**Arati Khadka A blue sign with white text

Description automatically generated with medium confidence**

**Cloud Engineer/ SRE**

[**Aratikhadka787@gmail.com**](mailto:Aratikhadka787@gmail.com)

**469-299-9341**

**Professional Summary**

AWS Certified Solution Architect Associate with 7+ years of IT experience in the areas of developing, deploying, managing, and maintaining software applications in different environments. Extensive experience in AWS, Ansible configuration management, CI/CD automation, Container Orchestration, Python Scripting, Monitoring Application Performance to increase their reliability and many more DevOps processes. Highly motivated and team player with excellent communication and problem-solving skills.

**Summary**

* Experienced AWS/DevOps engineer in AWS, DevOps, Build/Release Management, Configuration Management tools, GIT and Containerization skill**.**
* Experience in assigning infrastructure to an Auto Scaling group to scale-up and scale-down instances during heavy and low traffic and creating IAM roles (Identity Access management) and setting up policies.
* Experience in creating a very secure infrastructure in AWS by configuring VPC (virtual private network), IG (internet Gateway), Routing tables, ELB (Elastic Load Balancer), NACL (Network Access Control List), and Subnets (Public and Private subnets).
* Configured and maintained Jenkins to implement the CI process and integrated the tool with Ant and Maven to schedule the builds.
* Worked in all areas of Jenkins setting up CI for new branches, build automation, plugin management and securing Jenkins and setting up master/slave configurations.
* Expertise in SCM, AWS, Azure, SDLC, CI/CD, Cloud Computing and Build/Release Management and Agile Methodologies.
* Experienced in configuring Cloud platforms such as Virtual Networks Multi-site, Cross-site, VMs, Azure AD, Load Balancers, Azure SQL, Cloud Services, etc.
* Experience in setting up the Chef Workstation, Chef Repo as well as Chef Nodes from scratch.
* Developed Chef Recipes to configure, deploy and maintain software components of the existing infrastructure.
* Expert in maintaining and using Ansible server and workstation to manage and configure nodes.
* Proficient in handling and analyzing large-scale datasets using big data technologies such as Hadoop, Spark, and NoSQL databases.
* Created Ansible playbooks which are the entry point for Ansible provisioning, where the automation is defined through tasks using YAML format and run Ansible Scripts to depending on provision to Dev servers. Converted a slow and manual procedure to dynamic API generated procedures in Ansible.
* Experienced in working on several Docker components like Docker Engine, Hub, Machine, creating Docker images, Compose, Docker Registry and handling multiple images primarily for middleware installations and domain configurations.
* 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 plugins to support new functionality in Terraform.
* Setting up SWARM using Kubernetes and deployed containers using Docker inside the application. Used Kubernetes to manage containerized applications using its nodes, Config Maps, selector, Services, and deployed application containers as Pods.
* Developed scripts using PERL and BATCH files for Automation of Activities and builds, multiple Scripting languages like Bash, Python, Ruby, Shell, PowerShell.

**Technical Skills**

|  |  |
| --- | --- |
| **Cloud Computing** | EC2, ELB, VPC, RDS, IAM, Cloud formation, S3, Cloud Watch, Cloud Trial, SNS, SQS, SWF, EBS, EMR, Dynamo DB, Elastic Beanstalk, Route53. |
| **Azure** | Azure key vault, App Services, ARM Templates, Storage Blobs, VSTS, VPN gateway. |
| **Monitoring Tools** | Nagios, Grafana, Splunk and AWS CloudWatch. |
| **Configuration Management tools** | Chef and Ansible. |
| **CI/CD Tools** | Jenkins, Circle CI. |
| **Scripting** | Java, JavaScript, NodeJS, Power shell, Python, Bash |
| **Containerization** | Docker, Docker Swarm, Kubernetes |
| **Version Control Tools** | GIT, SVN and Bit-Buckets |
| **Databases** | Oracle, MS SQL Server, MySQL, NoSQL, PostgreSQL. |
| **Build tools** | Ant, Maven, Gradle. |
| **Virtualization** | Oracle Virtual Box, VMware. |

**Education**

* **Bachelor’s in computer science at Tribhuvan University, Kathmandu, Nepal**

**(Graduated 2016)**

**Certification**

**AWS Solutions Architect Associate**

**Validation Number:** VY28KQHCTJQ110CV

**Validate at:** <https://aws.amazon.com/verification>

**Professional Experience**

**Bank of America, Plano, Texas**

**Azure Cloud Engineer/SRE**

**Jan 2023 – Present**

**Responsibilities:**

* Created and managed Azure DevOps pipelines to automate the deployment of applications and infrastructure.
* Expertise in integrating Maven with Continuous Integration (CI) tools such as Jenkins, GitLab CI/CD, and Travis CI for automated builds.
* Experience in troubleshooting Maven build issues and optimizing build times.
* Collaborated with development and operations teams to ensure efficient and effective delivery of software.
* Implemented Infrastructure as Code (IaC) using Terraform to automate the deployment of Azure resources.
* Created custom scripts using PowerShell to automate routine tasks and improve system efficiency.
* Created branching and tagging strategies to maintain the source code in the Bitbucket repository and coordinate with developers with establishing and applying appropriate branching, naming conventions using GIT source control for Java and .Net applications.
* Configured monitoring and alerting for Azure resources using Azure Monitor and Log Analytics.
* Designed and engineered fully automated capabilities for hybrid cloud platforms, ensuring scalability and supportability.
* Strong understanding of CAF governance models, including resource organization, role-based access control (RBAC), and Azure Policy implementation to ensure compliance and security standards
* Experienced in shell scripting (Bash) for automation of routine tasks and system management.
* Deep understanding of Linux internals, including process management, file systems, networking.
* Collaborated with cross-functional teams to deliver scalable IaaS and PaaS platforms for stateless and stateful workloads, leveraging Kubernetes and serverless technologies.
* Worked on designing, deploying, and managing microservices architectures.
* Experience in using continuous integration and continuous deployment (CI/CD) pipelines for automating the deployment process of microservices.
* Experience in implementing fault-tolerant and scalable microservices architectures.
* Proficient in scripting languages like Bash, Python, or Ruby for automating routine tasks in microservices environments.
* Integrated Spark with continuous integration/continuous deployment (CI/CD) pipelines for streamlined development and deployment processes.
* Partnered with Risk, Information Security, and compliance teams to implement enterprise controls, policies, and industry best practices for hybrid cloud platforms.
* Developed, tested, and maintained hybrid cloud platforms, providing escalation support to Operations and SRE teams and customers as needed.
* Implemented CI/CD pipelines using Terraform, Ansible, Git, and Jenkins, reducing deployment time.
* Managed multi-tenant container orchestration platforms like Docker and ECS, ensuring high availability and scalability of applications.
* Designed and implemented disaster recovery strategies to ensure high availability and business continuity in case of system failures or disasters.
* Conducted regular disaster recovery drills and simulations to test the effectiveness of recovery plans and identify areas for improvement.
* Utilized monitoring tools such as Splunk, New Relic, and Datadog to proactively identify and resolve system issues, resulting in improved system reliability.
* Developed and maintained scripts in Python, SQL, Java, and Bash for automation purposes, streamlining repetitive tasks and increasing team productivity.
* Applied Machine Learning frameworks and technologies to develop predictive models for business insights, resulting improvement in decision-making processes.
* Collaborated within Agile development teams, participating in daily stand-ups, sprint planning, and retrospectives, contributing to the timely delivery of high-quality software products.
* Actively involved in the adoption and implementation of Agile development practices, fostering a culture of continuous improvement and adaptability within the team.
* Enabled teams/applications with Continuous Integration/Continuous Development (CI/CD) capabilities and collaborated with technical stakeholders for efficient functioning of CI/CD pipelines.
* Hands-on experience with setting up and configuring OpenShift clusters in both on-premises and cloud environments.
* Strong understanding of Kubernetes concepts like namespaces, deployments, services, and ingress controllers as applied in OpenShift.
* Implemented security best practices within OpenShift clusters, including role-based access control (RBAC) and network policies.
* Collaborated with development and DevOps teams to streamline CI/CD pipelines and ensure seamless artifact deployment.
* Configured and maintained Ansible Tower environment including setup and configuration of Tower nodes and database.
* Worked with Ansible Tower APIs to create custom scripts and tools for automation and reporting.
* Implemented security measures such as network security groups, firewall rules, and RBAC to ensure the security of the infrastructure.
* Troubleshooting issues related to SonarQube setup or analysis process.
* Managed Artifactory as a central artifact repository for storing binaries, packages, and dependencies.
* Worked in Agile/Scrum methodology to deliver features and enhancements on time and within budget.
* Experience in implementing Azure services such as Azure Active Directory (AD), Azure storage, Azure cloud services, IIS, Azure Functions.
* Configured Splunk to collect and index data from various sources such as servers, applications, and network devices.
* Collaborated with cross-functional teams to identify requirements and design solutions to meet business needs using Splunk.
* Implemented containerization using Docker and Kubernetes, reducing resource usage, and enabling faster deployments.
* Experience in designing and implementing data pipelines for efficient data ingestion, processing, and storage.
* Designed and implemented backup and recovery strategies for MSSQL databases using tools like SQL Server Management Studio (SSMS) and PowerShell.
* Managed databases using SQL, including designing database schema, defining data types, implementing constraints, and used SQL queries to extract data and analyze it for various purposes such as reporting, monitoring, and troubleshooting.
* Monitored and logged system performance using tools such as Prometheus and ELK stack, providing insights into system performance and identifying issues before they impact users.
* Configured cloud environments in Azure, using services such Azure Storage.
* Created Docker images using a Docker file, worked on Docker container snapshots, removing images, and managing Docker volumes and used Kubernetes for orchestration.
* Worked with Scheduling, deploying, and managing container replicas onto a node cluster using Kubernetes.
* Strong troubleshooting skills to diagnose and resolve system and application issues on Linux servers.
* Continuous learning and staying updated with new technologies and best practices in Linux and DevOps methodologies.

**Citi Bank, Irving, Texas**

**Aws Cloud Engineer Nov 2020 – Dec 2022**

**Responsibilities:**

* Maintained the user accounts (IAM), RDS, Route 53, VPC, RDB, Dynamo DB, Lambda, SES, SQS and SNS services in AWS cloud.
* Migrated the application which is hosted on EC2 to a serverless framework using AWS lambda & API Gateway.
* Knowledge of integrating OpenShift with other tools and platforms such as Jenkins, GitLab, and AWS/Azure for hybrid cloud deployments.
* Strong understanding of OpenShift's role-based access control (RBAC) for securing applications and resources.
* Worked with Azure Resource Manager (ARM) to deploy update and delete multiple Azure resources as well as migrating on-premises resources to Azure with Azure Site Recovery (ASR), and Azure backups.
* Worked on AWS Elastic load balancing (ELB) for deploying applications in high availability and AWS Auto Scaling for providing high availability of applications and EC2 instances based on the load of applications.
* Designed AWS Cloud Formation templates to create custom sized VPC, subnets, NAT to ensure successful deployment of Web applications and database templates.
* Setup and build AWS infrastructure various resources, VPC EC2, S3, IAM, EBS, Security Group, Auto Scaling, and RDS in Cloud Formation.
* Strong troubleshooting skills for diagnosing S3-related issues and implementing solutions to ensure high availability and durability of stored data.
* Proven ability to design and implement backup and disaster recovery strategies using S3 as a central storage repository.
* Integrated Artifactory with CI/CD pipelines (e.g., Jenkins, GitLab CI/CD) to automate artifact management.
* Configured and maintained Artifactory instances for multiple environments (development, testing, production).
* Experienced in configuring AWS WAF(web application firewall) to protect web applications from malicious traffic.
* Automated routine tasks and workflows using scripting languages like Bash or Python, enhancing efficiency in Hadoop cluster management.
* Worked on core AWS services such as setting up EC2 instances in AWS, configuring security groups, and setting up Elastic IP's and Configured Elastic Load Balancers (ELB) with EC2 Auto scaling groups.
* Configured and automated the Jenkins Build jobs for Continuous Integration and Continuous Deployment (CI/CD).
* Created Datadog dashboards for various applications and monitored real-time and historical metrics.
* Constructed and installed servers through Azure Resource Manager (Arm) Templates or Azure Portal.
* Building/Maintaining Docker container clusters managed by Kubernetes, Linux, Bash, GIT, Docker.
* Installed, configured, and maintained DNS, FTP, TCP/IP, and Samba on Red Hat Linux
* Implemented Continuous Delivery framework using Jenkins, Maven, and Ansible in Linux/ UNIX environment.
* Knowledge in Terraform as infrastructure providers, build images using Packer.
* Developed Python scripting for automaton purpose and built artifacts (war and ear) from Sonatype Nexus Artifactory are deployed into a Apache Tomcat app server using Shell Scripts.
* Deployment (CI/CD) tool on Linux machines along with adding/updating plugins such as Git, Maven, ANT, Sona type Nexus, Bitbucket and Ansible.
* Configured and interpreted static code analysis reports.
* Working knowledge in deploying CI/CD system using Azure DevOps on Kubernetes container environment and for the runtime environment of CI/CD system to build, test and Deployment we have utilized Kubernetes and Docker.
* Used Azure DevOps services such as Azure Repos, Azure Boards and Azure Test Plans to plan work and collaborate on code development, built and deployed application.
* Worked in setting up Azure Virtual Appliances (VMs) to meet security requirements as software-based appliance functions.
* Configured Jenkins pipeline jobs workflows to improve reusability for building pipelines.
* Configured and managed Apache Web Server on Linux for web-based applications using REST/SOAP, Apache, and WebLogic.

**CVS Health, Woonsocket, RI**

**Site Reliability Engineer Oct 2018 – Nov 2020**

**Responsibilities:**

* Experience in defining the AWS Security Groups which function as virtual firewalls that control the allowed traffic to reach the EC2 Instances.
* Use AWS Lambda for deploying and scaling web applications and services developed with NodeJS and Python
* Participate in setting-up Automation Failover and Failback between different zones.
* Build scripts using ANT, Gradle and MAVEN build tools in Jenkins, Sonar to move from one environment to other environments.
* Write templates for AWS infrastructure as a code using Terraform to build staging and production environments.
* Designing, configuring, maintaining, and managing the entire AWS private infrastructures which includes EC2, Auto-Scaling groups, Application Load Balancer, S3, Lambda, CloudWatch, RDS, VPC, SNS, SQS, CloudFront, CloudTrail, IAM for large scale mission critical applications.
* Launch EC2 instances and involve in AWS RDS, S3, Load Balancing, IAM, VPC, Cloud Formation, Lambda and Cloud Watch.
* Work on estimating costs and identify cost control mechanisms.
* Lift and shift of an existing on-premises application to AWS, identifying appropriate use of AWS architectural best practices.  
  Proficient in using OpenShift Operators for automating application management tasks.
* Knowledge of integrating OpenShift with other tools and platforms such as Jenkins, and AWS/Azure for hybrid cloud deployments.
* Experience in implementing high availability and disaster recovery solutions using OpenShift's features.
* Collaborated with cross-functional teams including developers, system administrators, and network engineers to define recovery objectives, recovery time objectives (RTO), and recovery point objectives (RPO).
* Documented disaster recovery plans, procedures, and configurations to ensure consistency and facilitate knowledge transfer within the team.
* Wrote scripts on Python, shell and bash and modified existing scripts on automations.
* Wrote deploy hooks/scripts for code deploy to deploy code from Git using Jenkins to AWS EC2 instances and have written multiple Jenkins jobs in bash.
* Created and hardened an Amazon Machine Image (AMI) and installed google authenticator.
* Designed, configured, and deployed Amazon Web Services for a multitude of applications utilizing the Amazon Web Services focusing on high-availability, fault tolerance and auto-scaling.
* Wrote Docker files and created images out of it as well as pulling and pushing Docker images to various environments from Docker Hub Registry.
* Understanding Linux security principles and best practices for securing servers and applications.
* Experience in deploying and maintaining applications on Linux-based infrastructure.
* Deployed Dockized Applications in Kubernetes cluster using Helm Charts.
* Worked on setting-up continuous deployment pipelines using Jenkins across multiple Kubernetes clusters to stress the clusters with new infrastructure tools for Kubernetes in development environments. Automated these pipelines through Jenkins using pipeline script.
* Installed Jenkins on AWS EC2 instance and configured to run all the application cron jobs to run through Jenkins’s server.
* Worked with GIT to store the code and integrated it into Ansible Tower to deploy the playbooks.
* Worked on the concept of GIT cloning to create GIT repository.
* Developed AWS Cloud Formation templates to create custom sized VPC, subnets, NAT, EC2 instances, ELB, Security Groups.
* Coordinated/assisted developers with establishing and applying appropriate branching, labeling/naming conventions using GIT source control.
* Used Nagios as an infrastructure monitoring tool to identify and resolve infrastructure problems before they affect critical processes.
* Used Perl, shell, Ruby, Python scripting for Applications, Backups, and scheduling.
* Supported 24x7 production computing environments and provided on-call and weekend support.

**Deloitte, Dallas, Texas**

**DevOps Cloud Engineer Aug 2016 – Oct 2018**

**Responsibilities:**

* Create S3 buckets and manage policies for S3 buckets and Utilized S3 bucket and Glacier for storage and backup on AWS.
* Create custom Amazon Machine Images (AMIs) to automate server build for auto scaling during peak times. Also, deploy applications in AWS using Elastic Beanstalk.
* Implemented IAM policies and roles to manage access control across AWS services, ensuring the principle of least privilege.
* Use tools like Visual Studio Community Edition, Visual Studio Code, Power Shell ISE, and SQL Server Management Studio.
* Work on implementation of SSL /TLS implementation.
* Configure Elasticsearch, Logstash and Kibana (ELK) for log analytics, full text search, application monitoring in integration with AWS Lambda and CloudWatch.
* Migration to Amazon Web Services & cloud technologies from their current datacenter and virtual environments.
* Experience in configuring and maintaining web servers like Apache and Nginx on Linux platforms.
* Familiarity with Linux package management systems like APT, YUM, and RPM for software installation and updates
* Create CloudFormation and Terraform templates and deploy AWS resources like EC2, Autoscaling, EBS, and S3.
* Implement Serverless architecture using AWS Lambda with Amazon S3
* Responsible for defining Branching & Merging strategy, check-in policies, improving code quality, automated Gated Check-ins, defining backup and archival plans.
* Create, manage, and perform container-based deployments using Docker images containing Middleware and Applications together.
* Enforce Test Driven Development (TDD) approach for writing application codes.
* Created different stages, Published the Artifacts, Copied the files and archived the files.
* Similarly, when the Master branch of GitHub is updated, it directly triggers staging, where you can verify all the developments before it moves to production.
* Created different pipelines, one for the cloud deployment, another for the backend data& one for Data flow.
* Wrote ARM templates and PowerShell Scripts, to automate the pipelines as a code.
* Performed Integrated delivery using Jenkins. Done Branching, Tagging, Release Activities on Version Control Tools GitHub.
* Worked in an Agile methodology model, using Jira as the project management tool.
* Install, Configure, and automate Jenkins Build jobs for Continuous Integration and AWS Deployment pipelines using various plugins like Jenkins EC2 plug-in and Jenkins Cloud Formation plugin.
* Automated configuration management and deployments using Ansible playbooks and Yaml for resource declaration. And creating roles and updating Playbooks to provision servers by using Ansible.
* Worked on monitoring servers using Nagios and Splunk using logging tools like ELK.
* Coordinate/assist developers with establishing and applying appropriate branching, labeling/naming conventions.

**AIG, Fort Worth, Texas**

**Linux Engineer Feb 2016 – Aug 2016**

* Installation, Configuration, Upgradation, and administration of Sun Solaris, Redhat Linux.
* Jumpstart & Kick-start OS integration, DDNS, DHCP, SMTP, Samba, NFS, FTP, SSH, LDAP integration.
* Network traffic control, IPSec, Quos, VLAN, Proxy, Radius integration on Cisco Hardware via Red hat Linux Software.
* Responsible for configuring and managing Squid server in Linux.
* Configuration and Administration of NIS environment.
* Managing file systems and disk management using Solstice Disksuite.
* Managing systems routine backup, scheduling jobs like disabling and enabling cron jobs, enabling system logging, network logging of servers for maintenance, performance tuning, testing.
* Provisioned, managed, and secured desktops in Cloud.
* Managed the Version control systems GIT and GITHUB.
* Created Docker images using Docker file from scratch and worked on Docker container snapshots, removing images, and managing Docker volumes customized and modified base images from existing environment configurations and maintain the image repos for development teams.
* Provided end-user training for all Subversion (SVN) users to effectively use the tool.
* Generated deployment profiles (jar, war, ear) using Jenkins.
* Configured Git build scripts using MAVEN build tools with Jenkins and scheduled jobs using POLL SCM option and integrated to automate the code checkout process.
* Generate reports in SSRS and support the SSRS platform.
* Setup Site scope monitoring for applications.
* Document and pushdown task to Service desk team.