

# ROHITH REDDY KEESARA

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Hyderabad

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## PROFESSIONAL SUMMARY

Kubernetes Administrator with 3 years of experience in managing and maintaining Kubernetes clusters, ensuring high availability and security. Adept at cluster upgrades, control plane management, and networking configurations. Skilled in leveraging Terraform for infrastructure as code (IaC), managing cloud environments (AWS, Azure), and implementing GitOps practices with tools like ArgoCD and FluxCD. Strong expertise in observability using the Prometheus stack, creating dashboards, and setting up alerts. Proven ability to troubleshoot real-time issues and optimize cloud system performance.

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## PROFESSIONAL EXPERIENCE

**Tata Consultancy Services**

**Jan 2022 - Present**

**Kubernetes Administrator**

### Kubernetes Administration

- Managed Kubernetes clusters, performing regular maintenance tasks such as upgrades and control plane management.
- Configured and maintained networking components, including Ingress controllers and TLS certifications for secure communication.
- Implemented and troubleshooted real-time issues related to Kubernetes pods, deployments, and resource allocation.

### Terraform & IaC

- Designed and implemented infrastructure-as-code using Terraform, managing remote states and creating custom modules in HCL.
- Automated provisioning of cloud resources on AWS and Azure platforms. Optimized infrastructure for scalability, cost-efficiency, and security.

### Cloud Platforms (AWS/Azure)

- Managed and deployed cloud services, including AKS/EKS clusters, IAM/AD integrations, and virtual machines (EC2/VMs).
- Configured and maintained VPCs, VNets, load balancers, Route 53, Traffic Manager, and storage solutions (S3/Storage Accounts).
- Monitored and optimized cloud usage with tools like CloudWatch and Azure Insights, and implemented cost management strategies.

### **GitOps Implementation**

- Deployed and managed GitOps tools such as ArgoCD and FluxCD for continuous delivery and deployment.
- Utilized Kustomize for configuration management and environment-specific customizations.
- Streamlined CI/CD pipelines, ensuring robust application delivery practices.

### **Observability**

- Integrated Prometheus stack for cluster and application monitoring.
- Configured Service Monitors for capturing metrics and used PromQL for querying data.
- Designed dashboards and set up alerting systems to ensure proactive monitoring and resolution of issues.

### **Troubleshooting Use Cases**

- Resolved control plane instability caused by resource contention, optimizing API server configurations and scaling nodes.
  - Identified and mitigated network latency issues by analyzing CNI plugin logs and reconfiguring network policies.
  - Debugged TLS certificate renewal failures, ensuring uninterrupted secure communication.
  - Addressed Prometheus metric scraping failures by refining Service Monitor configurations and tuning query performance.
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## **TECHNICAL SKILLS**

- Container Orchestration: Kubernetes (Cluster Maintenance, Control Plane Management, Networking, TLS)
- Infrastructure as Code :Terraform (HCL, Remote State Management, Custom Module Creation)
- Cloud Platforms: AWS (EKS, S3, EC2, Route 53, CloudWatch), Azure (AKS, Storage Accounts, Traffic Manager, Azure Insights)
- GitOps Tools :ArgoCD, FluxCD, Kustomize
- Observability Tools: Prometheus, Grafana (PromQL, Service Monitors, Dashboarding)
- Other Tools: Helm, Docker, Jenkins, Ansible

## **PROJECTS**

- Kubernetes Cluster Upgrade Automation
- Automated Kubernetes cluster upgrades using Terraform and Ansible, reducing downtime and manual intervention.
- GitOps Implementation for Microservices Deployment
- Established a GitOps workflow with ArgoCD and Kustomize, improving deployment frequency and reliability.
- Prometheus-based Observability for Multi-Cluster Environment
- Designed a centralized monitoring solution with Prometheus and Grafana for multiple Kubernetes clusters, enhancing operational insights.

## **ACHIEVEMENTS**

- Successfully managed a Kubernetes cluster migration with zero downtime, improving application performance by 20%.
- Reduced cloud infrastructure costs by 15% through optimization of resource allocation and utilization.
- Streamlined CI/CD pipelines, reducing deployment times by 40%.

## **EDUCATION**

- Bachelor of Technology in Mechanical
- CMR Technical Campus, Medchal, Hyderabad.
- Year of Graduation -2021