

# Akshat Sinha

## DevOps Engineer

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### Technical Skills

**Cloud:** AWS (EC2, ECR, EKS, RDS, ELB, S3, VPC, IAM), GCP (GKE, Cloud Storage, Artifact Registry), Azure (AKS, ACR)  
**Orchestration:** Kubernetes, Docker, Helm, KEDA, Argo Rollouts  
**CI/CD:** GitHub Actions, Devtron, Argo CD, Flux CD, GitOps Workflows  
**IaC & Scripting:** Terraform, Crossplane, Karpenter, Python, Bash  
**Monitoring:** Grafana, Prometheus, Pyroscope (eBPF), OpenTelemetry, VictoriaMetrics  
**Security:** Trivy, SonarQube, SSO, SOC-2, PostgreSQL RBAC, Air-gapped/Bastion Architectures

### Experience

- Devtron** May 2024 - Present  
*DevOps Engineer-I* Gurugram, Haryana
- Managed **100+ multi-cloud Kubernetes clusters** (AWS EKS, GCP GKE, Azure AKS) across 20-50 enterprise customers including Indian unicorns and fintechs, maintaining 99.95% uptime SLA.
  - Owned end-to-end release engineering for Devtron OSS (20K+ downloads) and Enterprise Helm charts; maintain **15+ production charts** including PostgreSQL/Argo CD backups and 10+ microservice charts, reducing release cycles from 4 days to 1 day.
  - Orchestrated zero-downtime migration of **20+ production Kubernetes clusters** (200+ nodes) from AKS to GKE and led **7 enterprise client migrations** from EC2 to EKS (10-12 services each), completing transitions within 1-week timeframes.
  - Engineered automated cluster provisioning system** for air-gapped/private environments using SSH tunneling and proxy cluster architecture, enabling secure management through bastion hosts while reducing manual setup time by 70%.
  - Improved **resource efficiency by 25% through KEDA-based autoscaling** and OpenCost analysis, maintaining performance SLOs while reducing monthly infrastructure spend from 1L to 75K.
  - Designed canary deployment pipelines using Argo Rollouts with progressive traffic shifts (25%→50%→75%→100%) and automated rollbacks on error thresholds for 10+ microservices.
  - Designed and implemented automated PostgreSQL migration system** from Bitnami PostgreSQL 11 to Official PostgreSQL 14 using automated jobs and checks, enabling seamless upgrades for 20K+ OSS users.
  - Implemented eBPF-based continuous profiling** with Pyroscope in Grafana, enabling low-overhead performance analysis and fast bottleneck identification across microservices without code instrumentation.
  - Drove incident response for **50-60+ monthly production escalations** across 100+ clusters, maintaining 95% first-response resolution rate and **30min MTTR**. Conducted blameless postmortems and implement preventive automation, reducing recurring incidents by 40%.
  - Decreased client onboarding time by **50%** through migration documentation, technical support for stack upgrades, OSS to Enterprise conversion guides, and cross-functional collaboration with customer success teams.
  - Implemented **PostgreSQL RBAC** with least-privilege controls and security audits, achieving SOC-2 compliance and reducing vulnerabilities by 40% across all managed environments.
- Devtron** Jan 2024 - May 2024  
*DevOps Engineer Intern* Gurugram, Haryana
- Managed multi-cloud Kubernetes clusters and participated in 30+ production incident responses, gaining enterprise-scale infrastructure experience.
  - Contributed to Helm chart maintenance, release automation, and GitOps workflow improvements, supporting transition to fully automated pipelines.

### Projects

- Kubernetes Authentication Guard** | Python, Operator SDK, K8s API
- Developed Kubernetes operator to implement basic authentication by monitoring Deployments/StatefulSets/Argo Rollouts for annotations and mutating them with Nginx sidecar containers for access control.
- PostgreSQL Migration Automation** | Kubernetes, PostgreSQL, Bash
- Designed and implemented automated PostgreSQL migration system from Bitnami PostgreSQL 11 to Official PostgreSQL 14 using automated K8s jobs and checks, enabling seamless upgrades for 20K+ OSS users and ensuring Zero Downtime.

### Education

**Bachelor of Technology in Computer Science and Engineering** 2020 - 2024  
*Trident Academy of Technology (CGPA: 8.08/10)* Bhubaneswar, Odisha