

# Manikranth v Bheemineni

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## SENIOR SITE RELIABILITY ENGINEER | INFRASTRUCTURE SECURITY SPECIALIST

Experienced Site Reliability Engineer with 9+ years of expertise in designing, implementing, and securing distributed systems across multi-cloud environments. Specializes in building resilient infrastructure that scales to support millions of users while maintaining 99.99% uptime. Proven track record of implementing infrastructure-as-code, automating operations through CI/CD pipelines, enhancing security postures with zero-trust networking, and optimizing system performance. Strong focus on networking fundamentals (TCP/IP, IPv6, BGP, DNS, SDN overlays), service mesh architectures, and cloud security across AWS, GCP, and Azure. Passionate about mentoring teams and driving automation that eliminates toil ("allergic to ops work").

### CERTIFICATIONS

- Associate Google Cloud Certification
- AWS Certified DevOps Engineer - Professional
- HashiCorp Certified: Terraform Associate
- AWS Certified Solutions Architect Associate
- Azure Administrator Associate

### KEY SKILLS

- **Cloud Platforms:** Multi-cloud architecture (GCP, AWS, Azure), IAM, VPC networking, security groups, global region failover
- **Networking:** TCP/IP (IPv4/IPv6), DNS, TLS/mTLS, BGP, VPNs, Tunnels, SDN overlays, Service Mesh
- **Security:** Zero-Trust Networking, OPA/Rego, PKI, CSPM, Cloud Security (GuardDuty, Security Hub, CloudTrail), Runtime Scanning, SIEM integration
- **Infrastructure as Code:** Terraform, Ansible, CloudFormation, Helm, Puppet (40,000+ lines contributed to enterprise modules)
- **Containers & Orchestration:** Kubernetes (300+ node clusters), Docker, Container Security, Falco endpoint protection
- **CI/CD & GitOps:** GitLab CI/CD, Jenkins, ArgoCD, Deployment Automation
- **Monitoring & Observability:** Prometheus, Grafana, Loki, Datadog, ELK Stack
- **Databases:** MongoDB Atlas, MySQL, PostgreSQL, DynamoDB, Redis
- **Programming Languages:** Python, Golang, Bash, Java, JavaScript, Ruby
- **Operating Systems:** Advanced Linux Administration, System Internals, Performance Tuning

### PROFESSIONAL EXPERIENCE

#### SENIOR SITE RELIABILITY ENGINEER

PwC | Feb 2021 - Present

- Led SRE guild of 15 engineers, setting roadmap and conducting quarterly performance check-ins.
- Architect and manage multi-cloud infrastructure (GCP, AWS, Azure) serving 50M+ users with 99.99% uptime across global regions.
- Improved platform availability by 0.05% (from 99.94% → 99.99%), preventing ~\$1.2M in annual revenue loss.
- Designed and implemented service mesh architecture enabling secure service-to-service communication with mTLS encryption, reducing security incidents by 85% and avoiding an estimated \$800K in potential breach costs.
- Built ChatGPT-powered SRE assistant that leverages OpenAI to help SREs filter through documentation for faster incident resolution, reducing MTTR by 40%.

- Implemented comprehensive BGP-based network architecture connecting multi-cloud environments with automated failover capabilities.
- Developed auto-remediation playbooks that resolved 95% of PagerDuty alerts without human intervention, reducing operational overhead by approximately \$250K annually.
- Designed scalable Kubernetes infrastructure (300+ nodes) with GitOps principles and automated security compliance verification.
- Created cloud security posture management system that monitors for security anomalies and automatically remediates common issues.
- Implemented observability platform (Prometheus, Grafana, Loki) with custom alerting and visualization dashboards that preemptively identify 30% of potential incidents.
- Participate in global 3-week rotating 24/7 on-call schedule, handling avg. 5 sev-1 incidents per quarter with < 15 min MTTR.
- Mentored 8 junior engineers in SRE practices, cloud security, and network architecture, improving team retention by 25%.

#### SECURITY POLICY ARCHITECT / REGO DEVELOPER

Coinbase | Oct 2023 - Jan 2024

- Designed and implemented policy-as-code framework using Rego/OPA for multi-cloud environments, enforcing security compliance across 50+ Kubernetes clusters processing \$1B+ daily transactions.
- Created security architecture for service mesh implementation, ensuring encrypted communication between microservices with mTLS.
- Developed automated cloud security monitoring solution that integrates with GuardDuty, Security Hub, and custom SIEM tooling.
- Implemented runtime scanning (Falco) and endpoint protection for container workloads, detecting 98% of threats in real-time.
- Developed VPC network security architecture with segmentation and least-privilege access controls, reducing attack surface by 60%.
- Created automated security testing framework for infrastructure changes, reducing security review cycles by 75%.
- Participated in global 24/7 security incident response rotation, handling critical severity incidents with 30-minute SLA.

#### CLOUD ARCHITECT / SRE ENGINEER

FedEx | Dec 2019 - Feb 2021

- Led migration to cloud-native data platform, improving query performance by 40% while enhancing security controls.
- Designed global network architecture spanning multiple regions with automated BGP routing and failover capabilities.
- Implemented defense-in-depth security model across multi-cloud infrastructure with automated compliance verification.
- Created real-time monitoring and alerting system that processes over 1 billion metrics daily with anomaly detection.
- Developed self-healing infrastructure that automatically resolved 80% of common system failures without human intervention, reducing operational costs by approximately \$320K annually.
- Built secure container orchestration platform with automated scanning and runtime protection.
- Orchestrated automated backup and disaster recovery solution with 15-minute RTO for critical systems.
- Established and led weekly on-call rotation, resolving an average of 3 Sev-1 incidents monthly with documented playbooks.
- Founded cross-functional SRE guild that established best practices adopted by 15+ engineering teams.

## DEVOPS / SRE ENGINEER

### FedEx | Dec 2019 - Feb 2021

- Implemented Infrastructure as Code using Terraform and Ansible, automating provisioning for cloud services.
- Developed secure CI/CD pipelines reducing release time from 30 days to 2 days while improving security controls.
- Created performance optimization framework for distributed systems, improving throughput by 35%.
- Designed monitoring solutions that provide real-time visibility into system health and security posture.
- Implemented automated disaster recovery procedures with regular testing to validate business continuity.
- Established DevOps center of excellence that reduced onboarding time by 50% and improved team velocity by 40%.

## DEVOPS ENGINEER

### MedCrave Group | Dec 2017 - Dec 2018

- Transformed deployment processes using secure Jenkins pipelines, reducing release time from 30 days to 2 days while improving vulnerability scanning.
- Implemented Infrastructure as Code with Puppet ensuring 100% environment consistency and security configuration compliance across all environments.
- Introduced automated security testing into CI/CD pipelines, catching 90% of common vulnerabilities before production.
- Designed and implemented comprehensive monitoring solution using Nagios and custom dashboards, providing real-time visibility into system health and security.
- Created standardized deployment workflows and security gates for application releases, ensuring compliance with organizational security policies.
- Developed disaster recovery procedures and conducted regular DR testing exercises, validating business continuity capabilities.
- Implemented secure integration between development tools and deployment environments, maintaining separation of duties and least privilege access.
- Established and documented DevOps best practices, creating a knowledge base that reduced onboarding time by 50%.
- Built and led DevOps team of 4, improving velocity by 40% through mentorship and secure process standardization.

## LINUX ADMINISTRATOR

### Blue Perl | Jun 2016 - Nov 2017

- Created standardized CI/CD workflows with integrated security controls, reducing deployment errors by 70% across development teams
- Automated infrastructure provisioning with security-by-design principles, reducing server setup time from 2 days to 4 hours
- Developed comprehensive monitoring solutions integrating security alerting that improved MTTR from 2 hours to 45 minutes for critical services
- Implemented container security scanning and hardening practices, reducing container vulnerabilities by 80%

## DATABASE OPERATIONS & MONGODB ATLAS

- Designed and managed 60+ MongoDB Atlas clusters across AWS & GCP with automated IaC provisioning (Terraform), achieving 99.99% uptime and enabling geo-distribution across 10 regions.

- Orchestrated quarterly full fail-over drills across 120 MongoDB Atlas replica-sets, validating < 60s RTO and < 500ms RPO under simulated region-outage scenarios, avoiding an estimated \$500K in potential downtime costs.
- Tuned WiredTiger cache sizing and journal commit intervals based on slow-query profiler data, improving average throughput by 25%, and sustaining 15K ops/sec under peak load.
- Implemented sharding strategies for high-volume collections, optimizing read/write performance for 20TB+ databases.
- Created developer self-service platform for MongoDB cluster provisioning, reducing time-to-value by 70% and accelerating feature launches to market.
- Designed data sovereignty controls for MongoDB deployments in compliance with regional regulations (GDPR, CCPA).
- Created automated index optimization tools that analyzed query patterns and suggested performance improvements, reducing query latency by 45%.
- Established monitoring and alerting framework specific to database performance metrics, enabling proactive capacity planning.

## LEADERSHIP & STRATEGY

- Chaired company-wide Security Infrastructure Working Group, establishing cross-organizational standards adopted by 5 business units.
- Developed SRE team charter and OKRs; held monthly engineering-strategy syncs; managed hiring process for 3 new SRE roles.
- Created standardized on-call handbook and incident management procedures adopted across organization.
- Established SRE maturity model to benchmark and improve reliability practices across 5 engineering departments.
- Led cross-functional initiatives to reduce technical debt, resulting in 30% decrease in incident frequency.
- Delivered technical presentations at cloud security conferences (AWS re
- , KubeCon) on infrastructure security at scale.
- Directed \$1.2M reliability and security initiative through bi-weekly steering committee meetings with executive stakeholders.

## AI & PERSONAL PROJECTS

- **ChatSRE Assistant:** Developed AI-powered tool using OpenAI API that helps SREs quickly search documentation during incidents, reducing response time by 40% and saving an estimated 120+ engineering hours monthly.
- **Paper Plane:** Built digital invitation platform (React, Firebase) with drag-and-drop editor and analytics dashboard.
- **PromptCraft-AI:** Created platform for optimizing LLM prompts with custom evaluation metrics and version control.

## EDUCATION

**Eastern Michigan University**, Michigan, USA | Master's in Engineering Management

**Jawaharlal Nehru Technological University**, India | Bachelor of Electrical Communication Engineering