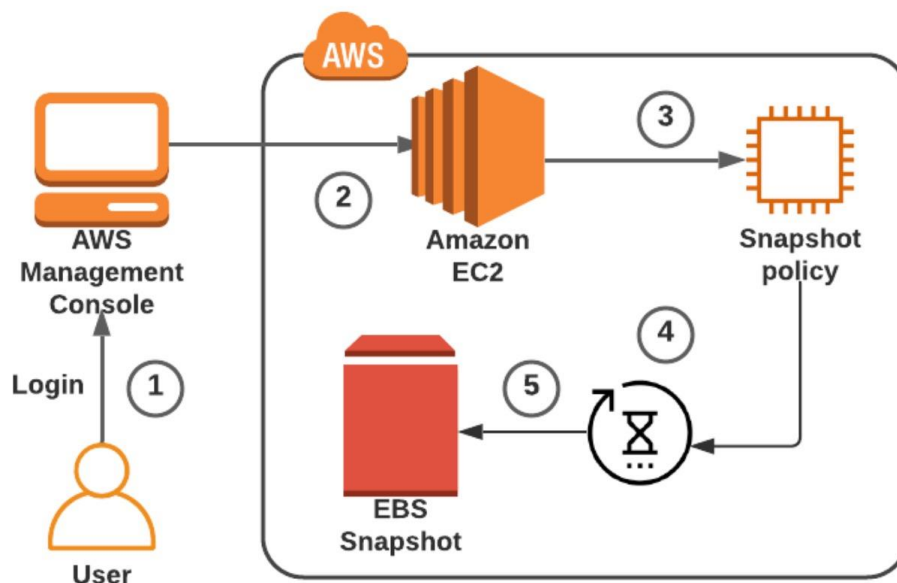


Overview:

You can leverage Amazon Data Lifecycle Manager to automate the process of creating, maintaining and removing EBS snapshots and EBS backed AMIs. Automating snapshot and AMI management offers benefits;

- Ensuring the protection of data by enforcing a regular backup schedule.
- Generating standardized AMIs that can be regularly refreshed.
- Retaining backups as required by auditors or internal compliance standards.
- Reducing storage costs, by deleting outdated backups.
- Establishing disaster recovery backup policies that back up data to accounts.

When combined with the monitoring capabilities of Amazon CloudWatch Events and AWS CloudTrail, Amazon Data Lifecycle Manager provides a backup solution, for Amazon EC2 instances and individual EBS volumes at no cost.



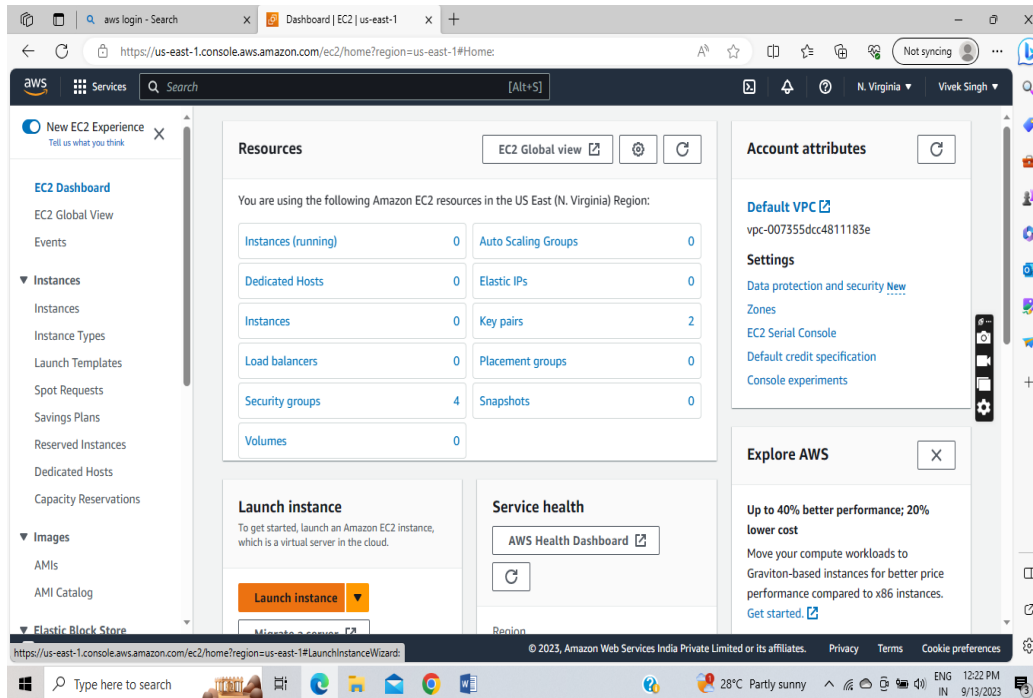
1. Launch the Lab
2. Launch an EC2 Instance
3. Create EBS Snapshot policy
4. Wait for the completion of 1 hour
5. Check the Automated EBS snapshot

Prerequisites:

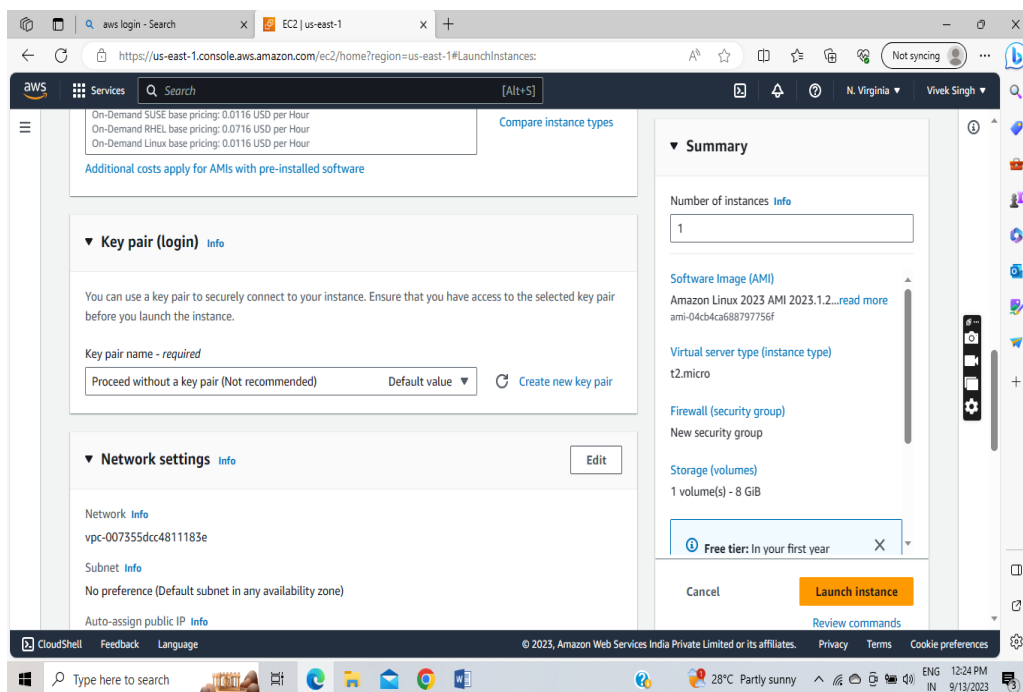
- AWS management console navigation.
- Amazon EC2 Instance.
- AWS Elastic Block Storage.
- Lifecycle Manager.

Steps:

- Launch an EC2 Instance by the name of : myec2server.



- Choose the OS Amazon Linux and t2. micro instance type, proceed without keypair.



The screenshot shows the AWS Management Console for the 'us-east-1' region. The left sidebar contains navigation links for EC2 Dashboard, EC2 Global View, Events, Instances, Images, and Elastic Block Store. The 'Instances' section is selected, showing a table with one instance: 'myec2server' (ID: i-085354ef89ae1a3) in a 'Running' state. Below the table, the 'Instance: i-085354ef89ae1a3 (myec2server)' details are shown, including its Instance ID, Public IPv4 address (54.166.246.82), Private IPv4 addresses (172.31.40.33), and Public IPv4 DNS (ec2-54-166-246-82.compute-1.amazonaws.com).

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
myec2server	i-085354ef89ae1a3	Running	t2.micro	2/2 checks passed	No alarms	us-east-1c

Instance: i-085354ef89ae1a3 (myec2server)

Instance ID	Public IPv4 address	Private IPv4 addresses
i-085354ef89ae1a3 (myec2server)	54.166.246.82 open address	172.31.40.33

Instance state: Running

Public IPv4 DNS: ec2-54-166-246-82.compute-1.amazonaws.com [open address](#)

➤ After creating Ec2 instance, the volume automatically created with the EC2 Instance.

The screenshot shows the AWS Management Console for the 'us-east-1' region, specifically the 'Volumes' section. A table lists one volume: 'vol-0896a799761ae5508' (ID: vol-0896a799761ae5508) of type 'gp3' and size '8 GiB'. Below the table, the 'Volume ID: vol-0896a799761ae5508' details are shown, including its encryption status (Not encrypted), Snapshot (snap-070e3553724e5756e), Availability Zone (us-east-1c), and Attached Instances (i-085354ef89ae1a3 (myec2server): /dev/xvda (attached)).

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot
-	vol-0896a799761ae5508	gp3	8 GiB	3000	125	snap-070e355...

Volume ID: vol-0896a799761ae5508

Encryption	Snapshot	Availability Zone	Created
Not encrypted	snap-070e3553724e5756e	us-east-1c	Wed Sep 13 2023 12:24:22 GMT+0530 (India Standard Time)

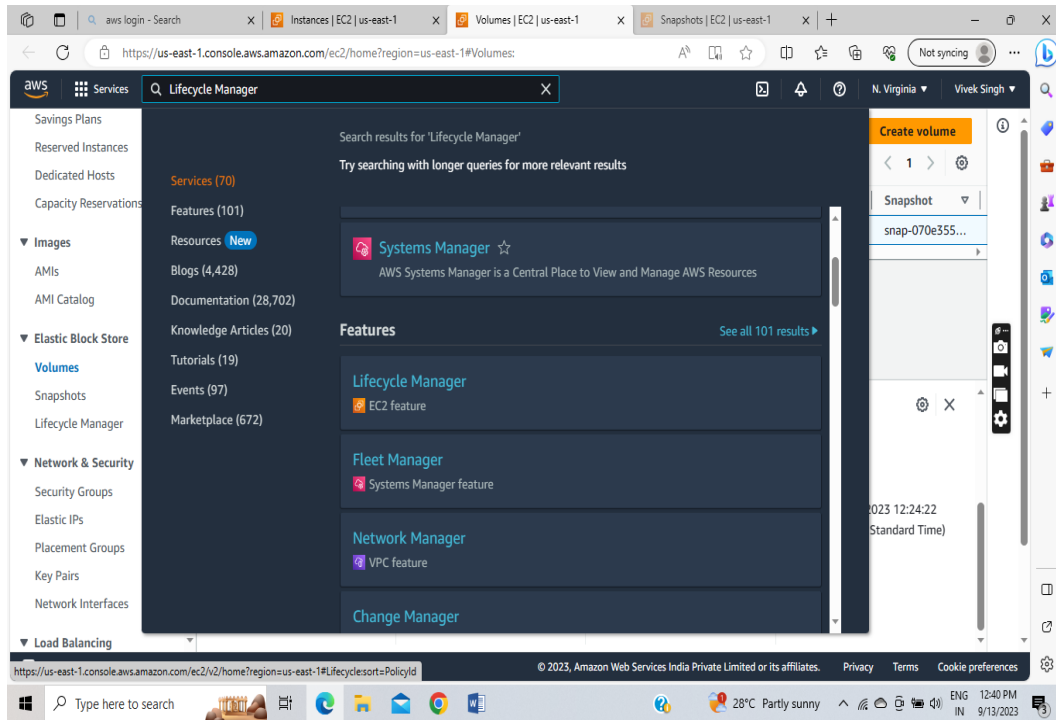
Fast snapshot restored: No

Multi-Attach enabled: No

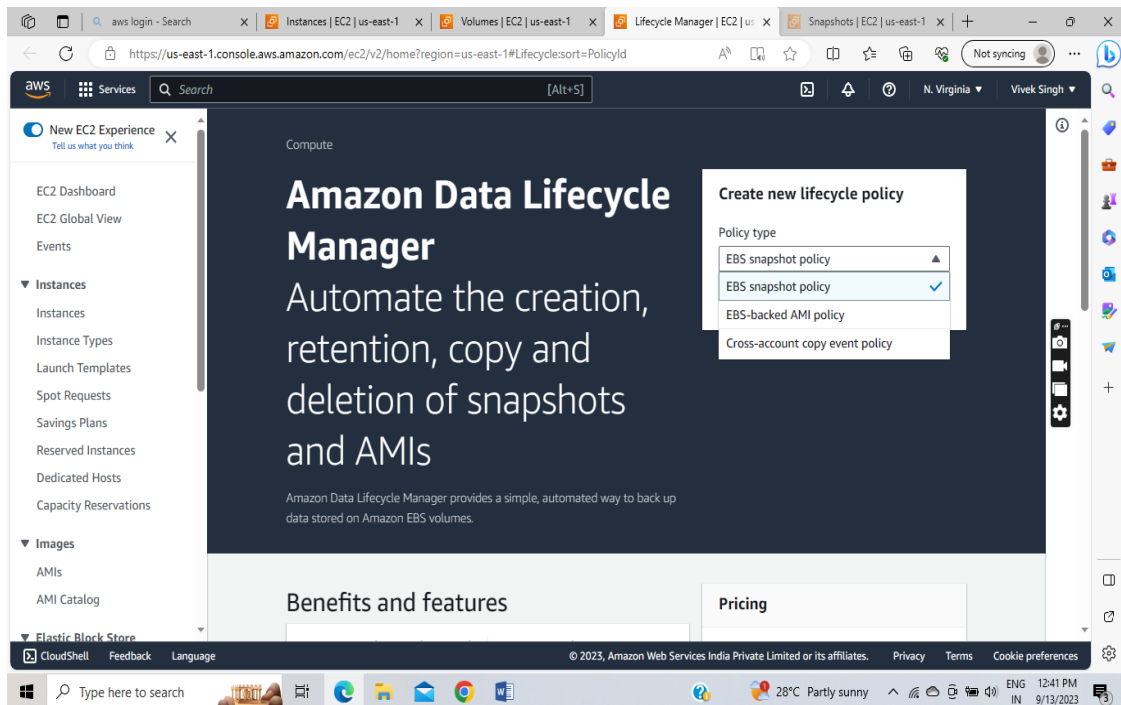
Attached Instances: i-085354ef89ae1a3 (myec2server): /dev/xvda (attached)

Outposts ARN: -

- In the Console Search Bar type the Lifecycle manager.



- Then Select the EBS Snapshot Policy Option.



- Target Resource Type: Volume
- Target Resource Tags: Name: myec2server
- Policy Description: Lifecycle Policy
- Policy Status: Enable.
- Keep everything default, Click Next.

The screenshot shows the AWS console interface for creating a lifecycle policy. The breadcrumb trail is: EC2 > Lifecycle Manager > Select policy type > Create lifecycle policy. The left sidebar shows the progress: Step 1 (Specify settings), Step 2 (Configure schedule 1 - Schedule 1), and Step 3 (Review and create). The main content area is titled 'Specify settings' and contains the following sections:

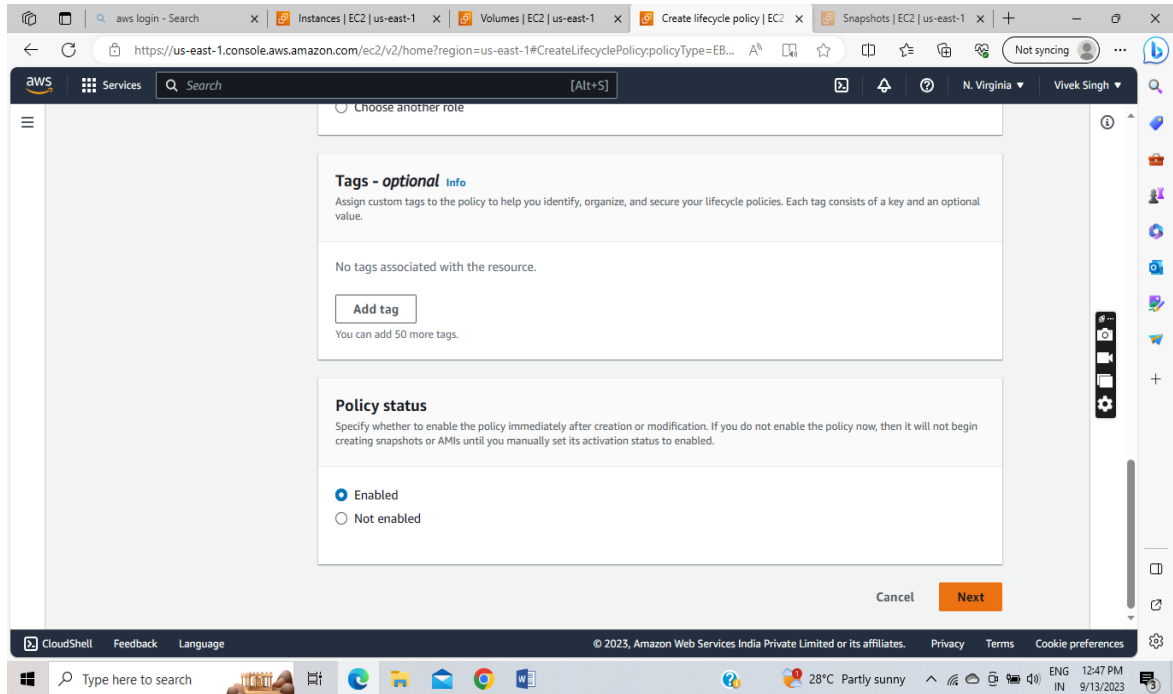
- Target resources** (Info icon): Specify the resources that are to be targeted by this policy.
- Target resource types**: Select the type of resources that are to be targeted.
 - ☒ Volume
 - ☐ Instance
- Target resource tags**: All resources of the selected type that have at least one of these tags will be targeted by the policy.
 - Search bar: Name (with a clear 'X' button). Below it, it says '45 tags remaining of 45.'
 - Value input: Enter a value. A dropdown menu is open showing 'myec2server' (with a 'Name' label) and 'End of all results'.
 - Add button.
- Description**: Policy description (empty text area).

The bottom of the console shows the footer with '© 2023, Amazon Web Services India Private Limited or its affiliates.' and a Windows taskbar at the very bottom.

The screenshot shows the 'Review and create' step of the AWS console. The left sidebar now shows Step 1 as 'Review and create'. The main content area contains the following sections:

- Target resource types**:
 - ☒ Volume
 - ☐ Instance
- Target resource tags**: All resources of the selected type that have at least one of these tags will be targeted by the policy.
 - Search bar: Enter a key.
 - Value input: Enter a value.
 - Add button.
 - Tag list: A box labeled 'Name' with a clear 'X' button contains the tag 'myec2server'. Below it, it says '44 tags remaining of 45.'
- Description**: Policy description (text area containing 'Lifecycle Policy').
- IAM role** (Info icon): This policy must be associated with an IAM role that has the appropriate permissions. If you choose to create a new role, you must grant relevant role permissions and set up trust relationships correctly. If you are unsure of what role to use, choose Default role.
 - ☒ Default role

The bottom of the console shows the footer with '© 2023, Amazon Web Services India Private Limited or its affiliates.' and a Windows taskbar at the very bottom.



- In the Configuration Schedule
- Schedule Name: Daily Backup
- Frequency: Daily
- Every: 12 hrs
- Starting at: 9:00 UTC (2:30 ITC)
- Count: 1, (Count is done in between 1-1000, Age is for last for 100 yrs.)

aws login - Search | Instances | EC2 | us-east-1 | Volumes | EC2 | us-east-1 | Create lifecycle policy | EC2 | Snapshots | EC2 | us-east-1 | +

https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#CreateLifecyclePolicy:policyType=EB...

Services Search [Alt+S] N. Virginia Vivek Singh

Schedule name
Daily Backup

Frequency
Daily

Every
12 hours

Starting at
08:00 UTC

Retention type
Count

Keep
1 snapshots in standard tier

Count
Age

Snapshot archiving Info

Fast snapshot restore Info

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Type here to search

aws login - Search | Instances | EC2 | us-east-1 | Volumes | EC2 | us-east-1 | Create lifecycle policy | EC2 | Snapshots | EC2 | us-east-1 | +

https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#CreateLifecyclePolicy:policyType=EB...

Services Search [Alt+S] N. Virginia Vivek Singh

12 hours

Starting at
09:00 UTC

Retention type
Count

Keep
1 snapshots in standard tier

Advanced settings - optional

Tagging Info

Snapshot archiving Info

Fast snapshot restore Info

Cross-Region copy Info

Cross-account sharing Info

Cancel Previous Review policy

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Type here to search

- Review the policy and then create the policy.

aws login - Search x Instances | EC2 | us-east-1 x Volumes | EC2 | us-east-1 x Create lifecycle policy | EC2 x Snapshots | EC2 | us-east-1 x +

https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#CreateLifecyclePolicy:policyType=EB...

aws Services Search [Alt+S] N. Virginia Vivik Singh

Step 1: Policy settings

Modify

Policy details

Target resource types	Target resource tags
Volume	Name:myec2server
Description	Role name
Lifecycle Policy	AWSDataLifecycleManagerDefaultRole
Policy status	Policy tags
Enabled	-

Step 2: Schedule 1 configuration

Modify

Schedule details

Schedule name	Frequency
Daily Backup	Every 12 hour(s) starting at 09:00
Retention in standard tier	
1 most recent snapshot(s)	

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Type here to search 28°C Partly sunny ENG IN 12:51 PM 9/13/2023

aws login - Search x Instances | EC2 | us-east-1 x Volumes | EC2 | us-east-1 x Create lifecycle policy | EC2 x Snapshots | EC2 | us-east-1 x +

https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#CreateLifecyclePolicy:policyType=EB...

aws Services Search [Alt+S] N. Virginia Vivik Singh

Step 1: Policy settings

Modify

Policy details

Target resource types	Target resource tags
Volume	Name:myec2server
Description	Role name
Lifecycle Policy	AWSDataLifecycleManagerDefaultRole
Policy status	Policy tags
Enabled	-

Step 2: Schedule 1 configuration

Modify

Schedule details

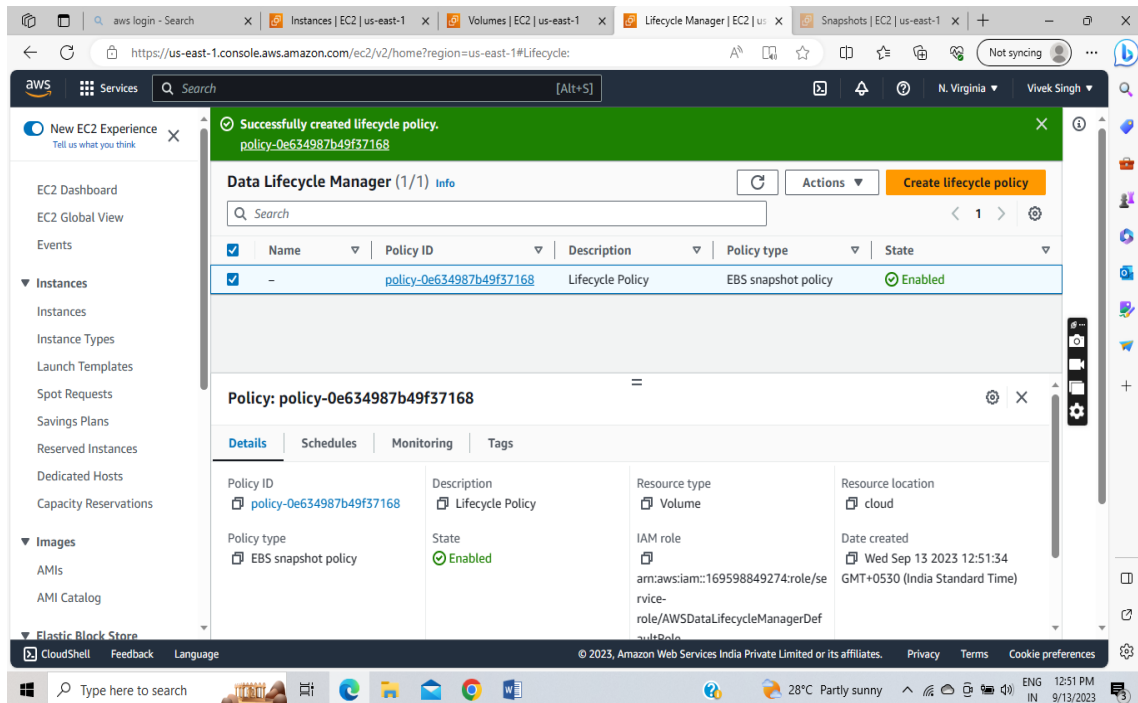
Schedule name	Frequency
Daily Backup	Every 12 hour(s) starting at 09:00
Retention in standard tier	
1 most recent snapshot(s)	

Cancel Previous Create policy

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Type here to search 28°C Partly sunny ENG IN 12:51 PM 9/13/2023

- Check the Lifecycle manager.



Successfully created lifecycle policy. policy-0e634987b49f37168

Data Lifecycle Manager (1/1) Info

Search

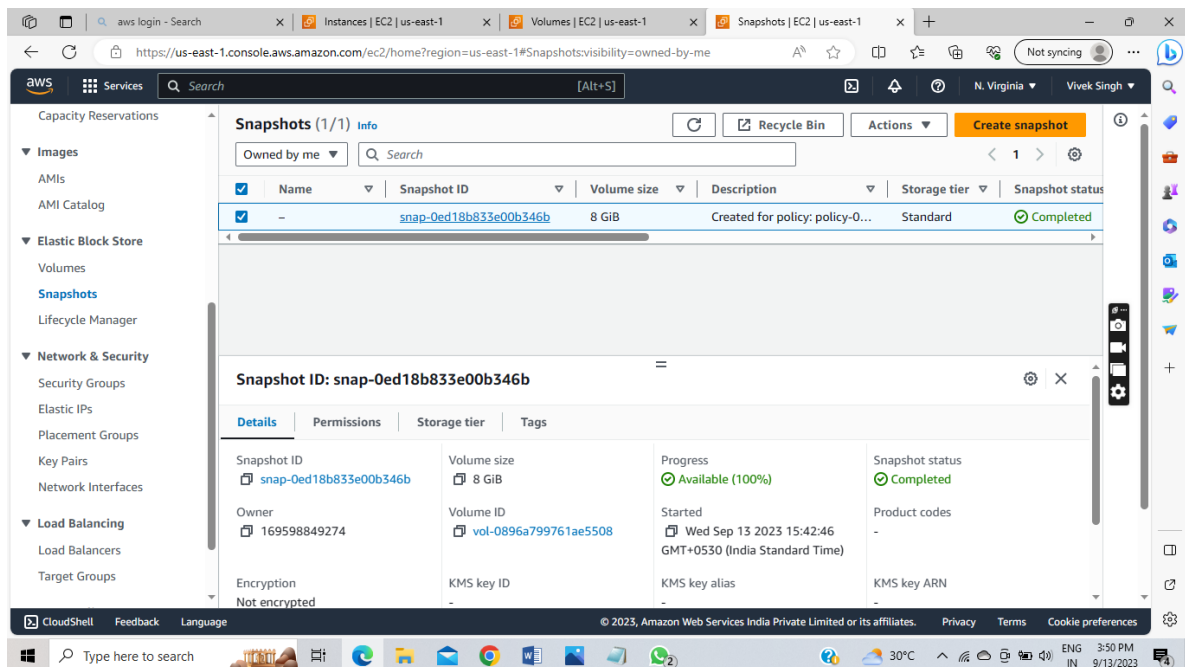
Name	Policy ID	Description	Policy type	State
-	policy-0e634987b49f37168	Lifecycle Policy	EBS snapshot policy	Enabled

Policy: policy-0e634987b49f37168

Details Schedules Monitoring Tags

Property	Value
Policy ID	policy-0e634987b49f37168
Description	Lifecycle Policy
Resource type	Volume
Resource location	cloud
Policy type	EBS snapshot policy
State	Enabled
IAM role	arn:aws:iam::169598849274:role/service-role/AWSDataLifecycleManagerDef
Date created	Wed Sep 13 2023 12:51:34 GMT+0530 (India Standard Time)

- Snapshots: you have to wait for sometimes for the snapshots.



Snapshots (1/1) Info

Owned by me Search

Name	Snapshot ID	Volume size	Description	Storage tier	Snapshot status
-	snap-0ed18b833e00b346b	8 GIB	Created for policy: policy-0...	Standard	Completed

Snapshot ID: snap-0ed18b833e00b346b

Details Permissions Storage tier Tags

Property	Value
Snapshot ID	snap-0ed18b833e00b346b
Volume size	8 GIB
Volume ID	vol-0896a799761ae5508
Owner	169598849274
Encryption	Not encrypted
KMS key ID	-
KMS key alias	-
KMS key ARN	-
Progress	Available (100%)
Started	Wed Sep 13 2023 15:42:46 GMT+0530 (India Standard Time)
Snapshot status	Completed
Product codes	-