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Description automatically generated**Mamatha Choudary Sankranthi**

**Professional Summary**

* AWS DevOps certified and Professional with 10+ years of experience in the IT industry as a Build and Release Engineer with DevOps Methodologies as AWS DevOps/Cloud Security Engineer, Skilled in software configuration management which includes Project Setup, Build & Release process setup, Build Automation, Continuous Integration, Infrastructure Security.
* Very good understanding of DevOps concepts and a critical thinker of its different application areas.
* Experienced in AWS Cloud platform with features EC2, VPC, ELB, Auto-Scaling, Security Groups, IAM, EBS, AMI, RDS, S3, SNS, SQS, CloudWatch, CloudFormation.
* Strong background in Branching, Merging, Tagging, and maintaining the version across the environments using SCM tools like Subversion (SVN) and GIT (GitHub, GitLab).
* Extensively worked on Jenkins for Continuous Integration (CI) and for end-to-end automation for build and deployments.
* Diagnosed and resolved issues related to OpenShift cluster performance, network configurations, and application deployments, minimizing impact on business operations.
* Participated in incident response and post-mortem analysis, using OpenShift logs and metrics to identify root causes and implement corrective actions.
* Experience in Container based deployments using Docker.
* Used Jenkins pipelines to drive all micro services builds out to the Docker registry and then deployed to Kubernetes, Created Pods and managed using Kubernetes.
* We have set up and managed Datadog log collection and analysis to monitor and investigate application issues, enhancing troubleshooting speed and reducing Mean Time to Resolution (MTTR).
* Created log-based metrics and alerts to track error rates, performance metrics, and unusual activity across distributed environments.
* Configured S3 bucket policies and IAM roles to secure data access and ensure compliance.
* Experience in Kubernetes to manage containerized applications using its nodes, ConfigMaps, selector, Services, and deployed application containers as Pods.
* Focused on containerization and immutable infrastructure. Docker has been core to this experience, along with Kubernetes, Docker Compose, AWS ECS ,EKS.
* Actively participated in incident response activities, leveraging WAF logs and alerts to investigate and respond to security incidents.
* Designed and implemented scalable and high-performance NoSQL databases using AWS DynamoDB.
* Utilized DynamoDB Streams to trigger Lambda functions for real-time data processing and analytics.
* Implemented S3 event notifications to trigger Lambda functions for real-time processing of data uploads.
* Trained development and operations teams on best practices for WAF configuration and management
* Created comprehensive technical documentation for Kafka architectures, configurations, and best practices, facilitating knowledge sharing and onboarding of new team members.
* Experience in creating well formatted documentation using Confluence.
* Experience in implementing and administering monitoring tools Splunk and Nagios.
* Experienced in setting up Branching, Merging, Tagging, and maintaining the version across the environments using SCM tools like GIT and Subversion (SVN) on Linux platforms.
* Designed and implemented robust microservices architectures using AWS services such as ECS, EKS, and Lambda, ensuring high scalability and fault tolerance.
* Configured EventBridge rules for filtering and routing events based on content, enabling targeted event delivery to specific targets or AWS Lambda functions.
* Implemented event transformations using EventBridge schemas to standardize event formats and enrich metadata for downstream processing.
* Applied Domain-Driven Design (DDD) principles to decompose monolithic applications into loosely coupled microservices.

**Skills**

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| **Amazon Web Services**  EC2, ELB, AMI, WAF, VPC, IAM, CloudFormation, S3, Cloud Watch, Cloud Trial, SNS, SQS, EBS, EMR, Lambda, Elastic Beanstalk, Route53,  **Microsoft Azure**  Azure key vault, App Services, ARM Templates, Storage Blobs, VPN gateway, VM's, Managed Discs.  **SCM Tools**  Bit Bucket, GIT, GIT HUB  **Build tools**  Maven, Gradle.  **Continuous Integration Tools**  Jenkins, JFROG  **Configuration Management Tools**  Ansible  **IAC Tools**  Terraform, CloudFormation  **Containerization**  Docker, Kubernetes. | **Virtualization**  Virtual Box, VMware, Vagrant.  **Scripting languages**  Shell Scripting, Python, Bash, JavaScript,  **Databases**  Oracle, MS SQL Server, MySQL, NoSQL  **Operating System**  Linux/Unix, Windows  **Monitoring Tools**  Splunk, ELK, Grafana, Cloud Watch, Datadog  **Security Tools**  WAF, AWS WAF  **Documentation Tools**  Confluence  **Project Management Tools**  Jira, DFM |

**Education and Certification**

* B.Tech: Electrical and Electronics Engineering, Jawaharlal Nehru Technological University - Hyderabad, India 2013
* Certifications: AWS DevOps certified and Professional

**Work Experience**

**Santander Bank – Matawan, NJ 04/2023 - Current**

**Sr. AWS DevOps Engineer**

**Responsibilities:**

* Responsible for building out and improving the reliability and performance of cloud applications and cloud infrastructure deployed on Amazon Web Services
* Supported over 200+ AWS cloud instances and used AWS command line interface to manage and configure various AWS products
* Performed installation, configuration, upgradation, patching on RHEL 6.x, 5.x and Windows 2008 and Windows 2012 in EC2 instances
* Planned and implemented VPCs with multiple availability zones and multiple subnets to meet the dynamic IP requirements
* Ensured regulatory compliance by configuring EventBridge event buses with audit trails and logging using Amazon CloudWatch Logs.
* Designed and implemented AWS cloud-based instances for use on their current and upcoming projects
* Worked on numerous AWS services such as EC2, S3, EKS, VPC, RDS, MSK, CloudWatch, CloudTrail, DynamoDB, ECR, IAM
* Worked with Amazon Web Services (AWS), EC2 Storage Managements integration and utilization within the infrastructure and applications
* Infrastructure deployment, administration, troubleshooting and configuration of virtual and cloud instances on AWS and VMware platforms.
* Implemented and optimized routing policies to ensure efficient data flow between VPCs (Virtual Private Clouds) and the internet.
* Configured and managed AWS Internet Gateway to provide secure and reliable connectivity for AWS resources.
* Implemented AWS solutions using S3, RDS, EBS, Elastic Load Balancer, and Auto scaling groups
* Implementing a Continuous Delivery framework using Jenkins and Maven in Linux environment
* Creating, Utilizing, Managing Policies in S3 buckets on AWS
* Ensure the key performance indicators (KPIs) for our project are tracked. Ensure that relevant metrics, such as service uptime, response times, and error rates, are correctly displayed.
* We have created Grafana dashboards our project to get the latest metrics and KPIs.
* We used data sources (Prometheus, Elasticsearch, MySQL, etc.) are set up for the project and are connected properly.
* Configured and maintained Datadog monitoring solutions for infrastructure and application-level performance, ensuring optimal system health and availability.
* Set up automated alerts and dashboards in Datadog for real-time tracking of key performance indicators (KPIs), system metrics, and application performance.
* Implemented custom monitoring dashboards for stakeholders to provide visual insights into system performance and health.
* Architected and deployed a microservices-based application using AWS ECS and AWS Fargate, improving scalability and reducing operational overhead.
* Developed and maintained CI/CD pipelines with AWS CodePipeline and Jenkins, reducing deployment times by 50% and increasing release frequency.
* Automated infrastructure provisioning and configuration management using Terraform and AWS CloudFormation, ensuring consistent environments across multiple stages.
* Ensured microservices security by implementing AWS IAM roles, security groups, and AWS Secrets Manager to handle sensitive data.
* Implemented SNS for reliable, scalable message broadcasting in a microservices architecture.
* Configured SNS topics for sending notifications to multiple protocols including HTTP/S endpoints, Email, and SQS queues.
* Experienced in creating, developing, and testing environments for different applications by provisioning Kubernetes clusters on AWS using Docker, Ansible, and Terraform.
* Implement cluster services using Docker and Kubernetes to manage local deployments in Kubernetes by building a self-hosted Kubernetes cluster using Terraform and Ansible and deploying application containers.
* Utilized SNS message filtering to optimize and streamline the notification process.
* Applied security best practices and compliance standards using AWS security services like AWS WAF, Shield, and Macie.
* Ability to develop and implement security policies for the WAF based on application requirements and security best practices.
* Proficiency in tuning WAF rules to balance security and minimize false positives.
* Working on transferring SQLite data generated to S3 bucket using Python scripts.
* Used Jenkins, GitHub for Continuous Integration and Deployment.
* Implemented CI/CD Pipeline for DevOps environment.
* Describe how Ansible playbooks ensured consistent configuration across all managed systems.
* Installed, configured and automated the Jenkins build jobs with AWS deployment pipelines using various plugins like Jenkins-EC2 plugin and Jenkins-Cloud Formation plugin
* We have used phython testing frameworks like pytest, unit test, or even specialized libraries for specific types of testing, can be integrated into CI/CD pipelines to ensure code quality.

**Environment: AWS, EC2, VPC, DynamoDB, Ansible, EKS, S3, WAF Nginx, Nexus, Terraform, Docker, Kubernetes, Jenkins, GitHub, Python, JIRA, Grafana, Prometheus, SNS, SQS**

**LTI Mindtree – Hyderabad, India 07/2021 - 03/2023**

**AWS DevOps/Cloud DevOps (LEAD)**

**Responsibilities:**

* Create Cloud Formation and Terraform templates and deploy AWS resources like EC2, Autoscaling, EBS, and S3
* Implement Serverless architecture using AWS Lambda with Amazon S3.
* Create S3 buckets and manage policies for S3 buckets and Utilized S3 bucket and Glacier for storage and backup on AWS.
* Integrated AWS SNS and SQS to create a robust, decoupled architecture for message distribution and processing across microservices.
* We used Grafana automated deployment or updates of dashboards, ensure that provisioning files (YAML/JSON) for dashboards and data sources are properly configured.
* I have Configured CI/CD pipelines using Jenkins that integrate with JFrog's Artifactory for artifact management.
* We have ensure and efficient delivery of software through automation and collaboration between development and operations teams.
* Implemented AWS GuardDuty to continuously monitor and detect unauthorized or malicious activity within AWS environments.
* Familiarity with different WAF deployment models (e.g., cloud-based, on-premise) and architectures (e.g., positive security model, negative security model).
* Developed and implemented incident response plans based on GuardDuty alerts to mitigate security threats promptly.
* Developed customized scan policies in Tenable Nessus to ensure thorough and accurate vulnerability assessments based on asset types and organizational needs.
* Integrated GuardDuty with AWS CloudWatch and AWS Lambda for automated response and enhanced threat intelligence.
* The Docker SDK for Python provides a Pythonic way to interact with Docker Engine APIs, allowing DevOps engineers to manage Docker containers, images, networks, and volumes programmatically.
* Automated testing, design and implementation.
* We have used Elasticsearch is a distributed search and analytics engine.
* Implemented GitLab’s security features including vulnerability scanning, dependency scanning, and container scanning to ensure code and deployments adhere to security best practices.
* Configured and enforced access controls and permissions within GitLab to safeguard sensitive information and maintain compliance with organizational policies.
* Responsible for defining Branching & Merging strategy, check-in policies, improving code quality, automated Gated Check-ins, defining backup and archival plans.
* Create, manage, and perform container-based deployments using Docker images containing Middleware and Applications together.
* Install, Configure, and automate Jenkins Build jobs for Continuous Integration and AWS Deployment pipelines using various plugins like Jenkins EC2 plug-in and Jenkins Cloud Formation plugin.
* Automated configuration management and deployments using Ansible playbooks and Yaml for resource declaration.
* Coordinate/assist developers with establishing and applying appropriate branching, labeling/naming conventions.
* Created different stages, Published the Artifacts, Copied the files and archived the files
* Performed Integrated delivery using Jenkins
* Developed and managed SQS queues to decouple and scale services in a distributed system.
* Designed and implemented message processing workflows using SQS standard and FIFO queues for various use cases.
* Configured visibility timeouts and implemented dead-letter queues to handle message processing failures effectively.
* Optimized system performance and cost by utilizing SQS long polling.
* Building/Maintaining Docker container clusters managed by Kubernetes Linux, Bash, GIT, Docker, Utilized Kubernetes, and Docker for the runtime environment of the CI/CD system to build, test deploy
* Monitored and analyzed cloud infrastructure (AWS) performance using Datadog to ensure uptime and cost-efficient scaling.
* Managed containers (Docker, Kubernetes) and microservices monitoring with Datadog, ensuring robust observability across multi-cloud environments.

**Environment: AWS, EC2, VPC, DynamoDB, Ansible, WAF Nginx, Datadog, Docker, Kubernetes, Jenkins, GitHub**

**Sonata Software Pvt Ltd – Hyderabad, India 06/2014 – 06/2021**

**DevOps Engineer**

**Responsibilities:**

* Designed, authored, and deployed software solutions to enhance the availability, scalability, and efficiency of products and services, ensuring optimized performance for critical applications.
* Working on Cloud Infrastructure DevOps and CI/CD using antifactory, bitbucket, Shepherd, Terraform.
* Proficient in utilizing CI/CD tools such as Jenkins, Jira, Confluence, and JFrog Artifactory to facilitate continuous integration and delivery workflows, ensuring efficient software delivery practices.
* Managed containerized applications on Kubernetes, configuring nodes, ConfigMaps, selector services, and deploying application containers as Pods, optimizing resource utilization and deployment efficiency.
* Implemented monitoring solutions for cloud infrastructure and databases using Grafana and Lumberjack logging system, ensuring comprehensive visibility and proactive issue detection.
* Successfully migrated applications from on-premise to cloud environments and transitioned to microservices architecture using Docker and Kubernetes, optimizing performance and scalability.
* Conducted upgrades of Kubernetes cluster control plane and worker node components using the out-of-place upgrade method, ensuring seamless operation and enhanced platform stability.
* Configured Cloud Load Balancer, SSL certificates, and DNS to efficiently route traffic to Kubernetes Cluster resources, optimizing application availability and performance.
* Provisioned Persistent Volumes (PV), Persistent Volume Claims (PVC), and Storage Classes for Kubernetes pods using CSI Volume Plugin, facilitating data persistence and storage management.
* Implemented Metrics servers, configured memory limits, and set up Horizontal Pod Autoscaler (HPA) based on memory usage, optimizing resource allocation and application performance.
* Created Kubernetes Secrets and ConfigMaps to establish connectivity between Kubernetes application pods and databases, ensuring secure data transmission and access.
* Configured Node Selectors to schedule Kubernetes workloads on specific nodes, optimizing resource allocation and workload distribution.
* Deployed Kubernetes monitoring tools such as Prometheus, Grafana, and Alert Manager using Kops, integrating alerts with Slack for real-time failure notifications, ensuring proactive issue resolution.
* Utilized sonarqube tool for scanning Docker images, identifying vulnerabilities, and implementing fixes, ensuring robust security posture for containerized applications.
* Functioned as Lead for migrating on premise applications to Cloud Infrastructure using DevOps methodology.
* As Vulnerability management project lead, interacting with other application owners and other supporting teams on weekly basis to review scan report and create a plan to install or update the appropriate software patches to make secure environment.
* Configured and setup Secure Sockets Layers (SSL), Self-signed certs in WebLogic, Apache and F5 for data encryption and client authentication.
* Automated most of the tasks like build, testing, deployment, applying Quarterly released CPU Patches, security patches, restarting components using shell scripts, wlst and ansible.
* Experienced in designing and implementing robust error handling and rollback mechanisms in Ansible playbooks to handle failures during application deployment at scale.
* Proficient in integrating Ansible with configuration management databases (CMDBs) and monitoring tools to maintain accurate inventory and monitor the health of deployed applications.
* Experienced in managing application lifecycle processes, including version upgrades, patch management, and security compliance across a large server fleet using Ansible automation.
* Designed and configured CI/CD workflows using GitLab CI/CD pipelines to automate the build, test, and deployment of ORDS services and database schema changes managed by Liquibase.
* Collaborated with development and operations teams to define CI/CD requirements, establish deployment pipelines, and integrate version control and issue tracking systems with GitLab for seamless collaboration and code management.

**Environment: Jenkins, CI/CD, Ansible, Kinbernetes, Docker, PVC, PV, Confluence**