Vipin Madhavanunni

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Experience

Industrial

January 2013 – July 2014

Senior Software Engineer, *embedUR systems India Ltd.*, Chennai, India.

Responsible for software design, development and sustenance of enterprise wireless device and mentoring the team.

- Cisco Aironet Access Point Module for 802.11ac (Wave 1)
  - Software maintenance of regulatory domain test framework for wireless Access Point.
  - Technologies: Cisco IOS, C, Broadcom WLAN driver
- Cisco Aironet 600 series Office Extend Access Point (OEAP)
  - Design and implementation of Access Control Lists for OEAP CAPWAP traffic.
  - Design and implementation of split-tunnels for OEAP WAN traffic.
  - Technologies: Linux, C, WLAN/Ethernet driver, CAPWAP

July 2010 – December 2012

Software Engineer, *embedUR systems India Ltd.*, Chennai, India.

Responsible for software design, development and sustenance of enterprise wireless and wired device.

- Cisco Aironet 600 series Office Extend Access Point (OEAP)
  - Design and implementation of firewall for OEAP local traffic including GUI.
  - Implementing QoS management for VOIP clients in OEAP and Wireless LAN Controller.
  - Technologies: Linux, C, WLAN/Ethernet driver, CAPWAP, TCP/IP, HTML, Java script
- Cisco Enforcement Policy Management (EPM) module switch/router
  - Maintenance of EPM code for different software releases.
  - Analysed and fixed customer posted defects.
  - Technologies: Cisco IOS, C.
- Cisco 4400 Wireless LAN Controller and Aironet 1500 Series Access Point
  - Maintenance of code related to NPU and configuration system in Legacy Controller.
  - Code maintenance of Legacy Mesh Access Point related to CAPWAP.
  - Technologies: Motavista Linux, vxWorks, Assembly, C

Research

July 2006 – June 2010

Research Engineer, *Wireless Communications Research Group, AU-KBC Research Centre*, Chennai, India.

Involved in research, development and testing of wireless systems, and training and guiding wireless test teams.

- Design and development of a tool to analyse the per-packet response of wireless devices.
- Developing a new protocol for fault tolerant ad-hoc routing in wireless network.
- Research on scheduling power save in IEEE 802.11n WLANs.
- Corporate course content preparation and teaching assistance in IEE 802.11 MAC layer concepts.
- Guidance to set up WiFi pre-certification test lab at Indium Software.
- Testing of outdoor WLAN (IEEE 802.11a/g) products for coverage extension in realistic environment for BroVis Wireless Networks.
- Technologies: Ixia Chariot, Iperf, Wireshark, C, Bash, Perl, Qt, Linux

April 2004 – June 2006	**Research Engineer**, *Cryptography and Network Security Group, AU-KBC Research Centre*, Chennai, India.

Involved in software development and testing, and guiding undergraduate students.
- Developing a fast method for remote file integrity check and providing proof of concept.
- Enhancement of WebGuard monitoring system.
- Design and development of a prototype for Dynamic Password Authentication Token.
- Technologies: Linux, Apache web server, C, Perl, Keil C51, Cypress EZ-USB

Miscellaneous

January 2015 – February 2015	**HiWi**, *Software Technology Group, TU Kaiserslautern*, Kaiserslautern, Germany.

Implementing functionality test support in Jenkins for EU project syncFree.
- Implementing workflow and writing scripts to support test automation/report generation.
- Technologies: Jenkins, Bash and Perl scripting

April 2004 – June 2010	**System Administrator**, *AU - KBC Research Centre*, Chennai, India.

Worked part time and involved in design/deployment of network/system infrastructure.
- Configuring, troubleshooting and automating management process of Linux based servers.
- Configuring and managing firewall/gateway policies.
- Building up new servers based on the requirement such as customized Leucine/Nuch based search cluster.
- Setting up labs and providing guidance for hands on training in faculty training programs as part of National Resource Centre for Free and Open Source Software (NRCFOSS).
- Managing and updating of web portls.
- Technologies: iptables, iproute, SVN, Trac, Qmail, DHCP, FTP, TFTP, Samba, Apache, Squid Proxy, Bash scripting, PHP, perl, html, css

January 2003 – March 2003	**Project Intern**, *Experimental Aerodynamics Division, National Aerospace Laboratories*, Banglore, India.

Bachelor final year project.
- Software for detection and analysis of burst signal from laser doppler velocimeter.
- Technologies: NI LabView, Matlab, C

Publications

M Vipin and S Srikanth. Analysis of open source drivers for ieee 802.11 wlans. In *International Conference on Wireless Communication and Sensor Computing, ICWCSC 2010*, pages 1–5. IEEE, 2010.

M Vipin, K Sankar, and AV Sarad. Building reliable and fault resilient mobile ad hoc networks. In *International Conference on Signal Processing, Communications and Networking, ICSCN 2008*, pages 264–268. IEEE, 2008.

AV Sarad, K Sankar, and M Vipin. A time and storage efficient solution to remote file integrity check. In *Fourth International Conference on Information Assurance and Security, ISIAS 2008*, pages 120–125. IEEE, 2008.

M Vipin, AV Sarad, and K Sankar. A multi way tree for token based authentication. In *International Conference on Computer Science and Software Engineering, ICCSSE 2008*, volume 3, pages 1011–1014. IEEE, 2008.

M Vipin and Mohamed Imran KR. Approximate mechanism for measuring stability of internet link in aggregated internet pipe. *e-Print at arxiv.org/abs/0907.4881*, 2009.

Talks

- Performance Measurement of WLAN using open source tools, FossConf (2008) at Madras Institute of Technology, Chennai, India.
- Network and open source - An introduction to open source way of network/server implementations, Emerging Tools and Trends in Open Source Computing (2008), Malaviya National Institute of Technology, Jaipur, India.