Srinivasa Repalle

Software engineer - Experis - Intel

Portland, OR - Email me on Indeed: indeed.com/r/Srinivasa-Repalle/da2b857378586fc6

➢ 17 years of embedded Software Development and Sustenance for Cable Modem Gateway, Router, Printer, IPS, Base Station / CMTS products in Embedded, Linux networking systems
➢ Development of software for IPv6 logo, FIPS certifications
➢ Development of open source software for 802.1X / wired authentication
➢ Development of software in Multicasting / PIMSM
➢ L3 Routing sustenance work for OSPF-2, BGP-4 , RIP2
➢ Netflow 9 packet maintenance and application detection DPI development for NBA
➢ L2 Sustenance work in VLAN, QinQ, SNTP, 802.1D protocols
➢ Development work for PKM security protocol in WIMAX base station
➢ Sustenance work in CLI, Linecard drivers
➢ 1394 serial bus protocol code integration, testing and maintenance for printer software
➢ Board bring up for pSos kernel, system call API replacement

WORK EXPERIENCE

Software engineer

Experis - Intel - Portland, OR - August 2016 to November 2016

• Validation of driver software, firmware
• Report issues in software, suggest fixes

Environment: C, Linux drivers, Kernel programming, 10/40GB Ethernet adapter, PCIe, firmware tools, GIT

Software engineer

HCL - Intel - Phoenix, AZ - December 2014 to August 2016

IPV6 features and PUMA7 software infrastructure

Responsibilities
➢ Customization of Intel SDK for PUMA7 cable modem eRouter platforms
➢ Maintenance work for IPV6 LOGO certificate issues in DHCPV6 application, neighbor discovery, ICMPV6 kernel software for PUMA6 eRouter
➢ PPPoe code verification and validation

Environment: Linux, CER / CDR IPV6 logo test suits, clearcase, C, DHCPV6, Cable Modem IPTables, PPPoE, GIT

Software engineer

Mars Telecom - Netgear - Hyderabad, Andhra Pradesh - November 2013 to June 2014

Wired authentication / 802.1x feature for CPE WAN security interface

Responsibilities
➢ Integration of open source supplicant into Broadcom SDK
➢ Implementation of AT&T requirements for SNTP sync, mutual authentication, VLAN
➢ Certificate storage and certificate verification

➢ TR69 extensions for EAPOL statistics
➢ WAN side HTTPS feature support

Environment: C, Linux 3.4rt, openssl, TR69, 8021x, supplicant, hostapd, Broadcom SDK

Software Engineer

Concept software - HP - Roseville, CA - January 2013 to August 2013

Multicast routing code development and maintenance for Tippingpoint firewall products
Roles and Responsibilities

➢ Verifying Gated multicast routing code as per RFC functional specification
➢ Fixing issues in PIM-SM protocol
➢ Fixing / testing CLI configuration issues for IGMP/MLD, PIM-SM

Platform: C, Linux, Multicast protocols, SVN

Software Engineer

Hcl Technologies - Brocade - Chennai, Tamil Nadu - July 2010 to October 2012

FIPS Security certification software development and Maintenance work for Brocade Routers
Sustenance for L3 and L2 protocols

Roles and Responsibilities
Project 2:
➢ FIPS-2 security software development for Brocade NI XMR router product
➢ FIPS 140-2 requirement enhancements for HTTPS / SSL layer porting for security methods
➢ Development of tests for POST, KAT
➢ CLI commands for forced failures, pairwise consistency tests
➢ Ported SNMPv3, SSH, SSL security APIs' to NSS library for MD5
➢ Sustenance work for Brocade BI / FI router products for maintenance issues for L3, L2 datacom protocols, OSPF, BGP, DHCP
➢ Software development in control plane for routing protocols and management protocols

Platform: OSPF, BGP, C, Security, Linux, C, STP, RSTP, VLAN, Clearcase

Principal engineer

Mcafee - Bangalore, Karnataka - November 2008 to May 2010

Development and Maintenance work for Mcafee Intrushield (IPS) product for application finger printing in NBA feature

Roles and Responsibilities
➢ Development of application detection features for NBA (network behavior analysis) device in Linux Posix Pthreads
➢ Maintenance work for Netflow 9 records generation and exportation
➢ Porting / using of Aho-Chorasic algorithm in Linux for configuration data
➢ Development of scripting utility tools
➢ Parsing of XML files for configuration items used in deep packet inspection (DPI)

Platform: vxWorks, Linux, C, Netflow 9, cvs, IPS, XML

Technical /Development Manager

Proxim Wireless - Hyderabad, Andhra Pradesh - August 2007 to August 2008

Addressing of customer issues for L2/L3 protocols for Proxim TMP product line and leading software development team

Roles and Responsibilities

➢ Porting of features from AP platform to TMP code base for features, SNTP, DNS, VLAN, Syslog, snmpv3
➢ Leading tram for FIPS-2 certification for secure management of WLAN devices
➢ Leading development team, responsible for development of L2, L3, SNMP, drivers, RADIUS, secure management snmpv3, ssl, ssh , CLI
➢ Responsible for internal builds and customer patch releases
➢ Feature enhancements and customer issue resolution for, Dynamic configuration for access list and filters, RADIUS, VLAN configuration on SU, Addressing end customer issues, for DHCP, bridge, performance improvements
➢ Embedded software development for control plane features

Platform: C, vxWorks, windows, L2/L3, Radius, winCvs, WIFI

Senior software engineer

Aperto Networks - Bangalore, Karnataka - June 2006 to August 2007

Development of PKM security module for Aperto WIMAX base station

Roles and Responsibilities

➢ Development of PKM module state machine for base and subscriber stations on vxWorks mutli- threaded environment
➢ Resolution of internal QA issues
➢ Performance testing for embedded security feature for Fujitsu ARC binaries for encryption
➢ Lead activities for VLAN double tagging, Base station redundancy
➢ Design and Development of QinQ module for base station data plane

Platform: C, vxWorks, QinQ, PKM of 802.16D (WIMAX), winCvs

Senior software engineer

Motorola - Bangalore, Karnataka - November 2004 to June 2006

Device driver enhancement for Broadcom BCM driver and CLI enhancements for Motorola BSR2000 product

Roles and Responsibilities

➢ RF driver enhancement for BCM3214 MAC driver for BSR2000
➢ Contribution to software maintenance work during internal release
➢ Modifications and enhancements made to CLI commands to work for standalone CMTS edge router (BSR2000), Cable Modem
➢ Development of DOCSIS 1.0 BPI (baseline privacy interface) for CM (cable modem) embedded software for authentication and authorization
➢ DOCSIS BPI Data encryption protocol enhancements for services configured on CM
➢ Maintenance for CLI commands for DOCSIS BPI protocol configuration

Platform: C, vxWorks, TCP/IP stack, CLI, ClearCase, CMTS, DOCSIS

Member Technical Staff

Hcl Technologies - Chennai, Tamil Nadu - October 2003 to November 2004

Neighbor Discovery Cache enhancements for Avici TSR core router

Roles and Responsibilities
➢ Design and enhancement of Linecard drivers for IPv6 statistics and driver initializations for IPv6 features
➢ Testing ASIC/FPGA drivers for initialization of hardware and for IPv6 packet statistics collection
➢ Merging Avici features from vxWorks 5.4 TCP/IPv4 stack to vxWorks 5.5 TCP/IPV4 stack during stack porting
➢ Enhancing ARP table manager on control server to Neighbor Discovery table manager for line card module interfaces on Data plane
➢ Software development in forwarding data plane

Platform: C, C++, Drivers, vxWorks, IPV6, Router, ClearCase

Senior software engineer
Hewlett Packard - Bangalore, Karnataka - June 2000 to July 2003

1394 stack integration and 1394 protocol applications enhancements, and verification

Roles and Responsibilities
➢ Understanding 1394 stack design and its applications (PPDT, SBP2, IP/1394)
➢ Finding defects in coding, design phases in development life cycle
➢ Integration of code in product (printer) base, bringing up embedded 1394 stack
➢ Verifying socket layer services in 1394 domain
➢ Writing tests cases and test plan
➢ Investigation on compression algorithms and IPv6 stack support in printer firmware
➢ Interoperability testing of 1394 supported devices
➢ Code coverage of software using Tornado tool

Platform: C, vxWorks, 1394 protocols, IPV6, Printer, ClearCase

Senior software engineer
Samsung - Bangalore, Karnataka - August 1999 to May 2000

Embedded kernel replacement with pSos+ for Samsung printer product

Roles and Responsibilities
➢ Replacing the HCL embedded kernel with pSos+ kernel
➢ Bringing up the board with new kernel ported
➢ Configuring the boot sequence: makefile changes, kernel configuration changes, and BSP changes required for pSos+ configuration
➢ Tested TCP/IP stack functionality (ICMP, ARP) over LAN for data plane
➢ Verified streams functionality
➢ Debugging stack code, 10/100 Ethernet Micro controllers using in circuit emulator

Platform: C, pSos, RIP-1, TCP/IP stack

Software engineer
Tektronix - Bangalore, Karnataka - March 1999 to August 1999

Tektronix M2100 audio and video digital switch feature verification
Verifying test cases for switch features for M2100 Audio video digital switch
Platform: C, VxWorks, ClearCase

Student

IITM - Chennai, Tamil Nadu - June 1998 to January 1999

This is a Mtech thesis project on Self-healing ATM networks based on WDM, light path technologies. Aim of the project is to design Virtual path and Light path networks. Given a physical network along its bandwidth, it is required to find Virtual paths, to reduce routing table entries, and to reduce setup, switching delays. An algorithm is implemented to select best Virtual paths. WDM is a technology, which addresses high bandwidth requirements in optical networks. Since available numbers of frequencies are few, it is required to find out a optimum light path network, over Virtual path network, in order to reduce fiber cost in ATM networks. After finding optimum virtual path network algorithm is extended to find best light paths for a selected configuration. Self-healing considered when a link fails and alternate virtual paths and light paths found for each affected virtual path that shares failed physical link. USA network (28 nodes, 45 links), and ARPA networks (20 nodes, 31 links) are used in implantation of these algorithms.
Platform: C, Linux

EDUCATION

Bachelor of Science

Nagarjuna university
1989 to 1992

ADDITIONAL INFORMATION

IT Skills Summary
Operating Systems Linux, Unix, vxWorks
Programming Languages C, C++, Assembly
Protocols DHCPV6, 802.1X, Multicast / PIM SM, IGMP / MLD, BGP, OSPF, RIP, VLAN, NETFLOW-9, IPV6 / Neighbor Discovery, Bridge (IEEE 802.1D), PKM - WiMAX (IEEE […] CLI, Security
Embedded Device drivers, 1394 serial bus, RTOS
Products Cable Modem, Router, Bridge, Base station / CMTS, IPS, Printer
Knowledge skills SVR System V Unix internals, Linux device drivers, Kernel Programming, SDN/openFlow spec
Tools Lanconf, nvmupdate, eeupdate, GIT, SVN, Clearcase, winCVS, SDS debugger, GDB, ICE debugger, crash dump analyzers, Tornado, DDTS, clearQuest, bugZilla, Smart Bits, wireshark, IOL CERouter, CDRouter, TR69
open source Linux software IPTables, Ebtables, WPA supplicant, hostapd , Gated, PPPoE, Quagga / zebra, openSSL, Dibbler