Anand Pattanashetti

DevOps Engineer

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PROFESSIONAL SUMMARY

AWS Certified Solutions Architect and **DevOps Engineer** with **2.10** years of experience in CI/CD pipeline design, infrastructure automation, and cloud cost optimization. Proven ability to enhance deployment efficiency, streamline workflows, and integrate security into DevOps practices

SKILLS

Versioning Tool - Git, GitHub, GitLab, BitBucket

Scripting - Bash, Python

Cloud Platform - AWS

CI/CD Tools - Jenkins, GitHub actions, Gitlab

Containerization and Orchestration - Docker, Kubernetes

Infrastructure as a code - Terraform

Platforms/Operating System - Linux (Ubuntu, Amazon), Windows

Configuration Management Tool - Ansible

Build Tools - Maven, Gradle, NPM

SAST & DAST Tools - SonarQube, OWASP ZAP, SonarCloud

Web Server - Apache, Nginx

Monitoring & Logging - Grafana, Prometheus, Dynatrace

Programming Language - Python, SQL

Databases - MySQL, DynamoDB, RDS

Security & Compliance: AWS KMS, AWS WAF, GuardDuty, Inspector,

Trusted Advisor, AWS CloudWatch, CloudTrail, Config

WORK EXPERIENCE

DevOps Engineer: Cloud Kinetics Technology Solutions Private Ltd

April 2022 - Present

- Collaborated closely with customers to understand their requirements and recommended feasible solutions, minimizing application downtime and reducing infrastructure costs.
- Led the containerization efforts using the Docker platform and managed orchestration with Kubernetes on AWS EKS
 Spearheaded the design, architecture, and implementation of scalable cloud-based web applications using AWS leveraging advanced CI/CD pipelines.

- Managed CI/CD pipeline using GitHub Actions to automate code deployment. Developers' code pushes trigger
 workflows for code checkout, compilation, unit testing, and SonarQube analysis for quality checks. Integrated Trivy for
 vulnerability scans and stored artifacts in Nexus. Containerized applications are pushed to AWS ECR and deployed to an
 AWS EKS Kubernetes cluster. Implemented post-deployment monitoring with Grafana, leveraging AWS Monitor to
 provide actionable insights into system health and stability.
- Automated CI/CD pipeline with Jenkins triggered by GitHub webhook. Workflow compiles, tests, and checks code
 quality with SonarQube, scans vulnerabilities with Trivy, and stores artifacts in Nexus. Builds Docker containers, pushing
 images to AWS ECR. Deployed to Kubernetes, with Grafana and AWS Monitor for performance insights.
- Led the deployment of a Java-based banking application, integrating Jenkins, Docker, and Kubernetes to establish
 efficient CI/CD pipelines. This effort resulted in a 30% reduction in infrastructure costs and a 50% improvement in
 system performance through advanced containerization and orchestration. The project also involved SonarQube for
 code quality assurance, OWASP dependency checks for enhanced security, and Ansible for infrastructure automation,
 ensuring a secure and efficient deployment process.
- Designed and built advanced CI/CD pipelines using Jenkins, integrating tools like Git, SonarQube, Docker, Terraform, Kubernetes, Argo CD, and security tools (SAST & DAST). This modernized customer architecture, leading to a 60% reduction in infrastructure costs and a 50% enhancement in system performance.
- Developed production-grade Terraform scripts utilizing conditions and functions to provision services on AWS automating infrastructure provisioning through **Terraform** and **CI/CD** tools. This approach optimized deployment processes, **eliminating 70% of manual work while ensuring high-quality code via continuous integration.**
- Implemented DevSecOps practices, integrating security tools (SAST & DAST) into CI/CD pipelines and at the application level, enhancing system security by 60%. Additionally, implemented monitoring solutions with Prometheus, Grafana, Datadog, enhancing observability.
- Monitored AWS accounts using CloudTrail and CloudWatch, ensuring real-time visibility and compliance with security standards.
- Implemented AWS WAF rules to safeguard web applications against SQL injections, cross-site scripting, and other threats, reducing vulnerabilities by 50%.
- Enhanced data security using **AWS KMS** by encrypting sensitive application data, meeting industry compliance standards.
- Conducted vulnerability scans with AWS Inspector, identifying and mitigating 90% of known security risks in AWS workloads.
- Implemented monitoring with tools like Prometheus, Grafana, Datadog, enhancing observability
- Successfully automated repetitive tasks using Bash Script and maximizing efficiency and ensuring consistent automation performance.

PROJECTS

Cooperative Banking Solution Deployment

- Deployed a Java-based banking application using Jenkins as the CI/CD tool, achieving a 30% decrease in deployment time compared to manual methods.
- Configured Docker containers to deploy the application, streamlining the deployment process and **reducing the time** to launch new instances by 50%.
- Orchestrated Kubernetes clusters to host the banking application, providing scalable infrastructure and high availability for production workloads.
- CI/CD Automation Implemented CI/CD pipelines with Jenkins, automating the build, test, and deployment processes.
 This automation led to a 30% reduction in manual effort, improved development cycles, and a more secure deployment process through the integration of SAST and DAST tools.
- Enabled flexible deployment strategies by setting up Docker and Kubernetes environments, allowing for both standalone Docker containers and Kubernetes-managed clusters. This flexibility increased scalability by 50% in real-time operations.
- By integrating Jenkins with Docker and Kubernetes, it achieved a robust and efficient automated deployment

process, significantly enhancing the team's ability to deliver and maintain the application.

Infrastructure Development

- **Architectural Design**: Developed detailed architectural diagrams to align with client specifications, ensuring clarity in project scope and technical requirements.
- Infrastructure Provisioning: Provisioned AWS infrastructure using Terraform templates for key components, including VPC, NACL, EKS, ElastiCache Redis, IGW, NAT Gateway, RDS, ALB, CloudFront, Route 53, ACM, enabling a robust and scalable architecture.
- **CI/CD Automation**: Streamlined CI/CD processes using **GitLab** by automating Docker image builds and deployments to Amazon ECR, resulting in faster and more reliable deployment cycles.
- **Application Monitoring**: Integrated AWS monitoring tools (CloudWatch, X-Ray) to enhance application observability and performance tracking, providing actionable insights for performance optimization.
- **Microservices Deployment**: Automated the deployment of microservices into an EKS cluster with ArgoCD, ensuring continuous deployment of image builds and improving operational efficiency

Integrated Business Management Solution

- Deployed front-end applications built with Angular and React, and containerized Java-based microservices in **Kubernetes** and **AWS EKS.**
- Automated infrastructure provisioning using **Terraform**, improving operational efficiency by 40%.
- Designed CI/CD pipelines with Jenkins, integrating Git, SonarQube, and Trivy for code quality and security, including file scanning and Docker image vulnerability scanning.
- Contributed to cloud cost optimization, reducing expenses by 30%. Deployed Prometheus for monitoring and Grafana for visualization, ensuring real-time performance tracking.
- Documented a comprehensive runbook and operations manual to streamline operational procedures, enhancing system reliability, deployment efficiency, and security in a cost-effective manner.

End-to-End DevOps Automation for Cloud-Hosted Application

- Led the development and deployment of a Java-based application with a **CI/CD pipeline** integrated into **AWS** for seamless automation and cloud management.
- Managed source code using Bitbucket and integrated SonarCloud for continuous code quality analysis.
- Utilized AWS CodeArtifact to download necessary dependencies during the build process with Maven.
- Built application artifacts using AWS CodeBuild and stored them in S3 for further use.
- Automated deployment to AWS Elastic Beanstalk, with AWS RDS handling database connectivity.
- Implemented a post-deployment process to execute Selenium test suites using CodeBuild.
- Designed and managed the pipeline using AWS CodePipeline, incorporating CodeDeploy for efficient and reliable application delivery.

CERTIFICATES

- 1. AWS Certified Solutions Architect Associate AWS Credential
- 2. Hashicorp Certified: Terraform Associate 2024 Udemy Credential
- 3. DevOps With AWS MicroDegree

EDUCATION

University: VTU Belagavi

BLDEA's V P Dr P.G. Halakatti College of Engineering & Technology **Bachelor of Engineering**