**Rabendra Shrestha**

**AWS/DevOps Engineer**

**Work Summary**

* Experienced in working on DevOps/Agile process and tools area Continuous Integration and Continuous Deployment (CI & CD), Cloud, Infrastructure as Code, Infrastructure Provisioning, Orchestration, Monitoring, Alerting and Service Level Dashboards.
* Expertise in Amazon AWS Cloud administration services like EC2, S3, EBS, VPC, ELB, SNS, RDS, IAM, Route 53, Auto scaling, CloudFront, Cloud Watch, Cloud Trail, Cloud Formation, OPS Work, Security Groups and EKS
* Working knowledge on AWS Security related issues such as IAM (User, Group, Role, Policies), Security Group, Active Directory, AWS Cognito, S3 policies
* Working with networking on VPC, Routing, VPN, AWS Direct Connect.
* Working with DNS like Route 53, Amazon API Gateway.
* Implemented the CI/CD pipeline as a code using Jenkins shared lib / Declarative dockerized multibranch pipeline with AWS EKS deployments.
* Installed and configured Nexus for artifacts repository. Published snapshot and release versioned artifacts into Nexus repository.
* Experienced in design, develop, and maintain automation scripts using Ansible and Python script for creating playbooks, roles, and modules to automate infrastructure provisioning, configuration management, and deployment processes.
* Configured CI/CD tools Jenkins, Maven, Ant, and GitHub repository for the continuous smooth build process and versioning.
* Worked on container-based deployments of Microservices using Docker and Kubernetes.
* Used Kubernetes to Container orchestrate the deployment, scaling and management of Docker Containers.
* Setup Nginx ingress controller to manage the ingress/egress rouging rules for Kubernetes.
* Having experience in traffic management, Security, Policy enforcement, Observability and extensibility using Istio.
* Good experience in Tetrate using Istio.
* Responsible for implementing containerized based application by using Elastic Kubernetes service (EKS)
* Virtualized the servers using the Docker & Kubernetes for the test environments and dev-environment needs.
* Used DTT scripts on Linux environment to run the queries and load the data to Redshift using Amazon Web Services (AWS).
* Worked with GitHub private repositories and plugin it to Jenkins
* Experience in adhoc commands and creating roles in Ansible for reusability and scalability.
* Provisioned highly available EC2 instances using Terraform and Coud formation and wrote new plugins to support new functionality in terraform.
* Understanding of software development lifecycle and thorough working experience in AGILE methodology.
* Experienced in configuring continuous and daily builds, creating Deployments, and publishing latest builds to development and QA teams.
* Coordinate with the Development/Test Teams to receive the correct versions of re-usable and dependent components for issuing/installing successful builds and making it ready for the Release on time.
* Maintain Git, Bitbucket repository, handling branching, Merging, tagging and release activities.
* Have a good understanding of databases like PostgreSQL, redis, MongoDB.
* Having expertise in all aspects of DevOps tools, clear understanding of the challenges facing Continuous Delivery / Continuous Integration practice and also familiar with QA and automation.
* Experience in AWS administration, Governance, Cost optimizations.
* Followed upon ITIL process, Using Service now handled Incidents, change requests
* Program Analytics and Reporting dashboards that contribute to the Product Version reviews, responsible for project testing progress and providing progress reports and analysis to Senior management.
* Having experience developing, maintaining and mentor Test strategies, Release process, CI/CD pipelines and Test environments, coordinate and execute test deliverables within teams.
* Having the experience to deal with support issues in production environments for critical systems.

**Education:**

**Bachelor of Science in Information Technology**

LBEF, Nepal afflicted under Sikkim Manipal University, India

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| **GITHUB** | **github.com/raibein** |

**Technical Skills**

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| **SDLC Methodologies** | AGILE/SCRUM methodologies, Waterfall |
| **Operating Systems** | Windows 11/10/2003/2008/2012, RHEL/CentOS, Ubuntu, Solaris, AIX, HP-UX |
| **Cloud/IaaS/SaaS/PaaS** | Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform, VMware, SAP On-premise, SAP BTP Subaccount. |
| **AWS Services** | EC2, EBS, ELB, IAM, RDS, S3, VPC, Route 53, CDN, security group, CloudTrail. |
| **SCM, Build, CI/CD Tools** | Git (Bitbucket, GitLab), SVN, Ant, Maven, PIP, NPM, Gradle, Jenkins, Bamboo, TeamCity |
| **Monitoring & Alert Tools** | CloudWatch, Datadog, PagerDuty, Prometheus, Grafana, Splunk, Nagios, ELK and Dynatrace. |
| **Containerization/ Orchestration** | Docker, Kubernetes, EKS, AKS, Vagrant and CloudFoundry. |
| **Database Servers** | Teradata, Oracle, MS SQL Server, MySQL and S/4 Hana. |
| **Ticketing Tools** | Atlassian JIRA, Redmine, Confluence. |
| **Scripting Languages** | PowerShell, Shell, Groovy, Python, and SQL |
| **Web Servers** | Apache Tomcat, Apache HTTP Server, Nginx, and IIS |
| **Infrastructure as Code** | Terraform, AWS CloudFormation, Ansible, Vagrant and Docker |
| **Build & integration tools** | ANT, MAVEN, PIP, NPM, BAMBOO, JENKINS. |
| **Languages/scripts** | JAVA, C, SHELL, BASH, PHP, PYTHON, CHEF, PHP, RUBY, PERL. |

**Professional Experience**

**Verizon, Irving, TX July 2023 – till date**

**AWS/DevOps Engineer**

**Responsibilities:**

* Proficient in core AWS services such as S3, EC2, ELB, EBS, Route53, VPC, auto scaling, and deployment services like Cloud Formation. Additionally, well-versed in security best practices encompassing IAM, CloudWatch, and CloudTrail.
* Demonstrated expertise in working with Terraform to orchestrate the components required for application deployment.
* Developed Terraform modules for various AWS IAAS & PAAS services and successfully deployed infrastructure across multiple environments for diverse applications.
* Executed AWS cloud deployments for web applications while implementing monitoring through CloudWatch and configuring VPC for network management.
* Held responsibility for on-call production support, including application deployments, upgrades, and round-the-clock application maintenance.
* Designed AWS Security Groups to function as virtual firewalls, controlling traffic to AWS EC2 instances.
* Utilized the AWS Simple Calculator for pricing estimation in corporate proposals.
* Configured Jenkins plugins to automate workflow and enhance the efficiency of build jobs. Deployed to AWS using Jenkins AWS CodeDeploy plugin. Implemented Groovy scripting in Jenkins Script Console for various tasks.
* Set up data sources for ingestion into AWS Glue, including connections to Amazon S3, RDS, and DynamoDB.
* Performed tuning, query optimization, and managed ETL pipelines to load and process data into Redshift. Oversaw Redshift clusters by monitoring health, configuring nodes, and scaling clusters as needed.
* Collaborated with the team lead and developers to implement features, refactor Java code for performance enhancements, and address application issues.
* Managed the Maven environment by configuring local, remote, and central repositories with necessary settings in Maven configuration files. Defined dependencies and plugins in the Maven POM.xml, integrating Maven with GIT for project-related tagging and deployment.
* Handled cluster maintenance, data migration between servers, and ELK stack upgrades.
* Proficient in creating Kubernetes manifest files and Helm packages for deploying, load balancing, scaling, and managing container applications across multiple namespace versions.
* Developed code using Java Spring and utilized REST services to connect with Oracle databases.
* Deployed KubeADM all-in-one using Ansible playbooks to create test environments for Docker image and Helm chart validation.
* Established and configured Vault clusters to provide secure and reliable secret management services. Ensured high availability, scalability, and disaster recovery planning.
* Integrated with various identity providers, including LDAP, Active Directory, and cloud-based identity services, to manage access to secrets. Tracked and monitored access and changes to the system.

**SAP (SAP / Concur), Czech Republic July 2018 – June 2023**

**DevOps Engineer**

**Responsibilities:**

* On-demand server provisioning by developing the jobs to create infrastructure from the cloud environment and writing automated jobs to create required servers for the developer.
* Optimize AWS cloud infrastructure to its highest efficiency by implementing cloud cost monitoring tools like Cloud Health.
* Manage Application Access to make sure no one is over privileged and collect Evidence (DSoD).
* Review the applications for Broken Authentication and Session Management Vulnerabilities
* Providing Developer Segregation of Duty (DSoD) Remediation Actions and Controls to findings
* Providing Container Security best practices.
* Integration of container security tool within the different phases of the container lifecycle
* Experience in Identifying the risks associated with containers and their mitigation strategies and controls.
* Configure HTML rendering with OWASP Markup Formatter to protect against Cross- Site Scripting (XSS) attacks.
* Configure cross-site request forgery (CSRF) Protection
* OWASP top 10 vulnerabilities mitigation and actions
* Implemented Blue/Green deployment to perform Updates and Rollback
* Troubleshooting cluster failures, application failures like the pods going down, or the pod not running
* Experience in writing Helm Chart and configure Hook to Install, Upgrade and Rollback Application
* Configured resource requirement for minimum amount of CPU / Memory requested by container.
* Setup Jenkins with installations and plugging.
* Install and configure Job Import Plugin to import Jenkins job from one server to the other (disaster recovery)
* Used Terraform in building infrastructure to host web/applications and RDS.
* infrastructure, using AWS and SAP On-premise as a cloud provider.
* Used GIT repo to commit and push codes to different branches as required after implementation through CI/CD pipeline following git security best practices.
* Create and work with load balancers to route the traffic to the application.
* Troubleshooting application issues in production environments for applications supported and maintaining the SLAs.
* Docker-compose spin everything up or tear it all down at once of multi-container docker applications.
* Slack provides immediate feedback to DEV teams after code check-in and also notification messages if the pipeline will fail or succeed.
* Create a scripted pipeline in Jenkins for Automating builds, deployment, and code quality checks.
* Setup Multibranch Pipeline job in Jenkins
* Created Dockerfile and automated Docker image creation using Jenkins and Docker
* Automated infrastructure provisioning on AWS using Terraform and Ansible
* Created nightly builds with integration to code quality tools such as SonarQube.
* Created quality gates in SonarQube dashboard and enforced in the pipeline to fail the builds when conditions not met.
* Config and integrate the Whitesource in Jenkins to check the vulnerabilities.
* Karma testing integration to Jenkins to test the client-side JavaScript for run, debug, and monitor coverage of the tests.
* Provision of EC2 instance using Terraform in AWS cloud.
* Automate infrastructure setup in Terraform using Jenkins pipeline.
* Ansible playbook for provisioning a new EC2 instance in AWS.
* Implemented the setup for master slave architecture to improve the performance of Jenkins.
* Set up Git repositories and SSH keys in GitHub for Agile teams.
* Install Jenkins and Tomcat on instances in AWS cloud.
* Customizing policies for EBS volumes and S3 storage
* Enabled S3 versioning to guard against unintended user actions and configured various life cycle management policies to archive objects in different types of S3 classes to minimize the cost.
* Provided Jenkins security best practices.
* Maintaining the source code management tool Gitlab project repositories and artifacts in Jfrog Artifactory.
* Migrating the code & artifacts to Kubernetes using Jenkins pipelines and maintaining the change management process using JIRA and Servicenow.
* Maintain Qlik sense infrastructure on AWS Cloud, rehydrate the application, and provide the application administration and support.

**Environment:** Linux/Unix, Windows, Docker, AWS, GitLab, GitHub, Ansible, JIRA, Confluence, Shell scripts, Bash, .Net, Maven, Apache Tomcat, Jenkins, Amazon S3 Buckets, EC2, EBS, CentOS, SonarQube, Maven, Splunk, Kubernetes, New Relic, Antifactory, Java, J2EE, Nginx, Whitesource, Karma

**Decision Trust, Nepal Jan 2015 – May 2018**

**DevOps Engineer**

**Responsibilities:**

* Manage source control repository in GIT– controlling and monitoring Source code & create tags for builds.
* Creation of new version-controlled branches, merging branches, resolving merge conflicts in Git.
* Participated in the release cycle of the product which involves environments like Development, UAT and Production.
* Create continuous integration/deployment by integrating and improving client infrastructure and build pipelines.
* Configuring Jenkins with GIT and scheduled jobs using Poll SCM option.
* Created and setup automated nightly build environment for Java projects using Maven and Jenkins.
* Created and maintained documentation of build and release process and application configuration to comply with audit requirements and industry best practices.
* Worked with Development Team Leads and testing team to establish a build schedule, execute software builds, and troubleshoot build failures, if any.
* Designed and implemented automation deployment using Jenkins to promote major releases, monthly releases, and patches to preproduction environment.
* Building the source code using Maven and integrate same on Jenkins.
* Responsible for weekly and daily work checks and backups.
* Perform code merges and product integration builds.
* Manage merges between project branches and streams and advising developers regarding best practices.
* Tracking artifacts build and deployment information on JFrog Artifactory.
* Worked on containerization tool Docker to generate docker images for RC builds and push those images to docker Registry.
* Deployment of application into different environments using Ansible Playbooks.
* Perform code merges and product integration builds.
* Launching Amazon EC2 Cloud Instances using Amazon Web Services (Linux/ Ubuntu) and configuring launched instances with respect to specific applications.
* Implemented Iac (Infrastructure as a code) using cloud formation template for managing infrastructure easy, reliable, and rapid.
* Written and implemented Templates for AWS infrastructure as a code using cloud formation templates to build test, staging and production environments.
* Designed AWS Cloud Formation templates to create custom sized VPC, subnets, NAT to ensure successful deployment of Web applications and database templates.
* Configured Elastic Load Balancers (ELB) with EC2 Auto Scaling groups.
* AWS EC2 and Cloud watch services. CI/CD pipeline management through Jenkins. Automation of manual tasks using Shell scripting.
* Created docker swarm cluster with AWS EC2 autoscaling instances for achieving high availability.
* Used Kubernetes for cluster management that runs Docker containerized applications in a cluster of EC2 instances in Linux Environment.
* Implemented Kubernetes to deploy scale, load balance, scale and manage Docker containers with multiple names spaced versions.
* Created Clusters using Kubernetes and worked on creating many pods, replication controllers, services, deployments, labels, health checks and ingress by writing YAML files.
* Scheduled, deployed and managed container replicas onto a node cluster using Kubernetes.
* Experienced in working in Data centers with 24X7 Production and On-Call Environments

**Environment:** AWS, Ansible, CICD (Jenkins), Docker, Maven, Linux, Red Hat, GIT, Cloud

Watch, Python, Shell Scripting, JSON, AEM, WebSphere, Splunk, Tomcat