

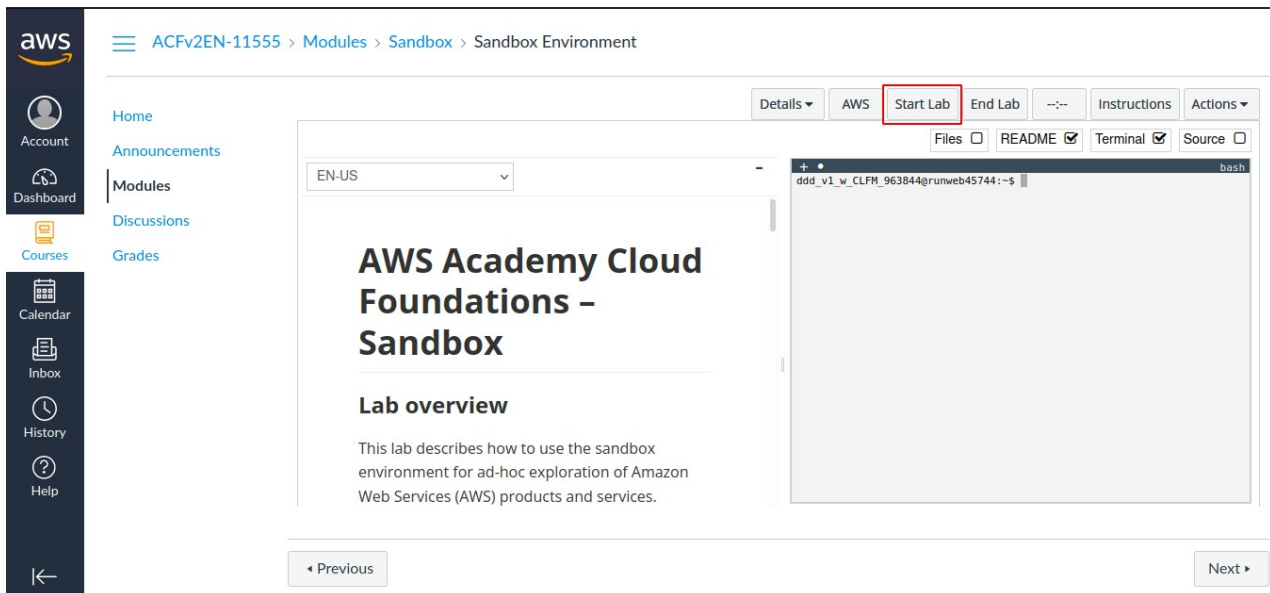
Name: Atharva Mahamuni.
Enroll No: 2002276

Cloud Computing

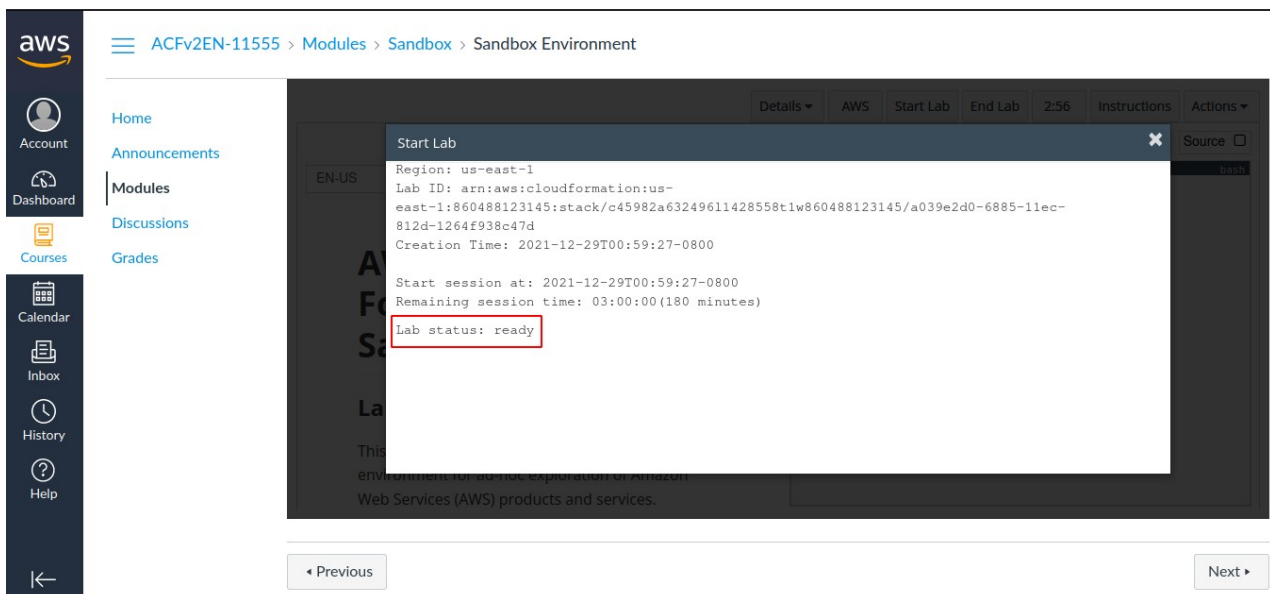
Practical Assignment No. 11

Launch RDS Instance (AWS).

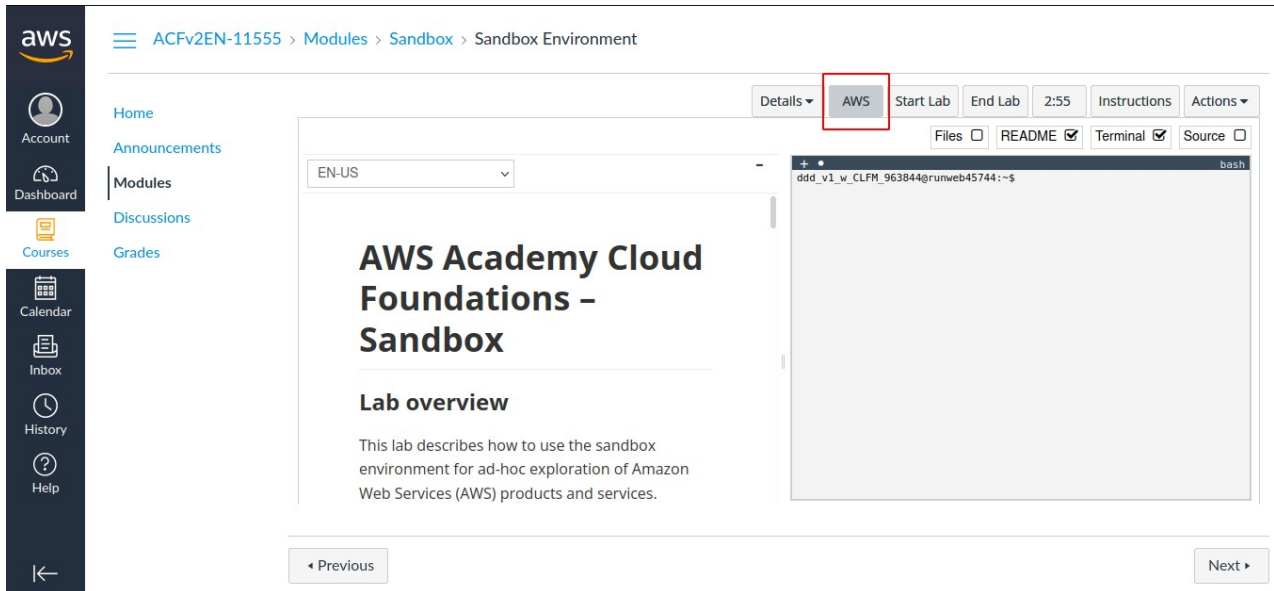
Step 1: At the top right panel above the console, choose **Start Lab** to launch your lab.



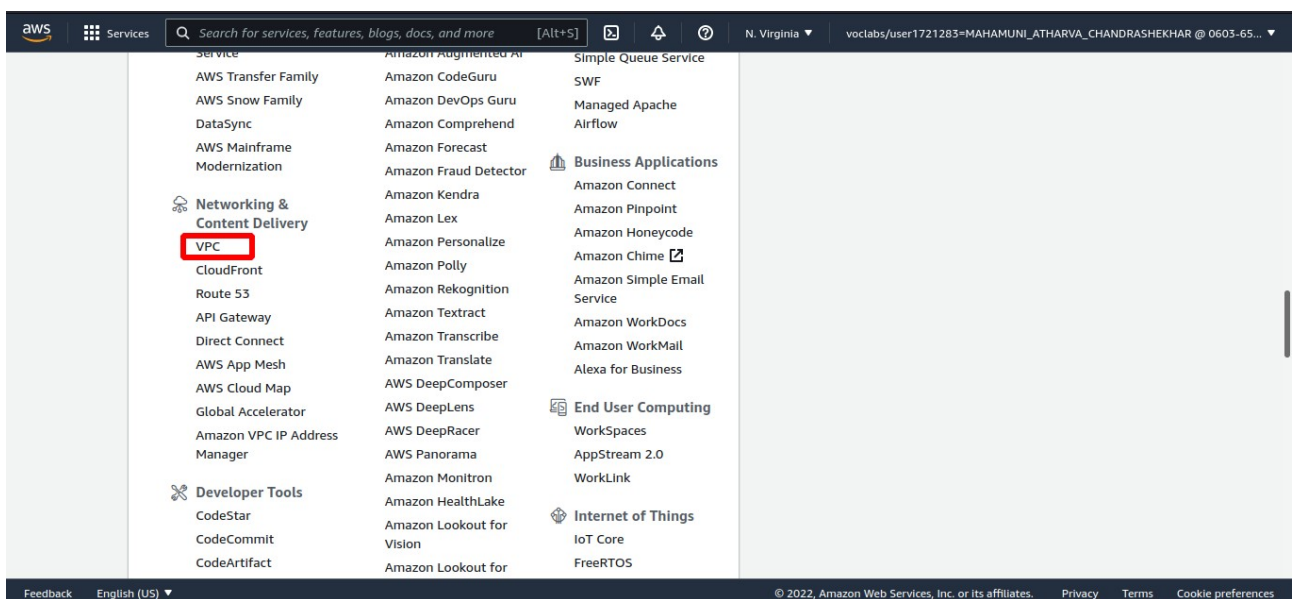
Step 2: Wait until you see the message "**Lab status: ready**", then choose the **X** to close the Start Lab panel.



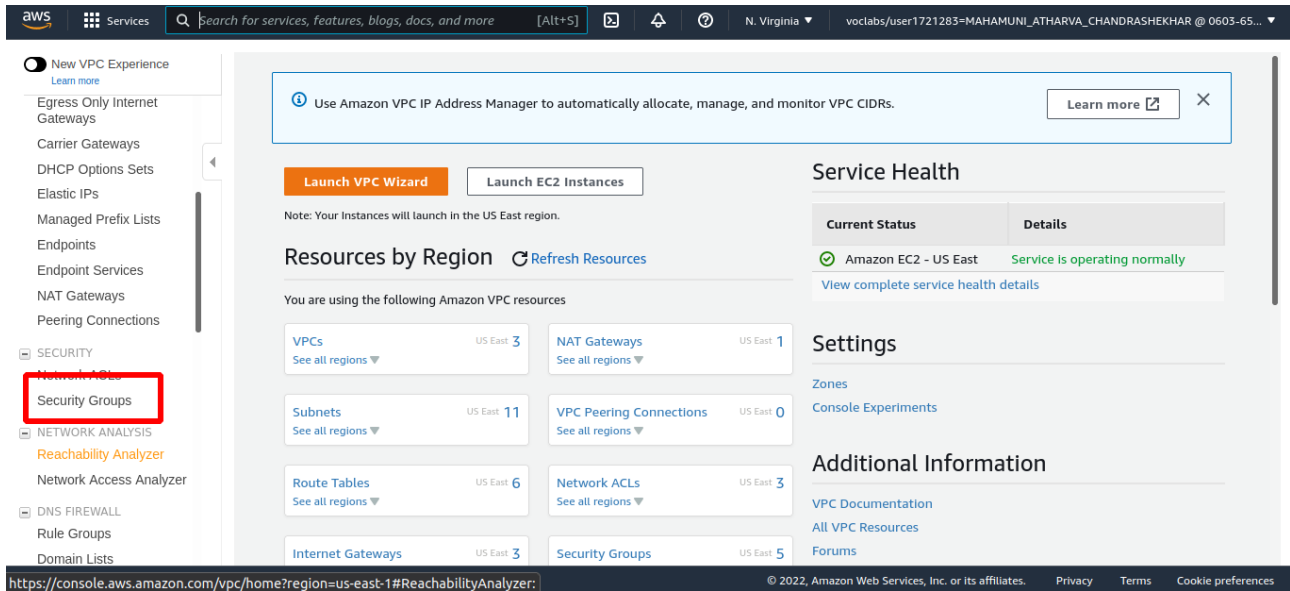
This will open the AWS Management Console in a new browser tab. The system will automatically log you in.



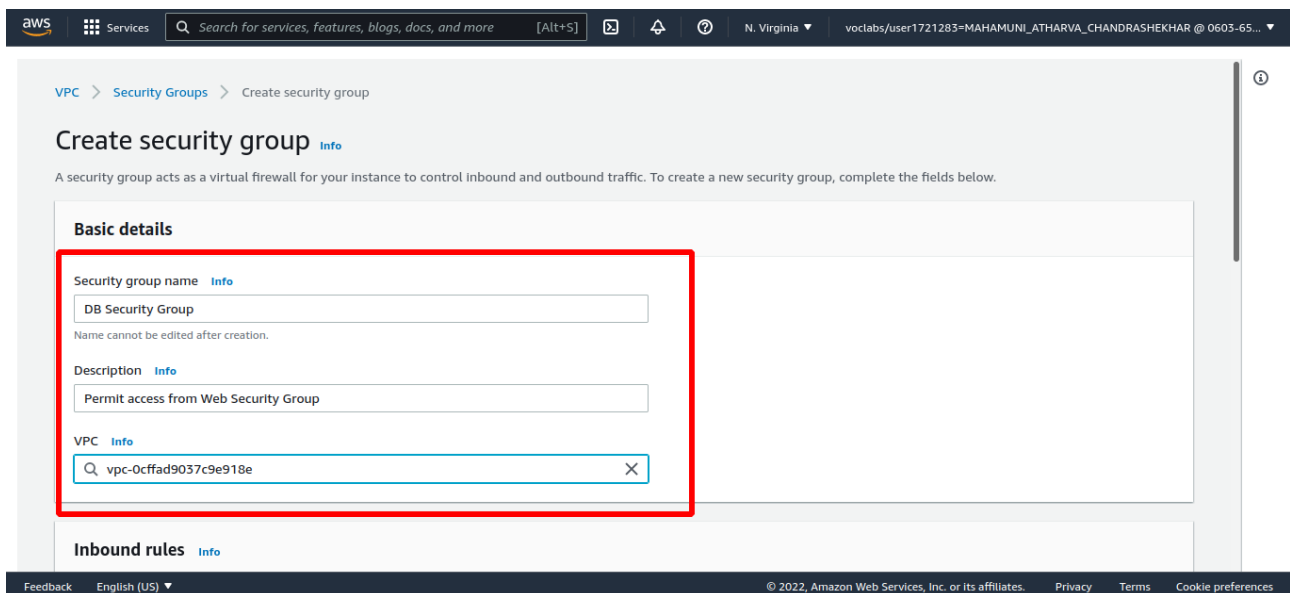
Step 4: In the **AWS Management Console** on the **Services** menu, choose **VPC**.



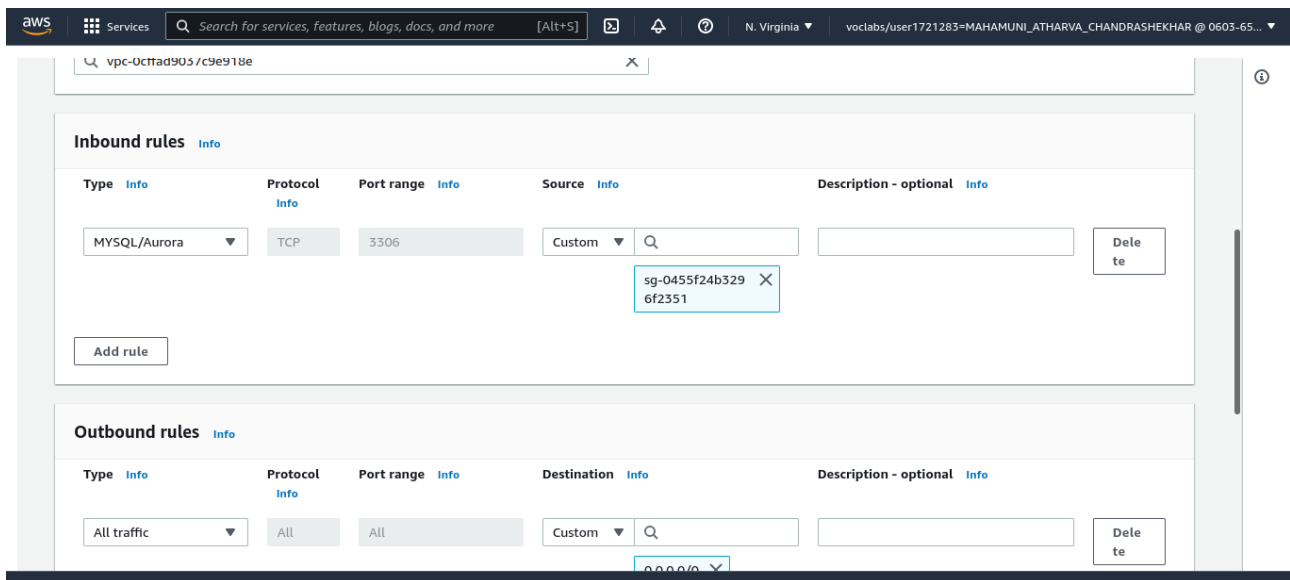
Step 5: In the left navigation pane, choose **Security Groups**.



Step 6: Choose **Create security group** and then configure:

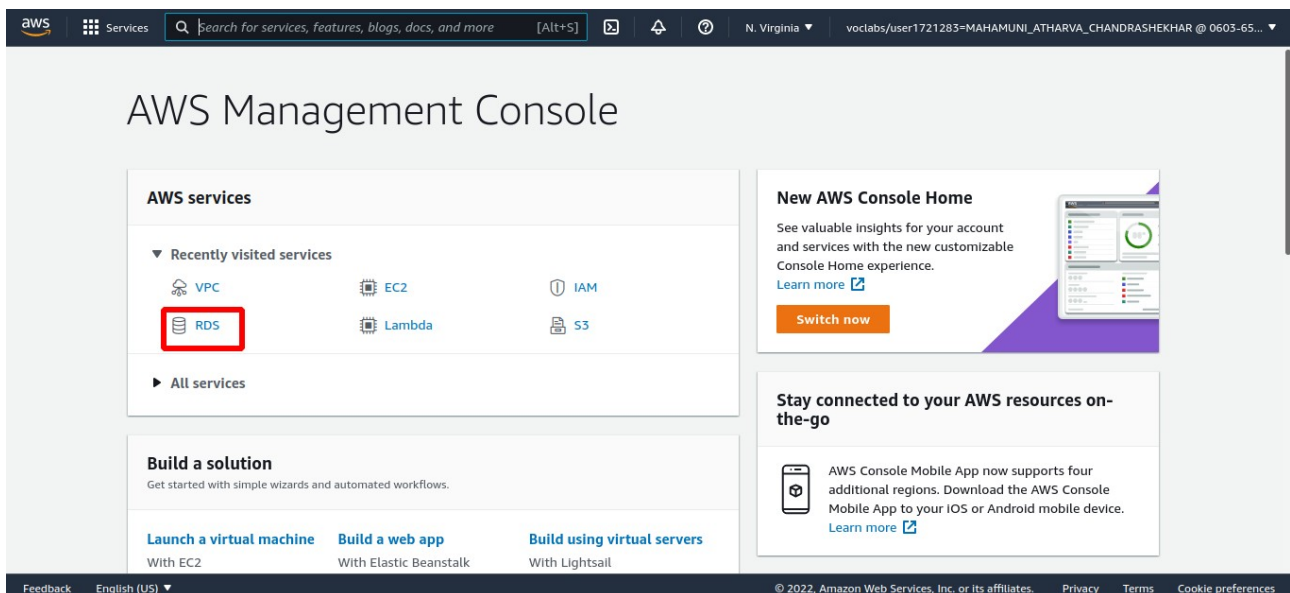


Step 7: In the **Inbound rules** pane, choose Add rule

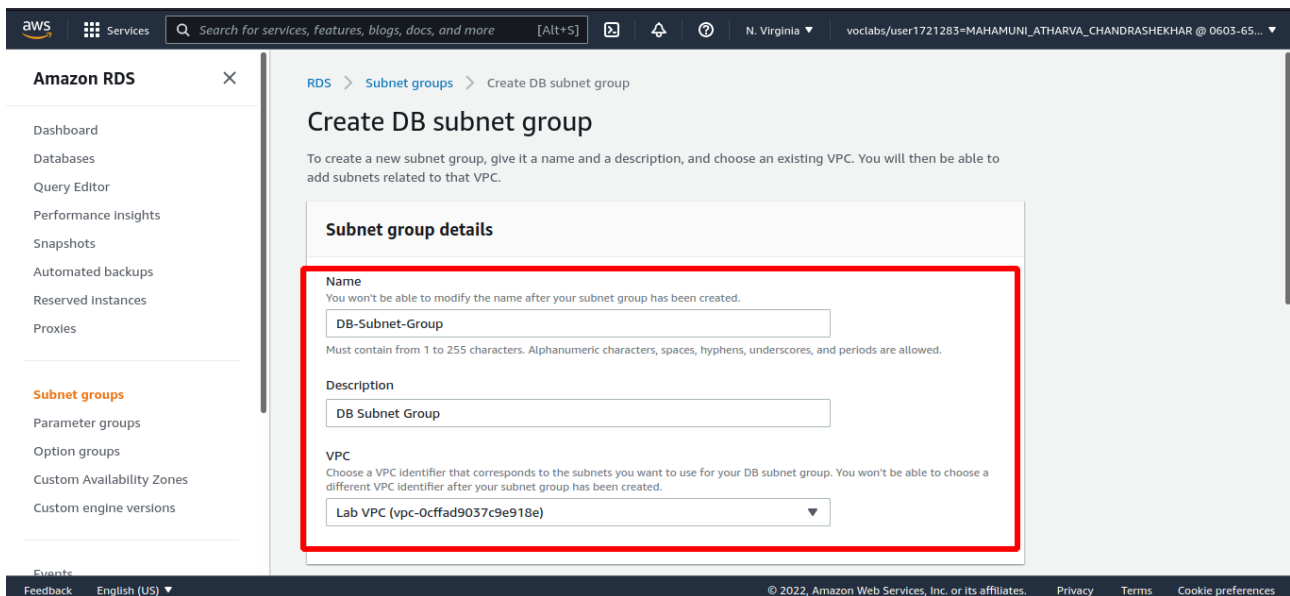


Choose Create security group

Step 8: On the Services menu, choose **RDS**.



Step 9: In the left navigation pane, choose **Subnet groups**.
Choose **Create DB Subnet Group** then configure



Amazon RDS

Dashboard
Databases
Query Editor
Performance Insights
Snapshots
Automated backups
Reserved instances
Proxies

Subnet groups
Parameter groups
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Custom Availability Zones
Custom engine versions

Create DB subnet group

To create a new subnet group, give it a name and a description, and choose an existing VPC. You will then be able to add subnets related to that VPC.

Subnet group details

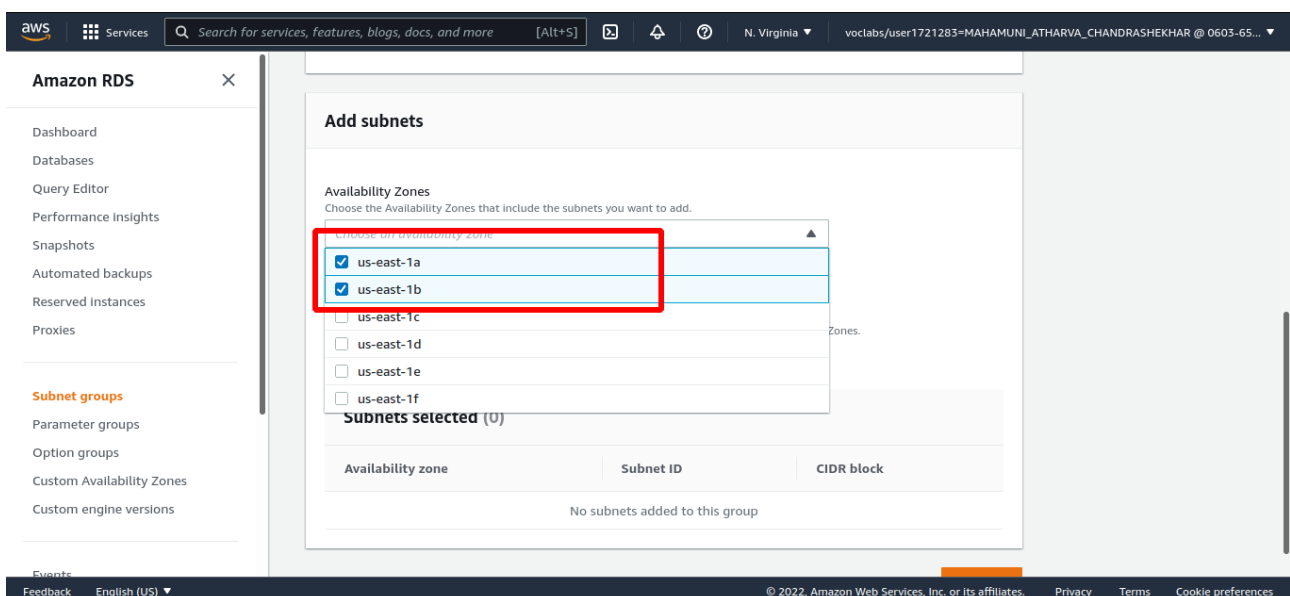
Name
You won't be able to modify the name after your subnet group has been created.
DB-Subnet-Group
Must contain from 1 to 255 characters. Alphanumeric characters, spaces, hyphens, underscores, and periods are allowed.

Description
DB Subnet Group

VPC
Choose a VPC identifier that corresponds to the subnets you want to use for your DB subnet group. You won't be able to choose a different VPC identifier after your subnet group has been created.
Lab VPC (vpc-0c9ad9037c9e918e)

Scroll down to the **Add Subnets** section.

Step 10: Expand the list of values under **Availability Zones** and select the first two zones: **us-east-1a** and **us-east-1b**.



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Add subnets

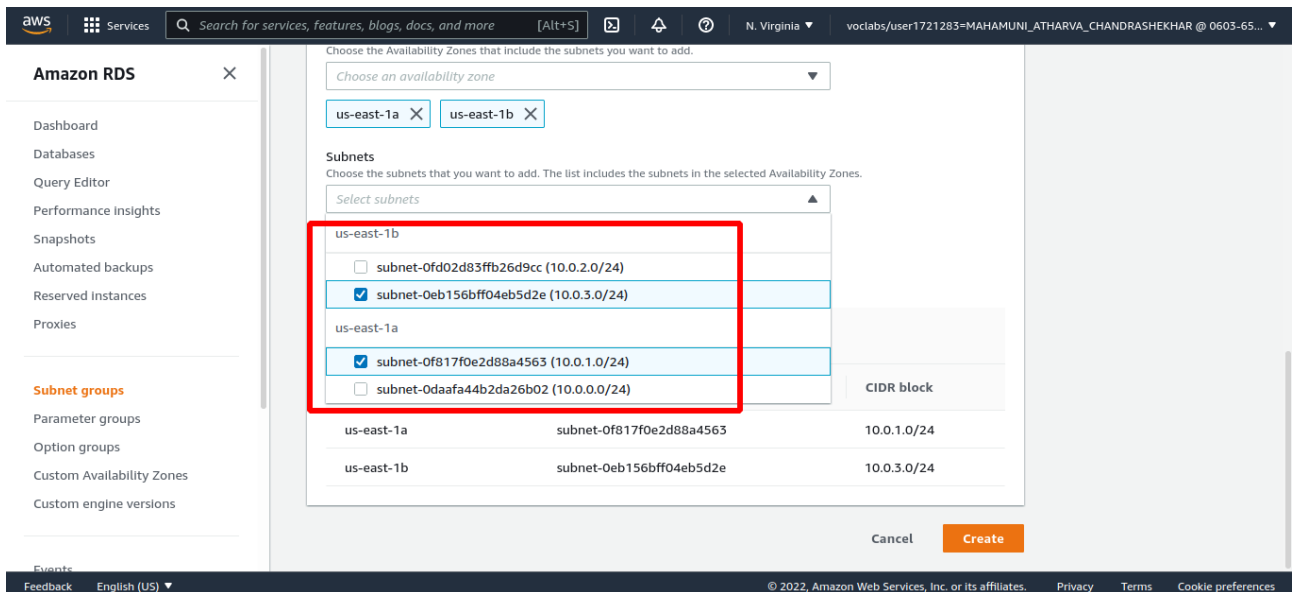
Availability Zones
Choose the Availability Zones that include the subnets you want to add.
Expand or collapse availability zones

☒ us-east-1a
☒ us-east-1b
☐ us-east-1c
☐ us-east-1d
☐ us-east-1e
☐ us-east-1f

Subnets selected (0)

Availability zone	Subnet ID	CIDR block
No subnets added to this group		

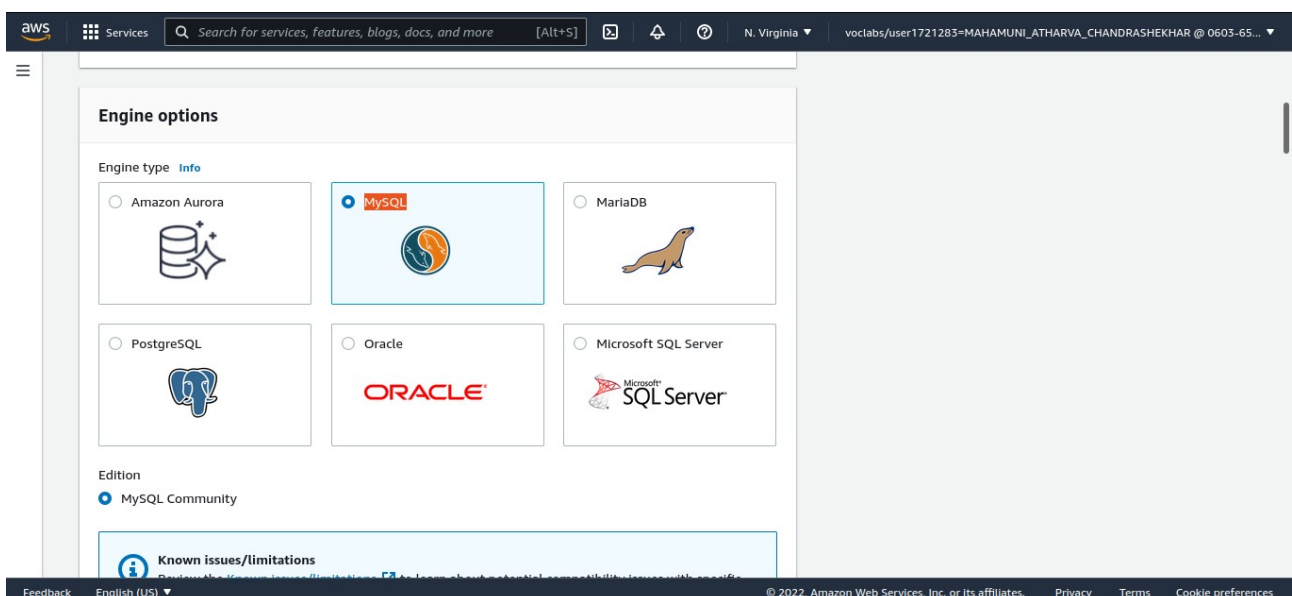
Step 11: Expand the list of values under **Subnets** and select the subnets associated with the CIDR ranges **10.0.1.0/24** and **10.0.3.0/24**.



Choose Create

Step 12: In the left navigation pane, choose **Databases**. Choose **Create database** **Select MySQL**.

- Under **Settings**, configure:



Step 13:

- **DB instance identifier:** lab-db
- **Master username:** main
- **Master password:** lab-password
- **Confirm password:** lab-password
- **Virtual Private Cloud (VPC):** Lab VPC

Under **Existing VPC security groups**, from the dropdown list:

- Choose *DB Security Group*.
- Deselect *default*.

The screenshot shows the AWS Management Console interface for configuring a VPC security group. The 'Choose existing' radio button is selected. The 'Existing VPC security groups' dropdown menu is open, showing 'Web Security Group' with an 'X' icon. The 'Availability Zone' is set to 'No preference'. The 'Database authentication' section shows 'Password authentication' selected. The footer includes 'Feedback', 'English (US)', and copyright information for Amazon Web Services, Inc. or its affiliates.

Step 14: Expand **Additional configuration**, then configure:

- **Initial database name:** lab
- Uncheck **Enable automatic backups**, **Enable encryption**, **Enable Enhanced monitoring**

The screenshot shows the AWS Management Console interface for configuring a Database instance. The 'Initial database name' field is set to 'lab'. The 'DB parameter group' is set to 'default.mysql8.0'. The 'Option group' is set to 'default:mysql-8-0'. The 'Backup' section shows 'Enable automated backups' unchecked. The 'Monitoring' section shows 'Enable Enhanced monitoring' unchecked. The 'Log exports' section shows 'Audit log' and 'Error log' unchecked. The footer includes 'Feedback', 'English (US)', and copyright information for Amazon Web Services, Inc. or its affiliates.

Step 15: Choose Create database, Choose **lab-db** (choose the link itself).
Wait until **Info** changes to **Modifying** or **Available**.

The screenshot shows the Amazon RDS console for the 'lab-db' instance. The 'Summary' section displays the following details:

DB identifier	CPU	Status	Class
lab-db	6.33%	Available	db.t2.micro

Additional details shown include:

Role	Current activity	Engine	Region & AZ
Instance	0 Connections	MySQL Community	us-east-1a

The 'Connectivity & security' section is visible below the summary, with tabs for Connectivity & security, Monitoring, Logs & events, Configuration, Maintenance & backups, and Tags.

Step 16: Scroll down to the **Connectivity & security** section and copy the Endpoint field.
Paste the Endpoint value into a text editor. You will use it later in the lab.

The screenshot shows the 'Connectivity & security' section of the Amazon RDS console for the 'lab-db' instance. The 'Endpoint & port' section is highlighted with a red box, showing the following details:

Endpoint
lab-db.cpdalrxk4ho.us-east-1.rds.amazonaws.com

The 'Port' is listed as 3306.


The 'Networking' section shows the following details:

Availability Zone	VPC	Subnet group	Subnets
us-east-1a	Lab VPC (vpc-0c9fad9037c9e918e)	db-subnet-group	subnet-0eb156bff04eb5d2e subnet-0f817f0e2d88a4563

The 'Security' section shows the following details:

VPC security groups	Public accessibility	Certificate authority	Certificate authority date
Web Security Group (sg-0455f24b3296f2351) Active	No	rds-ca-2019	August 22, 2024, 10:38 (UTC±10:38)

Step 17: Open a new web browser tab, paste the *WebServer* IP address and press Enter. The web application will be displayed, showing information about the EC2 instance.

 Load Test RDS


Meta-Data	Value
InstanceId	i-026bdac1985058692
Availability Zone	us-east-1b

Current CPU Load: 0%

Step 18: Choose the **RDS** link at the top of the page. You will now configure the application to connect to your database.

Configure the following settings:

- **Endpoint:** Paste the Endpoint you copied to a text editor earlier
- **Database:** lab
- **Username:** main
- **Password:** lab-password
- Choose **Submit**

 Load Test RDS

Endpoint

lab-db.ccpdalrxk4ho.us-east-1.rds.amazonaws.com

Database

lab

Username

main

Password

Submit