

SARAVANAN DHAKSHINAMURTHY

GENERALIST SOFTWARE ENGINEER

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CORE COMPETENCIES

Kernel, Distributed Systems, Databases,
Job Scheduling and Networking

Programming: C, C++, Python, Rust

OS: GNU Linux, FreeBSD, VxWorks

Databases: MySQL, MongoDB, SQLite

Hypervisors: XenServer, KVM, QEMU

Debugging: Drgn, BPF, GDB

EDUCATION

BACHELOR OF ENGINEERING

Computer Science, May 2007

Sathyabama University, Chennai, India

PUBLICATIONS

- **IOCost: Block Input-Output Control for Containers in Datacenters** | <https://doi.org/10.1109/MM.2023.3277783> (IEEE Micro Top Picks 2023)
- **IOCost: block IO control for containers in datacenters** | <https://doi.org/10.1145/3503222.3507727> (ASPLOS 2022)
- **CASH: A Credit Aware Scheduling for Public Cloud Platforms** | <https://doi.org/10.1109/CCGrid51090.2021.00032> (CCGRID 2021)

CERTIFICATIONS

Foundations in Computer Science

Graduate Certificate, Aug 2014

Stanford University

Advanced FreeBSD Kernel Internals

May 2016

Systems Software

Graduate Certificate, March 2019

Stanford University

PROFESSIONAL EXPERIENCE

ORACLE

Principal Software Engineer

Jul 1, 2024 – Present

Redwood Shores, CA

- Open Source Projects: SPDK
- Developed ultra-low latency, high throughput software-defined storage service
- Designed, built and maintained metrics library for high performance services in OCI

META

Nov 11, 2019 – Dec 27, 2023

Production Engineer, Kernel

Menlo Park, CA

- Open Source Projects: Linux Kernel, resctl-demo, chef
- Derived sequential, random r/w cost associated with SSD models and tuned cgroup controllers to improve I/O isolation [potential to stack workloads] on most of the fleet
- Stacked [12:1] Control Plane Coordination and Storage service (Zookeeper) workloads of different sizes to save capacity.
- Improved kdump, post-mortem and debugging capabilities of all server platforms deployed at datacenters and edge
- Worked on GRUB boot manager, EFI bootloader used for network booting any server, internal tool using BPF to accurately measure block device latencies to qualify vendors, firmware
- Maintained kernel build infrastructure, testing pool and framework to validate latest **Linux kernels**

CITRIX SYSTEMS, INC

May 15, 2011 – Nov 8, 2019

Principal Software Engineer

Santa Clara, CA

- Worked on Load Balancers, Application Delivery Controllers (ADC): NetScaler, Citrix ADC.
- **Developed device drivers and kernel customizations** for BSD-like proprietary Operating System.
- Server Platform development activities involving integration of drivers, libraries, firmware, tools and hardware validation.
- Developed supervisory infrastructure to monitor health and extract vital system stats through IPMI, actively participated in FIPS 140 Level 1, 2, 3 Citrix ADC projects.

ALCATEL-LUCENT (Contractor) January 18, 2010 – April 29, 2011

WIPRO TECHNOLOGIES

August 27, 2007 – April 29, 2011

Project Engineer (Contractor)

Calabasas, CA

Project Engineer, *Promoted in January 2010*

Chennai, India

- Developed Software for high performance switches and routers.
- Worked extensively on **Real Time (VxWorks) Kernel issues**
- Developed Microprocessor (MPC 8248) profiling utility, i2c driver
- Implemented non-intrusive postmortem dump generation
- **Prodigy of the Year 2008 Award**
- **Feather in my Cap Award x 2**