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Professional Summary

- 20+ years of experience in design and implementation of scalable software and systems in the cloud, data-center and networking products.
- Domain expertise in Distributed and Cloud networking, Hybrid/multi cloud, ADC, SDN, Service Chaining, DPI, TCP/IP networking.
- Proficient in Software development methodologies; result oriented; good problem solving skills; Creative, enthusiastic and eager to learn and evolve

Awards and recognitions

- Winner of Citrix TechFair 2017 – Hybrid/multi cloud application migration
- Proposed and show cased 'NetScaler solution for Cloud burst' in Citrix Customer meet (DNLF 2016)
- Winner of Citrix Hackathon 2015 – Service Chaining within networking devices
- Individual performance award at Juniper (April 2010) and Citrix (March 2016)
- Tech Lead of a product (iMFAST) which received
    - Lockheed Martin Innovation Gold Medal (July 2007)
    - Most Innovative Mobile Application in Asia Mobile Awards 2007 conducted by GSM Association

Individual Patents

- System and method for customizing packet processing order in networking devices (US10728055B2)
- System and method for Cloud Aware Application Delivery Controller (US10079877B2)
- System and method for Service Chain Load Balancing (US10237187B2)
- Adaptive rate limiter based on transactional heuristics and artificial intelligence (US20250240277A1)

Education

- PGDIT from Indian Institute of Technology - Kharagpur, India.   August 2004
- B.E., Computer Science & Engineering from Bharathidasan University, India.   April 2001

Experience

Distinguished Software Engineer   Palo Alto Networks Inc.   Oct 2021 to date

Built a new cloud native, next generation secure access product (Prisma Access Agent):
- Designed and architected the cloud service to manage millions of secure access agents
- Conceptualized many key features and functionalities and driven from POC to delivery and maintenance
- Built the core team from ground up (grown the team from 1 to 15 people)
- Seamless integration with other Prisma Access services and components
- Proposed and built many innovative solutions to differentiate the new product from all others in the market.

Principal Software Engineer   Oracle Public Cloud Infrastructure   April 2018 to Oct 2021

Data plane Lead – LBaaS, one of the fast-growing, level-0 core service in Oracle Cloud Infrastructure:
- Joined as an initial team member and quickly learnt and adapted to the cloud system and started contributing to the fast-growing team (from 3 to 12 people) and service (from 500 to 50k+ Load Balancers per region).
- End-to-end delivery owner of the following time critical projects - Architected, Design, Development and rollout
    - o L7 policy based request routing and load balancing (OCI-LBaaS Policy based routing)

o Access and Error logs for LBaaS customers ([OCI- Load Balancer logs](#))
o IPv6/dual stack support in LBaaS
o HTTP/2 request load balancing support in LBaaS
- Key Data plane member for LB-WAF (Web Application Firewall) integration after Zenedge acquisition
- Leading Service Availability and Resiliency program for LBaaS (both internal and external) service
  o Designed a new deployment solution, which reduced rollout time from 8 weeks to 3 days
  o Container health assessment, visibility and it's availability
- Increased fleet efficiency by 2x, by enabling multiple NIC support on data plane hosts
- Rigorously worked towards reducing ops load and achieved 70% reduction in 4 months

Principal Software Development Engineer   Citrix Systems Inc.   Feb 2011 to March 2018

Worked on multiple Cloud initiatives to bring NetScaler ADC to public clouds:
- NetScaler Autoscaling: Lead the effort involving multiple geographically distributed teams. Proposed a new approach, prototyped and taking the solution to the next level of design and development.
- Hybrid/Multi Cloud: Using various Citrix and NetScaler technologies, designed and developed methods for Cloud migration for On-premise applications. Worked on a case study to help achieve smoother migration strategies.
- ADC as a Cloud Service: Design of generic core infrastructure to deliver ADC features as Cloud service. Brought a multi-PoP interconnected infrastructure for on-premise customers, worked closely with CTO and other module owners to conclude on the design. Also, prototyped an alternative method for Cloud customers' workloads.
- Single-IP NetScaler ADC: Worked solely to make NetScaler function with single IP address for Cloud deployments. This has become a key functionality to bring NetScaler in container form factor, simplified NetScaler Gateway, NetScaler Gateway as a service, NetScaler autoscaling support in public clouds, etc.
- Cloud gap catchup: Design and development of IP-based multi-tenancy, NetScaler HA in AWS and Azure, made NetScaler deployments very flexible in AWS, competition analysis, etc.
- NetScaler integration with Cisco products: Played a key role in data plane (L2/L3) integration with various SDN/Service chaining infrastructures – Cisco's (Insieme Networks) service switching fabric, Cisco-RISE integration, Cisco-Firewall integration.
- NetScaler integration with other Citrix products: Involved in tight data-plane integration of NetScaler with Citrix's WAN optimization and Video optimization products, to enhance performance of those products.

Software Engineer III   Juniper Networks India Pvt. Ltd   Jun 2008 to Jan 2011
- SSL forward proxy support in SRX routers.
- Deep Packet Inspection (IDP) for IPv6 traffic: SRX is a Juniper's multi core router which has a bunch of security modules, including IDP, integrated together. IDP can detect and prevent almost all attacks in IPv4 network traffic. As an enhancement to the IDP module, support for IPv6 traffic inspection is enabled in JunOS 10.4
- IPv6 Packet processing - parse the network packet, packet validation, session creation, rule lookup and enabling flow specific detection sub-modules (Q-modules, L7 protocol decoders) for further IDP processing

Senior Software Engineer   Integra Micro Software Services (P) Ltd.   Aug 2005 to Jun 2008
Integra's Mobile Financial Applications Secure Terminal ([iMFAST](#)):
iMFAST is a financial application device, through which account holders can do all banking operations in their premises. It handles financial applications specifically targeted at rural banking. The terminal uses RFID technology for identification and Biometrics (Finger print) for authentication. Besides all usual online

transactions, the terminal can be operated in offline mode as well. It provides voice guidance support and an optional printed statement for all operations.

- Designed and developed an application level secure protocol for message transactions
- Defined and implemented a fast search tree, which is highly secured customized B+ tree, accessed through File meta-data and File access APIs to provide application level data integrity, access writes, version based file content interpretations, etc.,
- Developed three different ways to do transactions – Offline, Online and Switched online
- Interfacing the iMFAST transaction server with Core Banking System (CBS) of various banks.
- Ensuring proper transaction updation on Card, iMFAST transaction server & CBS.
- Formalized a method to have atomicity in multiple card updations
- Conceptualized and implemented an online upgrade/support system for iMFAST

iMFAST achievements

- Most Innovative Mobile Application in Asia Mobile Awards 2007 conducted by GSM Association
- The Lockheed Martin Innovation Gold Medal on 18 July 2007 conducted by FICCI, Lockheed Martin Corporation and IC2 Institute, University of Texas

Junior Project Assistant   **SRIC, IIT Kharagpur, India**   **Sep 2004 to Aug 2005**

Project   : Multi-objective genetic optimization on communication networks.
Sponsor : Ministry of HRD, Govt. of India.

Programmer   **SA Technologies, India**   **Apr 2002 to Jun 2003**

Mini DBMS (C, Linux): The system will execute a minimum set of queries. Data storage and retrieval is based on B-plus Tree. A proper implementation of Data Dictionary and Buffer management is also handled. Text File Compression (C, Linux) : This is a tool to compress text files, which uses the LZW compression algorithm to compress the input text file. Dictionary lookup for the algorithm is based on hashing technique.