

KAUSHIK DATTA

PRINCIPAL MEMBER OF TECHNICAL STAFF

Technology professional with a dynamic career & proven track record in System Analysis, Software Architecture & Design; developing, enhancing, maintaining and leading quality assurance of Control Plane Infrastructure and Platform & Protocol software. Worked with Technology Products and Technology Services organizations mostly from India as well as US development centres.

+91-9663382507



kaushik.datta@gmail.com



<https://in.linkedin.com/in/kaushik-datta-8404704>



PROFILE SUMMARY

- Principal Engineer with a strategic bent of mind offering a proven history of success in requirements gathering, design & development of multifaceted projects with complex dependencies, chronicled success with **nearly 25 years** of extensive experience.
- Leveraged capabilities as a **Design Engineer & Developer** in projects of various Hardware and Software products in **Database Cloud Services, Security, Telecom, Networking, Storage** domain.
- Experienced in **application** and **system software development** with a focus on ensuring and enhancing security of the product.
- Insightful knowledge & exposure in design and development of control plane, back-end infrastructure for Database services.
- Analytical, dedicated & versatile Technical Leader**, enthusiastically meeting deadlines with innate skills in building high performing softwares.
- Dedicated and helpful team player** with very good adaptability to diverse environments.



TECHNICAL SKILLS

Domain Knowledge: Database Cloud Services Architecture, Mobility & Service Provider Networks, Network Security and Access Control, IP Storage (SAN), NAS, Multicore CPU & Network Processors, TCP/IP, HTTP (1.1/2), HTTPS, TLS/SSL, IPsec, GTP, Router & Switch Platform and Infrastructure Software, Multithreaded applications, LibEvent OSS library, Kernel software, Kernel Infrastructure, IPC (Inter Process Communication), Device Drivers, Software Defined Networking

Programming & Scripting Languages: C, C++, Core Java, Python, TCL, Bash

Operating Systems: Linux (Server Class & Embedded), NetBSD, VxWorks RTOS, Green Hills Integrity RTOS (GHS)

Tools: Wireshark, GDB, GHS Integrity Multi, Probe, JTAG, GIT, Gerrit, Cscope, Ctags, Valgrind, Code coverage tools, Network Traffic Generators (iPerf, NG4T, Polaris, IXIA)

Network Processors: MIPS based Processor/Soc of Cavium (Nitrox, Octeon), Broadcom, Marvell (Presteria)



WORK EXPERIENCE

Principal Member of Technical Staff | Oracle, Bangalore

Jan'21-Present

Domain: Database as a Service

Key Result Areas:

- Designing, developing and maintaining control plane & back-end cloud security infrastructure for Database services.
- Design and development of complex software features for various Oracle cloud and on-premises database solutions, including OCI DBaaS, ExaCC (Exadata Cloud @ Customer), ExaCS (Exadata Cloud Services), ADB (Autonomous Database), VMBM DB, External Databases and Multi-cloud OracleDB@Azure integrations.
- Collaborate with cross-functional teams, including Product Management, QA, and other Engineering Teams, to ensure seamless integration and delivery of features.



CORE COMPETENCIES

Detailed understanding of Technology Landscape/ Legacy Systems / Business/IT Transformations

Software Architecture & Design

Software Implementation

Software Quality Assurance

Innovation and IP Creation

Technical/ Functional Documentation

Agile & Scrum Methodology

Team Building/ Hiring/ Mentoring

Team Set-up & Stabilization

Client Relationship & Stakeholder Management

- Implementing security best practices and manage compliance with security standards, managing CVEs and other security issues effectively.
- Providing high-level support for customer issues, ensuring timely resolution and maintaining customer satisfaction.
- Mentoring and guiding junior engineers, fostering their professional growth and development.
- Contributing to the hiring and interviewing process, ensuring the recruitment of top talent to strengthen the team.
- Acting as a technical expert and thought leader within the organization, staying updated on industry trends and advancements.

Senior Technical Manager | HCL Technologies, Bangalore

Mar'09-Dec'20

Growth Path:

Senior Technical Lead

Technical Manager

Senior Technical Manager

Domain: Telecom

Key Result Areas:

- **Palo Alto Networks** project focused on platform and infrastructure software of PA series firewalls of Palo Alto Networks. Involved in software improvements, CVE handling and Third-Party Open-Source Software Integration with PANOS.
- **Cisco System (MITG BU) project** focused on mobility simulation & tools development on Linux x86 servers. Leveraged Agile methodology to add features to 5G core network functions, nodes, interfaces and security modules
- **Intel Labs** Mobility and Telecom Research Group project about developing a virtual EPC to simulate 4G/LTE EPC components (SGW/PGW) on DPDK/x86 NUMA-based servers. Fostered cross-functional collaboration with ONF, Intel, HCL, and TSPs like T-Mobile and Sprint Teams. Managed software feature development, bug fixes, and QA of SGW/PGW, and gained exposure to Intel's traffic generator (DPDK based). Exposure to CI/CD using Jenkins.
- **Calix Inc. project** related to OS infrastructure and platform software development and maintenance for the E9 Intelligent Edge system (GPON/NG-PON/NG-PON2 Networks).
- **Ericsson project** involving the maintenance of NetBSD-based platform software for the SE (Smart Edge) Series of Edge Routers for IP/LTE service provider networks. Maintained Linux-based PaaS (Platform as a Service) software for the SSR (Smart Services Router), delivered software enhancements, bug fixes, and customer support.
- Software Engineer/Developer on an **HP Networking project** - Designed and developed a TLS/SSL-based Authentication, Authorization, and Certificate Provisioning module as part of a distributed network-based services manageability infrastructure on Linux and GHS Integrity OS. Developed Control Plane Offload & Extension Infrastructure to offload traditional control plane functionality to an x86 controller module on the HP 5400/5400zl switch series.
- Software Engineer/Developer for **Samsung** - Developed mobile handset middleware on Android and Win32 platforms. Involved in feature addition, bug fixes, debugging, and scripting for the Open Mobile Alliance (OMA) DM/DS protocol and middleware.



PREVIOUS EXPERIENCE

Senior Software Engineer | Nevis Networks, Pune

Oct'05-Feb'09

- Designed and developed Control Plane and Data Plane (ASIC-based) for IPS/IDS, Application Recognition, and Visualization Module (ALG) for Secure Ethernet Switch and LAN Security Appliance.
- Developed Control Plane modules for Traffic Anomaly and Protocol Anomaly detection.
- Engineered Data Plane (ASIC-based) and Control Plane features for Application Aware Signature and Application Pre-Classification.

Software Engineer | Cavium Inc., Hyderabad

Sep'04-Jun'05

- Maintained and added features to PCI device driver modules (Linux kernel) for Cavium's Nitrox/Nitrox-Lite security NIC cards, which provide IPsec/SSL acceleration and encryption processing.

Software Engineer | Adaptec Inc., Hyderabad

Aug'03-Aug'04

- Contributed to the Storage Networking Group (SNG) at Adaptec.
- Maintained the iSCSI HBA Host driver (Linux Kernel 2.4.x) for the Adaptec Vega-1 iSCSI Host Bus Adapter.
- Developed a Host-Based PCI diagnostic driver for the Vega-2 TCP Offload Engine (TOE) card, used for checking board components' integrity.
- Represented Adaptec at the Storage Networking Summit in Mumbai, 2003.

- Cisco Systems' project focused on IOS IP Routing & Switching regressions, ensuring quality assurance of IOS-ENA subsystems (Extended Network Architecture) and SNMP MIB(s) of IOS-ENA. The effort included manual testing and test automation using TCL/Expect.
- Developed iSCSI Control Path security (CHAP) software for Maranti Networks' CoreStore line of Data Center Storage Switches. Created iSCSI Initiator/Target protocol drivers in Linux Kernel 2.4. This work was done from Maranti's US office

CERTIFICATIONS

- Cloud Computing Using Amazon AWS | CloudThat Technologies, Bangalore | 2012
- Course on Leadership & Peak Performance (Attended weekly evening classes at Stanford University) | Stanford University (California) – 3 months (Stanford Continuing Studies Initiative) | 2003
- SNIA Fiber Channel Certification. (Level 1 & 2) | SNIA – Storage Networking Industries Association | 2002
- Cisco IOS Architecture/Memory/Build training/certification, Cisco IOS ENA Architecture Training/Certification 2000-2001 | Cisco Systems | 2000
- Cisco Certified Network Associate (CCNA) | Cisco Systems | 2000

EDUCATION

Master of Science (MS) Machine Learning and Artificial Intelligence

Liverpool John Moores University, UK

2023-2024 (In Progress)

ACMLC (Advanced Certification In Machine Learning and Cloud)

Indian Institute of Technology, Madras (IIT Madras)

2021-2023

APSM (Advanced Program in Strategy & Strategic Management)

Indian Institute of Management, Calcutta (IIMC)

2014-2015

B.E. (Computer Science & Engineering)

Government College of Engineering, Erode (Previously IRTT)

(Previous affiliation - Bharathiar University, Coimbatore. Current affiliation - Anna University, Chennai)

1995-1999

PATENTS & TECHNICAL INITIATIVES

- Co-authored the following granted patents in the domain of Network Security. These patents were a culmination of the works done in a project of Hewlett Packard (HP) Networking. These IP works mostly touch upon the area of TLS/SSL based secure communication infrastructure, authentication, authorization and certificate management.
 - <https://patents.justia.com/patent/9071596>
 - <https://patents.justia.com/patent/9237021>
 - <https://patents.google.com/patent/US10104060B2/en>
 - <https://patents.justia.com/patent/9325697>
- Co-authored the following IETF draft which was submitted to SDNRG work group of IETF and IRTF. The document went through some initial reviews by the community.
 - <https://datatracker.ietf.org/doc/draft-chattopadhyay-sdnrg-multi-party-sdn-trust/>
 - <https://www.ietf.org/archive/id/draft-chattopadhyay-sdnrg-multi-party-sdn-trust-03.txt>

PERSONAL DETAILS

Date of Birth: 27th December 1976

Languages Known: English, Bengali, Hindi, Tamil

Address: A-1204, SMR Vinay Galaxy, Hoodi Circle, ITPL Road, Mahadevapura Post, Bangalore, Karnataka – 560048