

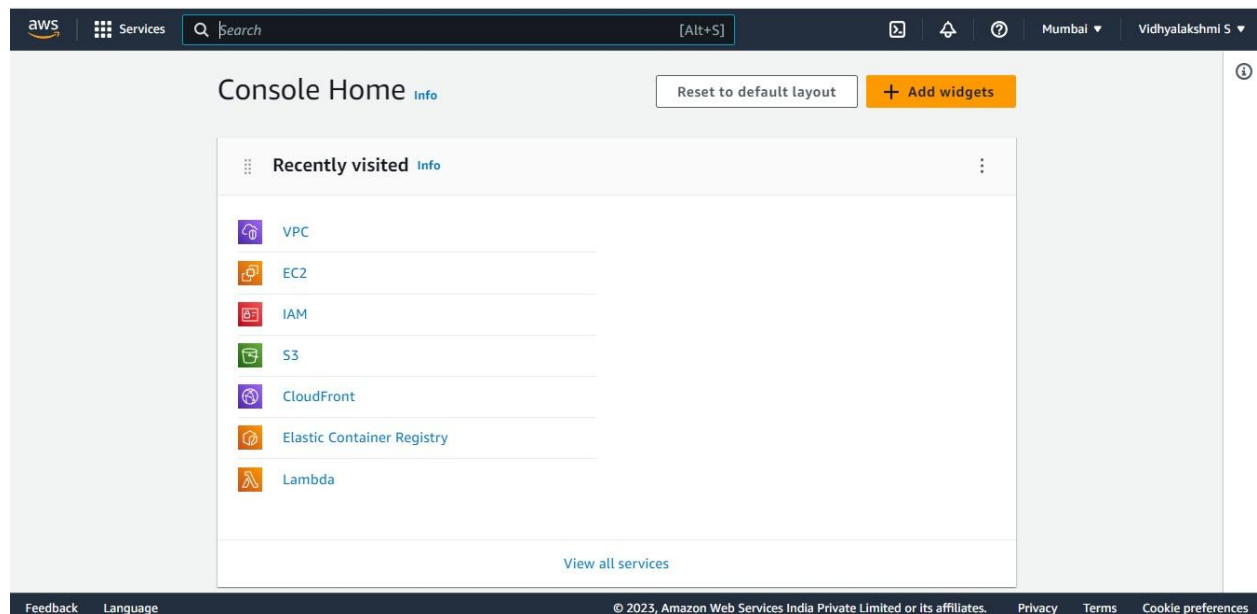
Name : Vidhyalakshmi S

Reg No:727721eucs176

# CLOUD COMPUTING

## DAY 1

### AWS Account Creation



## DAY 2

Name : Vidhyalakshmi S

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1.Create a Windows EC2 instance with t2.micro Instance and show the remote connection of that EC2 Instance.

The screenshot shows the AWS Management Console interface. On the left, the navigation menu includes 'EC2 Dashboard', 'EC2 Global View', 'Events', 'Tags', 'Limits', 'Instances', 'Images', and 'Elastic Block Store'. The 'Instances' section is selected, showing a list of 4 instances. The instance 'server' with ID 'i-0943d23de079c0f9b' is highlighted. Below the list, the details for this instance are shown, including its platform (Windows), AMI ID, AMI name, launch time, and various monitoring and protection settings.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
Webserver	i-092025d5a6acde46f	Stopped	t2.micro	-	No alarms	ap-south-1b
server	i-0943d23de079c0f9b	Running	t2.micro	-	No alarms	ap-south-1b
-	i-0733fbb2407b6477	Stopped	t2.micro	-	No alarms	ap-south-1b
asgvidhu	i-0124706645ef93b9	Stopped	t2.micro	-	No alarms	ap-south-1a

**Instance: i-0943d23de079c0f9b (server)**

**Instance details**

Platform	AMI ID	Monitoring
Windows	ami-09461328af8fbc9c	disabled
Platform details	AMI name	Termination protection
Windows	Windows_Server-2022-English-Full-Base-2023.03.15	Disabled
Stop protection	Launch time	AMI location
Disabled	Wed Apr 12 2023 20:50:32 GMT+0530 (India Standard Time) (1 minute)	amazon/Windows_Server-2022-English-Full-Base-2023.03.15
Instance auto-recovery	Lifecycle	Stop-hibernate behavior

2.Create an EBS volume of 5 GB and attach to a windows EC2 instance and make partition of that EBS volume.

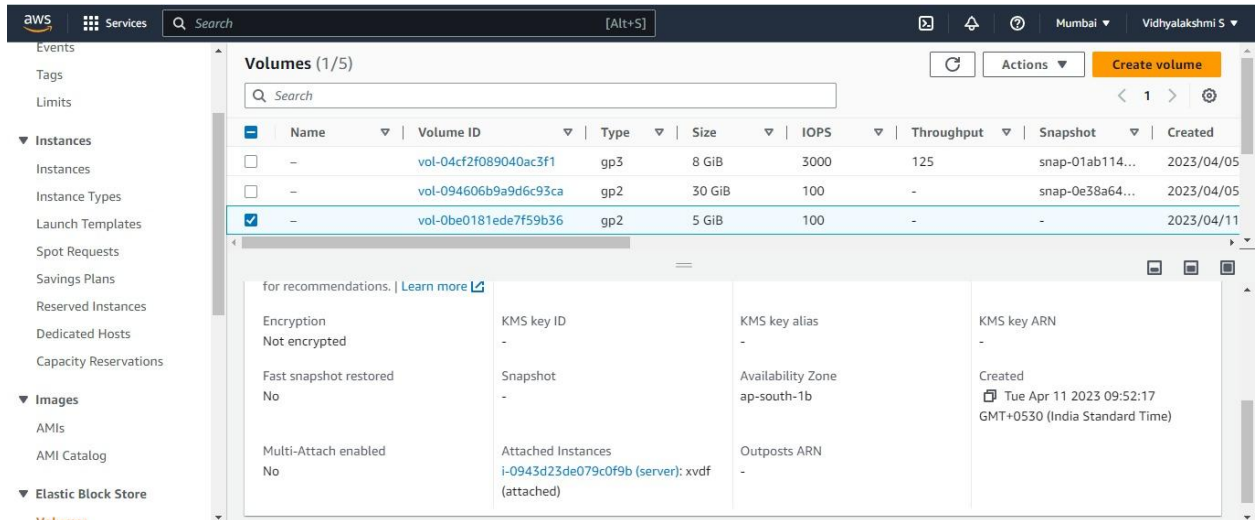
The screenshot shows the AWS Management Console interface for the 'Volumes' section. It displays a list of 5 volumes. The volume 'vol-0be0181ede7f59b36' is highlighted, which is a gp2 type, 5 GiB in size, and was created on 2023/04/11. Below the list, the details for this volume are shown, including its encryption status, snapshot, multi-attach status, and the instance it is attached to (i-0943d23de079c0f9b).

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
-	vol-04cf2f089040ac3f1	gp3	8 GiB	3000	125	snap-01ab114...	2023/04/05
-	vol-094606b9a9d6c93ca	gp2	30 GiB	100	-	snap-0e38a64...	2023/04/05
-	vol-0be0181ede7f59b36	gp2	5 GiB	100	-	-	2023/04/11

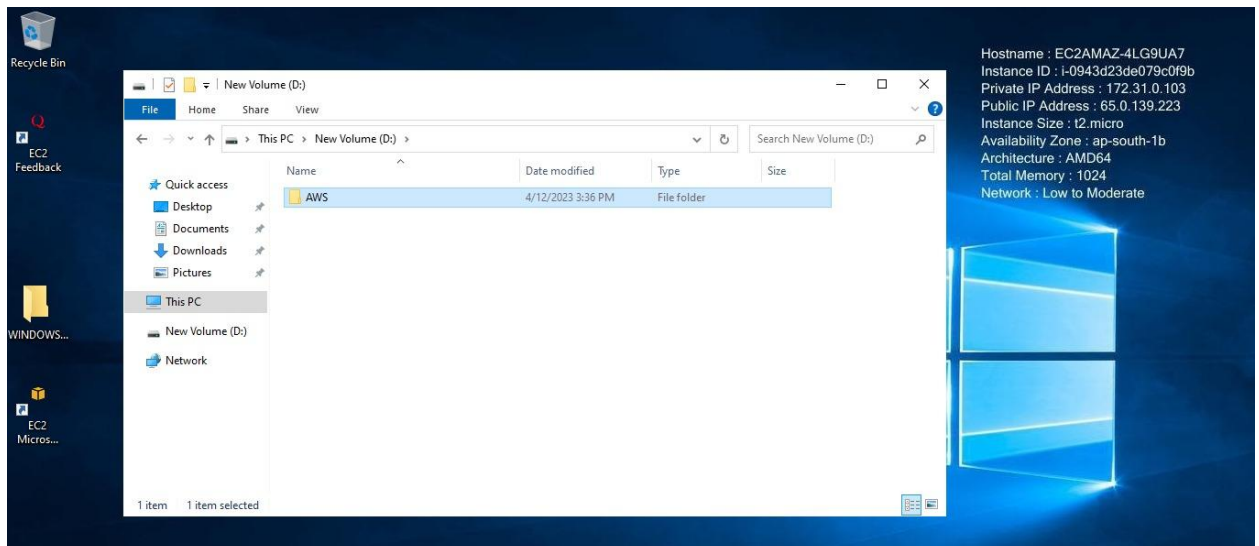
**Volume: vol-0be0181ede7f59b36**

Encryption	KMS key ID	KMS key alias	KMS key ARN
Not encrypted	-	-	-
Fast snapshot restored	Snapshot	Availability Zone	Created
No	-	ap-south-1b	Tue Apr 11 2023 09:52:17 GMT+0530 (India Standard Time)
Multi-Attach enabled	Attached Instances	Outposts ARN	
No	i-0943d23de079c0f9b (server): xvdf (attached)	-	

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3. Create some files and folders into 5 GB EBS volume of the previous exercise and take a snapshot of that EBS volume.



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4.Create a Linux EC2 instance with t2.micro Instance and show the remote connection of that EC2 Instance.

The screenshot displays the AWS Management Console interface. At the top, the user's name 'Vidhyalakshmi S' and location 'Mumbai' are visible. The main section shows a list of EC2 instances under the heading 'Instances (1/6) Info'. The instances are:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
Webserver	i-092025d5a6acde46f	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1b
server	i-0943d23de079c0f9b	Stopped	t2.micro	-	No alarms	ap-south-1b
-	i-0733fbba2407b6477	Terminated	t2.micro	-	No alarms	ap-south-1b
asgvidhu	i-01247066645ef93b9	Stopped	t2.micro	-	No alarms	ap-south-1a

Below the list, the details for the 'Webserver' instance (i-092025d5a6acde46f) are shown. The instance is running on the 'Amazon Linux (Inferred)' platform, using the 'ami-0376ec8eacdf70aae' AMI. The AMI name is 'al2023-ami-2023.0.20230322.0-kernel-6.1-x86\_64'. The launch time is 'Wed Apr 12 2023 21:09:20 GMT+0530 (India Standard Time) (8 minutes)'. The AMI location is 'amazon/al2023-ami-2023.0.20230322.0-kernel-6.1-x86\_64'.

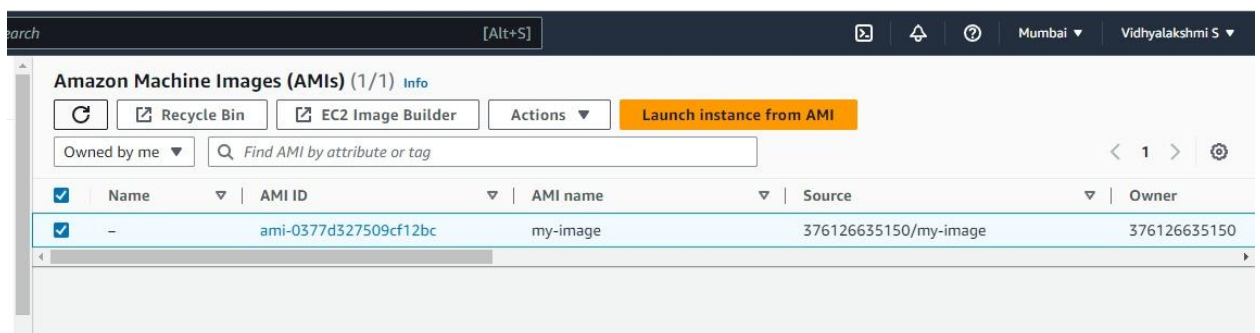
Below the instance details, a terminal window is open, showing the output of the 'dnf check-release-update' command. The output indicates that a newer release of 'Amazon Linux' is available, version 2023.0.20230322. The terminal also shows the user's login information: 'Last login: Wed Apr 5 09:11:02 2023 from 13.233.177.5' and the prompt '[ec2-user@ip-172-31-13-184 ~]\$'.

5.Install, Start and Enable the httpd webservice in that Linux EC2 Instance, then host a static website in EC2.

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6. Create Image(MyAMI) of the linux Webserver(from the previous exercise) and launch new EC2 instance from the created Image(MyAMI)



### DAY 3

1. Create a S3 Bucket and create a folder in the bucket and upload a file in the folder.

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[Alt+S] [Icons] Global Vidhyalakshmi S

Amazon S3 > Buckets

**Account snapshot** [View Storage Lens dashboard](#)  
Storage lens provides visibility into storage usage and activity trends. [Learn more](#)

**Buckets (2)** [Info](#) [Refresh](#) [Copy ARN](#) [Empty](#) [Delete](#) [Create bucket](#)

< 1 > [Settings]

	Name	AWS Region	Access	Creation date
<input type="radio"/>	bucketvidhya	Asia Pacific (Mumbai) ap-south-1	<span style="color: red;">Public</span>	April 6, 2023, 11:25:06 (UTC+05:30)

[Alt+S] [Icons] Global Vidhyalakshmi S

Amazon S3 > Buckets > bucketvidhya > myfolder/

**myfolder/** [Copy S3 URI](#)

**Objects** | Properties

**Objects (1)**  
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](#)

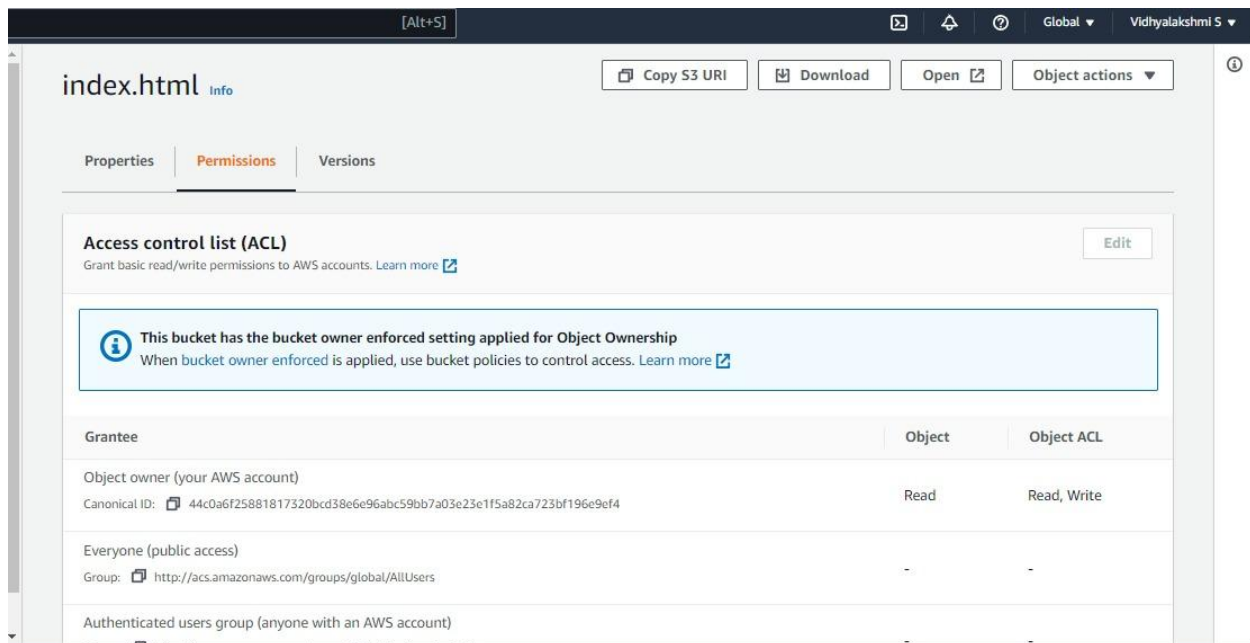
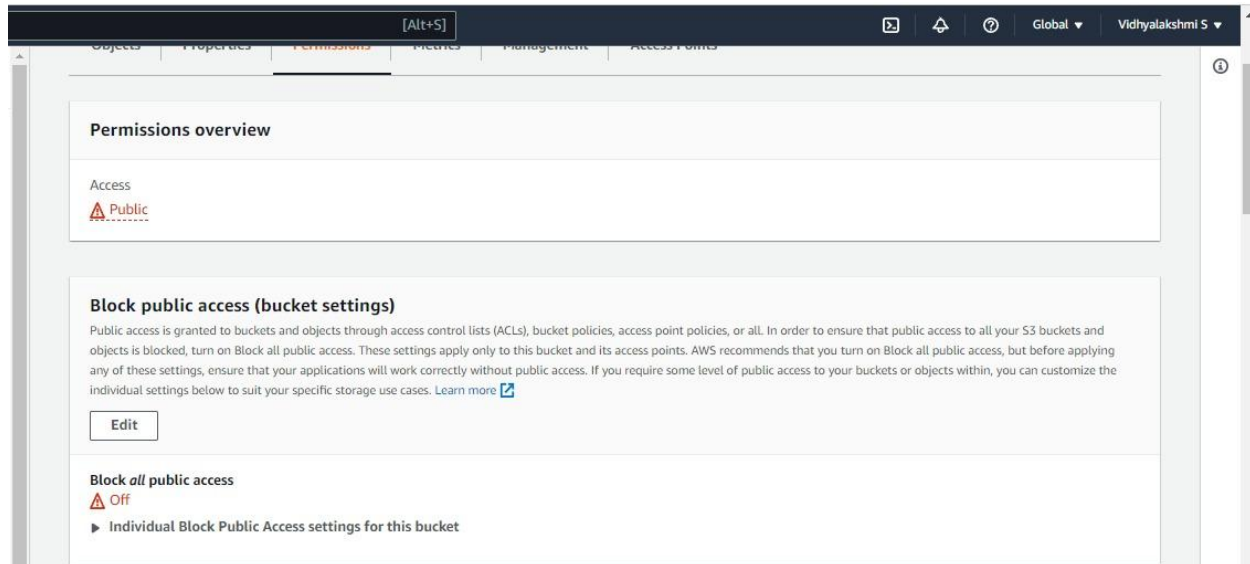
[Refresh](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#) [Create folder](#) [Upload](#)

< 1 > [Settings]

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	index.html	html	April 18, 2023, 15:38:56 (UTC+05:30)	1.8 KB	Standard

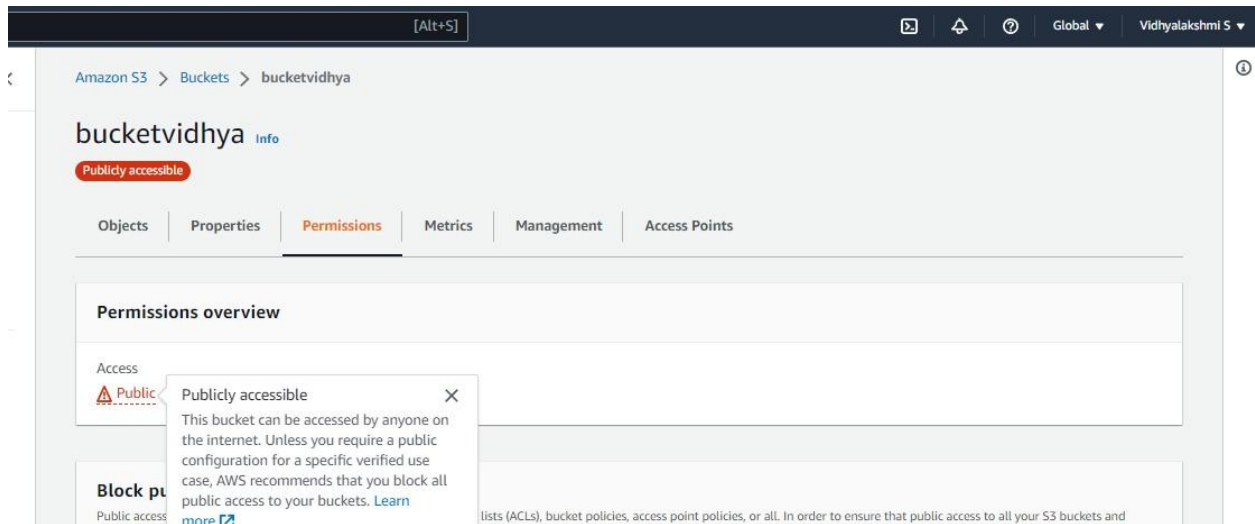
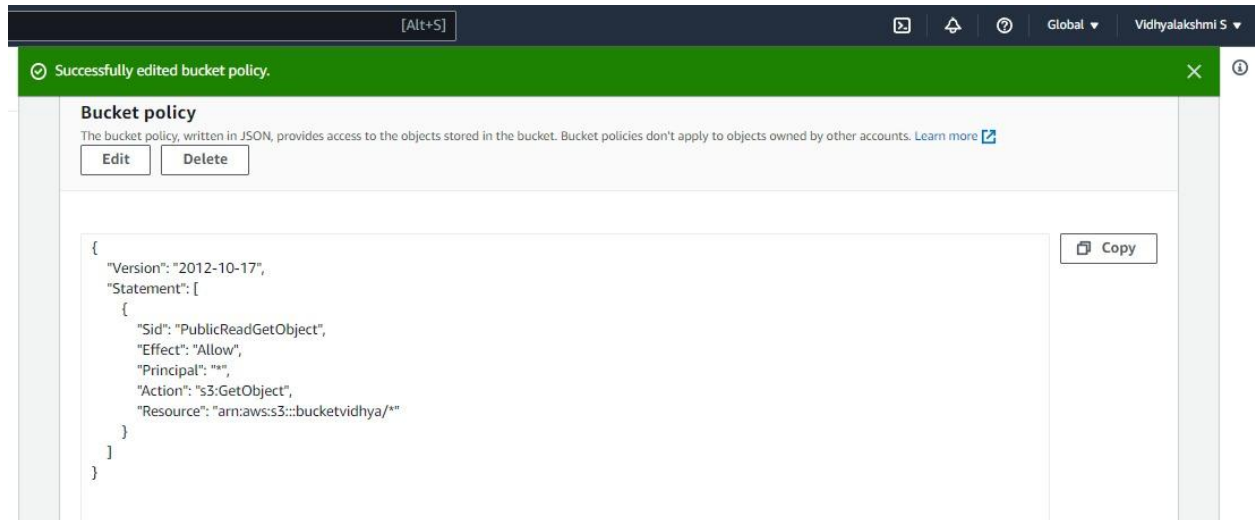
2.Disable "Block Public Access" for the bucket and enable public read access for a file.

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3.Create a bucket policy which should deny to read objects under a folder of a bucket.

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4.Enable versioning objects for a bucket and upload objects with multiple versions of it.



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Amazon S3 > Buckets > bucketvidhya

bucketvidhya

Info

Publicly accessible

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](#)

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Show versions

< 1 >

<input type="checkbox"/>	Name	Type	Version ID	Last modified	Size	Storage class
<input type="checkbox"/>	<a href="#">index.html</a>	html	null	April 6, 2023, 11:29:44 (UTC+05:30)	1.8 KB	Standard
<input type="checkbox"/>	<a href="#">myfolder/</a>	Folder	-	-	-	-

[Alt+S] Global Vidhyalakshmi S

Successfully edited Bucket Versioning

To transition, archive, or delete older object versions, [configure lifecycle rules](#) for this bucket.

Amazon S3 > Buckets > bucketvidhya

bucketvidhya

Info

Publicly accessible

Objects

Properties

Permissions

Metrics

Management

Access Points

Bucket overview

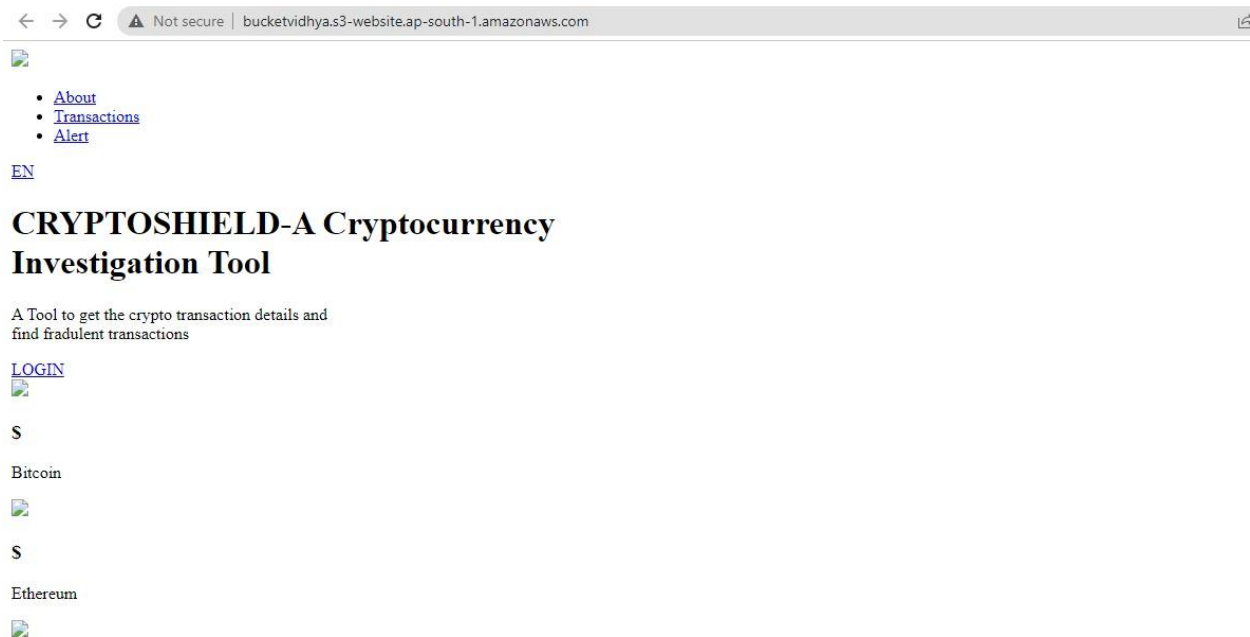
AWS Region Asia Pacific (Mumbai) ap-south-1	Amazon Resource Name (ARN) arn:aws:s3:::bucketvidhya	Creation date April 6, 2023, 11:25:06 (UTC+05:30)
--	---	--

Bucket Versioning

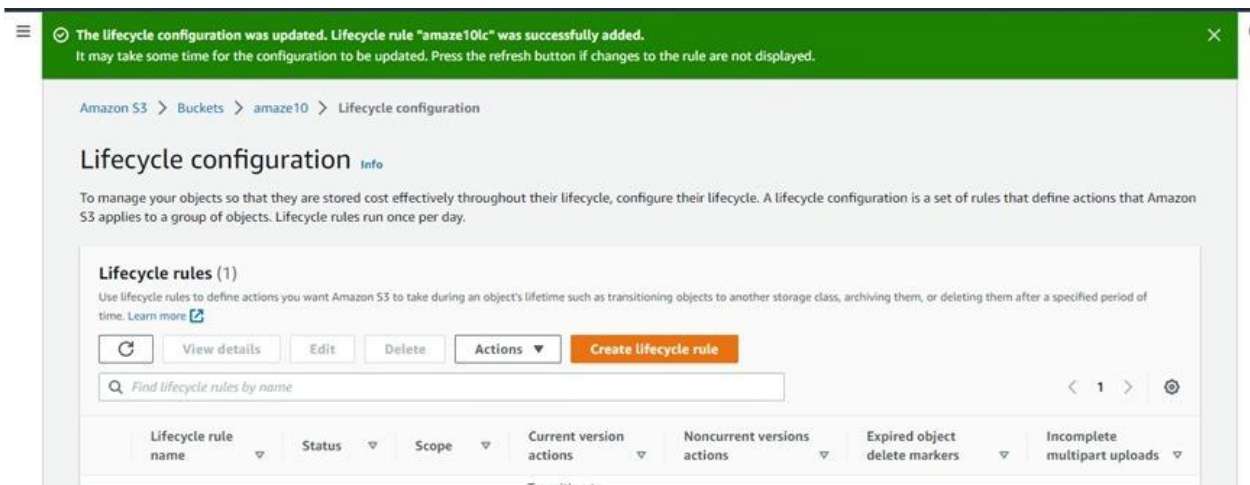
Name : Vidhyalakshmi S

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5.Host a static webpage in a bucket itself by using static website hosting feature of it.

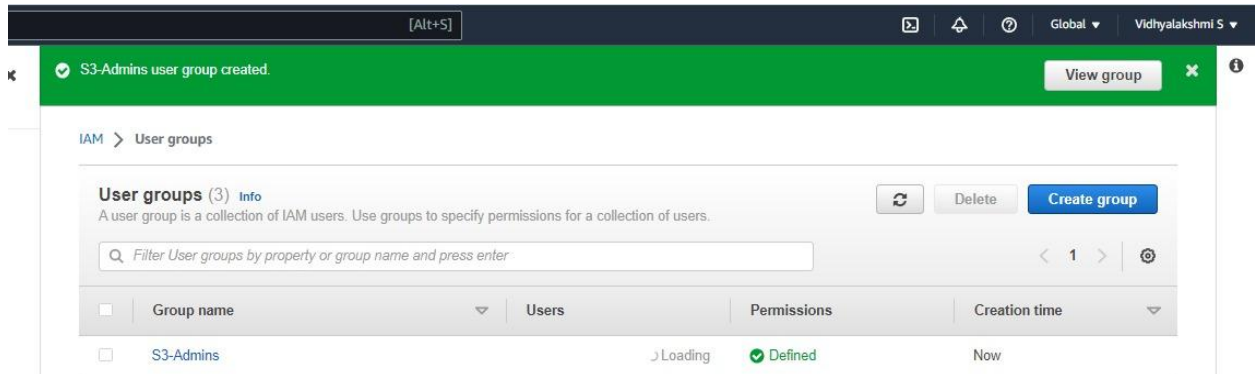


6.Enable a lifecycle management rule between various storage classes for a S3 bucket.

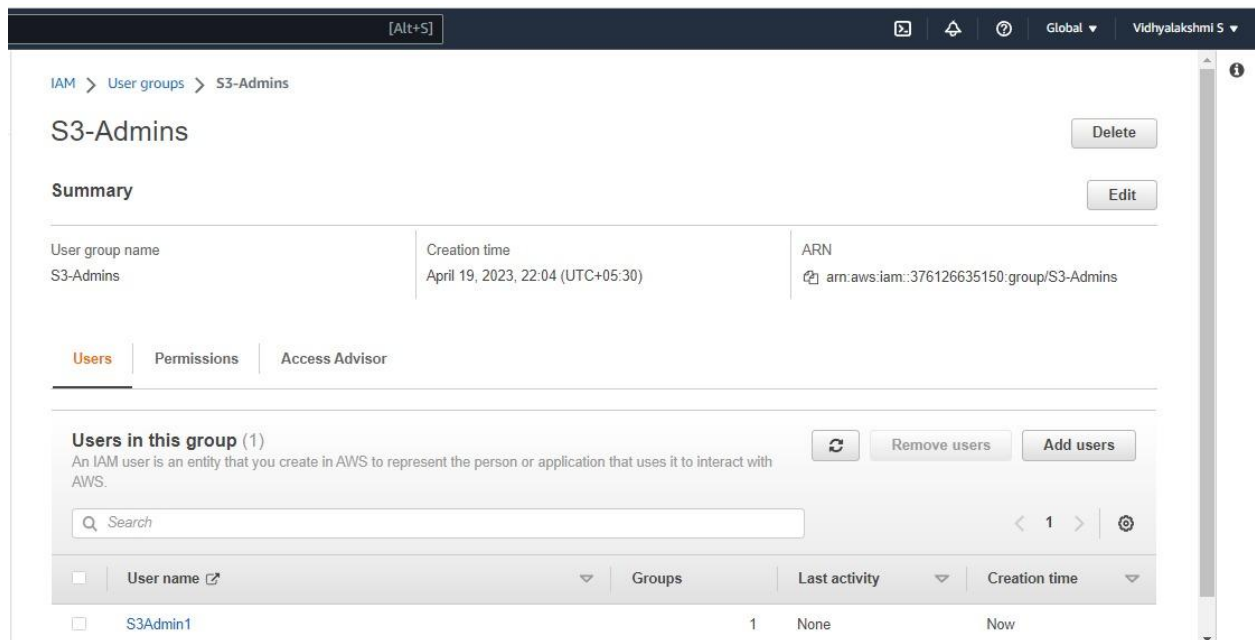


## DAY 4

1.Create an IAM group called as 'S3-Admins' with 'AmazonS3FullAccess'.



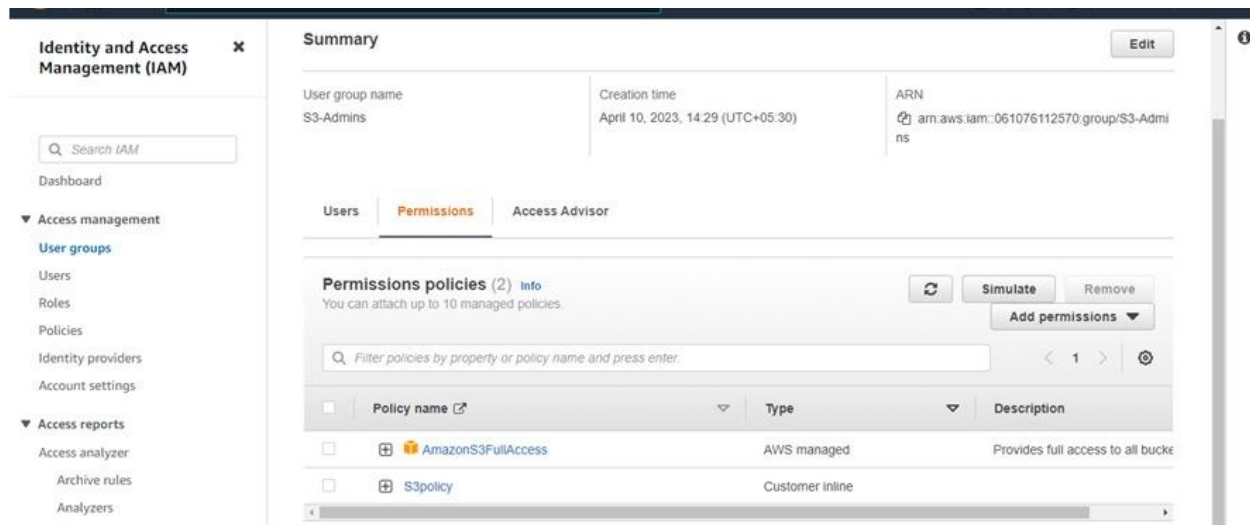
2.Create an IAM user called as 'S3Admin1' and add it to the 'S3-Admins' group.



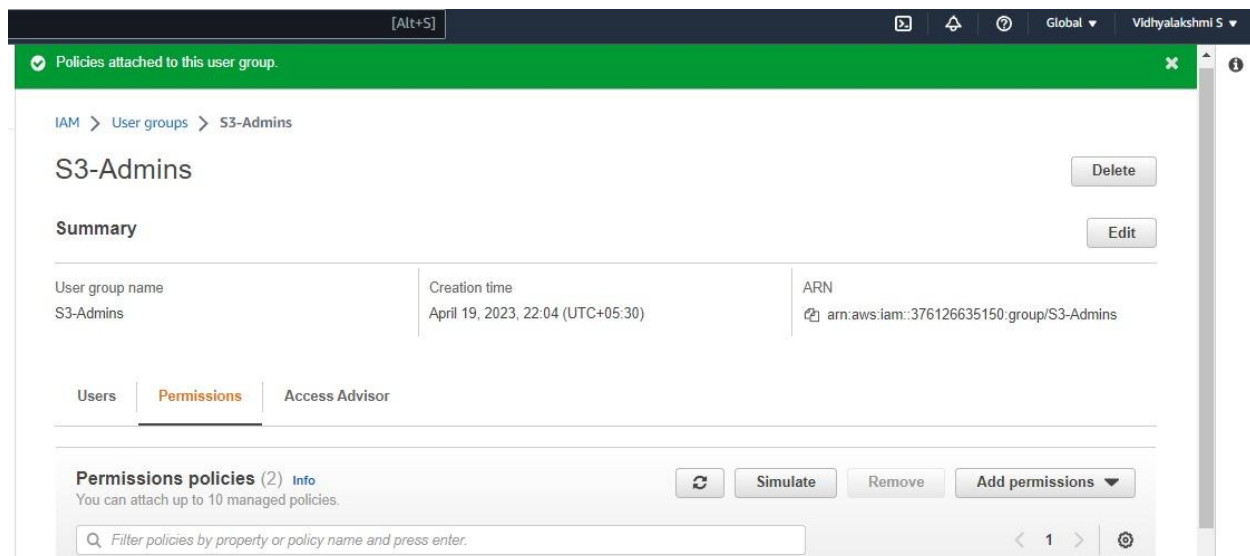
Name : Vidhyalakshmi S

Reg No:727721eucs176

3. Attach an IAM custom policy to the 'S3-Admins' group which should deny to delete objects.

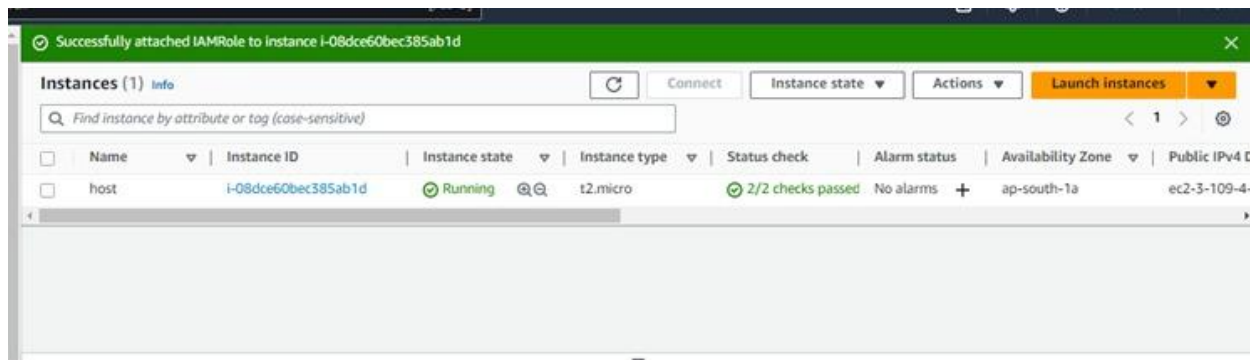
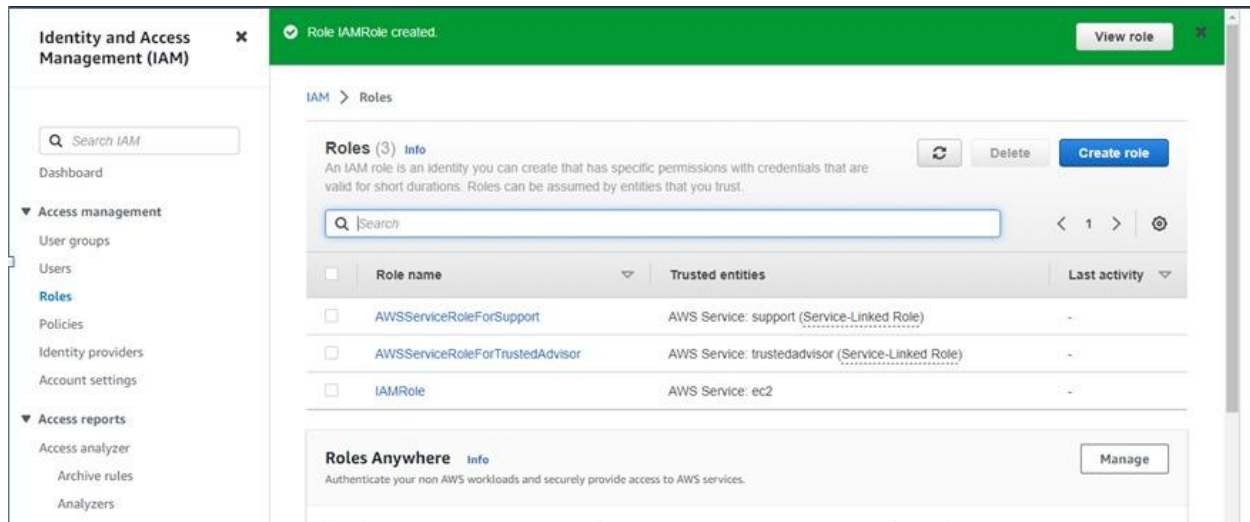


4. Create an Inline policy for an IAM user and set some permission boundary for that user.

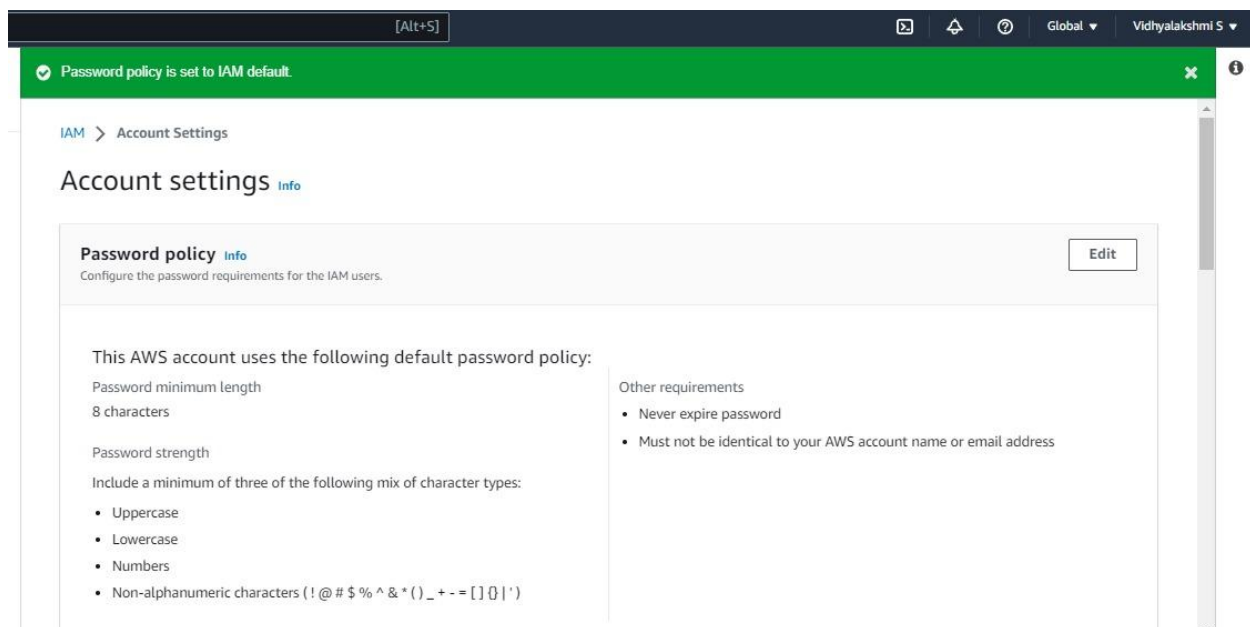


5. Create an IAM role with 'AmazonS3FullAccess' and attach the role to an EC2 instance.

Name : Vidhyalakshmi S  
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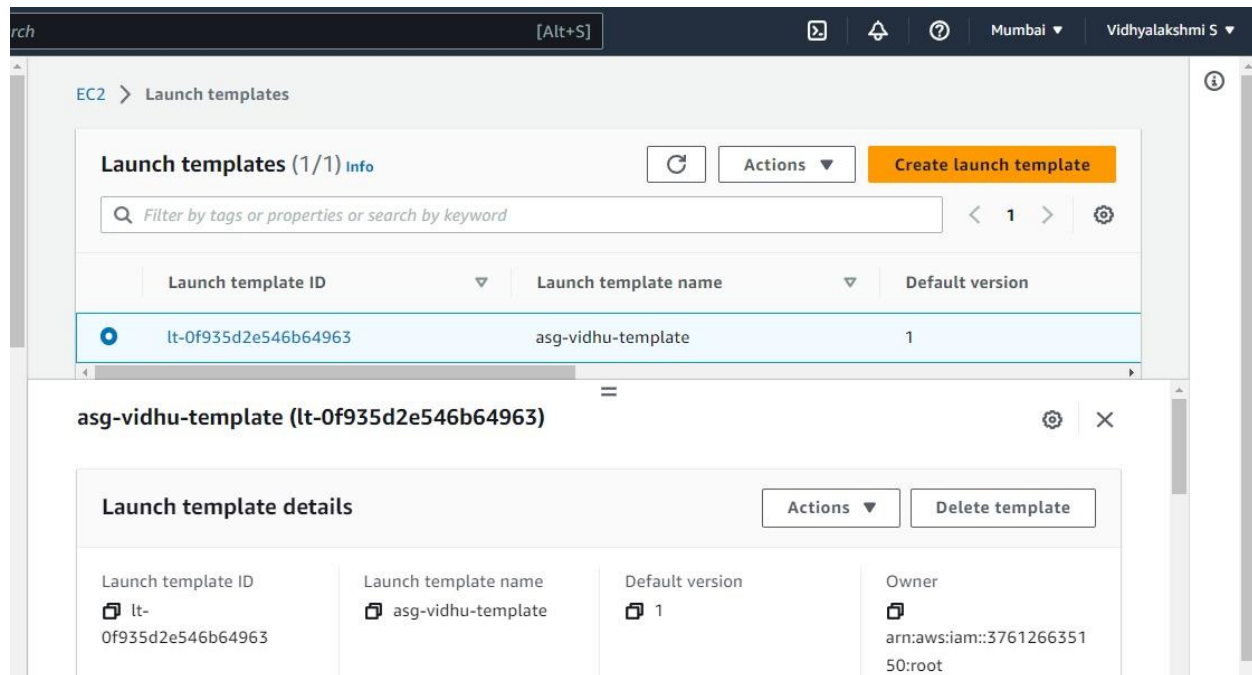


6. Activate MFA for an IAM user and Set some Password Policies such as 1 uppercase, 1 lowercase etc

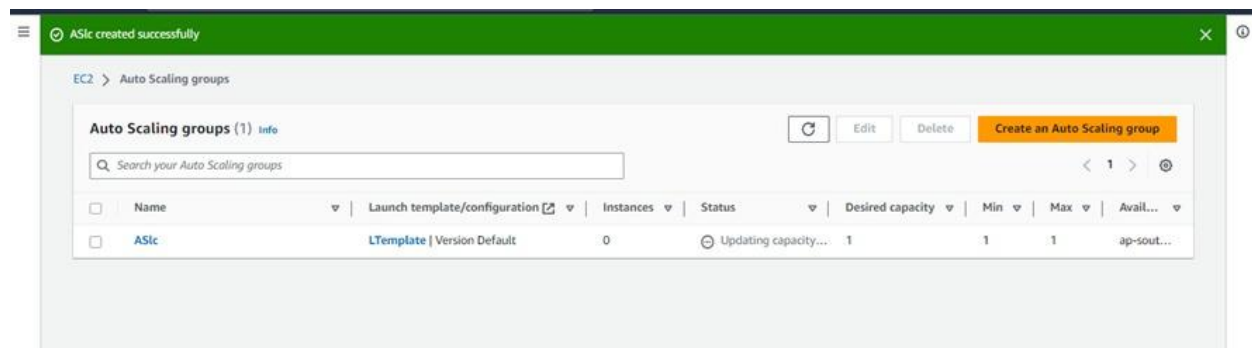


**DAY 5**

1.Create a launch template with a custom AMI and t2.micro instance type



2.Create an autoscaling group with the above-created launch template



**DAY 6**

1.Create a vpc with multiple subnets(atleast 1 subnet in each zone)

The screenshot shows the AWS Management Console interface for VPCs. The top navigation bar includes the search bar, navigation icons, and the user's name 'Vidhyalakshmi S' in the Mumbai region. The main heading is 'Your VPCs (1/2) Info'. Below this is a search bar for 'Filter VPCs' and a table listing VPCs.

Name	VPC ID	State	IPv4 CIDR
-	vpc-061b8d838dc0322bd	Available	172.31.0.0/16
✓ vpc-vidhu	vpc-030577d8ba60ba4cb	Available	10.0.0.0/16

Below the table, the 'Resource map' tab is selected, showing a visual overview of the VPC resources. It includes a 'VPC' card with a 'Show details' link, a 'Subnets (2)' card, and a 'Route tables (1)' card.

2.Make 1 public subnet and 2 private subnets in the created VPC

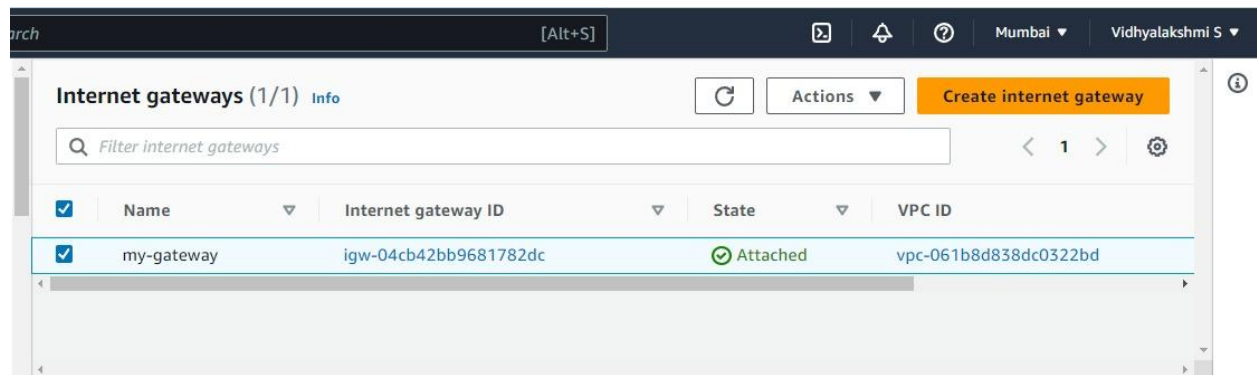
The screenshot shows the AWS Management Console interface for Subnets. The top navigation bar is the same as the previous screenshot. The main heading is 'Subnets (3/5) Info'. Below this is a search bar for 'Filter subnets' and a table listing subnets.

Name	Subnet ID	State	VPC	IPv4 C
-	subnet-005de1677c1a8c3a0	Available	vpc-061b8d838dc0322bd	172.31
✓ private-subnet	subnet-0894c7d783e9f37e6	Available	vpc-030577d8ba60ba4cb   vp...	10.0.2.
-	subnet-01b40cac07c49af0b	Available	vpc-061b8d838dc0322bd	172.31
✓ private-subnet	subnet-082e03722f749c113	Available	vpc-061b8d838dc0322bd	172.31
✓ public-subnet	subnet-0be406f7a1c1798b7	Available	vpc-030577d8ba60ba4cb   vp...	10.0.1.

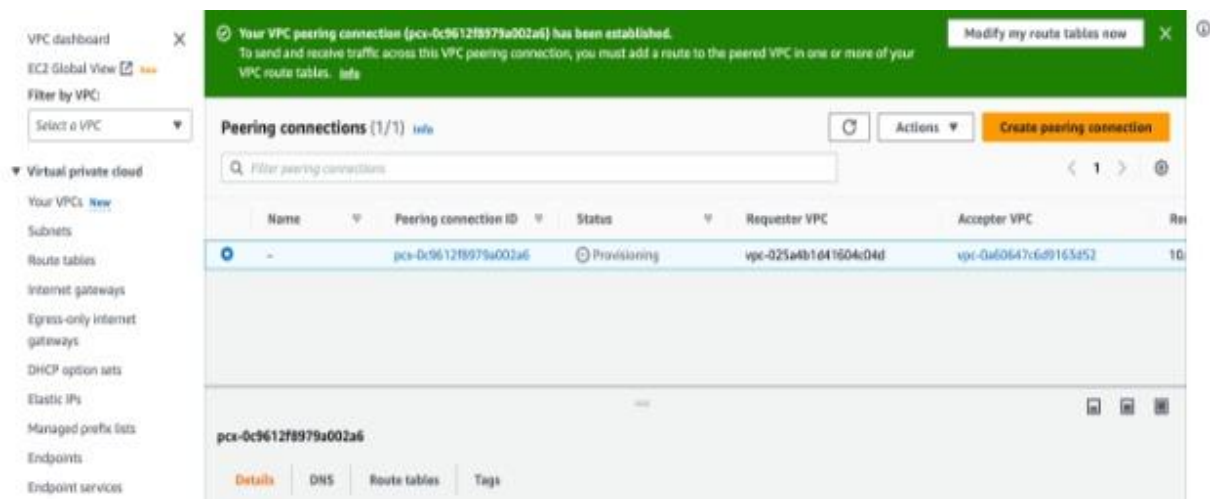
Name : Vidhyalakshmi S

Reg No:727721eucs176

3. Make internet connection using NAT gateway for the 2 private subnets.



4. Create a VPC peering connection between 2 different VPCs from 2 different regions.





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Reg No:727721eucs176

5.Create VPC peering connetions for 3 different VPCs from the same region.

The screenshot displays the AWS VPC console interface. On the left, a navigation sidebar lists various services under 'Virtual private cloud' and 'Security'. The main content area shows a green notification banner at the top stating: 'A VPC peering connection pcx-0ae0cfff0d658e499 / nvirginia-mumbai-vpc has been requested. Remember to change your region to ap-south-1 to accept the peering connection.' Below this, the 'Peering connections (1)' section is active, featuring a search bar and a table with one entry. The table columns are Name, Peering connection ID, Status, Requester VPC, Accepter VPC, and Requester CIDR. The entry shows a peering connection with ID 'pcx-0ae0cfff0d658e499' in an 'Active' state. Below the table, there is a section titled 'Select a peering connection above' with three icons for actions.

VPC dashboard

EC2 Global View [New](#)

Filter by VPC:

Select a VPC

Virtual private cloud

Your VPCs [New](#)

Subnets

Route tables

Internet gateways

Egress-only internet gateways

Carrier gateways

DHCP option sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

NAT gateways

Peering connections

Security

Network ACLs

Security groups

DNS firewall

Rule groups

Domain lists

A VPC peering connection pcx-0ae0cfff0d658e499 / nvirginia-mumbai-vpc has been requested. Remember to change your region to ap-south-1 to accept the peering connection.

Peering connections (1) info

Filter peering connections

Actions Create peering connection


Name	Peering connection ID	Status	Requester VPC	Accepter VPC	Requester CIDR
nvirginia-mum...	pcx-0ae0cfff0d658e499	Active	vpc-077c391e311d830b9 / pr...	vpc-0d6535a3ff3e11a1	192.0.0.0/16

Select a peering connection above

CloudShell Feedback Language

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Reg No:727721eucs176

EC2 Global View  **New**

Filter by VPC:

▼ Virtual private cloud

- Your VPCs **New**
- Subnets
- Route tables
- Internet gateways
- Egress-only internet gateways
- DHCP option sets
- Elastic IPs
- Managed prefix lists
- Endpoints
- Endpoint services
- NAT gateways
- Peering connections**

▼ Security

- Network ACLs
- Security groups

▼ DNS firewall


- Rule groups
- Domain lists


▼ Network Firewall

### Peering connections (2) **Info**

	Name	Peering connection ID	Status	Requester VPC	Accepter VPC	Requester CIDR
<input type="radio"/>	mumbai-frank...	pcx-005bcef1f399596f4	Active	vpc-0d6535a3ff3e11a1 / mu...	vpc-0e46dd502259db0df	10.0.0.0/16
<input type="radio"/>	mumbai-nvrigl...	pcx-0ae0cfd0d658e499	Active	vpc-077c391e311d830b9	vpc-0d6535a3ff3e11a1 / mu...	192.0.0.0/16

Select a peering connection above

VPC dashboard 

EC2 Global View  **New**

Filter by VPC:

▼ Virtual private cloud

- Your VPCs **New****
- Subnets
- Route tables
- Internet gateways
- Egress-only internet gateways
- Carrier gateways
- DHCP option sets
- Elastic IPs
- Managed prefix lists
- Endpoints
- Endpoint services
- NAT gateways
- Peering connections

▼ Security

- Network ACLs
- Security groups

▼ DNS firewall

- Rule groups
- Domain lists




### Your VPCs (1/3) **Info**

Press **F11** to exit full screen

	Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	D
<input type="checkbox"/>	project-vpc	vpc-0e48ea0d10552da2b	Available	172.0.0.0/16	-	dk
<input checked="" type="checkbox"/>	project-vpc-frankfurt-vpc	vpc-0e46dd502259db0df	Available	172.0.0.0/16	-	dk
<input type="checkbox"/>	-	vpc-0457e845777cra432	Available	172.31.0.0/16	-	dk

#### vpc-0e46dd502259db0df / project-vpc-frankfurt-vpc

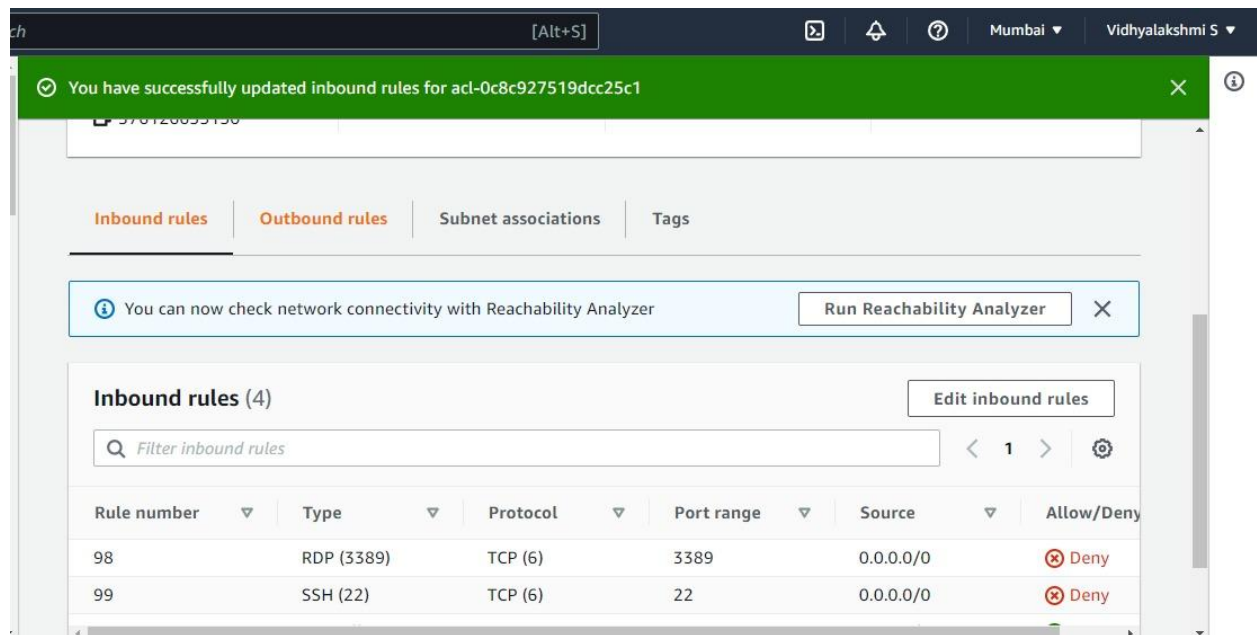
**Details** | Resource map **New** | CIDRs | Flow logs | Tags

VPC ID  vpc-0e46dd502259db0df	State  <b>Available</b>	DNS hostnames Disabled	DNS resolution Disabled
Tenancy Default	DHCP option set dopt-0e95595599ba256ae	Main route table rtb-0c8b0bb9ab5236955	Main network ACL acl-0188da99d88ddce0d
Default VPC No	IPv4 CIDR 172.0.0.0/16	IPv6 pool -	IPv6 CIDR (Network border group) -
Network Address Usage metrics Disabled	Route 53 Resolver DNS Firewall rule groups -	Owner ID  215512906739	

Name : Vidhyalakshmi S

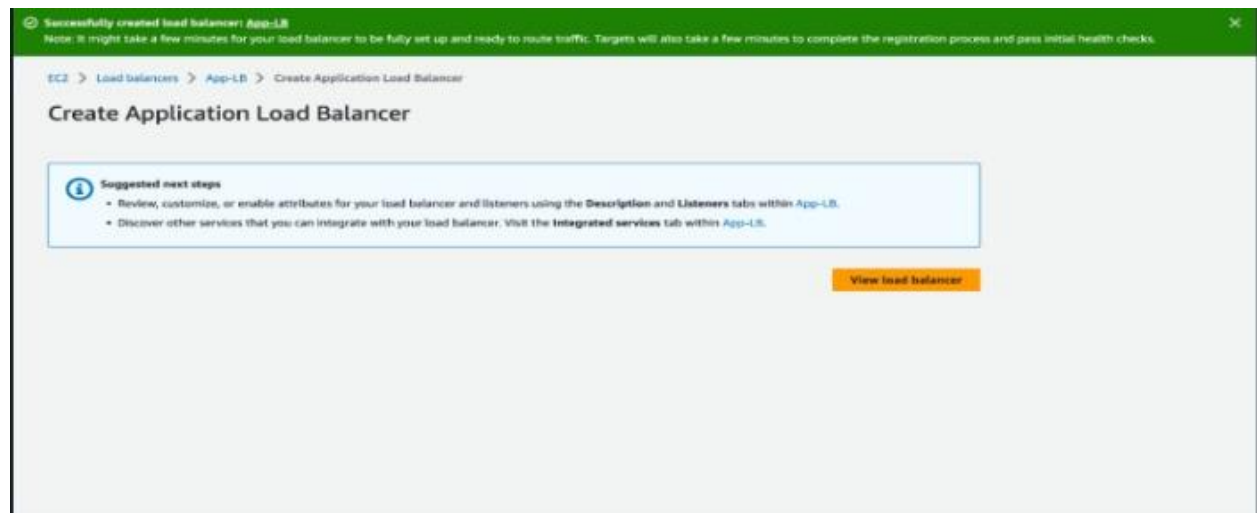
Reg No:727721eucs176

6.Add security rules in the VPC's NACL which should deny RDP, SSH from the public network



## DAY 7

1.Host a static website using classic LoadBalancer



Name : Vidhyalakshmi S  
Reg No:727721eucs176

← → ↻ Not secure | ec2-13-126-131-150.ap-south-1.compute.amazonaws.com

It works!

## 2.Host multiple pages website using Application Load Balancer

