

RAVI KUMAR REDDY K

+1 647 427 5274 • ravikumark815@gmail.com • [LinkedIn](#) • [GitHub](#)

SUMMARY:

- **Software Developer** with a Masters in Software Systems and an extensive experience of **8+ years** in developing System Platform Software, Network Datapath, Applications and Tools.
- Proficient in **Layers 2,3,4&7 networking, Network Security, Virtualization, Cloud Computing, Linux Internals, Containerization, Software Architecture**, with a keen grasp of latest technologies.
- Hands-on experience in design, configuration, development, and troubleshooting of diverse public and private cloud platforms and networking products including firewalls, routers, and switches.
- **Collaborative team player** experienced in fostering relationships across cross-functional teams, contributing effectively to collective objectives, and achieving successful project outcomes.
- **Highly adaptable** professional skilled in swiftly acclimating to new technologies and industry developments, adeptly navigating diverse work environments and evolving landscapes.
- Adept at active listening, encouraging open dialogue, and valuing diverse perspectives within team settings, contributing to cohesive and productive work environments.
- Demonstrated ability in identifying and **enhancing architectural scalability** and application design. Adept at developing diagnostic tools and utilities to troubleshoot issues efficiently.

SKILLS & TECHNOLOGIES

- **Programming:** C, C++, Python3, Bash, Terraform
- **Web Development:** HTML5, CSS, Javascript, XML, JSON, REST.
- **Cloud Platforms:** AWS, Azure, GCP, Oracle Cloud (OCI), Alibaba Cloud
- **Virtualization:** KVM, VMware, DPDK
- **Containerization:** Docker, Kubernetes
- **Networking:** TCP/IP, Network Security, SSL/TLS, VPN, Routing and Switching, NAT, High Availability, IPSec, STP, VLAN.
- **Debugging:** GDB, GCOV, Strace, Perf, TRex.
- **Version Control and Management:** Git, Perforce, Gerrit, Jira, Confluence, Target Process, Agile, Kanban
- **Tools:** Visual Studio, Linux, MS Office, Windows

EDUCATION

- [Master of Technology](#), Software Systems-Security. Birla Institute of Technology and Science 2021-2023 | CGPA 8.74
- [Bachelor of Engineering](#), Computer Science & Engineering. Visvesvaraya Technological University 2011-2015 | CGPA 7.3

EMPLOYMENT

Software Engineer

Cisco Inc.

Aug 2020 – Till Date

- Developed new features for **Cisco ASAc (Containerized firewalls)** and integrated with SFCN using C, Docker, and Kubernetes.
- Added support to **Broadcom NetXtreme and Mellanox Connect X-5 [DPU]** virtual NIC cards for Cisco ASAv and FTDv deployments in Oracle Cloud Infrastructure (OCI) with **SR-IOV support**.
- Resolved several **Performance issues, NIC underruns, hot-plugging issues, core dumps, memory leaks, CPS/PPS issues** on ASAv and FTDv deployments in Public and Private Cloud platforms.
- Designed and implemented **horizontal autoscaling support** for ASAv deployments in Alibaba Cloud using Python3 and Terraform.
- **Migrated Virtual firewall deployments in Azure** from Python2.7 to Python3.9 using Azure WA Linux Agent. Resolved issues as part of upgrading underlying Wind River Linux OS and FXOS.
- Resolved several integration issues, performance issues and driver upgrades as part of underlying Wind River Linux OS upgrade to LTS 22, DPDK to v21 and FXOS upgrades in ASAv/FTDv deployments.
- **Enhanced debuggability and serviceability** of virtual firewalls by integrating Datapath logs into debug commands and tac reports generated using ASAv CLI.
- **Mentored and onboarded new team members**, providing comprehensive guidance on project methodologies, best practices, and technical tools, fostering their integration into the team.
- **Collaborated** on pipeline creations, Code reviews, functional spec reviews and process enhancements with the team.

Software Development Engineer

Red Piranha

May 2020 – Aug 2020

- Developed features for Crystal Eye, a Linux based network operating system running on firewalls including **SSLVPN Module enhancements like LDAP Integration, Static IP configurations, SSL Perceive and Bump.**
- Designed system specifications for SSLVPN features.
- Collaborated on code reviews, test case development, documentation, and process enhancements.

Software Development Engineer

SonicWall Inc.

Jun 2015 – Apr 2020

- Designed and developed several features for SonicWall's network security products and solutions.
- Integrated **SonicWall Switches with Firewalls**, simplifying end-user monitoring via a unified management interface.
- Resolved various issues in SonicOS, including **Wire Mode Interfaces, Log Monitoring, FTP Logging**, and more.
- Designed and developed **web applications for log analyzers** namely **TSR Analysis Tool, EXP Viewer** that parse various sections of log files using Python3 and Regular Expressions.
- Developed **Migration Tool using Python3** for customers of other vendors namely, Cisco, Check Point, Juniper, Fortinet, Palo Alto, and so on to migrate easily to SonicWall.

CERTIFICATIONS & COURSES:

- [Oracle Certified Cloud Infrastructure Foundations Associate](#) (Feb 2022)
- [SonicWall Network Security Administrator](#) (SNSA)
- [Crystal Eye Certified Engineer](#) (CECE)
- [Certified SonicWall Security Administrator](#) (CSSA)
- Linux Kernel Debugging and Device Drivers. (Cisco Internal Course)
- Linux Process Management, Scheduling and Memory Management. (Cisco Internal Course)
- Cisco Certified Networking Associate (CCNA - Cisco Internal Course)

ACHIEVEMENTS:

- As part of Hackathon 2023, 1000eyes process was integrated to into containerd daemon running Cisco FTDv to improve network monitoring for customers.
- [Cisco Connected Recognition Award for extensive work on VirtIO issues](#) (Feb 2022) for resolving intricate VirtIO issues in ASAv/FTDv deployments in OCI, contributing significantly to product enhancement.
- [Cisco Connected Recognition Award for SR-IOV Support](#) (March 2021) for pioneering SR-IOV Support, optimizing performance in ASAv/FTDv deployments in Oracle Cloud Infrastructure.
- Recognized as a [SonicWall Technical Master \(April 2020\)](#) for comprehensive contributions to firewall development, bug resolution, and rapid customer environment deployments.
- SonicWall Outstanding Contributor for Q4 FY 2019
- SonicWall Key Contributor for FY 2018