

ANAND TIWARI

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PROFILE

Experienced DevOps, AWS and System Engineer with hands-on experience in designing, implementing, and maintaining cloud-based infrastructure and using DevOps methodologies. Proficient in leveraging AWS services delivering scalable and reliable services. Expertise in Linux system administration and configuration management. Demonstrated ability to streamline operations, reduce costs, and enhance system performance through innovative DevOps practices and tools.

EXPERIENCE

AWS Cloud Engineer

CM Solutions | Kanpur

I have managed cloud services like EC2, S3, RDS, ensuring scalable and secure deployments. I automated CI/CD pipelines using GitLab CI and Jenkins, enabling smooth application releases. I have hands-on experience in Linux server management, including system administration, shell scripting, and troubleshooting deployment issues for optimal system performance and reliability. I am proficient in assisting with the maintenance and support of IT infrastructure, including servers, networks, and hardware. Responsibilities typically include troubleshooting technical issues, managing user accounts, and ensuring system security and efficiency.

PROJECT

- **AWS Project: Architect and Build an End-to-End AWS Web Application from Scratch**
In this project I have architected and developed a fully functional, serverless web application leveraging AWS services to deliver a scalable and efficient solution. Designed the architecture using AWS Amplify for frontend hosting, AWS Lambda for backend logic, API Gateway for secure REST API access, and DynamoDB for data persistence. Built a custom HTML user interface, integrated it with the backend using API Gateway, and configured role-based permissions with IAM to ensure secure interactions between services. Implemented a Python-based Lambda function for mathematical operations and seamlessly connected it to DynamoDB for data storage. Conducted thorough testing to ensure functionality and leveraged AWS Amplify for continuous deployment. Followed cost optimization best practices by monitoring and cleaning up resources post-project. This project demonstrates expertise in AWS services, serverless architecture, and end-to-end application development.
- **Deploy a WordPress and MySQL multitier application on AWS ECS using AWS Fargate (Serverless)**
In this project, I have Designed and deployed a scalable, serverless WordPress and MySQL multitier application using AWS ECS and AWS Fargate. Configured ECS clusters with task definitions for two

containers: WordPress and MySQL, leveraging Docker images and fine-tuning port mappings for seamless communication. Ensured secure application access by setting inbound rules for HTTP (port 80) and MySQL (port 3306) in security groups. Created and launched ECS services to orchestrate the containerized workloads efficiently. Successfully accessed the WordPress application via the public IP of the ECS tasks. This project highlights expertise in containerization, serverless technologies, and secure application deployment on AWS infrastructure.

SKILLS

DEVOPS

- **Git:** Proficient in using Git for version control, including branching, merging, rebasing, and resolving conflicts. Experience in managing repositories, tracking changes, and ensuring code integrity across and working with various branching strategies.
- **GitHub:** Skilled in utilizing GitHub for repository hosting, including setting up and maintaining repositories, forking, managing pull requests, and implementing code review processes.
- **Docker:** Experienced in running containerized applications and writing optimal Docker files to define container images and push it to docker registry along with working with docker volumes to persist data and Docker networking to set up various network drivers.
- **Jenkins:** Experienced in creating Jenkins freestyle and pipelines jobs using Jenkins file and Declarative Pipeline syntax. Skilled in managing agents, nodes and plugins along with build automation tool Maven and test automation tool SonarQube to identify bugs and vulnerabilities.
- **Kubernetes:** Experienced in deploying and managing Kubernetes clusters, ensuring scalability, high availability, and automation. Proficient in configuring deployments, services, and networking. Skilled in CI/CD pipeline integration.

AWS

- **IAM:** Proficient in managing AWS IAM to control user access and permissions securely. Experienced in creating and managing IAM roles, policies, and groups to enhance security and compliance, with inline policies and permission boundaries within AWS environments.
- **S3:** Managed and configured Amazon S3 buckets for scalable storage solutions, including versioning, and cross-region replication with optimization using S3 Intelligent-Tiering. Implemented security best practices with bucket policies, access control lists (ACLs), and server-side encryption.
- **EC2:** Provisioned and managed EC2 instances and worked with various purchase options along with configuring auto scaling groups and load balancing to target groups for management of servers. Worked with Launch Templates, custom AMI's and security groups to configure instances.
- **VPC:** Designed and deployed AWS VPCs, creating isolated network with subnets, route tables, and network ACLs. Also, configured VPC peering, VPN connections, and Transit Gateway to enable efficient communication between VPCs and on-premises networks. Implemented NAT gateways and Internet gateways to manage traffic to subnets.
- **ROUTE 53:** Configured and managed Route 53 for DNS management, including domain registration, hosted zones, and DNS routing policies with various routing policies such as latency-based, weighted, and geolocation routing to optimize traffic flow and ensured high availability and fault tolerance using health checks and failover configurations.
- **RDS:** Deployed and maintained RDS instances for various database engines including MySQL, MariaDB etc. ensuring high availability and performance with automated backups and snapshots to enhance data durability and security.

LINUX

- **User and Group Management:** Create, modify, and delete users and groups, manage permissions and ownerships.
- **File System Management:** Configured file systems, mount/unmount storage devices, disk partitioning and LVM.
- **Package Management:** Install, update, and remove software packages using tools like apt, yum, and dnf.
- **Network Configuration:** Set up and manage network interfaces, IP addressing and routing.
- **Network Services:** Configured essential network services like SSH, FTP, NFS and HTTP/HTTPS
- **System Monitoring:** Used tools like top, netstat, journalctl for monitoring and troubleshooting.
- **Backup Strategies:** Implemented backup strategies using tools like rsync, tar, cron and automated backup solutions.



TECHNOLOGIES

SKILL	<u>TOOLS USED</u>
Operating system	LINUX (RedHat, Ubuntu), Windows
Version Control tool	Git, GitHub and GitLab
Containerization tool	Docker
IaC tool	Terraform
CI/CD Automation tool	Jenkins
AWS Services	IAM, S3, EC2, VPC, RDS, CloudWatch, CloudFront, EFS, EBS, Route53, ACM, SNS
Programming Language	Python , MySQL
Data Science Tool	Power BI , MS-Excel

EDUCATION

CSJM University, Kanpur

Bachelor Of Computer Application

2022-2025