

SKILLS

Go C C++ Protobuf Python Javascript L^AT_EX Linux FreeBSD Solaris

EXPERIENCE

Joyent, Inc. San Francisco California
Software Engineer

June 2017 - Present

Go Linux QEMU gRPC Nomad Terraform FreeBSD SmartOS C Dtrace

- Founding member of new cloud platform group with 2 other engineers, now 20
- Head developer on host networking service, controlling overlay networking for VMs and securely configuring networking for customers
- Designed virtual private cloud (VPC) networking services
- Designed communication protocols (protobuf and gRPC) between networking services and hypervisor service
- Planned and prioritized networking work required for success in quarterly prototype demos for Samsung
- Devised metrics to provide observability into distributed systems making up cloud infrastructure using Circonus
- Fixed post-mortem DTrace bug enabling porting of FreeBSD hypervisor to Solaris
- Implemented “hot-inlining” CPU feature toggling to mitigate ROP vulnerability
- Improved memory deallocation by 100,000x to improve Postgres performance
- Patched Postgres 9.4 to use Intimate Shared Memory for more effective virtual memory usage

Groupon Palo Alto California
Systems Engineering Intern

June 2016 - June 2017

FreeBSD ZFS MySQL Postgres Jenkins Poudriere R Python Ansible

- Devised OS upgrade plan for a large, international database host fleet
- Managed a contractor, dividing work into external and internal projects
- Documented and indexed all FreeBSD information across internal services
- Benchmarked FreeBSD kernel patches and configurations, drivers and firmware for performance regressions under database workloads
- Upstreamed several of Groupon’s FreeBSD ports, and fixes to included tools
- Attended and gave talks at FreeBSD conferences

SPEAKING

Improving Netdump Performance with iflib BSDCan 2018 AsiaBSDCon 2018

- Added buffering for performance increase of 1.7x without packet loss

Participating in Open Source Software Horizon School of Technology

The History and Future of Core Dumps in FreeBSD BSDCan 2017

EDUCATION

Texas A&M University College Station Texas
Bachelor of Science in Computer Engineering
Minor in Mathematics

May 2017

Github github.com/gwydirsam