**Sr DevOps Engineer**

**Alekhya**

**+1 5517751025**

[**peesarialekhya0@gmail.com**](mailto:peesarialekhya0@gmail.com)

**PROFESSIONAL SUMMARY**

* Around 9 years of experience in IT sector building and deploying applications by adopting DevOps practices such as Continuous Integration / Continuous Deployment automation Pipelines in runtime with various tools like Git, Maven, VSTS, Ansible, Chef, Docker, Kubernetes and managing cloud services with Azure & Oracle.
* Involved in Architect, build and maintain Highly Available secure multi-zone Azure cloud infrastructure utilizing Ansible, Chef and Puppet with Azure Cloud Formation and Jenkins for continuous integration.
* Configured Ansible to manage Azure environments and automate the build process for core AMIs used by all application deployments including Autoscaling, and CloudFormation scripts.
* Experienced in Administration, Troubleshooting, Tuning, Security, Backup, Recovery, and Upgrades of RHEL Linux.
* Created Azure Cloud formation templates on creating IAM Roles & total architecture deployment end to end (Creation of instances & its infrastructure).
* Hands-on experience in using Chef for automation, provisioning, and configuration management on enterprise Linux distributions, JFrog, and Nexus repository, by using ecosystem integrations with Azure, and Docker
* Expertise in Architecting and Implementing Azure Service Offering, such as Azure storage, Azure Active Directory (AD), Azure Resource Manager (ARM), Azure VMs, SQL Database, Azure Functions, Azure Monitor, and Azure Service Bus.
* Experience in migrating on-premises applications to Azure, configured VNETs & Subnets as per the project requirement, performed PowerShell scripting to do Patching, Imaging Deployments in Azure.
* Knowledge of Azure Site Recovery and Azure Backup Installed and Configured the Azure Backup agent and virtual machine backup, Enabled Azure Virtual machine backup from the Vault and configured the Azure Site Recovery (ASR).
* Experience in dealing with Windows Azure IaaS, Virtual Networks, Virtual Machines, Cloud Services, Resource Groups, Express Route, VPN, Load Balancing, Application Gateways, Auto-Scaling and Traffic Manager.
* Experience in writing Infrastructure as a code (IaC) in Terraform, created reusable Terraform modules in both Azure and Oracle cloud environments.
* Experience with Terraform key features such as Execution plans, Resource Graphs, Change Automation
* Involved in Design discussions of Tier 0 application implementations with Canary/ Blue Green Deployment in production on Kubernetes cluster in the rollback and rollout methods and services are packed by Helm charts.
* Worked on Kubernetes to manage containerized applications using its nodes, Configuring Maps, selector services and deployed application containers as Pods. To provide secured network connectivity to the containers we used Calico.
* Responsible for build and deployment automation using Docker, Kubernetes containers.
* Experience with Docker container life cycle management, Docker service management, Docker volumes, Docker networks etc. for running Tomcat, NodeJS, php containers.
* Experience on AKS service from Azure to manage the Kubernetes Services and Clusters
* Created pods and services using Master and Minion architecture of Kubernetes and developed microservices built by integrating Jenkins with Docker container using Cloudbees, Docker pipeline plugin, leveraging Python allowing for creation and maintenance build jobs and used Kubernetes to deploy services.
* Expertise with Docker images using a Docker file, worked on container snapshots, removing images, and managing Docker volumes. Orchestration of Docker images and Containers using Kubernetes by creating master and node.
* Implemented a CI/CD pipeline using Azure DevOps (VSTS, TFS) in both cloud and on-premises with GIT, MS Build, Docker, Maven along with Jenkins’s plugins.
* Experienced in working on DevOps/Agile operations process and tools area (Code review, unit test, Build & Release automation Environment, Incident and Change Management) including various tools.
* Developed automated processes for code builds and deployments using Jenkins, Ant, Maven, Sonar type Nexus, Shell Script, Perl, Java.

**TECHNICAL SKILLS**

|  |  |
| --- | --- |
| **Cloud Platforms(GCP)** | Amazon Web Services (AWS), Microsoft Azure, Google Could |
| **Versioning Tools** | Git, GitHub, Gitlab, CVS, SVN, Tortoise Git, ClearCase, TFS |
| **Scripting Languages** | Django, Flask. |
| **Programming**: | Shell, JSON, Bash, YAML, ARM, and Python |
| **Web/App Servers** | C#, .net, VB.NET, R Programming, Python, SQL, PostgreSQL |
| **Monitoring Tools** | Apache Tomcat, WebLogic, WebSphere, Restful |
| **Building Tools** | Splunk, Nagios, App D, ELK, Azure App Insights, Cloud Watch, Grafana |
| **Configuration** | Jenkins, Build forge, Cruise Control, SonarQube |
| **Management** | Chef, Terraform, Puppet, Ansible |
| **Databases**: | Microsoft SQL Server, MS Access, Teradata, Snowflake |
| **RPA Technologies** | Automation Anywhere, Oracle Digital Assistant |
| **Bug Tracking Tools** | Jira, HP Quality Center, IBM ClearQuest, Fisheye |
| **Networking** | SMTP, SNMP, ICMP, TCP/IP, FTP, TELNET, UDP, and RIP |

**PROFESSIONAL EXPERIENCE**

**Client : Discover, IL Aug 2022 – Present**

**Role : Sr DevOps Engineer**

**Project Description:** Design, develop, and maintain automated build, test, and deployment pipelines. Monitor and troubleshoot system performance and availability. Develop and maintain scripts for system automation. Implement and maintain source control system.

**Responsibilities:**

* Configured and automated the Jenkins Build jobs for Continuous Integration.
* Worked on creation of Multiple Servers in Linux machines using Chef on AWS.
* Created Maven shell scripts for build and release activities in QA, Staging, and Production environments.
* Implemented CI/CD process using Jenkins, Terraform and GKE on Google GCP shared VPC environment.
* Compiled microservices maven builds using Jenkins CI process and deployed using docker and Kubernetes to GCP environment namespace such as dev, QA, UAT and PROD.
* Configured and automated infrastructure components such as GCP’s Cloud Functions, Dataflow, GKE Cluster, GCS, BigQuery, Pub/Sub using terraform deployed via CI/CD pipeline.
* Performed functional and regression test of microservices web application using Selenium tool and integrated with Jenkins CI/CD pipeline.
* Implemented security controls based on data classification for all deployed GCP components using Customer managed Keys/KMS Encryption.
* Installed, Configured and automated the Jenkins Build jobs for Continuous Integration and AWS Deployment pipelines using various plugins like Jenkins EC2 plugin, AWS Code Deploy, AWS S3 and Jenkins CloudFormation plugin.
* Created and Maintained Chef Recipes and cookbooks to simplify and expedite deployment of applications and mitigate user error.
* Worked on Managing the Private Cloud Environment using Chef.
* Designing and implementing fully automated server build management, monitoring and deployment By Using Technologies like Chef.
* Created Python scripts to totally automate AWS services which includes web servers, ELB, CloudFront distribution, database, EC2 and database security groups, S3 bucket and application configuration, this script creates stacks, single servers, or joins web servers to stacks
* Used AWS Beanstalk for deploying and scaling web applications and services developed with Java, JSON, PHP, Node.js, Python, Ruby, and Docker on familiar servers such as Apache and IIS.
* Build server deployment on Cloud (EC2) servers with help of DevOps tools like Ansible.
* Created and maintained various DevOps related tools for the team such as provisioning scripts, deployment tools and staged virtual environments using Docker.
* Used Kubernetes during debugging. Leading up to production when multiple application builds must be tested for stability.
* Implemented Docker containers to create images of the applications and dynamically provision slaves to Jenkins CI/CD pipelines.
* Used GIT to manage Configuration Items (CI's)
* Worked on core AWS services such as setting up new server (EC2) instances in AWS, configuring security groups, and setting up Elastic IP, auto-scaling config, and cloud migration.
* Managed Linux and Windows virtual servers on EC2 using Chef Server and Familiar with Cloud watch, Elastic IP's and managing security groups for EC2 Servers. Hands-on experience with the AWS CLI and SDKs/API tools.
* Infrastructure automation on cloud using Terraform. Automated terraform template deployments via code commit and code build
* Used GIT to manage Configuration Items (CI's)
* Created Bitbucket repositories including merging and building feature branches.
* Participated in weekly release meetings with Technology stakeholders to identify and mitigate potential risks associated with the releases

**Environment: Python 3.6, Flask, REST API, MongoDB, Docker, Kubernetes, GitHub, Sonar, Jenkins.**

**Client : CitiBank - Warren, NJ, Sep 2019 – Jul 2022**

**Role : Cloud DevOps Engineer**

**Project Description:** Citi works tirelessly to provide consumers, corporations, governments, and institutions with a broad range of financial services and products. We strive to create the best outcomes for our clients and customers with financial ingenuity that leads to solutions that are simple, creative and responsible.

**Responsibilities:**

* Gathering the requirements from the clients about the existing applications to apply the security measures.
* Work on Auto Scaling, CloudWatch (monitoring), Azure Websites (app deployments), Azure storage(storage) and Azure blob (persistent disk storage).
* Used Chef for configuration management of hosted Instances within GCP. Configuring and Networking of Virtual Private Cloud (VPC).
* Worked on implementing backup methodologies by PowerShell Scripts for Azure Services like Azure SQL Database, Key Vault, Storage blobs, App Services etc.
* Experience on Azure, focusing on high-availability, fault tolerance, and auto-scaling using Terraform templates. Along with (CI/CD) with Azure Functions and Azure Code Pipeline.
* Infrastructure automation on cloud using Terraform. Automated terraform template deployments via code commit and code build
* Converted existing Azure Infrastructure to Serverless architecture (Azure Functions, Kinesis), deploying via Terraform and Cloud Formation templates.
* Created Terraform templates for provisioning virtual networks, Auto Scaling, APP Gateway and used Terraform graph to visualize execution plan using the graph command. Worked on Hashicorp Vault secret tool to provide security for credentials, tokens, and API keys.
* Experience in setting up and managing Kubernetes clusters by using Helm charts and using Flux for deploying any code changes made SCM tools like GitHub, Bitbucket on the Kubernetes cluster.
* Set-up databases in GCP using RDS, storage using S3 bucket and configuring instance backups to S3 bucket. prototype CI/CD system with GitLab on GKE utilizing Kubernetes and Docker for the runtime environment for the CI/CD systems to build and test and deploy.
* Improved the virtualization for the servers using Docker for the test environments and worked in the DevOps group running Jenkins in a Docker container with container slaves in Azure configuration.
* Developed automation system using PowerShell scripts and JSON templates to remediate the Azure services.
* Created builds and release pipelines in VSTS and done deployments using SPN (secure endpoint connection) for implementing CI/CD.
* Applied Key Management service (KMS) for encrypting data when residing in one environment and implementing SSL encryption during data transportation.
* Implemented automation for deployments by using YAML scripts for massive builds and releases.
* Created recommendations on how to duplicate a subset of on-premises machines to the Azure Infrastructure as a Service (IAAS) offering which will be used for disaster recovery. This analysis included the specifics to synchronize on-premises data with SQL Server and SharePoint instances hosted in VMs.
* Assist with configuration of Cloud Compute systems using OpenStack on Ubuntu, collaboration using Orchestration with Keystone, Kubernetes, and other functions within OpenStack.
* Managed servers on AWS cloud platform using Puppet, Ansible as configuration management tools. Writing JSON templates for Cloud formation and Ruby scripts for puppet automation and contributing to our repository in Bitbucket.
* Implemented and managed GitLab Instances, Runners along with its Admin Area to manage Projects, Pipelines, Kanban boards & created GitLab System Hooks for changing the existing information in servers.
* Assisted on monitoring servers and responding to event notifications (Service outages, Load Alerts etc.) using Nagios
* Strong Experienced in managing Ansible Playbooks with Ansible roles, high-level child-branch strategies inventory management, group variables, copy and remove files on remote systems using file module.
* Extensively worked on Ansible Playbooks, Inventory files, Vault feature to configure the servers, deploy software, encryption of data file & orchestrate continuous deployments with zero downtime rolling updates.
* Written Chef Recipes to automate our build/deployment process and do an overall process improvement to any manual process. Setup and maintain an automated environment using Chef Recipes within the AWS environment. Good understanding of Knife, Chef Bootstrap process etc.
* Used GIT version control to manage the source code and integrated with Jenkins to support build automation and integrated with JIRA to monitor the commits.
* Authentication flow, ADFS installation using Azure AD Connect, and involved in administrative tasks that include Build, Design, Deploy of Azure environment.
* Over saw the quality of Automated Build plans to help the Delivery process to NON-PROD and PROD Environments.
* Gained enough knowledge on Splunk architecture & various components (indexer, forwarder, search head, deployment server), Heavy & Universal forwarder, License model.

**Environment: Python 3.6, Flask, GCP, REST API, MongoDB, Docker, Kubernetes, GitHub, Sonar, Jenkins.**

**Client : Webster Bank, Waterbury, CT Apr 2017 – Aug 2019**

**Role : DevOps Engineer**

**Project Description:** Webster Bank reports provide in-depth analysis for evaluating business relationships, making decisions about important transactions, researching competitors and suppliers planning for sales calls. Worked on building applications using Spring Framework, Angular 5, Hibernate, REST.

**Responsibilities:**

* Designed an Architectural Diagram for different applications before migrating into amazon cloud for flexible, cost-effective, reliable, scalable, high-performance, and secured.
* Creating and Managing Virtual Machines in Windows Azure and setting up communication with the help of Endpoints. Configured Shared Access Signature (SAS) tokens and Storage Access Policies in Azure Cloud Infrastructure.
* Worked on google cloud platform (GCP) services like compute engine, cloud load balancing, cloud storage, cloud SQL, stack driver monitoring and cloud deployment manager.
* Setup GCP Firewall rules to allow or deny traffic to and from the VM's instances based on specified configuration and used GCP cloud CDN (content delivery network) to deliver content from GCP cache locations drastically improving user experience and latency.
* Deployment automation, AWS EC2 instance mirroring, WebLogic domain creations and several proprietary middleware installations.
* Configured and maintained the AWS Lambda function to trigger when a Jenkins build is kicked off, which internally gets stored on AWS S3 bucket for everybody to access.
* Worked with AWS EC2 Container Service plugin in Jenkins to automate Jenkins control- commute configuration by creating temporary slaves.
* Designed and Developed AWS Cloud infrastructure utilizing Ansible with AWS CloudFormation and Jenkins for Continuous Integration with high availability and secure multi-zones and automated end-to-end transit hub connectivity resource deployment in AWS via Terraform.
* Responsible for writing Terraform reusable modules and mentoring the peers in writing consumable code for terraform modules for provisioning and managing the different cloud provider infrastructure and to support deployment of applications across the organization
* Hands on experience in writing Terraform API modules to manage infrastructure, for automatic creation of RDS instances, VPCs, Autoscaling groups, Load balancers, SQS, S3 buckets
* Worked with Scheduling, deploying and managing Container replicas onto a node cluster using Kubernetes and worked with building Kubernetes run time environment of the CI/CD system to build, test and deploy in our open-source platform.
* Expertise with Docker images using a Docker file, worked on container snapshots, removing images, and managing Docker volumes. Orchestration of Docker images and Containers using Kubernetes by creating master and node.
* Worked on deployment automation of all the micro services to pull image from the private Docker registry and deploy to Docker swarm cluster using Ansible.
* Experience in installing, configuring, managing MYSQL, SQL Server, PostgreSQL, Oracle, MongoDB & Cassandra. Ability to build deployment, build scripts and automated solutions using scripting languages such as Bash, Shell, Ruby, and Python.
* Enhanced existing automated Build/Deploy process and architect the next generation centralized deployment processes using Octopus.
* Automated and tested the Build and deployment of the CRM product on Smoke, DEV Environment using Power shell and Octopus tool.
* Implemented CI/CD using azure pipeline and conducted Security Scans like Static and Dynamic Application testing at each layer of DevOps lifecycle to eliminate SQL Injections, Vulnerabilities present in the source code and converted the existing methodologies/workflows to DevSecOps model.
* Worked with development/testing, deployment, systems/infrastructure, and project teams to ensure continuous operation of build and test systems on Agile methodology.
* Expertise in writing Ansible Playbooks from scratch using YAML functions and utilizing setup and automate the CI/CD pipeline and deploy microservices. Provisioned load balancer, auto-scaling group and launch configuration for microservices using Ansible
* Implemented Chef Recipes for Deployment to build an internal Data Center Servers. Also re-used and modified the same Chef Recipes to create a Deployment directly into Amazon EC2 instances.
* Installed & used Chef Server enterprise on-premises, workstation and bootstrapped the nodes using Knife command. Created various Roles & Environments & used Chef Handlers for auto kick-off requirement jobs.
* Monitored Kubernetes clusters by integrating it with Prometheus using Helm Charts for collection of metrics and Grafana dashboard to view metrics.
* Monitored the servers and applications’ health status using Splunk, responded to alerts, and configured threshold settings. Also Configured Splunk to monitor Linux servers with Ansible automation.
* Communication with team members for both Ansible Core and Ansible Tower teams to clarify requirements and overcome obstacles.
* Experience in System Administration, System Builds, Server builds, Installs, Upgrades, Patches, Migration, Troubleshooting, Security, Backup, Disaster Recovery, Performance Monitoring and Fine-tuning on UNIX (Red Hat Linux) Systems.
* Worked in different software development life cycles using the methodologies like waterfall, agile etc. and have great experience with the tools like GITHUB, Jenkins, JIRA, Subversion (SVN) etc.

**Environment: Python 3.6, GCP, Django 2.0, REST API, HTML, CSS, Pandas, NumPy, Oracle DB, MongoDB, Teradata, GitHub, Rest API, Vault, HVAC, Snowflake DB.**

**Client : UPS, Wayne, NJ, Jan 2015 – Mar 2017**

**Role : DevOps Engineer**

**Project Description:** Activities related to AWS cloud, starting from VM Creation, adding storage, adding network, troubleshooting. Deploying, managing, and operating scalable, highly available, and fault tolerant systems on AWS.

**Responsibilities:**

* Selecting the appropriate AWS service based on compute, data, or security requirements. Estimating AWS usage costs and identifying operational cost control mechanisms.
* Implement systems that are highly available, scalable, and self-healing on the AWS platform.
* Created the AWS VPC network for the Installed Instances and configured the Security Groups and Elastic IP's accordingly
* Responsible for handling Integration and feature branches in GitHub for Continuous Deployment. Defined branching strategies and responsible for maintaining source control in SVN and GIT repositories.
* Involved in editing the existing ANT/MAVEN files in case of errors or changes in the project requirements.
* Worked on CI/CD tools Jenkins and Git version control system. Created and maintained Jenkins jobs using Maven and Ant.
* Configured Jenkins with GitHub so it will run tests every time new code is pushed using web hooks to ensure Jenkins to automate the code check-out process.
* Code Coverage-Installed SONAR on Jenkins server and configured with the build process for the code analysis process for better code quality and code metrics, and rapid feedback for development teams and managers.
* Wrote Ansible Playbooks in YAML to manage Configurations, Orchestrations, and deployments to remote machines.
* Deployed web applications using Chef by developing the cookbook.
* Worked with Docker and Kubernetes on multiple cloud providers, by helping developers build and containerize their application (CI/CD) to deploying either on public or private cloud.
* Deployed Kubernetes clusters and managed, scheduled container tasks on AWS infrastructure.
* Configured NAGIOS and CloudWatch monitoring tool to maintain the number of servers on different environments.
* Developed Python Scripts to automate various system tasks.

**Environment: Cloud Watch, Cloud Formation, EC2, Route53, S3, RDS, DynamoDB, AWS, GIT, Maven, ANT, Jenkins, Ansible, Docker, Kubernetes, Apache Tomcat, MYSQL, RHEL Ubuntu 14.04, Ubuntu 16.04.**