Project Report: AWS Backup Plan for EC2 and RDS

Title:

Automated Backup and Recovery Plan for EC2 and RDS Using AWS Backup

Introduction:

In modern cloud infrastructure, data protection and disaster recovery are critical components of a robust deployment strategy. AWS Backup provides a centralized, fully managed service to automate and manage backups across AWS services. This project demonstrates how to configure and manage automated backup and recovery of EC2 and RDS resources using AWS Backup, ensuring business continuity and data resilience.

Objectives:

- Launch and configure an EC2 instance with a sample web server and test data.
- Launch and configure an RDS instance with a sample database and data.
- Set up AWS Backup, including a Backup Vault and Backup Plan.
- Assign EC2 and RDS to the Backup Plan using tags or direct resource selection.
- Test and validate the backup process with on-demand backups.
- Document the entire process with screenshots and a summary report.

Technology Stack:

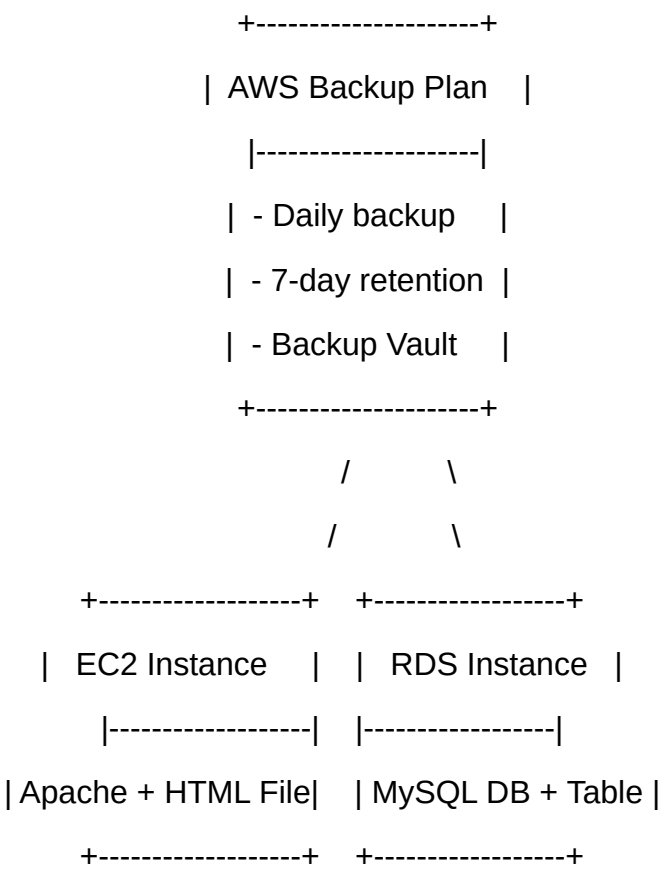
Component | Technology Use

Compute | AWS EC2 (Amazon Linux 2) Database | AWS RDS (MySQL 8.x) Web Server | Apache HTTP Server

Backup Service | AWS Backup

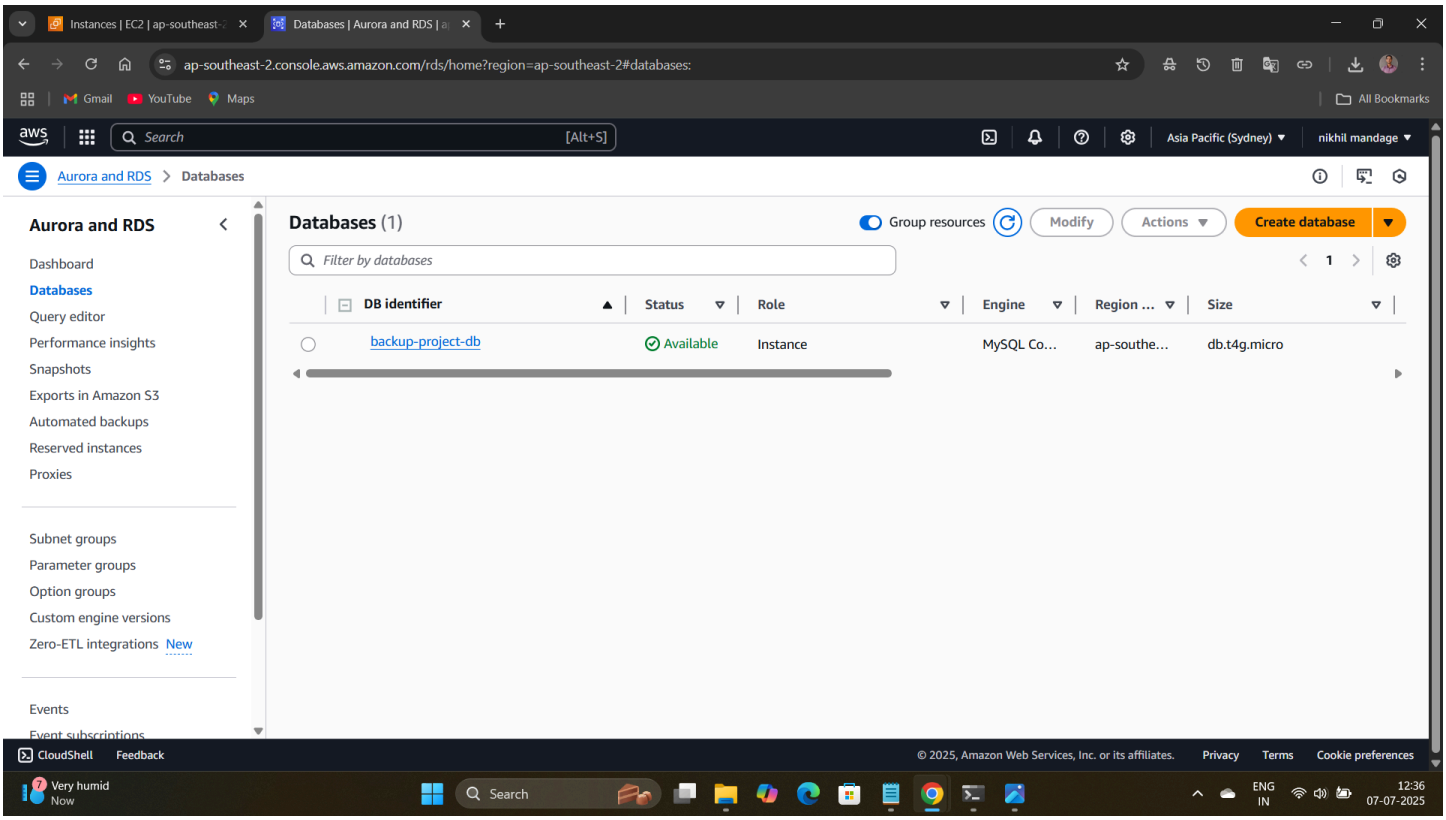
OS & CLI Tools | Amazon Linux 2, AWS Console, MySQL Networking | VPC, Security Groups

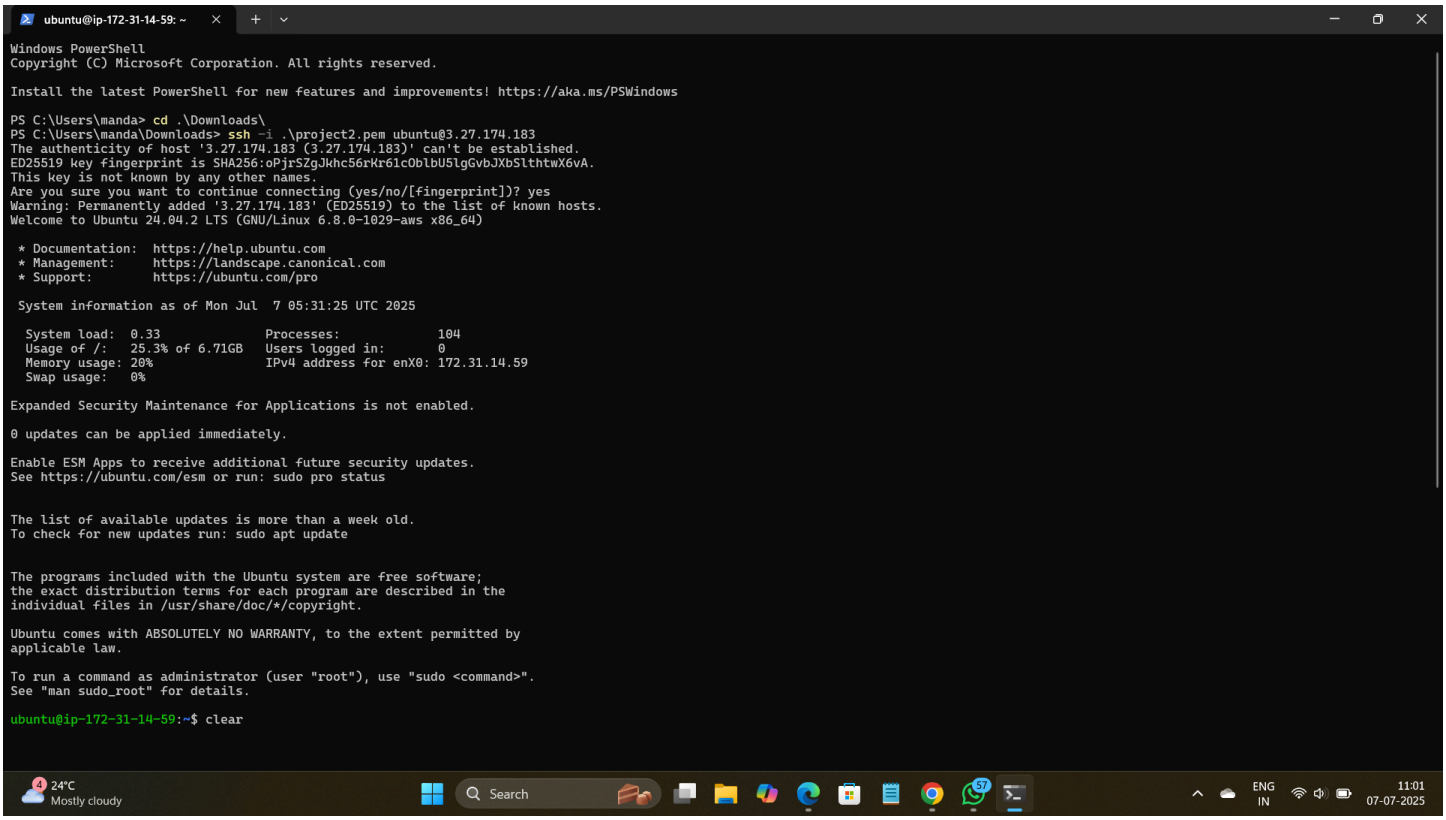
System Structure Diagram:



Implementation Steps:

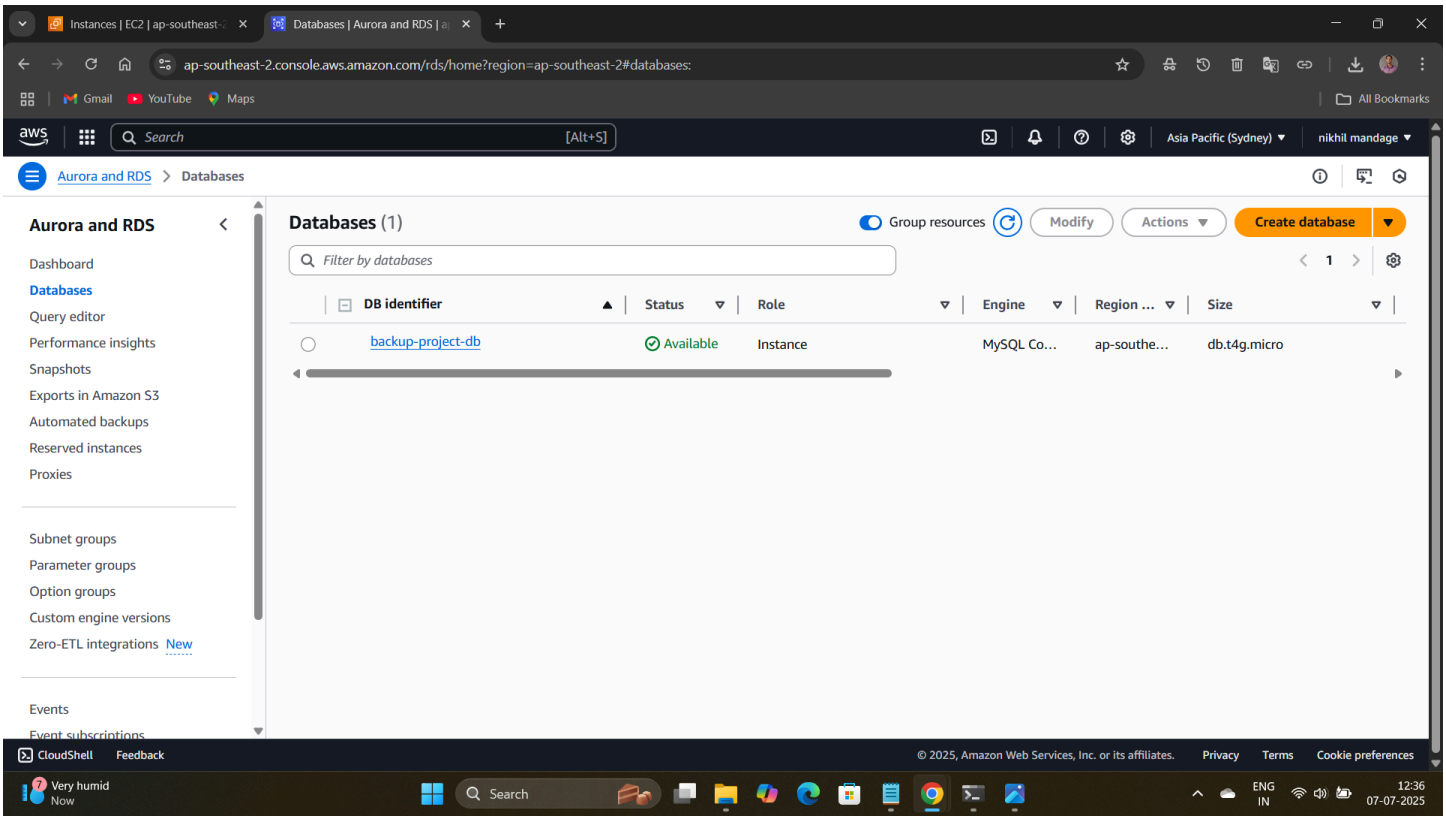
1. Launch EC2 Instance:



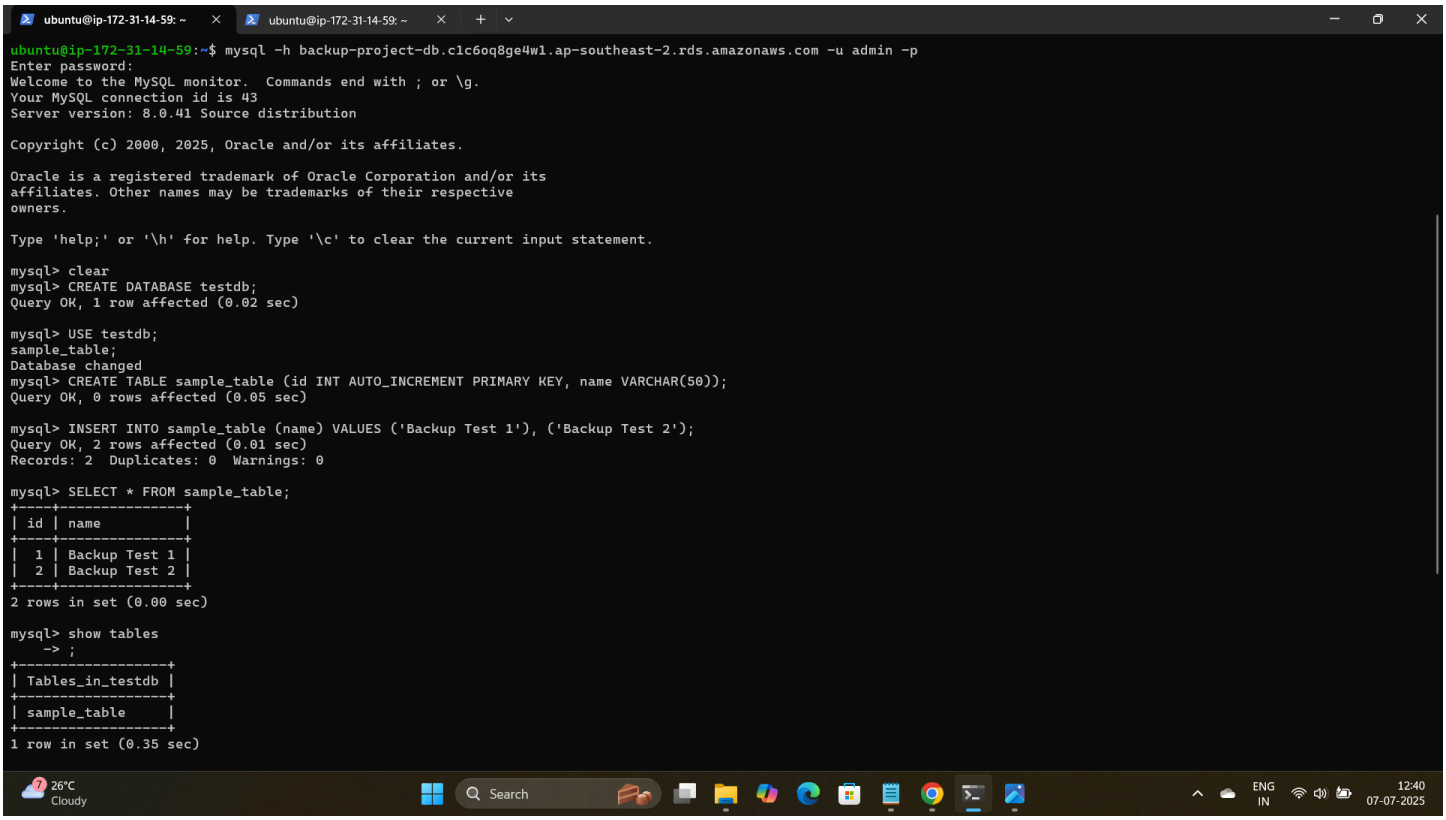


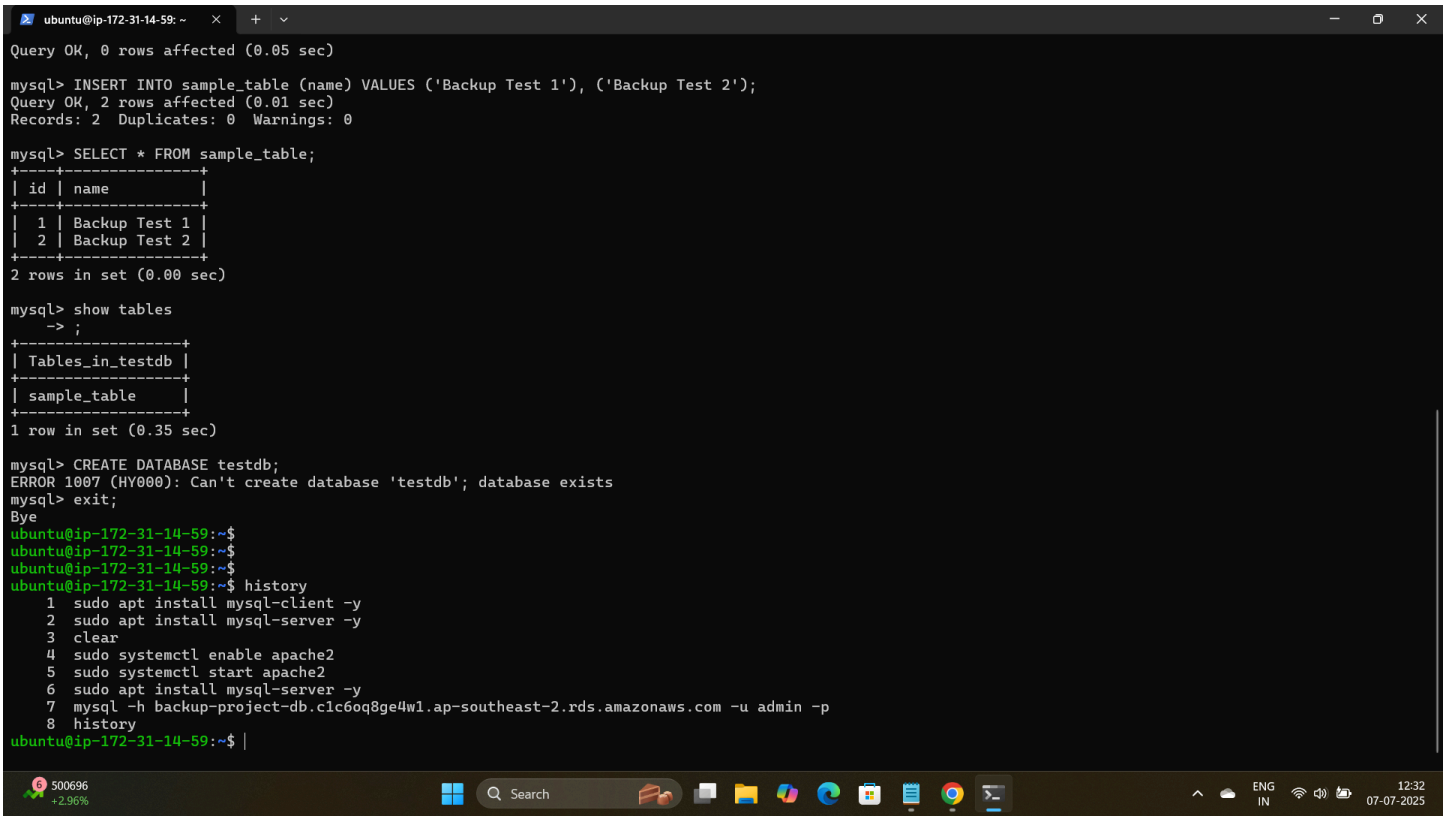
- Install Apache and create sample page

1. Launch RDS Instance:



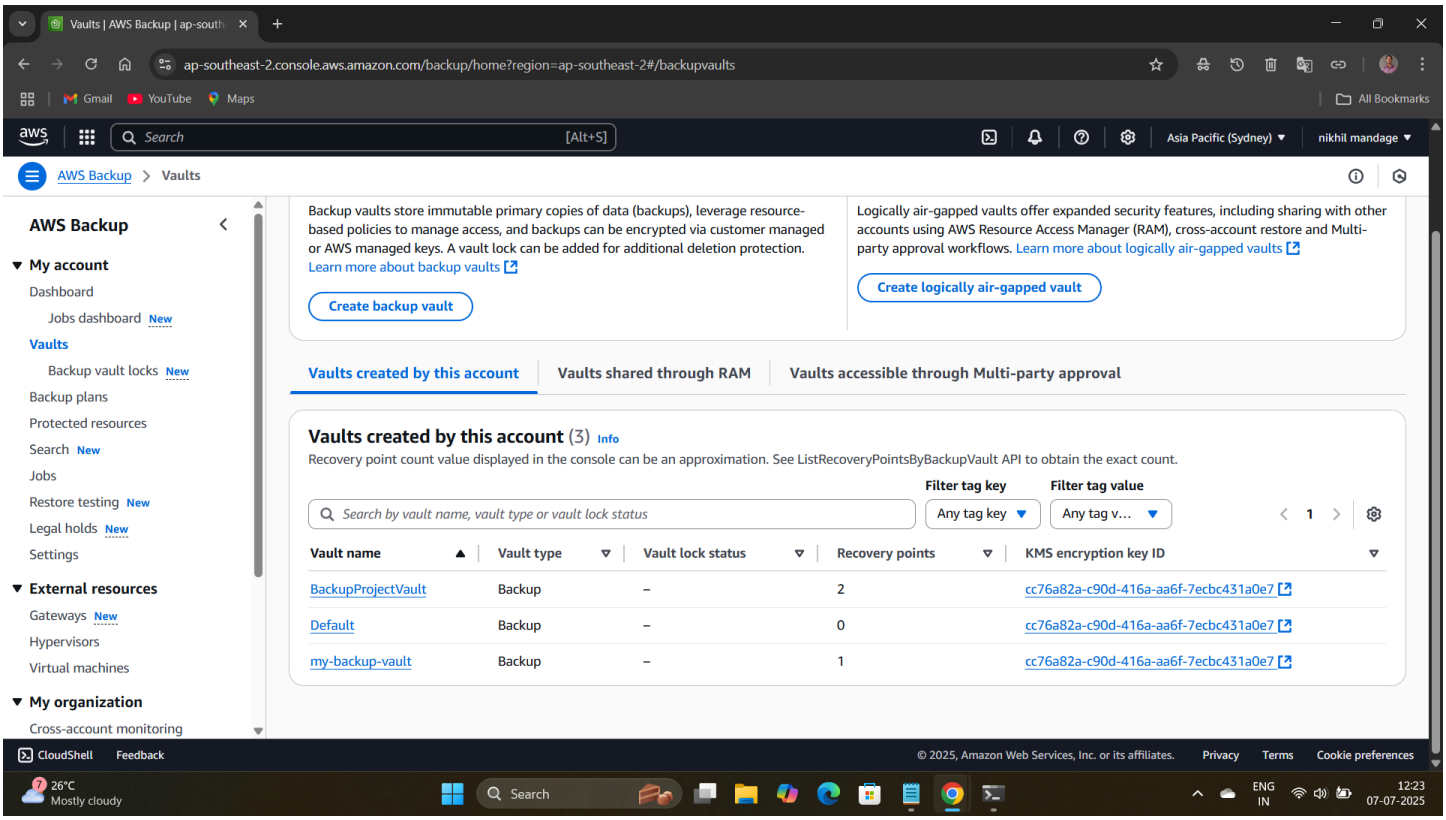
- Create MySQL DB, add table and data

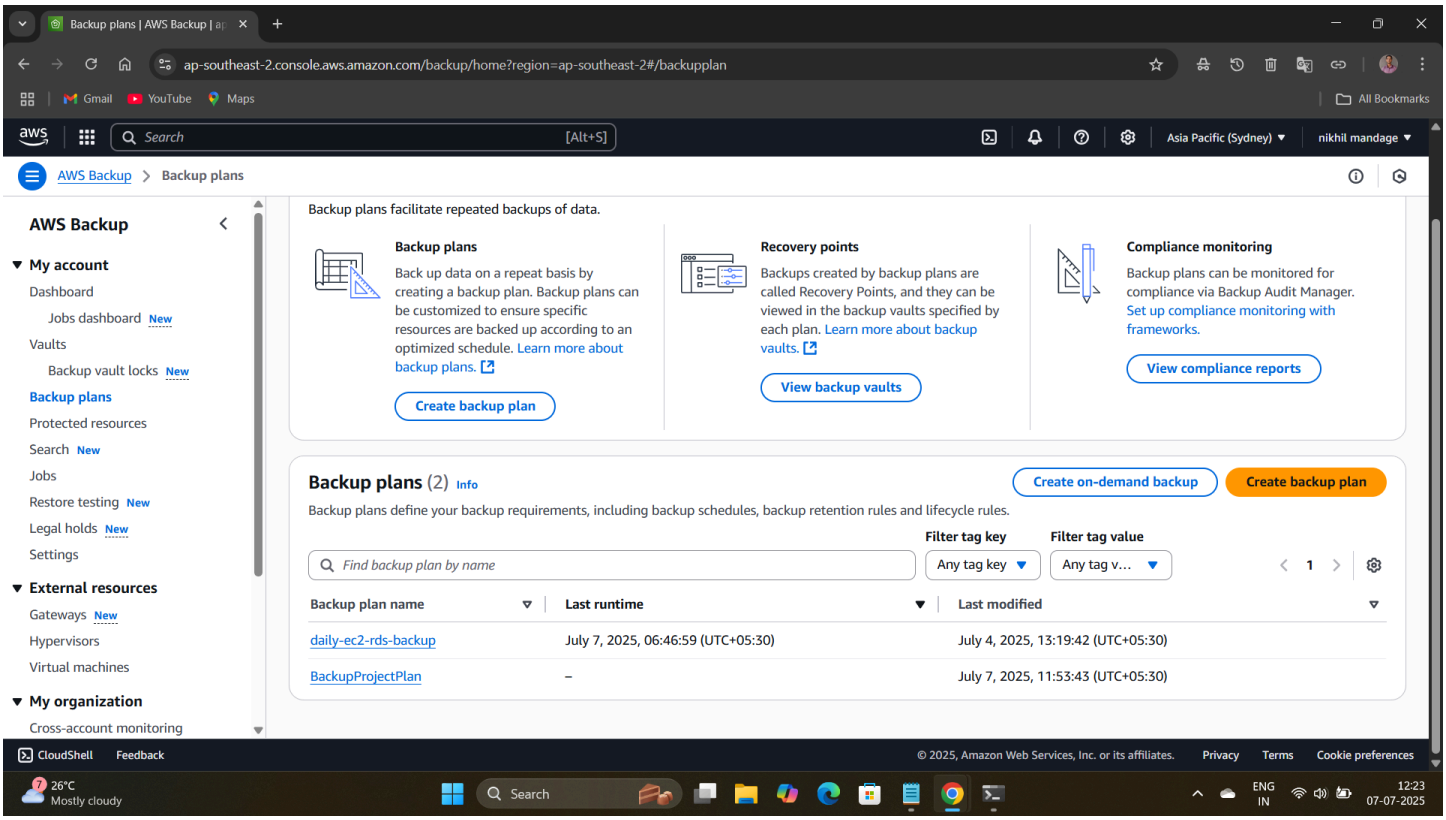


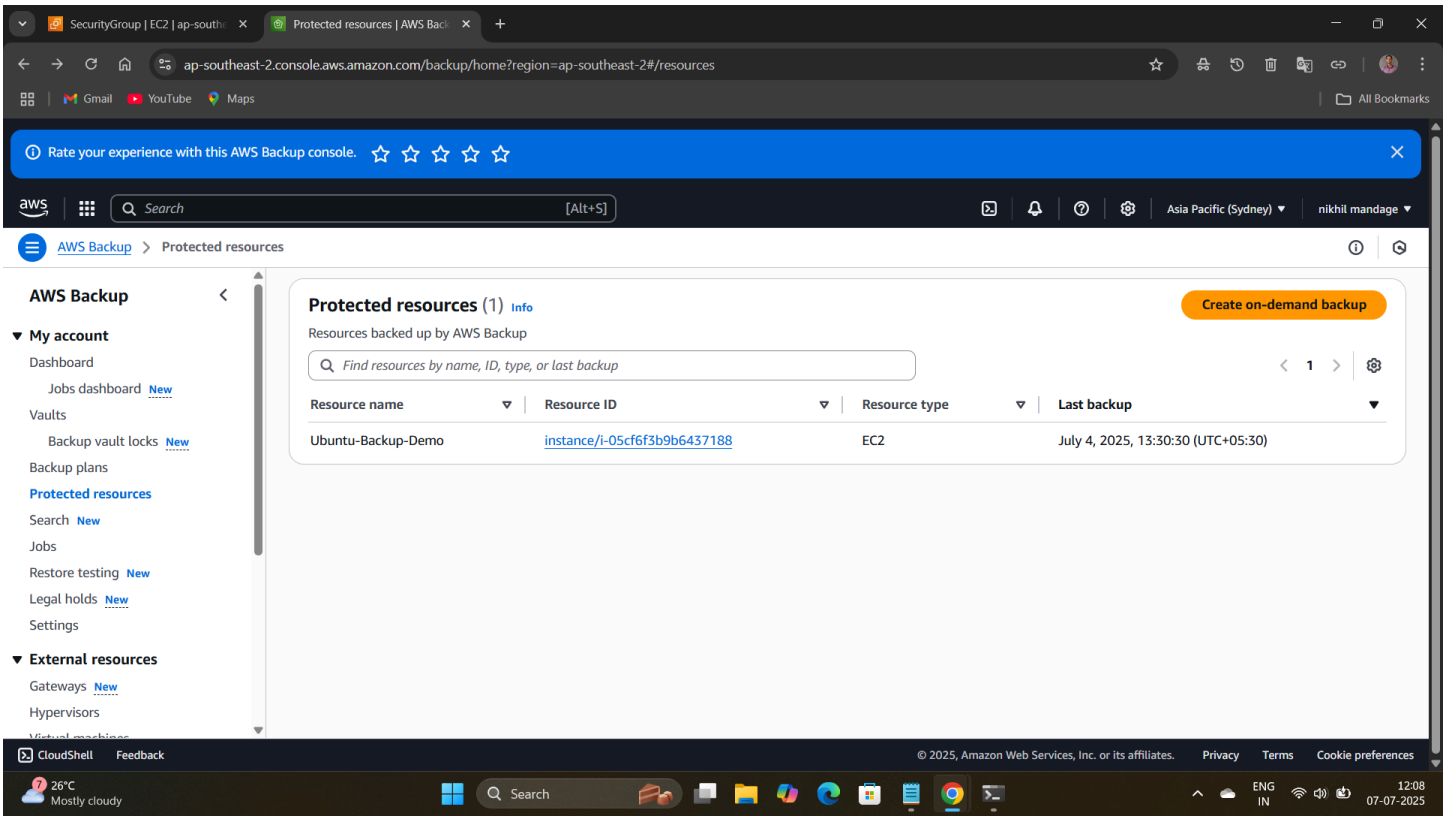


1. Set Up AWS Backup:

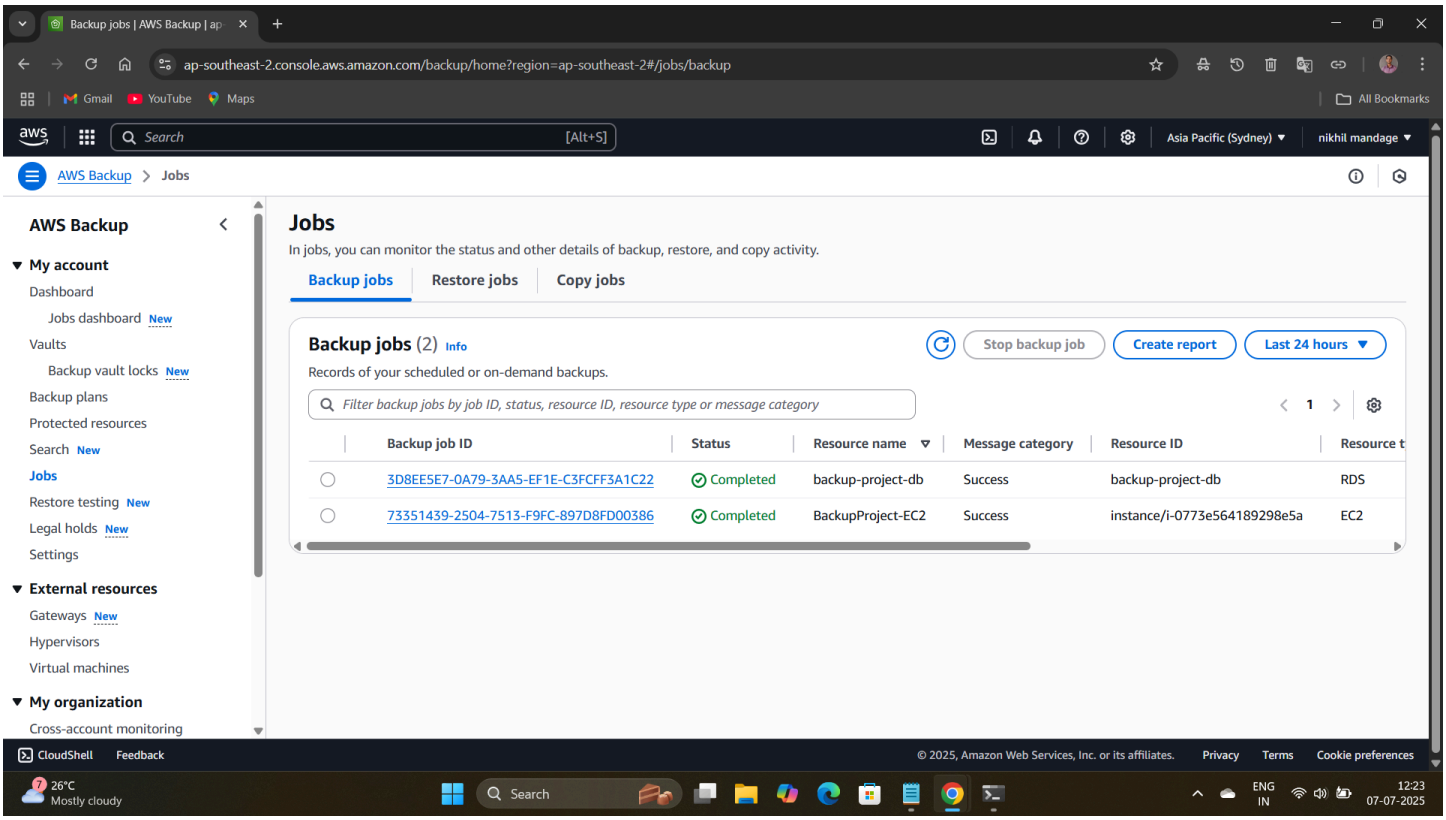
   - Create Vault, Plan, Assign Resources







- Trigger and verify on-demand backups


Backup jobs | AWS Backup | ap
ap-southeast-2.console.aws.amazon.com/backup/home?region=ap-southeast-2#/jobs/backup
Gmail
YouTube
Maps
All Bookmarks
Search
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Asia Pacific (Sydney)
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AWS Backup > Jobs
AWS Backup
My account
Dashboard
Jobs dashboard New
Vaults
Backup vault locks New
Backup plans
Protected resources
Search New
Jobs
Restore testing New
Legal holds New
Settings
External resources
Gateways New
Hypervisors
Virtual machines
My organization
Cross-account monitoring
Jobs
In jobs, you can monitor the status and other details of backup, restore, and copy activity.
Backup jobs
Restore jobs
Copy jobs
Backup jobs (2) Info
Records of your scheduled or on-demand backups.
Stop backup job
Create report
Last 24 hours
Filter backup jobs by job ID, status, resource ID, resource type or message category
Backup job ID
Status
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Message category
Resource ID
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Feedback
© 2025, Amazon Web Services, Inc. or its affiliates.
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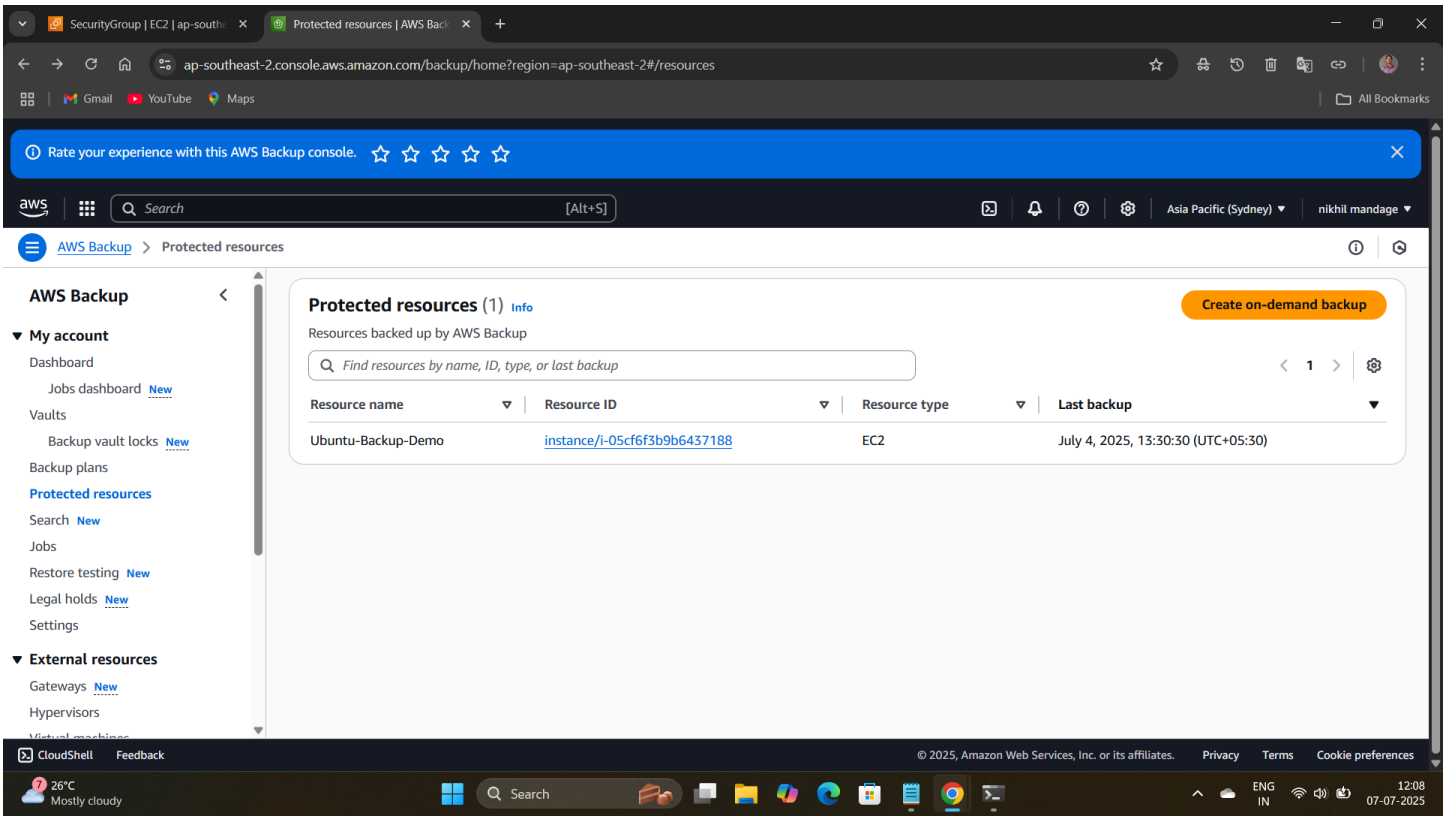
SecurityGroup | EC2 | ap-south
Protected resources | AWS Back
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YouTube
Maps
All Bookmarks
Rate your experience with this AWS Backup console.
Search
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Asia Pacific (Sydney)
nikhil mandage
AWS Backup > Protected resources
AWS Backup
My account
Dashboard
Jobs dashboard New
Vaults
Backup vault locks New
Backup plans
Protected resources
Search New
Jobs
Restore testing New
Legal holds New
Settings
External resources
Gateways New
Hypervisors
Protected resources (1) Info
Resources backed up by AWS Backup
Create on-demand backup
Find resources by name, ID, type, or last backup
Resource name
Resource ID
Resource type
Last backup
Ubuntu-Backup-Demo
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EC2
July 4, 2025, 13:30:30 (UTC+05:30)
CloudShell
Feedback
© 2025, Amazon Web Services, Inc. or its affiliates.
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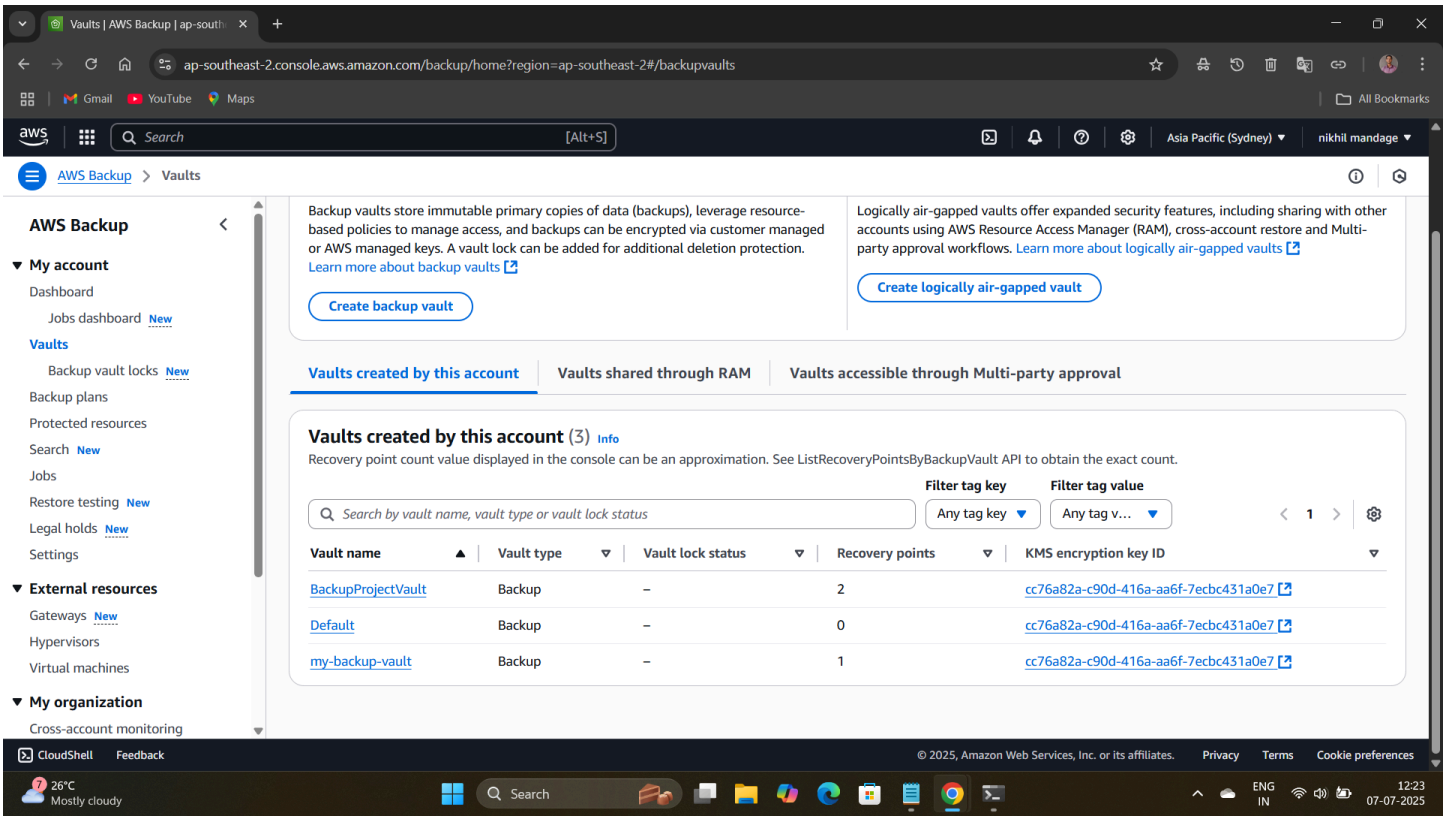

Results:

- EC2 Test Page accessible
- RDS table contains sample data
- Backup Plan active
- Recovery points verified

Conclusion:

This project successfully demonstrated how to configure a centralized backup solution using AWS Backup for both EC2 and RDS resources. By automating daily backups with a 7-day retention policy, we've implemented a reliable data protection and recovery mechanism.

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