**Karthik Reddy**

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## SUMMARY:

Seasoned IT professional with a primary focus on AWS, Azure, and Development Operations, adept at building, managing, releasing, and deploying code through automated infrastructure processes.

*  Proficient in AWS services including EC2, Security Groups, S3, Elastic IP's, Load Balancers, Auto-scaling, VPC, CloudWatch, and IAM, among others.
*  Configuration and management of Virtual Machines, Storage, network, and applications using the Windows Azure portal.
*  Managed operations and maintenance support for AWS cloud resources, overseeing the launch, maintenance, and troubleshooting of EC2 instances, S3 buckets, VPCs, ELBs, and RDS.
* Proficient in scripting languages Java, Python, and Node.js.

* Proficient in creating end-to-end Integrated Pipelines using Jenkins/Hudson, Bamboo, and CI tools to automate triggers from GitHub and SVN.
*  Extensive experience in migrating legacy applications to AWS using DevOps tools such as Jenkins, Maven, Docker, and Groovy scripts.
*  Proficient in Containerization and Orchestration with Docker containers and Kubernetes Pods.
*  Expertise in IAM, creating roles, users, and groups within different AWS accounts with customized policies.
* Sound knowledge of CI systems like Jenkins, GitLab, and continuous integration practices.

* Skilled in managing AWS Route53 for traffic routing between different regions.
* Implemented monitoring and alerting for production and corporate servers/storage using AWS CloudWatch.
* Facilitated migration to Windows Azure using Azure Site Recovery and Azure Backups.

* Utilized Packer for Automated Machine Image creation and automated AMI processes using Jenkins.
* Hands-on experience with GitLab CI and Jenkins for CI and end-to-end automation.

* Installed, maintained, and managed Kubernetes clusters using Kubeadm and Docker containerization.
* Configured Docker containers and Dockerfiles for different environments.

* Managed Docker orchestration and containerization using Kubernetes.
* Built MySQL servers in containers, integrated with Grafana, and deployed in Kubernetes clusters.
* Deployed services and applications into Kubernetes clusters using Helm.

* Utilized Docker for test and dev-environments virtualization, coupled with configuration automation using Docker containers.
*  Migrated SQL Server databases to SQL Azure Database using SQL Azure Migration Wizard and deployed applications to Azure Cloud.
*  Managed highly available EC2 instances using Terraform and CloudFormation, creating custom Terraform Modules.
* Set up build and deployment automation for Terraform scripts using Jenkins.

* Built Jenkins jobs to create AWS infrastructure from GitHub repositories containing Terraform code.
* Designed project pipelines using Jenkins and managed plugins within Jenkins.

* Integrated Maven with Jenkins for builds and continuous integration, also automating builds and deployments.
* Developed build and deploy scripts using MAVEN in Jenkins.

* Utilized Hudson and Jenkins for continuous integration and end-to-end automation.
* Created Jenkins configurations for generating project artifacts during packaging and deployment.
* Automated deployment of Java applications in Tomcat Server.

* Deployed applications on AWS using Elastic Beanstalk, integrating Jenkins and Ansible for CI/CD.
*  Coordinated with vendors like Atlassian, JFrog for system information review, issue troubleshooting, bug reporting, and improvements.
* Implemented SonarQube for code coverage, compliance, duplication, and unit test results.

* Experienced with databases including MSSQL, NoSQL (DynamoDB, Couchbase), and Snowflake.
* Utilized GIT and Bitbucket for source code management.

* Documented and automated the build and release process effectively.
* Demonstrates excellent interpersonal skills, a collaborative team-oriented attitude, and proactively solves problems while providing optimal solutions.

## SKILLS:

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| --- | --- |
| **Cloud Platform** | AWS, Azure |
| **Application Servers** | Apache Tomcat, Red Hat, WebSphere |
| **Log Tools** | Elastic Search, Grafana, |
| **CI Tools** | Jenkins. |
| **Container Tools** | Docker, Kubernetes, ECS, EKS |
| **Infrastructure as Code** | Terraform, Cloudformation |
| **Configuration Management** | Ansible |
| **Virtualization** | VMware Client, vSphere |
| **Programming Languages** | Core Java, HTML. |
| **Operating systems** | Linux , CENTOS, Ubuntu, Windows |
| **Monitoring tools** | Splunk, Nagios, Cloud Watch |
| **Scripting** | Shell scripting, YAML, JSON |
| **Database** | MSSQL, Snowflake, Microsoft synapse, Snowflake & Azure Data Factory. |
| **Version control tool** | Git, GitHub, Git Lab, Bitbucket, SVN. |

**EDUCATION:** Bachelor in Computer Science Engineering, Hyderabad, India (2009)

**Professional Experience:**

# Client: R1RCM NOV22 – TILL DATE

## Role: Sr.DevOps Engineer Responsibilities:

* Troubleshoot Deployment issues in the Dev, QA and UAT environments.
* Building and setting up new development tools and infrastructure
* Responsible to manage project code and configurations & Set up a basic project structure.
* Working on ways to automate and improve development and release processes
* Developed Jenkins pipelines to automate the end-to-end build and deployment processes
* Proficient in both scripted and declarative pipeline syntax to define complex build, test, and deployment workflows, ensuring efficient and maintainable CI/CD processes.
* Integrated Jenkins pipelines with Git/GitHub for source code management, implementing triggers for automated builds and deployments upon code commits and pull requests.
* Implemented parallel and sequential execution in Jenkins pipelines to optimize build and test processes, reducing overall pipeline execution time
* Wrote Jenkinsfiles as code to define and version control pipeline configurations, enhancing traceability and enabling collaboration among development and operations teams.
* Implement data ingestion mechanisms to import this data into the cloud data warehouse Microsoft Synapse & Snowflake.
* Develop ETL (Extract, Transform, Load) processes using Azure Data Factory. Cleanse, preprocess, and enrich the data as needed & Schedule regular data updates.
* Connect the dashboard to the cloud data warehouse to fetch real-time data using Power BI
* Testing and analyzing results with code quality tool like SonarQube.
* Dockerize the application to ensure consistency in deployment across environments.
* Identifying technical problems and developing software updates and ‘fixes’
* Working with software developers and software engineers to ensure that development follows established processes and works as intended
* Implement scaling and load balancing for the application to handle increasing user traffic.
* Build tools to reduce occurrences of errors and improve customer experience
* Perform root cause analysis for production errors & Investigate and resolve technical issues
* Automate the provisioning of AWS resources like EC2 instances, VPCs, and S3 buckets using Terraform.
* Configure Jenkins to automatically trigger deployments when new code is pushed to the Git repository.
* Install and configure Nagios to monitor the infrastructure, container clusters, and application health.Set up alerts for critical issues, such as high resource usage or application downtime.

**Environment**: AWS, Docker, Kubernetes, Jenkins, Git, Linux, Maven, SonarQube, Nagios, Terraform, Microsoft Synapse, Snowflake, Azure Data Factory, Power BI.

# Client: Fidelity Investments, Dallas-TX MAR 2022 – OCT 2022 Role: Sr.DevOps Engineer

## Responsibilities:

* Implemented and maintained a robust CI/CD pipeline using Jenkins, reducing deployment time by 30% and ensuring consistent and reliable software delivery.
* Orchestrated containerized applications on Docker and managed container orchestration platforms such as Kubernetes, AWS ECS, and Azure AKS for efficient scalability and resource utilization.
* Automated infrastructure provisioning and configuration using Terraform, resulting in a 20% reduction in deployment errors and faster environment setups across AWS and Azure.
* Utilized Infrastructure as Code (IaC) principles to define and manage cloud resources, enhancing repeatability and version control in AWS and Azure environments.
* Collaborated with development and operations teams to troubleshoot and optimize applications, ensuring high availability, scalability, and performance on cloud platforms.
* Implemented monitoring and alerting solutions using Grafana for visualizing system performance, enabling proactive issue identification and resolution.
* Developed and maintained Python scripts for automating routine tasks, improving efficiency in system management and administration.
* Managed and optimized SQL databases, primarily Microsoft SQL Server, ensuring data integrity, availability, and optimal performance.
* Designed and implemented RESTful APIs to facilitate seamless communication between different services and systems.
* Conducted regular security audits and implemented best practices, ensuring compliance with industry standards and regulations.
* Utilized SonarQube for continuous code quality inspection, identifying and addressing code vulnerabilities and maintaining high code standards.
* Collaborated with cross-functional teams to integrate Tableau and Power BI for data visualization, providing actionable insights to stakeholders.
* Provided technical support and training to teams for the effective utilization of DevOps tools and practices.
* Regularly updated documentation and provided knowledge transfer sessions to ensure a well- documented and knowledge-sharing environment.
* Proficient in Microsoft Office Suite for documentation, reporting, and communication purposes.

**Environment:** AWS, Azure, Docker, Kubernetes, jenkins, Python, Grafana, Terraform, ECS, EKS, AKS, MSSQL Server, Tableau, Power BI, MS office, RESTAPI, SonarQube

# Client: Pekin Insurance, Pekin-IL Jan 2020 - Mar 2022 Role: MLOps Engineer

## Responsibilities:

* Responsible for day-to-day operation and support of the Continuous Integration and Continuous Deployment framework including upgrades, issues as well as executing POCs where necessary.
* Creating Repository in Bit bucket based on type of artifacts like ear, war and rpm and sql code.
* Managing and guiding source code strategy to development team for branching and tagging in Bit bucket.
* Installed and configured GIT and communicating with the repositories in GITHUB.
* Implemented Security in Web Applications using Azure and Deployed Web Applications to Azure.
* Deciding and monitoring pull request merge to heavy branch by having reviewed and approved by senior developer or lead to avoid future issues like build failure.
* Guiding and drafting version control tools strategy such as GIT, Eclipse, and Intellij for pushing Source Code to Repository.
* Wrote Jenkinsfiles as code to define and version control pipeline configurations, enhancing traceability and enabling collaboration among development and operations teams.
* Configured Jenkins pipelines for artifact management, ensuring the seamless storage and retrieval of build artifacts, dependencies, and release packages.
* Automated environment provisioning and configuration using Jenkins pipelines, guaranteeing consistent and reproducible deployment environments across different stages.
* Implemented automated integration testing within Jenkins pipelines, incorporating quality gates to enforce code quality standards and prevent the promotion of defective builds.
* Managing Jenkins on premise instances for Admin activity restart instances and configuration of new plug in or tools.
* Installed Jenkins on a Linux machine and created a master and slave configuration to implement Multiple parallel builds and pipeline build using Groovy.
* Experience in Jenkins/Maven package building and have hands on experience in development using Shell and Groovy scripting to automate processes.
* Configuring Build tools in Jenkins to generate application artifacts in workspace with Apache Maven for Source Code and Binary Code.
* Proficient in creating Jenkins pipeline through groovy base and good hands on troubleshooting the issues with the pipeline
* Extensively worked with Jenkins APIs to know various things like build status, count of builds, GIT commit version used by Jenkins builds etc. using Groovy Script
* Creating Build job in Jenkins and have it configured with Junit, Cobertura, Sonarqube to maintain quality code before it migrates to higher region.
* Configured with Jenkins job, source code vulnerability tool such as Fortify and Find bugs so that developer can identify status of vulnerability of code.
* Used Agile/scrum Environment and used Jenkins, GitHub for Continuous Integration and Deployment with Tier2 Support.
* Creating deployment job on Jenkins on premise for Windows and UNIX servers.
* Following with Serena Deployment Artifacts Team to monitor deployment logs.
* Provided high availability for IaaS VMs and PaaS role instances for access from other services in the VNet with Azure Internal Load Balancer.
* Worked on setting up deployment artifacts on Nexus Repository in cloud environment.
* Written build scripts using gradle for gradle builds in GitLab CI pipeline
* Develop UNIX scripting for automation and migrating code from PVCS Tools to Bit bucket so that for any developer it is easy to clone, pull and push source code for build.
* Implemented cloud services IAAS, PAAS, and SaaS which include Openstack, Docker and Open Shift.
* Experience Microsoft Azure date storage and Azure Data Factory, Data Lake
* Expert understanding of the CD workflow and working knowledge of release automation technologies.
* Used Splunk and Kibana Tool for Metrics reporting after Continuous Integration and Continuous Deployment.

**Environment:** Apache Maven, GitLab, Groovy, shell, Jenkins, Nexus, AWS S3, EC2, Splunk, JIRA, GitHub, Bit bucket, Putty.

**Client: Reliance Corporate IT Park Ltd Jun’13– Dec’2019**

# Role: DevOps Cloud Engineer

## Responsibilities:

* Knowledge in Amazon Web Services (AWS) environment and good knowledge of AWS services like Elastic Compute Cloud (EC2), Elastic Load-balancers, S3, Elastic Beanstalk, Cloud -Front, Route53, Cloud -Watch, Cloud -Formation, IAM, VPC, RDB, IoT, DynamoDB, SES, SQS and SNS.
* Used AWS Beanstalk for deploying and scaling web applications and services developed with Java, PHP, NodeJS, Python and Docker on familiar server such as Apache.
* Created snapshots and Amazon Machine Images (AMI) of the instance for backup and created Identity Access Management (IAM) policies for delegated administration within AWS to create new accounts, roles and groups and give permissions.
* Integrated Jenkins pipelines with notification systems (Slack, Email) to alert teams about build status, failures, or other critical events, enhancing visibility and communication.
* Integrated security scanning tools SonarQube into Jenkins pipelines to automate code analysis, identify vulnerabilities, and enforce compliance with coding standards.
* Maintained comprehensive documentation for Jenkins pipelines, ensuring that team members can understand, troubleshoot, and enhance the pipelines effectively.
* Provided security and managed user access and quota using AWS Identity and Access Management (IAM), including creating new Policies for user management.
* Involved in Designing and deploying AWS solutions using EC2, S3, RDS, EBS Volumes, Elastic Load Balancer, Auto Scaling groups.
* Worked on Amazon AWS EC2 cloud services for build, configuring and troubleshooting on various Amazon images like Amazon Linux AMI, AIX, Red Hat 4.x, 5.x, Ubuntu 12.x, 13.x.
* Worked on Open Stack, AWS Cloud Formation, and Terraform API to create infrastructure on AWS as a code. Extensively involved in infrastructure as code, execution plans, resource graph and change automation using Terraform, Managed AWS infrastructure as code using Terraform, Expertise in writing new plug-in to support new functionality in Terraform.
* Converting existing AWS infrastructure to server less architecture (AWS Lambda, Kinesis) deployed via Terraform or AWS Cloud formation. Created the AWS VPC network for the Installed Instances and configured the Security Groups and Elastic IP's accordingly. Installing the Load Balancers and VPC with Public and Private Subnets.
* Built scripts using ANT and MAVEN build tools in Jenkins, SonarQube and Nexus to deploy J2EE applications to server one. Integrating the Third Party Tools with TFS for ALM & Traceability.
* Virtualized the servers using the Docker for the test environments and dev-environments needs. Configuration automation using Docker containers.
* Experience in creating Docker Containers leveraging existing Linux Containers and AMI's in addition to creating Docker Containers. Hands on experience in using tools like Docker Compose, Kubernetes, etc. for orchestrating, linking and deploying the services related to the containers.
* Experience on centralized logging (Data) and monitoring tools such as Elasticsearch, Logstash, and Kibana (ELK), Splunk dash boards for search and reporting and managing the dashboard access.

**Environment:** AWS, IAM, S3, cloud watch, ANT, SonarQube, SVN, GitHub, Ansible, Docker, Kubernetes, Terraform, Maven, Apache Tomcat, J Boss, Bash, Shell.