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Professional Summary

Software Senior Principal Engineer with 15+ years of experience in networking, cloud-native platforms, and 5G mobile technologies.

Proven leader in end-to-end network virtualization architecture, including design of call flows, user journeys, and outcomes for enterprise edge platforms. Recognized innovator with 5 filed patents in edge computing and network virtualization.

Experienced in technical architecture, mentoring, and global project delivery, with a strong record of delivering high-impact networking features on predictable release cycles.

Core Strengths

- Network Virtualization, SDN, NFV, Policy-Based Routing, Network Security
- Kubernetes, Docker, Podman, Cloud-Native & Microservices Architecture
- 5G Core, cnBNG, EPC (SGW/PGW/SAEGW)
- Go (Golang), Python, C, REST APIs, Performance Optimization
- Technical Leadership, Mentoring, Patents, Architecture Reviews, SDD

Professional Experience

Software Senior Principal Engineer

Dell Technologies, Bengaluru | Aug 2022 - Present

Enterprise Edge Orchestration Platform - Own the network virtualization and network security layer for a new edge orchestration platform, covering host, VM, and container networking from release 0 onward, with all committed networking features delivered on time across 10+ consecutive releases. - Implemented multihoming in an enterprise automation/orchestration platform running on Kubernetes, enabling control-plane pods to connect to both in-band and out-of-band networks for common enterprise server deployments. - Implemented policy-based routing and a block-by-default, open-by-policy firewall model to isolate VM, container, and host traffic to dedicated network ports and

prevent unintended host exposure. - Built a unified ingress layer using MetalLB and NGINX to accept incoming traffic from both in-band and out-of-band networks, simplifying deployment of mixed management and data paths. - Designed a Layer-2 service console and protocol for diagnostics, filed as a patent. - Maintained a low true-defect rate in networking, with only a small fraction of reported issues turning out to be actual code defects. - Mentored multiple engineers in and outside the team, helping them grow from minimal networking background to independently owning networking design and implementation. - Lead adoption of Spec-Driven Development (SDD), making structured specifications the primary artifact for networking features.

Senior Software Engineer

Cisco Systems, Bengaluru | Jan 2015 - Aug 2022 - Designed and optimized 5G Session Management Function (SMF) according to 3GPP specifications, improving reliability and resilience of 5G call flows. - Optimized 5G SMF state machines and EPC gateway code paths, increasing transaction handling capacity by 2 times by significantly reducing memory footprint (50%+). - Implemented key 5G core features including PCF integration, handover mechanisms, and AMF temporary reject handling. - Developed REST APIs and optimized MongoDB data access patterns for RAN automation solutions, improving scalability and performance. - Engineered high availability mechanisms for LTE EPC gateways (SGW/PGW/SAEGW), reducing failover time and improving network resilience. - Built overcharging protection and granular ARP statistics systems to improve billing accuracy and network visibility. - Delivered critical customer escalation support across mobility and core network products.

Earlier Roles

Senior Analyst - Software Engineer, Accenture | 2014 - 2015

Engineer - Software, Sasken | 2010 - 2014

Engineer, TelecomOne | 2009 - 2010 - Built LTE core test automation frameworks and dynamic spectrum allocation systems for public-safety and commercial networks. - Developed RF data analysis solutions and KPI-driven optimization workflows to improve telecom network performance. - Authored 60+ technical reports and led small engineering teams in optimization and benchmarking projects.

Education

- MCA - Indira Gandhi National Open University, 2024
- PGDCA - Indira Gandhi National Open University, 2020
- BE (Electronics & Communication) - Visvesvaraya Technological University, 2010

Certifications & Recognition

- Dell Technologies TechEDGE Program - Technology Leadership & Advanced Engineering (with IIM Bangalore & NIIT StackRoute) (2025)
- Dell GenAI Foundations Certification (2024)
- Cisco MBG Excellence Award
- Dell Game Changer Award (2x)
- Ignite 3 Data Science Competition Finalist (Cisco)
- Cisco Aspiring Leadership Program (2019)

Technical Skills

- Programming: C, Python, Go (Golang)
- Cloud & Containers: Kubernetes, Docker, Podman, Microservices
- Networking: SDN, NFV, VLAN, Wi-Fi, 5G/4G/3G/2G, PBR, Network Virtualization
- Security: iptables, ebtables, nftables
- Databases: MongoDB, SQL, SQLite
- Frameworks/Tools: Flask, Django, Git, Bitkeeper, Jira, REST APIs
- Testing: Unit Testing, CI/CD, Test Automation