

John F. Sullivan, III

112 Derby Street · Dracut, MA 01826 · 978-323-9917 · jsullivan3@gmail.com

Objective: To work with a talented team in a creative, personal atmosphere in which I can exercise my problem solving skills.

Professional Skills

Programming: Expert knowledge of Python, bash, C/C++. Experience with Go, Perl, Java, sed, awk.

Hardware/Software: Expert knowledge of Red Hat Enterprise Linux (RHEL), CentOS/Rocky Linux, and Fedora Linux on x86_64 architecture. Experience with Podman/Docker, Ubuntu, Windows, NetBSD, MS-DOS.

Storage: Experience with BTRFS, LVM, XFS, ZFS, mdraid on RHEL/CentOS/Rocky, Ubuntu, and Fedora.

Networking: Expert knowledge of configuration and management of Ethernet hardware in Linux.

Other: Expert knowledge of the Git version control system, expert knowledge of RPM/DNF/Yum software packaging, experience with Linux KVM-QEMU and VMware virtualization, member of the Association for Computing Machinery (ACM).

Experience

Software Contributions

Hashicorp Memberlist: <https://github.com/hashicorp/memberlist>

Golang Argparse: <https://github.com/akamensky/argparse>

GitHub Profile: <https://github.com/jsullivan3>

Nasuni, Marlboro, MA

June 2019 – Present

Principal Software Engineer

- Design and implement flexible and scalable solution for complex upgrades, minimizing downtime and reducing failure risk, and used it to upgrade the PostgreSQL databases on customer appliances
- Implement changes to disaster recovery of storage appliances with coordinated interactions, to improve stability and reliability as well as reduce customer downtime
- Implement functionality to dynamically increase the storage appliance's usable disk space with no interruption to user I/O
- Update RAID library to replace use of deprecated RAID management utility with a new utility that supports more functions and new hardware RAID devices
- Improve reliability and boot time by converting startup scripts to fine-grained SystemD units
- Create feature development plans and time lines for implementation
- Own development plans to completion within a given release
- Engage in cross functional communication with Sustaining Engineering, QA, and Support teams
- Analyze customer escalations, identify and implement solutions
- Triage bugs during the development cycle and prioritize with feature development

IBM, Littleton, MA

October 2016 – June 2019

Software Storage Developer

- Development lead for regional orchestration service for storage volume images
- Develop next-generation control plane based on Kubernetes
- Develop, maintain, and debug issues with next-generation storage control plane and data path
- Closely work with operations team to triage and address issues in production environments
- Act as team lead for the storage team for both development and maintenance roles

Cimpress, Waltham, MA

August 2015 – October 2016

Lead Software Engineer

- Develop, maintain, and debug issues with worldwide Consul clusters, and submit changes to Consul
- Develop and maintain tools to automate software engineering tasks for the database team
- Develop access-based API authentication support software and help educate engineers in the process of transitioning from ID-based authentication to access-based authentication

Verizon (Terremark), Lowell, MA

March 2014 – August 2015

Principal Software Development Engineer – Platform Storage Team

- Develop and support platform-level Thrift-based management of cloud storage stack using C++
- Triage and fix storage-related issues in staging and development environments
- Develop Python-based tools to test interfaces and process log files to facilitate debug and triage
- Develop and support storage-related user API into Java-based cloud orchestration layer
- Work with release engineering to implement a release infrastructure for storage components

Dell, Nashua, NH

Senior Software Development Engineer – I/O Driver Team

October 2012 – March 2014

- Develop and support the lower-layer I/O drivers that communicate with SATA and SAS drives
- Add drive failure prediction functionality to the I/O stack in the Dell EqualLogic firmware
- Debug issues with new drives being qualified for use in new and existing Dell EqualLogic arrays
- Provide training on new features of I/O stack to support and sustaining team members
- Provide help for customer support problems and customer-down escalations

Systems Engineer II – Sustaining Engineering

March 2011 – October 2012

- Analyze behavior of Dell EqualLogic components in customer environments and work with development teams to provide workarounds and fix problems
- Recreate complex customer environments in which to reproduce issues
- Develop tools to allow engineers to more quickly analyze and identify issues

Emulex, Bolton, MA

Staff Software Engineer

September 2007 – March 2011

- Established software build environment and lab infrastructure
- Implemented an iSCSI management solution into the Emulex OneCommand management suite
- As team lead, implemented the Emulex OneCommand management suite for VMware
- Developed cross-platform test suite using Python in Windows, Linux, Solaris, and VMware ESX

Senior Software Engineer

May 2000 – September 2007

- Implemented a Microsoft Simple SAN-certified FC SAN installation and configuration suite
- Designed and implemented a simplified installer for the LPFC driver on RHEL and SLES
- Developed a Linux driver for iSCSI and FC HBAs

Education

Master of Science in Electrical Engineering

Worcester Polytechnic Institute (WPI), Worcester, MA

May 2000

GPA: 3.4 **Master's thesis:** "Fault Tolerant Ethernet with Sub-Second Recovery"

Bachelor of Science in Electrical Engineering, concentration in Computer Engineering

Worcester Polytechnic Institute (WPI), Worcester, MA

May 1998

GPA: 3.4 Graduated with Distinction

Member of Eta Kappa Nu, the Electrical Engineering Honor Society