**Alekhya K**

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**SUMMARY**:

* Working professional with 10+ years of experience in DevOps and cloud management with technologies such as configuration management, build management, deployment, architecture management, release management domains with extensive knowledge on system administration implementation.
* Extensive experience in implementation of cloud with cloud service such as AWS add infrastructure automation, version control systems, quality assurance, release management along with containerization using continuous integration add continuous deployment.
* Experience in AWS platform and its features including IAM, EC2, EBS, VPC, RDS, Cloud Watch, Cloud Trail, Cloud Formation AWS Configuration, Autoscaling, Cloud Front, S3, SQS, SNS, Lambda and Route53 .
* Worked on architecture creation off various components of AWS by using different services such as **EC2, EBS, VPC,RDS, ELB, S3, cloud watch, simple notification service (SNS), simple query service(SQS) call more cloud formation, IAM, dynamo DB, ECS and EKS.**
* Experienced with Terraform key features such as Infrastructure as code, Execution plans, Resource Graphs, Change Automation. Collaborate in the automation of **AWS** infrastructure via Terraform and **JENKINS** -services configuration via Chef Cookbooks.
* Implemented a 'server less' architecture using API Gateway, Lambda, and Dynamo DB and deployed AWS Lambda code from Amazon S3 buckets. Created a Lambda Deployment function, and configured it to receive events from your S3 bucket
* Extensively used to develop strategy in various DevOps tools like **SUBVERSION, GIT, GITHUB, MAVEN, JENKINS, DOCKER, KUBERNETES, NAGIOS** Along with implementing them in cloud environment like **AWS**.
* Experienced in using larger environments **ANSIBLE** for the use of configuration management and ensure scalability across multiple Linux environment.
* Experienced in Using **ANT** and **PYTHON** scripts to automate the Build and Deployment process.
* Configured **JENKINS** as a CI engine to build and promote applications to **QA, UAT** and Staging to **LINUX** environments.
* Hands on with **PUPPET** Manifest files to deploy automated tasks to many servers at once.
* Extensive used build and automation tools like **ANT** and **MAVEN** for building the project and deploying the artifacts which were generated from the source code in the process.
* Developed **PYTHON** script that allows access tokens of artifactory to send images from **DOCKER** registry.
* Experience with containerization of applications using **DOCKER**.
* Monitored applications running on the **AWS** by using Cloud watch.
* Experience using **NAGIOS** monitoring system and different Bug Tracking Tools like Remedy, Jira, ServiceNow and Clear Quest. Designed, deployed, and coordinated with different teams to enhance ELK platform and took ownership of new technologies.
* Used **Docker** and **Kubernetes** as the build, test, and deployment runtime environments for the CI/CD system
* Knowledge of testing frameworks like **JUNIT** and **SELENIUM** as well as defect management solutions like **REMEDY, JIRA, and SERVICE NOW.** Monitoring using **ANSIBLE** Playbooks and has integrated ANSIBLE with JENKINS.
* Configured, Managed Monitoring Tools such as **NAGIOS, SPLUNK** for Resource Monitoring, Network Monitoring, Log Trace Monitoring.
* Experienced in writing Shell Scripts in Bash and Corn tab in **LINUX** to automate the tasks.
* Good understanding of the principles and best practices of Software Configuration Management (**SCM**) in **Agile, scrum,** and **Waterfall methodologies**.

**TECHNICAL SKILLS:**

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| --- | --- |
| **Operating Systems** | Windows, UNIX, Ubuntu, Redhat/CentOS Linux. |
| **AWS** | EC2, VPC, EBS, AMI, SNS, RDS, EBS, ELB, Redshift, Elastic search, Cloud Watch, Cloud Formation, Cloud-Pass, Cloud Trail, SNS, SQS, IAM |
| **CM Tools** | Chef, Puppet, Ansible |
| **Automation Tools** | Jenkins, Bamboo |
| **Build Tools** | ANT, MAVEN |
| **Continuous Deployment** | Artifactory, Nexus, Jboss |
| **Version Control Tools** | Subversion, Git, TFS, Bit Bucket |
| **Monitoring Tools** | Nagios, Splunk and cloud watch |
| **Virtualization** | Vagrant, Docker, ESXi, Kubernetes, virtual Box and VMware. |
| **Scripting** | Shell, Bash, Perl, Ruby and Python. |
| **Container Management Tools** | Docker, kubernetes, Mesos, Aws ECS |
| **Operating Systems** | Cent OS, Ubuntu, RHEL and Windows. |
| **Programming languages** | C++, Python, XML, HTML, Shell Scripting, YAML, Ruby and PowerShell |
| **Web/Application Servers** | Web logic, Web sphere, Apache Tomcat, Nginx |
| **Databases** | My SQL, MS SQL, Oracle, PostgreSql, Dynamo DB, Cassandra |
| **Bug Tracking Tools** | JIRA, Remedy, HP Quality Center, Bugzilla |

**PROFESSIONAL EXPERIENCE:**

**Client: Lending Tree - Des Moines, IA June 2022 – Till date**

**Role: Sr. DevOps Consultant**

**Responsibilities:**

* Practical knowledge of setting up the AWS network architecture **with VPC, Subnets, Internet gateways, NAT gateways, and Route tables.**
* Using Ansible playbooks and AWS services including E**C2, S3, Route53, Cloudwatch, Lambda, and CDK,** managed live applications.
* worked on the Amazon **IAM** service to control user addition, resource management for various users, and rights granting.
* Used **Gitlab** for version control and to run and deploy CI/CD pipelines.
* Extensively worked on **CI/CD** pipeline for code deployment by engaging tools like **Gitlab, Jenkins and CodePipeline**. Developed code to automate the stages in pipeline in lab and prod environments.
* Worked on automating the scripts and developing the code to improve efficient usage of resources and performance.
* Developed **Python** code extensively to automate various applications across teams and improve the client output formatting and options handling.
* Responsible for the building and deploying the artifacts into DEV, QA, UAT and PROD Environments.
* Worked on multiple **Web Scale** **deployments** implementing ansible plays and shell scripts in different regions and worked on **Bastion** and **AVGAS** containers.
* Deployed new nodes to the newly added datacenters.
* Developed script for monitoring servers.
* Worked on **JIRA** to keep track of the tasks progress and to document the updates on the work accomplished.
* Utilized **JavaScript** and **CSS** to fix software issues. knowledge of applying **BATS** and Junit to create test cases.
* Set up security groups and AWS Identity Access Management (IAM) in the public and private subnets of the VPC.
* Installed, set up, and maintained monitoring tools like New Relic, Splunk, and Grafana to track the performance of various apps and evaluate their efficiency and load distribution.
* Configured alarms in **CloudWatch** service for tracking the CPU Utilization, server’s performance, disk usage.
* Used **Ansible Playbooks** to set up Continuous Delivery Pipeline. Deployed micro services, including provisioning **AWS** environments using Ansible Playbooks.
* Automated the provisioning and configuration of cloud-based environments with configuration management tools and implemented **Infrastructure as Code** using **CloudFormation** and **Terraform**.

**Client: US Bank - NY May 2021 – June 2022**

**Title: Sr DevOps/Cloud Engineer.**

**Responsibilities:**

* Gathering Information from the Clients and providing consultation by performing POC’s and set up the Build/Deployment and Release Management.
* Architected High Availability applications on **AWS** using Availability Zones and Availability Regions.
* Implemented Continuous Integration and Continuous Delivery (**CI & CD)** Process stack using **AWS, GITHUB/GIT, Docker, Jenkins, Artifactory** and **Ansible.**
* Designed, Developed and implemented a Lambda function to automate the firmware upload process to different environments in Node.js.
* Implement System Monitoring and Alerts using **AWS Cloud Watch.**
* Used Cloud Watch for monitoring server’s, CPU performance and memory utilization.
* 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.
* Setting up databases in AWS using **RDS, storage using S3 buckets** and configuring instance backups to S3 bucket.
* Working experience with AWS Services: Lambda, S3, EC2, EB, CloudFront, SNS, DynamoDB and Docker Containerization.
* Developed the features and automating test scenarios, step definitions for **BDD** (Behavior Driven Development) using **Cucumber**.
* Configured **Elastic Load Balancers** with EC2 Auto scaling groups.
* primary point of contact for all production issues and effectively resolved them with time drivern senarios.
* Build and configure a virtual data center in the Amazon Web Services cloud-paas to support Enterprise Data Warehouse hosting including Virtual Private Cloud (VPC), Public and Private Subnets, Security Groups, Route Tables, Elastic Load Balancer.
* Extensively worked on **Jenkins** for continuous integration and for End to End automation for all build and deployments.
* Integrated maven with Jenkins for the builds as the Continuous Integration process.
* Setting up the build and deployment automation for Java base project by using **JENKINS** and **MAVEN**.
* Configured AWS cloud using Terraform and done continuous deployment through Jenkins and automated cloud formation using **Terraform**.
* Refined automation components with scripting and configuration management **Ansible**.
* Monitored RDS instances and Elastic Load Balancer for performance and availability.
* Implemented OWASP framework to ensure coding security by validating best coding practices to prevent while underlines in the application as well as infrastructure like SQL injection and potential security vulnerabilities.
* Worked on AWS features such as S3,EC2, ELB, Route53, Lambda, NACL, Security group.
* Working with **Java** to use **Selenium**-**WebDriver** API library to write automation scripting with **Cucumber** Feature and Scenario.
* Automated updating and maintenance process in production environment using **Ruby** and **python** **scripts**.
* Wrote Cloud Formation scripts to provision and configure stack resources.
* GIT administration like providing access for branches and **GIT repositories.**
* Worked on **Nagios** for Load Balancing and Controlling Flow of Traffic. Used Nagios log server for network device log collection, network device log visualization, Nagios Network analyzer for net flow collection and analysis of IP transactions. Used EC2 as virtual servers to host **GIT, Jenkins,** and configuration management tool like **Ansible**. Converted slow and manual procedures to dynamic API generated procedures.
* Used **Ansible Tower**, which provides an easy-to-use dashboard and role-based access control, so that it's easier to allow individual teams access to use Ansible for their deployments.
* Worked on docker containers snapshots, uninstalling images, and managing docker volumes.
* Woked with application teams to improve the performance of application by increasing throughput by 30%
* Creating Cloudwatch alerts for instance and using them in Auto scaling launch configurations.
* Automated the Applications and **MYSQL, NOSQL** container deployment in Docker using Python and monitoring of these containers using Nagios.
* Worked on APIs using **Kubernetes** to manage and specify the copies of the containers to run the actual servers in the cloud. Scheduled, deployed, and managed container replicas onto a node cluster using Kubernetes.
* Responsible for build and deployment automation using VM Ware ESX, Docker containers and Chef.
* Launching Amazon EC2 Cloud Instances using Amazon Images (**Linux/ Ubuntu)** and Configuring launched instances with respect to specific applications.
* Rolled out Chef to all servers and used the chef node database to drive host configuration, DNS zones, monitoring, backups.
* Setup on workstations a variety of chef **cookbooks, recipes, templates, and attributes** for distribution to different chef nodes .
* Implemented Cloud Trail to capture the events related to **API** calls made to AWS infrastructure.
* Created Python Scripts to Automate AWS services which include web servers, **ELB, Cloud front Distribution,** database, **EC2** and database security groups**, S3 bucket** and application configuration, this Script creates stacks, single servers or joins web servers to stacks.
* Configured and implemented the overall **JIRA** technical strategy for ticketing.
* Given support for Development and Production environments.
* Experience in Test Automation using **Selenium Web Driver** with Testing Framework, Maven& Protractor.

**Client: CVS Health - providence, RI Sept 2019 – April 2021**

**Title: Sr. DevOps Engineer**

**Responsibilities:**

* Designing, planning and implementation for existing On-Prem applications to AZURE  Cloud (ARM)
* Configured and deployed Azure Automation Scripts utilizing Azure stack (Compute, Web and Mobile, Blobs, ADF, Resource Groups, Azure Data Lake, HDInsight Clusters, Azure Data Factory, Azure SQL, Cloud Services and ARM), Services and Utilities focusing on Automation.
* Deploying infrastructure with **Terraform**, **Ansible** and **Azure DevOps** tools to target clouds **Microsoft Azure** (Azure Kubernetes Services, Azure Red Hat Open shift, Network security groups, Key Vaults, VNets, Application gateways, Load balancers, PostgreSQL, Storage Accounts, etc.) and **IBM Cloud** (IBM Kubernetes Service, IBM Open shift, Virtual Private Cloud, Access Control List, Key Protect, Load balancers, Cloud Object Store, PostgreSQL, etc.).
* Integration of **Azure DevOps** with **GitHub Enterprise**.
* Definition of **GitHub branching strategy**.
* Experience in developing Lambda functions in Node.JS
* Enablement of Depend Bot for vulnerability scanning in **GitHub Enterprise**.
* Application Load Balancer configuration (pools, health checks, listeners) as well as Application gateways.
* Setting vnets, subnets, VPC and other network concepts in both clouds **Microsoft** **Azure** and **IBM Cloud**.
* Deploying Virtual Machines Scale Sets into secure VNets and subnets using network security groups.
* Linux Administration (LVM, user management, updates/upgrades, monitoring, etc.)
* Used several Jenkins plugins to automate processes including job creation, creation of metrics, and used the AWS EC2 plugin. Jenkins-based automated testing of web applications.
* **Kubernetes/Open shift** administration setting up security setting like image provenance, security context constraints, network policies, RBAC, Ingress SSL certificates among others.
* Troubleshooted and resolved the issues that arise at the time of deployment by analyzing **Helm** managed releases along with a analysis of **helm** charts to maintain the consistency of the application
* Created documentation and runbooks for Argo CD deployment processes on the pre existing projects along with reviewing the architecture and providing recommendations on existing **Argo cd** projects
* Writing and maintaining YAML files for **Kubernetes/Open shift** components like deployments, secrets, configmaps, HPA, Ingress, jobs, cronjobs, etc.
* Monitoring **Kubernetes/Open shift** cluster using **Grafana/Prometheus**.
* Writing **Docker files** to create custom images for micro services written in different languages.
* Setting up pipelines using **Azure DevOps** configuring self-hosted agents, azure pools and writing custom yaml files for deployments to cloud environment as well as **Kubernetes/Open shift** clusters.
* Working with team from around the globe following **agile** methodology using **Azure DevOps Dashboards**.
* Created specialized Python scripts to automate Open Shift/Kubernetes admin activities and lessen manual labor.
* Production application support experience troubleshooting critical problems.

**Client: AT&T Alpharetta, GA Jan 2018 – August 2019**

**Title: AWS Cloud Infrastructure**

**Responsibilities:**

* Build the entire company’s **Infrastructure** and played a vital role in building the **Architecture** of the project.
* Worked extensively on **AWS** resources like **EC2 Instances, AMI’s, Load Balancers, target groups, Auto Scaling Groups, IAM, Volumes, S3 repositories, Snapshot, Key pairs, Security groups, Elastic IP’s Elastic Container Service, elastic Cache, RDS, VPC, Cloud Front, X-Ray, cloud watch, Dynamo DB, Route 53, Cloud Trail, Elastic Bean stack, cloud formation, Artifact, cloud search, elastic search service, SQS, SNS, SES, Amazon Certificate manager,.**
* With all my extensive experience on **AWS** had a good practical implementation on control over **AWS Billing**.
* Created **S3** buckets and managed policies using **IAM** roles for **S3 buckets** and used S3 bucket for storing data.
* Managing **IAM** accounts (with MFA) and IAM policies to meet security audit & compliance requirements.
* Provisioning the **AWS EC2 servers** by assigning the **EBS volumes, auto scaling groups, load balancers, security groups in the defined VPC**.
* Worked on creating server-less Micro services by integrating AWS Lambda, S3/Cloud watch/API Gateway.
* Developed and maintained Cloud Formation scripts automated the provisioning of **AWS** resources (**IAM, EC2, S3, SNS, RDS, ELB and Auto Scaling**) and installed workstations.
* Generated build tasks to enable continuous automated builds while querying the GitHub source control system is how the Continuous Delivery **pipeline** is implemented.
* Created and managed multiple Instances of **Apache Tomcat** and deployed several test applications in EC2 instances in **AWS** environment.
* Created yml Playbooks to existing scripts to make changes to make infrastructure more robust and increase productivity.
* Red hat Linus was installed on all environments like the **Jboss** application servers and configured and troubleshooting as necessary.
* Expertise configuring session affinity, persistence, and monitoring in **Apache Tomcat 7.x and 6.x** as well as **JBOSS EAP 6.x and 5.x.**
* Used AWS lambda to run servers without managing them and to trigger to run code by S3 and SNS
* Used amazon web services to launch multiple ec2 instances on all flavors of **Linux** based on the requirements of the projects
* Written **Cloud Formation Template (CFT’s)**, to provisioning of multiple **AWS**resources and installed workstations based on requirements.
* Setting up **databases** in **AWS** using **RDS, storage** using **S3 bucket** and configuring backups to **S3 bucket**.
* Wrote **Ansible** playbooks to launch **AWS instances** and used **Ansible** to manage web applications, configuration files, used mount points and packages and worked on playbooks for **Ansible** in **YAML** scripting.
* Installed, Configured and Automated **Dynatrace** as Application Performance Manager and created different dashboards to monitor all the tools which are used in the application.

**Client: Inovalon, India – India April 2015 – July 2017**

**Title: DevOps Engineer**

**Responsibilities:**

* Developed and implemented Software Release Management strategies for various applications according to the agile process.
* Involved in all projects that move to production and work closely with the Data Center, Development, Quality Assurance and Management teams to ensure cross communication and confirmed approval of all production changes.
* Managed and imported numerous business applications into Subversion (SVN).
* Involved in headmost Automation Deployment Team by working with **puppet.**
* Created snapshots and Amazon machine images (AMIs) of the instances for backup and creating clone instances.
* Utilized **Puppet**to oversee Wed Applications, Configure Files, Data Base, Commands, User Mount Points, and Packages.
* Written make, **Maven**and **Ant** build tools for application layer modules.
* Worked on other Visual Studio Team System tools during the build process, including version control, work item tracking and Build tracking.
* Developed build and deployment scripts using **ANT** and **MAVEN**as build tools in **Jenkins** to move from one environment to other environments.
* Built and Deployed Java/J2EE to a web application server in an **Agile** continuous integration environment and also automated the whole process.
* Build a CI/CD pipeline to automate the process using the **python**and **Bash**script.
* Created and maintained the **Python** deployment scripts for **Tomcat**web application servers.
* Configured and worked on static code coverage tool like**SonarQube**.
* Implementation of **TFS** and Visual Studio integration along with Microsoft Test Manager.
* Involved in deployment of application on **Azure** server by creating packages.
* Provide SME in all areas of Cloud (IaaS, PaaS, SaaS) to existing and perspective clients on multiple cloud platforms; vSphere/vCloud/CloudStack/**Azure**/**AWS** and various PaaS platforms (Cloud Foundry/OpenShift).
* Developed **Python** and **shell scripts** for automation of the build and release process.
* Created a backup of an Azure Virtual Machine and restored it from a Recovery Services vault.
* Managed Maven project dependencies by creating parent-child relationships between projects.
* Experience working with **SonarQube,**a code quality control tool.
* Responsible for the Plugin Management, User Management, Build/Deploy **Pipeline** Setup and End-End Job Setup of all the projects.
* Creating/Managing AMI/Snapshots/Volumes ,Upgrade/Downgrade AWS resource(CPU and Memory)
* **Jenkins** used as a continuous integration tool for automation of daily process.
* Worked on **Docker** engine and Docker Machine environments, to deploy the micro services-oriented environments for scalable applications, **Docker swarm** to host cluster and container scheduling, **Docker** compose to define multiple container applications.
* Experienced in using **SSH** for secure remote access and management of Linux servers and managing SSH key pairs for secure authentication.
* Installed, Configured and Managed **Nexus** Repository Manager and all the Repositories.
* Using JIRA as a defect tracking system and configuring different workflows, customizations, and plug-ins for the bug/issue tracker, as well as integrating **Jenkins** and **GitHub**.
* Maintained the dashboards of Zabbix server to obtain real time performance logs and monitoring of the resources of servers.
* Monitored System Activities like CPU, Memory, Disk and Swap space usage to avoid any performance issues.
* Followed **agile** principles and used **JIRA** for maintenance and Bug development tasks.
* Deployed the build artifacts into environments like QA, UAT and production according to the build life cycle.

**Company: C3i Technologies Sept 2014– March 2015**

**Title: System Administrator**

**Responsibilities:**

* System Administrator/Integrator role in a large team responsible for maintaining of Linux operating systems such as **RHEL, CentOS, Ubuntu**. Responsible for Day-to-day systems administration tasks in **Solaris, Red hat Linux and AIX** servers.
* Setting up and maintaining RHEL, SUSE, Solaris, and Cento’s servers for new and ongoing projects using standalone and network installation methods.
* Develops and maintains Linux Kernels (**CentOS and RHEL**), application servers – **JBoss, Tomcat and Apache, Scripting-Shell scripting, Infrastructure automation.**
* Managed system storage requirements, access controls and permissions.
* Make sure the backup of the whole infrastructure is taken everyday before starting of the day
* Worked on **LDAP** Server and **SSL** Certificates, two web security technologies. worked on assigning static routes and host names, as well as configuring the network interface and TCP/IP.
* Design, configuration, administration, and development of various open source apps and LAMP (Linux Apache **MySQL** PHP)-based architecture.
* Managing system processes and scheduling processes with the **cron** utility
* Learning the new industry technologies and best practices that are used in **DevOps** environments and recommending newly available technologies to the team.
* Responsible for managing different environments like development stage and production by checking if the resources are configured correctly in all the environments.
* Documenting the steps of the infrastructure that is already existing and participating in on-call rotation along with handling basic production issues.
* Installed, Configured, Managed Monitoring Tools such as Nagios for Resource Monitoring/Network Monitoring/Log Trace Monitoring