**Shiva Reddy** 

**Senior DevOps Engineer**

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**Professional Summary**

* Seasoned **Senior DevOps Engineer** with **12+ years** of experience specializing in the design, implementation and optimization of CI/CD pipelines, cloud infrastructure and automation solutions. Proven expertise across **DevOps**, **DevSecOps** and Site Reliability Engineering (**SRE**), with a strong focus on delivering scalable, secure and highly available systems for enterprise-grade applications.
* Skilled in optimizing cloud infrastructure across **AWS**, **Azure** and **GCP** to ensure high availability, cost-efficiency and fault tolerance through modern cloud-native architectures.
* Proficient in Infrastructure as Code (IaC) using **Terraform**, **CloudFormation**, **Ansible** and **Helm** to automate, standardize and scale infrastructure deployments.
* Skilled in architecting microservices and serverless solutions using **AWS Lambda**, **API Gateway**, **DynamoDB** and **Step Functions** to build event-driven, scalable applications.
* Hands-on expertise in infrastructure automation with **Terraform**, **Packer** and **Ansible** to accelerate provisioning and ensure consistent environment configurations.
* Deep understanding of FinOps methodologies, leveraging cost analysis tools across **AWS**, **Azure** and **GCP** to drive efficient cloud spending.
* Extensive experience designing and managing CI/CD pipelines with tools like **Jenkins**, **GitLab CI/CD**, **CircleCI** and **ArgoCD** to streamline and secure software delivery processes.
* Experienced in implementing GitOps workflows with **ArgoCD** and **FluxCD**, enabling declarative deployments and streamlined operational governance.
* Well-versed in DevSecOps practices, integrating tools like **SonarQube**, **Snyk**, **Trivy**, **AquaSec** and **HashiCorp Vault** for secure code delivery and secrets management.
* Well-versed in zero-downtime deployment strategies, including **Blue**-**Green** **deployments**, **Rolling** **updates**, **Canary** **releases** and **Feature** **toggles**.
* Strong background in HA and DR planning using multi-region deployments and automated failover with tools like **Route 53**, **Global Accelerator**, **Terraform** and **Velero**.
* Hands-on experience with configuration management tools like **Chef**, **Puppet** and **SaltStack** to enforce system consistency and automate provisioning.
* Strong understanding of regulatory compliance frameworks, such as **SOC 2**, **PCI DSS**, **ISO 27001** and **NIST**, with practical experience in policy enforcement and audit automation.
* In-depth knowledge of monitoring and observability stacks, including **Prometheus**, **Grafana**, **ELK**, **Datadog** and **OpenTelemetry**, to enable proactive system health management.
* Experienced in centralized logging and analytics, leveraging **ELK Stack**, **Graylog** and **Splunk** for real-time diagnostics and operational intelligence.
* Advanced knowledge of cloud security and networking, including **VPNs**, **firewalls**, **IAM**, **TLS encryption**, **WAFs** and **DDoS** mitigation techniques.
* Proficient in scripting and automation using **Python**, **Bash** and **Go** to enhance deployment pipelines and system administration tasks.
* Experienced in managing and optimizing relational and NoSQL databases, including **PostgreSQL**, **MySQL**, **MongoDB** and **Redis** for performance and reliability.
* Proponent of **DevOps** culture, promoting collaboration, automation and continuous improvement within cross-functional engineering teams.
* Practical application of **Site Reliability Engineering** (SRE) principles, including incident response, chaos engineering and performance optimization.
* Experienced in chaos engineering practices using tools like **Chaos Monkey** and **LitmusChaos** to validate system resiliency and fault tolerance.
* Experience supporting mission-critical production systems, providing 24/7 on-call incident response, troubleshooting and rapid recovery, following Site Reliability Engineering (**SRE**) best practices.
* Deep familiarity with **Agile** methodologies and traditional **SDLC** processes, promoting continuous integration, continuous delivery, continuous improvement and effective release management.

**Professional Experience**

**Client: M&T bank | Atlanta, GA Jan 2023 - Till Date**

**Senior DevOps Engineer**

**Role & Responsibilities:**

* Designed, deployed and managed highly available, secure and scalable cloud infrastructure across **Azure** and **GCP**, supporting seamless migrations from on-premise environments with zero data loss.
* Led end-to-end cloud migration projects using lift-and-shift, re-platforming and re-architecting strategies, utilizing tools like **Azure Data Factory** and **Google Cloud Storage Transfer Service** to enable cross-cloud data replication and synchronization.
* Engineered Infrastructure as Code (IaC) using **Terraform**, **ARM Templates** and **Pulumi**, enabling standardized, reusable and automated provisioning across multi-cloud environments.
* Administered and scaled **Kubernetes** clusters using **AKS** and **GKE**, implementing auto-scaling, self-healing and service discovery to support microservices deployment at scale.
* Architected and maintained serverless applications using **Azure Functions**, **GCP Cloud Functions**, **API Management** and **Event Grid**, reducing operational complexity and cost.
* Built and optimized CI/CD pipelines using **Jenkins**, **GitHub Actions**, **GitLab CI/CD** and **ArgoCD**, embedding unit, integration, API, load and security testing, while reducing release errors by 40%.
* Implemented GitOps workflows with **FluxCD** and **ArgoCD** for declarative, version-controlled infrastructure management, enhancing auditability and rollback capabilities.
* Implemented progressive delivery strategies such as **blue-green deployments**, **canary releases** and **feature toggles** using **Azure Pipelines** and **Azure DevOps Deployment Groups** for smooth, zero-downtime rollouts.
* Developed automation scripts in **Python** and **PowerShell** to streamline infrastructure operations and eliminate repetitive tasks, enhancing engineering efficiency.
* Enabled self-healing infrastructure using **Azure VM Scale Sets**, **Kubernetes health checks** and remediation scripts, reducing downtime and manual intervention.
* Automated secrets management and rotation workflows using **Azure Key Vault**, **GCP Secret Manager** and **HashiCorp Vault** to enforce secure credentials handling.
* Automated database schema versioning and rollouts using **Liquibase** and **Flyway**, enabling traceable and conflict-free database changes.
* Leveraged configuration management tools like **Ansible**, **Chef** and **Puppet** to enforce environment consistency and eliminate drift.
* Integrated security scanners including **SonarQube**, **Snyk** and **OWASP ZAP** into pipelines to catch vulnerabilities pre-deployment and ensure secure releases.
* Enforced identity and access controls using **IAM**, **Azure RBAC** and least privilege policies to maintain compliance with enterprise security standards.
* Strengthened hybrid cloud security posture by integrating **Azure Sentinel** and **Google Cloud Security Command Center**, enabling proactive threat detection and response.
* Worked closely with **DevSecOps** teams to embed compliance checks and vulnerability scanning into cloud infrastructure and CI/CD processes.
* Implemented centralized monitoring and observability using **Azure Monitor**, **Log Analytics**, **Prometheus**, **Grafana**, **Datadog** and **CloudWatch** for real-time performance tracking.
* Designed incident response strategies and alerting systems using **PagerDuty**, **OpsGenie**, **VictorOps** and **AlertManager**, achieving 50% reduction in MTTR.
* Implemented cross-cloud network connectivity using **Azure VNet Peering** and **Google Cloud VPC Peering**, ensuring secure and low-latency hybrid-cloud communication.
* Created automation and integration scripts using **Python** and **PowerShell**, accelerating operational workflows and reducing human error.
* Tuned and maintained cloud/on-prem databases including **Azure SQL**, **Cosmos DB**, **PostgreSQL**, **MongoDB**, **SQL Server** and **DynamoDB**, with caching via **Redis** and **Varnish** for high availability.
* Managed version control systems including **GitHub**, **GitLab**, **Azure Repos** and **AWS CodeCommit** and enforced branching strategies like **GitFlow**, trunk-based development and feature branching.
* Integrated continuous testing using **Selenium** for UI and **JUnit** for unit tests within CI/CD workflows to detect defects early and improve release reliability.
* Collaborated with **SRE** teams to define and measure **SLIs**, **SLOs** and **SLAs**, resulting in improved service reliability and uptime.
* Provided DevOps leadership and mentorship to cross-functional teams, advocating containerization, cloud-native development and agile delivery methodologies.

**Client: Ally Financial | Detroit, MI July 2021 - Dec 2022**

**Senior DevOps Engineer**

**Roles & Responsibilities:**

* Spearheaded the seamless migration of cloud infrastructure from **Azure to AWS**, ensuring zero business disruption, enhanced scalability and optimized cloud performance.
* Designed and implemented Infrastructure as Code (IaC) using **Terraform** and **AWS CloudFormation**, enabling consistent, automated and rapid cloud resource provisioning across multiple environments.
* Architected and optimized core infrastructure components including **EC2**, **VPC**, **ELB**, **S3** and **EBS**, enhancing system reliability, network security and performance at scale.
* Designed, deployed and managed **Amazon EKS** clusters for container orchestration, leveraging **Docker**, **Helm** and auto-scaling for high availability and microservices deployment.
* Migrated legacy monolithic applications to cloud-native, microservices-based architectures using **EKS**, enhancing agility and resource efficiency.
* Built and maintained CI/CD pipelines using **AWS CodePipeline**, **GitHub Actions** and **Jenkins**, integrating testing, deployment and rollback strategies for faster and more reliable software delivery.
* Executed **Blue-Green** and **Canary Deployments** using **AWS CodeDeploy**, achieving zero-downtime releases with seamless rollback capabilities.
* Developed end-to-end infrastructure automation workflows using **Terraform**, **Ansible** and **AWS CodePipeline**, significantly reducing manual effort and configuration drift.
* Created automated remediation and self-healing workflows using **AWS Lambda**, **Step Functions** and **CloudWatch Events**, improving service resilience and reducing downtime.
* Hardened cloud environments by enforcing policies with **AWS Config**, **Security Hub** and **Trusted Advisor**, proactively identifying misconfigurations and vulnerabilities.
* Implemented fine-grained access control using **IAM roles**, **policies** and **resource-based permissions**, upholding least privilege principles across all cloud services.
* Secured sensitive data with **AWS Secrets Manager** and **KMS**, automating secret rotation and encryption key lifecycle management to meet compliance standards.
* Deployed automated patching and compliance enforcement workflows using **AWS Systems Manager Patch Manager** and **AWS Config**, ensuring continuous security posture alignment.
* Strengthened threat detection and response capabilities using **Amazon GuardDuty**, **Security Hub**, **AWS CloudTrail** and centralized incident logging.
* Monitored infrastructure health and application performance using **CloudWatch**, **CloudWatch Logs** and **Metrics**, building real-time observability with alerts and thresholds.
* Built custom dashboards and analytics using **CloudWatch Dashboards**, **Kibana**, **Grafana** and **OpenSearch**, improving visibility into system behavior and troubleshooting.
* Aggregated and analyzed logs using **CloudWatch Logs Insights** and **Amazon OpenSearch**, enabling proactive debugging, auditing and compliance tracking.
* Enhanced network security by configuring **Security Groups**, **VPC Endpoints** and **AWS Network Firewall**, enabling secure communication and access control between services.
* Developed custom automation scripts in **Bash** and **Python**, eliminating manual tasks, accelerating deployments and improving operational efficiency.
* Automated provisioning, migration and management of databases using **Liquibase**, **Flyway** and **Amazon RDS**, ensuring high data integrity and availability.
* Collaborated with cross-functional teams to drive cloud adoption, promote DevOps practices and ensure reliable delivery throughout the SDLC, supporting continuous improvement and 24/7 infrastructure reliability.

**Client:** **Elevance Health | Atlanta, GA Aug 2019 - June 2021**

**DevOps Engineer**

**Roles & Responsibilities:**

* Designed, implemented and maintained scalable and compliant infrastructure using **Azure Resource Manager (ARM) templates**, enabling automated and consistent provisioning of cloud environments.
* Architected and deployed highly available, fault-tolerant systems using **Azure Virtual Machines (VMs)**, **Blob Storage**, **Service Bus** and **Azure Functions**, ensuring performance and cost-efficiency for cloud-native applications.
* Configured and secured cloud networking environments using **Azure Virtual Network (VNet)**, implementing fine-grained control over traffic flow and service isolation through subnets, route tables and **Network Security Groups (NSGs)**.
* Designed and executed disaster recovery strategies using **Azure Backup** and **Recovery Services Vault**, ensuring data durability and compliance with organizational RTO/RPO requirements.
* Provisioned and optimized **Azure Cosmos DB** and **Azure Table Storage** to support low-latency, scalable, globally distributed databases for mission-critical workloads.
* Built and maintained robust CI/CD pipelines using **Azure DevOps Pipelines** and **Jenkins**, automating code integration, testing and deployment to accelerate software delivery cycles.
* Automated environment configuration and deployment processes across dev, staging and production using **Azure Automation**, **Azure Runbooks** and **Ansible**, improving release reliability and reducing manual errors.
* Developed and maintained infrastructure automation and deployment scripts using **Python** and **PowerShell**, increasing efficiency and reducing manual intervention.
* Streamlined artifact management by integrating **Azure Artifacts** and **JFrog Artifactory**, improving package versioning and software delivery consistency.
* Orchestrated and managed containerized workloads using **Azure Kubernetes Service (AKS)**, ensuring scalability, high availability and resilience in production environments.
* Monitored infrastructure and application performance using **Azure Monitor**, configuring custom dashboards and alerts for proactive issue resolution.
* Implemented centralized logging and audit trails using **Azure Monitor Logs**, **Log Analytics** and **Azure Activity Log**, enabling real-time monitoring and incident analysis.
* Secured sensitive application credentials and encryption keys with **Azure Key Vault**, enforcing automated secret rotation and access control.
* Enforced code quality and security best practices by integrating **SonarQube** and **Azure DevOps Code Analysis Tools**, reducing defects and vulnerabilities.
* Established secure remote access and configuration management using **SSH** and **Azure Bastion**, ensuring secure connectivity to distributed cloud infrastructure.
* Managed source control using **Azure Repos** and **Bitbucket**, implementing branching strategies and pull request workflows to support collaborative and efficient development.
* Facilitated effective cross-functional collaboration using **Microsoft Teams** and **Slack**, ensuring rapid communication, task tracking and resolution of operational issues across teams.

**Client: State Farm | Bloomington, IL May 2016 - July 2019**

**DevOps Engineer**

**Roles & Responsibilities:**

* Implemented and maintained cloud infrastructure using **Terraform**, delivering scalable, repeatable and automated Infrastructure as Code (IaC) across environments.
* Automated server configuration and environment provisioning using **AWS Systems Manager (SSM)** and **SaltStack**, ensuring consistency and compliance across environments.
* Utilized **AWS EC2**, **S3** and **Lambda** to architect and manage scalable, secure and cost-effective cloud-native solutions.
* Developed Python-based automation scripts using **Python** to streamline routine operational workflows, reducing manual effort and improving efficiency.
* Designed and managed CI/CD pipelines with **CircleCI**, facilitating continuous integration, automated testing and seamless application deployments.
* Integrated **Nexus** as a binary artifact repository, streamlining artifact management and improving version control throughout the build pipeline.
* Orchestrated containerized workloads on **Amazon EKS** and **OpenShift**, ensuring high availability, resilience and optimal resource usage in production clusters.
* Configured secure, high-performance hybrid connectivity using **AWS Direct Connect**, enabling low-latency, private communication between on-prem and cloud environments.
* Implemented secrets management using **HashiCorp Vault** and **AWS Secrets Manager**, automating access control and credential rotation for enhanced security.
* Provisioned and optimized **Amazon RDS (MySQL)** instances, ensuring high performance, fault tolerance and availability for mission-critical applications.
* Centralized logging and observability setup using **AWS CloudWatch Logs** and **Splunk**, enabling proactive monitoring, incident investigation and log analysis.
* Monitored infrastructure and application health using **Datadog**, enabling real-time visibility and early detection of performance and availability issues.
* Architected disaster recovery strategies leveraging **AWS Backup** and **AWS Disaster Recovery**, minimizing data loss and ensuring business continuity during failures.
* Managed source control with **Git**, implementing robust branching strategies and ensuring code quality, traceability and team collaboration.
* Facilitated cross-functional collaboration using **Confluence**, supporting documentation, project visibility and streamlined communication across teams.

**Client: Lowes | Charlotte, NC Feb 2014 – April 2016**

**Build & Release Engineer**

**Roles & Responsibilities:**

* Maintained and configured Continuous Integration (CI) systems such as **Hudson**, **CruiseControl** and early versions of **Jenkins**, enabling automated build verification and reduced integration errors.
* Automated software packaging and deployment using **Shell**, **Batch scripts** and **Windows Installer (MSI)** technologies to streamline release workflows and reduce manual effort.
* Performed source code integration and version control management using **Subversion (SVN)**, **CVS** and **Perforce**, supporting multiple code branches and merge strategies across development teams.
* Managed build automation processes using tools like **Apache Ant**, **Apache Maven** and **MSBuild**, ensuring consistent and repeatable software builds across multiple environments.
* Managed artifact repositories using **Nexus Repository Manager** and **Artifactory**, organizing binaries and third-party libraries for version control and accessibility.
* Developed environment-specific build configurations, handling application properties, environment variables and custom build targets to support diverse deployment scenarios using **ANT-Contrib**.
* Performed nightly and on-demand builds, implementing error tracking and reporting mechanisms to quickly identify and resolve build failures using **BuildForge**.
* Integrated unit testing frameworks like **JUnit**, **NUnit** and **TestNG** into CI workflows, supporting early defect detection and improving code quality.
* Built and maintained release pipelines for Java and .NET applications, handling artifact promotion through development, testing, staging and production environments.
* Supported and coordinated software releases across multiple platforms and environments, working closely with QA, Development and Operations teams to ensure successful rollouts using **Release Engineer** (Atlassian).
* Created and maintained deployment documentation and build instructions, ensuring reproducibility, traceability and compliance with software release policies using **Confluence**.
* Contributed to process improvement and automation initiatives, promoting build standardization, scripting efficiencies and version control best practices across the engineering team.

**Certified Achievements**

* AWS Certified DevOps Engineer Professional
* Microsoft Certified: Azure DevOps Engineer Expert
* Google Cloud Certified Professional Cloud DevOps Engineer

**Academic Qualifications**

* Bachelor of Computer Science.