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| **SUMMARY:** | | | |
| * **Software Developer** with a Masters degree in Software Systems and an extensive experience of **9+ 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. * Adept at **debugging and optimizing system performance**, including resolving **kernel/user space issues**, **concurrency problems**, and **memory leaks**. * **Collaborative team player** experienced in fostering relationships across cross-functional teams, contributing effectively to collective objectives, mentoring, and driving process improvements. | | |
| **SKILLS & TECHNOLOGIES** | | | |
| * **Programming:** C, C++, Python3 * **Networking:** TCP/IP, Network Security, Routing, Switching, VPN (IPsec/SSL/TLS), NAT, VLAN, SR-IOV, SD-WAN, HA. * **Cloud Platforms:** AWS, Azure, GCP, Oracle Cloud (OCI), Alibaba Cloud * **Virtualization & Containerization:** KVM, VMware, Intel DPDK, Docker * **Web Development:** HTML, CSS, Javascript, XML, JSON, REST. * **Version Control and Management:** Git, Perforce, Jira, Confluence, Target Process, Agile, Kanban * **Tools:** Visual Studio, Linux, Cisco TRex, MS Office, Windows | | | |
| **EMPLOYMENT** | | | |
| **SOFTWARE ENGINEER** | **IBM SEVONE** | **APR 2024 – TILL DATE** | |
| * Developed features and resolved critical bugs in the **Network Management System (NMS)**, focusing on **NAT support, peering, SNMP,** and **database integrity**. * Implemented **D-Bus and CAP\_NET\_ADMIN configurations** to enable seamless **Network Address Translation (NAT)** between multiple NMS environments. * Enhanced **cluster management** by adding support for removing **inaccessible peers and HSA nodes** in active NMS environments. * OptimizedSNMP communication by fixing **IPv6 compatibility issues**, ensuring dual-stack agent support. * **Improved system stability** by automating the **removal of unknown kernel versions** and enhancing **Supervisord functionality** post-HSA removal. * **Hardened security** by patching **critical Golang dependencies** and migrating container images to verified publishers. * **Troubleshot major escalations**, resolving **NMS upgrade failures, schema errors, ICMP plugin malfunctions, and SDP export issues**, minimizing downtime for customers. * **Enhanced device discovery and policy enforcement**, ensuring consistent network monitoring and system reliability. * **Optimized SQL schema updates**, ensuring idempotent database migrations to prevent upgrade failures. * **Collaborated with cross-functional teams**, providing expertise on **containerized deployments, OAuth2 OIDC authentication, and peering configurations**, ensuring seamless integrations. | | | |
| **SOFTWARE ENGINEER** | **CISCO INC.** | **AUG 2020 – MAR 2024** | |
| * Developed and enhanced **Cisco ASAc (containerized firewalls)**, integrating with **SFCN** using **C, Docker, and Kubernetes** for seamless network service chaining. * Enabled **SR-IOV support** for virtual NICs, adding compatibility for **Broadcom NetXtreme and Mellanox ConnectX-5 DPUs** in **Cisco ASAv and FTDv** deployments across **Oracle Cloud and private cloud platforms**. * **Optimized performance** by resolving **NIC underruns, memory leaks, core dumps, CPS/PPS bottlenecks, and hot-plugging issues** across **public and private cloud environments**. * Designed and implemented **horizontal autoscaling** for ASAv in **Alibaba Cloud** using **Python3 and Terraform**, improving scalability and resource efficiency. | | | |
| * **Migrated Azure virtual firewall deployments** from **Python 2.7 to Python 3.9**, addressing dependency challenges while upgrading **Wind River Linux OS and FXOS**. * Upgraded key system components, including **Wind River Linux LTS 22, DPDK v21, and FXOS**, ensuring stability, improved performance, and compatibility with cloud platforms. * **Enhanced troubleshooting and debugging capabilities** by integrating **datapath logs** into debug commands and **TAC reports** accessible via ASAv CLI. * Actively contributed to development processes, including **code reviews, functional spec reviews, and CI/CD pipeline improvements**, fostering a high-quality and collaborative engineering environment. * **Mentored and onboarded new team members**, providing guidance on best practices, debugging techniques, and cloud integrations. | | | |
| **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 and ensured seamless integration into the existing system. * Collaborated on code reviews, test case development, documentation, and process enhancements. | | | |
| **SOFTWARE DEVELOPMENT ENGINEER** | **SONICWALL INC.** | **SEP 2017 – APR 2020** | |
| * Designed and implemented solutions to integrate **SonicWall Switches** with Firewalls, enabling granular control and end-user monitoring through a unified management interface. * Resolved complex issues related to **wire mode interfaces**, **log monitoring**, **syslog analysis**, **FTP logging**, and **TSR exports** in SonicOS. * Developed **CLI and API interfaces** for key features, including **Flow Reporting**, **ARP Storm Limit**, **AWS Integration**, and **SonicWall Switch Integration**. * Built web-based tools like the **TSR Analysis Tool** and **EXP Viewer** using Python 3.7 and regular expressions to parse logs and display user-friendly outputs. * Worked on a **web-based migration tool** to help customers seamlessly migrate configurations from other vendors (Cisco, Fortinet, Palo Alto, etc.) to SonicWall devices, minimizing transition friction. * Diagnosed and resolved customer issues by replicating complex environments using tools like **vSphere**, **LAN bridges**, **SSL applications**, **content filtering**, **load balancing**, **VLAN**, **802.1x**, **VPN**, and routing protocols. | | | |
| **EDUCATION** | | | |
| * [Master of Technology](https://github.com/ravikumark815/certifications/blob/master/Masters_Degree.pdf), **Software Systems-Security. Birla Institute of Technology and Science** 2021-2023 | GPA 3.6 * [Bachelor of Engineering](https://github.com/ravikumark815/certifications/blob/master/Bachelors_Degree.pdf)**, Computer Science & Engineering. Visvesvaraya Technological University** 2011-2015|GPA 3.0 | | | |
| **CERTIFICATIONS & COURSES:** | | | |
| * [IBM SevOne NPM Overview](https://www.credly.com/badges/e4907a48-56e0-4c14-b171-fb61fdf15c33/linked_in_profile) (April 2024) * [Oracle Certified Cloud Infrastructure Foundations Associate](https://github.com/ravikumark815/certifications/blob/master/OCI-Foundations-2022.pdf) (Feb 2022) * [Crystal Eye Certified Engineer](https://github.com/ravikumark815/certifications/blob/master/Red_Piranha_Crystal_Eye_Certified_Engineer_16042020.pdf) (CECE) * [SonicWall Network Security Administrator](https://github.com/ravikumark815/certifications/blob/master/SNSA.pdf) (SNSA) * [Certified SonicWall Security Administrator](https://github.com/ravikumark815/certifications/blob/master/CSSA.pdf) (CSSA) * 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](https://github.com/ravikumark815/certifications/blob/master/Cisco-Award-VirtIO-OCI-ConnectedRecognition.pdf) (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](https://github.com/ravikumark815/certifications/blob/master/Cisco-Award-SRIOV-ConnectedRecognition.pdf) (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)](https://github.com/ravikumark815/certifications/blob/master/SonicWall-Technical-Master.pdf) for comprehensive contributions to firewall development, bug resolution, and rapid customer environment deployments. * [SonicWall Outstanding Contributor for Q4 FY 2019](https://github.com/ravikumark815/certifications/blob/master/SonicWall_FY2019_Outstanding_Contributor.pdf) * [SonicWall Key Contributor for FY 2018](https://github.com/ravikumark815/certifications/blob/master/SonicWall_FY2018_Key_Contributor.pdf) | | | |