







BRENT BLOOD

 Renton, WA
 +1 (206) 708-9419
 brent@ownsu.net

 www.openpile.org
 brent-blood
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Network & Systems Architect

WHO AM I?

Experienced team leader, UNIX and networking geek, mentor, and hacker. Expert-level practical knowledge of full-stack networking and application development in service provider and enterprise environments. Comfortable working with complicated systems composed of opensource or blackbox components, hardware or software, on-prem or in the cloud, physical or virtual, layer 1 to layer 7. Enjoys sharing knowledge and teaching the next generation of engineers.

PROFESSIONAL EXPERIENCE

- 7/2023 – Present **Director, Platform Architecture** F5 Networks – Seattle, WA
I lead an engineering team focused on the architecture of the network and compute platform that powers F5 Networks Distributed Cloud services. 25+ physical points of presence around the world as well as public cloud via AWS, Azure, and Google connected via a fiber backbone. One of the most well-connected networks in the world by BGP peers.
BGP / OSPF / anycast / MSTP / IPv6 / AWS / GCP / Azure / Kubernetes
- 3/2019 – 7/2023 **Architect** F5 Networks – Seattle, WA
Architect for F5 Silverline and later Distributed Cloud. Architecture and initial implementation for virtualized application delivery controller platform with hardware acceleration. Architecture for a scalable SNAT aggregation tier. Global server load balancing architecture to extend service into public cloud.
KVM / F5 BIG-IP / Ansible / HashiCorp Nomad / Intel QuickAssist / AWS EC2
- 10/2016 – 2/2019 **Sr Manager, Product Development** F5 Networks – Seattle, WA
Responsible for a team focused on virtualization and public cloud. Adapted F5 BIG-IP to run in virtual environments by creating virtual machine images for common hypervisors and public cloud marketplaces. Achieved high performance through system tuning and implementing high performance drivers for network cards, FPGAs, and ASICs for crypto and compression offload.
C / KVM / VMware / Xen / OpenStack / AWS EC2 / GCP / Azure / DPDK
- 11/2013 – 10/2016 **Senior Manager, Technical Marketing Engineering** ExtraHop – Seattle, WA
Led a team that implemented additional functionality on the ExtraHop platform. This involved parsing on-wire network protocols, recording metrics, defining alert thresholds, and developing purpose build visualizations specific to common applications. This helped secure, optimize and identify issues in complicated environments.
JavaScript / ECMAScript / JSON / tcpdump / PCAP
- 8/2012 – 11/2013 **Manager, Product Development** F5 Networks – Seattle, WA
Managed the team responsible for coding F5 BIG-IP iApps, a system for improving the ease of deploying applications in a secure, repeatable, and reliable manner.
Tcl / BIG-IP iApps / automation / load balancers / Docker
- 8/2009 – 8/2012 **Product Management Engineer II** F5 Networks – Seattle, WA
Member of an R&D team responsible for prototyping ideas for new products, or implementing experimental changes to existing F5 BIG-IP product. Served as subject matter expert representing customers to development teams as they productized features based on that earlier research and prototypes. Technical due diligence for M&A activities.
F5 BIG-IP / C / Perl / Python / Cloud Autoscaling / LXC Containers
- 7/2006 – 8/2009 **Enterprise Network Engineer, (Senior) Network Support Engineer** F5 Networks – Seattle, WA
Responsible for support escalations from F5's largest customer as well as aiding them to integrate F5 BIG-IP into their deployment architectures.
TCP/IP / IEEE 802.3 / IEEE 802.1 / MSTP / HTTP / SSL & TLS / DNS / LDAP

1/2004 – 6/2006 **Systems Engineer** **Rainier Connect – Centralia, WA**
Deployed, managed, and supported all equipment for a rural telecom, internet, and cable television service provider. Implemented dynamic routing across a multihomed and multisite environment. Wrote customer provisioning software. Audited telecom bills between other carriers by parsing and summarizing call detail records.
BGP / OSPF / MSTP / IPv4 / SS7 / T1 / ISDN / CMTS / ATM / Java

PATENT AUTHOR

Issued 12/5/2017 **US 9838259** **F5 Networks – Seattle, WA**
Methods for managing client defined response requirements in DNS query and devices thereof

Issued 2/14/2017 **US 9569233** **F5 Networks – Seattle, WA**
Elastic offload of prebuilt traffic management system component virtual machines

PUBLIC SPEAKING

12/3/2018 **DPDK on F5 BIG-IP Virtual ADCs** **DPDK Summit North America 2018**
F5's strategy of using DPDK to support emerging NIC models, enable high performance workloads and services, and lessons learned around integrating F5's dataplane with DPDK. Recording available on Youtube.

EDUCATION

1998 – 2003 **Bachelor of Science, Electrical Engineering** **Pennsylvania State University – University Park, PA**
Course concentration focused on communication systems and embedded systems. I gained an appreciation for the beauty and utility of the Laplace transform and differential equations.

PROGRAMMING

C - professional
Bourne Shell - professional
Python - professional
Perl - proficient
Tcl - proficient
JavaScript - proficient
HTML & CSS - proficient
LaTeX - generated this document

OPERATING ENVIRONMENTS

GNU/Linux - professional
F5 BIG-IP - professional
BSD Family - proficient
MacOS X - proficient
Solaris - proficient
Windows - remedial

AGILE DEVELOPMENT

Certified Scrum Master - exp 2020
Certified Product Owner - exp 2020

REFERENCES

Available upon request.