record

The following table lists the existing records in rushimagar1.online. You can't delete the SOA record or the NS record named rushimagar1.online.

Type ▼ Routing policy ▼ Alias ▼

< 1 > ⚙

	Record ... ▼	Type ▼	Routin... ▼	Differ... ▼	Alias ▼	Value/Route to
<input type="checkbox"/>	rushimag...	A	Simple	-	No	13.233.160.15
<input checked="" type="checkbox"/>	rushimag...	NS	Simple	-	No	ns-1317.awsdns-36.org. ns-752.awsdns-30.net. ns-40.awsdns-05.com. ns-1554.awsdns-02.co.uk.
<input type="checkbox"/>	rushimag...	SOA	Simple	-	No	ns-1317.awsdns-36.org.

Record name

rushimagar1.online

Record type

NS

Value

ns-1317.awsdns-36.org.
ns-752.awsdns-30.net.
ns-40.awsdns-05.com.
ns-1554.awsdns-02.co.uk.

Alias

No

TTL (seconds)

172800

Routing policy

Simple

Assing these Value to Hostinger → Manage → DNS/Nameservers

hpanel.hostinger.com/domain/rushimagar1.online/dns

HOSTINGER

< Main menu

Domain Overview

DNS / Nameservers

Domain Ownership

Select Nameservers

☐ Use Hostinger nameservers (recommended)

☒ Change nameservers

ns-1317.awsdns-36.org

ns-752.awsdns-30.net

ns-40.awsdns-05.com

ns-1554.awsdns-02.co.uk

Save

Cancel

Nameservers changed!

Your nameservers has been changed to:

ns-1317.awsdns-36.org

ns-1554.awsdns-02.co.uk

ns-40.awsdns-05.com

ns-752.awsdns-30.net

ⓘ

It might take up to 24 hours for the domain to propagate to the new nameservers.

Close

Create Load Balancer

→Application Load Balancer

Basic configuration

Load balancer name

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

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

Availability Zones

☒ ap-south-1a (aps1-az1)

Subnet

subnet-08bcd76d7fdc29343
IPv4 subnet CIDR: 172.31.32.0/20

IPv4 address

Assigned by AWS

☒ ap-south-1b (aps1-az3)

Subnet

subnet-0f68909eb75b26a98
IPv4 subnet CIDR: 172.31.0.0/20

IPv4 address

Assigned by AWS

☒ ap-south-1c (aps1-az2)

Subnet

subnet-0e2a15341909605d9
IPv4 subnet CIDR: 172.31.16.0/20

IPv4 address

Assigned by AWS

Select Security group same as Instance

Security groups [Info](#)

A security group is a set of firewall rules that control the traffic to your load balancer. Select an existing security group, or you can [create a new security group](#).

Security groups

Select up to 5 security groups

SG-Route53

sg-09bc37288508781f5 VPC: vpc-04fda53d2f783b4c2

Change Protocol HTTP to **HTTPS : 443**

Listeners and routing [Info](#)

A listener is a process that checks for connection requests using the port and protocol you configure. The rules that you define for a listener determine how the load balancer routes requests to its registered targets.

▼ Listener HTTPS:443

Remove

Protocol

HTTPS

Port

443

1-65535

Default action

[Info](#)

Forward to

Select a target group

[Create target group](#)

Create Target Group as well

Here change Protocol HTTPS to **HTTP : 80**

Target group name

TG

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

Protocol : Port

Choose a protocol for your target group that corresponds to the Load Balancer type that will route traffic to it. Some protocols now include anomaly detection for the targets and you can set mitigation options once your target group is created. This choice cannot be changed after creation

HTTP

80

1-65535

Select Instance ID → Include as pending Below → Create Target Group

Available instances (1/1)

Q Filter instances

<input checked="" type="checkbox"/>	Instance ID	Name	State	Security groups
<input checked="" type="checkbox"/>	i-02d8d0d3b37640db9	Server Route-53	Running	SG-Route53

1 selected

Ports for the selected instances
Ports for routing traffic to the selected instances.

80

1-65535 (separate multiple ports with commas)

[Include as pending below](#)

Again, go to Load Balancer → Select Target Group that now created.

▼ Listener HTTPS:443 [Remove](#)

Protocol Port Default action [Info](#)

HTTPS : 443 Forward to TG HTTP [Refresh](#)

1-65535 Target type: Instance, IPv4

[Create target group](#)

Make a request for SSL to ACM (AWS Certificate Manager)-

Secure listener settings [Info](#)

These settings will apply to all of your secure listeners. Once created, you can manage these settings per listener.

Security policy [Info](#)

Your load balancer uses a Secure Socket Layer (SSL) negotiation configuration called a security policy to manage SSL connections with clients. [Compare security policies](#)

Security category Policy name

All security policies ELBSecurityPolicy-TLS13-1-2-2021-06 (recommended)

Default SSL/TLS server certificate

The certificate used if a client connects without SNI protocol, or if there are no matching certificates. You can source this certificate from AWS Certificate Manager (ACM), Amazon Access Management (IAM), or import a certificate. This certificate will automatically be added to your listener certificate list.

Certificate source

☒ From ACM ☐ From IAM ☐ Import certificate

[Certificate \(from ACM\)](#)

The selected certificate will be applied as the default SSL/TLS server certificate for this load balancer's secure listeners.

Select a certificate [Refresh](#)

[Request new ACM certificate](#)

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](#)

Mention Your Domain Name only → Request

Request public certificate

Domain names

Provide one or more domain names for your certificate.

Fully qualified domain name [Info](#)

rushimagar1.online

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 Create records in Route 53

Domains (1) [Create records in Route 53](#) [Export to CSV](#)

Domain	Status	Renewal status	Type	CNAME name
rushimagar1.online	Pending validation	-	CNAME	_61ff4792006fb6599de41a0aed21d0ff.r e.

[AWS Certificate Manager](#) > [Certificates](#) > [ca85d7e4-04db-4604-95fa-cc00ad4437f3](#) >
Create DNS records in Amazon Route 53

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

1 match

[Validation status = Pending validation](#) [Validation status = Failed](#) [Is domain in Route 53? = Yes](#)

[Clear filters](#)

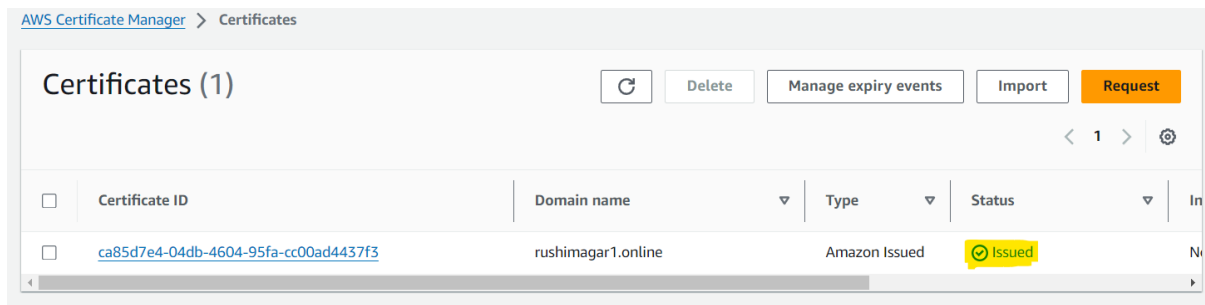
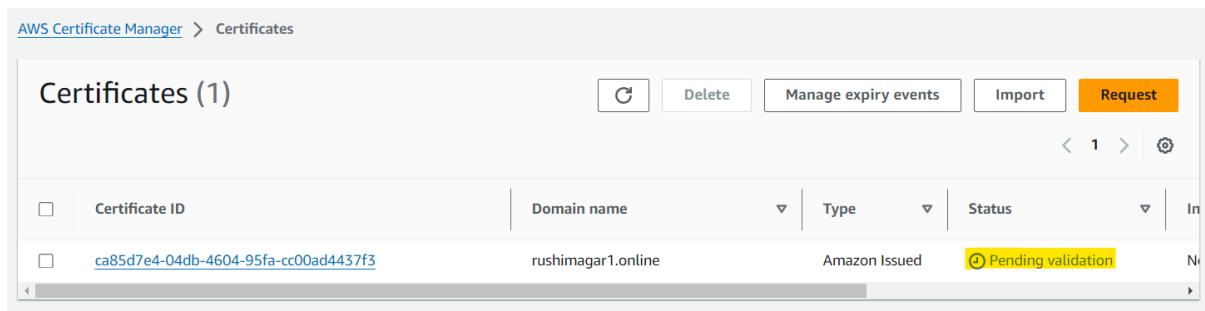
<input checked="" type="checkbox"/>	Domain	Validation status	Is domain in Route 53?
<input checked="" type="checkbox"/>	rushimagar1.online	Pending validation	Yes

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

Here new record **CNAME** is created in Route 53

Records (4) Info								
Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.								
<input type="text" value="Filter records by property or value"/> Type Routing policy Alias 1 Settings								
<input type="checkbox"/>	Record ...	Type	Routin...	Differ...	Alias	Value/Route traffic to	TTL (s...	Health ...
<input type="checkbox"/>	rushimag...	A	Simple	-	No	13.233.160.157	300	-
<input type="checkbox"/>	rushimag...	NS	Simple	-	No	ns-1317.awsdns-36.org. ns-752.awsdns-30.net. ns-40.awsdns-05.com. ns-1554.awsdns-02.co.uk.	172800	-
<input type="checkbox"/>	rushimag...	SOA	Simple	-	No	ns-1317.awsdns-36.org. aws...	900	-
<input type="checkbox"/>	_61ff479...	CNAME	Simple	-	No	_ea11abb99abffe922f1c00d...	300	-

And wait for changing status to **Issued**



Now, in Load Balancer Select Certificate

Default SSL/TLS server certificate

The certificate used if a client connects without SNI protocol, or if there are no matching certificates. You can source this certificate from AWS Certificate Manager (ACM), Amazon Identity and Access Management (IAM), or import a certificate. This certificate will automatically be added to your listener certificate list.

Certificate source

☒ From ACM ☐ From IAM ☐ Import certificate

Certificate (from ACM)

The selected certificate will be applied as the default SSL/TLS server certificate for this load balancer's secure listeners.

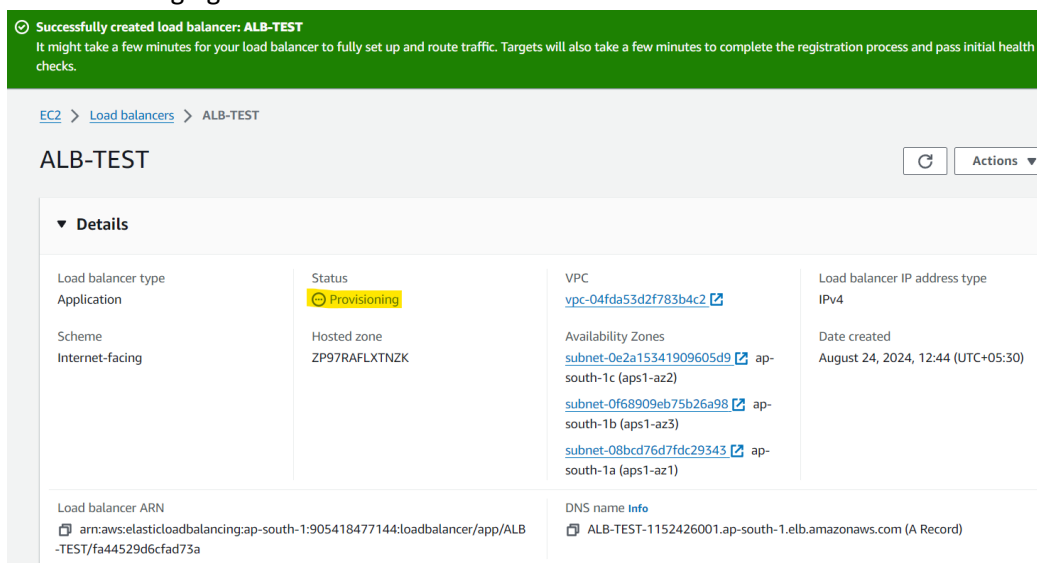
rushimagar1.online
ca85d7e4-04db-4604-95fa-cc00ad4437f3



[Request new ACM certificate](#)

And, Create Load Balancer.

Wait for Changing Status of Load Balancer to **Active**



And for Target Group also

Registered targets (1) [Info](#) [Anomaly mitigation: Not applicable](#) [Refresh](#) [Deregister](#) [Register targets](#)

Target groups route requests to individual registered targets using the protocol and port number specified. Health checks are performed on all registered targets according to the target group's health check settings. Anomaly detection is automatically applied to HTTP/HTTPS target groups with at least 3 healthy targets.

<input type="checkbox"/>	Instance ID	Name	Port	Zone	Health status	Health status details	Launch...
<input type="checkbox"/>	i-02d8d0d3b37640db9	Server Route-53	80	ap-south-1b	Initial	Target registration is i...	August 24...

Status is changed for Load Balancer & Target group

ALB-TEST [Refresh](#) [Actions](#)

Details

Load balancer type Application	Status Active	VPC vpc-04fda53d2f783b4c2	Load balancer IP address type IPv4
Scheme Internet-facing	Hosted zone ZP97RAFLXTNZK	Availability Zones subnet-0e2a15341909605d9 ap-south-1c (aps1-az2)	Date created August 24, 2024, 12:44 (UTC+05:30)

Registered targets (1) [Info](#) [Anomaly mitigation: Not applicable](#) [Refresh](#) [Deregister](#) [Register targets](#)

Target groups route requests to individual registered targets using the protocol and port number specified. Health checks are performed on all registered targets according to the target group's health check settings. Anomaly detection is automatically applied to HTTP/HTTPS target groups with at least 3 healthy targets.

<input type="checkbox"/>	Instance ID	Name	Port	Zone	Health status	Health status details	Launch...
<input type="checkbox"/>	i-02d8d0d3b37640db9	Server Route-53	80	ap-south-1b	Healthy	-	August 24...

In Route 53, edit A Record

Route 53 [View status](#)

Record for rushimagar1.online was successfully created.
Route 53 propagates your changes to all of the Route 53 authoritative DNS servers within 60 seconds. Use "View status" button to check propagation status.

Records (4) [Info](#) [Delete record](#) [Import zone file](#) [Create record](#)

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

[Type](#) [Routing policy](#) [Alias](#)

<input type="checkbox"/>	Record ...	Type	Routin...	Differ...	Alias	Value/Route t
<input checked="" type="checkbox"/>	rushimag...	A	Simple	-	No	13.233.160.157
<input type="checkbox"/>	rushimag...	NS	Simple	-	No	ns-1317.aws...
<input type="checkbox"/>	rushimag...	SOA	Simple	-	No	ns-1317.aws...
<input type="checkbox"/>	_61ff479...	CNAME	Simple	-	No	_ea11abb99ab

Record details [Edit record](#)

Record name
rushimagar1.online

Record type
A

Value
13.233.160.157

Alias
No

TTL (seconds)
300

Routing policy
Simple

Edit record



Record name [Info](#)

subdomain

rushimagar1.online

Keep blank to create a record for the root domain.

Record type [Info](#)

A – Routes traffic to an IPv4 address and so... ▼

☒ Alias

Route traffic to [Info](#)

Alias to Application and Classic Load Balancer ▼

Asia Pacific (Mumbai) ▼

Q dualstack.ALB-TEST-1152426001.ap-south X

Alias hosted zone ID: ZP97RAFLXTNZK

Routing policy [Info](#)

Simple routing ▼

Evaluate target health

☐ No

Cancel

Save

We can see status from above Notification – (Pending → INSYNC)

[Route 53](#) > [Hosted zones](#) > [rushimagar1.online](#) > [Change Info](#)

C033617130QT7FJSPNBRE [Info](#)

Change info details



ID
/change/C033617130QT7FJSPNBRE

Submitted at
August 24, 2024, 12:52 (UTC:+05:30)

Status
 PENDING

Comment
-

[Route 53](#) > [Hosted zones](#) > [rushimagar1.online](#) > [Change Info](#)

C033617130QT7FJSPNBRE [Info](#)

Change info details



ID
/change/C033617130QT7FJSPNBRE

Submitted at
August 24, 2024, 12:52 (UTC:+05:30)

Status
 INSYNC

Comment
-

Test Record using Domain & Public IP

[Route 53](#) > [Hosted zones](#) > [rushimagar1.online](#) > Test record

Test record [Info](#)

Test records to simulate the values that Route 53 returns in response to DNS queries. This tool displays the standard values that Route 53 provides based on the settings in the hosted zone. The tool doesn't send actual DNS queries.

Record to test

Hosted zone

rushimagar1.online

Record name - *optional* [Info](#)

To check a record that has the same name as the hosted zone rushimagar1.online, leave this field blank. To check the record for a subdomain, enter the subdomain name excluding the domain name.

Q

www

Record type [Info](#)

The DNS type of the record determines the format of the value that Route 53 returns in response to DNS queries.

A – Routes traffic to an IPv4 address and some AWS resources ▼

Response returned by Route 53

Response from Route 53 based on the following options.

Hosted zone

rushimagar1.online

Record name

-

Record type

A

DNS response code

✔ No Error

Protocol

UDP

Response returned by Route 53

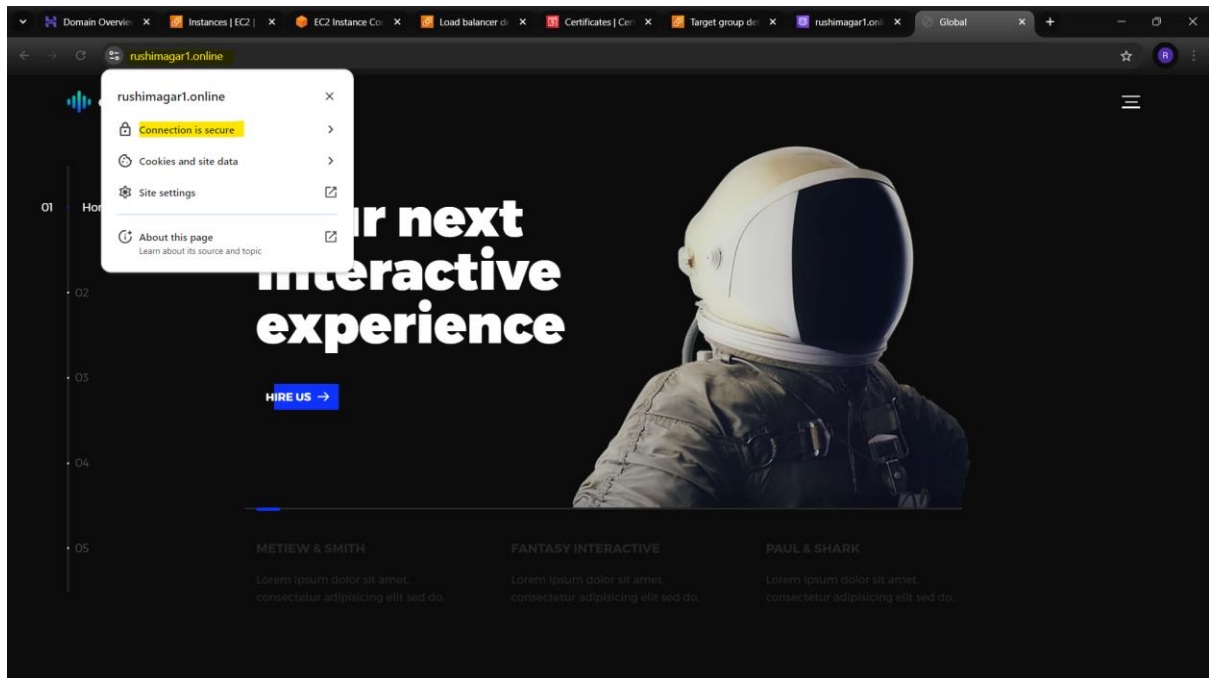
15.206.219.50
3.7.40.36

Cancel

Get response

Rushikesh Magar (Cloudblitz)

Test website using domain <https://rushimagar1.online/>



For Deletion

1. Route 53 - Delete **A & CNAME** records only → Delete Hosted Zone
2. Delete Load Balancer
3. Delete Target Group
4. ACM – Delete SSL Certificate
5. Terminate Instance