Ravikiran K.S.

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Ravi is a **programmer, author,** and **consultant** residing in *Bangalore, IN*. Over 18 years of **hands-on** software development career, he has delivered over *#9 products* from concept-to-deployment for companies like **Versa, Cisco, Juniper and CCPU**. In academia, he **ranked #1** with **81% aggregate in Masters** under the faculty of Computer Science at the *RD University, Jabalpur*. He **pens papers** on *tech topics*, contributes to *open-source*, and hacks *tech* in spare time. He is awarded **#11** times for **timely product delivery**, **solving critical problems**, and help in securing **customer design wins**. He also provides *freelance consultation* to startups on need basis.

Core Competencies

Industry Trend Analysis . Fire-Fighting . RFP . Customer Engagement . Patent . Articles . Tech Talk . Mentoring . Demos . Product Ownership . Feasibility Analysis . Standards tracking . Cross Team/Geography Collaboration . Distributed System . SD-WAN . SASE . DC Network . Load Balancer . High Availability . Container . NFV . Infra . VOS . NXOS . JUNOS . TWAMP . DPI . VNTAG . VRRP . SCTP . MLAG . LLDP . STP . DPDK . Bonding Driver . C . Bash . Python . Java . Automation . Linux/FreeBSD Network Stack . VFS . Performance . DPU Offload . Ixia . Broadcom Trident3 . Netlogic XLP/R . Fulcrum Bali . Cavium Octeon . MSPD Comcerto 2K . Proprietary ASICs . Docker . LXC . 6Wind FastPath . QNX . Spirent . Solaris . Mirroring File-System . Trillium Stack . SAF .

Authored Articles & Patents

- *Versa Networks Launches Industry's First Unified SASE Gateway that Scales Beyond 100 Gbps* - **Versa Networks' unified SASE gateway ensures security, increases network performance**
- *Method for split-brain avoidance in sub-secondary HA systems* - **Versa 75th Patent**
- *Increasing Carrier-Class High Availability* - **TechOnline**, **PICMG-Embedded**
- *Load balancing between server blades within ATCA platforms* - **TelecomAsia**, **Radisys Blog**.

Professional Summary

Since Feb/2018   *Sr. Principle Engineer, SME for Cloud Performance, HA Infra & SLA* at **Versa Networks, Ltd.**

As a Engineering Leader, delivers and owns High Availability, I/O + Services Scaling, and SLA areas on *Versa FlexVNF SD-WAN router*. Key highlights are split-brain avoidance in sub-secondary HA, SLA scaling upto **64K sessions** with performance of **<20ms inter packet gap**.

- Helps with performance and scalability changes to meet increasing demands for **20X higher throughput**.
- Spearheads effort to measure end-user quality-of-experience from Versa SASE Clients to Cloud Gateways.
- Develops innovative way to avoid split-brain in HA systems. Solution is granted patent, **USPTO #10972337**.
- Implements feature to solve runtime config & state validation to avoid race-conditions among HA pairs.
- Ravi is called for **troubleshooting customer escalations** and for tech-talks on his expertise areas.

Sep/2014 -   *Storage Networks Developer* at **Cisco Systems, Inc.**
Feb/2018

As Individual Contributor, delivers FEX access features on *N9000 DC Leaf/Spine* and *N7000 DC Core* switches. Features are FCoE support for Fabric Extender, FEX Active-Active, vPC/MLAG, Phy-Port vPC, and FabricPath. Also delivers Linux *LXC container based NXOS ISSU* support for network services, KLMs on N9K ToR switches.

- Develops innovative feature for system-wide runtime debug trace logging without affecting performance.
- Ravi is **invited for presenting it to NXOS Architecture Forum** and feature is used on all product lines.

May/2012 -   *Core Router Developer* for **Juniper Networks, Inc.**
Aug/2014

As Individual Contributor, develops control-plane infra, inter-chassis topology monitoring, chassis management and protocol role assignment for *PTX family* multi-chassis core router. Develops the **fault detection, isolation, and recovery framework** for high-speed SERDES based ASIC interconnects in *T-series standalone* products.

- Develops innovative method of **reusing IS-IS as loop-free topo-mgmt solution** without overhead of STP

Aug/2011 -   *Security Session Exchange Developer* for **Stoke Networks, Inc.**
May/2012

As Individual Contributor, develops statistics harvest infra on Netlogic XLP processors, implements clock synchronization mechanisms for *SSX3000 Security Exchange Gateway*.

- Implements 64-bit counter infra over PCIe-aperture mapped from NPU registers onto Management CPU
- Solves packet-engine and DMA issues, optimizes packet-path on XLP for higher throughput.
- Optimizes the packet-path using Netlogic XLP NPUs to achieve Line-rate IPSec Encryption Gateway.

Feb/2007 - Jul/2011

Network Solutions Developer at **Continuous Computing, Ltd.**

As a Technical Leader, delivers **#2** carrier-grade and **#2** enterprise-grade solutions mentoring a **team of 6**.

- *FastPath SCTP* is a carrier-grade, highly optimized, stateful gateway solution. It gives bi-di throughput of **1M pps** of 1500B SCTP packets over 10G links. It extends 6Wind FastPath stack on NetLogic XLR NPUs. Ravi delivers complex zero-copy packet forwarding & scheduler, in-place IPSec, DMA and DNS support.
- *Layer2 HA* is an enterprise-grade network resilience solution. It gives **sub-msec** failover, weighted traffic mapping as hub-n-spoke, and faster convergence by VRRP enhancement. It is implemented as extension to Fulcrum ControlPoint on Switch and Bonding Driver enhancement on x86 Blades. Ravi delivers entire product, from ideation to deployment, pens white papers, customer support. It generates **>$3M** revenue.
- *FlexBalance* is an enterprise-grade server load balancer. It does **statistical hashing** of traffic marked by **L4 flows**, MPLS tags, physical port-groups using DWRR & CBQ schedulers. It is implemented as pattern-match & scheduler enhancement using FFU, TCAM. Ravi delivers entire product from code to docs single handedly, works with architect and QA in different geographies, helps in deployment, customer support. Huge commercial success, generated **>$8M** in revenue, and helped in more than **12 design wins**.
- *LTE ENodeB on Mindspeed ARM processors* using 4GMX OS. Mindspeed has ARM family of processors with very low power usage. U-CPU/L-CPU dual CPU achitecture is suitable for distributing Phy and stack layers across two different CPUs, both of which are connected by a message bus. Ravi is tasked with porting, optimization of stack on these low-powered devices
- *FlexTCA* is a carrier-grade, service availability product that pre-integrates Trillium stacks with GoAhead Saffire middleware to run out-of-box on ATCA chassis. It implements OAM interface over SNMP/Web, Compute blade resilience using SAF SAI, Protocol HA using DFTHA layer, Control plane HA using SAF checkpoint service, and Chassis management using SAF HPI. Ravi is responsible for design, code and testing of **complex SAF-Trillium integration layer** that represents core value-add of product offering.
- *UpSuite* is a high-availability middleware providing fault identification, isolation, and recovery along with **real-time mirroring file-system** for Solaris based servers. It implements heartbeat framework, application monitoring framework, kernel file-system for mirroring, and **NIC resiliency driver**. Ravi is involved in doing upgrade of file-system to Solaris 10, supporting zones, and providing bug-fixes on Solaris servers.

Jul/2004 - Jan/2007

Software Consultant at **[Various Bangalore Startups]**

As a Technology Consultant, he has helped in **feasibility analysis, new tech integration & prototyping/PoC**, *solving design & coding challenges*, **timebound resolution of critical bugs**, *deployment engineering assistance*, and **Application optimization for scale & performance**.

- AJAX/xmlhttprequest & DOM integration for *HR Management Java Web App*. Used are Struts, Spring, JSP.
- Seamless sync of user application data to Cloud services using integration of *Funambol* sync-server and J2ME application on Symbian S40 & S60 phones.

Versa Networks India Pvt. Ltd.

Ravi is employed as a full-time employee, in the role of Senior Principal Engineer, at Versa Networks India Pvt. Ltd., Bengaluru since Feb/21/2018. His Employee No is 1803001.

Ravi held following designations earlier:

- **Principal Engineer**: 21-Feb-2018 to 31-Jul-2023

Versa Networks is secure SD-WAN (Software-Defined WAN) and SASE (Secure Access Service Edge) vendor, specializing in providing on-prem and cloud delivered WAN-edge interconnect and comprehensive security stack bundled into a single-pass packet processing architecture. All offerings are presented as a single pane of glass for easy, consistent, and scaled operations. All configurations are templatized, parameterized, and exposed over REST APIs. Versa is consistently named as SD-WAN leader for 3 consecutive years (2020 to 2022) and the only vendor to feature in all 3 of SD-WAN, SSE, and FWaaS Gartner magic quadrants. Startup is backed by VCs like Sequoia, Mayfield, and BlackRock. They have engineering teams in San Jose & Bangalore, whereas sales and support teams are spread throughout the globe.

Responsibilities

- Design, implement and test input-output and service scale-in/scale-out cluster solution for dynamically up/down revising of network and security services throughput, elastic load management, and port density, along with auto fault detection and recovery.
- Create a cross-platform, light-weight, and power-frugal Application for recording & reporting the User quality-of-experience (QoE) wrt. underlay network using periodic and automatic SLA measurements from Versa SASE clients on Windows, Linux, MacOS, and Android OS towards Versa Cloud Gateways deployed across the globe.
- Add support for TWAMP metrics based traffic steering in the Versa VOS Application Performance Monitor

towards MEF standards compliant, inter-operable, and functional SD-WAN.

- Add support for SLA over IPsec, GRE tunnel interfaces and real data loss measurements over the tunnels.
- Design, implement, document, support deployments, train, and own RFC 5357 compliant TWAMP protocol stack that can scale well, perform under high load, and interoperate with all major NEM equipments in WAN edge.
- Conceptualize and deliver broker-less, resilient, and reliable solution for dynamic configuration-consistency validation, capacity degradation audit, realtime capabilities exchange, and practive actions on misconfiguration.
- Ideate, design, develop, help with release qualification and deployments, train, and support software-only solution for split-brain avoidance on the Versa VOS redundancy cluster.
- Assist with securing patent award from USPTO (#10,972,387) for Split-Brain avoidance solution for Versa VOS redundancy cluster.
- Implement websocket protocol for dynamic, lightweight notification push to SASE user end points.
- Assist with feature requirements analysis, technology limitations study, third-party & open-source software study and research on peer-review papers and promotional content to suggest right technical solutions to meet given set of requirements within existing Versa architecture.
- Responsible for engaging with customers to troubleshoot issues, gather new requirements, and demonstrate features in the areas of his product and solution ownership.
- Mentor new hires, deliver tech talks, and train sales & support engineers on his areas of product & solution ownership and expertise.
- Engage with talent acquisition team to hire for new positions. Assist with job description, resume screening, conducting interviews and selection of candidates through both on-campus interviews at premier institutes and on-premise interviews at office location.
- Undertake travel as needed to engage with US engineering team, to take transfer of technology, and understand deliverables and their scope from engineering executive leaders.
- Help documentation team in updating content on relevant subject areas.
- Assist with performance reviews, development guidelines enforcement, design, code and documentation reviews, and test plan reviews.
- Collaborate with cross-geography engineering, sales and support staff across the globe, from time to time, as required for his deliverables.
- Assist with market research related presentations, details for relevant customer RFP requirements, and content for customer demonstrations.

Skill Set

- Technologies: SD-WAN, SASE, DPDK, stats harvesting, elastic scaling, TWAMP, Load-Balancing, High-Availability, IPFIX, IPsec, Websockets, GSL, NTP, XML.
- DBs: Redis, LevelDB, SqliteDB
- Programming Languages: C, C++, Bash, Yang, Tailf ConfD & Python scripting
- Operating Systems: Linux
- Testing Tools: Ixia

Cisco Systems (India) Pvt. Ltd.

Ravi was employed as a full-time employee, in the role of Software Engineer IV at Cisco Systems India Pvt. Ltd., Bengaluru from Sep/01/2014 to Feb/09/2018. His Employee Number was 365507.

Cisco Systems Data Center BU is an industry leader in Data Center networking solutions that include Local Area (LAN), Wide Area (WAN), and Storage Area (SAN) Network technologies. They have in-house built feature-rich, store-n-forward, and customizable N7K family of DC switches. Through acquisition of Insieme Networks in 2013, they have ultra low-latency, cut-through, and economical N9K family of DC switches. N9K switches come with line-cards built using both in-house and Broadcom ASICs. NX-OS NOS and DCNM NMS is used on both N7K and N9K family of switches. IEEE 802.1BR standard compliant Fabric Extenders (FEX) provide higher port-density for them. The FC-over-Ethernet (FCoE) overlay protocol for carrying Fiber Channel (FC) protocol, along with other relevant infra like naming-service, spf, and so on are supported on these switches. For providing loss-less switching, the DCBX extensions to LLDP standard are used.

Responsibilities

- Conceptualization, design, development, demo to Architecture Board and release delivery of loss-less trace-logs using Linux ftrace on Cisco NXOS.
- Design, development, and release delivery of FCoE support over Fabric Extender (FEX) on Cisco Nexus 9000 and Nexus 7000 family of switches.
- LXC container based ISSU support for Fiber-Channel over Ethernet(FCoE) stack on Cisco N9000 family ToR switches
- Support and fix any bugs observed on Active-Active, vPC, and FabricPath topologies when tested over the FEX traffic.
- Support and fix any issues reported in FCoE control plane and data plane of Cisco Nexus 7000 family of switches.
- Involve in gathering specific, measurable, and accurate requirements from relevant stake holders, prepare functional specification, unit test, and integration test documents.
- Gain in-depth understanding of ASIC flow, tables, and registers; as well as software process interactions, dependencies, and division of responsibilities to deliver on the assigned features.

- Perform design, code & QA test-plan reviews, provide on-need tech talks.
- Work with functional and system test engineers to qualify the developed features, quickly fix any issues identified for on-time delivery of feature.
- Mentor and knowledge transfer to other new engineers as needed.
- Engage with third-party Merchant Silicon provider for verifying issues in their hardware and identifying workarounds for some of those issues.
- Assist with end-user documentation update for relevant work areas, and perform release-time review as needed.
- Participate in project meetings, occasional war-rooms setup for customer escalations triaging, and brainstorming sessions.
- Engage with teams in US as required for handling issues & relevant change reviews in their respective components.

Skill Set

- Technologies: FCoE, IEEE 802.1BR VNtag, vPC, LXC Containers, Linux ftrace
- Programming Languages: C, Bash & Python scripting
- Operating Systems: Linux, NXOS
- Testing Tools: IXIA, Spirent
- Platforms: Nexus 7000 and 9000 family of switches

Juniper Networks India Pvt. Ltd.

Ravi was employed as a full-time employee, in the role of Software Engineer 3, at Juniper Networks India Pvt. Ltd., Bengaluru from May/28/2012 to Aug/14/2014. His Employee ID was 000025951.

Juniper Networks Core Router BU is a well-known vendor of Core Routers for IP backbone Service Providers. T-series routers provide stackable (TX), feature-rich and low-latency routing with advanced traffic engineering capabilities for SP core. Whereas, PTX-series of routers present low power-consumption, very high throughput, and space efficient routers with advanced IP/MPLS feature-set. Both router families run FreeBSD based JunOS NOS. Juniper routers are deployed at high stakes, high bandwidth, and performance critical places like Nasdaq, London Olympics, and NEP CDN. Stacking offers value-protection by allowing same family routers to be inter-connected to act as single large router with much higher throughput & port density, while keeping management overhead to a minimum.

Responsibilities

- Design, develop, and unit testing of IS-IS protocol based multi-chassis control plane detection, loop-free topology creation & monitoring, and role assignment feature on proposed Juniper PTX Router.
- Implement framework for fault detection, isolation, attempted recovery, and reporting of high-speed SERDES based ASIC interconnect quality in Juniper T4000 line cards to prevent silent traffic blackholing.
- Port, implement, and unit test IEEE 802.3x standard based pause frames transmission towards relevant network elements based on queue depth.
- Provide fix to any issues reported in T & TX-series families of Routers, in the areas of Fabric interconnect and Chassis Management.
- Involve in design discussions and bug reviews, do review of code and QA test-plans.
- Understand Chassis Management, IS-IS protocol, SERDES training, and ASIC blocks, flows, and registers to work on the deliverables.
- Presented technical sessions to other team members and QA in areas of project work.
- Work with documentation team to update relevant docs based on new enhancements.
- Help other team members, transfer know-how to new engineers joining the team.

Skill Set

- Technologies: IS-IS protocol, IEEE 802.3X, ASIC, SERDES
- Programming Languages: C, Bash & Python scripting
- Operating Systems: FreeBSD, JunOS
- Testing Tools: IXIA, Spirent
- Platforms: Juniper T, TX and PTX family of routers

Stoke Networks Pvt. Ltd.

Ravi was employed as a full-time employee, in the role of Senior Software Engineer, at Stoke Networks Pvt. Ltd., Bengaluru from Aug/08/2011 to May/02/2012. His Employee No was 9180080. Stoke Networks was acquired by Mavenir Systems in November, 2014.

Stoke Networks is a vendor of LTE Security, eNodeB aggregation, Mobile data offload, Small Cell offload and Wi-Fi offload Gateways. Along with marquee investors like Sequoia, Kleiner Perkins, Samsung Ventures; they also have marquee customers like *NTT-Docomo, Japan*, *SoftBank, Japan*, and KDDI, Korea. They support line-rate IPSec encryption/decryption, IP session termination, bandwidth-control, and so on. They use Netlogic XLP and Intel IXP NPUs to build the line-cards in their SSX8000 and SSX3000 chassis respectively. They also use Cavium Nitrox crypto engine for fast & in-place encryption/decryption and fast lookup using TCAM (KBP). The QNX based StokeOS is run on x86 based Managment card for control & management plane processing.

Responsibilities

- Implement and unit test infrastructure logic for periodic and on-demand harvesting of statistics from Netlogic XLP NPU based Stoke SSX8000 line-cards to Management card through PCIe aperture.
- Design, develop, and unit test periodic clock-synchronisation mechanism between Management and Line cards, aligned through SMbus.
- Travel to US to engage with his Manager and team members, understand scope & timelines for work assignments, and take technology transfers.
- Understand design of software components on Control plane and Data plane, and their inter-communication. Understand functions of hardwares like PCIe, SMbus.
- Understand technical requirements and deliver code to meet them.
- Involve in design discussions, review of code and test-plans.
- Closely work with other team members and QA in areas of project work.
- Help in hiring by conducting in-person interview of shortlisted candidates
- Help documentation team to update relevant docs based on deliverables.
- Help with transfer of technology to new engineers joining the team.

Skill Set

- Technologies: Netlogic XLP NPU, SMbus, PCIe, Time synchronisation.
- Programming Languages: C, Bash & Python scripting
- Operating Systems: QNX, StokeOS
- Testing Tools: Spirent
- Platforms: Stoke SSX3000 and SSX8000 family of IPsec gateways

Continuous Computing India Pvt. Ltd.

Ravi was employed as full-time employee, in the role of Lead Engineer with Continuous Computing India Pvt. Ltd., Bangalore from Feb/05/2007 to Jul/29/2011. His Employee No was 148. Continuous Computing was acquired by Radisys in July 2011. Radisys was acquired by Reliance Industries Limited (RIL) in June 2018.

Ravi held following designations during his tenure.

- **Lead Engineer**: 01-Feb-2011 to 29-Jul-2011
- **Senior Engineer**: 01-Apr-2008 to 31-Jan-2011
- **Engineer**: 05-Feb-2007 to 21-Mar-2008

Continuous Computing (CCPU) builds off-the-shelf ATCA & Compact-PCI compliant chassis and fab-less line-cards of different configurations for Telecom service providers. Through acquisition of *Trillium*, they also have the SS7, Diameter, VoIP, LTE, Femto Cell and other Telecom stacks. They have engineering teams in SanDiego, Shenzen, and Bangalore, whereas sales & support teams are spread throughout the globe. Third-party vendors ASIC/NPUs are used to build cost-efficient line-cards. For instance, Fulcrum Bali & Tahoe chipsets are used for building FM30 & FM40 fabric line-cards, Cavium Octeon & RMI XLR NPUs are used for bulding PP50 DPI line-cards, and Intel Nehalem architecture based CPUs for building Compute line-cards. Pigeonpoint Shelf-Manager is used for managing chassis, which includes power-rails, fans, heat/voltage sensors, backplane, other FRUs.

Responsibilities

- Design, implement, and deliver statistical L4 load-balancer for balancing IP & MPLS traffic over Fulcrum Bali chipset based Continuous Computing FM40 fabric cards in ATCA compliant chassis towards other line cards.
- Design, develop, and demonstrate the node, link, and network resilience solution with sub-millisecond fault detection, isolation, & reconvergence by enhancing Fulcrum Control Point firmware, VRRP protocol, and Linux Kernel Ethernet Channel Bonding driver.
- Identify, implement and test zero-copy packet forwarding, in-place IPsec encryption/decryption, DMA assisted CRC generation/verification, async DNS resolution over Netlogic XLR NPU based Continuous Computing PP50 DPI line-cards, for using in SCTP & IPsec Gateway solutions.
- Port and integrate Trillium System Software Interface (SSI) with 6Wind Fastpath stack and Nano-kernels in Cavium Octeon Simple Executive OS, Netlogic XLR, netos and Mindspeed ARM 4GMX.
- Port, integrate, and unit-test Trillium DFTHA layer with GoAhead Saffire middleware's SAI, HPI, and Checkpointing interfaces to provide Telecom SAF standard compliant & resilient VoIP service using Trillium SIP stack.
- Enhance, troubleshoot, and support Upsuite high-availability middleware with realtime mirroring file-system, NIC resiliency driver, and App health monitor framework over Solaris 10 operating system.
- Provide OAM support over SNMP, Web, and CLI interfaces, documentation support, and script automation support for solutions that he developed.
- Write marketing white-papers and articles for statistical L4 load-balancer and network resilience solutions.
- Constantly collaborate with Architect in UK, engineering development & test teams in China, and sales/marketing leads in US & Japan to deliver on his assignments.
- Mentor and manage a team of 4 engineers, conduct periodic performance reviews, assign tasks, track work progress, train them on best practices in SDLC & company tech, and provide workplace support necessary for them to perform their assignments.
- Engage with customers on enhancement requirements, pre-sales demo & presentations, lab & field trial assistance, post-sales engineering support in the areas of products and solutions owned by him.
- Assist in recruitment by shortlisting candidate resumes, preparing written test screener questions, taking in-person interviews, and providing objective feedback based on candidate performance.
- Involve in design, code, test-plan, and documentation reviews of related products and solutions.

- Provide tech-talks in work ownership areas, do knowledge-transfers to new team members, and participate in ToastMasters sessions.
- Take up travel on need basis, to engage with China engineering team, to assist with understanding solution, quick turnaround on reported issues, and ensure quality feature release.
- Participate in the team building exercises, hackathon and other company events conducted from time to time.
- Assist documenting on delivered products, troubleshoot and support products and solutions owned by the team.
- Responsible for engaging with customers in the areas of his product and solution ownership.
- Responsible for maintaining the lab hardware inventory owned by team.

Skill Set

- Technologies: SCTP, VRRP, Load-Balancing, High Availability, DPI, IPsec, SNMP
- ASIC Hardwares: Fulcrum Tahoe & Bali, Netlogic XLR & XLP, Mindspeed Cortex
- Programming Languages: C, C++, Bash, Perl & Python scripting
- Operating Systems: Linux, VxWorks, Solaris, Nano-Kernels
- Device Drivers: Linux channel bonding driver, Solaris DLPI GLDv3 driver
- Testing Tools: Spirent
- Platforms: FM40 & PP50 line-cards, Pigeonpoint Shelf Manager, ATCA Chassis
- Processor Architecutres: x86, ARM, PowerPC

Freelance Consulting Engagements

Ravi provides both on-demand & retainer based service in the areas of his expertise. Majority of consulting work is ghost-writing, no attribution. Payment proofs and references are provided where feasible, upon request.

Feb/2018 *Technology Advisor* for **Telaverge Communications India Pvt Ltd**

SCTP L4 load-balancer is stateful SCTP proxy, which is capable of providing out-of-box transport load-balance for SS7 services including tunneling, session management, and identity management services.

- Ravi is tasked with developing workable design without any changes for applications involved.

Jul/2004 - Dec/2006 *Java Web Consultant* for **Lisle Technology Partners India Pvt Ltd**

A popular Hiring Management web application, *TalentPlus* is built using JAVA/J2EE. Multiple frameworks are used. Jakarta Struts as business layer, Spring+Hibernate and MySQL as model layer, JSP and Javascript for view layer.

- Ravi adds AJAX/xmlhttprequest feature along with DOM integration for View layer
- Optimization of SQL queries for fast retrieval of large result-sets for generic queries
- Evaluation of Google GWT toolkit and SAHI test-automation frameworks for integration

Technologies: Spring MVC . Bootstrap . AJAX . GWT . MySQL . SAHI . JSP . J2ME . CGI . Hibernate . Java

Dec/2005 - Jan/2006 *Embedded Hardware Consultant* for **Sakhatech Information Systems India Pvt Ltd**

Cloud Sync Platform is a cloud-based services for seamless sync of mobile data (geo-tagged photographs, binary data) to Cloud server over internet. Uses Funambol as sync-server, runs J2ME application on mobile as client, and JSF/J2EE Web Server as data store.

- Ravi implements J2ME client, adds geotagging, SMS, DB compression, and sync logic to client.
- Integrate J2ME client with SyncML compliant Funambol Desktop application using OTA & USB interfaces.
- Implement a Desktop client that picks up the Funambol data, transforms it and pushes to Cloud App.

MANET protos for ad-hoc mobile gaming without internet, sensor protos using Gumstix for agri sector.

Education

Jul/2004 - Jun/2006 **Masters in faculty of Computer Science** from **RD University, Jabalpur**

Ravi has studied his Masters at Department of Mathematics and Computer Science, within the University teaching campus. Reputed Department secures grants and is affilliated with International Mathematical Association (IMA). Whereas, the University is affilliated with University Grants Commission (UGC) of India.

- Ravi secures first position, in order of merit among all University affilliate colleges and teaching departments
- Ravi engages in consulting assignments to improve practical knowledge and know-hows in his areas of study.

Jul/2001 - Apr/2004 *Bachelors in faculty of Computer Science* from **RD University, Jabalpur**

He has studied his Bachelors from *New Education Society (NES) College* affilliated to RD

University, Jabalpur.

- Ravi secures A, B, and C certificates in National Service Scheme (NSS) run by Ministry of Youth Affairs, Government of India.
- Ravi wins 2nd and 3rd position respectively in University level, inter-collegiate Chess and Carrom tournaments.

Jun/1999 - Jun/2001   *Pre-University Education* from **Department of Pre-University Education, Karnataka**

He completed his 2 year study equivalent of Diploma with subjects Physics, Chemistry, Mathematics, and Computer Science from Government Pre-University College, Rangoli Halla, Hassan.

Mar/1999   *Higher Secondary Education* from **Karnataka Secondary Education Examination Board**

He completed his Elementary Education from Government Higher Secondary School, BM Road, Hassan.

Language Fluency

English, Hindi, Kannada

Open Source Contributions

Ravi developed his like for FOSS after he was involved in Linux kernel driver related development activities in 2006. Since then, he has contributed to open-source by identifying & fixing bugs, making own work available as open-source and free under liberal license. Here are some of his early contributions.

- **Ethernet Channel Bonding Driver enhancements**. Stock driver consumes >18% bandwidth for keep-alives. The failover time is in order of several seconds. Attempt is to reduce total bandwidth usage to less than 5% and improve failover time to 3msec. Also, enhance failure detection to identify external network failures.
- **OpenSAF bug-fixes**. During bringup and performance validation of Open-SAF in initial days of release, had multiple bugs in the areas of tipc, sai, checkpoint and event services. Those issues are identified and fixed.
- **OpenSolaris bug-fixes**. Real-time mirroring FS and NIC-teaming driver is built around Solaris DDI/DKI API. OpenSolaris announcement brings opportunity to study solaris kernel, harden our code, as well as fix bugs found in OpenSolaris code. Bugs around DLPI metadata, raw socket mirroring, RX-ring scheduling fixed.
- **Personal Wiki, Resume & Code**. This resume is auto-generated using markdown notes, pandoc utility, Bootstrap JS & CSS, and some javascript. Similarly, the wiki is also auto-generated from markdown notes. The repo also has tech hacks, protos, and eval tests. Mostly used for feasibility analysis, for ramping up on technology, and quick-n-dirty trials.

Curious coder, who delivers under *tight deadlines*, *automates as hobby*, *listens to understand*, **gets job done**.

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