

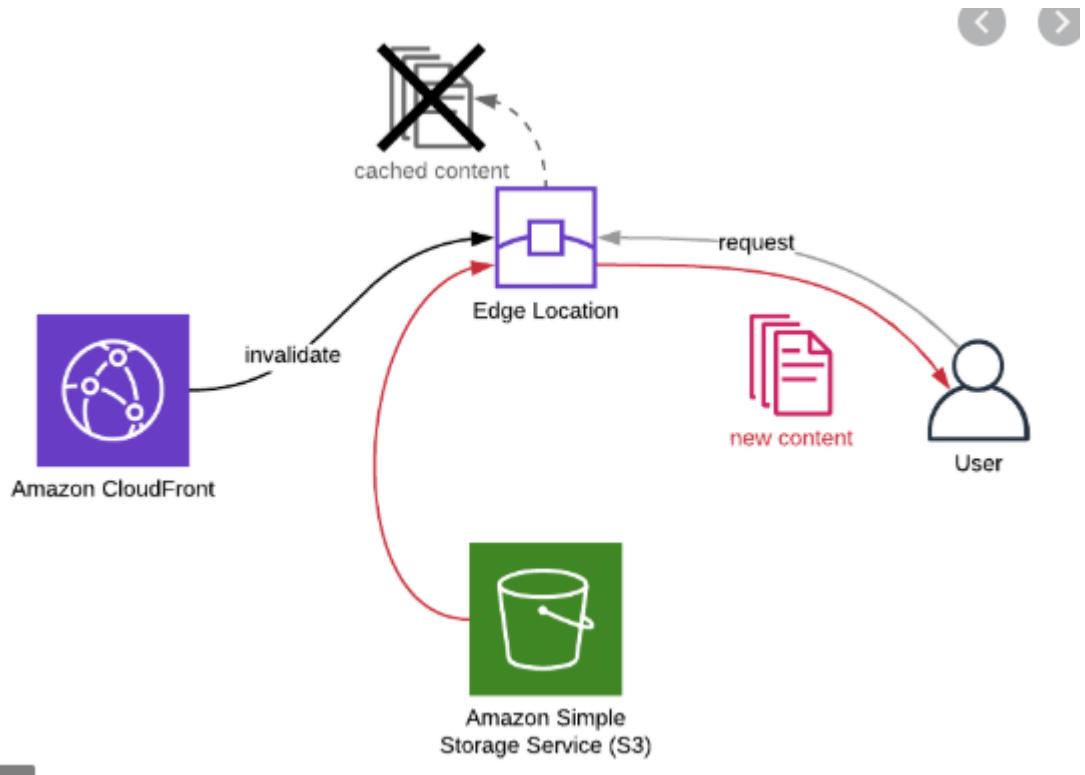


We know that cloudfront will create the cache or local copy in the edge location so that client will connect to this edge location and get the content.

As we know that the cache or file that has been copied in edge location is by default available for 1 day in edge location. But if my developer change the code in file that has been added as cache in edge location then client will not see the updated code till 1 day. So our demand or intention is that client will not see this old cache , he/she will see the updated code for this we have to do one method that is known as **invalidation**.

Invalidation - remove the old cache in the edge locations.

We are doing this because we have updated the code in the file . so that client can see the latest update.



As you can see I updated the code in the my.html file but when I see the file that is stored as cache in edge location it will not give me this output.

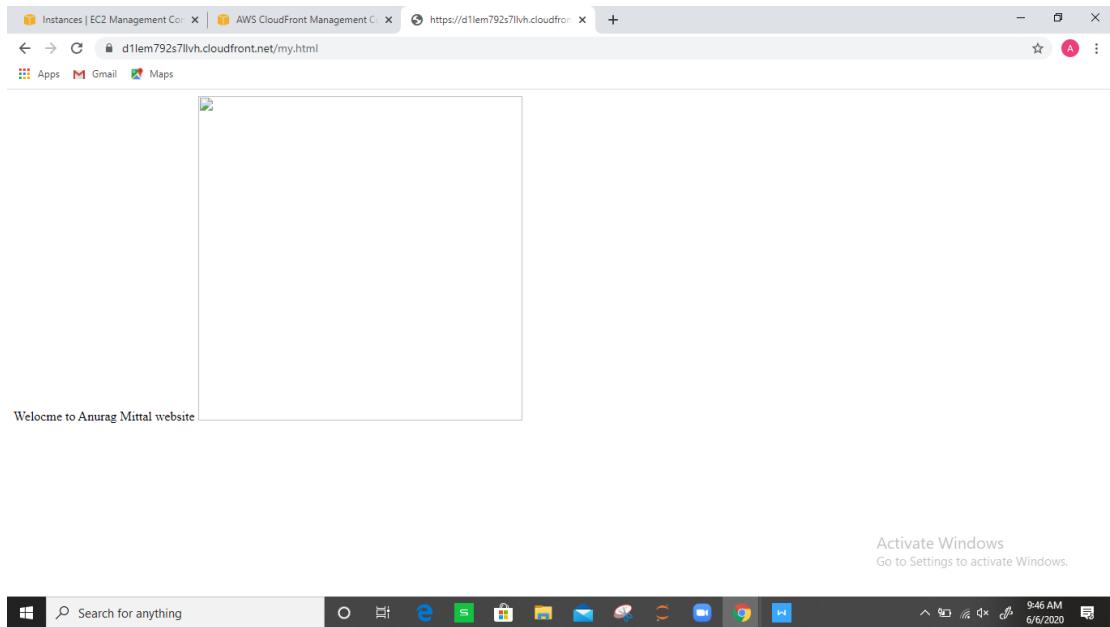
The screenshot shows the AWS EC2 Management Console with a terminal window and a browser preview. The terminal shows the command `cat my.html` being run, displaying the content "Welcome to Anurag Mittal website". The browser preview shows the same content. This indicates that the cached version of the file is still being served.

```

[Instances | EC2 Management Con... | ap-south-1.console.aws.amazon.com]
[...] [i-05096daf85c7fe93e (myos) | EC2 Instance Connect - Google Chrome]
[...] [ap-south-1.console.aws.amazon.com/ec2/v2/connect/ec2-user/i-05096daf85c7fe93e]
[...] [root@ip-172-31-47-197 html]# whoami
[...] [root@ip-172-31-47-197 html]# pwd
[...] [root@ip-172-31-47-197 html]# ls
[...] [root@ip-172-31-47-197 html]# cat my.html
[...] [root@ip-172-31-47-197 html]# systemctl enable httpd
[...] [root@ip-172-31-47-197 html]# cat my.html
[...] [root@ip-172-31-47-197 html]# Welcome to Anurag Mittal website
[...] [root@ip-172-31-47-197 html]# systemctl enable httpd
[...] [root@ip-172-31-47-197 html]# Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service to /usr/lib/systemd/system/httpd.service.
[...] [root@ip-172-31-47-197 html]# [root@ip-172-31-47-197 html]#

```

As you can see it is showing the previous version of code.

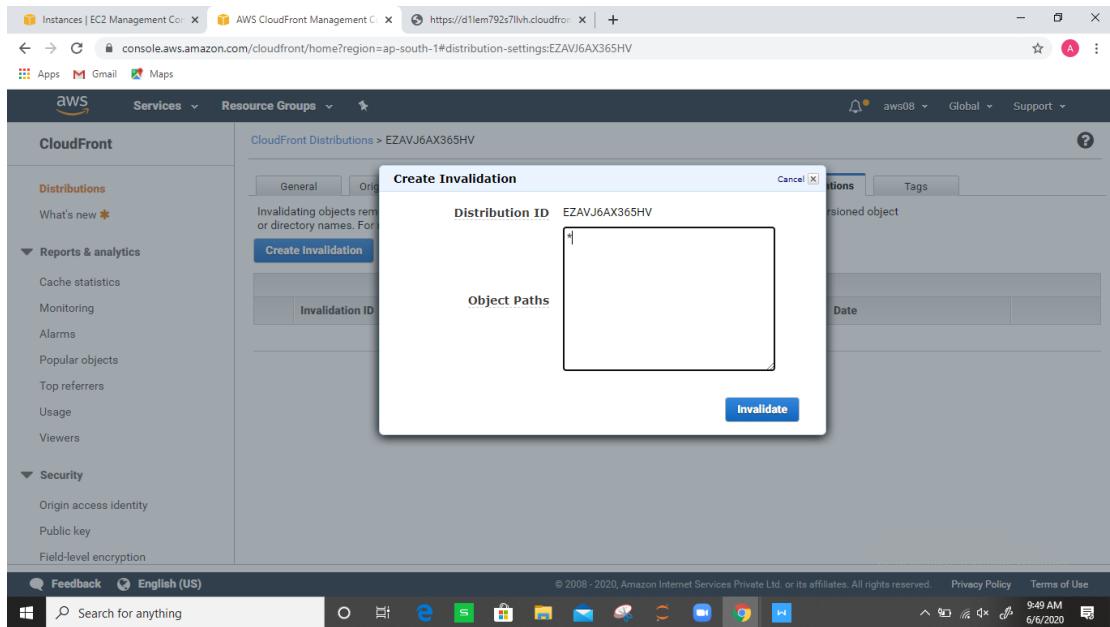


So we have to apply invalidation...

Here I am creating one invalidation.

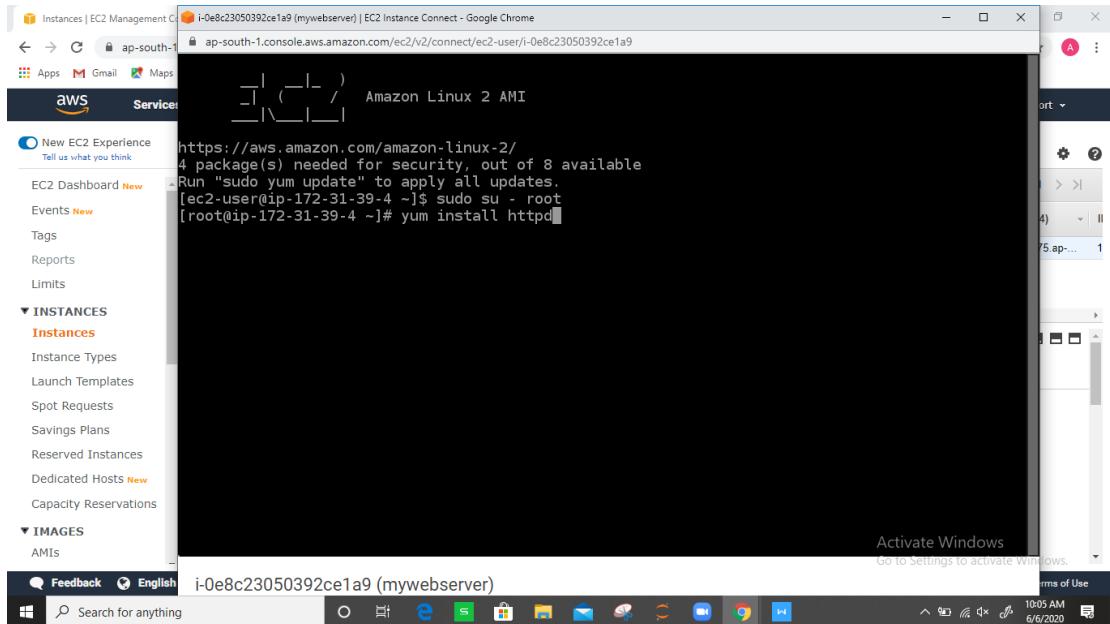
A screenshot of the AWS CloudFront Management console. The left sidebar shows sections like 'CloudFront', 'Distributions', 'Reports & analytics', and 'Security'. The main content area is titled 'CloudFront Distributions > EZAVJ6AX365HV'. It has tabs for 'General', 'Origins and Origin Groups', 'Behaviors', 'Error Pages', 'Restrictions', 'Invalidations' (which is selected), and 'Tags'. A sub-header says 'Invalidate objects removes them from CloudFront edge caches. A faster and less expensive method is to use versioned object or directory names. For more information, see [Invalidating Objects](#) in the [Amazon CloudFront Developer Guide](#)'. Below this is a 'Create Invalidations' button, followed by 'Details' and 'Copy' buttons. A table below shows one row with 'No Data'. At the bottom of the page, there is a status bar with 'Activate Windows' and a link to 'Go to Settings to activate Windows'. The bottom of the screen shows the Windows taskbar with various pinned icons.

* indicates I am updating all the files of webserver.



2. How to create own os image.

First I am launching the instance. In this instance I install http server and php interpreter and adding some web pages in the webserver.



W Writer Home Insert i-0e8c23050392ce1a9 (mywebserver) | EC2 Instance Connect - Google Chrome

```
Installing : apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64 2/9
Installing : apr-util-1.6.1-5.amzn2.0.2.x86_64 3/9
Installing : httpd-tools-2.4.43-1.amzn2.x86_64 4/9
Installing : generic-logos-httpd-18.0.0-4.amzn2.noarch 5/9
Installing : mailcap-2.1.41-2.amzn2.noarch 6/9
Installing : httpd-filesystem-2.4.43-1.amzn2.noarch 7/9
Installing : mod_http2-1.15.3-2.amzn2.x86_64 8/9
Verifying : httpd-2.4.43-1.amzn2.x86_64 9/9
Verifying : apr-util-1.6.1-5.amzn2.0.2.x86_64 1/9
Verifying : httpd-2.4.43-1.amzn2.x86_64 2/9
Verifying : mod_http2-1.15.3-2.amzn2.x86_64 3/9
Verifying : httpd-filesystem-2.4.43-1.amzn2.noarch 4/9
Verifying : apr-1.6.3-5.amzn2.0.2.x86_64 5/9
Verifying : mailcap-2.1.41-2.amzn2.noarch 6/9
Verifying : generic-logos-httpd-18.0.0-4.amzn2.noarch 7/9
Verifying : httpd-tools-2.4.43-1.amzn2.x86_64 8/9
Verifying : mod_http2-1.15.3-2.amzn2.x86_64 9/9

Installed:
httpd.x86_64 0:2.4.43-1.amzn2

Dependency Installed:
apr.x86_64 0:1.6.3-5.amzn2.0.2
apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2
httpd-filesystem.noarch 0:2.4.43-1.amzn2
mailcap.noarch 0:2.1.41-2.amzn2

Complete!
[root@ip-172-31-39-4 ~]# yum install php
```

Page Num: 2 Page: 2/20 Section: 1/1 i-0e8c23050392ce1a9 (mywebserver)

Search for anything

Activate Windows Go to Settings to activate Windows.

10:06 AM 6/6/2020

After this I have created a one php webpage

Instances | EC2 Management Con AWS Cloud i-0e8c23050392ce1a9 (mywebserver) | EC2 Instance Connect - Google Chrome

← → C ap-south-1.console.aws.amazon.com

Apps Gmail Maps

AWS Services Resource G

New EC2 Experience Tell us what you think

EC2 Dashboard New Events New Tags Reports Limits

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

IMAGES AMIs

Feedback English (US)

Launch Instance

Instance: i-0e8c23050392ce1a9

Name: mywebserver

Description:

```
"index.php" [New] 17L, 112C written
[root@ip-172-31-39-4 html]# pwd
/var/www/html
[root@ip-172-31-39-4 html]# ls
index.php
[root@ip-172-31-39-4 html]# cat index.php
<body bgcolor="#elelele">
<pre>
<?php
print "Hi anurag\n";
print `ifconfig`;
print `free -m`;
?>
</pre>

[root@ip-172-31-39-4 html]#
```

i-0e8c23050392ce1a9 (mywebserver)

Public IPs: 13.233.250.75 Private IPs: 172.31.39.4

Activate Windows Go to Settings to activate Windows.

10:11 AM 6/6/2020 Terms of Use

Because we have install php interpreter so all php code can be run easily

```
Hi anurag
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 9001
        inet 172.31.39.4 netmask 255.255.240.0 broadcast 172.31.47.255
        inet6 fe80::c3:73ff:fe02:c988 prefixlen 64 scopeid 0x20<link>
          ether 02:c3:73:5c:a9:88 txqueuelen 1000 (Ethernet)
            RX packets 38448 bytes 52381372 (49.9 MiB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 4218 bytes 370633 (361.9 KiB)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
        inet 127.0.0.1 netmask 255.0.0.0
        inet6 ::1 prefixlen 128 scopeid 0x10<host>
          loop txqueuelen 1000 (Local Loopback)
            RX packets 8 bytes 648 (648.0 B)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 8 bytes 648 (648.0 B)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

Mem:       total     used     free   shared  buff/cache   available
Swap:      983       69      528       0      385       775

</pre>

[root@ip-172-31-39-4 html]#
```

i-0e8c23050392ce1a9 (mywebserver)
Public IPs: 13.233.250.75 Private IPs: 172.31.39.4

After this I started the services of webserver.

```
ether 02:c3:73:5c:a9:88 txqueuelen 1000 (Ethernet)
RX packets 38448 bytes 52381372 (49.9 MiB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 4218 bytes 370633 (361.9 KiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
inet 127.0.0.1 netmask 255.0.0.0
inet6 ::1 prefixlen 128 scopeid 0x10<host>
loop txqueuelen 1000 (Local Loopback)
RX packets 8 bytes 648 (648.0 B)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 8 bytes 648 (648.0 B)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

Mem:       total     used     free   shared  buff/cache   available
Swap:      983       69      528       0      385       775

</pre>

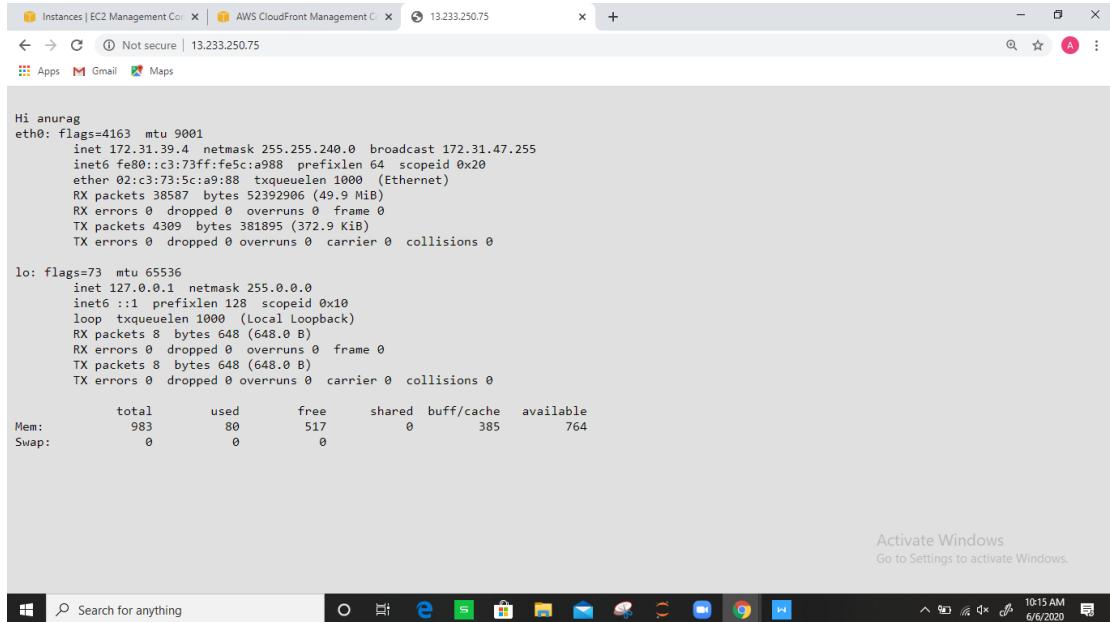
Mem:
Swap:
[root@ip-172-31-39-4 html]# systemctl start httpd
[root@ip-172-31-39-4 html]# systemctl enable httpd
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service
to /usr/lib/systemd/system/httpd.service.
[root@ip-172-31-39-4 html]#
```

i-0e8c23050392ce1a9 (mywebserver)
Public IPs: 13.233.250.75 Private IPs: 172.31.39.4

AS you can see our site is running fine.

In the code of webpage I added ifconfig command because it will help me further to check the ip of instance.

Here my instance private ip is same as the ip shown in ifconfig in website .



```
Hi anurag
eth0: flags=4163 mtu 9001
    inet 172.31.39.4 netmask 255.255.240.0 broadcast 172.31.47.255
        inet6 fe80::c3:73ff:fe5c:a988 prefixlen 64 scopeid 0x20
            ether 02:c3:73:5c:a9:88 txqueuelen 1000 (Ethernet)
            RX packets 38587 bytes 52392906 (49.9 MiB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 4389 bytes 381895 (372.9 KiB)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10
        loop txqueuelen 1000 (Local Loopback)
        RX packets 8 bytes 648 (648.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 8 bytes 648 (648.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

          total     used     free     shared   buff/cache   available
Mem:       983         80      517         0       385         764
Swap:        0         0         0

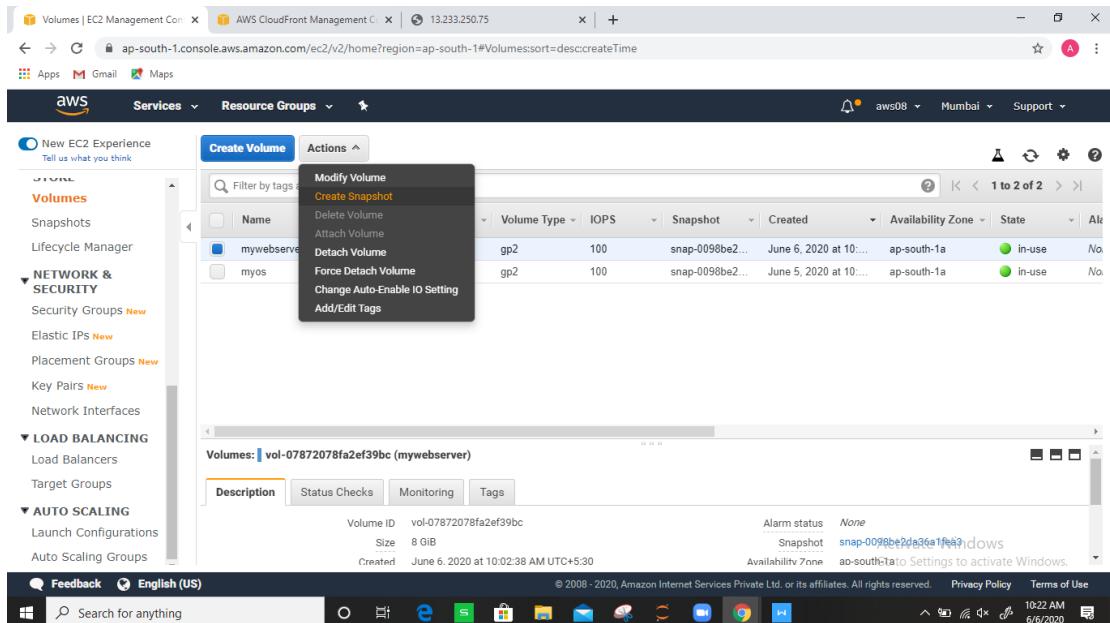
Activate Windows
Go to Settings to activate Windows.
```

If I want to create the image of this environment that I have created than we have to first go to the ebs volume of this instance and create a copy of this ebs volume . copy of this ebs volume is can be understood as snapshot.

We are copying this ebs volume because all the data of instance is stored in this volume like webserver, php, webpages. We want that we again manually don't setup this again so from this we can create a image and from this image we can launch as many as instance with same setup .

Same website is running on all the instances that has been created from this image.

Now from this snapshot we can create our image.

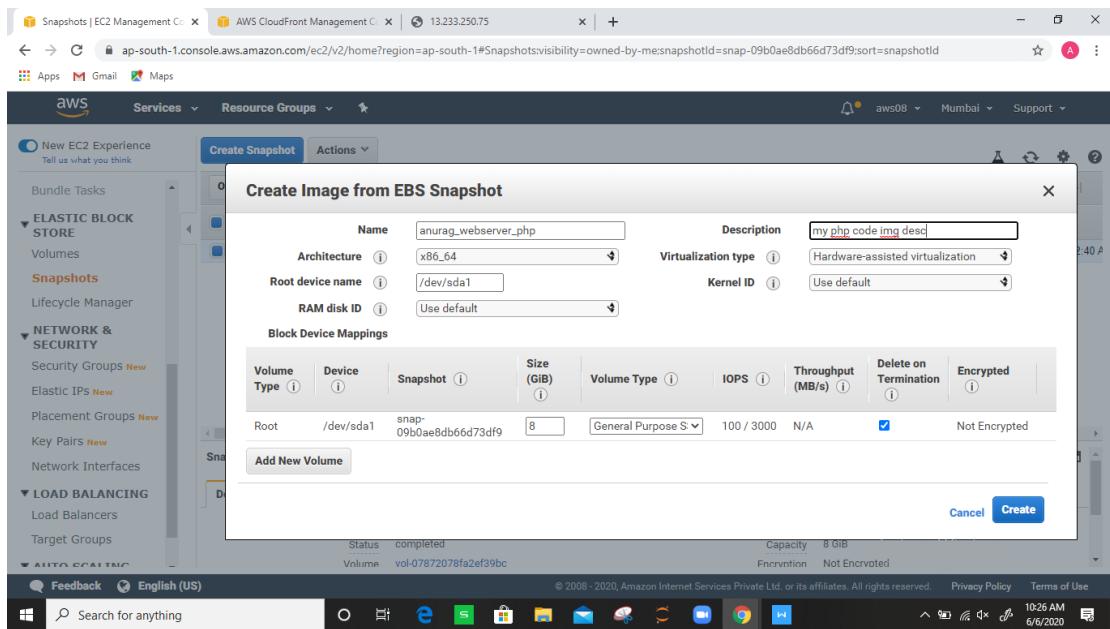


So as you can see one snapshot has been created

The screenshot shows the AWS EC2 Management Console. On the left, the navigation menu includes 'Schemas', 'Volumes', 'Snapshots', 'Lifecycle Manager', 'NETWORK & SECURITY', 'Security Groups New', 'Elastic IPs New', 'Placement Groups New', 'Key Pairs New', 'Network Interfaces', 'LOAD BALANCING', 'Load Balancers', 'Target Groups', 'AUTO SCALING', 'Launch Configurations', and 'Auto Scaling Groups'. The 'Snapshots' section is selected. In the main content area, a table lists snapshots. One row is highlighted for 'myweb' with the Snapshot ID 'snap-09b0ae8db66d73df9'. Below the table, a modal window titled 'Snapshot: snap-09b0ae8db66d73df9 (myweb)' shows details: Snapshot ID 'snap-09b0ae8db66d73df9', Status 'completed', Volume 'vol-07872078fa2ef39bc', Progress '100%', Capacity '8 GiB', and Encryption 'Not Encrypted'. A note says 'Activate Windows' and 'Not Encrypted' with a link to 'Settings to activate Windows'. At the bottom of the modal, there are tabs for 'Description', 'Permissions', and 'Tags', and a close button.

Now from this snapshot I am going to create a image.

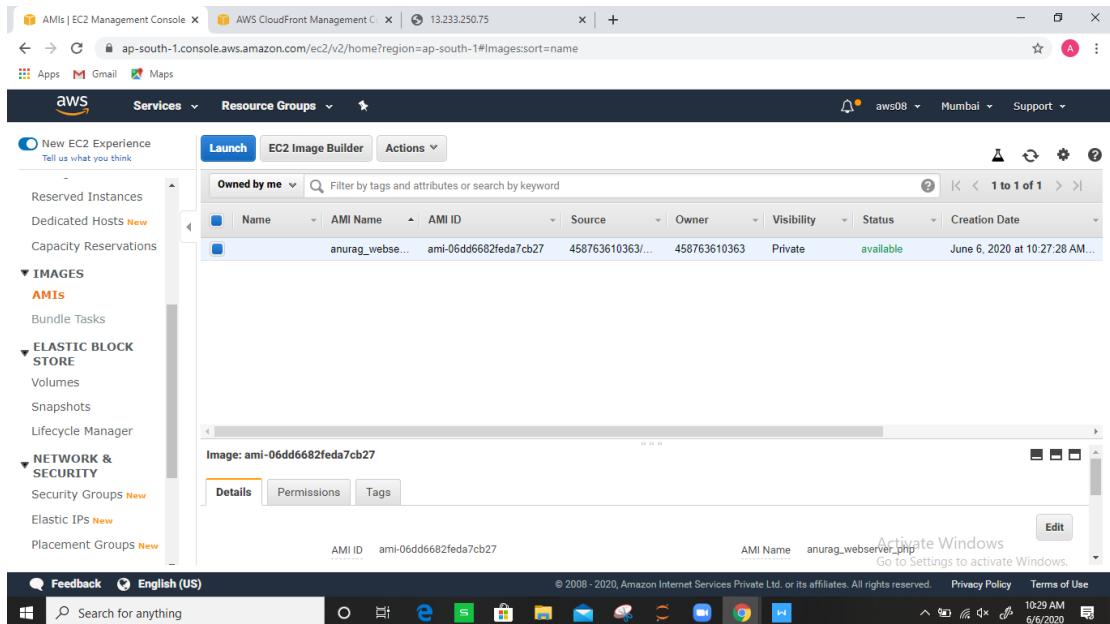
This screenshot is similar to the previous one, showing the AWS EC2 Management Console. The 'Snapshots' section is selected in the sidebar. A context menu is open over the 'myweb' snapshot row, listing options: 'Delete', 'Create Volume', 'Manage Fast Snapshot Restore', 'Create Image' (which is highlighted in blue), 'Copy', 'Modify Permissions', and 'Add/Edit Tags'. The main content area shows the same snapshot details as before: Snapshot ID 'snap-09b0ae8db66d73df9', Status 'completed', Volume 'vol-07872078fa2ef39bc', Progress '100%', Capacity '8 GiB', and Encryption 'Not Encrypted'. The 'Create Image' option in the context menu is likely the step being demonstrated.



You can check that your image has been created successfully or not

Go to Images ---> AMI - here you can see your image has been created or not .

In my case it has been created successfully.



Now from this image I m launching a instance.

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"

anurag_webserver_php - ami-06dd6682fed7cb27

my php code img desc

Root device type: ebs Virtualization type: hvm Owner: 458763610363 ENA Enabled: Yes

Select

64-bit (x86)

Here I am not adding ssh protocol because we are hosting this webserver so that client can access the website we don't want to login inside this instance.

Assign a security group: Create a new security group
 Select an existing security group

Security group name: launch-wizard-7

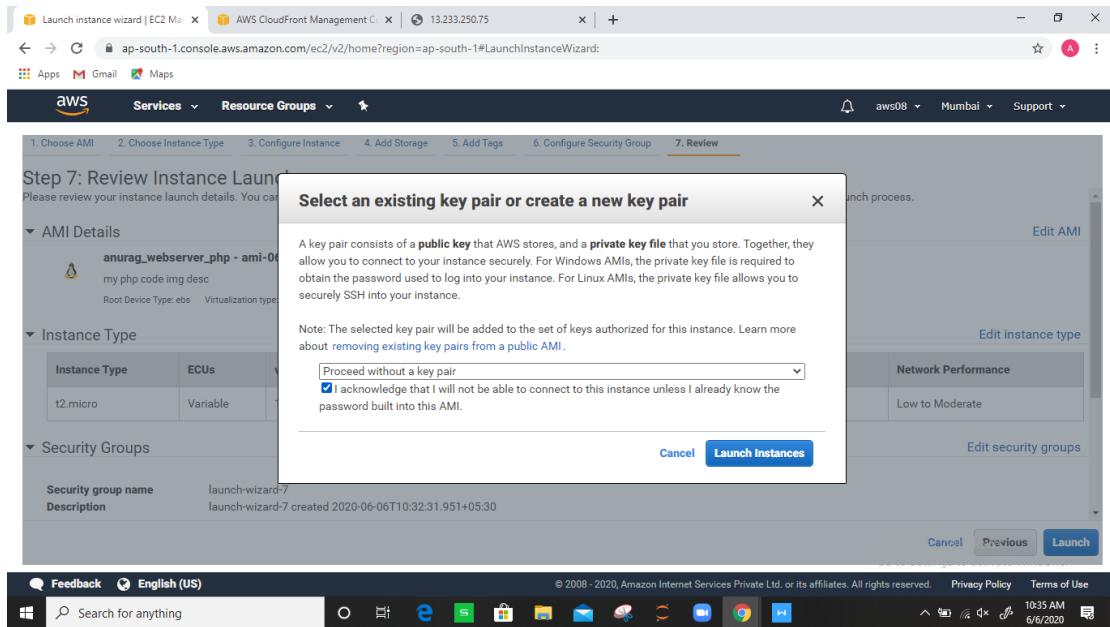
Description: launch-wizard-7 created 2020-06-06T10:32:31.951+05:30

Type	Protocol	Port Range	Source	Description
HTTP	TCP	80	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

Add Rule

Warning
You will not be able to connect to this instance as the AMI requires port(s) 22 to be open in order to have access. Your current security group doesn't have port(s) 22 open.

So if we don't want to login so there is no usefull case to add keys . so I am not adding keys



After my instance has been launched from this image

I can access the same site

I can also cross check through ifconfig . my instance private ip and ifconfig give same output that means this website is running on this instance that we launch currently.

Ip - 172.31.34.112 mumbai region

```
Hi anurag
eth0: flags=4163 mtu 9001
    inet 172.31.34.112 brd 255.255.240.0 scopeid 0x20
        netmask 0xffff:fe26:d7f2 broadcast 172.31.47.255
        ether 02:42:ff:26:d7:f2 txqueuelen 1000 (Ethernet)
        RX packets 835 bytes 99100 (96.7 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 982 bytes 100395 (98.0 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 brd 255.255.255.255 scopeid 0x10
        netmask 0.0.0.0
        loop txqueuelen 1000 (Local Loopback)
        RX packets 0 bytes 0 (0.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 0 bytes 0 (0.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

Mem: total 983 used 71 free 750 shared 0 buff/cache 161 available 777
Swap:      0       0       0
```

Activate Windows
Go to Settings to activate Windows.

we have created the image in mumbai region. Image is per region basis.

But if you go to california region you will not find this image.

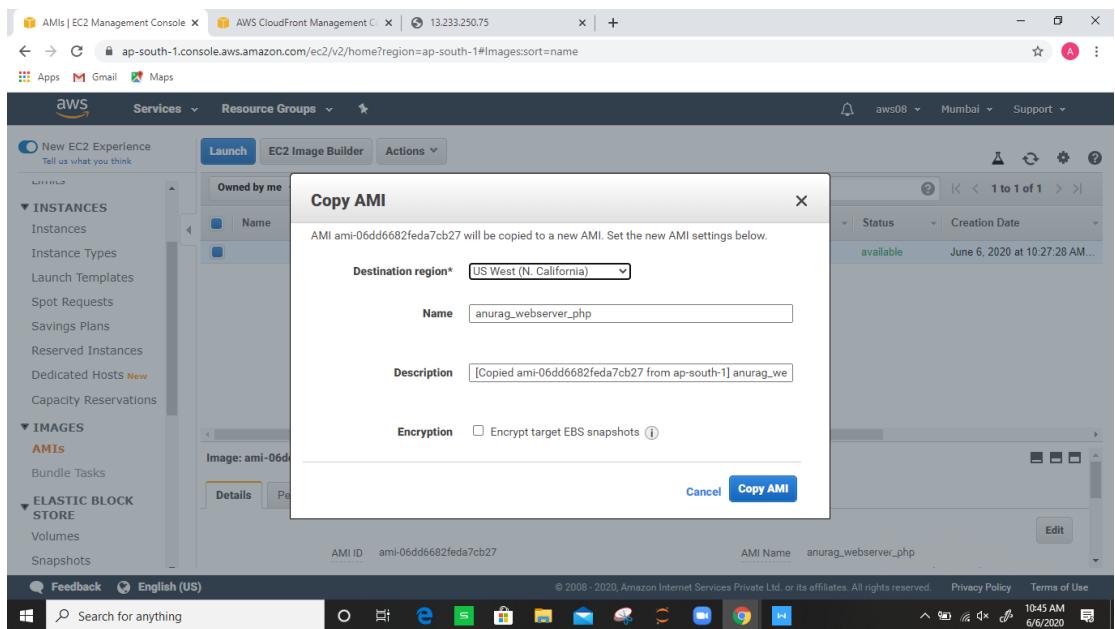
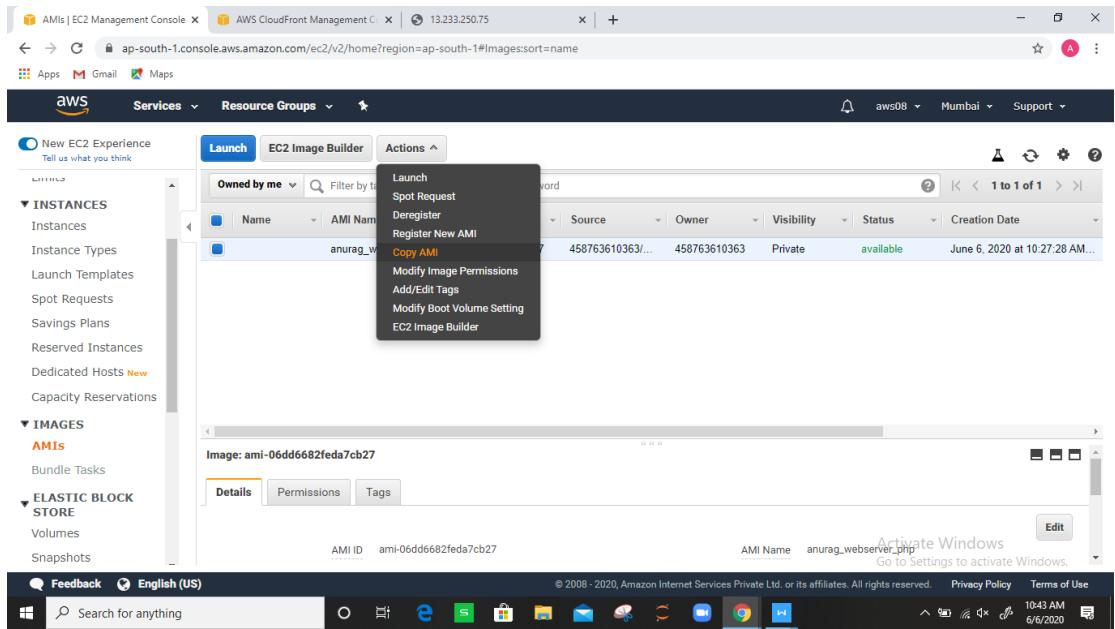
Let me show you. I am shifting myself to north california region and try to see that image that I have created in mumbai region is available in north california region or not.

So as you can see there is no image with name anurag in california region

The screenshot shows the AWS EC2 Management Console interface. The top navigation bar includes tabs for 'AMIs | EC2 Management Console', 'AWS CloudFront Management', and a status indicator '13.233.250.75'. Below the navigation is a toolbar with 'Launch', 'EC2 Image Builder', and 'Actions' buttons. The main content area has a sidebar on the left with links like 'Instances', 'Instance Types', 'Launch Templates', etc., and a expanded section for 'IMAGES' with 'AMIS'. The main pane displays a search bar with 'Owned by me' and a filter 'None found'. A message states 'You do not own any Images matching your filter criteria.' Below this is a link to 'aws marketplace' with the text 'Find more than 500 AMIs of popular Open Source and commercial software from aws marketplace'. At the bottom right, there's a 'Activate Windows' notice with a link to 'Settings to activate Windows.'

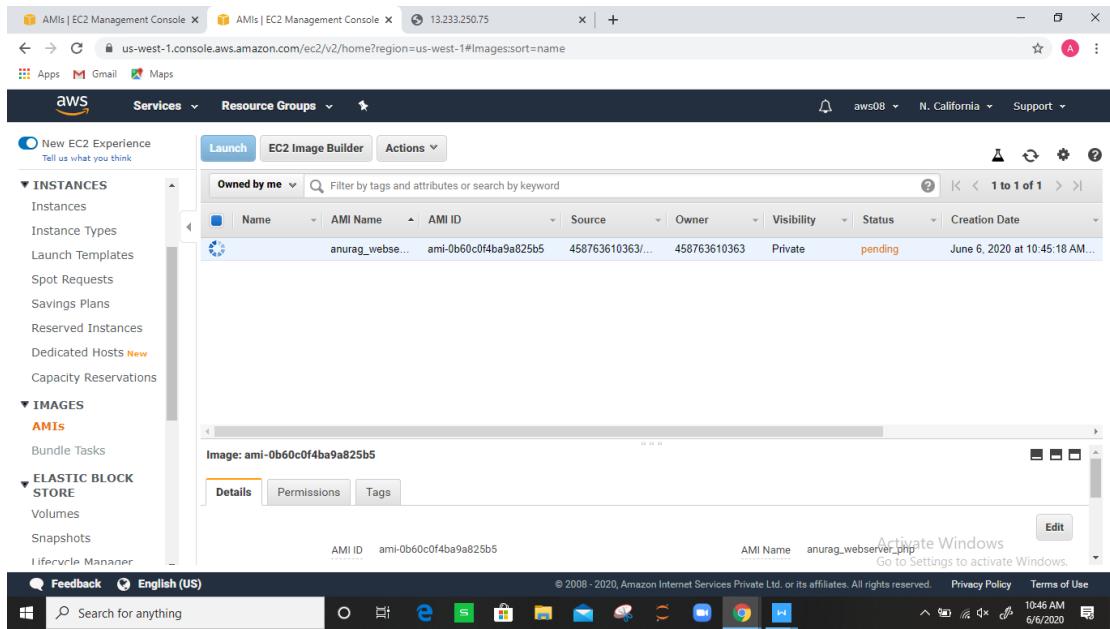
But we can copy the image that we have created from one region to another region.

Here I copy the image from mumbai region to north california region.



Now I am shifting myself to California region to see that image has been copied or not.

It is start copying



Now from California region I can create same instance that has same website that has been running in Mumbai region.

This image that I have created can be used only by me nobody can use this image to launch an instance. If I want that anybody can use this image we have to change the permissions or visibility from private to public.

The screenshot shows the AWS EC2 Management Console interface. On the left, the navigation pane includes 'Services' (selected), 'Resource Groups', and sections for 'DEDICATED HOSTS', 'CAPACITY RESERVATIONS', 'IMAGES' (selected), 'ELASTIC BLOCK STORE', 'NETWORK & SECURITY', and 'KEY PAIRS'. In the 'IMAGES' section, there is a table with one row: 'anurag_webserver.php' (AMI ID: ami-06dd6682feda7cb27, Owner: 458763610363, Status: available). A context menu is open over this row, listing options: Launch, Spot Request, Deregister, Register New AMI, Copy AMI, Modify Image Permissions, Add/Edit Tags, Modify Boot Volume Setting, and EC2 Image Builder. Below the table, a modal window titled 'Image: ami-06dd6682feda7cb27' is displayed, showing the 'Details' tab with the AMI ID and Name.

This screenshot shows the same AWS EC2 Management Console interface as the previous one, but with a different focus. A modal dialog box titled 'Modify Image Permissions' is centered on the screen. It contains the message 'This image is currently: Public Private' and two buttons: 'Cancel' and 'Save'. The background shows the same table of AMIs and the 'anurag_webserver.php' modal window.

Now I am launching the instance from the image that we have copied in California region.

Screenshot of the AWS EC2 Management Console showing the launch instance wizard.

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"

Quick Start

My AMIs

- AWS Marketplace
- Community AMIs

Ownership

- Owned by me
- Shared with me

anurag_webserver_php - ami-0b60c0f4ba9a825b5
 [Copied ami-06dd6682fed47cb27 from ap-south-1] anurag_webserver.php
 Root device type: ebs Virtualization type: hvm Owner: 458763610363 ENA Enabled: Yes

Select 64-bit (x86)

Activate Windows Go to Settings to activate Windows.

Feedback English (US)

Search for anything

AMIs | EC2 Management Console Instances | EC2 Management Console

Launch Instance Actions

search: i-0c6f2bb777ec6e97e Add filter

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)
firstimageos2	i-0c6f2bb777ec6e97e	t2.micro	us-west-1a	pending	Initializing	None	ec2-18-144-29-173.us-west-1.compute.amazonaws.com

Instance: i-0c6f2bb777ec6e97e (firstimageos2) Public DNS: ec2-18-144-29-173.us-west-1.compute.amazonaws.com

Description Status Checks Monitoring Tags

Instance ID: i-0c6f2bb777ec6e97e Public DNS (IPv4): ec2-18-144-29-173.us-west-1.compute.amazonaws.com

Instance state: pending IPv4 Public IP: 18.144.29.173

Activate Windows Go to Settings to activate Windows.

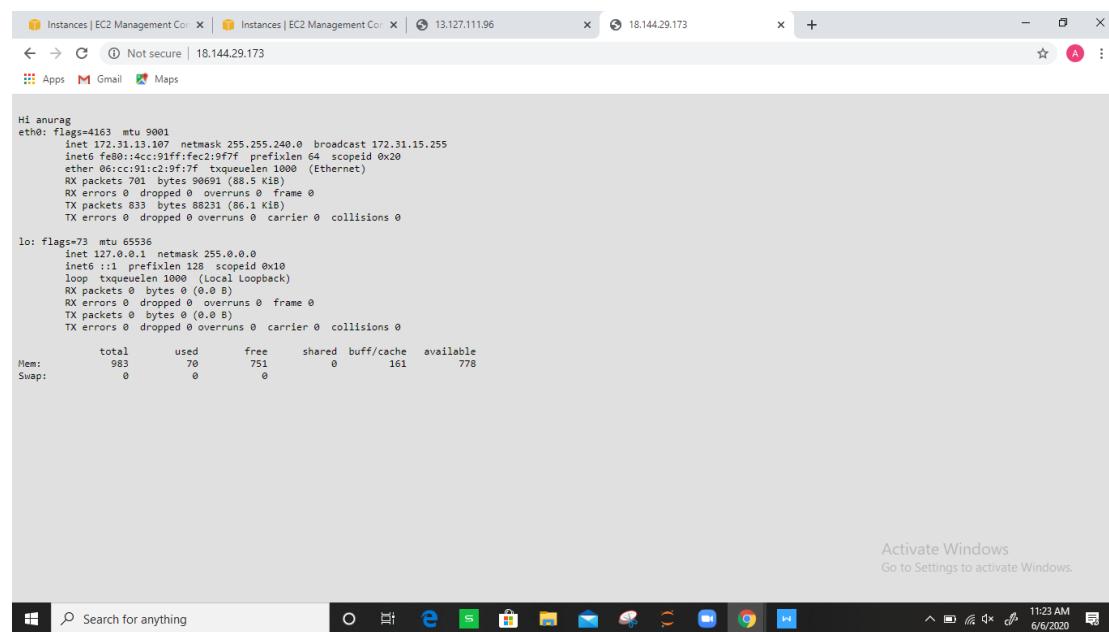
Feedback English (US)

Search for anything

Now I can access the same site that is running on mumbai region

I can also cross check through ifconfig . my instance private ip and ifconfig give same output that means this website is running on this instance that we launch currently in california region

Ip - 172.31.13.107 California Region



```
Hi anuraag
eth0: flags=4163 mtu 9001
    inet 172.31.13.107 netmask 255.255.240.0 broadcast 172.31.15.255
        inet6 fe80::4c:91ff:fecc2:9f7f prefixlen 64 scopeid 0x20
            ether 06:cc:91:c2:9f:7f txqueuelen 1000 (Ethernet)
            RX packets 701 bytes 90691 (88.5 KiB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 833 bytes 88231 (86.1 KiB)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
        inet6 ::1 prefixlen 128 scopeid 0x10
            loop txqueuelen 1000 (Local Loopback)
            RX packets 0 bytes 0 (0.0 B)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 0 bytes 0 (0.0 B)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
Mem: total       used       free      shared  buff/cache   available
Swap:          0          0         0          0         161          778
Activate Windows
Go to Settings to activate Windows.
```

Now let me explain the setup that we have created above and why we are creating this setup.

1. Currently we have two instances running on which webserver is running. One is in mumbai region and other is in california region.

2. Suppose my client is in US and he/she wanted to access the website running on webserver. So how he will know that he should connect to mumbai region or california region for the website.

Let say from US it will try to connect to mumbai region . client is using public internet or network to connect to website. So the internet speed is not stable it is fluctuating many times , client will see some latency in getting the website.

NOTE - All the edge locations of aws are connected to each other with a strong internet that is private.

3. GLOBAL ACCELERATOR-

As we know on both regions calirfornia and india same website is running so client have to connect to what region to get site.

Here global accelerator role comes in play.

Global accelerator will provide a common unique url from which client will connect to the website.

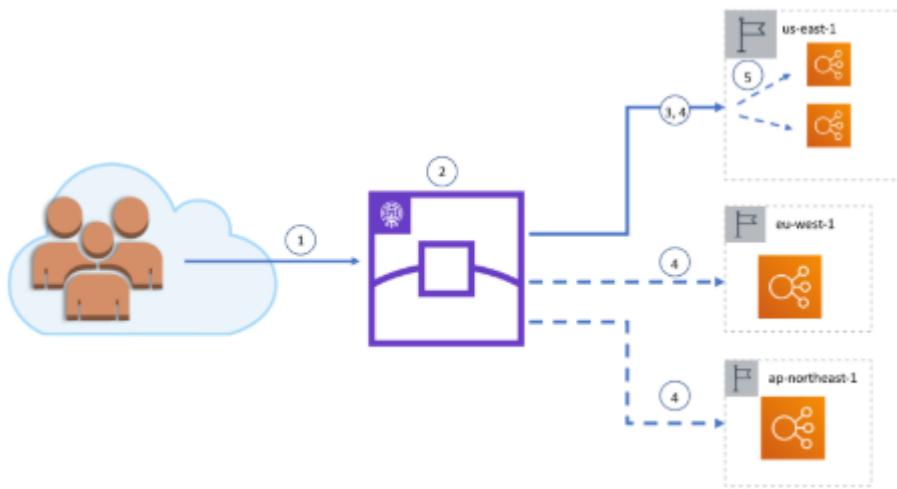
From above example our client is in US from this url it will connect to nearest edge location . this edge location will take the network packet to the nearest webserver to the edge location. This network packet will travel through private network of aws so there will be very less chane of latency. And connect the client to webserver.

Suppose it connect to california but the instance running in california down due to some reason than in this case it will redirect the network

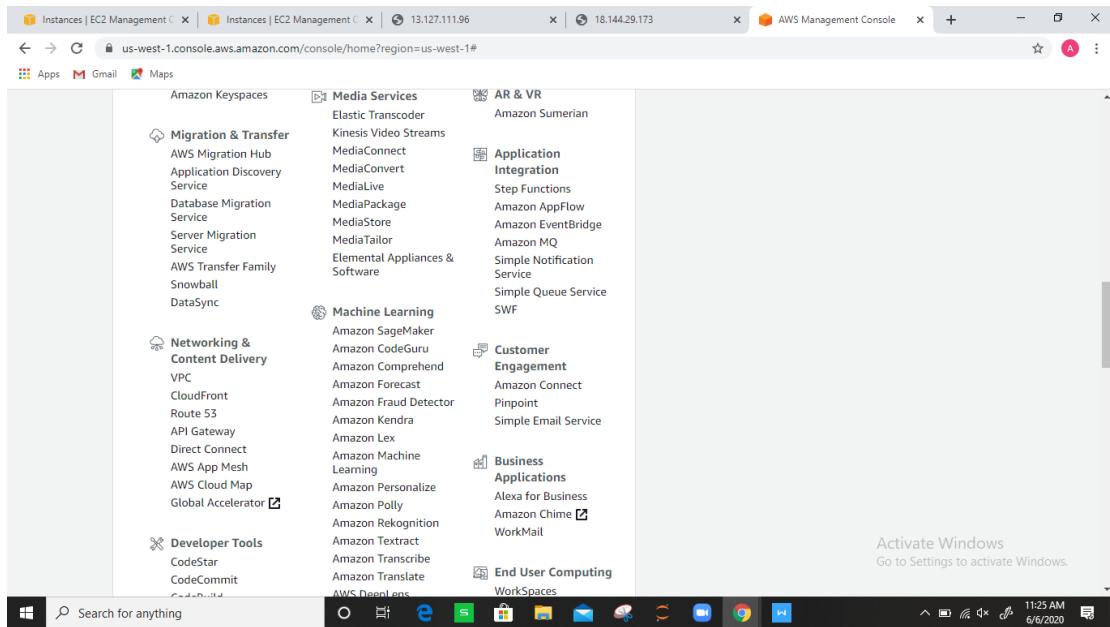
packet from client nearest edge location to mumbai region with some private network that connect the client to mumbai region .

NOTE- Global accelerator service is provide only in Oregon region.

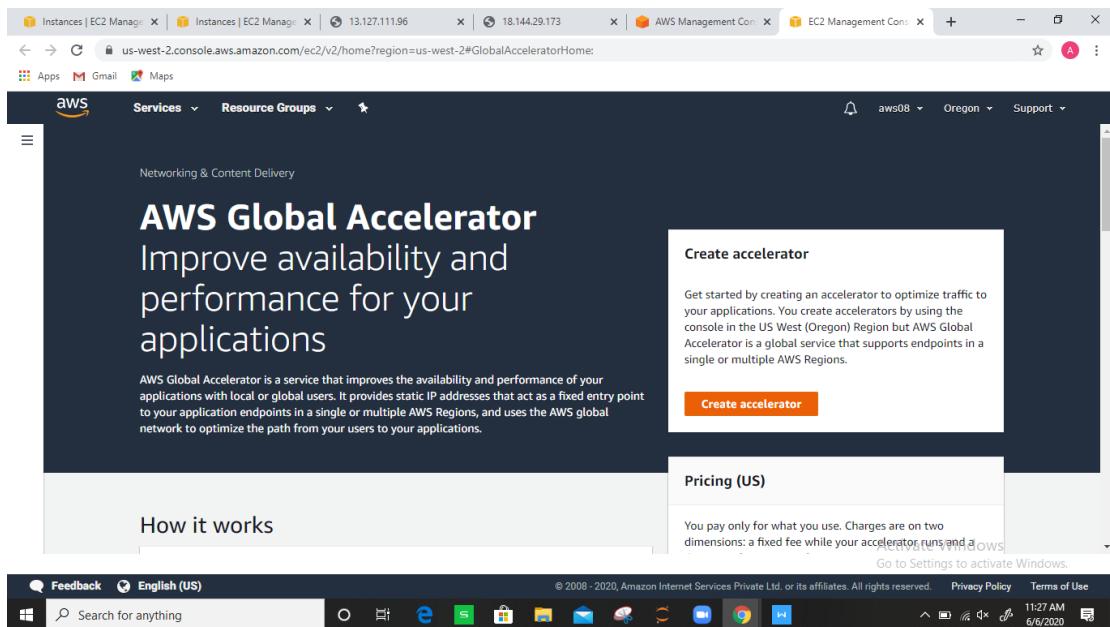
Global accelerator is a paid service of aws.



So I am creating global accelerator service



Click on create accelerator to create a global accelerator.



Just give the name of accelerator that you want

An accelerator includes one or more listeners that direct traffic to one or more endpoint groups. An endpoint group includes endpoints, such as load balancers. Global Accelerator is a global service that supports endpoints in multiple AWS Regions but you must be in the US West (Oregon) Region to create or update accelerators.

Basic configuration

To get started with creating your accelerator, provide a name for it.

Accelerator name
provide a name to associate with your accelerator.
 Enter only letters or numbers, with no spaces.

IP address type

► IP address pool selection
► Tags

Cancel **Next** Activate Windows Go to Settings to activate Windows.

Listeners- Global accelerator will provide a url that having combination of ip and port no.

So here client want to connect to webserver so for this

Port - 80

Protocol - TCP

HTTP is one of example of tcp

AWS Global Accelerator > Accelerators > Create accelerator

Add listeners

A listener is a process that checks for connection requests that arrive to an assigned set of static IP addresses on a port or port range that you specify.

Listeners
You designate a listener by choosing a specific port or port range to listen on.

Ports Info	Protocol Info	Client affinity Info
80	TCP	None

Use commas to separate port numbers or ranges.

Add listener

Cancel Previous **Next** Activate Windows Go to Settings to activate Windows.

Where your service like in our case ec2 is running in mumbai region and california region.

Traffic dial- All the traffic from california or near by region go to instance running in california.

The screenshot shows the AWS Management Console interface for creating an accelerator. The current step is "Step 3: Add endpoint groups". The configuration details are as follows:

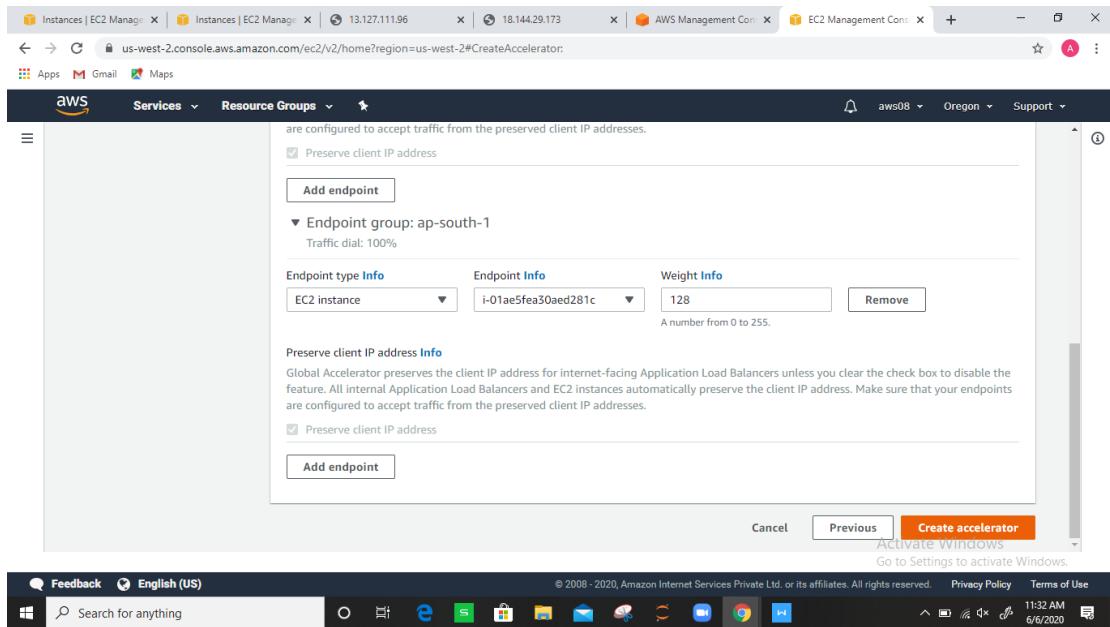
- Listener: 80 TCP**: Each listener can have multiple endpoint groups. Each endpoint group can only include endpoints that are in one Region. You aren't required to add an endpoint group, but until you do, traffic to this listener won't reach any endpoints.
- Region Info**:
 - Region: us-west-1
 - Traffic dial Info: Value 100, Remove button
- Configure health checks**:
 - Region: ap-south-1
 - Traffic dial Info: Value 100, Remove button
- Configure health checks**: Add endpoint group button

At the bottom of the page, there are buttons for **Cancel**, **Previous**, and **Next**. The status bar at the bottom right shows the date and time: 6/6/2020, 11:30 AM.

The screenshot shows the AWS Global Accelerator 'Create Accelerator' wizard at Step 3: Add endpoint groups. The main panel displays a list of endpoint groups: 'Endpoint group: us-west-1' (Traffic dial: 100%) and 'Endpoint group: ap-south-1' (Traffic dial: 100%). Each group has an 'Add endpoint' button. On the left sidebar, navigation steps are shown: Step 2 (Add listeners), Step 3 (Add endpoint groups, currently selected), and Step 4 (Add endpoints). At the bottom right, there are 'Cancel', 'Previous', and 'Create accelerator' buttons. A status bar at the bottom indicates 'Activate Windows'.

Now provide the id of ec2 instance in mumbai as well as california region.

The screenshot shows the AWS Global Accelerator 'Create Accelerator' wizard at Step 4: Add endpoints. It details two endpoint groups: 'Endpoint group: us-west-1' (Traffic dial: 100%) and 'Endpoint group: ap-south-1' (Traffic dial: 100%). Each group has an 'Add endpoint' button. Under 'Endpoint group: us-west-1', there is an 'Endpoint type Info' section showing 'EC2 instance' and 'i-0c6f2bb777ec6e97e'. A 'Weight Info' section shows a weight of '128'. Under 'Endpoint group: ap-south-1', there is another 'Endpoint type Info' section showing 'EC2 instance' and 'i-01ae5fea30aed281c'. A 'Weight Info' section shows a weight of '128'. Both sections have 'Remove' buttons. A 'Preserve client IP address Info' section is present. At the bottom right, there is an 'Activate Windows' message. The status bar at the bottom indicates 'Activate Windows'.



Now the accelerator has been deployed successfully. So that my client can connect easily.

DNS name- url

The screenshot shows the AWS Global Accelerator console. At the top, there are tabs for Instances | EC2 Manager, Instances | EC2 Manager, 13.127.111.96, 18.144.29.173, AWS Management Con, EC2 Management Con, and a search bar for us-west-2.console.aws.amazon.com/ec2/v2/home?region=us-west-2#GlobalAcceleratorDashboard. The main header says "AWS Services" and "Resource Groups". Below the header, it says "AWS Global Accelerator > Accelerators". A message box states: "You create accelerators by using the console in the US West (Oregon) Region but AWS Global Accelerator is a global service that supports endpoints in a single or multiple AWS Regions, which are listed in the Region Table". A table titled "Accelerators (1)" lists one entry: "mywebAL" with IP 75.2.42.180, 99.83.229.41, Enabled status, DNS name a94d6495cdafb0446.awsglobalaccelerator.com, Status Deployed, and Edited Saturday, June 6, 2020 6:02 AM GMT. There are buttons for View details, Edit, Delete, and Create accelerator. The Windows taskbar at the bottom shows various icons and the date/time 6/6/2020 11:39 AM.

Now I am trying to connect from this url to website. Lets see where accelerator will connect me .

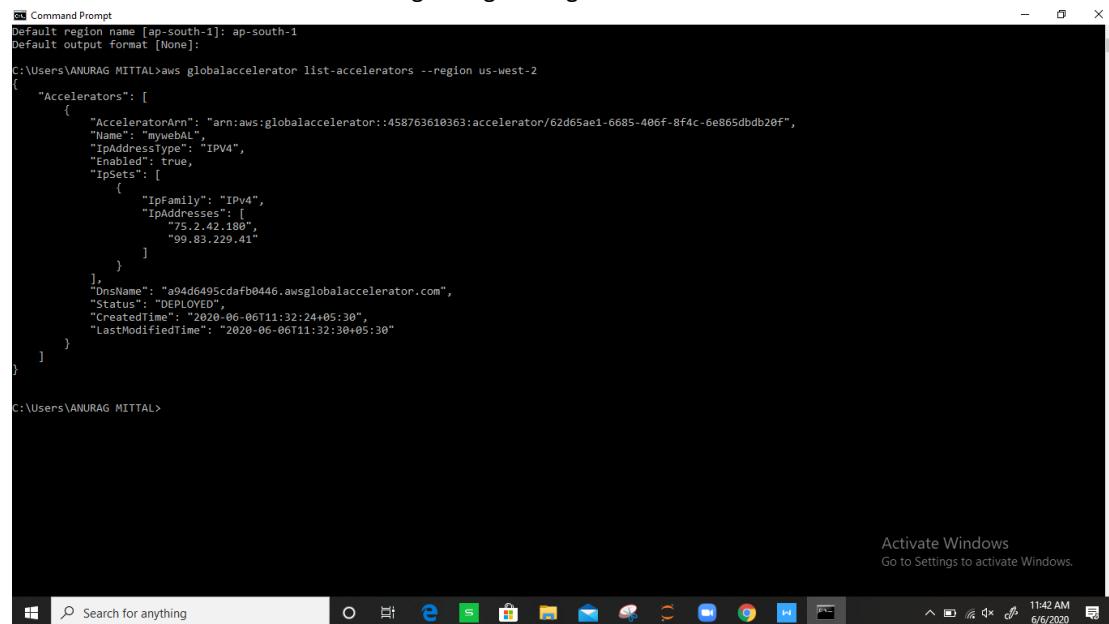
So it connect me to mumbai region. Because first it will take me to nearest edge location that in my case is delhi from delhi it connect to mumbai.

How I will check that it connect to mumbai datacentre. For this I have written ifconfig in the webpage

Here ifconfig give output as - 172.31.34.112 that is private ip of instance running in mumbai region.

The screenshot shows a browser window with the URL a94d6495cdafb0446.awsglobalaccelerator.com. The page displays the output of the ifconfig command. The output includes information for the eth0 and lo interfaces. The eth0 interface has an IP of 172.31.34.112, netmask 255.255.240.0, broadcast 172.31.47.255, and MAC address 02:42:ff:26:d7:f2. The lo interface has an IP of 127.0.0.1, netmask 255.0.0.0, and MAC address 00:00:00:00:00:00. Below the interface information, memory usage is shown: Mem: total 983 used 72 free 749 shared 0 buff/cache 161 available 776. The Windows taskbar at the bottom shows various icons and the date/time 6/6/2020 11:40 AM.

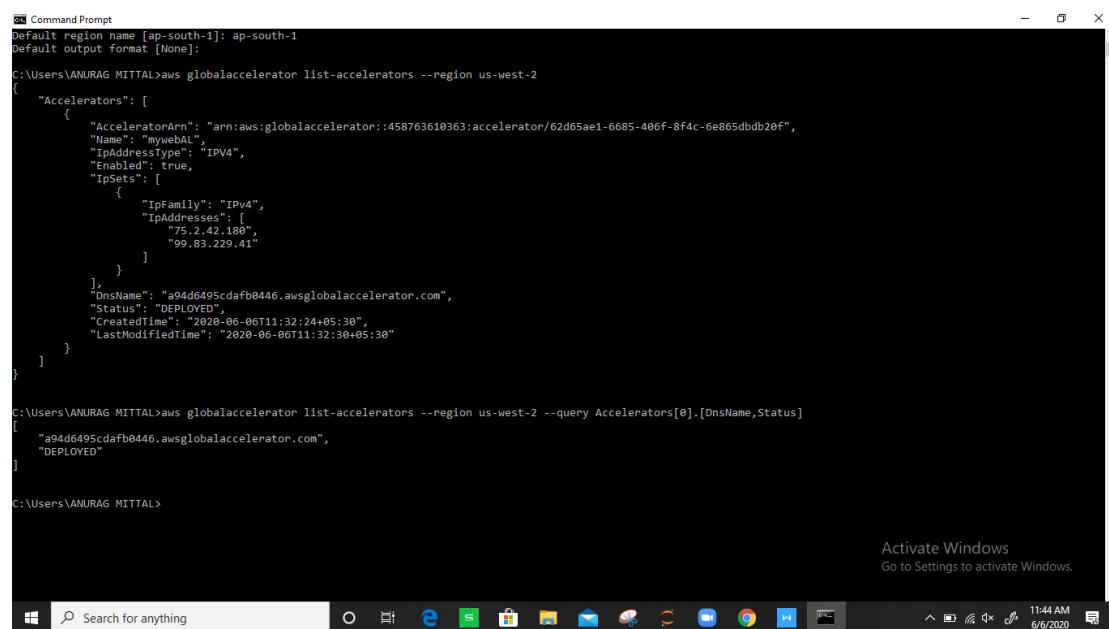
I can also check the global accelerator that is running from cli. Here I provide region - US-West-2 because accelerator service is running in Oregon region.



```
cmd Command Prompt
Default region name [ap-south-1]: ap-south-1
Default output format [None]:
C:\Users\ANURAG MITTAL>aws globalaccelerator list-accelerators --region us-west-2
{
    "Accelerators": [
        {
            "AcceleratorArn": "arn:aws:globalaccelerator::458763610363:accelerator/62d65ae1-6685-406f-8f4c-6e865dbdb20f",
            "Name": "mywebAL",
            "IpAddressType": "IPV4",
            "Enabled": true,
            "IpSets": [
                {
                    "IpFamily": "IPv4",
                    "IpAddresses": [
                        "75.2.42.188",
                        "99.83.229.41"
                    ]
                }
            ],
            "DnsName": "a94d6495cdafb0446.awsglobalaccelerator.com",
            "Status": "DEPLOYED",
            "CreatedTime": "2020-06-06T11:32:24+05:30",
            "LastModifiedTime": "2020-06-06T11:32:30+05:30"
        }
    ]
}

C:\Users\ANURAG MITTAL>
```

Activate Windows
Go to Settings to activate Windows.



```
cmd Command Prompt
Default region name [ap-south-1]: ap-south-1
Default output format [None]:
C:\Users\ANURAG MITTAL>aws globalaccelerator list-accelerators --region us-west-2
{
    "Accelerators": [
        {
            "AcceleratorArn": "arn:aws:globalaccelerator::458763610363:accelerator/62d65ae1-6685-406f-8f4c-6e865dbdb20f",
            "Name": "mywebAL",
            "IpAddressType": "IPV4",
            "Enabled": true,
            "IpSets": [
                {
                    "IpFamily": "IPv4",
                    "IpAddresses": [
                        "75.2.42.188",
                        "99.83.229.41"
                    ]
                }
            ],
            "DnsName": "a94d6495cdafb0446.awsglobalaccelerator.com",
            "Status": "DEPLOYED",
            "CreatedTime": "2020-06-06T11:32:24+05:30",
            "LastModifiedTime": "2020-06-06T11:32:30+05:30"
        }
    ]
}

C:\Users\ANURAG MITTAL>aws globalaccelerator list-accelerators --region us-west-2 --query Accelerators[0].[DnsName,Status]
[
    "a94d6495cdafb0446.awsglobalaccelerator.com",
    "DEPLOYED"
]

C:\Users\ANURAG MITTAL>
```

Activate Windows
Go to Settings to activate Windows.

Global accelerator is a paid service of aws . so it is good practice to remove the accelerator after the practical has been done.

First disable then delete.

The screenshot shows the AWS Global Accelerator console with a modal dialog titled "Delete the accelerator?". The dialog contains the following text:

Delete the accelerator permanently? This action cannot be undone. If you proceed with this action, you'll lose the static IP addresses that are assigned to this accelerator, so you can no longer route traffic by using them.
Before you can delete the accelerator, you must disable it. When you disable it, the accelerator no longer accepts or routes traffic.

Disable accelerator

This might take up to 5 minutes.

When the accelerator is disabled, you can delete it. Enter delete in the box, and then choose Delete.

Cancel **Delete**

The background of the console shows a list of accelerators, including "mywebAI" with IP 75.2.42.180, 99.83. The status of the accelerator is shown as "Enabled".

The screenshot shows the AWS Global Accelerator console with a modal dialog titled "Delete the accelerator?". The dialog contains the following text:

Delete the accelerator permanently? This action cannot be undone. If you proceed with this action, you'll lose the static IP addresses that are assigned to this accelerator, so you can no longer route traffic by using them.
Before you can delete the accelerator, you must disable it. When you disable it, the accelerator no longer accepts or routes traffic.

Accelerator disabled

When the accelerator is disabled, you can delete it. Enter delete in the box, and then choose Delete.

Cancel **Delete**

The background of the console shows a list of accelerators, including "mywebAI" with IP 75.2.42.180, 99.83. The status of the accelerator is now shown as "Disabled".

Now the accelerator has been deleted successfully.

The screenshot shows the AWS Global Accelerator dashboard. At the top, a green notification bar says "Global Accelerator successfully deleted the accelerator mywebAL.". Below it, a message states: "You create accelerators by using the console in the US West (Oregon) Region but AWS Global Accelerator is a global service that supports endpoints in a single or multiple AWS Regions, which are listed in the Region Table." A table header for "Accelerators" is visible, with columns for Name, Static IP addresses, Enabled, DNS name, Status, and Edited. A message in the center of the table says "You don't have any accelerators. To create one, choose Create accelerator." A prominent orange "Create accelerator" button is at the bottom of the table area. The bottom of the screen shows the Windows taskbar with various pinned icons and system status information.