Optimizing Performance: Three-Tier Architecture Setup with ALB, EC2, and RDS

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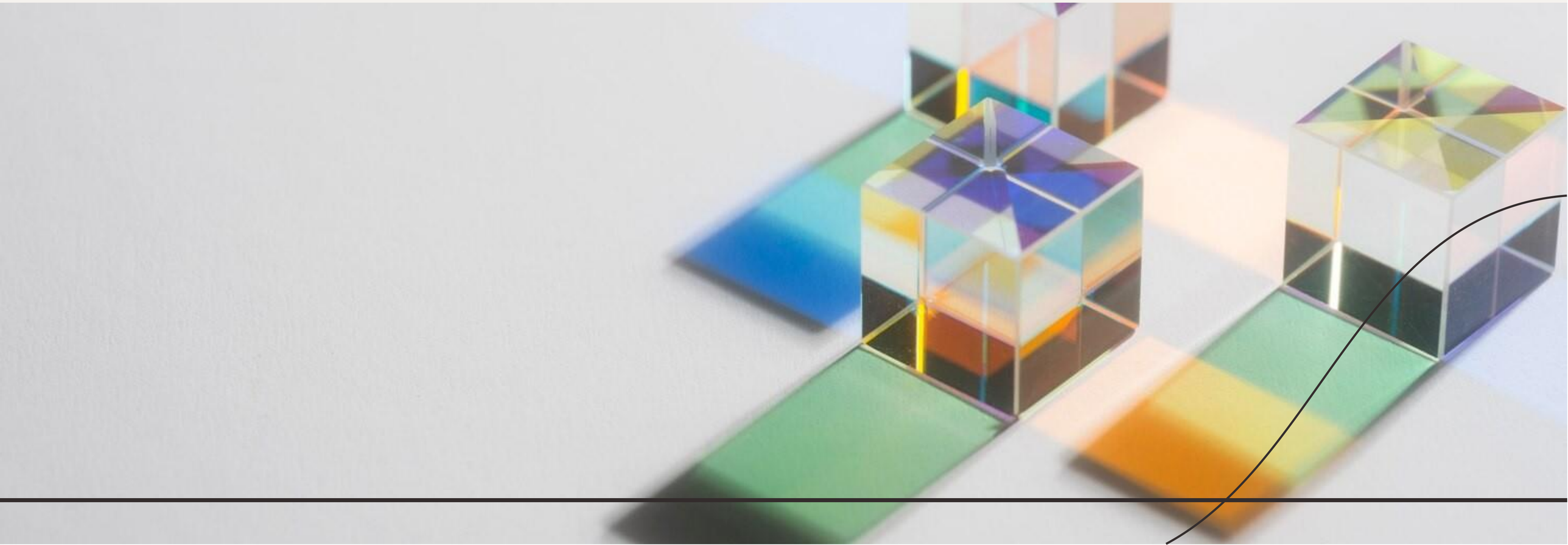
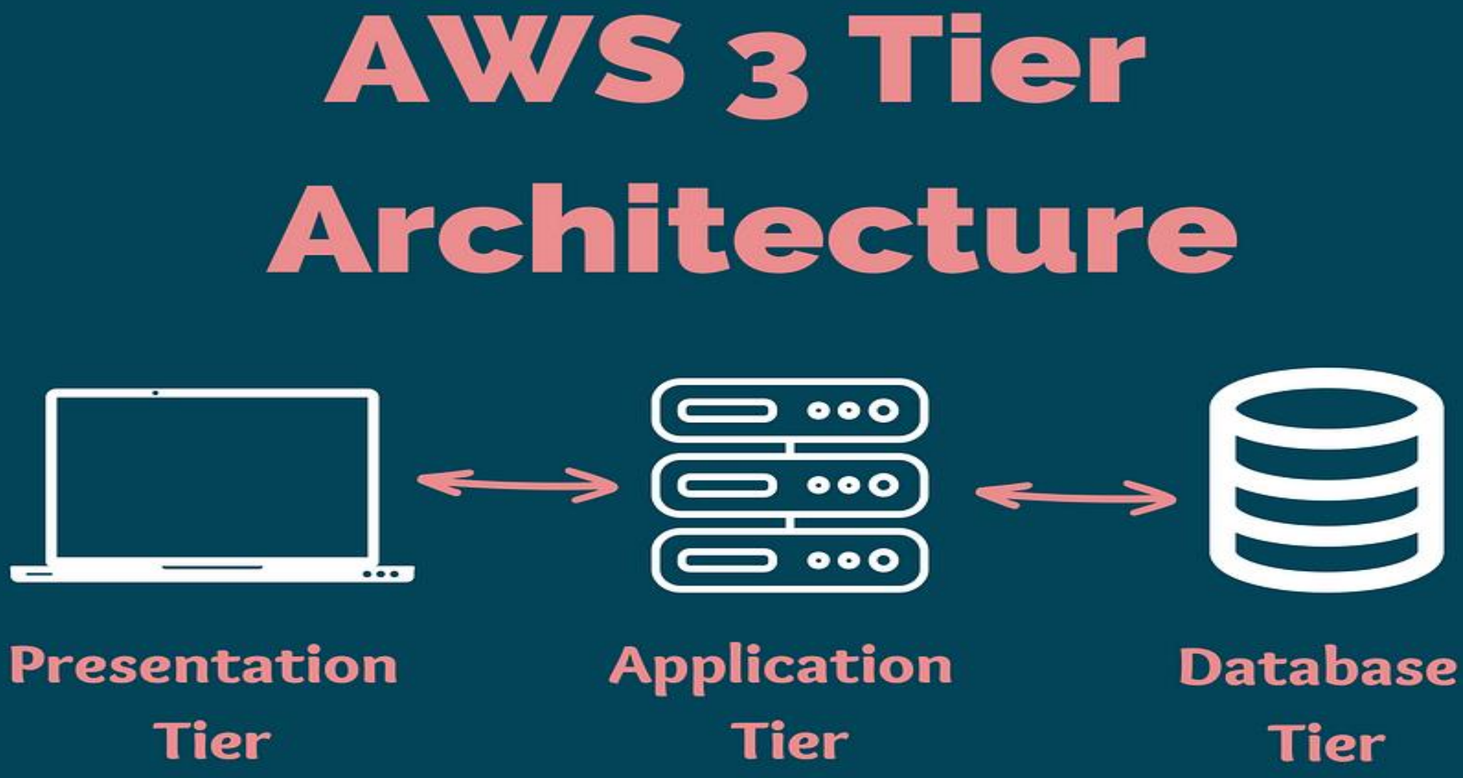
This presentation discusses *optimizing performance* using a Three-Tier Architecture setup with ALB, EC2, and RDS. We will explore the benefits of this architecture and how it enhances scalability and reliability.



Discription

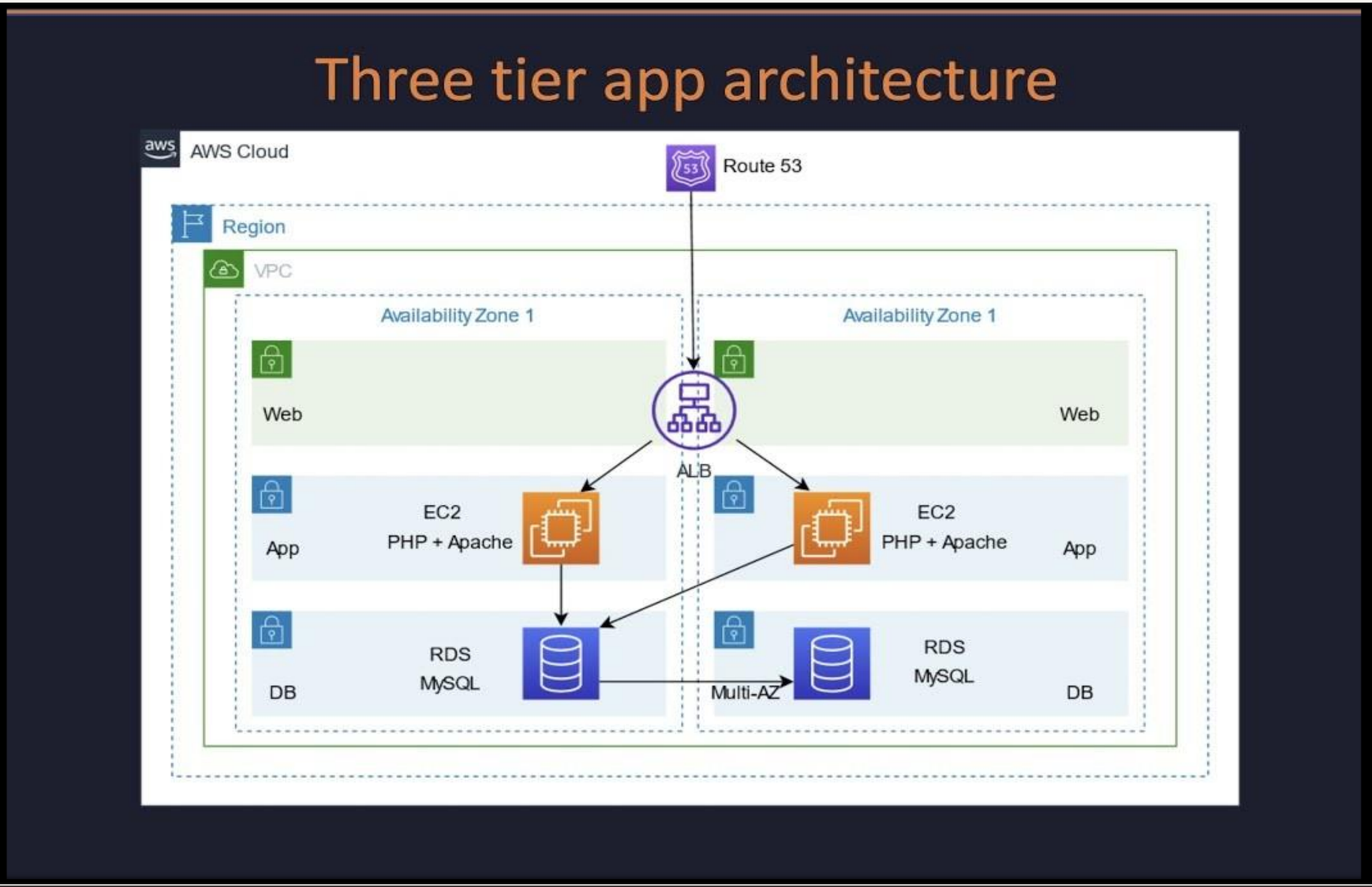
In a three-tier architecture with ALB, EC2, and RDS on AWS, optimize performance by configuring ALB for load balancing and health checks, utilizing Auto Scaling for EC2 instances, implementing caching and CDN for content delivery, optimizing database parameters and queries in RDS, monitoring with CloudWatch, conducting performance testing, and ensuring security and compliance with AWS best practices.



Prerequisites:

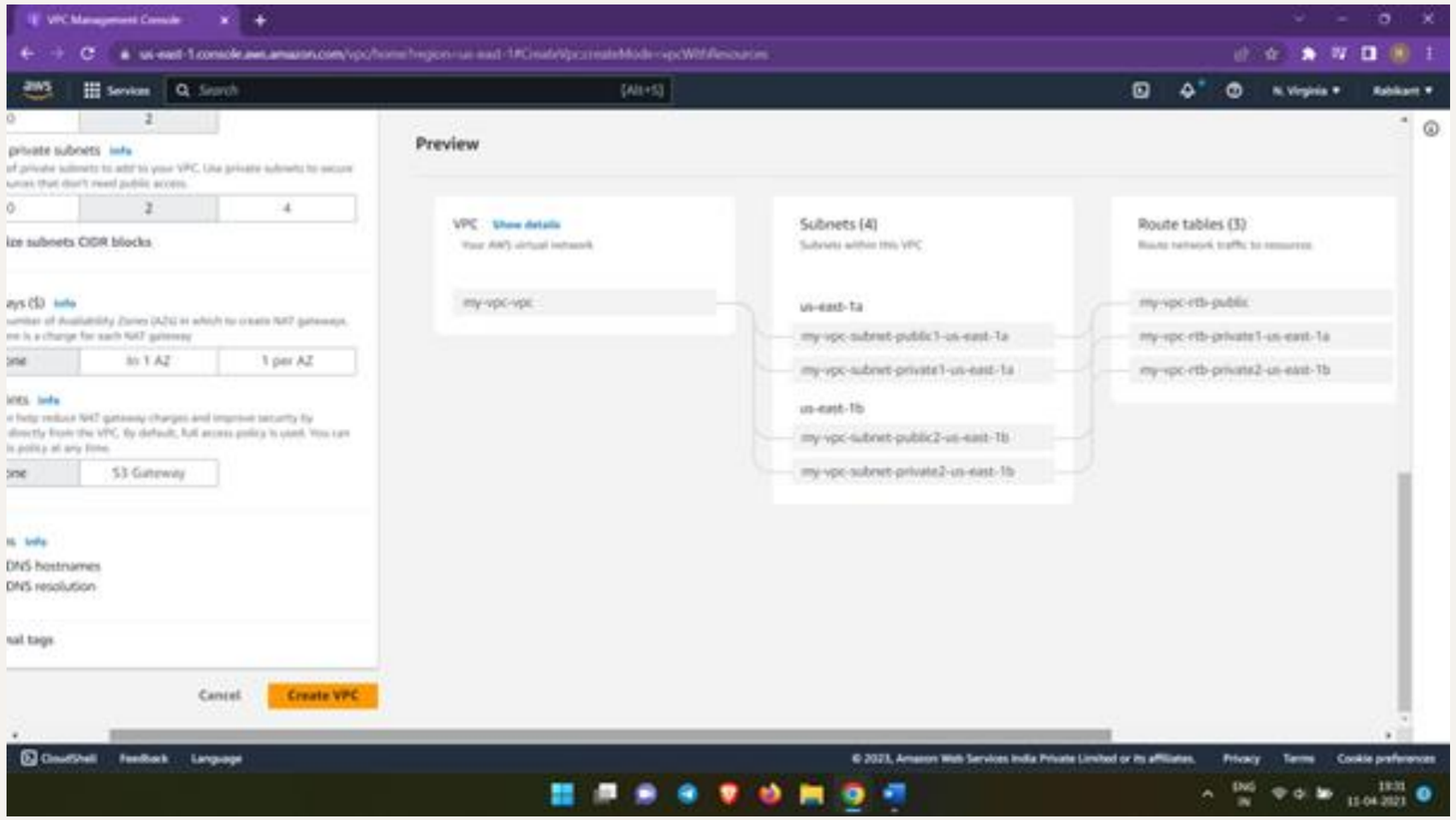
1. Creating virtual private cloud(VPC)
2. Creating Route table in VPC services
3. Creating subnet, Internet gateway in VPC services.
4. Creating instance and database by using php.
5. Creating Load balancer.
6. Create RDS and check the connection.

Architecture Design



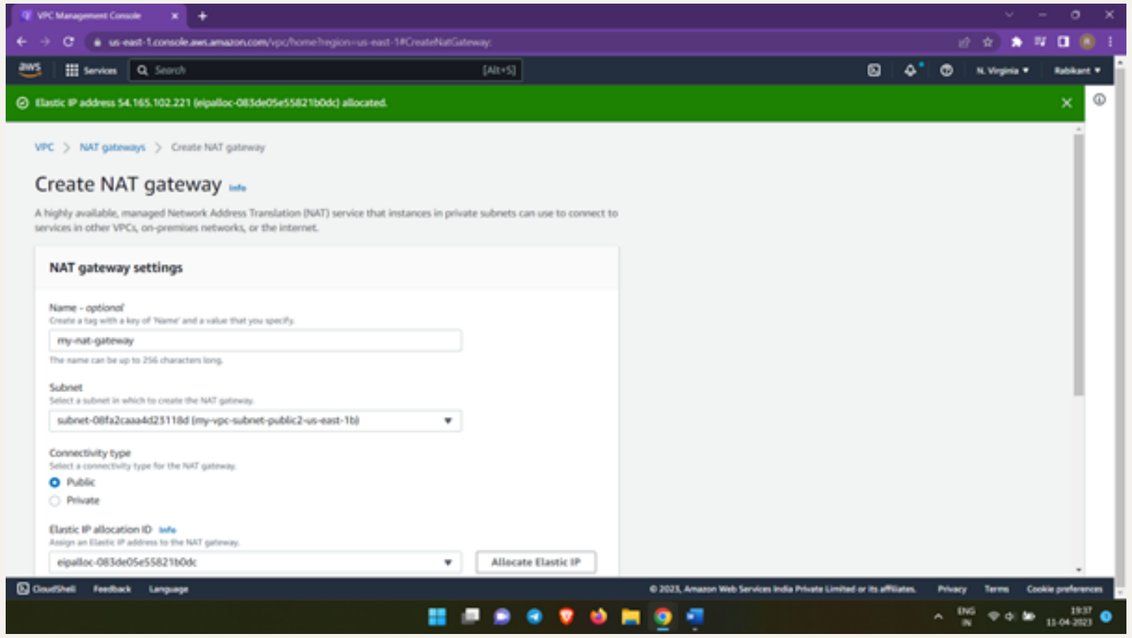
VPC’s

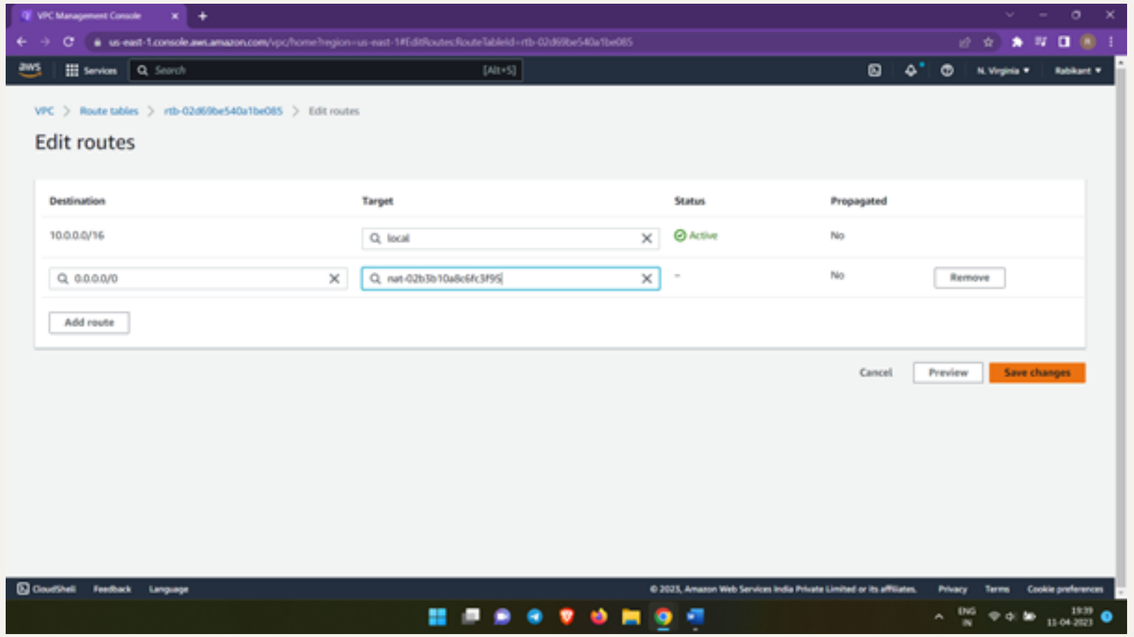
A VPC is a virtual network that closely resembles a traditional network that you'd operate in your own data center



Virtual Private Cloud(VPC's) services

- Creating Subnet
- Route table
- Internet Gateway

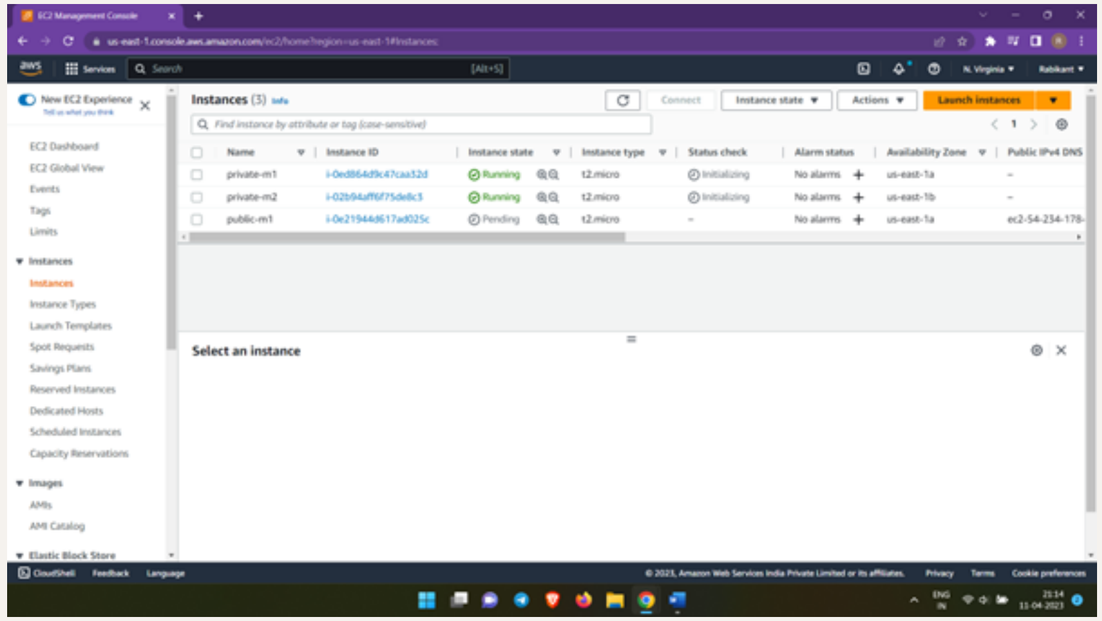


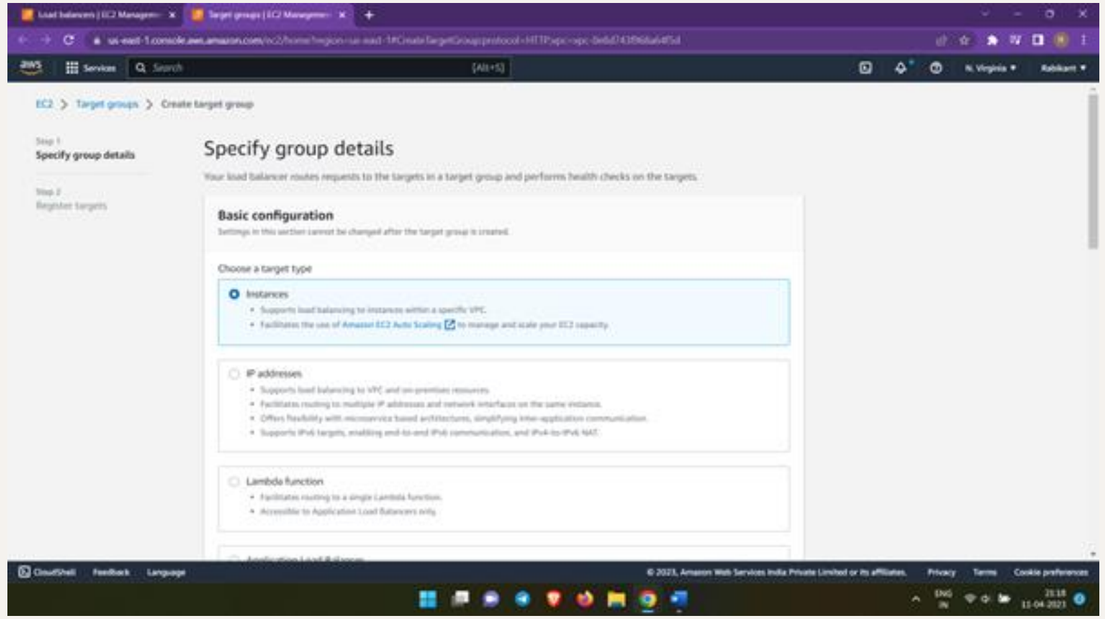


EC2

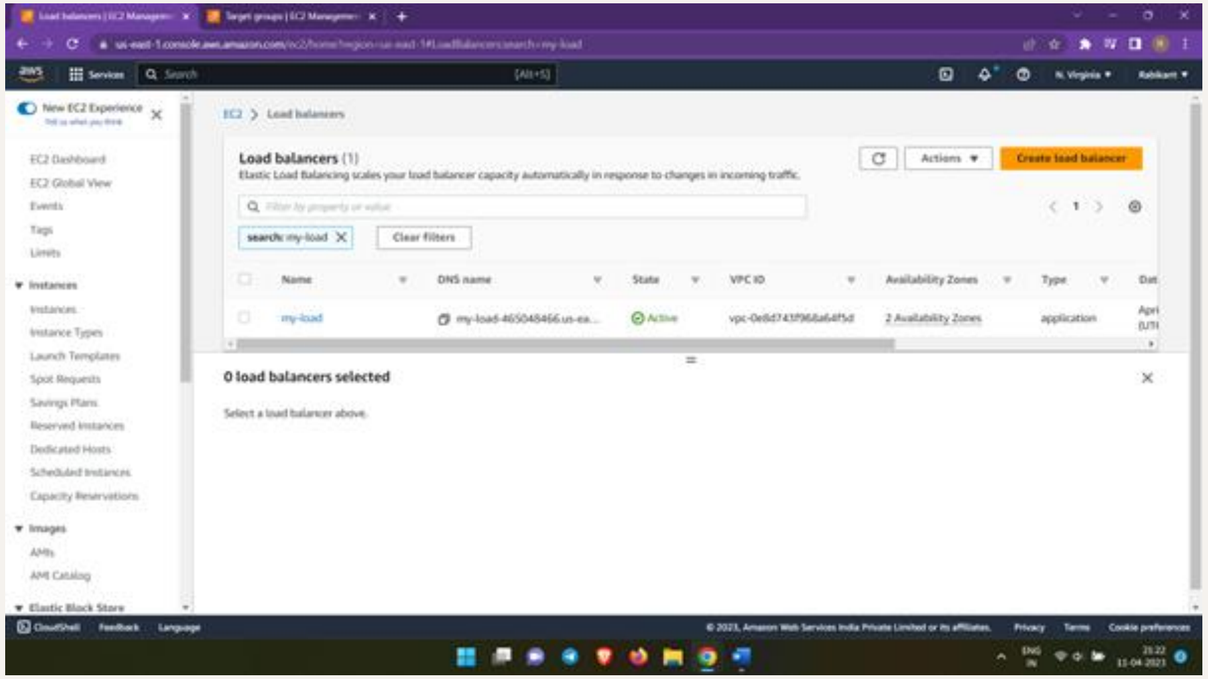
- Creating an instance
- Creating target group

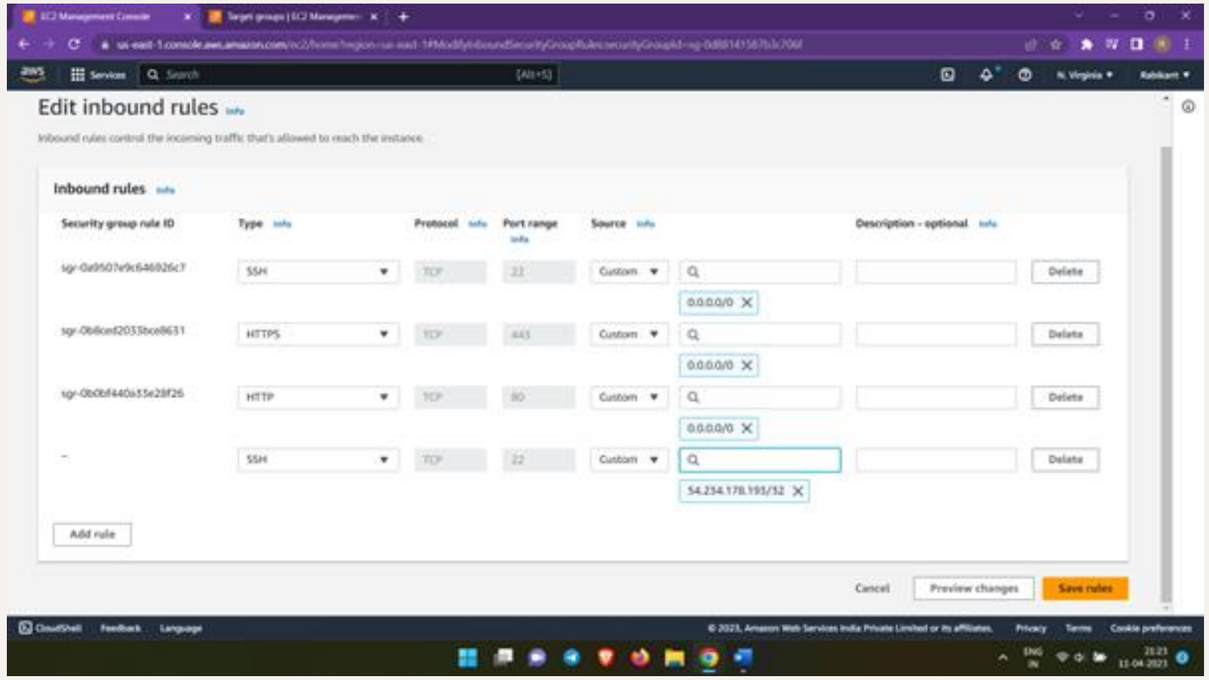
Amazon Elastic Compute Cloud (Amazon EC2) is **a web service that provides secure, resizable compute capacity in the cloud**. It is designed to make web-scale cloud computing easier for developers. Amazon EC2's simple web service interface allows you to obtain and configure capacity with minimal friction.





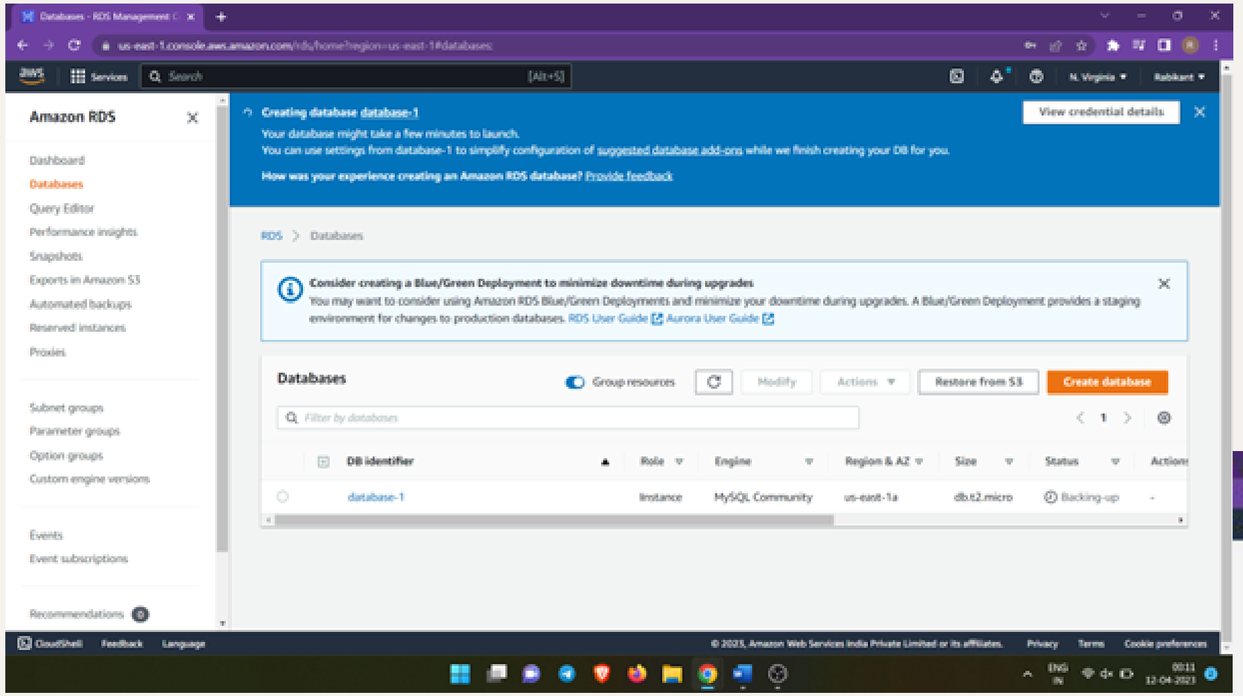
- Creating Load balancer
- Edit Inbound Rules

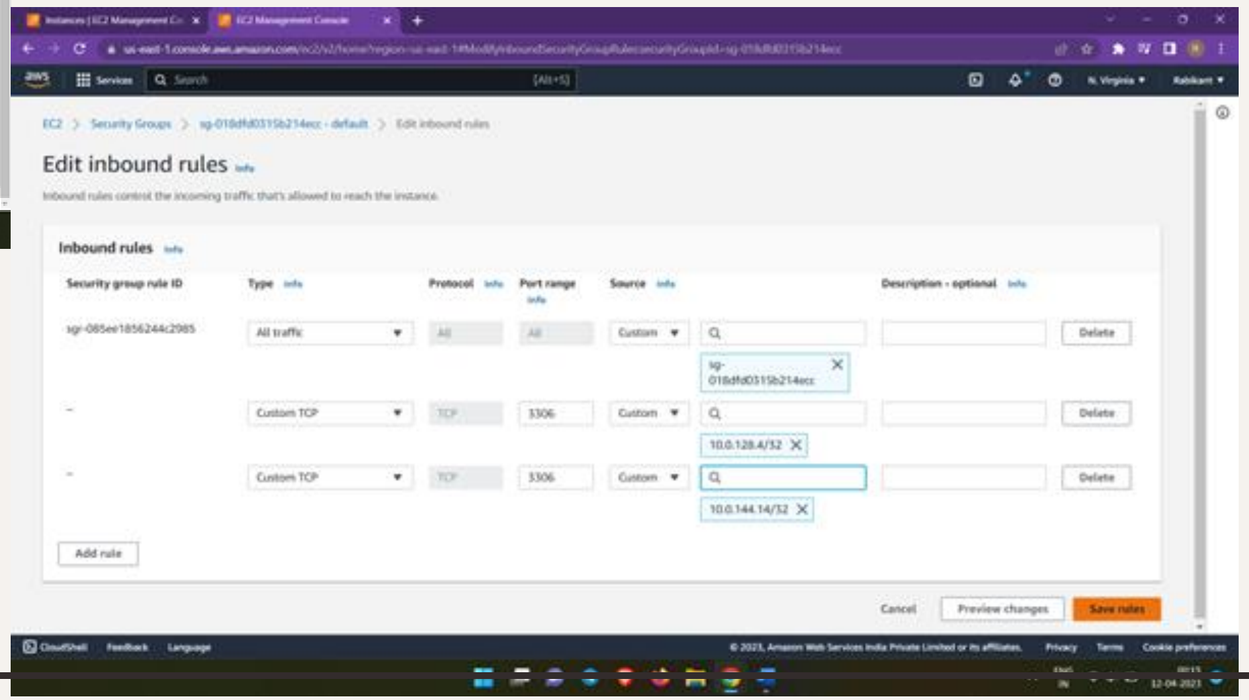




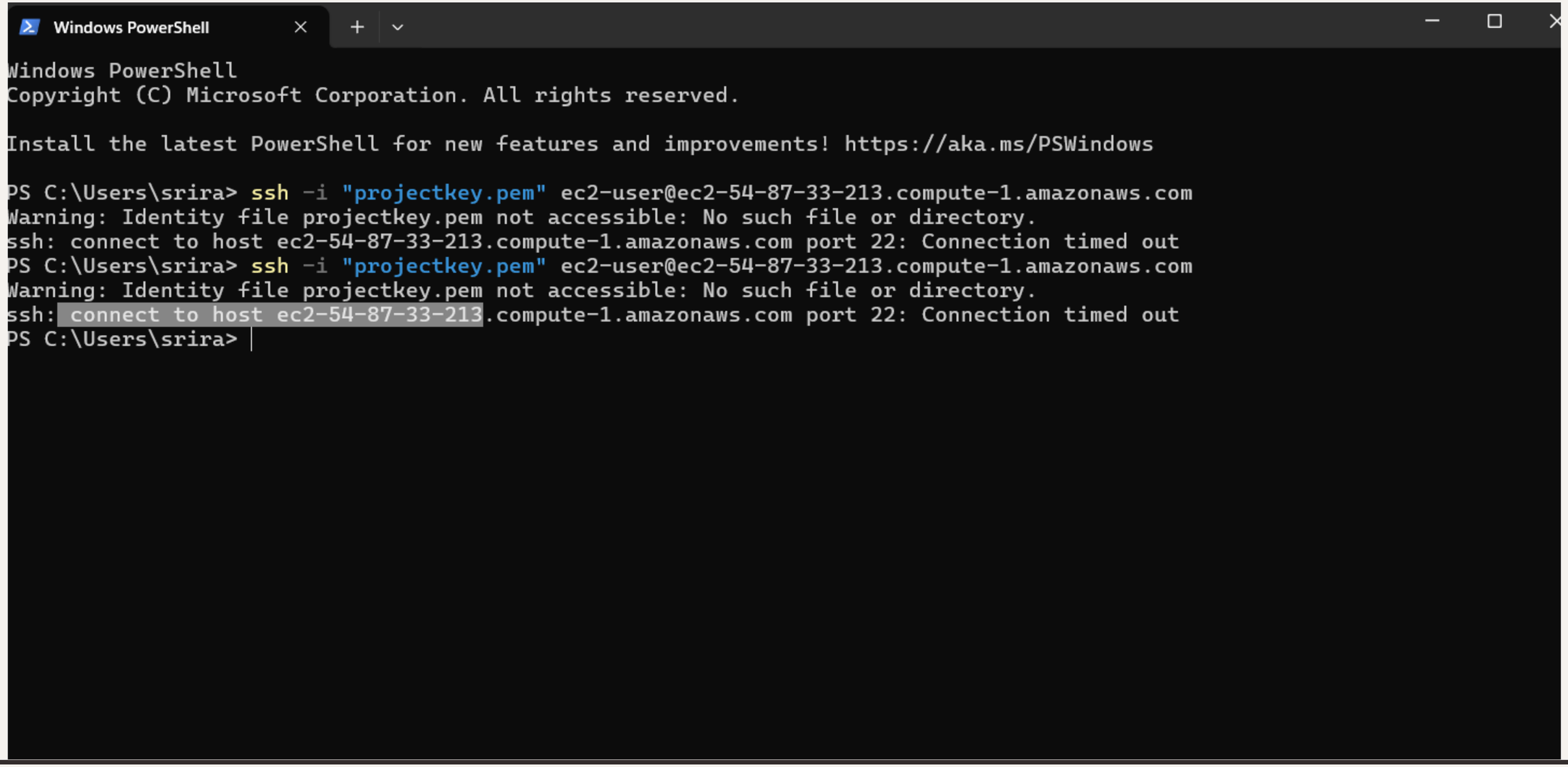
RDS

Amazon Relational Database Service (Amazon RDS) is a collection of managed services that makes it simple to set up, operate, and scale databases in the cloud.





Check the Connection



Conclusion

In conclusion, the three-tier architecture setup with ALB, EC2, and RDS offers a robust foundation for optimizing performance. By leveraging best practices, security measures, and scalability strategies, organizations can achieve high availability, reliability, and scalability for their applications.

Thanks!

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