Assignment 10

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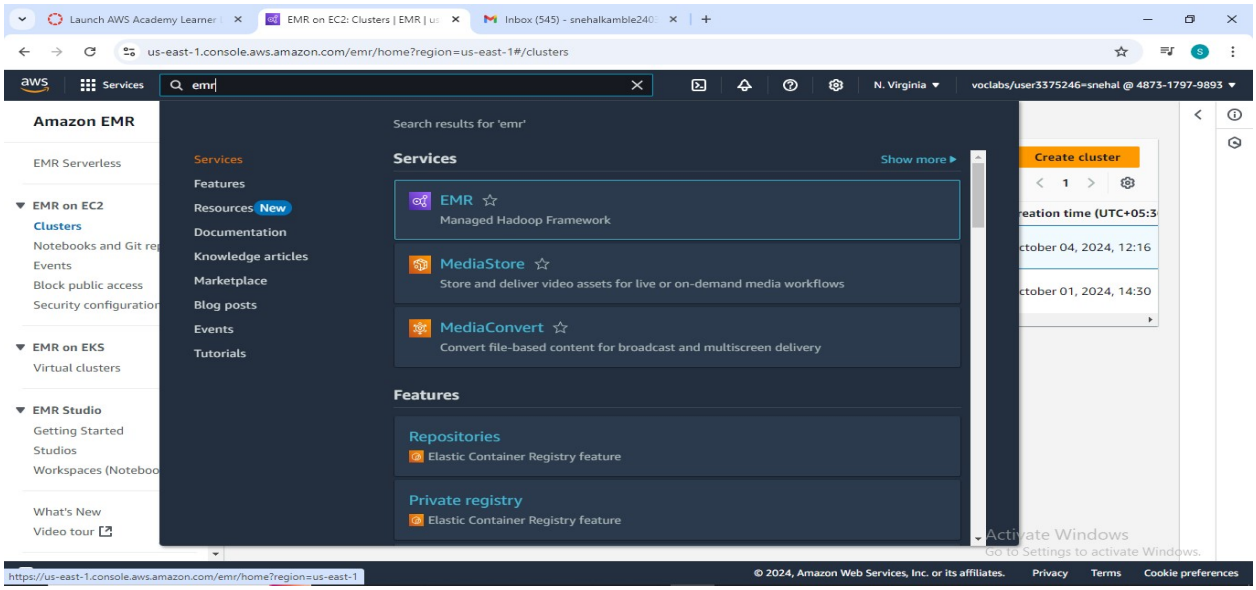
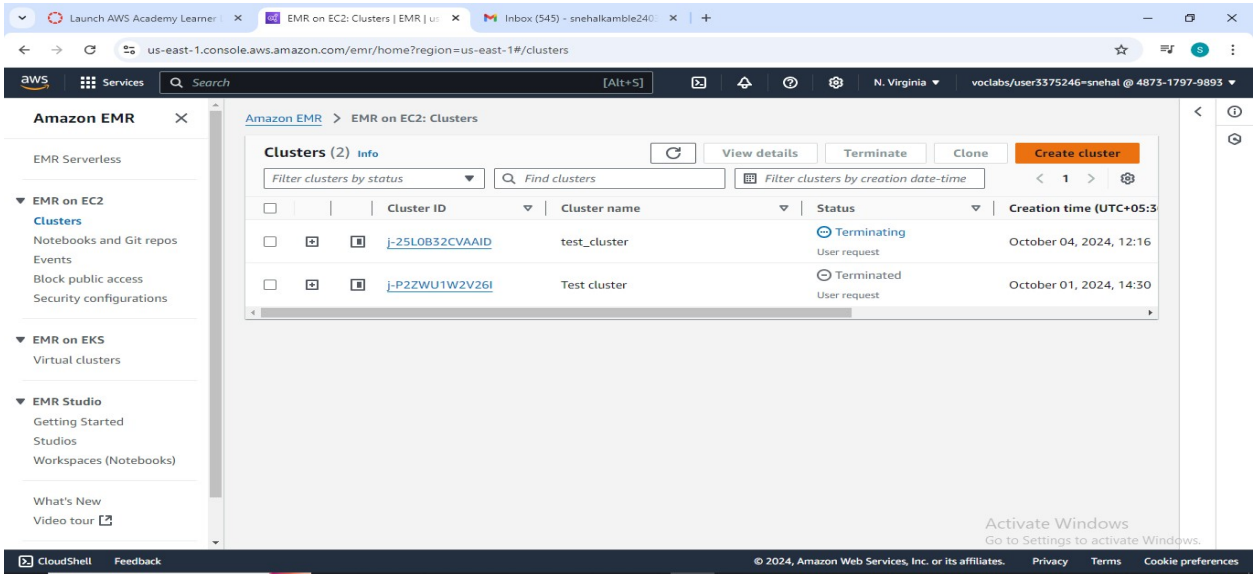
Class: Msc CS Part 2

Q.) Installation and configuration of cloud Hadoop and demonstrate simple query

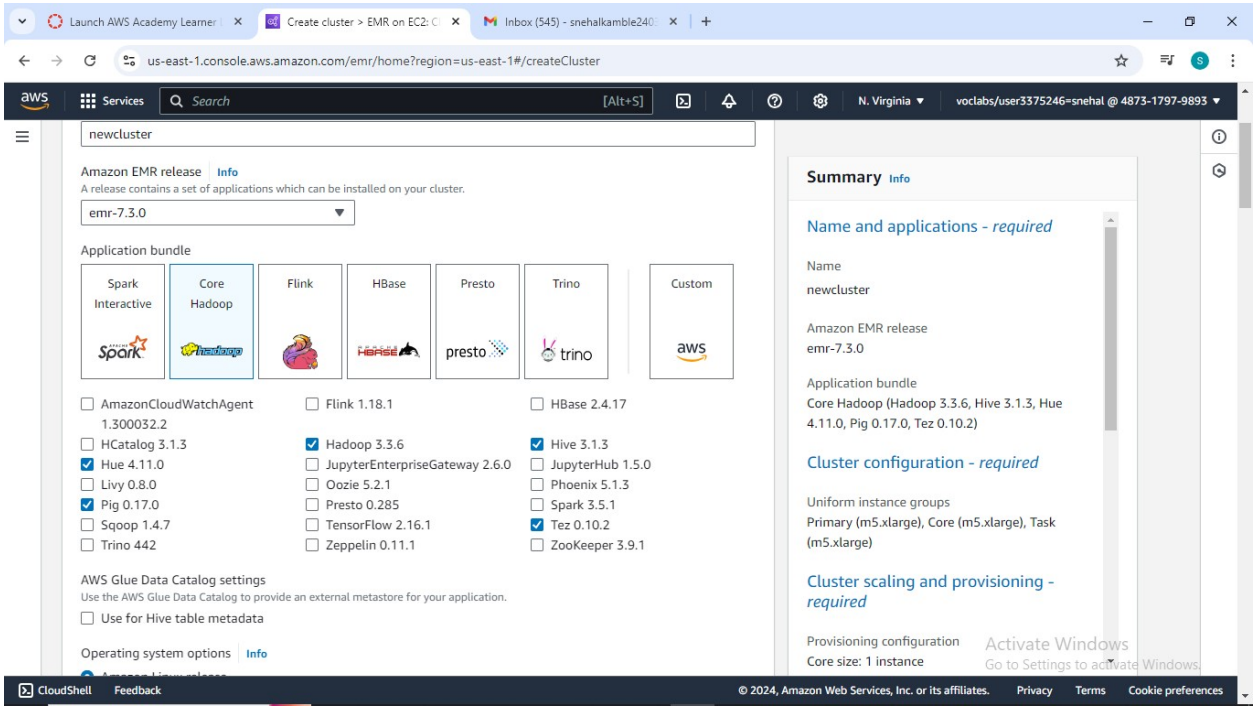
Step 1:Login to your AWS account ,search for EMR under services



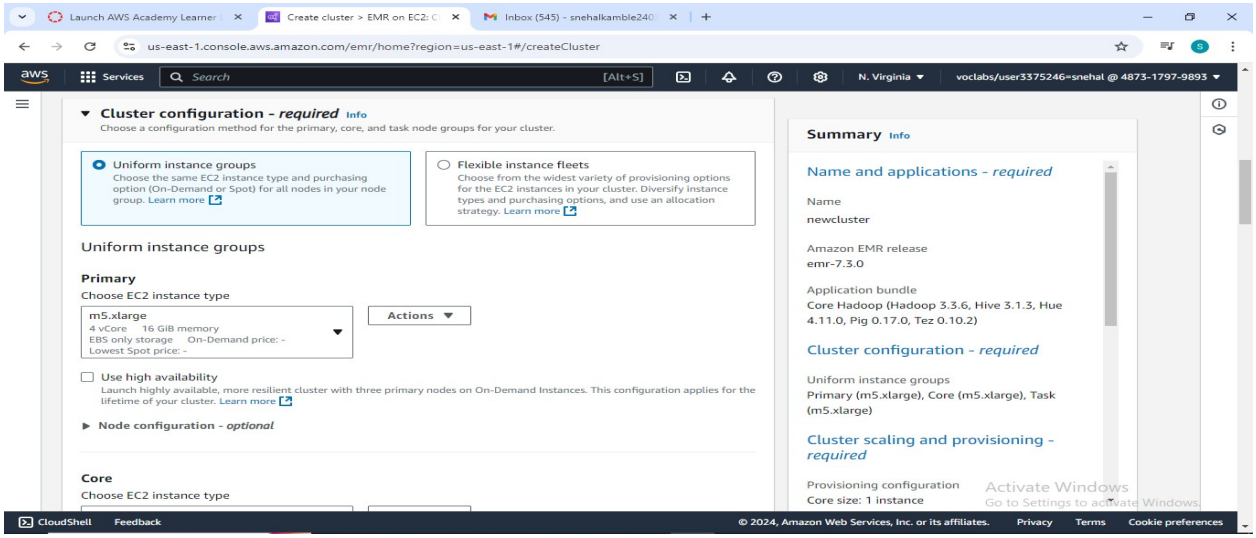
Step 2:Click on->Create cluster



Step 3:Give name to cluster and select Core Hadoop application bundle.



Step 4:Select EC2 key pair.Service role->EMR_DefaultRole


Launch AWS Academy Learner
Create cluster > EMR on EC2: C
Inbox (545) - snehalkamble240
us-east-1.console.aws.amazon.com/emr/home?region=us-east-1#/createCluster
aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user3375246=snehal @ 4873-1797-9893
Cluster configuration - required Info
Choose a configuration method for the primary, core, and task node groups for your cluster.
Uniform instance groups
Choose the same EC2 instance type and purchasing option (On-Demand or Spot) for all nodes in your node group. Learn more
Flexible instance fleets
Choose from the widest variety of provisioning options for the EC2 instances in your cluster. Diversify instance types and purchasing options, and use an allocation strategy. Learn more
Uniform instance groups
Primary
Choose EC2 instance type
m5.xlarge
4 vCore 16 GiB memory
EBS only storage On-Demand price: -
Lowest Spot price: -
Actions
Use high availability
Launch highly available, more resilient cluster with three primary nodes on On-Demand Instances. This configuration applies for the lifetime of your cluster. Learn more
Node configuration - optional
Core
Choose EC2 instance type
Summary Info
Name and applications - required
Name
newcluster
Amazon EMR release
emr-7.3.0
Application bundle
Core Hadoop (Hadoop 3.3.6, Hive 3.1.3, Hue 4.11.0, Pig 0.17.0, Tez 0.10.2)
Cluster configuration - required
Uniform instance groups
Primary (m5.xlarge), Core (m5.xlarge), Task (m5.xlarge)
Cluster scaling and provisioning - required
Provisioning configuration
Core size: 1 instance
Activate Windows
Go to Settings to activate Windows.
CloudShell
Feedback
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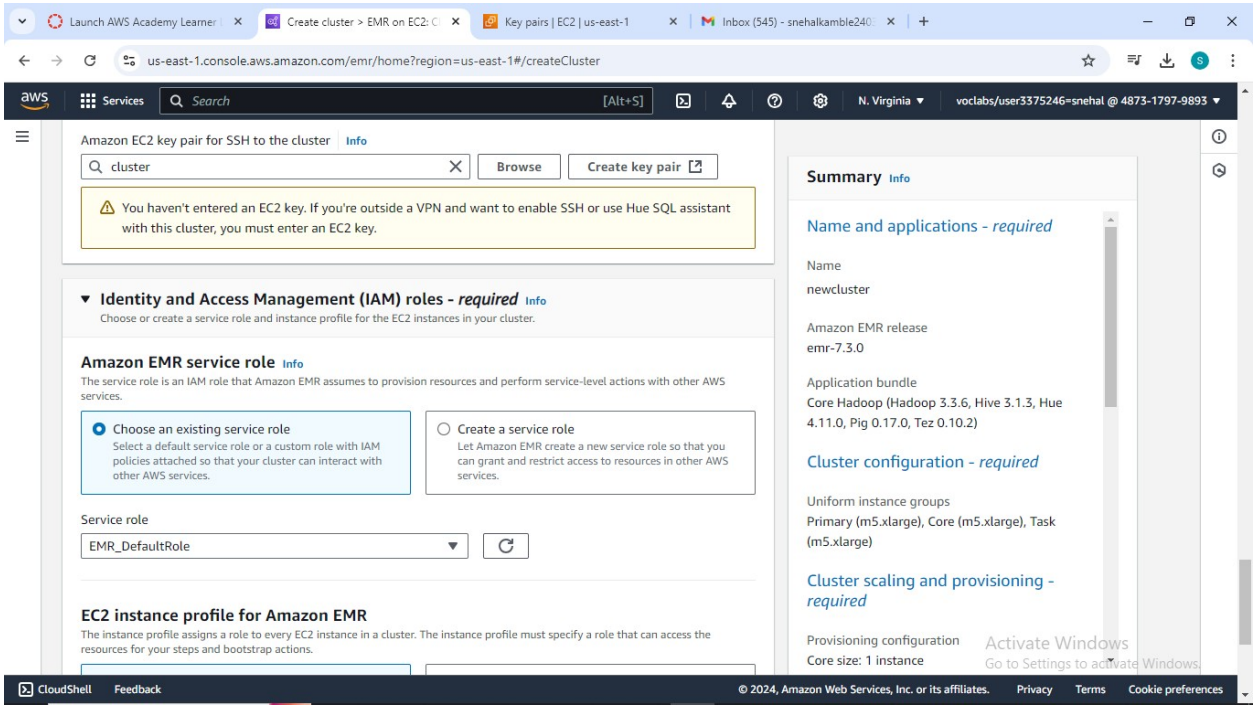
Launch AWS Academy Learner
Create cluster > EMR on EC2
Key pairs | EC2 | us-east-1
Inbox (545) - snehalkamble240
us-east-1.console.aws.amazon.com/emr/home?region=us-east-1#/createCluster
Services
Search
[Alt+S]
N. Virginia
voclabs/user3375246=snehal @ 4873-1797-9893
Amazon EC2 key pair for SSH to the cluster Info
cluster
Browse
Create key pair
You haven't entered an EC2 key. If you're outside a VPN and want to enable SSH or use Hue SQL assistant with this cluster, you must enter an EC2 key.
Identity and Access Management (IAM) roles - required Info
Choose or create a service role and instance profile for the EC2 instances in your cluster.
Amazon EMR service role Info
The service role is an IAM role that Amazon EMR assumes to provision resources and perform service-level actions with other AWS services.
Choose an existing service role
Select a default service role or a custom role with IAM policies attached so that your cluster can interact with other AWS services.
Create a service role
Let Amazon EMR create a new service role so that you can grant and restrict access to resources in other AWS services.
Service role
EMR_DefaultRole
EC2 instance profile for Amazon EMR
The instance profile assigns a role to every EC2 instance in a cluster. The instance profile must specify a role that can access the resources for your steps and bootstrap actions.
Summary Info
Name and applications - required
Name
newcluster
Amazon EMR release
emr-7.3.0
Application bundle
Core Hadoop (Hadoop 3.3.6, Hive 3.1.3, Hue 4.11.0, Pig 0.17.0, Tez 0.10.2)
Cluster configuration - required
Uniform instance groups
Primary (m5.xlarge), Core (m5.xlarge), Task (m5.xlarge)
Cluster scaling and provisioning - required
Provisioning configuration
Core size: 1 instance
Activate Windows
Go to Settings to activate Windows.
CloudShell
Feedback
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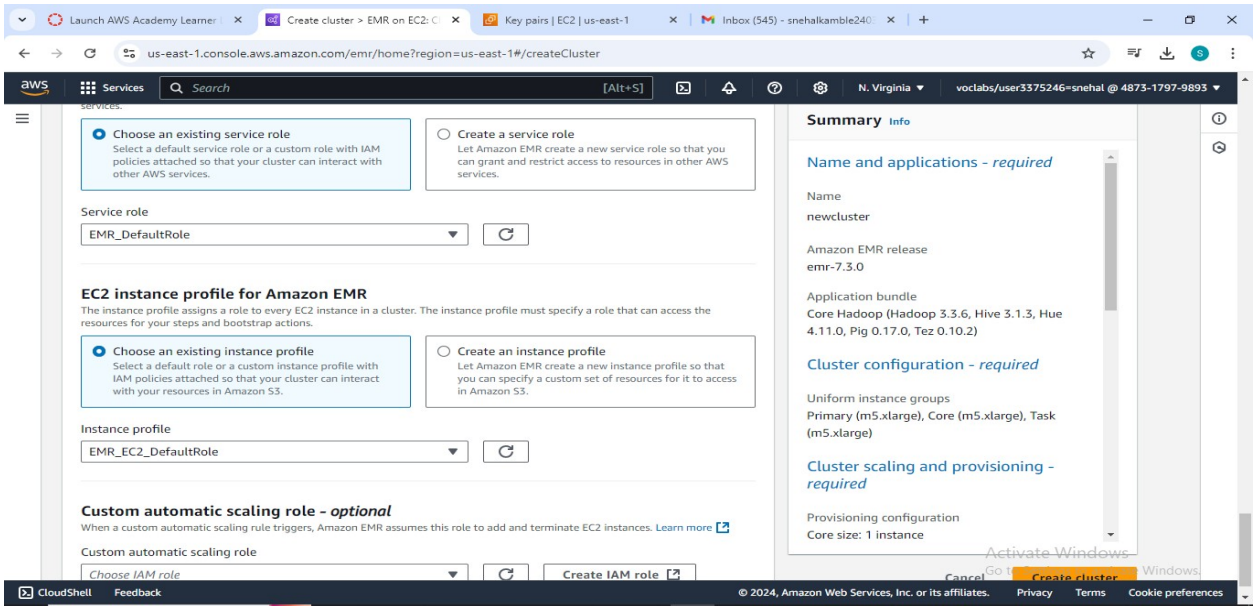
Launch AWS Academy Learner
Create cluster > EMR on EC2
Key pairs | EC2 | us-east-1
Inbox (545) - snehalkamble240
us-east-1.console.aws.amazon.com/emr/home?region=us-east-1#/createCluster
Services
Search
[Alt+S]
N. Virginia
voclabs/user3375246=snehal @ 4873-1797-9893
Choose an existing service role
Select a default service role or a custom role with IAM policies attached so that your cluster can interact with other AWS services.
Create a service role
Let Amazon EMR create a new service role so that you can grant and restrict access to resources in other AWS services.
Service role
EMR_DefaultRole
EC2 instance profile for Amazon EMR
The instance profile assigns a role to every EC2 instance in a cluster. The instance profile must specify a role that can access the resources for your steps and bootstrap actions.
Choose an existing instance profile
Select a default role or a custom instance profile with IAM policies attached so that your cluster can interact with your resources in Amazon S3.
Create an instance profile
Let Amazon EMR create a new instance profile so that you can specify a custom set of resources for it to access in Amazon S3.
Instance profile
EMR_EC2_DefaultRole
Custom automatic scaling role - optional
When a custom automatic scaling rule triggers, Amazon EMR assumes this role to add and terminate EC2 instances. Learn more
Custom automatic scaling role
Choose IAM role
Create IAM role
Summary Info
Name and applications - required
Name
newcluster
Amazon EMR release
emr-7.3.0
Application bundle
Core Hadoop (Hadoop 3.3.6, Hive 3.1.3, Hue 4.11.0, Pig 0.17.0, Tez 0.10.2)
Cluster configuration - required
Uniform instance groups
Primary (m5.xlarge), Core (m5.xlarge), Task (m5.xlarge)
Cluster scaling and provisioning - required
Provisioning configuration
Core size: 1 instance
Activate Windows
Cancel
Create cluster
CloudShell
Feedback
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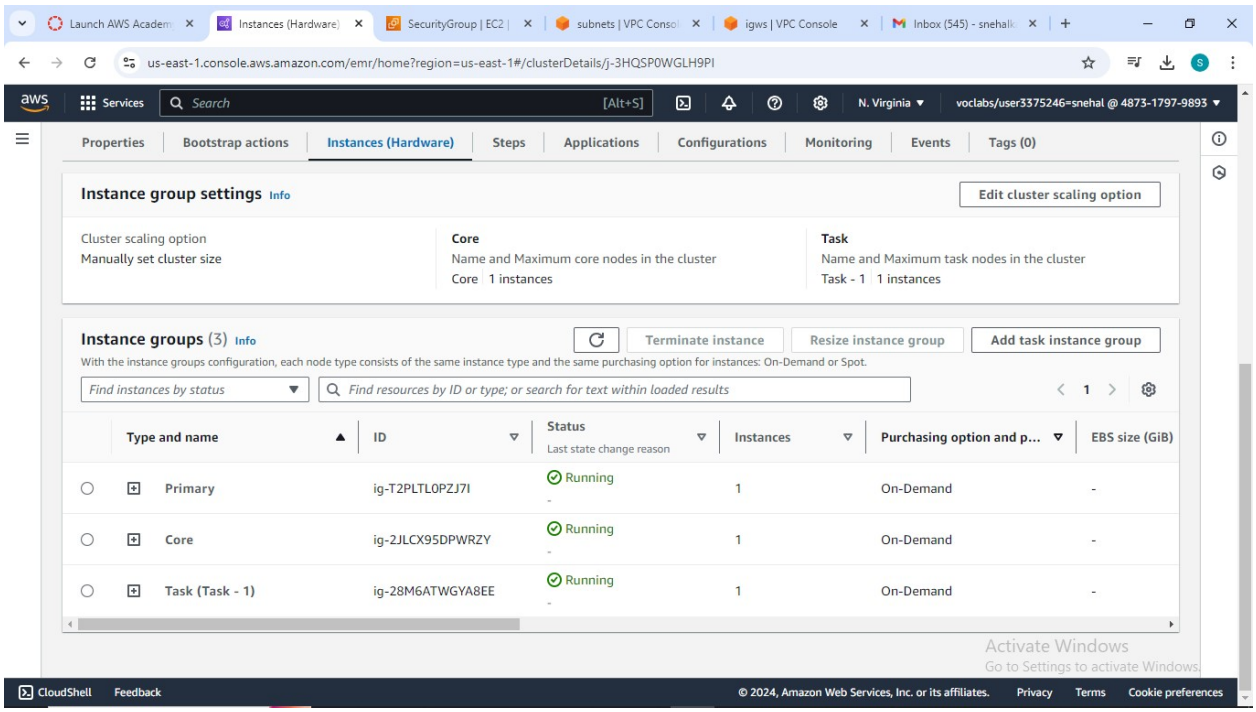
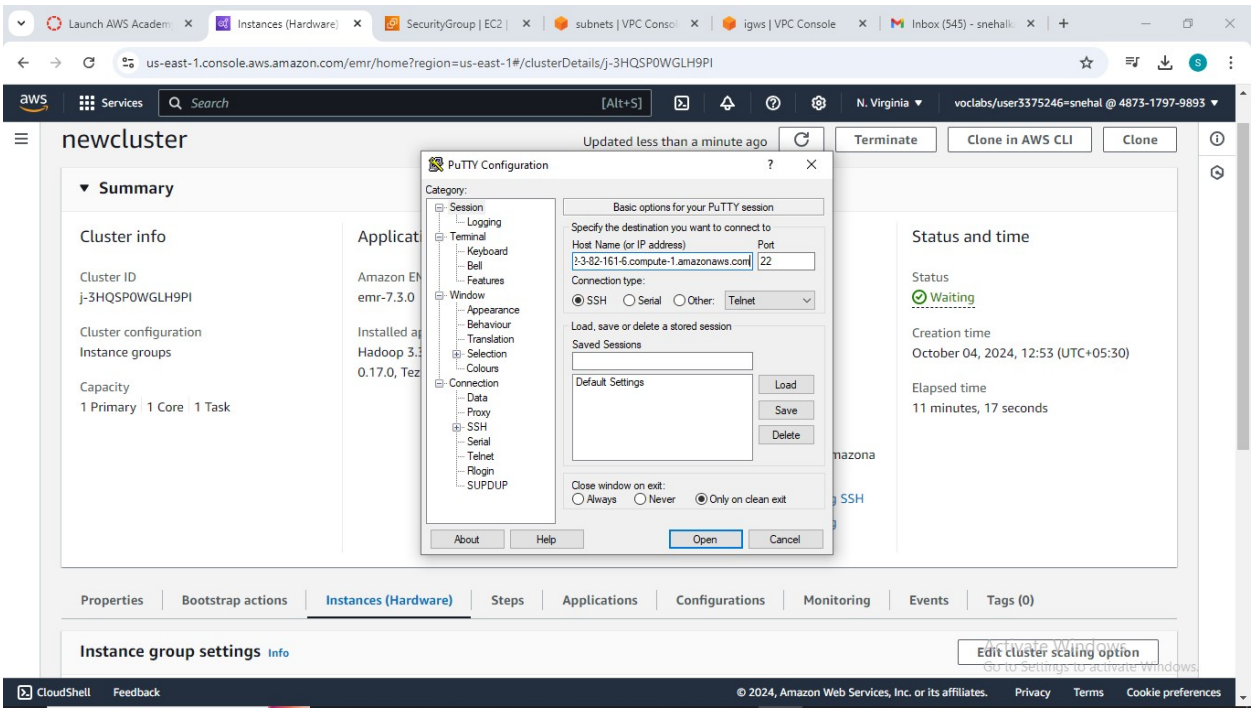
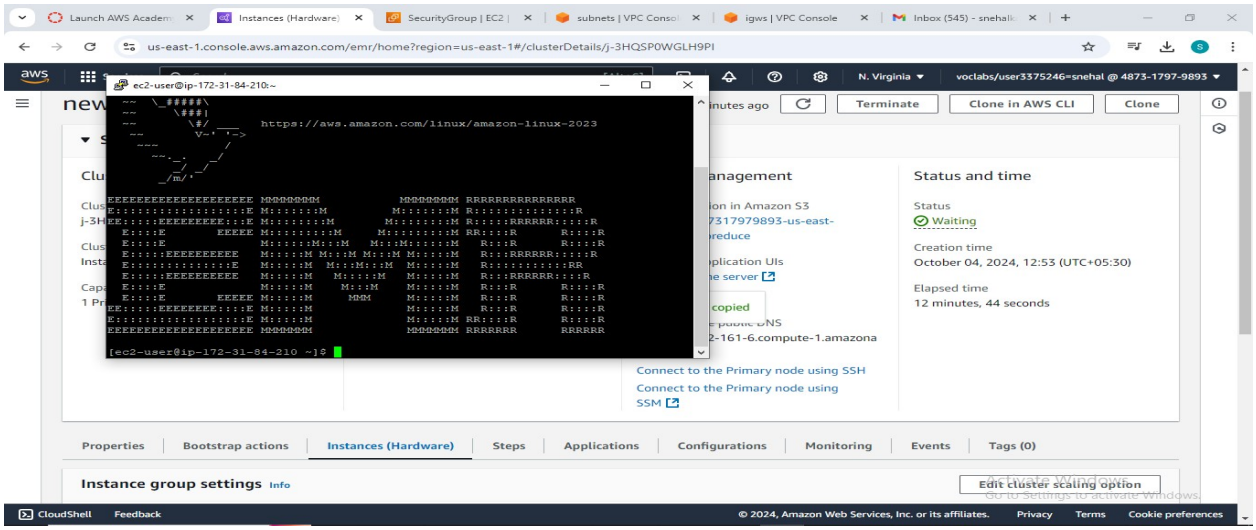
Step 5:IN EC2 instance,choose instance profile EMR_EC2_DefaultRole and click->Create >Create cluster

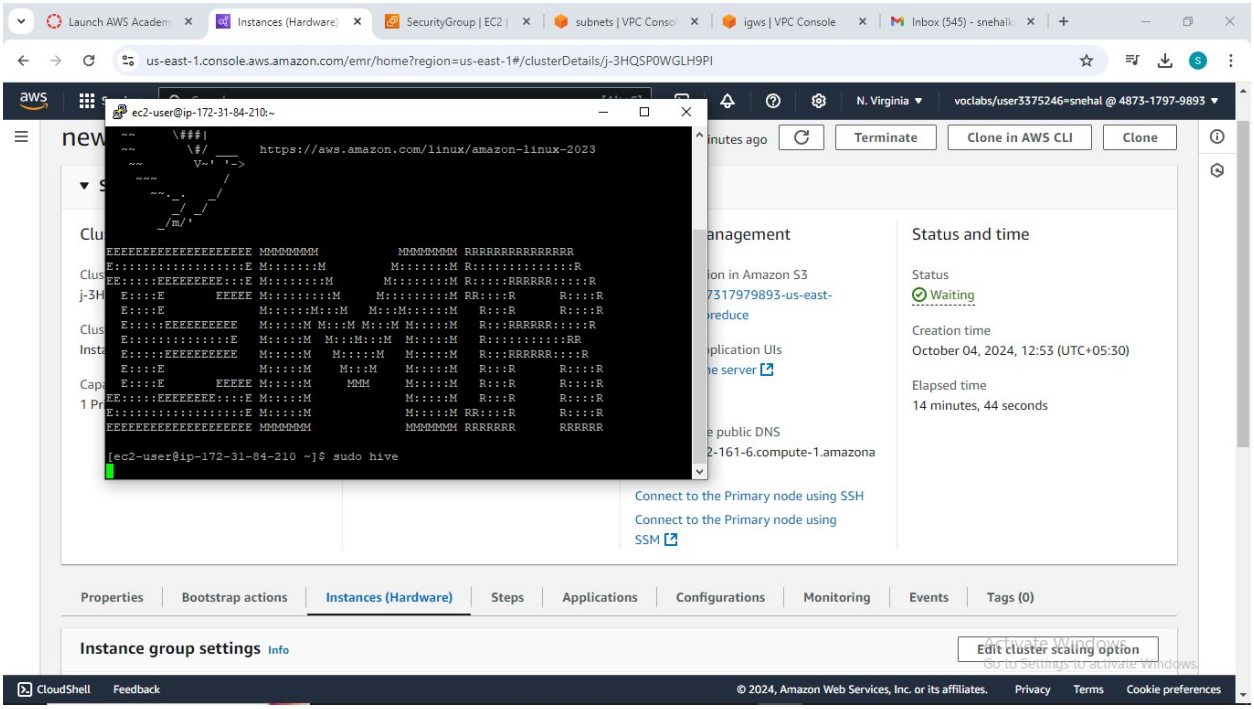


Step 6:Wait until all instance group's status changed to running

Step 7:Copy the public DNS in puttyit will open a new terminal for ec2 user







Step 8:Type commands:

sudo hive

Fire a query for creating table CREATE TABLE student(

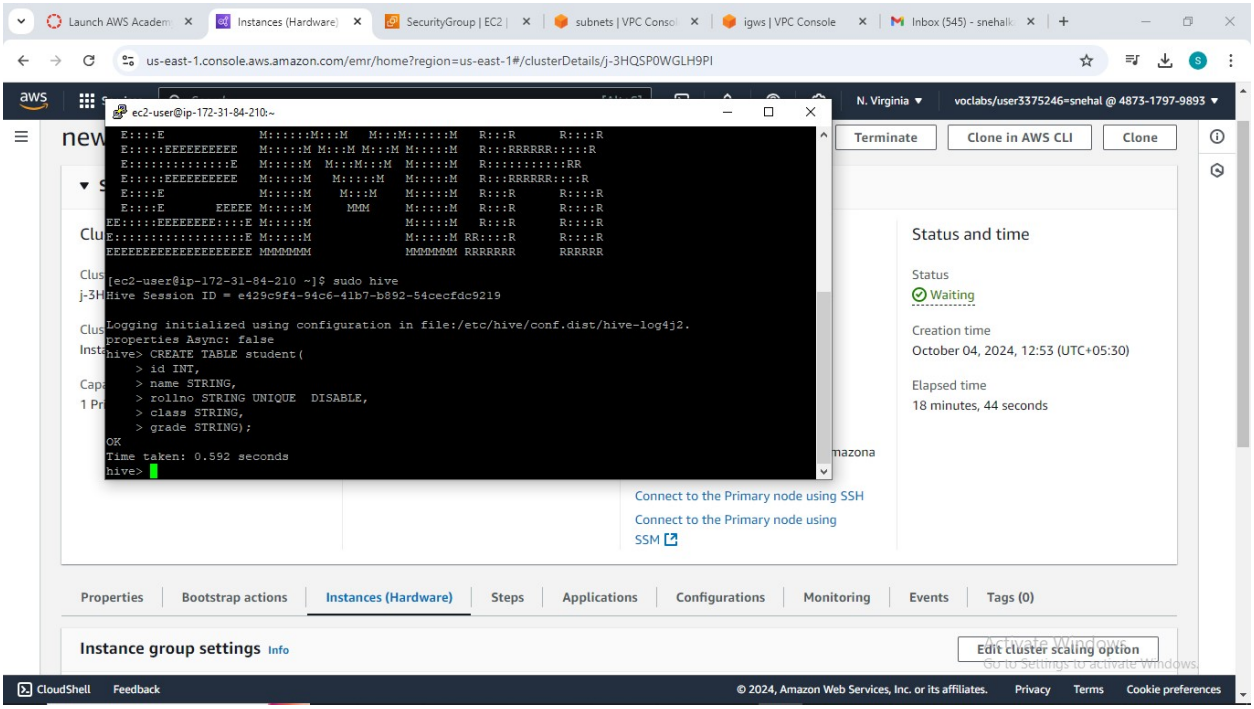
id INT,

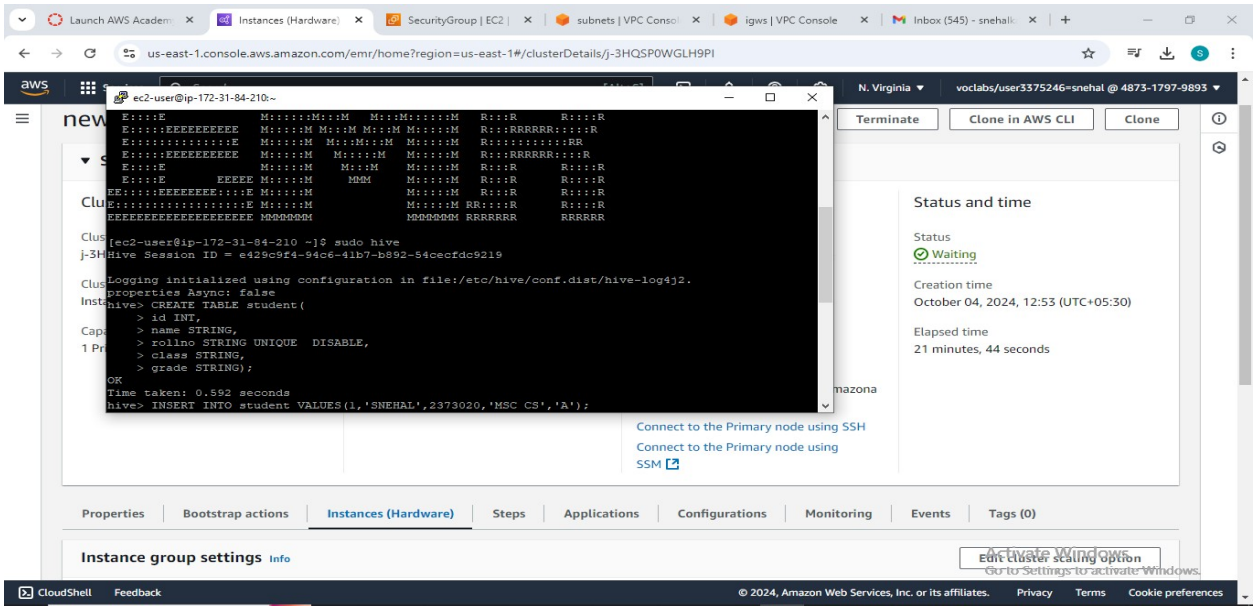
name STRING,

rollno STRING UNIQUE DISABLE,

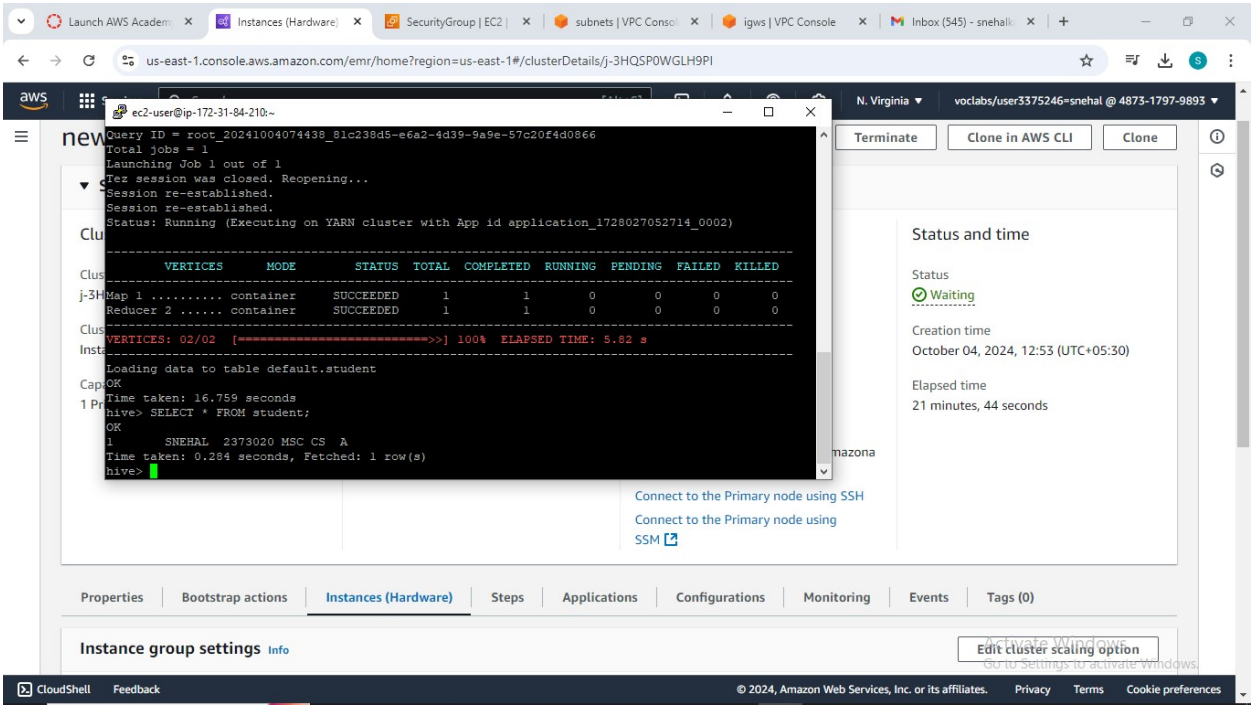
class STRING,

grade STRING);





Insert values in the table :insert into student values(1,'snehal',2373020,'MSc CS','A');



And using select * from student; You can view the entry of student