**KALYAN BABU**

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**Professional Summary****:**

* Over 7 years of experience in **AWS** **Cloud** computing and on Devops life cycle such as **Build** and **Release** **Management**, **Configuration** **Management**, **Continuous** **Integration & Deployment, Containerization and Linux Administration**.
* In depth understanding of the principles and best practices of software configuration management (SCM) in **Agile,** Scrum and Waterfall methodologies.
* Experienced in provisioning on Amazon Web Services like **IAM, VPC, EC2, EKS, ECS, RDS, S3, AWS CLI, Route 53, SNS, AWS SQS, Elastic Load Balancing, Auto Scaling Groups, CloudWatch and CloudFormation.**
* Hands on experience in developing **YAML/JSON** scripts to automate Infrastructure like AWS EC2, CloudWatch Alarms, Lambda functions using **AWS** **cloud formation**
* Proficient in developing **Terraform** scripts to deploy the infrastructure across mutli-cloud environments and created customized **terraform modules** for increased flexibility.
* Provide high durability of the available data using data storage in the **AWS S3 bucket**, versioning S3 and configuring Bucket lifecycle policies.
* Experience in configuring AWS VPC and **provisioning EC2** instances using **AMI's** of Linux, Ubuntu, RHEL, and Windows and developed shell scripts to perform the bootstrap.
* Configured and provisioned **Kubernetes clusters** to provide a platform for automating deployment, scaling and operations of application containers across clusters of hosts.
* Experienced in working on container-based technologies like **Docker, Kubernetes and Red Hat OpenShift**
* Worked on **Kubernetes** orchestration tool to **automate** deployments, scaling, and management of microservices that manage multiple **docker** **Containers**.
* Experienced in installing and configuring **Docker** to run different software packages on the containers to improve Continuous Delivery framework.
* Experienced in setting up installation and configuration of **Jenkins** for integrated automation of build and deployments including poll SCM, pulling artifacts from Nexus, Integration of Ansible to execute playbooks for bootstrapping EC2 instances.
* Extensively worked on **Jenkins** for Continuous Integration and Continuous Deployment (CI/CD) methodologies for End to End automation for application deployments.
* Worked on developing **Ansible Playbooks** for installing web. Application and database servers and used hosts to deploy them onto groups of servers. (dev, qa)
* Expertise in developing **Ansible Jinja templates** to auto populate **AWS CloudFormation** templates by passing application and environment variables using **Jenkins.**
* Experience in using configuration management tools like **Chef** in managing system configurations supporting large Environments.
* Experienced in authoring pom.xml files, performing releases with the **Maven** release plug-in and managing Maven repositories and its integration to Jenkins CI/CD pipelines.
* Experienced in setting up **Nexus artifactory** using Plug-in to the Jenkins CI/CD pipelines to automate the creation of application builds whenever there is an SCM poll.
* Expertise on managing source code using source code management tools like **Subversion**, Bitbucket and **GIT**, Source code management client tools like Git Bash, GitHub Desktop, GitLab and Git GUI.
* Provide highly durable and available data by creating and **managing policies for S3** data store, versioning, life cycle policies.
* Worked on deploying **applications** on a **serverless** infrastructure and implemented CI/CD using **AWS Lambda** application model.
* Experienced in troubleshooting, Configuring and deploying various enterprise applications in **WebLogic**, **WebSphere**, and **Tomcat**.
* Monitored system performance health and using Monitoring Tools within **AWS** infrastructure like **CloudWatch.**
* Hands on experience in monitoring **EC2** instance metrics and several **AWS** service-related logs using **CloudWatch** as well as log monitoring tools like Splunk.
* Experience in issue management and bug tracking tool **JIRA** for different severity level and priorities
* Extensive knowledge in developing **Shell, Python, YAML/JSON** and bash **scripting** and throughout the entire Devops Life cycle.

Professional Skills:

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| **Infrastructure as a Service** | Terraform |
| **Containerization Tools** | Docker, Kubernetes |
| **Configuration Management Tools** | Chef, Ansible, Puppet |
| **Build Tools** | Maven, ANT |
| **AWS Cloud Services** | EC2, VPC, S3, Route53, SNS, IAM, Cloud Formation, EBS, ELB, ECS, EKS, Cloud Watch, Auto Scaling, SQS, Elastic Beanstalk |
| **Monitoring Tools** | Splunk, Nagios |
| **Scripting Languages** | Shell (Bash Scripting), Python, PowerShell, Ruby |
| **SCM/Version Control Tools** | GIT, Bitbucket |
| **Continuous Integration Tools** | Jenkins |
| **SDLC** | Agile, Scrum |
| **Bug Tracking Tools** | JIRA |
| **Operating System** | UNIX, Linux (Ubuntu, Debian, RHEL, Centos), Windows |

**Professional Experience:**

**Black Knight, Jacksonville, FL**

**AWS Devops Engineer June 2020 – Present**

* Performed troubleshoot for build failures in the **TFS (Team Foundation Server)** while deploying entire JAVA application required infrastructure in AWS using **Terraform.**
* Experienced in deploying **AWS lambda** functions with **CloudWatch** alarm configured and the **AWS API Gateway** linkage by developing Terraform scripts and automating using TFS.
* Worked on developing customized **terraform modules** to create AWS **SNS Email Subscriptions**, **CloudFront, DynamoDB table and Elastic Search Domains**.
* Expertise in developing **CloudFormation stacks** that are triggered by the customized terraform modules to create infrastructure in the AWS environments for development teams.
* Extensively worked on integrating **APIgee tool** with **Jenkins CI/CD pipeline** to auto deploy the **API Gateways** to the higher environments (qa, pre-prod, prod) whenever there is a new source code update made.
* Experienced in creating automation around application build creation and deployments using the **TFS** and also developed **PowerShell scripts** to serve the purpose.
* Worked on moving local terraform modules from TFS source code repository to the **Terraform Enterprise Server (TFE**) to increase the latency of AWS Lambda execution.
* Extensively worked on deploying and configuring **AWS DynamoDB** tables that are hosting the application related data hosted over the **lambda serverless** architecture.
* Experienced in creating build release definitions using **PowerShell** scripts to automate the build and release process of infrastructure in AWS environments.
* Experienced in configuring **Ansible** to deploy dependency software’s required that are executed during the AWS EC2 server bootstrapping by developing Ansible Playbooks.
* Worked on automating the process of **capturing Elastic Search Snapshot** at the start of every deployment from the TFS server using the terraform modules.
* Experienced in **integrating SonarQube** with the Team Foundation Server for the **continuous inspection** of code and debug errors and bugs as part of continuous integration of tools to the TFS.
* Configured **AWS CloudWatch** to trigger alarms regarding the AWS Lambda function threshold along with other service-related metrics like CloudFront and API **proxies.**
* Participated in **code reviews and** development activities of application backend code and API proxies to support the real time user data in different AWS Environments.
* Worked on managing source code using **Gitlab** and its integration with the Jenkins to successfully deploy API proxy code by developing Groovy scripts.
* Expertise in creating **Splunk dashboard** and configuring the Splunk to load all the server, application and service-related logs and transforming them to view using visualization.

Environments: TFS, GitLab, Jenkins, APIgee, PowerShell, Groovy, AWS EC2, CloudWatch, DynamoDB, CloudTrail, Elastic Search, S3, Ansible, YAML, JSON.

**SkyTouchTechnology (Choice Hotels), Phoenix, AZ**

**AWS Devops Engineer Sept 2019 – May 2020**

* Worked on creating the end to end infrastructure of **Elastic Kubernetes Service (EKS)** architecture (**Master Cluster, Nodes, IAM, SGs)** using the Jenkins Continuous Integration and Deployment **(CI/CD)** methodology.
* Extensively worked on deploying **AWS EC2** instances through **Cloud Formation Templates** using **Custom AMI**s and configured the **User Data** to execute the Bootstrap scripts for the **Ansible** Modules to get executed as **Infrastructure-as-a-code.**
* Worked on Amazon **Virtual private cloud (VPC**) in creating **public subnets, Private subnets and NAT instances** and dealt with security standards using Security Groups, IP Tables and in/Outbound Rules.
* Created Terraform Scripts to Deploy **AWS RDS** instances to provision **MySQL and PostgreSQL** with high availability and enabled multi availability zone backups.
* Experienced on developing cloud formation templates for the creation of AWS services like **IAM, VPC, EC2, ASG, ELB, SG, EKS, DynamoDB, SQS, SNS, Elasticache (Redis), CloudWatch, CloudTrail and ECS.**
* Extensively used **Ansible** to provision **CloudFormation Stacks** and to deploy third party tools like **Qualys for the ECR** repo scanning as part of Infrastructure as a code Methodology.
* Developed **Groovy scripts** to support the **Jenkins Shared Library** concept for sharing resources between the multiple branch **Bitbucket Repos** and to deploy the applications at multiple stages.
* Primarily worked on implementing **Jenkins Multi Branch EC2 CI/CD Pipeline** that has various modules like scm checkout**, maven build, application deployment**, **smoke/functional** tests along with the QAT and PRD environments.
* Experienced in using **Ansible Jinja Templating** concept to automate the creation of **Cloud Formation Templates** by passing the Environment and Application specific Variables and automated the deployment of stacks using **Jenkins.**
* Developed **Ansible Roles** to support the AWS services like **EC2.EKS, S3, Cloud Formation and frameworks SpringBoot, ActiveMQ, Nginx and Jenkins Master** through the deployment process.
* Developed application **dependency pipeline** though Jenkins that supports the creation of AWS services like **DynamoDB, Elasticache and SQS** as per the application requirement.
* Solved the issue **with parametrizing the Key-Value pair** in the Ansible which was not supported by the YAML syntax using the **Set Fact Module** to attach tags to **the EKS worker Nodes** (EC2 Instances).
* Worked on Cleaning the **Docker Images** in the ECR repo to eliminate the Vulnerabilities identified by the Qualys ECR repo scanner and created custom Docker Images (Golden Images) for the deployments.
* Experience in **creating Docker Containers** leveraging existing Linux Containers and AMI’s in addition to creating Docker Containers from scratch.
* Integrated **Bitbucket Repositories and Maven Plugins within the Jenkins UI** to ensure the automation of builds whenever there is a new merge to the existing code for the **Continuous Delivery** and deployment.
* Integrated **Nexus Artifactory** with Jenkins to automatically store the artifacts created by the Maven Build process.
* Experienced in various scripting languages like **Shell (Bash), Groovy, YAML/JSON** for the Cloud Formation and Ansible **Playbooks, Python Scriptin**g for Automation and YAML for developing EKS Frameworks.
* Experienced in configuring **AWS CloudWatch** to collect and track metrics, log files, set alarms, and automatically detect changes across multiple AWS resources.

Environment: IAM, Cloud Watch, EC2, EKS(Kubernetes), ECR, Bitbucket, Ansible, Python and shell scripting, YAML, Maven, Nexus, Jenkins, Groovy, Jinja 2 Templating, CI/CD, DynamoDB, Elasticache, SQS, SNS.

**Pearson, Durham, NC**

**AWS Engineer May 2019 – Aug 2019**

* Extensively worked on **configuration** and **build management** automation within the full AWS suite, specifically with **EC2, CloudWatch, ECS.**
* Worked primarily on cost optimization across AWS accounts using various services like **Trusted Advisor**, **Cost explorer** and **Cloudcheckr** to reduce the cost from using services like **EC2, RDS, S3,** EBS Volumes, DMS, Elasticsearch and Lambda.
* Continuously used **shell scripting** to **automate** processes across multiple AWS accounts like automating the execution of **smoke tests** before the launch of servers etc.
* Experienced in using **Auto Scaling groups** to increase the scalability by automatically increasing or decreasing the

number of instances running depending on the incoming load for the **high performance**.

* Experienced in writing the **Terraform script** to make changes in an architecture at the root level of the application that is deployed on the AWS cloud platform.
* Created private cloud using **Kubernetes** that supports DEV, TEST, and PROD environments, changing the AWS infrastructure Elastic Beanstalk to **Docker** with Kubernetes
* Worked on creating **docker images** from the base Docker Image as part of running **Apache ActiveMQ** Message processing server to process message count from EC2 instances.
* Extensively worked with Scheduling, deploying and managing container replicas onto a node cluster using **Kubernetes**.
* Automated Deployments using configuration Management tool **Ansible** to provision **Amazon AWS Instances** to enable continuous Deployments
* Hands on experience in creating various kinds of build jobs in **Jenkins** such as pipeline project, multi-configuration, freestyle, and parameterized triggered builds, etc.
* Created **Jenkins CI/CD Pipeline** to schedule turnoff/on of Non-Production environments with build parameters across multiple AWS Accounts.
* Deep understanding of **networking, load balancing** and storage technologies in a cloud environment like AWS EC2 (S3, ELBs, VPCs, etc.)
* Created alarms in **CloudWatch** to monitor any sudden increase in the costs of any AWS resources and frequently analyzed the reports from the **billing Dashboard**.
* Extensively worked on **Ansible Playbooks** with Ansible roles. Created inventory in Ansible for automating the continuous deployment with zero downtime rolling updates.
* Responsible for **Continuous Integration (CI) and Continuous Delivery (CD)** process implementation-using **Jenkins** along with scripts to automate routine jobs to speed up deployments.
* Experience with version controls systems (VCS) such as Git, **Bitbucket**, GitHub and the related concepts of Pull Requests, branching strategies, best practices
* Hands on experience in using scripting languages like **shell, Python (Boto3), YAML and JSON.**

Environment: AWS EC2, Lambda, Step Functions, S3, RDS, Jira, Bitbucket, CloudCheckr, Shell, Python Scripting, Terraform, Jenkins, Docker, ECS, CloudWatch, Ansible.

**HCSC, Chicago, IL**

**Cloud/DevOps Engineer Apr 2018– May 2019**

* Configured **IAM roles for EC2** instances and assigned policies granting specific level access to S3 buckets.
* Development of **AWS** Virtual Private Cloud (**VPC**) with advanced security features including security groups and network access control lists to enable inbound and outbound filtering.
* Configured **Network security groups** to control inbound and outbound traffic to the internal network Interfaces,

Subnets and Virtual Machines.

* Involved in building and maintaining Highly secure **multi**-**zone** AWS **cloud** **infrastructure** utilizing **Ansible** with AWS Cloud Formation and **Jenkins** for **continuous** **integration**.
* Experienced in using Cloud Watch to analyze the logs and troubleshoot issues to ensure all the applications running on AWS are performing smoothly.
* Worked on **AWS** Code Build and Code Commit to store and compile the source code and to host private Git

Repositories and configured entire **CI/CD** process using Code Pipeline and Code Deploy.

* Experience in creating Amazon machine images (**AMIs**) and snapshots of the instances for backup and creating

clone instances.

* Created several customized Cloud Formation Templates in **AWS** which has specific configurations for subnets,

security groups, **NACLs**, **NAT Gateways**, **VPC**, **EC2**, **ELB** and other Services as per the requirement.

* Created container based virtualized deployments using Docker working with **Docker images**, **Docker-hub** and

Docker registries.

* Used **Jenkins** pipelines to drive all microservices builds out to the **Docker** **registry** and then deployed to Kubernetes, Created **Pods** and managed using **Kubernetes**.
* Experience in working with **Docker** **hub**, creating Docker images and handling multiple images primarily for

**middleware** **installations** and **domain** **configurations**.

* Extensively worked with Scheduling, deploying, managing **container** **replicas** onto a node cluster using **Kubernetes**
* Experienced in developing Python scripts to automate the tasks as part of Automation and deployment.
* Implemented **CI/CD** processes using Cloud Formation and terraform templates and Containerized the entire

infrastructure using Docker setup in **AWS** Cloud based environment.

* Expertise in **Ansible Playbook, YAML** for Maintaining Roles, Inventory Files, and Groups Variables and worked on distributed version control system **GIT** for data integrity.
* Automated various infrastructure activities like **Continuous Deployment,** Application Server setup, Stack monitoring using Ansible playbooks and has Integrated **Ansible with Jenkins.**
* Installed **Jenkins**/Plugins for **Git Hub** Repository and Setup SCM Polling for Immediate Build with Maven Repository.
* Installed, Configured **Ansible** and Triggered **Ansible** playbooks from the Terraform instance.tf file as a local-exec call

to deploy the application to the provisioned servers.

**Environments:** Git, Maven, **Jenkins**, Nexus, Docker, **Kubernetes**, **Ansible**, ELK, Lambda, Terraform, GitHub, Jira, Apache, Oracle, Tomcat, WebLogic, Amazon Web Services, EC2, ELB.

**Applied Materials, Austin, TX**

**Devops Engineer Jan 2017 – March 2018**

Configured an AWS Virtual Private **Cloud (VPC)** and Database Subnet Group for isolation of resources within the Amazon **RDS** Oracle DB cluster.

* Experience in designing and deploying AWS Solutions using **EC2, S3**, EBS, an Elastic Load Balancer (ELB) and **auto scaling groups.**
* Supported **AWS** **Cloud EC2** **instances** and used AWS command line Interface to manage and configure various AWS services.
* Expertise in maintain the AWS infrastructure ensuring **high performance**, availability and cost efficiency.
* Experienced in creating serverless solutions using AWS Lambda functions to run the code without provisioning.
* Experience working with IAM to create new accounts, roles and groups.
* Created, managed and performed container-based deployments using **Docker** **images** containing **Middleware** and Applications together and Evaluated Kubernetes for Docker container orchestration.
* Worked on creating the **Docker containers** and Docker consoles for managing the application life cycle.
* Maintained the maven scripts used for the build process and created configuration files using the POM.xml files and published those artifacts into **NEXUS** repository as part of continuous Integration.
* Experienced in developing AWS APIs to access all the data stored in S3 buckets and all the services available in the amazon web services cloud.
* Written templates in JSON format for cloud formation and YAML Script for **Ansible** automation and contributed source code to the **GitHu**b repository.
* Configuration of nodes for **Jenkins** to customize builds for different operating systems, optimize and smooth running of builds jobs.
* Hands-on experience on **Ansible and Ansible Tower** as **Configuration** management tool, to automate repetitive tasks, quickly deploys critical applications, and proactively manages change.
* Built a **deployment** **pipeline** for deploying tagged versions of applications to **AWS** **Beanstalk** using Jenkins CI.
* Created **Ansible Play**books to automate the deployment process and integrated with Jenkins jobs for Continuous Delivery (CD) framework.
* Automated **application** **deployment** in the cloud using Docker technology using **Elastic** **Container** Service Scheduler.
* Wrote **Python** scripts for pushing data from **DynamoDB** to **MySQL** Database. Also created and maintained the Python deployment scripts for Web Sphere web application server.
* Expertise in using **Microsoft IIS Web Server**, Tomcat, Web logic and WebSphere Application servers for deployment.
* Monitored the Application and Infrastructure health by analyzing the logs and observing the user dashboard using Splunk.
* Used **Cloud Watch** to monitor applications and act accordingly to increase system wide performance and to optimize the usage of resources.

**Environments:** Java/J2EE, Maven, Jenkins, GIT, Ansible Docker, AWS, Splunk, Python, Ruby.

**Xtrac Solutions,** **Salt Lake City, Utah**

**Build & Release Engineer Dec 2015 – Jan 2017**

**Responsibilities:**

* Launching Amazon Linux and Ubuntu **EC2** Instances in the **AWS** cloud and timely configuring the launched EC2

Instances.

* Experienced in using Cloud Watch to monitor and regularly check the health of the instances running EC2, all the

services running.

* Experienced with the process of deploying EAR, WAR, JAR files to application servers like **Apache Tomcat & Web sphere.**
* Created container based virtualized deployments using Docker working with **Docker images**, **Docker-hub** and

Docker registries.

* Expertise in managing large volumes of **POM.xml** files from the multi-level environments where there are dependencies for both the parent and the child nodes.
* Performed several configurations according to the **development** and deployment as part of migration from on-premise to **AWS Cloud.**
* Automated various infrastructure activities like Continuous Deployment, Application Server setup, Stack monitoring using Ansible playbooks and has Integrated Ansible with Jenkins.
* Worked on AWS cloud services such as **EC2**, **auto-scaling,** and **VPC** to build secure, highly scalable and flexible systems that handled expected and unexpected load bursts.
* Experience with setting up **CHEF** Infrastructure, bootstrapping nodes, creating and uploading recipes, node convergence in **CHEF** SCM.
* Executed **MAVEN** scripts in **Jenkins** to build several java-based projects where there is a change in the working environment.
* Expertise in writing **Shell and Python scripts** used by several tools to automate the process of build and release process.
* Involved in editing the existing MAVEN files in case of errors or changes in the project requirements.
* Expertise in writing Bash, PowerShell and **Python scripts** for the automation of the CI/CD process using **Jenkins**
* Involving in the **upgrade** activities for the servers and **applications.**
* Worked with the release and deployment of the web applications in the **Java/J2EE** based applications environments.
* Installation of **JIRA**, and customization of JIRA for workflow, look & feel, fields, user & group management.

**Environments:** Subversion/GIT, ANT/MAVEN, Ansible, Jenkins, Nexus, Web Sphere Application server, Shell script, JIRA and Python script.

**P3 Technologies, Hyderabad, IN**

**Linux Administrator July 2013 – Nov 2015**

**Responsibilities:**

* Installation and administration of Linux based operating systems like **RHEL 6.0 and SUSE 10.x.**
* Experienced in **troubleshooting** all the technicalissues faced by the clients while using the Linux based systems.
* Responsible for the maintenance of development tools and utilities and to maintain **shell, Perl automation Scripts.**
* Expertise in using AWS CLI for using, configuring and managing all the operations based on the Amazon web services cloud environment.
* Integrated **WebLogic 10.x** and Apache 2.x and successfully deployed **EAR, WAR** files in WebLogic Application Servers.
* Created and updated **puppet manifests** and modules, files, and packages stored in the central repository.
* Configured Java based environment pre-required for the successful installation of **ANT** and to build java-based applications.
* Used **Jenkins** to automate everyday builds, testing and deployed in **Apache tomcat server.**
* Experience in creating **Docker** containers leveraging existing Linux Containers and AMI's in addition to creating Docker containers from scratch.
* Monitored performance of applications, servers and performing capacity planning using **Nagios** and used to notify when it reaches the threshold limits.
* Worked closely with the Database Admins for designing, installing and configuring, restoration and performance tuning of the database.

**Environments:** WebLogic, Git, Puppet, Jenkins, Apache, RHEL, shell, PERL, Ant

**EDUCATION:**

* Masters, Information Systems,

University of Mary-Hardin Baylor