

# Sharad Ahlawat

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## PROFILE



20+ year Silicon Valley technologist in Networking and Information Security, designing and deploying products and solutions for enterprises and service providers for their Datacenter, LAN, and WAN infrastructure requirements. Extensive hands-on experience in Open Networking, Cloud technologies, Classification, Analytics, Security, and Security risk management.

Through my professional career, I have built strong motivated teams across the globe at large companies and startups, focused on innovating and developing cutting edge products and solutions addressing Networking and Cyber-security challenges.

An engineer and an avid programmer, am passionate about driving technology innovations to tackle challenging problems in Information Technology.

## EXPERIENCE

### **VP Technology & Architecture, PICA8 Inc., Palo Alto, CA - 2016 - Current**

- Architecting and driving development of innovative solutions applying Open Networking to long standing networking and security related problems as we develop the White Box switching market.
- Working with large enterprises and service providers like Verizon, defining and developing the next-era OpenFlow SDN and traditional networking hybrid Network Operating System (NOS).
- Building a team of architects and mentoring the engineering leadership team to innovate and deliver solutions like EVPN, Zero-Trust-Networking (ZTN) and the Kubernetes service chaining enabled edge computing platform.
- Defining a blue ocean product strategy around CrossFlow and GraphQL network modeling, architecting and building solutions integrating AWS, Azure, GCP hybrid cloud networking and monitoring.
- Engineering innovative solutions like the White Box Cluster Configurator and the White Box Network Packet Broker (NPB) leveraging Broadcom Trident and Tomahawk switches.

### **Head of Engineering & Solutions Engineering, PLUMgrid Inc., Santa Clara, CA - 2014 – 2016**

(Acquired by VMware)

- Led the engineering team in developing the PLUMgrid overlay networking suite (ONS), an innovative modular and flexible LXC container-based OpenStack neutron plugin architecture. ONS featured IO-Visor (eBPF), Micro Segmentation Security, VTEP integration, Dynamic router and DNS networking functions. These innovative technology solutions eventually led to VMware acquiring the company.
- Architected and designed networking platform capabilities for Enterprise and Service Provider solutions to bring VM and container orchestration frameworks together with deployments at large customers like Swisscom, Mercado-Libre, and WalMart.
- Led the field engineering solutions team in integrating and deploying OpenStack+Docker/Container SDN & NFV solutions with Rackspace, Ubuntu, RedHat, Mirantis, Piston and Huawei distributions using Ansible, Juju, Puppet, CHEF orchestration frameworks and integrating PLUMgrid SDN with PaaS and IaaS orchestration frameworks like OpenShift, CloudFoundry, Kubernetes and Mesos.

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## **VP Solutions Engineering, Procera Networks, Fremont, CA - 2013 – 2014**

(Acquired by Sandvine)

- Chartered with driving the integration of Vineyard's Network Application Visibility Library (NAVL) and Procera's Datastream Recognition Definition Language (DRDL) technologies.
- Spearheaded Procera's OpenStack SDN and NFV strategy developing architectures and driving solution development with customers and technology partners across US, Canada, Europe, Japan and Israel.
- Engaged prospects and customers in deep technical and architectural discussions and helped them build their products and solutions incorporating Procera's network intelligence technology components. Drove product features requirements and defined the technology and solution vision within the engineering & architecture teams.

## **Chief Architect & Head of Field Operations, Qosmos Inc., Sunnyvale, CA - 2012 – 2013**

(Acquired by ENEA)

- As the first technical employee of Qosmos in the US I helped establish the Americas business engaging in technical pre-sales activities, establishing partnerships and expanding the eco-system with networking chip manufacturers.
- Closed OEM deals in the 10s of millions with major networking vendors and conceptualized the product roadmaps leading delivery of solutions for penetrating the OpenStack and NFV markets.
- My success with the OEM DPI business model caught the attention of Vineyard Networks and I was approached to lead a larger international charter at Procera Networks.

## **Engineering Manager, Cisco Systems, San Jose, CA - 1998 – 2012**

- Founded Cisco Product Security Incident Response Team (PSIRT) for formulating and driving product security best practices across all Cisco business units. Initiated secure code development and testing procedural changes. Built a cross functional team for Protocol Robustness Testing and was awarded the Cisco RAS award.
- Led deployments for the Analytics and Performance Management (ANPM) solutions and WAN optimization solutions on the Cisco ISR and ASR router platforms delivering major wins with service providers in Europe like BT, SFR, France Telecom, Belgium Telecom, Telefonica and Telecom Italia.
- Built a team of engineers to support service provider networks for AT&T, US-WEST, MCI, SPRINT and Concert. Managed a joint Cisco and AT&T's NFS Labs specialized team for the ATM and Frame-Relay solution validation that helped AT&T IFRS achieve its Six Sigma performance and uptime rating.
- Drove cross business unit collaborative efforts to develop DPI technologies and Network Service Integration solutions on routers. Built out the Application Visibility and Control (AVC) and WAN Optimization solutions comprising of CCE, NBAR, PA/MACE, FNF, QoS, VPN, PfR, WAAS and ISG technologies integrated with MPLS, BGP, OSPF and other routing technologies under a common Policy framework.
- Managed engineering teams in the US and India developing various networking technologies and solutions like the Policy Router paradigm, the multi-core IOS architecture on ISRs, ACL, Flexible Packet Match (FPM), Control Plane Protection, Threat Information Exchange/Distribution Protocol, Network Antivirus, Data Leakage Protection (DLP), Firewall, IPS, URL filtering with Ironport cloud service, SML state graphs for DPI on IOS and IOS Threat Defense Solutions.

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## EDUCATION

<b>BS Computer Science, Compilers</b>	1989-1992
<b>MBA, Technical Product Management</b>	1992-1994

## PATENTS AND INDUSTRY PRESENCE

- US7650635 (2010) - Method and apparatus for preventing network attacks by authenticating Internet control message protocol packets.
- US8432919 (2013) - Data Stream Classification- SCM – Statistical Classification Matching – An approach to classify traffic based on statistical properties rather than traditional content-based inspection.
- US9106432 (2015) - Data Stream Classification- Controlling the computer to assign a data stream classifier to the data stream; wherein the data stream classifier is determined by comparing a portion of the set of characterization data to a set of identification data.
- US9178783 (2015) - Method for Inter-packet Gap Histogram (IGH) Metric Measurement to provide network performance visibility.
- Created the Cisco-PSIRT vulnerability scoring system which became the basis for the National Infrastructure Advisory Council (NIAC) Common Vulnerability Scoring System (CVSS) adopted by the Dept. of Homeland Security (DHS) and [FIRST.org](http://FIRST.org)
- Cisco Security CCIE content advisory board member.
- Presented on secure coding and vulnerability handling at multiple conferences including the 2004 Internet doomsday BGP TCP SYN/RST issue at CanSec West, Vancouver.
- Designed and developed the Engineering Operations System for a group of 800+ engineers to streamline engineering operations which was recognized as an ISO best practice.
- As a core member on the Open Networking Foundation (ONF) Architecture Working Group and NFV discussions groups, I evangelized the L4-7 classification architecture frameworks for use cases within SDN, Security, Compliance, Traffic Engineering, Management, and Analytics domains. OpenFlow Enabled Mobile and Wireless Networks - [ONF](http://ONF)
- Open Source community contributor, developing secure and private IT infrastructure deployment solutions templates leveraging open source projects - [diyiT.org](http://diyiT.org)