AKHILA ALVA

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###### Summary

* Software system design, development, test, document and live customer beta/support experience for 11+ years.

**Professional Experience:**

* Virtualization and cloud technologies like micro services, containers and dockers.
* SDN and NFV, Open vSwitch, OpenFlow etc.
* Web development with Java Script (Angular JS), HTML, Lua, Java and Python.
* UI and NMS with REST concepts, XML and Angular JS, Telerik Kendo UI.
* Embedded system development with C/C++ in RTOS like Linux and IOS, IOS-XE, Polaris.
* Linux Device Drivers, loadable kernel modules and IPC.
* Design and implementation of data path and congestion management with QoS.

#### Technical skills

**Operating System** Linux, Cisco IOS, IOS XE, Polaris

**Programming Languages** C, Python, C++, Java. (Angular JS)

**Embedded Platforms** IXP425, MPC8323E and Broadcom 63168 NPUs.

**Networking Protocols** IPv6, DHCPv6, ATM, DSL, SNMP, TCP/IP, UDP, ARP.

**Development Tools** CVS, P4V, SVN, Clear case, ACME, GIT, Karma.

**Network/Debug Tools** Wireshark, Spirent, Ixia, tcpdump, GDB, Core dump.

**Professional Years:**

**RedHat India,** as **Principal Engineer** from **Aug 2020 to Feb 2021. (Quit on nerve injury)**

**VMware R &D India,** as **Senior Member Technical Staff** from **May 2018 to Nov 2019.**

**Samsung R &D India Bangalore,** as **Chief Engineer** from **Jan 2016 to Aug 2017.**

**CISCO Systems, India Pvt. Ltd.**, as **Software** **Engineer 3** from **Jul 2010 to Jan 2016.**

**D-Link R&D Center,** as **R&D Engineer,** from **Apr 2008 to Jun 2010**.

**D-Link R&D Center,** as **R&D Intern (Jul 2007 to Apr 2008).**

**Nitte** **Education** **Trust**, as **Lecturer** in computer science (**2003**-**2006**).

**Education**

**M.Tech (Networking & Internet Engineering),** SJCE, Mysore,(VTU).

**B. Tech (Computer Science)**, Visveshwaraih Technological University, Belgaum.

**Achievements**

* Leading small local development team in VMware on AWS for VMware Cloud SDDCs.
* Part of critical Samsung projects like S8 Bixby and Reliance Jio launch.
* Performance Awards (CAP Awards) and Cisco Connected Recognition in Cisco.
* D-Link Best Presentation among newcomers for “Watchdog Timers”.
* Secured 3rd rank in PGCET 2006 for all engineering branches.

**Project Profile (Latest as first)**

**Project #1: Port Mirroring As A Service** (Aug 2020 to Feb 2021)

Port mirroring as A Service offers flexibility to choose vendor neutral and performance based port mirroring capability to cloud users. Analyzed performance of drivers of different chip

vendors and designed a capability list on possible hardware offload. Intention was vendor neutral port mirroring and other capability interface to cloud users.

**Project #2: SDDC As A Service on Cloud** (May 2018 to Nov 2019)

VMware SDDC as A Service on AWS offers VMware software stack on AWS infra. Developed upgrade workflow modules and it's CI/CD pipelines. Fixed issues in live upgrades of SDDC on Cloud. Increased testing and deployment efficiency with parallelism in workflows. I was leading this small local team on development and learning activities.

**Project #3: Bixby Smart Assistant on Samsung S8** (Jan 2017 to Aug 2017)

Bixby Smart assistant is voice recognition intelligent system based on Deep Neural Network. Developed possible command variations, generated machine learning models to improve accuracy to 98.8% for clock and messaging apps.

**Project #4: 4G and 5G mobile network from Samsung** (Jan 2016 to Dec 2017)

Samsung NMS, monitors its mobile network elements like EnodeBs and EPC components.

Implemented high availability of 4G NMS through active/backup model, load balancing master slave mode and cloud service model. Reduced page average load time by 3 times with load balancing. Designed port mirroring feature in 5G SDN controller and backhaul monitoring.

**Project #5: Web UI support in Polaris for Cisco 3850.** (July 2014 to Dec 2015) Cisco 3850 ACLConfiguration UI and backend needed better usability. Designed and implemented compact ACL GUI with reduction in page load time. Used Kendo UIGrid with angular JS on different versions of UI.

**Project #6: ADSL interface on Cisco 8xx series routers**(July 2013 to till June 2014)

Designed and implemented network traffic prioritization during congestion and decongestion. Improved QOS with no delay and 0% high priority traffic drop, up to link bandwidth with Multi Queueing in ATM. Performance improvement of around 20% with multi level buffering.

**Project #7: Cisco SHDSL EHWIC card** (March 2011 – June 2013)

SHDSL EHWIC, a WAN Interface card series needed market critical hardware and software replacement. Worked with team on EHWIC card development and deployment, at all levels to get product certification in 8 months against normal 18-month duration.

**Project #8: D-Link DRO-XXX series router** (April 2008 – June 2010)

Design and development of Linux based SOHO router from scratch. Implemented features from UI to kernel level. Brought up a software test router LAN setup, to reduce development/test time with live debugging. Early bug detection and ease of testing increased feature release and fix speed by more than 50%.

**Project #9: Watchdog Support for D-Link Router-2XX** (July 2007 to March 2008)

Designed and developed watchdog functionality to monitor router for any possible failures in registered features. This improved user satisfaction with automated failure recovery, better user alerts and debug dumps on failures. Router services availability improved around 80%.

**PERSONAL DETAILS:**

Sex : Female  
Nationality : Indian

Present Address : #17-165, J.P. Nagar, 4th Phase, Bengaluru, India – 560076

**DECLARATION:**

I do here by declare that the above information is true to the best of my knowledge.

(AKHILA ALVA)