Daily Tasks Performed :

- Provisioned and configured an EC2 instance to install and run Apache web server on a custom port, ensuring accessibility over the internet.
- Created an S3 bucket for file uploads, implementing lifecycle policies to transition files to Glacier storage after a specified retention period.
- Developed a shell script for monitoring EC2 instance health, logging results into timestamped directories for historical analysis.
- Deployed a static website on an EC2 instance with functionality for file uploads, utilizing shell scripts to automate file transfers to S3 every 60 minutes and delete files older than one day.
- Established a cron job to execute shell scripts at defined intervals for system maintenance and data management.
- Created a shell script to monitor and log CPU metrics from an EC2 instance, storing logs in an S3 bucket and updating an RDS database with metadata for each log entry.
- Implemented monitoring solutions using AWS CloudWatch for EC2 instances and configured AWS CloudTrail for auditing actions performed on instances.
- Managed IAM roles, policies, and users to control access to EC2 instances, S3 buckets, RDS databases, and other AWS resources.
- Deployed a web application architecture comprising a static frontend hosted on Amazon S3, a backend API on an EC2 instance, and an RDS database for user credentials with automated backups stored in S3 for disaster recovery.
- Designed a scalable web application using EC2 instances behind an Elastic Load Balancer (ELB), configuring the Application Load Balancer (ALB) to route traffic based on URL paths to various target groups.
- Containerized a simple HTML website using Docker, tagged the image, and pushed it to Docker Hub for version control and deployment.
- Created an Amazon EKS cluster using eksctl, deploying a web application within the cluster while managing the deployment through Kubernetes resources.
- Configured VPCs with public and private subnets, internet gateways, NAT gateways, and route tables; launched EC2 instances in both subnet types to facilitate secure SSH access between them.
- Implemented VPC peering connections across multiple regions to enable secure communication between isolated VPCs, enhancing resource sharing capabilities.
- Managed VPC Gateway Endpoints to establish secure connections between Amazon VPC and AWS services like S3, improving network security and reducing data transfer costs.

- Managed Amazon RDS instances, implementing best practices for performance optimization, security, and backup strategies, including automated backups, Multi-AZ deployments for high availability, and IAM policies for access control
- Utilized package management tools (e.g., `apt`, `yum`) to install, update, and remove software packages on Linux servers, ensuring systems are up-to-date with the latest security patches.
- Executed network troubleshooting commands (e.g., `ping`, `traceroute`, `netstat`) to diagnose connectivity issues and optimize network performance across distributed systems.
- Configured cron jobs using Linux commands to schedule automated tasks at specified intervals, enhancing system maintenance and operational reliability.
- Developed and executed shell scripts to automate routine tasks such as backups, log rotation, and system health checks, improving operational efficiency and reducing manual effort.
- Created and managed Kubernetes deployment manifest files to automate the deployment of applications, specifying replicas, container images, and resource limits for optimal performance.
- Developed and applied Ingress rules to manage external access to services within a Kubernetes cluster, enabling efficient routing of traffic based on hostnames and paths to various backend services.
- Utilized Kubernetes YAML files to define pod specifications, including environment variables, persistent storage volumes, and health checks to ensure application reliability.
- Implemented rolling updates using Kubernetes deployments, allowing for zero-downtime application upgrades while maintaining service availability and performance.