

 **YASHWANTH CHITHALURI**
 **Sr. Cloud DevOps Engineer**

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**PROFESSIONAL EXPERIENCE**

Certified Cloud DevOps Engineer with 11+ years of IT professional experience in all the areas of Software development life cycle which are Included but not limited to automation, Implementation of CI/CD, System Administration, Cloud computing, Software Configuration Management (SCM), Containerization, orchestration, Scripting for various environments.

* Proficient in monitoring and troubleshooting OpenShift environments, utilizing built-in monitoring tools and logging mechanisms to identify and resolve performance issues and ensure optimal application performance.
* Experience in working with a wide range of Amazon Web Services (AWS) cloud services, including **Autoscaling, AWS Storage, AWS EC2, AWS ELB, AWS EBS, AWS VPC, AWS CloudFormation, Security Groups, ACL, Route 53, RDS, S3, AWS IAM, and AWS CloudWatch.**
* Hands-on Experience Administering Microsoft Azure Services like **Azure App Services, Azure SQL Database, Azure Active Directory, Azure DataBricks, Azure Blob storage, Azure Functions, Virtual machines, Azure Fabric controller, Azure Data Factory, Azure web applications, Azure Service Bus, and Notification hub.**
* Experience in designing Azure Resource Manager (**ARM**) Template to deploy multiple resources as well as in designing custom build steps using **PowerShell** and Developed **PowerShell** scripts and **ARM** templates to automate the provisioning and deployment process.
* Led the design and implementation of **Ansible Tower** to automate infrastructure provisioning, configuration management, and application deployments.
* Designed and implemented scalable and secure **Kafka** clusters for real-time data processing and event-driven architectures.
* Utilized **SageMaker's** automated model tuning and hyperparameter optimization features to improve model performance.
* Used **SageMaker's** model explainability and interpretability features to gain insights into model behavior and improve transparency.
* Experienced in practical application of the GitOps methodology with **Argo CD** and integrated Git as the single source of truth for application configurations and utilized Argo CD to reconcile the desired state of applications with the state in the Git repository.
* Created infrastructure as code using **Terraform** which includes defining the infrastructure components, modules, and dependencies needed to create a complete environment.
* Managed Kubernetes using **Helm charts**. Created reproducible builds of the Kubernetes applications, templatize Kubernetes manifests, and provided a set of configuration parameters to customize the deployment and managed releases of Helm packages.
* Strong understanding of TCP/IP and its role in facilitating communication on the internet.Expertise lies in Microsoft Azure Integration, including **Azure API Management, Azure LogicApp, Web API, Azure Functions, Service Bus, Event Grid, Event Hub, and Kubernetes Service on Azure**.
* Knowledge of the features and benefits of each VM SKU series, including the Compute, memory, and storage capabilities ,Networking and storage performance and also Cost and pricing considerations.
* Containerized Java, .NET and Python Applications by writing Dockerfiles and setting up containers in **JFrog** Artifactory and running containers in **AKS** and **EKS.**
* Well versed in using Azure Infrastructure as a Service (**IaaS**), Provisioning **VMs**, Virtual Networks, Deploying Web Apps, Microsoft SQL Server, using **ARM** Templates, and Azure DevOps CI/CD pipelines.
* Expertise in configuring the Monitoring and Alerting tools according to the requirements like **Prometheus** and **Grafana**, setting up alerts, and deploying multiple dashboards for individual applications in Kubernetes.
* Developed and deployed **Kafka** producers and consumers using Python and Apache Spark, ensuring data integrity and encryption.
* Successfully devised and implemented cost optimization strategies leveraging **cloud** cost management tools such as **Cloudability** and **CloudHealth**. Achieved significant reductions in cloud expenditure while maintaining or improving performance levels.
* Utilized strong analytical skills to extract actionable insights from extensive datasets obtained from cloud billing and usage reports. These insights informed decision-making processes and resource allocation, resulting in improved cost efficiency.
* Demonstrated proficiency in utilizing leading cloud cost management tools such as **Cloudability**, **CloudHealth**, and **AWS** native tools like **AWS** Cost Optimization Hub and **AWS** Cost Explorer. Utilized these tools for comprehensive cost monitoring, analysis, and optimization.
* Leveraged negotiation skills to engage with cloud service providers and secure advantageous pricing structures and terms. These negotiations resulted in cost savings and improved budget management.
* Hands-on experience in developing complex models in Deep Learning for Computer Vision using **TensorFlow** on cloud infrastructure.
* Proficient in creating, developing, and testing environments for different applications by provisioning Kubernetes clusters on AWS using **Docker, Ansible, and Terraform**.
* Strong proficiency in **AWS IAM and Azure AD Connect** and extensive experience with Exchange administration and management.
* Hands-on experience in developing and maintaining CI/CD pipelines using Jenkins and AWS cloud-native services such as **CodeCommit, CodeBuild, CodePipeline, and CodeDeploy.**
* Proficient in setting up **Kubernetes** (k8s) clusters for running microservices and automating Kubernetes cluster management using Ansible playbooks.
* Proficient in version control tools like **Git, Subversion (SVN), and TFS**, and experienced in branching, tagging, and maintaining versions across different platforms and SCM client tools like **GitLab, GitHub, and Bitbucket**.
* Skilled in scripting using **Python, Ruby, and Shell** Scripts for configuration management and maintaining enterprise applications. Performance Metrics using **ELK Stack, Dynatrace.**
* Well-versed in using **JIRA, Bugzilla and ServiceNow** for ticketing and defect tracking, configuring workflows, customizations, and integrating Jenkins with **JIRA, GitHub, and Maven.**

**CERTIFICATIONS**

* Certified in Microsoft Azure Administrator Associate.
* Certified in Kubernetes Administrator.
* Certified in AWS Developer.

 **TECHNICAL SKILLS**

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| **Infrastructure as a service** | Amazon Web Services, Azure |
| **Version Control Tools and SCM** | GIT, SVN, GitHub, Azure Repos, Bitbucket, Gitlab |
| **Infrastructure as Code** | Terraform, AWS Cloud Formation, Arm Templates |
| **Containerization** | Docker, Kubernetes, Helm, Open-Shift, Docker Swarm |
| **Build Tools** | Gradle, Ant, Maven, MSBuild, SBT |
| **Continuous Integration Tools** | Jenkins/Hudson, GitHub Actions, Azure DevOps Pipelines, BuildBot, Bamboo, Sonar |
| **Web technologies** | HTML, JAVA Script, jQuery, React, GraphQL |
| **Configuration Management Tools** | Ansible, Puppet |
| **Tracking Tools** | Jira, Bugzilla, ServiceNow, Atlassian |
| **Databases** | Amazon RDS, PostgreSQL, DynamoDB, SQL Server, CosmosDB, My SQL DB, Oracle, Cassandra |
| **Monitoring Tools** | Nagios, Splunk, Grafana, Prometheus, Cloud Watch, Cloud Trail, Azure monitor, Kibana, Datadog, New relic, ELK Stack, Dynatrace  |
| **Programming and Scripting Languages** | Groovy, Ruby, SHELL, POWERSHELL, Python, YAML, JSON, .NET |
| **SDLC Methodologies** | Agile/Scrum, Kanban, Waterfall |
| **Web/ Application Servers** | Apache Tomcat, JBoss 4.x/5.x, WebSphere 8.5, WebLogic 10 |
| **Artifactories** | Nexus, Artifactory, Docker Hub |
| **Virtualization** | Docker, Kubernetes, VMware |
| **Operating Systems** | Linux (Red Hat, CentOS, Ubuntu), Windows |
| **Code Scan/Testing and ticketing tools** | SonarQube, Trivy, HashiCorp Vault, Veracode, Twist lock, WhiteSource, Black Duck, Selenium, JIRA, Service Now, Remedy, Connect Wise. |
| **Logging** | AWS CloudWatch, CloudTrail, Azure App Insights, Azure Monitor. |

 **WORK EXPERIENCE**

**Client: AXA XL, Stamford, CT.**

**SRE / Sr. DevOps Engineer**

**Jun 2022 – Current**

* Created templates and jobs in Ansible Tower for deploying Java applications to servers in different environments (Dev, QA, Stage, and Production) and automated them for periodic releases.
* Implemented Ansible scripts for deploying AWS applications to remote servers, ensuring zero-downtime releases across multiple backend systems.
* Developed and maintained automated CI/CD pipeline for code deployment using Jenkins on AWS Lambda.
* Created CI/CD Pipelines using Jenkins and GitHub Actions for Application deployments and Infrastructure Deployments.
* Experience with using AWS Datadog for monitoring and troubleshooting applications and infrastructure in AWS.
* Understanding of Datadog alerting and notification capabilities, including integrations with AWS services like SNS and SQS.
* Developed detailed business cases, conducted thorough cost modeling, and performed comprehensive Total Cost of Ownership (TCO) analyses. These efforts provided stakeholders with valuable insights into the financial implications of cloud investments and supported strategic decision-making.
* Demonstrated strong communication skills by effectively communicating complex cost management strategies to diverse stakeholders. Conducted engaging training sessions to empower teams with the knowledge and skills needed to implement cost optimization techniques effectively.
* Applied FinOps principles to design and execute cost optimization strategies aligned with organizational objectives. This approach ensured maximum value from cloud investments while maintaining cost control and governance.
* Implemented automation and integration solutions to streamline Cloud FinOps processes. This involved automating repetitive tasks, integrating various tools and systems, and optimizing workflows to improve efficiency and accuracy in cost management.
* Used SageMaker's model explainability and interpretability features to gain insights into model behavior and improve transparency.
* Integrated SageMaker with other AWS services, such as AWS Recognition and AWS Comprehend, to build comprehensive machine learning solutions.
* Ensured compliance with resource tagging practices and regulatory requirements to effectively manage cloud resources. Implemented robust tagging strategies to facilitate cost allocation, monitoring, and governance in alignment with organizational policies.
* Obtained certification as an AWS Solutions Architect Associate or Professional, validating expertise in AWS services and solutions. This certification enhances credibility in cloud cost management and demonstrates proficiency in designing and implementing AWS architectures.
* Proactively evaluated and reported on cloud billing data, identifying cost optimization opportunities and potential areas of overspending. Implemented cost alerts and collaborated with application teams to optimize costs, ensuring cost-effectiveness and budget adherence.
* Ensured data privacy and compliance with industry standards for AI/ML platforms, mitigating potential security risks and maintaining customer trust.
* Integrated Ansible Tower with GitHub and Vault for source code management and AWS secret management.
* Integrated AWS Secrets Manager with Helm charts to manage sensitive data securely, such as API keys and database credentials.
* Automated processes with PowerShell scripts. DNS changes, DC builds User management.
* Utilized Kubernetes for container orchestration, deploying Docker containerized applications on a cluster of EC2 instances in a Linux environment.
* Migrated Containers running at On-Prem OpenShift cluster to EKS Cluster by writing HELM Charts and Integrated with Jenkins and GitHub actions.
* Collaborated with development and security teams to integrate Kafka with existing security tools and processes, enhancing overall data security posture
* Developed Ansible playbooks for provisioning virtual and physical instances, configuration management, patching, and software deployment on AWS environments and integrated Ansible Playbook using Terraform Provisioners and configured Terraform Statefile and Locking using DynamoDB.
* Configured Ansible to manage AWS environments and automate the build process for core Amazon Machine Images (AMIs) used by all application deployments, including Auto Scaling and CloudFormation scripts.
* Optimized Kafka performance and throughput, achieving high availability and low latency for real-time data pipelines.
* Developed and maintained complex AWS CloudFormation templates to deploy and manage large-scale applications and infrastructure. Implemented best practices for CloudFormation template development, including modularity, reuse, and testing.
* Utilized AWS CloudFormation templates for infrastructure-as-code (IaC) to create the necessary AWS resources for EKS and the Helm deployment.
* Worked with AWS CloudFormation templates to automate the provisioning and management of the PostgreSQL database infrastructure, facilitating infrastructure as code practices.
* Implemented DNS, Route 53, and AWS Elastic Load Balancer (ELB), and assigned AWS SSL Certificates to servers.
* Setup and build AWS infrastructure using various resources, VPC, EC2, RDB, S3, AWS IAM roles, AWS Elastic Load balancer, EBS, AWS Security Group, AWS Auto Scaling, SES, SQS, SNS and RDS in AWS Cloud Formation templates, Route53, Lambda.
* Worked with Terraform to manage infrastructure through terminal sessions, execute scripts, and create alarms and notifications for EC2 instances using AWS CloudWatch.
* Configured Nagios plugins for EC2, RDS, and ELB and utilized Nagios for comprehensive monitoring of AWS resources, including AWS auto-scaling.
* Worked with AWS Key Management Service (KMS) to enable encryption-at-rest for the PostgreSQL database, safeguarding sensitive data from unauthorized access.
* Designed and deployed ELK stack for centralized log management and real-time monitoring. Integrated ELK with AWS Lambda for serverless analytics.
* Leveraged New Relic's dashboards and visualizations to provide real-time visibility into application health and performance metrics.
* Implemented Micro Services framework with Spring Boot, Node.js and OpenShift containerization platform (OCP).
* Implemented AWS Microservices on OpenShift based on Docker to achieve Continuous Delivery.

**Client: Atlanticus, Atlanta, GA.**

**Sr DevOps Engineer**

**Jan 2020 – May 2022**

* Participated in the migration of on-premises cloud storage to Microsoft Azure using Azure Site Recovery and Azure Backup, as well as deploying Azure IaaS virtual machines (VMs) and PaaS role instances into secure VNETs and subnets, and configured Azure Storage Monitor, snapshot, Load balancer etc.
* Administered Microsoft Azure as part of a DevOps team, focusing on automation of internal projects and configuration management. This involved configuring virtual machines, storage accounts, and resource groups.
* Setup Azure Active Directory Roles for Authentication and assigned roles for all resources in Azure and Authentication for Applications using Service Principal and Managed Identity.
* Experience with creating and managing ARM template repositories using Git and version control systems.
* Knowledge of ARM template validation and testing tools, such as Azure Resource Manager Validate and ARM Template Test.
* Proficient in writing vanilla JavaScript, without relying on frameworks or libraries.
* Strong understanding of JavaScript fundamentals, including prototypes, closures, and the DOM
* Ability to integrate ARM templates with Azure DevOps and Azure Pipelines for automated deployment and continuous integration/continuous deployment (CI/CD).
* Familiarity with ARM template security best practices and secure coding guidelines.
* Knowledge of ServiceNow's workflow and automation capabilities, including Scripted REST APIs and Orchestration.
* Ability to create and customize ServiceNow reports and dashboards using Advanced Reporting and Analytics.
* Implemented security best practices for AI/ML platforms, ensuring data privacy and compliance with industry standards.
* Deployed and managed A-series VMs for dev/test environments, optimizing resource utilization and reducing costs and designed and implemented D-series VMs for mission-critical applications.
* Implemented HTTPS Ingress controller and used TLS certificate on AKS to provide reverse proxy, configurable traffic routing for individual Kubernetes services.
* Responsible to setup Self Hosted Build Agents for Azure DevOps Pipelines in Azure VNET, do upgradation.
* Installed and configured Prometheus and Grafana for AKS cluster monitoring and configured metric alerts.
* Knowledge of DevOps practices and tools like Azure Pipelines and Azure App Service to streamline performance testing and deployment.
* Utilized New Relic to monitor and analyze application performance, identifying bottlenecks and optimizing code for improved user experience.
* Used New Relic's alerting and notification capabilities to quickly respond to performance issues and outages.
* Implemented ServiceNow IT Service Management (ITSM) module in the Azure cloud environment to enhance incident, problem, and change management practices.
* Experience in working with End-to-End Test cases of Terraform using Terratest and Terrascan for detecting vulnerabilities.
* Proficient in using Azure Performance Analysis and Azure Monitor to troubleshoot and optimize performance issues.
* Migrated Containers running on OpenShift (3.9) On-Prem Clusters to AKS Public Cloud and have implemented CI/CD pipelines using OpenShift's integrated Jenkins, Git, and automation tools, streamlining the software delivery process and enabling rapid and frequent deployments.
* Familiarity with deploying and managing .NET applications in Azure using tools like Azure DevOps, Azure Pipelines, and Azure App Service Environment
* Used ELK for monitoring purposes for LOG analytics and Application monitoring and integrated this with Azure for security purposes we use search guard to protect the logs.
* Developed and implemented comprehensive monitoring and alerting systems for AI/ML platforms, ensuring proactive detection and resolution of issues.
* Leveraged Python's extensive libraries, including Pandas and NumPy, for data manipulation and analysis tasks.
* Strong understanding of React fundamentals, including state management, props, and lifecycle methods.
* Utilized Azure Storage and Azure Cosmos DB for data storage and management in .NET applications.
* Worked with RedHat OpenShift Container Platform for Docker and Kubernetes, used Kubernetes to manage containerized applications using its nodes, ConfigMaps, node-selector, Services and deployed application containers as Pods.
* Optimized OpenStack performance and troubleshot issues using monitoring tools like Prometheus and Grafana.
* Designed and configured custom DataDog dashboards and alerts tailored to project requirements, enabling proactive identification of critical issues, and ensuring prompt incident response.
* Utilized Nagios for monitoring log files, network monitoring, and hard drive status. Implemented Nagios event handlers for automatic restart of failed applications and services.

**Client: Pragmatics Inc., Arlington, VA**

**Role: SRE/DevOps Engineer**

**Aug 2017 – Dec 2019**

* Worked AWS Infrastructure Management services to leverage AWS services like Amazon EC2, Amazon S3, and Amazon RDS to provision and manage infrastructure resources, designed scalable and fault-tolerant architectures using AWS Auto Scaling, Elastic Load Balancing, and other AWS services.
* Implemented infrastructure as code using AWS CloudFormation and Infrastructure as Code (IaC) tools like Terraform to ensure consistent and reproducible deployments.
* Designed and implement end-to-end CI/CD pipelines using AWS CodePipeline, AWS CodeBuild, and AWS CodeDeploy also integrated source code repositories, such as AWS CodeCommit or GitHub, with AWS CI/CD services to enable automated build, test, and deployment processes.
* Managed cost limits to prevent budget overruns and maintain cost control. Monitored spending against predefined budgets, adjusted limits as needed, and implemented governance mechanisms to enforce compliance with budgetary constraints.
* Leveraged AWS Billing Reports, including the Cost Usage Report, to gain granular insights into AWS resource usage and associated costs. Analyzed cost allocation tags, resource utilization metrics, and usage patterns to optimize spending and enhance cost visibility.
* Developed and maintained automated deployment scripts using tools like Ansible and Shell scripting, ensuring consistent and error-free deployments across environments.
* Automated the deployment of applications using infrastructure automation tools like AWS CloudFormation or AWS Elastic Beanstalk.
* Used configuration management tools like AWS Systems Manager, AWS OpsWorks, or AWS Config to manage and enforce configuration consistency across infrastructure resources.
* Automated configuration updates and ensure compliance by using tools like AWS Config Rules or AWS Config Conformance Packs.
* Set up monitoring and alerting using AWS CloudWatch to track the health and performance of applications and infrastructure resources. Utilized AWS CloudTrail and AWS Config to track changes and audit the environment for security and compliance purposes.
* Implemented security best practices on the AWS platform, including identity and access management (IAM), security groups, encryption, and key management also ensure compliance with industry standards and regulations by configuring AWS services like AWS Config, AWS CloudTrail.
* Utilized AWS Virtual Private Cloud (VPC) to design and deploy isolated network environments for Amazon applications and services. configured subnets, routing tables, and network gateways within VPC to ensure secure and efficient traffic flow.
* Configured AWS Elastic Load Balancing to distribute incoming network traffic across multiple instances, ensuring high availability and scalability.
* Used Amazon Route 53 for domain management and DNS routing, enabling seamless and reliable access to applications.
* Worked with Amazon EBS (Elastic Block Store) for reliable block-level storage attached to EC2 instances, enabling persistent data storage.
* Experience AWS Lambda for serverless computing, allowing for the execution of code without the need for server management to enable scalability and cost efficiency for event-driven workloads.
* Leveraged AWS Lambda for building serverless applications and implementing serverless functions, reducing the need for infrastructure management.
* Utilized AWS API Gateway to create and manage APIs for Amazon services, enabling secure and scalable communication with external systems.
* Utilized AWS Fargate as a serverless compute engine for ECS, allowing for the deployment of containers without managing underlying infrastructure.
* Provisioned Amazon EKS to deploy, manage, and scale Kubernetes clusters on AWS. Deployed containerized applications to EKS clusters using Kubernetes manifests and helm charts.
* Worked with EKS cluster configurations to define and customize cluster settings, including networking and security. Managed and scaled containerized workloads on EKS using Kubernetes constructs, such as deployments, services, and pods.
* Worked with ECR to create and manage repositories for different container image versions. Utilized ECR to push and pull container images securely, ensuring their availability for deployment. Integrated ECR with container orchestration services like ECS and EKS to streamline the deployment workflow.
* Configured the ELK (Elasticsearch, Logstash, Kibana) stack to centralize log management and monitoring, configured Logstash to collect and process logs from various sources, including AWS services and applications.

**BMO Harris Bank, Chicago, IL.**

**Role: Build & Release Engineer.**

**Sept 2015 - July 2017**

* Responsible for Build and Deployment of the java applications on different environments like Dev/QA & Production.
* Involved in Installing Jenkins on a Linux machine and created a master and slave configuration to implement multiple parallel builds through a build farm.
* Used Jenkins, Build forge for Continuous Integration and deployment into Tomcat Application Server.
* Installing, configuring, and administering Jenkins CI tool on Linux machines.
* Application installation and troubleshooting for Solaris, Red Hat Linux, and CentOS.
* Designing, Administration and troubleshooting database servers like MySQL 5.7, MySQL 5.6, MySQL 5.5
* Installed and Configured the Nexus repository manager for sharing the artifacts within the company.
* Worked on upgrading the Splunk Indexers, Search heads and forwarders.
* Experience to Integrate Release with Jira for Requirements Management, Bamboo/Deploy for Build & Deployment and Service Now for Change Management process via plugins.
* Wrote puppet modules for the Tomcat/Apache/Splunk forwarder services in our distributed infrastructure.
* Administered Linux Servers Linux (Red hat – RHEL 3/4/5) for several functions including managing Apache/Tomcat server, mail server, MySQL database and firewalls in both development and production.
* Created monitors, alarms, and notifications for EC2 hosts using CloudWatch.
* Worked on Cloud automation using AWS Cloud Formation templates.
* Used OpenStack and AWS cloud services to launch Linux and windows machines, created security groups and written basic PowerShell scripts to take backups and mount network shared drives.
* Responsible for Installation, Configuration Management, Maintenance and Systems Development of Red Hat Linux, Oracle Enterprise Linux / UNIX Systems.
* Designed Puppet Modules to manage configurations and automate installation process.
* Implementing a Continuous Delivery framework using Jenkins, Puppet, Maven & Nexus in Linux environment.
* Assisted the development team in integrating DynamoDB with the application code by utilizing serverless architecture with AWS Lambda and API Gateway.
* Used JIRA custom workflows to track issues and JBoss application server to deploy the application.
* Maintained all the Red hat servers Linux entitled with the latest subscriptions and also created Instances on OpenStack.
* Performing server’s health checks on daily basis, by logging into Unix system and monitoring logs, and processes.

**Client: FISERV, Atlanta, GA.**

**Role: Linux System Administrator July 2013—Aug 2015**

* Installed, Configurator and Managed RedHat Enterprise Linux 5.x.
* Involved in Installing, configuring, and maintaining application Servers like WebSphere and Web servers like Web Logic, Apache, HTTP and Tomcat on UNIX and Linux.
* Managed users, groups, and permissions configured LDAP and given SUDO Access in test and development servers and allowed passwordless logins for authorized users on servers.
* Installed and upgraded packages on Red Hat Linux servers through YUM and RPM tools.
* Responsible for Oracle database security and patching, Oracle database capacity analysis and planning.
* Installing Red Hat Linux using kick-start and applying security policies for hardening the server based on the company policies.
* Hands-on experience in server builds, migrations such as OS migrations, Application migrations, and Storage migrations.
* Involved in developing dynamic web-based user interfaces using HTML and JavaScript.
* Installing and configuring SSH (Secure Shell) encryption to access securely on Ubuntu and Red hat Linux.