**Deeksha Singh**

**Sr. DevOps Engineer**

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**Summary:**

* 11+ years of professional experience in IT industry comprising of Linux Administration, DevOps and AWS Cloud Services that includes principles with keeping up Continuous Integration, Continuous Delivery and Continuous Deployment in various environments like (DEV/TEST/STAGE and PROD).
* Experience in AWS Cloud IaaS with components VPC, ELB, Auto-Scaling, EBS, AMI, Lambda, Cloud Formation template, Cloud Front, Cloud Trail, ELK Stack, Elastic Bean stalk, Cloud Watch and Dynamo DB.
* Experience in maintaining the user accounts (IAM), RDS, Route53, VPC, RDS, Dynamo DB and SNS services in AWS cloud.
* Involved in designing and deploying multitude applications utilizing almost all the AWS stack (Including EC2, Route53, S3, RDS, Dynamo DB, Maria DB, SNS, SQS, IAM) focusing on high-availability, fault tolerance, and Auto scaling in AWS Cloud Formation.
* Designed AWS Cloud Formation templates to create customized VPC, subnets, NAT to ensure successful deployment of Web applications and database templates.
* Hands on experience in S3 buckets and managed policies for S3 buckets and utilized S3 Buckets and Glacier for storage, backup and archived in AWS and in setting up and maintenance of Auto-Scaling AWS stacks.
* Expertise in creating functions and assigning roles in AWS Lambda to run python scripts.
* Designed high availability environment for Application servers and database servers on EC2 by using ELB and Auto-scaling. Installed application on AWS EC2 instances and configured the storage on S3 buckets.
* Experience in Branching, Merging, Tagging and maintaining the version across the environments using SCM tools like GIT, Bit bucket and Subversion (SVN) on windows and Linux platforms.
* Experience building Kubernetes operator and running CI/CD pipeline on operator using kaniko image.
* Orchestrated the migration of application to a microservices architecture using Amazon ECS to improve scalability and resource utilization.
* Expertise in developing build and deployment scripts using Maven(pom.xml) as build tools in Jenkins to move from one environment to other environments.
* Extensively worked on Jenkins for continuous integration and for End-to-End automation for all build and deployments.
* Worked in DevOps group running Jenkins in a Docker container with EC2 slaves in Amazon AWS Cloud configuration.
* Implemented a microservices architecture in GoLang, reducing complexity and enhancing system maintainability.
* Hands on in using Jenkins modules such as Build Complete Action, Build Plan Definition, and Administration configuration. Involved in Provisioning AWS Infrastructure using Terraform scripts from Jenkins.
* Integrated Code Build with version control systems such as GitHub and AWS Code Commit to trigger builds automatically upon code changes, improving development efficiency.
* Experience in Writing Chef Cookbooks and Recipes to automate our build/deployment process and do an overall process improvement to any manual processes.
* Configured AWS IAM and security group in VPC (Public and Private Subnets) using Chef.
* Created AWS Route53 to route traffic between different regions.
* Experience with infrastructure automation tool Terraform. Implement Infrastructure as Code utilizing Terraform for AWS resource provisioning and management.
* Proficient in Writing Terraform templates, Chef Cookbooks, recipes and pushed them onto Chef Server for configuring EC2Instances.
* Analyzing in working with Ansible, written playbooks to manage Web applications, Environments configuration Files, Users, Mount points and Packages.
* Experience in writing Ansible Playbooks and Puppet Manifests to provision Apache Web servers, Tomcat servers, Nginx, Apache Spark and other applications.
* Expert in Chef/Puppet as Configuration management tool, to automate the repetitive tasks, quickly deploy critical applications, and enthusiastically manage the changes.
* Experienced in keeping up and looking at log archives using monitoring tools like Cloud Watch, Nagios, Splunk, ELK Stack, New relic and App Dynamics.
* Experience in working with cluster management and orchestration features embedded in Docker Engine which is built using Swarm Kit and worked on creation of custom Docker container images, tagging, pushing the images and Dockers consoles for managing the application of life cycle.
* Extensively used Docker/Kubernetes for containerization, virtualization, Ship, Run and Deploy the application securely to fasten Build/Release Engineering.
* Excellent knowledge of Linux including CentOS, RedHat, Ubuntu, Debian, configuration and administration of RedHat Virtual machines in VM ware Environment.
* Working Knowledge on databases like MySQL, RDS, DynamoDB and MongoDB. Experienced in Administration, Support, Performance Tuning, Migration and Maintenance of Servers.

**Technical Skills:**

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| --- | --- |
| **Operating Systems** | Linux (RedHat, Ubuntu, CentOS), Windows, MAC |
| **Build/Automation Tools** | AWS Code Pipelines, GitLab CI, Jenkins, Cloud Formation, Nexus, SonarQube,  Swagger Hub, Maven, Ant, Team city, Build Forge, Gradle, TFS |
| **Configuration Management**  **Tools** | Ansible, Chef, Puppet, SaltStack |
| **Cloud Technologies** | AWS, OpenStack, Azure |
| **Scripting Languages** | Shell, Bash, Python, Terraform, Groovy, .Net, Go Lang, Power Shell, Perl |
| **Database System** | MySQL, PostgreSQL, Aurora PostgreSQL, DynamoDB, MongoDB, Hadoop. |
| **Web/AppServer** | Apache, IIS, HIS, Tomcat, Web Sphere Application Server, Web Logic, Jboss |
| **Version Control Tools** | GIT, Subversion, Bitbucket, CVS. |
| **Web Technologies** | Servlets, JDBC, JSP, XML, HTML, YAML, Swagger Tool. |
| **Virtualization Tools** | VMware, Power VM, Virtual box, V Centre, v Sphere, WebLogic. |
| **Monitoring Tools** | CloudWatch, Nagios, Splunk, ELK, AppDynamics, Datadog |

**Educational Qualifications**

* Bachelor's technology from KL University with Information Technology in the year 2012.

**Professional Experience:**

**Client: CITI Bank, Dallas, TX August 2022 – Till Date**

**Role: Sr. DevOps Engineer**

**Responsibilities:**

* Managed project repositories using Git and Bitbucket, defining branching strategies, tagging, and creating release branches while utilizing Configuration Management tools.
* Configured Continuous Integration/Continuous Deployment (CI/CD) pipelines in Concourse to automate the build, test, and deployment processes for projects.
* Employed open cover for code coverage and SonarQube for static code analysis (SCA) as part of Continuous Testing, creating custom quality gates and profiles.
* Managed production release plans, coordinated and conducted plan review calls, performed release readiness checks, and supported monthly and off-cycle production releases as part of release management.
* Integrated White Source into CI/CD pipelines to check for security vulnerabilities.
* Achieved Continuous Integration, Continuous Testing, and Continuous Deployment by integrating Git, Bitbucket, Concourse, JFrog, SonarQube, WhiteSource, Slack, and AWS CloudFormation.
* Conducted build activities and artifact versioning using SemVer and Concourse by maintaining version files in AWS S3.
* Automated the build and deployment process for React and Angular applications using GitHub Actions and AWS DevOps, improving release cycles and minimizing downtime.
* Supported full-stack application deployments, integrating the front-end Angular or React frameworks with back-end services in cloud environments.
* Configured and managed basic networking components such as VPCs, subnets, firewalls, and load balancers in cloud environments, ensuring secure and efficient network communication.
* Integrated monitoring and alerting systems with AWS Cloud Watch and other tools to ensure real-time monitoring of infrastructure health, security, and application performance.
* Developed and maintained automation scripts using Python, Shell scripting, and PowerShell to automate tasks like server provisioning, configuration, application deployments, and infrastructure monitoring.
* Implemented infrastructure automation using AWS Cloud Formation and Terraform, creating reusable templates to manage AWS resources
* Utilized Ansible to automate system configurations and enforce compliance across AWS EC2 instances and other resources
* Developed custom scripts in Bash and Python for system automation, API integration, and task scheduling, improving operational efficiency and reducing time-to-market.
* Managed version-controlled infrastructure as code (IaC), ensuring consistent environments across staging, production, and development.
* Implemented Infrastructure as Code (IaC) using Terraform and Cloud Formation, creating reusable, modular, and scalable cloud infrastructure templates to ensure consistency across environments
* Developed shared YAML templates in Concourse to streamline processes across multiple jobs.
* Monitored and trouble shooted Concourse builds to ensure smooth project execution.
* Assisted developers with establishing and applying appropriate branching, labeling, and naming conventions using Git and Bit bucket.
* Managed high-performance databases like MySQL and PostgreSQL, implementing caching solutions with Redisto optimize data retrieval and application performance.
* Worked extensively with PowerShell and Python for automating infrastructure-related tasks, including configuration management and application deployments.
* Automated and managed administration tasks by writing scripts using Jenkins, shell scripting, and bash scripting.
* Integrated Sonar Qube Pull Request analysis into CI/CD pipelines to scan for unit test code coverage, code duplications, vulnerabilities, and severity issues in projects.
* Leveraged AWS services, including AWS EC2, AWS Security Groups, AWS ELB, AWS S3, AWS Cloud Front, AWS RDS, AWS Route53, AWS Cloud Watch, AWS Cloud Formation, AWS IAM Roles and Users, and AWS Elastic Container Service (ECS and ECR) for Containerization and Orchestration in projects.
* Configured multiple AWS EC2 instances, setting AWS Security Groups, AWS Elastic Load Balancers, AWS AMIs, and AWS Auto Scaling to design cost-effective, fault-tolerant, and highly available systems.
* Created custom AWS Cloud Watch Dashboards using AWS Cloud Watch Logs for log monitoring and used AWS Kinesis streams to send logs to Kibana, aiding app Dev and testing teams.
* Developed Docker images using custom Docker Files, managed Docker container snapshots, removed images, and managed Docker volumes for Containerization and Orchestration.
* Hands-on experience managing relational databases such as SQL, MySQL, and PostgreSQL, supporting high-availability applications by ensuring data integrity and performance optimization.
* Implemented Redis for caching solutions to optimize application performance, reducing latency and improving user experience in web application

**Environment:** Git, Bit bucket, Continuous Integration (CI), Continuous Deployment (CD), Concourse, Jenkins, (Chef, Ansible), Containerization (Docker), Orchestration (AWS Elastic Container Service, Kubernetes), Infrastructure as Code (IaC) using Terraform and AWS Cloud Formation, Monitoring & Logging.

# Client: AT&T, Agoura Hills -CA December 2020 - June 2022

**Role: Sr.DevOps Engineer   
Responsibilities:**

* + Designed, configured and deployed Amazon Web Services AWS for a multitude of applications utilizing the AWS stack (Including EC2, S3, RDS, Cloud Formation, Cloud Watch), focusing on high-availability, and auto-scaling.
  + Deploying and maintaining infrastructure using code pipeline, Lambda functions and scripts.
  + Implemented AWS Code Build as a key component of the CI/CD pipeline, automating the build and testing processes for multiple applications.
  + Experience building Kubernetes operator and running CI/CD pipeline on operator using kaniko image.
  + Worked on Terraform to create Kubernetes infrastructure on AWS EKS.
  + Automated application deployment processes on OpenShift using YAML manifests and Helm charts, reducing deployment times and ensuring consistency across environments.
  + Integrated OpenShift into the CI/CD pipeline, automating the build, test, and deployment phases.
  + Designed CI/CD pipeline using Ansible.
  + Implementing a Continuous Delivery (CI/CD) framework using AWS pipeline and GitLab pipeline.
  + Managed Kubernetes workloads with helm templates & helm file.
  + Leading team with on-shore and off-shore resources to deploy, maintain and support various DevOps tools in the organization.
  + Installing and configuring tools like Swagger Hub, Nexus, GitLab and SonarQube on AWS cloud.
  + Migrating applications database from On-premises to AWS for tools like Swagger Hub and Gitlab.
  + Involved in designing and deploying multiple applications using AWS cloud infrastructure focusing on high availability, fault tolerance and auto-scaling of the instances.
  + Migrated On-Premises application to AWS by creating and executing a migration plan, deployed EC2 instances in VPC, configured security groups, attached profiles and roles using AWS Cloud Formation templates.
  + Developed and deployed various lambda functions to create automation like data backup for Nexus and Swagger Hub and setup disaster recovery for Nexus.
  + Responsible for upgrading DevOps tools like Nexus and GitLab.
  + Implementing disaster recovery for various applications for high availability.
  + Designed and implemented robust ETL processes using Talend to extract, transform, and load data from diverse sources, ensuring data integrity and accuracy.
  + Developed end-to-end data integration solutions with Talend, enabling seamless connectivity between various systems and databases.
  + Configured and worked on static code quality and coverage tools like SonarQube. Onboard numerous applications into SonarQube and help maintain the SonarQube installation.
  + Built and implemented collaborative development environment using GitLab and integrated it with Jenkins. Set up Jenkins master and added the necessary plugins and adding more slaves to support scalability and Agility.
  + Managed the end-to-end lifecycle of Helm charts, from creation and packaging to repository management.
  + Collaborated with development and operations teams to integrate Helm charts into CI/CD pipelines, ensuring consistent and automated application deployments
  + Created custom monitors, alarms and notifications for EC2 hosts using Cloud Watch.
  + Created Buckets in AWS and stored files. Enabled Versioning and security for files store.
  + Create and execute automated and manual functional tests and smoke tests.
  + Implementing the monitoring and alerting for existing applications using code pipelines.
  + Integrate cloud watch monitoring with PagerDuty and responsible for resolving PagerDuty alerts and its corresponding SNOW incidents.
  + Creating technical documents for new implementation of applications.
  + Participated in Scrum ceremonies (Planning, Daily Scrum, Backlog refinement, Demos & Retrospectives)
  + On-call 24/7 support (AWS & on-prem) for tools like Nexus, SonarQube, GitLab, Jenkins and other legacy applications.
  + Support and maintain tools like Nexus, SonarQube, GitLab, Jenkins, AWS Pipelines.

**Environment:** GitLab, GitLab CI/CD, Nexus, SonarQube, Swagger Hub, Maven, Kubernetes, Jenkins, Chef, Docker, AWS, AWS Code Pipelines, IAM, S3, EC2, SNS, SQS, EKS, ECS, Lambda, Route53, Shell, Python, Open Shift, Helm charts, Talend, MySQL, Aurora PostgreSQL, Ansible, Helm, Ruby, Kaniko, Jira.

# Client: AXA Insurance, Chicago -IL June 2018 - November 2020

**Role: Sr. DevOps Engineer**

**Responsibilities:**

* Implementing new projects builds framework using Jenkins & Maven as build framework tools.
* Performed AWS Cloud administration managing EC2 instances, S3, SES and SNS services.
* Implementing a Continuous Delivery (CI/CD) pipelines using Jenkins, GitLab CI, AWS Code Pipelines.
* Integrated Code Build with AWS Code Pipeline for continuous delivery, automating the end-to-end software delivery process and reducing manual intervention.
* Supporting Local System Administrators to troubleshoot Configuration Management and Network issues.
* Worked on Setting up Chef Workstation, Working with Chef Cookbooks, Chef Recipes, Chef attributes.
* Created Python scripts to automate AWS S3 data upload/download and control instance operations with AWS API.
* Migrated Linux environment to AWS by creating and executing a migration plan, deployed EC2 instances in VPC, configured security groups &NACL's, attached profiles and roles using AWS Cloud Formation templates and Ansible modules.
* Strong experience on DevOps essential tools like GitLab, Nexus, SonarQube, Swagger Hub, Jenkins, Chef, Ansible, Docker, Kubernetes, Hudson, Maven and migrated VMWARE VM’s to AWS and Managed Services like EC2, S3, Route53, ELB, EBS.
* As a DevOps engineer used GIT, Maven, Jenkins, Chef and JIRA as tools for day to day build & release cycles for automated (CI/CD).
* Developed, build Continuous Integration/Continuous Deployment (CI/CD) pipelines using AWS Cloud Formation with Jenkins.
* Integrated GoLang applications with PostgreSQL, implementing optimizations that improved query performance.
* Designed and implemented RESTful APIs in GoLang, ensuring seamless integration with front-end applications.
* Manage AWS EC2 instances utilizing Auto-Scaling, Elastic Load Balancing and Glacier for our QA and UAT environments as well as infrastructure servers for GIT and Chef.
* Utilized AWS CloudFormation to define and manage ECS infrastructure as code, ensuring consistency and reproducibility across development, testing, and production environments.
* Collaborated with development teams to define and implement CI/CD pipelines for ECS deployments, automating the end-to-end software delivery process.
* Responsible for installation &configuration of Jenkins to support various Java builds and Jenkins plugins to automate continuous builds and publishing Docker images to the Nexus repository.
* Managed Kubernetes charts using Helm. Created reproducible builds of the Kubernetes applications, managed Kubernetes manifest files and Managed releases of Helm packages.
* Implemented monitoring and logging solutions for OpenShift clusters, using tools like Prometheus and Grafana.
* Designed and implemented Helm charts for Kubernetes-based microservices architecture.
* Trained staff on effective use of Jenkins, Docker, GitLab and Kubernetes
* Worked on various Docker components like Docker-Engine, Hub, Machine, Compose and Docker Registry.
* Designed and implemented data models and schemas in Snowflake, optimizing data storage and retrieval for efficient analytics.
* Implemented end-to-end data encryption in Snowflake, enhancing data security and ensuring the confidentiality of sensitive information.
* Developed scripts using Python and Shell for Automation of Activities and builds.
* Built Jenkins jobs to create AWS infrastructure from Git Hub repos containing Terraform code.
* Deployment of Cloud service including Jenkins and Nexus on Docker using Terraform.
* Monitored the Data Center-IT Infrastructure using Monitoring Tool Jira and automated the JIRA tasks using Jira cli and Perl.

**Environment:** GIT, AWS, Nexus, Maven, Jenkins, Chef, Docker, Shell, Python, Terraform, GoLang, Kubernetes, EKS, ECS, OpenShift, Helm charts, MySQL, Java, Nagios, Jira.

# Client: T Systems, New York- NY August 2016 – May 2018

**AWS DevOps Engineer**

**Responsibilities:**

* + Setup and build AWS infrastructure various resources VPC, EC2, S3, IAM, EBS, DynamoDB, Security Group,

Auto Scaling, EMR and RDS in Cloud Formation templates, Amazon ECR.

* + Setup Active Directory in the AWS Cloud that can be used to manage users, groups, computers and can enable you to join Amazon Ec2 instances to our domain easily.
  + Created S3 bucket policies based on the requirement using Terraform, thus restricting access to the bucket.
  + Setup ELK stack to aggregate logs from all your systems and applications, analyze these logs, and create visualizations for application and infrastructure monitoring, faster troubleshooting, security analytics.
  + Built and implemented collaborative development environment using Bitbucket and integrated it with Jenkins. Set up Jenkins master and added the necessary plugins and adding more slaves to support scalability and Agility.
  + Created and maintained various DevOps related tools for the team such as provisioning scripts, deployment Tools and staged virtual environments using Terraform.
  + Responsible for ensuring Continuous Delivery/Continuous Integration across all environments from POC to Postproduction and Production using Jenkins.
  + Implemented several Continuous Delivery Pipelines for different products using Jenkins and GitLab CI. Set upbuild pipelines in Jenkins by using various plugins like Maven plugin, EC2 plugin, Terraform, JDK, Twist locket.
  + Wrote python scripts for implementing Lambda functions. Created API as a front door application to access data or functionality from backend services running on EC2 and code running on Lambda or any web application.
  + Managed AWS EC2 instances utilizing Auto-Scaling, Elastic Load Balancing and Glacier for our environments.
  + Hands on Experience on Cloud automation, Containers and PaaS (cloud foundry) which helps to trigger the inherent originality of an individual using Terraform.
  + Played a role migrating existing AWS infrastructure to server less architecture (AWS Lambda, Kinesis) deployed via Terraform or AWS Cloud formation.
  + Converted existing Terraform modules that had version conflicts to utilize cloud-formation during Terraform deployments to enable more control or missing capabilities.
  + Implemented and maintained the monitoring and alerting of production and corporate servers/storage using AWS Cloud-watch.
  + Integrated ECS with AWS Secrets Manager to securely manage and retrieve sensitive information such as API keys and database credentials used by containerized applications.
  + Worked on the migration from VMware to AWS and used Terraform to automate the infrastructure in AWS by creating EC2, S3, RDS, VPC and Route 53.
  + Involved in designing and deploying multiple applications using AWS cloud infrastructure focusing on high availability, fault tolerance and auto-scaling of the instances.
  + Designed DevOps workflow for multiple applications by orchestrating Test, Build, Release and Deploy phases through various CI/CD pipelines using Git, Jenkins, Docker, Ansible & Cloud-formation tools.
  + Installed and configured Jenkins and created parameterized jobs to kickoff builds for different environments. Managed the team's source repository through Bitbucket and continuous integration system using Jenkins.
  + Branching and merging code lines in the GIT and resolved all the conflicts raised during the merger.

**Environment:** AWS, Jenkins, Terraform, ELK, EKS, ECS, EMR, Ec2, S3, IAM, VPC, WSo2, Snowflake, Apache, Python, Maven, Linux, Kubernetes, JIRA, KANBAN, Elastic Search, Log stash, Splunk, AWS Red-Shift.

# Client: CapGemini, Banglore- India December 2012 to August 2016

# DevOps Engineer

**Responsibilities:**

* + Created and maintained user accounts in RedHat Enterprise Linux (RHEL)and other operating systems.
  + Troubleshooting and maintaining of TCP/IP, Apache HTTP/HTTPS, SMTP and DNS applications.
  + Configuration of NIS, DNS, NFS, SENDMAIL, LDAP, TCP/IP, Send Mail, FTP, Remote access Apache Services on Linux &UNIX Environment.
  + Migrated different projects from Perforce to SVN.
  + Performing NIC bonding on Linux Systems for redundancy.
  + Diagnosed and resolved problems associated with DNS, DHCP, VPN, NFS, and Apache.
  + Created Bash/shell scripts to monitor system resources and system maintenance.
  + Create and Update Documentation for current Patching process. Coordinate with Lines of Business to schedule patching. Create Change request for Patching in Production environment.
  + Booted systems into different run levels for troubleshooting and system maintenance.
  + Network troubleshooting using traceroute, net stat, ipconfig, and snoop etc.
  + Expertise in Logical Volume Manager (LVM), Configured volume groups and logical volumes, extended logical volumes for file system growth needs using LVM commands.