

Contact

sh.mukul@gmail.com

www.linkedin.com/in/mukul-sharma-bayarea (LinkedIn)

Top Skills

TCP/IP

Software Development

Networking

Languages

English (Native or Bilingual)

Certifications

Artificial Intelligence Foundations:
Machine Learning

Learning React.js (2019)

Mukul Sharma

Engineer (Network/cloud) at Cradlepoint
Sunnyvale

Summary

Router/Switch Architect, design and development.

Architect, design for E9-2 Data-plane/forwarding, includes linux kernel modules, Tomahawk ASIC from BRCM.

Specialties: End-to-end networking, L2 & L3 forwarding, CRS-1/ CRS-3 fabric, multichassis. MPLS, L2VPN, AToM, SRP/DPT, TCP/ IP, POS, SONET protocols,

Design and implementation of unicast IPv4 data-plane, QinQ, IPv4GRE, Filter-based GRE

Automation of test cases using Python (RobotPython)

- CAPWAP Fragmentation and Reassembly

Lead engineer for packet forwarding plane on Next Generation Campus Architecture. Design and implementation of CAPWAP Fragmentation-Reassembly in microcode.

- TCP MSS-adjust implementation on MX-80

Design and implementation of TCP MSS-adjust on MX80. Feature involved looking at the options in TCP header and changing the mss-adjust value to lower configured value.

- EoGRE implementation on EX-3300

Design and implementation of EoGRE tunnel on EX series with bobcat+ family of Marvell's ASIC.

Experience

Cradlepoint (Now part of Ericsson)

Engineer (Network/cloud)

March 2019 - Present (1 year 9 months)

California, United States

Calix

Principal Software Engineer

October 2016 - March 2019 (2 years 6 months)

San Jose, California

Leading a very technical and talented team of engineers located across the USA and other countries. Team is located at San Jose, Santa Barbara, Petaluma, Vancouver Canada, Ireland, China and India.

Working on BRCM Tomahawk. Distributed chassis E9-2 product which was built and shipped to VZ for trial in less than a year. Responsible for L2 & L3 forwarding - data plane forwarding.

Completed BRCM DNX based Jericho2 Broadcom university training.

Juniper Networks

Staff Software Engineer

October 2010 - October 2016 (6 years 1 month)

sunnyvale, ca

- QFX5100

Lead engineer for packet forwarding plane. Switch is based on Broadcom's switch ASIC family.

Design and implementation of unicast IPv4 data-plane

Design and implementation of targeted-broadcast

Design and implementation of QinQ

Design and implementation of IPv4GRE

Design and implementation of Filter-based GRE

Automation of test cases using Python (RobotPython)

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Cisco Systems

Sr. Software Engineer

October 1996 - October 2010 (14 years 1 month)

- Fabric subsystem of CRS-1, CRS-3 and NG (2 ½ years)
 - o Worked on various fabric subsystems of multi-chassis of CRS-1. Design and development of fabric driver, bring-up of fabric on CRS-3. Architect and design of fabric components on Next-Generation (NG) platform.
 - o
- ATM SPA development on GSR in IOS-XR (1 ½ years)
 - o Defined overall platform side software architecture. Designed and developed SPA plugin code to bring up the ATM SPA card, interface driver to create interfaces over channelized DS3/nxDS0 paths. SPA configuration/event messaging over IPC, etc.
 - o Team lead and responsible for SPA/hardware bring up, interface creation, forwarding and forwarding infra-structure.
- Forwarding Infra of GSR on IOS-XR and stabilization of E4/E6 of GSR (2 ½ years)
 - o Support of various forwarding components of GSR in IOS-XR.
 - o Stabilization of E4/E6 line cards and training Development teams in India.
 - o Design and development of forwarding engine/micro code for SRP/DPT feature
- Design and development of SONET/SDH and DSP driver on voice gateway (2 ½ years)
 - o Design and development of temux84 driver on voice gateway on VxWorks.
 - o Design and development of DSP driver on voice gateway on VxWorks.
- Modem driver development on 5300/5400/5800 in IOS (4 years)
 - o Design and development of modem driver on 5300, 5400 and 5800 product family.
- Testing on 5200 access server in IOS (1 years)
 - o Devtest of 5200 product included testing and automation of test suites.

Patent:

Approved Patent-6792555 – Access Server fault isolation without service disruption. Method and apparatus.

Bay Networks Inc

Software engineer

July 1995 - October 1996 (1 year 4 months)

Education

RV College Of Engineering

computer, Computer Engineering

Birla Institute of Technology and Science, Pilani

Master of computer engineering, Computer Engineering

colvin taluqdars' college, Lucknow

colvin taluqdars' college, Lucknow