Scalable WordPress Hosting on AWS with LAMP Stack and Blue/Green RDS Upgrade

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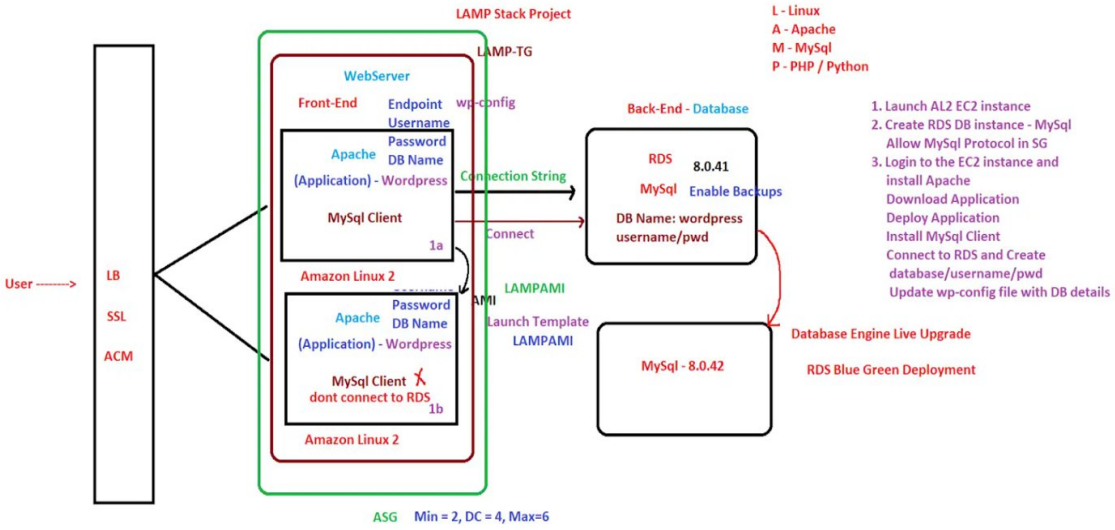
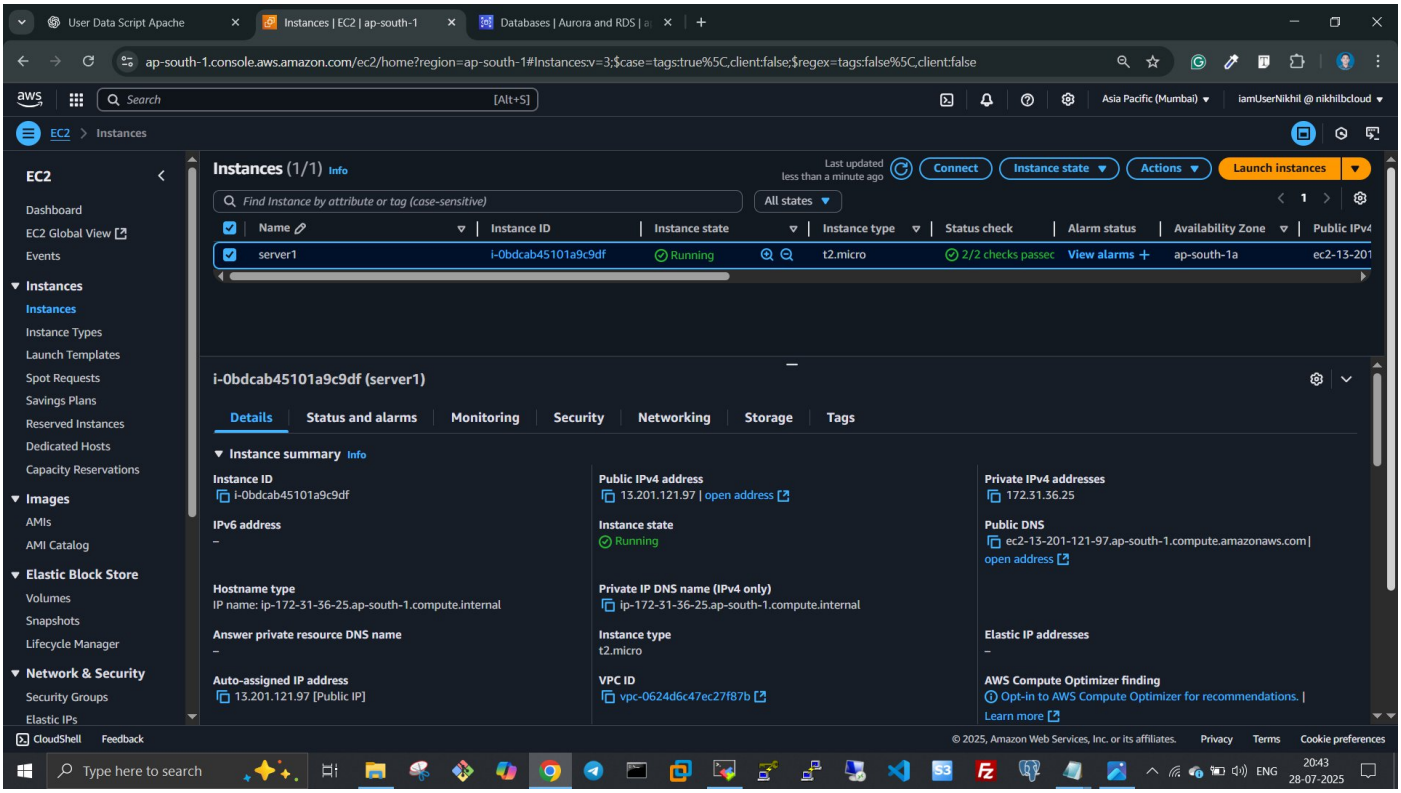
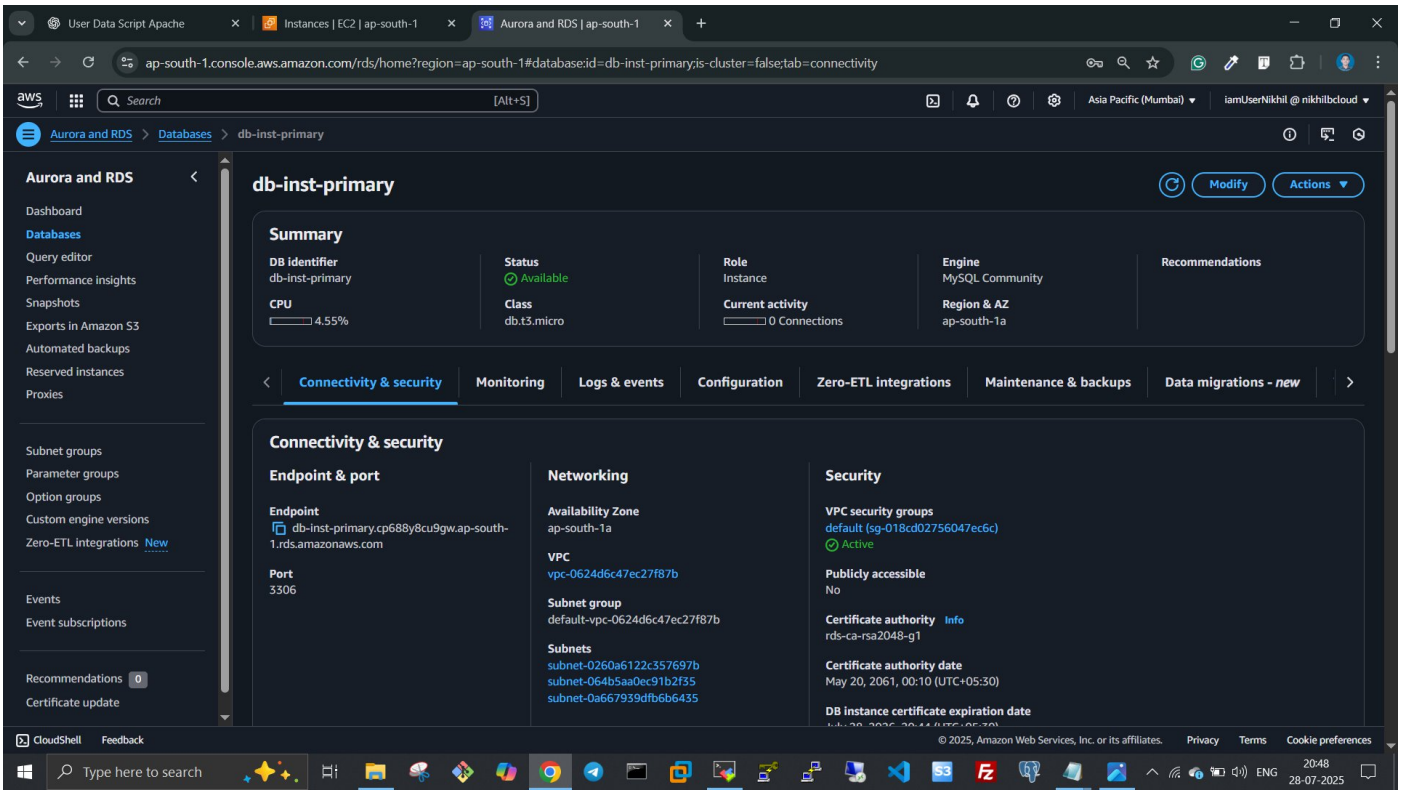
Architecture Diagram of Project -



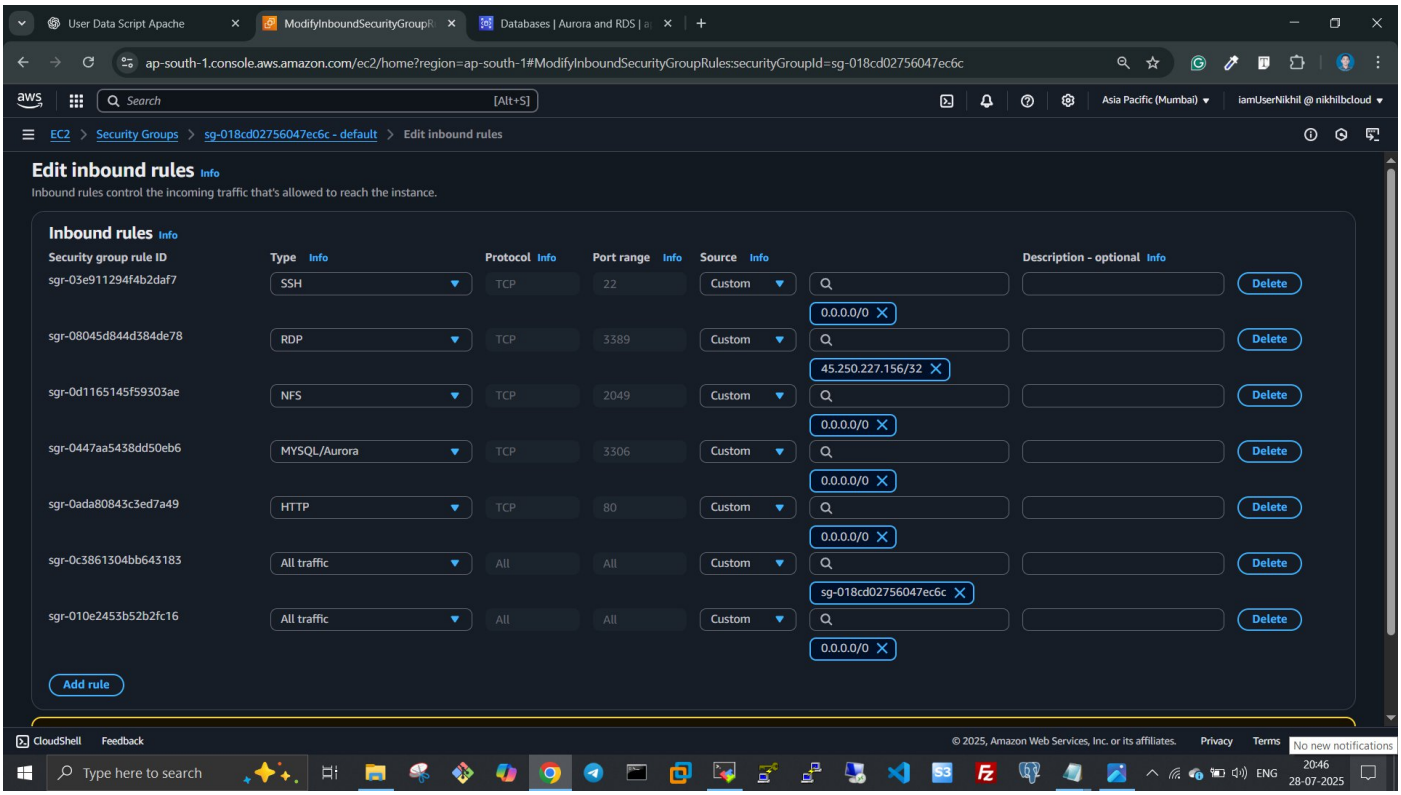
1. Launching ec2 instance with instance type Amazon Linux 3



2. Creating Database instance using RDB with MYSQL engine 8.0.41 ensure enable automatic backup

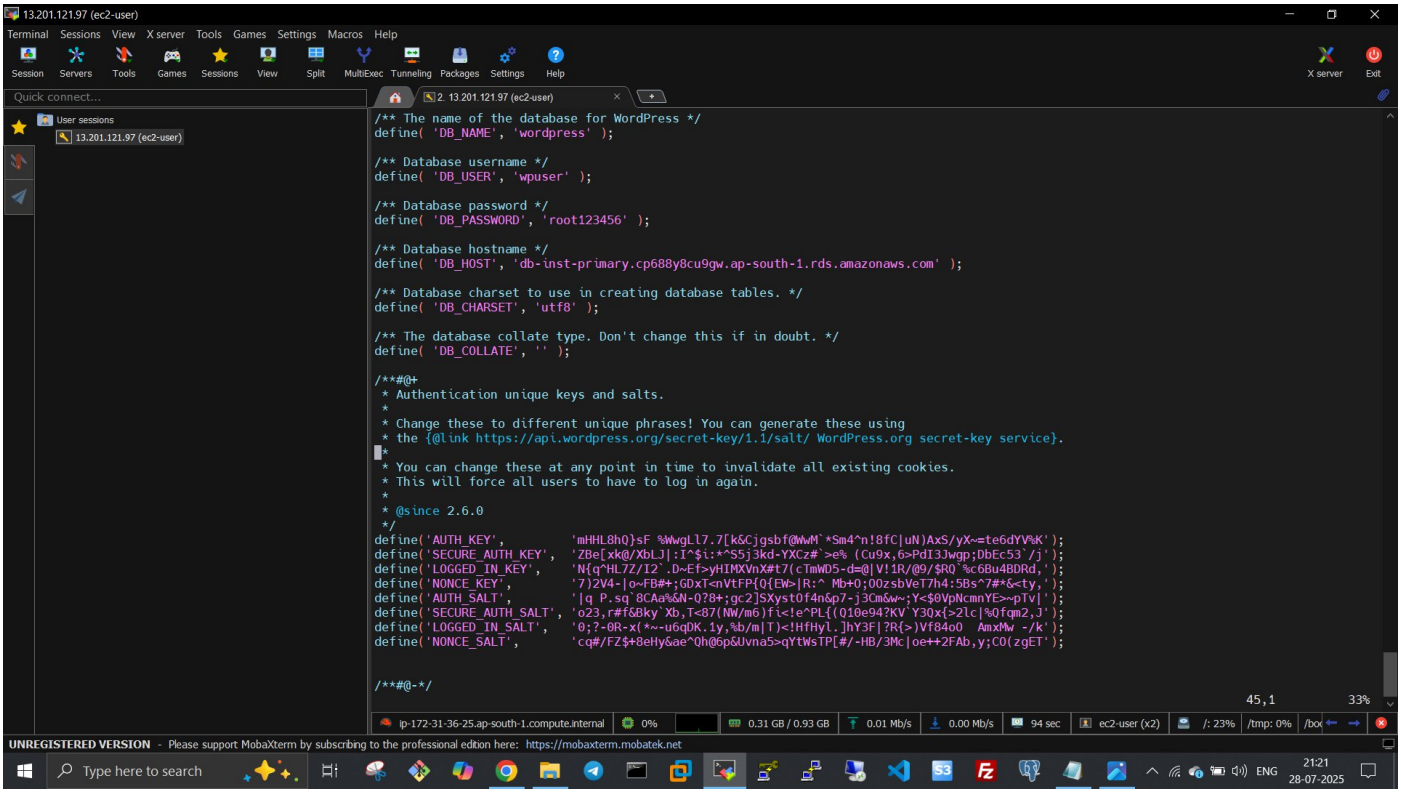


3. Allow protocols in SG, MySQL or anywhere



4. Installing MYSQL client as we need to connect to DB instance and creating database, username and pass.

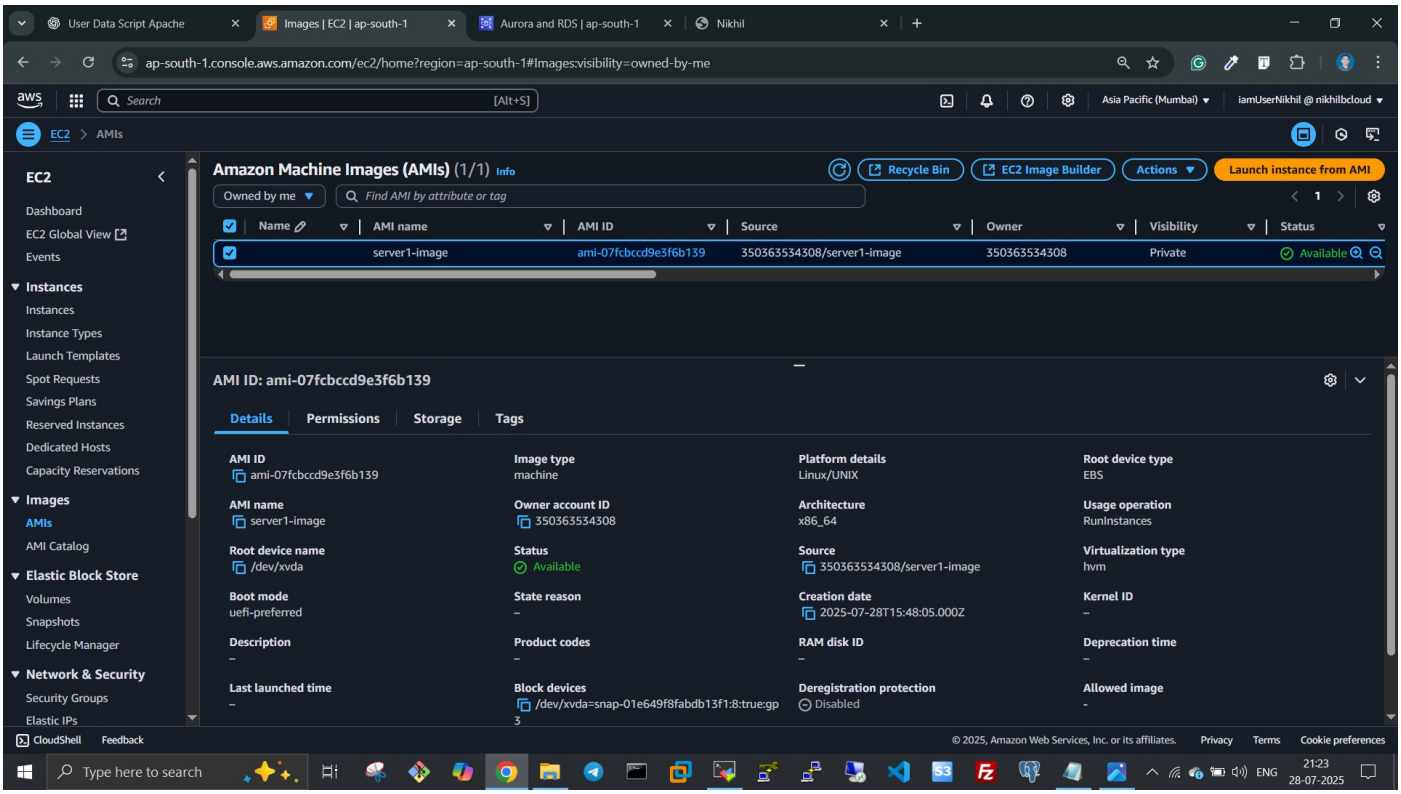
5. Installing Apache webserver and installing WordPress app, extracting it and configuring config file that is setting connection string so that application should connect to database.



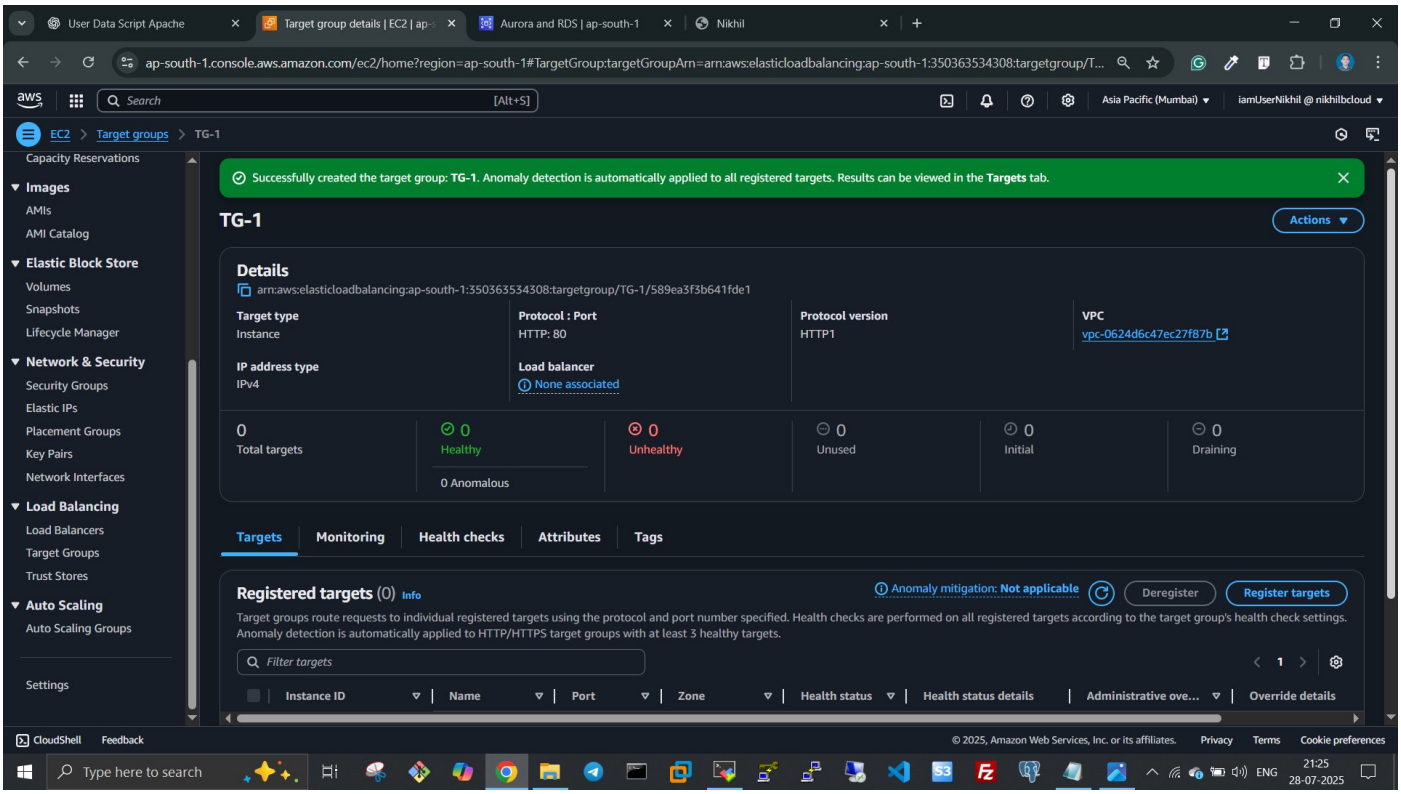
6. Copy all WordPress files to Apache directory /var/www/html then restart apache server

7. Now what if this ec2 goes down so we have to set Auto Scaling

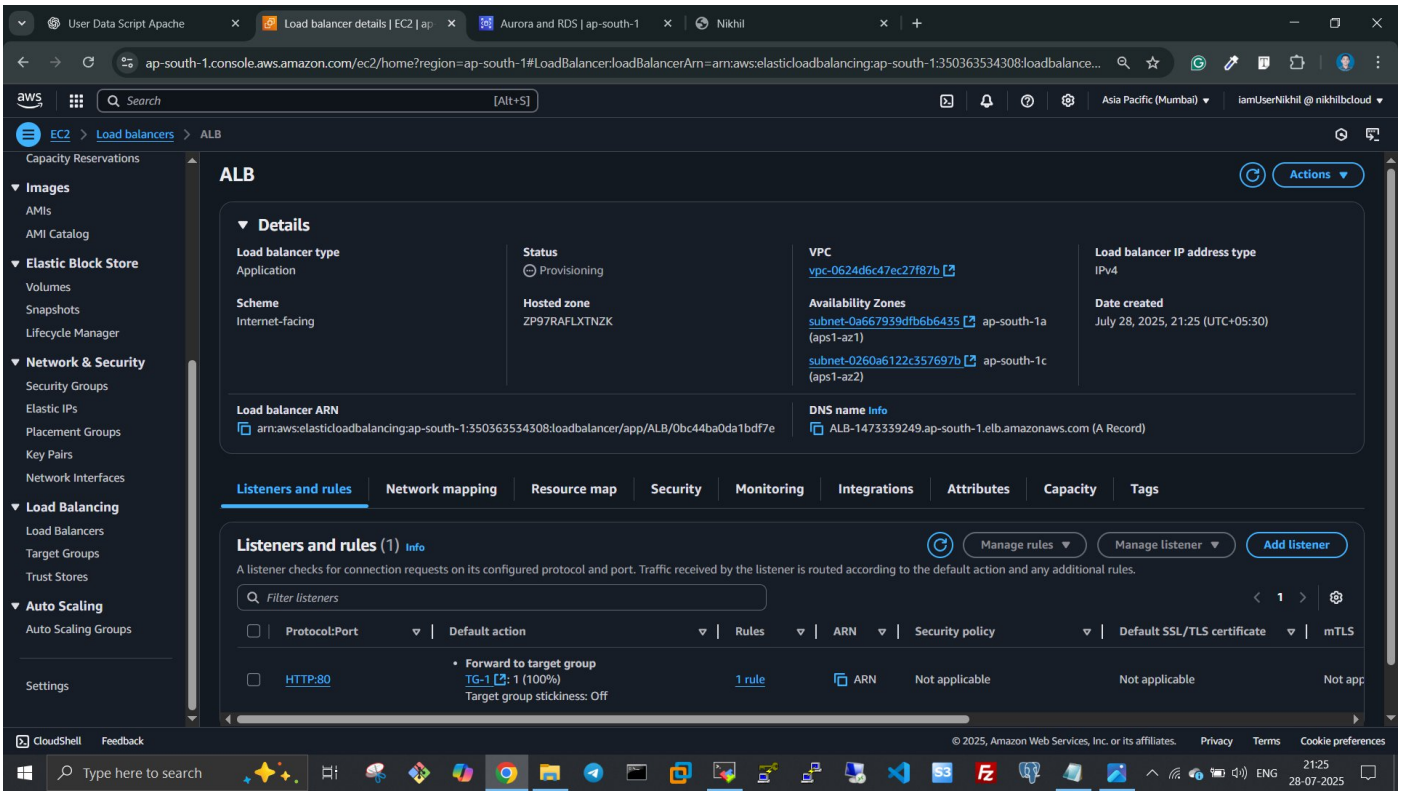
So first create AMI form this ec2 where all configuration are done so that we can use same AMI in launch template



8. Creating Empty Target Group giving health check path / only (ie: root path)



9. Creating Application Load Balancer – distributing traffic to diff ec2 servers



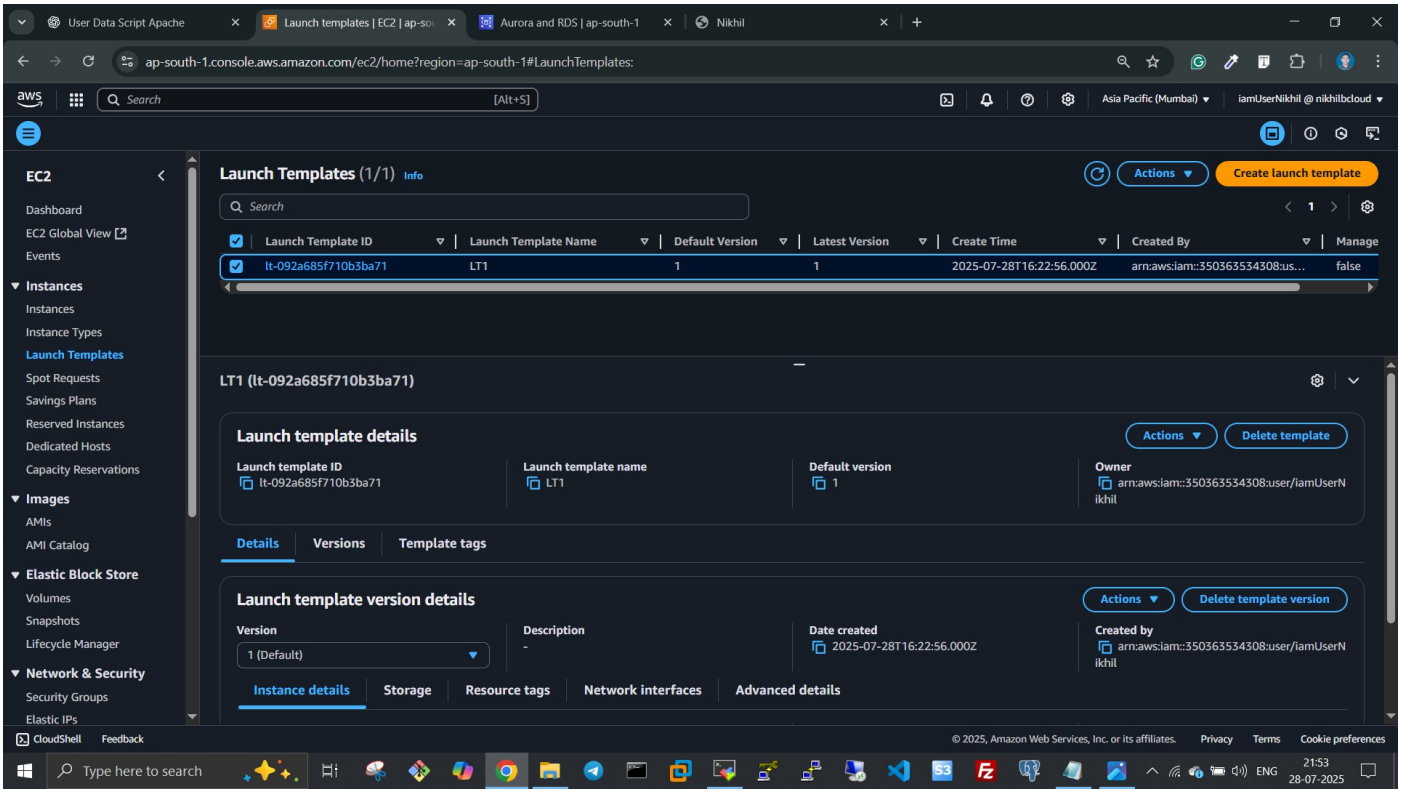
10. For Creating ASG we need to launch first launch template

while launching launch tamplate use same AMI and in user data mention –

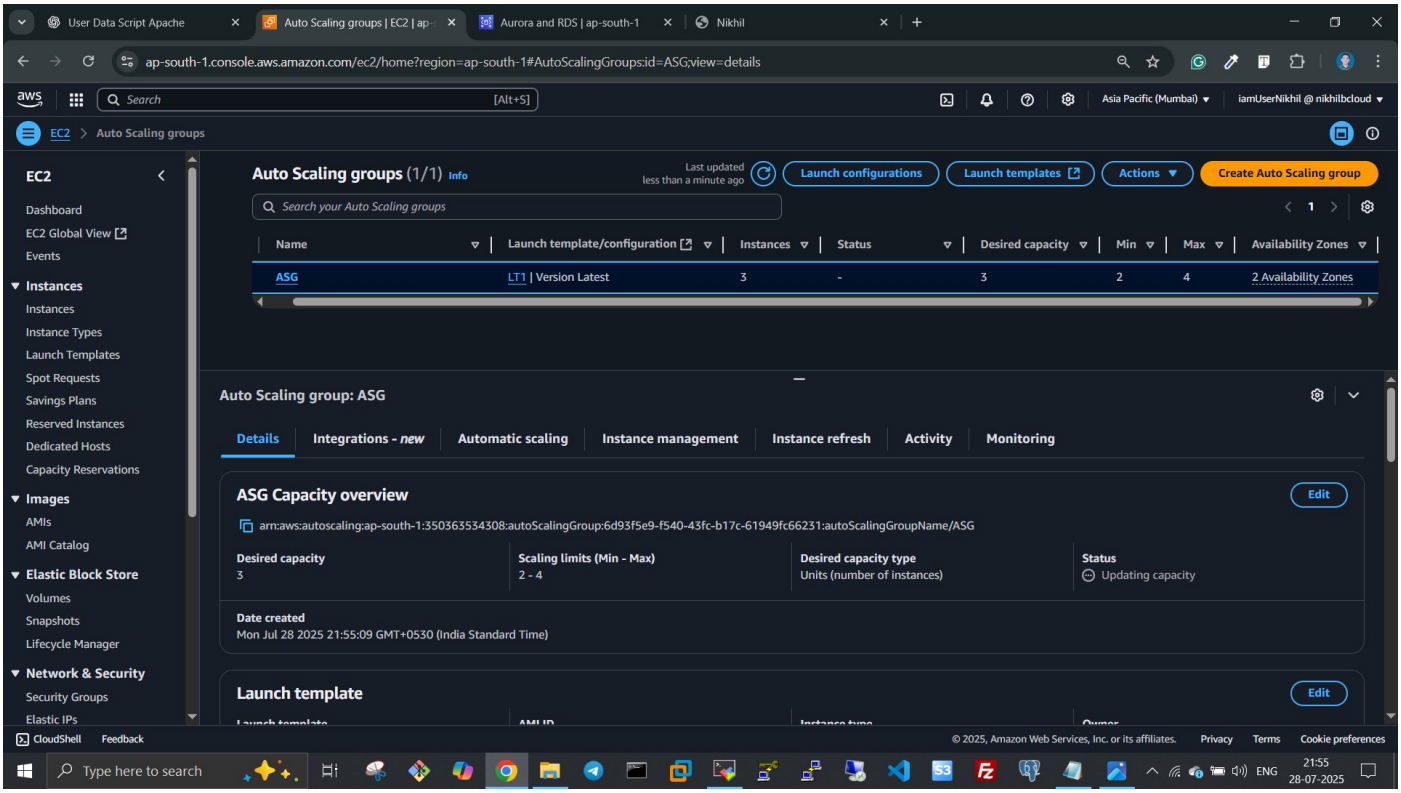
systemctl restart httpd

systemctl restart php-fpm

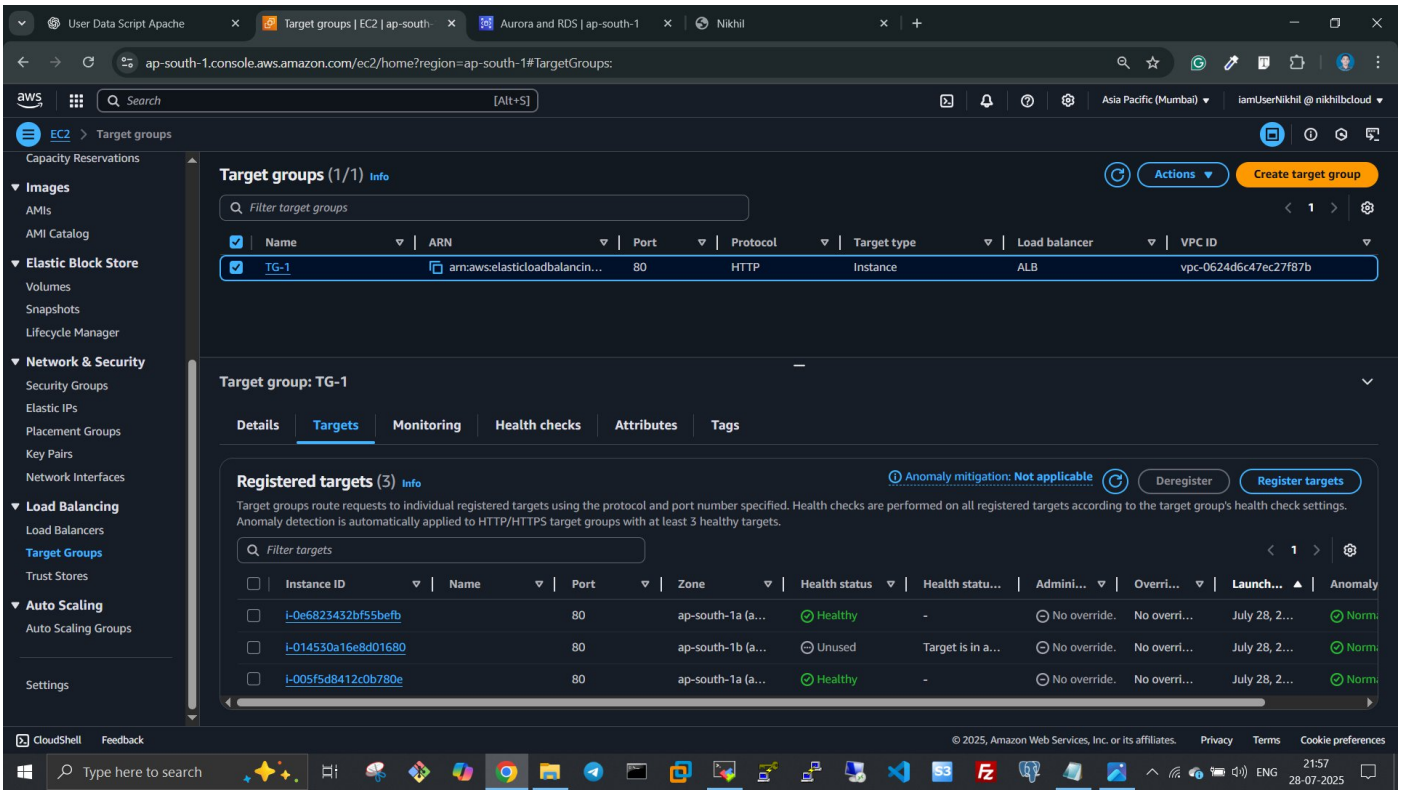
because when ASG launches new ec2 we need to restart apache and php



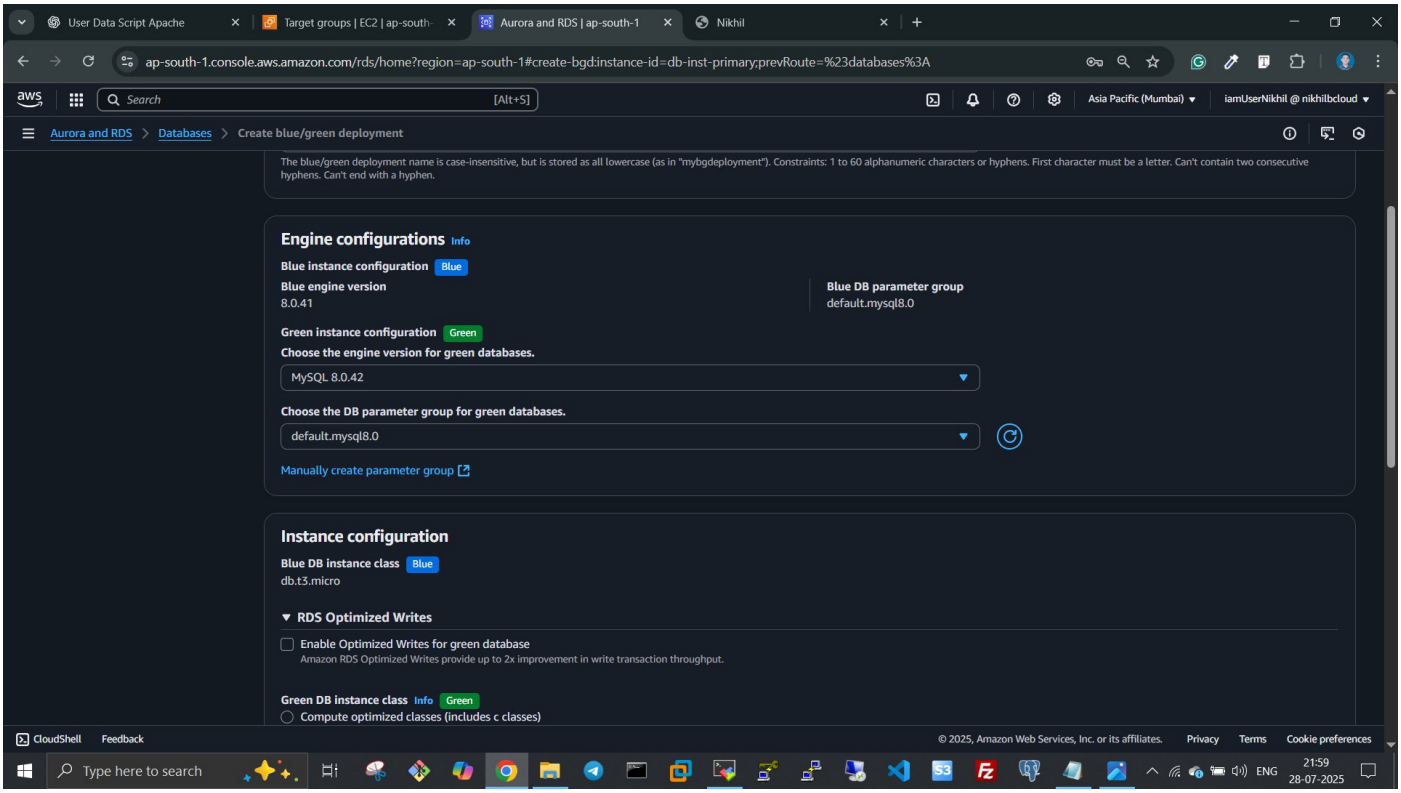
Create ASG

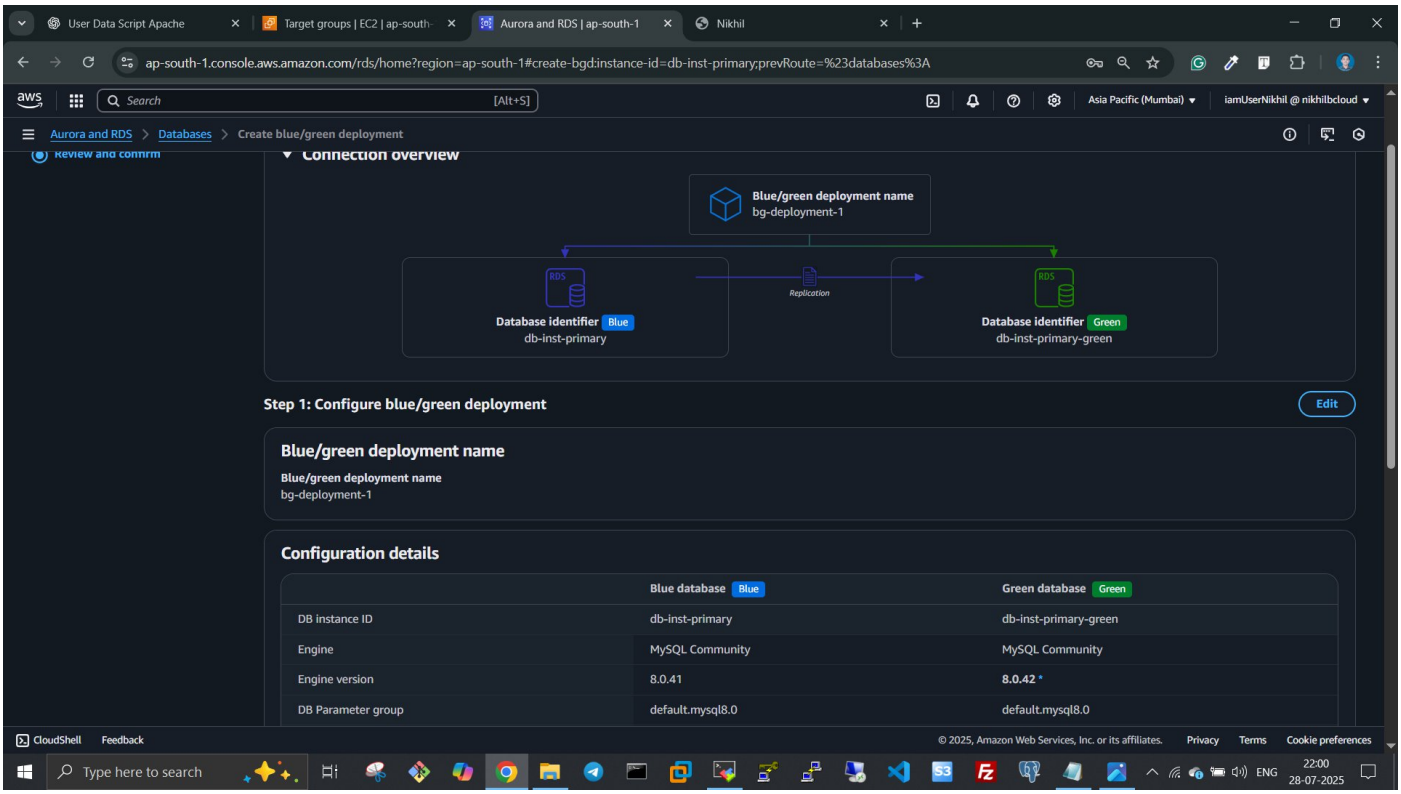


11. After this you will see ec2 instances in TG where you can check health check and access wordpress using ALB



12. Now we need to upgrade MYSQL version from 8.0.41 to 8.0.42 without any downtime so we are using BLUE-GREEN-DEPLOYMENT where endpoint will remain same




User Data Script Apache
Target groups | EC2 | ap-south-
Aurora and RDS | ap-south-1
Nikhil
ap-south-1.console.aws.amazon.com/rds/home?region=ap-south-1#create-bgd:instance-id=db-inst-primary;prevRoute=%23databases%3A
Search
[Alt+S]
Asia Pacific (Mumbai)
iamUserNikhil @ nikhilbcloud
Aurora and RDS > Databases > Create blue/green deployment
Review and confirm
Connection overview
Blue/green deployment name
bg-deployment-1
RDS
Replication
Database identifier Blue
db-inst-primary
Database identifier Green
db-inst-primary-green
Step 1: Configure blue/green deployment
Edit
Blue/green deployment name
Blue/green deployment name
bg-deployment-1
Configuration details
Blue database Blue
Green database Green
DB instance ID
db-inst-primary
db-inst-primary-green
Engine
MySQL Community
MySQL Community
Engine version
8.0.41
8.0.42
DB Parameter group
default.mysql8.0
default.mysql8.0
CloudShell
Feedback
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ENG
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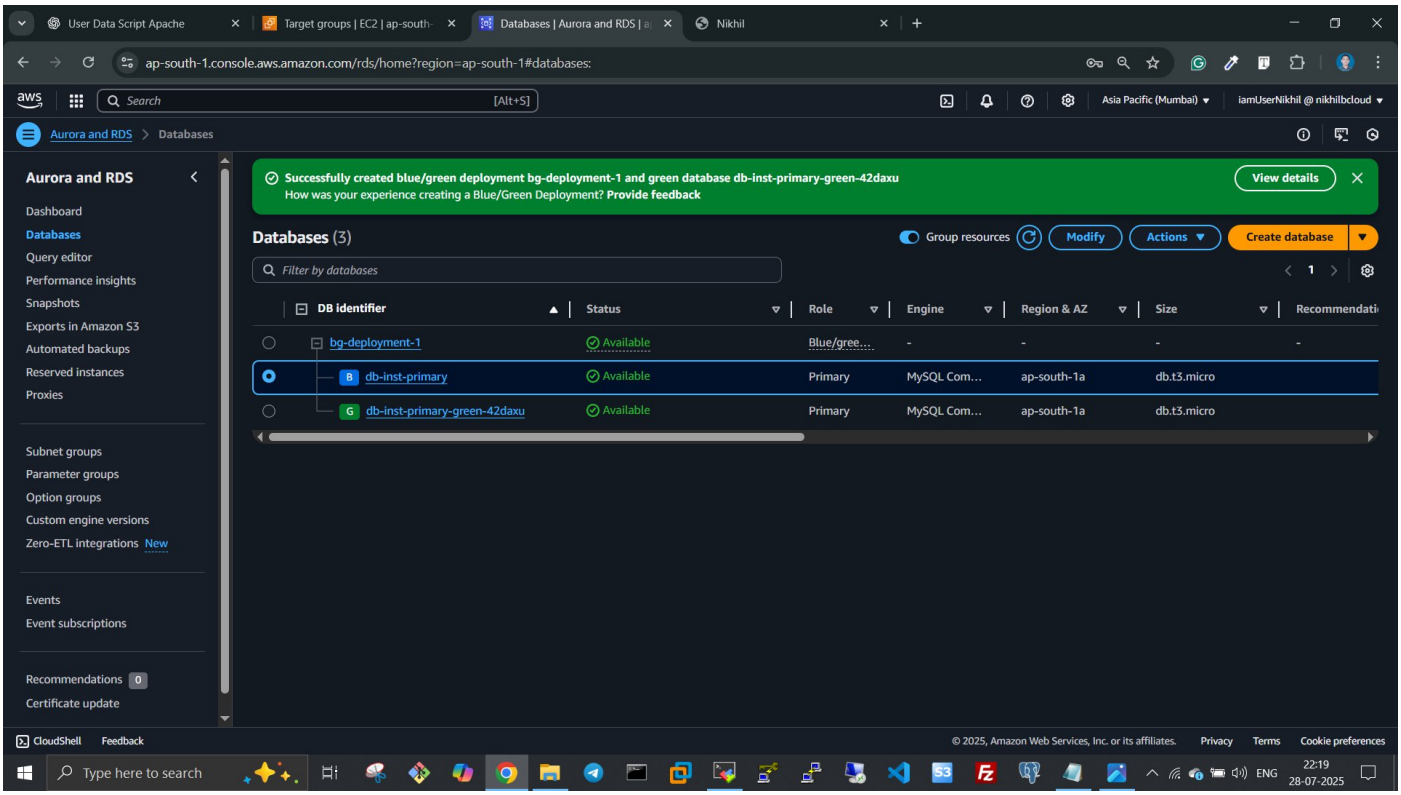
User Data Script Apache
Target groups | EC2 | ap-south-
Databases | Aurora and RDS |
Nikhil
ap-south-1.console.aws.amazon.com/rds/home?region=ap-south-1#databases:
Search
[Alt+S]
Asia Pacific (Mumbai)
iamUserNikhil @ nikhilbcloud
Aurora and RDS > Databases
Aurora and RDS
Dashboard
Databases
Query editor
Performance insights
Snapshots
Exports in Amazon S3
Automated backups
Reserved instances
Proxies
Subnet groups
Parameter groups
Option groups
Custom engine versions
Zero-ETL integrations New
Events
Event subscriptions
Recommendations 0
Certificate update
Successfully created blue/green deployment bg-deployment-1 and green database db-inst-primary-green-42daxu
How was your experience creating a Blue/Green Deployment? Provide feedback
View details
Databases (3)
Group resources
Modify
Actions
Create database
Filter by databases
DB identifier
Status
Role
Engine
Region & AZ
Size
Recommendati
bg-deployment-1
Available
Blue/gree...
db-inst-primary
Available
Primary
MySQL Com...
ap-south-1a
db.t3.micro
db-inst-primary-green-42daxu
Available
Primary
MySQL Com...
ap-south-1a
db.t3.micro
CloudShell
Feedback
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Cookie preferences
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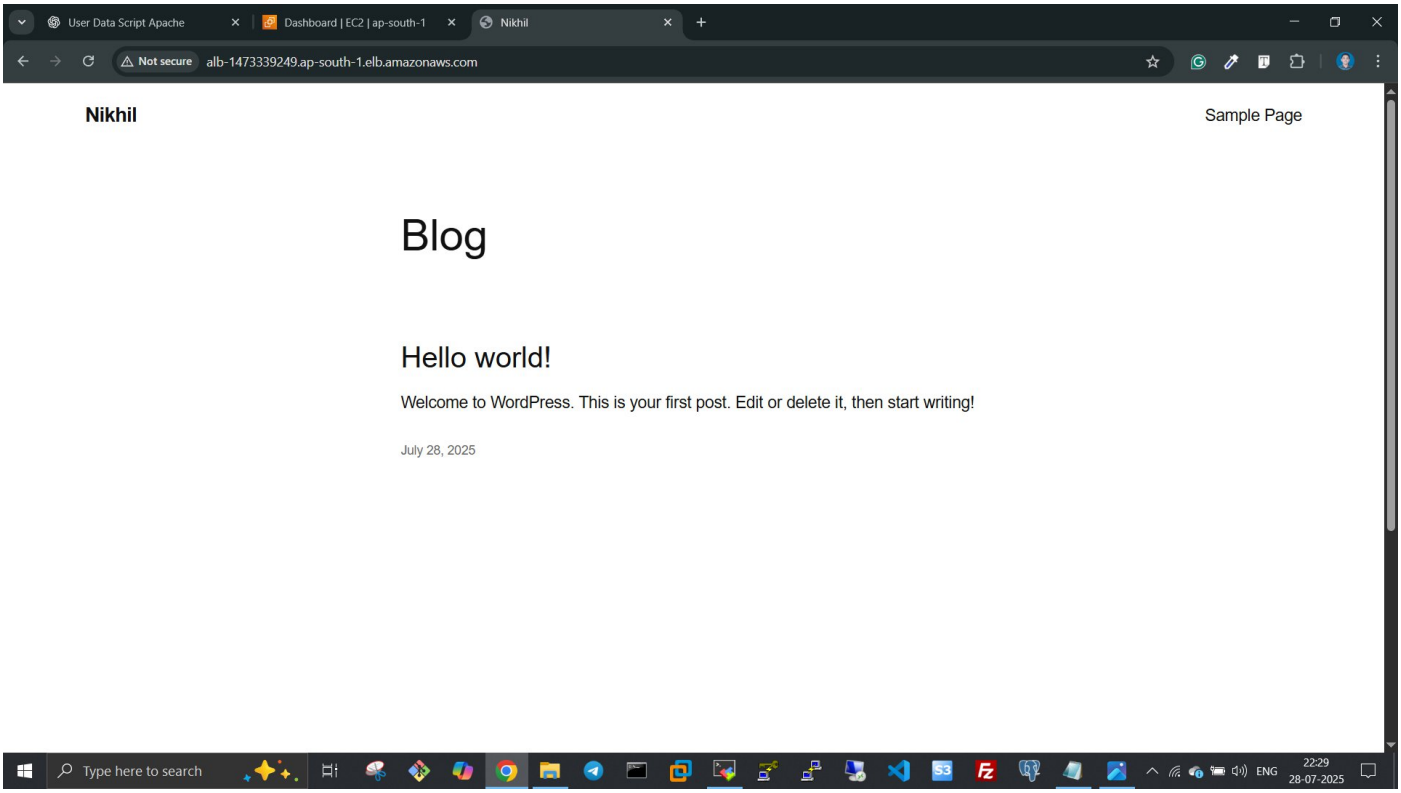
28-07-2025


User Data Script Apache
Dashboard | EC2 | ap-south-1
Nikhil
Not secure
alb-1473339249.ap-south-1.elb.amazonaws.com
Nikhil
Sample Page
Blog
Hello world!
Welcome to WordPress. This is your first post. Edit or delete it, then start writing!
July 28, 2025
Type here to search
ENG
22:29
28-07-2025