RAVI KUMAR REDDY K

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SUMMARY	• Software Developer with extensive experience of 6+ years in developing System Platform Software, Network Datapath, Applications and Tools for On-Premises and Virtual Next Generation Firewalls (NGFW), Containerized Firewalls (ASAc), Switches and Access points.
	• Extensive Experience in Cloud Computing, Virtualization, Linux Internals, Software Architecture, and comprehensive understanding of latest technologies.
	• In-depth knowledge of Layer 2, Layer 3 and Layer 4 networking, SSLApplications and Firewall Features.
	• Hands-on experience in design, configuration, development and troubleshooting of firewalls, routers, switches and email security appliances of different vendors.

SKILLS

Languages	C, C++, Python3, Bash
Public Clouds	AWS, OCI, Azure, GCP (Beginner), Alibaba Cloud (Beginner)
Private Clouds	KVM, VMWare
NFV	Intel DPDK Framework, Datapath Performance Optimization, VxWorks on BSPlib (Beginner)
Web	REST, JSON, XML, Regular Expressions, HTML, CSS, JavaScript, PHP (MVC CodeIgniter)
Tools	vSphere 6.5, Agile, Jira, Confluence, Target Process, CDETS, Coverity, Git, Perforce, Linux (RHEL, CentOS, Ubuntu, Fedora, WindRiver), Windows, MacOS
Networking	Layers – 2,3,4, TCP/IP, NAT, Policy Based Routing, Content Filtering, High Availability, SSL/TLS, LDAP, RADIUS, IPSec, VLANs, 802.1x, STP, Failover & Load Balancing and so on

EXPERIENCE

CISCO INC.

Software Engineer III   *(August 2020 – Present | 1Year 5 Months)*

Cloud and Virtualization

- Worked on **Intel DPDK/NFV Architecture** for Deep Packet Inspection in Cisco ASAv and NGFWv (FTDv) firewalls, which detects threats and responds dynamically.
- **Data path specialist** for various Public clouds mainly AWS, OCI, GCP, Azure and Private clouds including KVM and VMWare for drivers used in form factors Containers/Virtual Machines for Cisco ASAv and NGFWv firewalls.
- Worked on adding **SRIOV support** for Cisco ASAv and NGFWv deployments in **Oracle Cloud Infrastructure (OCI)**, **ESXi servers through VMware and Alibaba Cloud.**
- Worked on adding support to **Broadcom NetXtreme Adapters** for Cisco ASAv and NGFWv (FTDv) deployments in Oracle Cloud Infrastructure (OCI).
- **Improved Performance of SMP systems** mainly Cisco ASAv in KVM and OCI Platforms by adding **Multiqueue with RSS support** for i40E and i40evf network drivers and Intel XL710 Network Cards.
- Resolved several **NIC Underruns, Interface Hot Plugging Support, Core Dump Issues, Mbuf issues, Memory Leaks, Low CPS/PPS** (Connections per second or Packets Per Second) issues on ASAv deployments in KVM and VMware platforms.
- Migrated Virtual firewall deployments **in Azure from Python2.7 to Python3.9** using **AzureLinuxAgent**. Resolved various issues as part of upgrading underlying WindRiver Linux OS Upgrade.
- Cleared several **Coverity (Synopsys Framework) defects** in existing Code base and automated for QA analysis.
- Collaborated with other Engineers on code reviews, functional specification reviews and process enhancements. Facilitated problem diagnosis and prompt resolution for critical issues reported by customers.

RED PIRANHA

Software Development Engineer   *(May 2020 – August 2020 | 3 Months)*

Crystal Eye

- Developed features for Crystal Eye, a network operating system running on firewalls, such as **SSLVPN Module** such as **LDAP Integration**, Static IP setups, SSL Perceive and Bump and so on in Linux based Virtual Firewalls.
- Designed system specification for various features of SSLVPN.
- Collaborated with colleagues on code reviews via Git, test cases, documentation and general process enhancements.

SONICWALL INC. SonicOS	**Software Development Engineer** *(June 2015 – April 2020 | 4Years 11 Months)* • Developed a solution to integrate SonicWall **Switches with Firewalls** to give granular monitoring on every end-user through a single management interface. • Developed CLI and API interfaces to configure Flow Reporting, ARP Storm Limit and AWS Integration of Firewalls. • Resolved several issues with **Wire Mode Interfaces, Log Monitor**, Syslog Monitoring, FTP Logging, TSR Export and so on in SonicOS • Designed and developed **log analyzers** namely TSR Analysis Tool, EXP Viewer that parses various sections of log files using Regular Expressions and display output in a human-readable format. • Developed Migration Tool for customers of other vendors namely, Cisco, Check Point, Juniper, Fortinet, Palo Alto, WatchGuard and Sophos to migrate easily to SonicWall. *URL: https://migratetool.global.sonicwall.com*
EDUCATION	• **Master of Technology in Software Systems – Security** from **Birla Institute of Technology and Science (BITS).** *2021 – 2022, Current CGPA: 8.7/10* • **Bachelor of Engineering** in **Computer Science & Engineering** from **Visvesvaraya Technological University.** *2011 – 2015, CGPA: 7.3/10, accredited by World Education Services, Toronto, ON*
CERTIFICATIONS & TRAININGS	• Crystal Certified Network Engineer *(Red Piranha – April 2020)* • SonicWall Technical Master *(STM – March 2020)* • SonicWall Network Security Administrator *(SNSA – License # bd75d8d8051084bcbcf26328e7caff60)* • Certified SonicWALL Security Administrator *(CSSA - License # 54A9-2099-DE5E-4B52)* • Certified White Hat Hacker *(CWHH – Certified till Level 2)* • Certified Cisco Networking Associate *(Cisco Netacad)* • Cloud Computing Essentials *(Cisco Netacad)* • AWS for Developers *(Cisco Internal Trainings* • Linux Kernel Debugging *(Cisco Netacad)* • Linux Device Drivers *(Cisco Netacad)* • Linux Process Management and Scheduling *(Cisco Netacad)* • Linux Memory Management *(Cisco Netacad)*
ACHIEVEMENTS	• Cisco Connect Everything recognition for VirtIO Troubleshooting 2022 • Cisco Connect Everything recognition for SR-IOV Support 2021 • Completed all Technical Tiers in SonicWall University FY'21 • SonicWall Outstanding Contributor for Q4 FY 2019 • SonicWall Key Contributor for FY 2018 • Won Q3 FY'16 Dell SonicWall Quarterly OSAT and NPS Championship Award • Won IBNC (Networking Championship) at Zonal Level conducted by Association for Computer Machinery (ACM).
RESEARCH PAPERS	• "Detection of HTTP Based Botnets with Network Analyzers using Classifiers and Domain Name Filters" in International Conference on Engineering, Science, Management and Advances in Research Technology, 2015, ISBN: 2278-0181, IF: 1.76 • "Interfacing Automobiles with Smartphones" in National Conference on Green Computing Technologies (NCGCT), IJRET 2015, ISBN: 978-93-84935-31-3, IF:2.375