Abhishek Kumar Singh

Senior Site Reliability/DevOps Engineer

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PROFILE

Senior SRE / DevOps Engineer with 7+ years leading production reliability and cloud platforms across AWS, Azure, and GCP. Expert in Kubernetes, Terraform, Ansible, CI/CD, and large-scale observability systems. Proven record reducing MTTR, rollout risk, and cloud spend through automation, progressive delivery, and AIOps. Driving platform maturity through SLOs, release governance, and predictive capacity planning.

WORK EXPERIENCE

SLK Software, Team Leader   01/2025 – Present
Client: Emerson, Fifth Third Bank, HNB bank |
Bengaluru

Emerson

- Built end-to-end observability for Azure workloads using **Managed Prometheus**, **Grafana**, and **Azure Monitor**, reducing **MTTR by 25%** and **false alerts by 30%**.
- Designed monitoring for **Azure Kubernetes Service (AKS)**, **PostgreSQL**, and HTTP endpoints with **Service Level Objective (SLO)** and **Service Level Agreement (SLA)** dashboards and actionable alerting.
- Delivered infrastructure changes through **Infrastructure as Code (IaC)** using **Terraform** and **Ansible** with standardized modules, approval workflows, and policy guardrails to improve release safety and compliance.
- Partnered with product owners and **platform engineering teams** to define **golden signals** and **production-readiness checklists** for new services.

Fifth Third Bank

- Automated operating system patching and application deployments using **Ansible** and **Jenkins**, reducing manual effort by **70%**.
- Enabled event correlation and auto-baselining in **Dynatrace**, reducing **P1/P2 incidents by ~20%**.
- Introduced runbooks and incident-response playbooks integrated with **PagerDuty** and **Opsgenie**, improving on-call consistency and time to mitigation.
- Acted as a Build-and-Release-focused **Site Reliability Engineer**, owning **CI/CD pipelines** and production release workflows across **Kubernetes** platforms.
- Designed and enforced release **Service Level Objectives (SLOs)** and post-deployment health checks using **Prometheus**, **Grafana**, **Dynatrace**, and **Splunk**, reducing rollback frequency and improving **MTTR by 25–40%**.
- Implemented **blue-green and canary deployments** on auto-scaling infrastructure integrated with **Jenkins**.

HNB Bank

- Orchestrated event-driven remediation using **PowerShell** and **Ansible** triggered by anomaly signals, reducing manual toil by **30%**.
- Applied operating system hardening and patch compliance for cloud and on-premises nodes aligned to **CIS benchmarks**, improving audit scores.
- Expanded **Dynatrace** and **Splunk** dashboards with threshold tuning and business key performance indicators (KPIs), improving the signal-to-noise ratio for alerting.
- Designed Google Cloud Platform (GCP) environments aligned with Google Cloud Architecture Framework, leveraging **Compute Engine, Google Kubernetes Engine (GKE), Cloud Load Balancing (HTTP/S & Internal), Cloud Armor (WAF), Cloud CDN, IAM, Service Accounts, Workload Identity, Cloud KMS, and Secret Manage**r **and Cloud Storage (GCS)**, using Infrastructure as Code with **Terraform**.
- Designed secure **GCP networking architectures** using **VPC, private subnets, Shared VPC, VPC Peering, Cloud NAT, and Firewall Rules**, enabling private service communication and controlled egress for Tier-1 workloads.
- Managed **Google Kubernetes Engine (GKE)** deployments with **Horizontal Pod Autoscaler (HPA)** and **Vertical Pod Autoscaler (VPA)**, resource governance, and secure ingress and egress, improving platform stability and cost efficiency.

Impetus Technologies, SRE/Devops Engineer   06/2021 – 12/2024 | Client: Transunion | Noida

- Migrated legacy monoliths to **Kubernetes** microservices using **Docker**, **Google Kubernetes Engine (GKE)**, and **Amazon Elastic Kubernetes Service (EKS)**, improving scalability, resilience, and release velocity.
- Designed **Amazon Web Services (AWS)** environments from the ground up aligned with the **AWS Well-Architected Framework**, leveraging **EC2**, **Auto Scaling Groups (ASG)**, **Application Load Balancers (ALB)**, **Web Application Firewall (WAF)**, **CloudFront**, **S3**, and **RDS**, with Infrastructure as Code using **Terraform** and **CloudFormation**.
- Designed cloud networking and security architectures across AWS and GCP, including **Virtual Private Cloud (VPC)** and **Virtual Network (VNet)** with private subnets, secure ingress via **ALB** and **Application Gateway**, and controlled egress using **NAT Gateways** and firewalls, eliminating public exposure for Tier-1 services.
- Implemented **Identity and Access Management (IAM)**, **Role-Based Access Control (RBAC)**, and secrets management using **AWS Key Management Service (KMS)** and **Google Secret Manager**, integrated with **Continuous Integration / Continuous Deployment (CI/CD)** pipelines to enforce least privilege and automated credential rotation.
- Implemented production-grade **CI/CD pipelines** using **Jenkins**, incorporating **blue-green** and **canary deployments**, reducing rollback frequency by **30%**.
- Developed **Ansible** playbooks to automate software provisioning, deployment, configuration updates, and system maintenance, reducing manual intervention and operational toil.
- Standardized **Terraform** modules for network, compute, and Kubernetes add-ons, cutting provisioning time by **80%** and improving reproducibility across environments.
- Leveraged **Splunk** and the **ELK Stack** for log analytics with custom dashboards, accelerating troubleshooting and reducing mean time to detect (MTTD).
- Conducted vulnerability assessments and patching programs to mitigate security risks and maintain regulatory and audit compliance.
- Utilized **Prometheus**, **Grafana**, and **Dynatrace** for real-time monitoring and alerting, enabling proactive system management and performance optimization.
- Configured and deployed secure VPN solutions using **Libreswan** and **StrongSwan** for enterprise customers.

Cavisson Systems, Software Engineer   10/2018 – 05/2021 | Client: Kohl's | Noida

- Implemented **robust monitoring, alerting, and observability solutions** using APM, Prometheus, Grafana, and logs to reduce downtime for critical applications.
- Conducted **performance testing, diagnostics, root cause analysis (RCA), and optimization** to improve application reliability, throughput, and system efficiency.
- Designed and maintained **Jenkins CI/CD pipelines** for automated build, test, and deployment; integrated with Git, Maven, and Nexus to improve release cadence and reduce errors.
- Provisioned and managed **cloud infrastructure (AWS and GCP** using **Terraform and Ansible**, established logging, monitoring baselines, and monthly patch workflows.
- Containerized workloads using **Docker, Docker Compose, and Kubernetes**, streamlining deployment, scaling, and environment consistency.
- Collaborated with development and QA teams to design **scalable, high-performance, and resilient systems** that met client functionality, reliability, and SLA/SLO requirements.
- Implemented **automation and scripting** (Python, Bash) for deployment, monitoring, and incident remediation, reducing manual intervention and MTTR.
- Applied **infrastructure-as-code (IaC)** best practices and GitOps principles to ensure reproducible, version-controlled, and auditable deployments.

SPECIALIZED SKILLS

- Acted as **Lead SRE** for public-facing production systems, managing **incident response, client communications**, and promoting **DevOps best practices**.
- Implemented **AI-driven observability** and anomaly detection using **OpenAI, Gemini, and NVIDIA AI**, improving proactive incident detection and operational efficiency.
- Performed **predictive analytics for capacity planning**, resource optimization, and scaling critical workloads.
- Diagnosed **Java performance issues** including memory leaks, GC pauses, and slow endpoints; monitored **JVM health metrics** such as heap usage, GC, thread count, and response times.
- Executed **performance tuning and optimization** across applications and infrastructure to ensure SLA compliance.
- Designed and tested **disaster recovery (DR) and high availability (HA) strategies** for enterprise-grade applications.
- Managed **configuration, deployment, and automation** using **Ansible** and Infrastructure-as-Code principles.
- Implemented **monitoring, logging, and observability frameworks** across applications and cloud environments using Prometheus, Grafana, and ELK Stack.
- Built and maintained **CI/CD pipelines** to automate build, test, and deployment; integrated with Git, Jenkins, and container registries.
- Led migration of **monolithic applications to containerized and orchestrated environments** using Docker and Kubernetes.
- Ensured **security and vulnerability management**, performing audits, patching, and compliance checks.
- Coordinated **ticketing, documentation, and collaboration** using Jira, Confluence, and Slack for cross-team visibility.
- Provided **on-call production support**, troubleshooting complex incidents and maintaining IT operations reliability.

TOOLS

AIOps & Observability AI:
- Dynatrace Davis AI (Anomaly Detection, Root Cause Analysis)
- Predictive capacity analytics (CPU, memory, pod saturation forecasting)

AI / LLM Skills: Prompt Engineering, Llama / open-source LLMs, Agentic AI workflows, Fast API, LlamaIndex
Operating Systems: Linux, Windows
Servers & Web: NGINX, Apache HTTP, Apache Tomcat, JBoss
Cloud Services: AWS, GCP, Azure
Configuration & Infrastructure Management: Ansible, Ansible Tower, Terraform
CI/CD Tools: Jenkins, Harness CI/CD, Argo CD
Container Technology: Docker, Docker-Compose, Kubernetes, Helm
Database: PostgreSQL, MySQL, RDS
Monitoring & Logging Tools: Grafana, Prometheus, Cortex, Fluentd, File beat, Net diagnostic, Splunk, ELK Stack, Dynatrace, Google Cloud Monitoring, Amazon CloudWatch, ThousandEyes, AI observability
Security & Vulnerability: SonarQube, Rapid7 Nexpose, CrowdStrike Falcon
Ticketing Tools: JSM, ServiceNow
Version Control: GitHub, GitLab
Incident Management & Automation: PagerDuty, Opsgenie, StackStorm, Shell scripting, AWX
Artifact & Image Management: Docker Trusted Registry (DTR), Harbor, Nexus
Messaging & Streaming: RabbitMQ, ActiveMQ, Kafka
Documentation & Collaboration: Confluence, SharePoint, Google Workspace, Microsoft Teams + OneNote
VPN Solutions: Libreswan, StrongSwan

ENGINEERING INITIATIVES

- Designed and built a **web based Terraform dashboard** integrated with an **AI chatbot assistant**, streamlining infrastructure provisioning and improving user experience.
- Leveraged **open-source LLMs (Llama)** for internal **SRE knowledge management** and **root cause analysis (RCA) exploration**.
- Led **POC for SLK Direct**, aggregating data from **Dynatrace** and **ServiceNow** to create unified operational views and workflows, accelerating SRE adoption.
- Integrated **AWX for event automation and self-service operations**, reducing manual interventions across **incident management and change processes**.
- Built **POCs with Harness (CI/CD)** demonstrating automated build, deploy, progressive delivery, and policy enforcement workflows.
- Evaluated **Nagios, ThousandEyes, and New Relic** for infrastructure, network, and application performance monitoring; produced comparative analyses and adoption recommendations.

EDUCATION

Bachelor of Technology (B.Tech) in Electronics, Ideal Institute of Technology   08/2014 – 07/2018 | Ghaziabad
Percentage: 73%