**Alekhya K**

**Mail:** [**32alekhya@gmail.com**](mailto:32alekhya@gmail.com)

**Phone: 484-872-2820**

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**SUMMARY**:

* With over 9+ years of comprehensive IT experience, I have excelled in various aspects of the software development life cycle (SDLC), including requirements elicitation, design, coding, unit testing, quality assurance, and code deployment.
* As a highly motivated and committed DevOps Engineer, I possess expertise in automating, configuring, and deploying instances on AWS and GCP cloud environments.
* My experience spans across different SDLC methodologies, including Waterfall, Agile/Scrum, and most recently, Continuous Integration (CI) and Continuous Deployment (CD) practices.
* In the AWS cloud environment, I have successfully built and configured a virtual data center to support Enterprise Data Warehouse hosting, leveraging Virtual Private Cloud (VPC), Public and Private Subnets, Security Groups, Route Tables, and Elastic Load Balancer.
* I have designed and maintained highly available, scalable, secured, monitored, and alerting network infrastructures on both AWS and Azure platforms.
* Building Fault-Tolerant and High Availability applications on AWS has been one of my key strengths, where I have implemented Auto Scaling behind Elastic and Application Load Balancers.
* Expertise in providing durable and available data through the creation and management of policies for S3 data store, versioning, and life cycle policies.
* Utilized AWS Lambda effectively for serverless code execution triggered by S3 and SNS events.
* Proficient in scripting AWS AMIs deployment, bootstrapping, and pre-baking AMIs with Packer.
* Managing Amazon Redshift clusters, including launching the cluster and specifying the node type, is part of my skill set.
* Hands-on experience setting up AWS infrastructure with various resources, such as VPC EC2, RDB, S3, IAM, EBS, Security Group, Auto Scaling, SES, SNS, and RDS using Cloud Formation JSON templates.
* My expertise also includes administrating Continuous Integration (CI) tools like Jenkins and Bamboo.
* In the Google Cloud environment, I have created clusters and managed them using Kubernetes (k8s). Jenkins has been utilized for code deployment to Google Cloud, creating new namespaces, and pushing docker images to the container registry.
* Jenkins has been extensively used for continuous integration and end-to-end automation for all build and deployments.
* I am skilled in setting up Jenkins Master and multiple slaves for the entire team as part of the Continuous Development and Deployment process.
* In AWS, I have deployed EC2 instances with various operating systems, including RHEL, CentOS, Ubuntu, and Solaris, both in Linux and Windows environments.
* My expertise in Cloud Security includes leveraging Linux and Windows operating systems and using the AWS console and CLI (command line interface).
* I possess a strong command of SQL scripting and execute various scripts for different environments.
* In UNIX-based environments, I have developed, maintained, and updated various scripts for services, including start, stop, restart, recycle, and Cron jobs, using Korn shell and Bash.
* As part of continuous deployment in Dev, Integration, and Pre-Production environments, I have hands-on experience using Ansible/Chef as deployment automation tools.
* In addition, I have designed and deployed Kubernetes clusters for production Container orchestration with multi-AZ and self-healing capabilities, using Terraform for one-click deployment and Ansible Playbooks for maintenance.

**TECHNICAL SKILLS:**

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| **Cloud Infrastructure** | AWS, GCP & Azure |
| **AWS Services** | EC2, ELB, VPC, RDS, IAM, S3, AWS CLI, Trusted Advisor, CloudWatch, CloudTrail, SNS, SQS, EBS, Elastic Cache, ECS, Lambda, Glacier, Direct Connect, Storage Gateway, AKS, MariaDB service, VNET, APIM, Blob storage, Data Lake gen 2, Azure Data Factory. |
| **CI/CD Tools** | Jenkins, Bamboo, ANT, MAVEN, Terraform, Docker, Kubernetes, Puppet, Chef, Ansible |
| **Versioning Tools** | GIT, Subversion (SVN), GITHUB, GITLAB, Bitbucket |
| **Bug Tracking Tools** | JIRA, Remedy. |
| **Container Orchestration tools** | Docker, Kubernetes |
| **Scripting** | Shell, Python, JavaScript, YAML, JSON, Groovy |
| **Virtualization Tools** | Vagrant, VMware vSphere, Oracle VirtualBox, VMware Workstation |
| **Web/App server** | Web Logic Application Server 9.x, 10.x, WebSphere 6.x/7.x/8.x, Apache Tomcat5.x/7.x, AWS, JBOSS4.22.GA |
| **Database** | DynamoDB, MongoDB, Oracle, SQL Server, MySQL |
| **Operating System** | OS X, Mac IOS, Windows, Solaris, RHEL, Centos, Ubuntu, SUSE |
| **Network Topologies** | LAN, WAN, VPN and Firewalls |
| **Logging &Monitoring Tools** | Nagios, Splunk, ELK |

**PROFESSIONAL EXPERIENCE:**

**Client: Lending Tree - Des Moines, IA June 2022 – Till date**

**Role: AWS Cloud/DevOps Engineer**

**Responsibilities:**

* Successfully executed Application and Data migration from on-premises to AWS cloud, ensuring seamless transitions and optimized performance.
* Conducted training sessions for junior DevOps engineers and other engineering teams, providing guidance on building efficient processes with minimized dependencies.
* Effectively utilized AWS Beanstalk (EBS) for deploying and scaling web applications and services developed with Java, Python, and Docker.
* Managed S3 bucket policies and effectively leveraged S3 bucket and Glacier for storage and backup on AWS.
* Designed and deployed multiple applications using AWS Cloud infrastructure with a strong focus on high availability, fault tolerance, and auto scaling of instances.
* Launched EC2 instances and configured AWS IAM roles to enhance security and access control.
* Implemented system backups to ensure quick recovery after crashes or outages, maintaining data integrity during Disaster recovery scenarios.
* Handled end-to-end setup of new applications and environments, from provisioning RHEL hosts to rolling out applications in production and providing ongoing server maintenance.
* Provided comprehensive pre and post-production deployment support in an agile environment, actively contributing to a 4-week release cycle.
* Worked proficiently on Google Cloud Platform (GCP) services, including compute engine, cloud load balancing, cloud storage, cloud SQL, stack driver monitoring, and cloud deployment manager.
* Configured GCP Firewall rules to manage traffic to and from VM instances, ensuring a secure networking environment. Leveraged GCP cloud CDN for efficient content delivery and reduced latency.
* Designed AWS Cloud Formation templates using JSON to create customized VPC, Subnets, and NAT, facilitating successful deployment of web applications and databases.
* Authored Ansible playbooks to streamline instance configuration and implemented security baselines, roles, and templates for reliable deployments.
* Maintained high availability clusters and standalone server environments, optimizing automation components with scripting and configuration management using Ansible.
* Created Docker Images and skillfully managed multiple containers as a cluster using Docker Swarm and Compose for various applications and microservices.
* Deployed containers within a cluster using Kubernetes, ensuring efficient container management.
* Responsible for implementing the CI/CD process using Jenkins, Python, and Shell scripts, effectively automating routine jobs and enhancing overall development efficiency.

**Environment**: Jenkins, Ansible, EC2, S3, ELB, VPC, NAT, OpenShift, Git, Docker, Terraform, Kubernetes, Mongo dB, AWS, GCP, Maven, Bash, Nagios, CloudWatch.

**Client: US Bank - NY May 2021 – June 2022**

**Role: DevOps Engineer**

**Responsibilities:**

* Played an active role in provisioning various services using Puppet modules on the AWS cloud environment.
* Currently working in the DevOps Platform team, with responsibilities focused on Chef for Cloud Automation.
* Actively participated in the architecture of the DevOps platform and cloud solutions.
* Utilized Chef for server provisioning and infrastructure automation in a SAAS environment.
* Integrated Automated Build with the Deployment Pipeline by installing Chef Server and clients to fetch builds from the Jenkins repository and deploy them in target environments (Integration, QA, and Production).
* Implemented scheduled downtime for non-production servers to optimize AWS pricing.
* Ensured proper documentation for new server setups and existing servers.
* Developed installer scripts using Maven and Python for various products hosted on Application Servers.
* Worked on Cloud automation using AWS Cloud Formation templates.
* Implemented Chef Recipes for Deployment on internal Data Centre Servers and also adapted and customized the same Chef Recipes for direct deployment into Amazon EC2 instances.
* Evaluated and tested Chef Recipes, following the concept of Test-Driven Development for Infrastructure as Code.
* Automated Continuous Build and Deploy Scripts for Jenkins Continuous Integration tool.
* Automated Cloud deployments using Chef, Python (boto & fabric), and AWS Cloud Formation Templates.
* Implemented rapid-provisioning and life-cycle management for Ubuntu Linux using Amazon EC2, Chef, and custom Ruby/Bash scripts; maintained a farm of EC2 instances, ELBs, and RDS.
* Developed Chef Cookbooks for OS component configuration to maintain AWS server's template minimal.
* Created Chef Cookbooks for various DB configurations to modularize and optimize product configuration.
* Implemented and built tools like Maven to automate and enhance the overall operational environment.
* Managed source code in GIT, created LABELS, and merged codes on GIT for QA testing and release.
* Implemented Atlassian Stash along with GIT to host GIT central repositories for source code across products, facilitating code reviews and login audits for Security Compliance.
* Designed and implemented a backup strategy for critical systems like build machines, bug tracking, and central repositories.

**Environment**: AWS ELB, AWS SQS, AWS S3, AWS Cloud Formation, AWS RDS, AWS Cloud Watch, Java/J2EE, JQuery, Tomcat, Apache, Jenkins, Artifactory, GITHUB, CentOS, Ruby, Power Shell, Chef, Oracle, Linux.

**Client: CVS Health - providence, RI Sept 2019 – April 2021**

**Role: DevOps Engineer**

**Responsibilities:**

* Implementing Continuous Integration and Continuous Deployment (CI/CD) pipelines using Azure DevOps services to automate build, test, and deployment processes for applications.
* Developing and managing infrastructure code with tools like ARM templates or Terraform to efficiently provision and maintain cloud resources.
* Overseeing version control systems such as Git within Azure DevOps to ensure effective code collaboration, branching, and merging strategies.
* Creating and managing various environments (development, testing, staging, production) with appropriate configurations and access controls.
* Orchestrating the release process, coordinating with teams to ensure successful and timely deployments to production.
* Setting up monitoring solutions using Azure Monitor and other tools to track application performance and system health, responding to incidents promptly.
* Applying security best practices to safeguard Azure resources and ensuring compliance with industry standards and organizational policies.
* Developing automation workflows and scripts to streamline repetitive tasks and enhance operational efficiency.
* Utilizing Azure services like Azure App Service, Azure Functions, Azure Storage, and Azure SQL Database to support application development and deployment.
* Investigating and resolving application and infrastructure-related issues, conducting root cause analysis, and implementing preventive measures.
* Collaborating with cross-functional teams, including developers, testers, and operations, to foster effective communication and teamwork.
* Working in Agile/Scrum environments, participating in sprint planning, backlog grooming, and sprint reviews.
* Implementing disaster recovery plans and backup strategies to ensure data integrity and availability in case of emergencies.
* Creating and maintaining detailed documentation of infrastructure configurations, CI/CD pipelines, and deployment procedures.
* Staying updated with the latest Azure technologies and industry trends to enhance skills and contribute to continuous improvement.

**Environment**: Azure (IAAS, PAAS), Windows server, SQL server, VSTS, Windows PowerShell, Azure Storage, Docker, Ruby, Bash, Chef, Jenkins, Maven, Puppet, Bash, NT command shell, ANT, Gradle, GitHub.

**Client: AT&T Alpharetta, GA Jan 2018 – August 2019**

**Role: DevOps Engineer**

**Responsibilities:**

* Demonstrated proficiency in designing, planning, and executing the migration of existing on-premise applications to the Azure Cloud (ARM). Configured and deployed Azure Automation Scripts, utilizing Azure stack Services and Utilities to streamline automation processes.
* Implemented storage blobs and Azure files, including the creation and configuration of Storage accounts, Content Delivery Network (CDN), custom domain setup, and access management with storage access keys.
* Utilized Docker to set up Azure Container Registry with Docker and Docker-compose, actively participating in deployments using Kubernetes on Docker.
* Developed CI/CD Pipelines within Azure DevOps environments, managing dependencies and tasks effectively. Skilled in implementing and managing continuous delivery systems and methodologies on AWS, while automating Maven builds with Jenkins.
* Leveraged Azure Kubernetes Service (AKS) to deploy managed Kubernetes clusters in Azure, utilizing various template-driven deployment options like Resource Manager templates and Terraform.
* Configured servers for hosting Team Foundation Server (TFS) instances, facilitating Continuous Integration (CI) through Team Foundation (TF) Build Service.
* Administered and monitored Visual Studio Team System (VSTS), ensuring smooth migration between versions and maintaining backups and collections.
* Employed Maven pom.xml to define dependencies and plugins for various activities, integrating Maven with GIT to streamline project tag management and deployment.
* Automated infrastructure activities using Ansible playbooks and successfully integrated Ansible with Jenkins in the Azure environment.
* Implemented fully automated Server build management, monitoring, and deployment using technologies like CHEF and Ansible.
* Developed Python scripts for automation and testing of Java applications across Linux servers, significantly improving daily task efficiency.
* Designed and implemented best SCM processes and procedures using GitHub, GIT, and analyzed and resolved conflicts related to source code merging with clear case.
* Utilized Apache Kafka to import real-time network log data into HDFS, improving data processing capabilities.
* Implemented Master-Slave architecture to enhance Jenkins' performance and utilized Jenkins for Continuous Integration and deployment into TomCat Application Server.
* Expertise in designing strategies for increased development and release velocity through Continuous Integration, delivery, and deployment using Bamboo and Jenkins.
* Proficient in SCM tools like GIT, Subversion (SVN), and TFS on Linux platforms for version control management.
* Proficient in JIRA for issue tracking and project management.
* Experience in installing and configuring the NEXUS Repository manager for artifact sharing and developing tools for integration, automated testing, and release management.
* Proactively involved in researching project application architecture to support and resolve build, compile, and test issues and problems.

**Environment**: ANT, MAVEN, Subversion (SVN), CHEF, Docker, Vagrant, EC2, Ansible, JIRA, LINUX, RHEL, SNS, SQS, Kubernetes, Shell/Perl Scripts, Bitbucket, Python, TFS, SCM, API, GIT, Jenkins, TomCat, Java, Azure TFS, Azure VSTS, Visual Studio, Visual Studio Code, GitBash, Python

**Client: Inovalon, India – India April 2015 – July 2017**

**Role: DevOps Engineer**

**Responsibilities:**

* Development and Enhancement of PACS (Planning Assignment & Configuration Sub-systems) using Developer.
* Involved in compliance management for safety and incident reporting procedures.
* Created and designed the Terraform templates to create custom sized VPC, NAT SUBNETS for deployment of Web applications and database templates.
* Wrote custom support modules for upgrade implementation using PL/SQL and shell scripts.
* Unit testing and System testing on both Linux and Windows environments.
* Involved in CI/CD process using GIT, Nexus, Jenkins job creation, Maven builds and Create Docker image and use the docker image to deploy in Google cloud clusters.
* Worked on cloud formation templates to create EC2 instances and by leveraging security and management features, ECS containers to run, stop and manage Docker containers on a cluster, S3 for object storage, VPC to create the private and public subnets, IAM roles for securely accessing the AWS resources.
* Wrote and debugged basic shell scripts for basic tasks and to get information about various Linux servers.
* Knowledge in Implementation of horizontal auto-scaling use cases using OpenStack components - Heat, Ceilometer, and automated local user provisioning in instances created in OpenStack cloud through Ansible Playbooks.
* Documented technological issues and resolutions in the knowledge base.
* Worked on Docker to containerize the application and all its dependencies by writing Docker file and Docker-Compose files
* Provided analytical reports about the test to the project manager using advanced Excel features.

**Environment**: AWS EC2, S3, RDS, EBS, ELB, Docker, Kubernetes, PACS, VPC, SQL, GIT.

**Company: C3i Technologies Sept 2014– March 2015**

**Title: System Administrator**

**Responsibilities:**

* System Administrator/Integrator role in a large team responsible for maintaining of Linux operating systems such as **RHEL, CentOS, Ubuntu**. Responsible for Day-to-day systems administration tasks in **Solaris, Red hat Linux and AIX** servers.
* Setting up and maintaining RHEL, SUSE, Solaris, and Cento’s servers for new and ongoing projects using standalone and network installation methods.
* Develops and maintains Linux Kernels (**CentOS and RHEL**), application servers – **JBoss, Tomcat and Apache, Scripting-Shell scripting, Infrastructure automation.**
* Managed system storage requirements, access controls and permissions.
* Make sure the backup of the whole infrastructure is taken every day before starting of the day
* Worked on **LDAP** Server and **SSL** Certificates, two web security technologies. worked on assigning static routes and host names, as well as configuring the network interface and TCP/IP.
* Design, configuration, administration, and development of various open source apps and LAMP (Linux Apache **MySQL** PHP)-based architecture.
* Managing system processes and scheduling processes with the **cron** utility
* Learning the new industry technologies and best practices that are used in **DevOps** environments and recommending newly available technologies to the team.
* Controlling different environments like development stage and production by checking if the resources are configured correctly in all the environments.
* Documenting the steps of the infrastructure that is already existing and participating in on-call rotation along with handling basic production issues.