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| ***Software Developer****with* ***9+*** *years of expertise developing system platform software for enterprise network management systems virtualized firewalls, network switches and cloud-native infrastructure solutions.* | | |
| **SOFTWARE DEVELOPER** | **IBM SEVONE** | **APR 2024 – TILL DATE** |
| * **Developed network management features** for enterprise-scale Network Management System (NMS), serving Fortune 500 clients across 4 major feature releases. * **Engineered containerized NAT solutions** using D-Bus and CAP\_NET\_ADMIN configurations, enabling seamless network address translation across distributed NMS environments. * **Enhanced cluster resilience and scalability** by developing peer removal capabilities for inaccessible nodes and HSA environments, improving system availability during maintenance windows and reducing manual intervention * **Strengthened system security and stability** through proactive dependency management, including critical Golang security patches, container image migrations to verified publishers, and automated kernel cleanup processes * **Led critical escalation resolution** for high-priority customer issues, including NMS upgrade failures, database schema errors, ICMP plugin malfunctions, and SDP export problems, minimizing customer downtime * **Developed robust database migration strategies** with idempotent SQL schema updates, preventing upgrade failures and ensuring seamless version transitions across production environments * **Collaborated with cross-functional teams** on OAuth2 OIDC authentication implementations, containerized deployment strategies, and peering configurations, facilitating system integrations. * **Implemented comprehensive testing frameworks** using Playwright and TypeScript for flow integration testing, enhancing code quality. * **Streamlined device discovery** poller process by resolving issues that caused failures due to unset constants and memory exhaustion errors, ensuring successful network device identification. * **Enhanced usability and debuggability** by adding synthetic indicators for interface error monitoring, policy validation enhancements, and ingestion pipeline utilities, improving network visibility and operational efficiency | | |
| **SOFTWARE ENGINEER** | **CISCO INC.** | **AUG 2020 – MAR 2024** |
| * Developed and enhanced **Cisco ASAv, FTDv (virtualized firewalls) and ASAc (containerized firewalls)** deployments across diverse platforms including AWS, Azure, GCP, OCI, Alibaba Cloud, KVM, Nutanix and VMware. * **Implemented SR-IOV** support of virtual NICs, achieving compatibility with **Broadcom and Mellanox DPUs** across **Cisco ASAv and FTDv** deployments on Oracle Cloud Infrastructure and private cloud platforms * **Designed and implemented cloud-native autoscaling solutions** for ASAv deployments on **Alibaba Cloud** using **Python3** and **Terraform** infrastructure-as-code reducing operational costs by 35% * **Led critical platform modernization initiatives** by successfully addressing dependency challenges while upgrading **Wind River Linux OS, DPDK and FXOS** components ensuring stability and compatibility. * **Optimized system performance and reliability** by resolving **NIC underruns, memory leaks, core dumps, CPS/PPS bottlenecks, and hot-plugging functionality** across diverse **public and private cloud environments**. * **Enhanced troubleshooting and debugging capabilities** by integrating comprehensive **datapath logs** into debug commands and **TAC reports** accessible via ASAv CLI reducing mean time to resolution. * Actively contributed to development processes, including **code reviews, functional spec reviews, and CI/CD pipeline improvements**, fostering a collaborative engineering environment. * **Resolved 30+ critical customer escalations** including performance degradation issues, VPN connectivity problems, hot-plugging interface challenges, and cloud-specific deployment failures. * **Mentored and onboarded new team members**, providing guidance on best practices, debugging techniques, and cloud integrations. | | |
| **SOFTWARE 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 ENGINEER** | **SONICWALL INC.** | **SEP 2017 – APR 2020** |
| * **Designed and implemented** enterprise solutions to integrate **SonicWall Switches** with **SonicWall Firewalls**, enabling granular network control and comprehensive end-user monitoring through unified management interface. * **Worked on critical network capabilities** by resolving complex issues in **wire mode over LAG, High Availability, Memory Management**, implementing advanced **log monitoring systems**, optimizing **syslog analysis** workflows, and developing robust **FTP logging** and **TSR export** functionality within **SonicOS**. * Developed **CLI and API frameworks** for key features, including **Flow Reporting**, **ARP Storm Limit controls**, **AWS Integration**, and **SonicWall Switch Integration** enabling automated network management. * Built innovative web-based tools like the **TSR Analysis Tool** and **EXP Viewer** using Python 3.7 and regular expressions, creating intelligent log parsing capabilities that transformed raw network data into user-friendly analytical outputs * Worked on a **web-based migration tool** facilitating seamless configuration transitions from competing vendors (Cisco, Fortinet, Palo Alto Networks) to SonicWall devices, minimizing deployment friction and accelerating customer onboarding. * **Resolved 30+ critical customer escalations** by troubleshooting complex network environments using advanced virtualization tools including vSphere, LAN bridges, SSL applications, content filtering systems, load balancing configurations, VLAN implementations, 802.1x authentication, VPN tunnelling, and dynamic routing protocol | | |
| **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, Visvesvaraya Technological University 2011-2015 | GPA 3.0 | | |
| **SKILLS & TECHNOLOGIES:** | | |
| |  |  | | --- | --- | | **Programming** | : C, C++, Python3, Golang, PHP, Bash | | **Web** | : HTML, CSS, Javascript, XML, JSON, REST. | | **Cloud Platforms** | : AWS, Azure, GCP, Oracle Cloud (OCI), Alibaba Cloud | | **Virtualization** | : KVM, VMware, Intel DPDK, Docker, Kubernetes | | **Networking** | : TCP/IP, Network Security, Routing, Switching, VPN (IPsec/SSL/TLS), NAT, VLAN, HA | | **Tools** | : Git, Perforce, Cisco TRex, Linux, Windows, Jira, Confluence, Target Process, Agile | | | |
| **CERTIFICATIONS & COURSES:** | | |
| * [IBM SevOne NPM](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) | | |