

Christopher A. Neylan

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Experienced in operating and performance tuning low-latency/high-throughput trading systems with a strong background in problem solving, programming, and automation. I prefer to lead by example; valuing stewardship, consistency, and reliability. Learning and engineering are what drive me—I never want to stop doing either.

Technical Highlights

Programming and Scripting

Ruby, Perl, Bash, C, Java, SQL, HTML, JavaScript, PowerShell

Operating Systems

Red Hat Enterprise Linux 9/8/7/6/5, Arch Linux, Windows 10/7/XP

Containers and Virtualization

Podman/Docker, Docker Compose, VMware/vSphere, Vagrant, QEMU, VirtualBox

Automation and Monitoring

Chef, Cobbler, Kickstart, OpenNMS, PostgreSQL, Autosys

Collaboration

Git, Gerrit, Jira, Confluence, SharePoint, Office/Visio

Network

Xilinx/Solarflare Onload, SNMP, syslog, DHCP, DNS, LDAP, SSH, NFS, SMTP, TCP, UDP, multicast

Servers and Storage

Intel, AMD, HPE, Lenovo, Hypertec CIARA, NetApp, DDN + GPFS, EMC Isilon, Dell EqualLogic, EMC VMAX

Professional Experience

Senior Lead Infrastructure Engineer, Vice President – May 2018 to present

Electronic Trading Services, JPMorgan Chase

- Design Authority for all Platform infrastructure applications including: Chef, Gerrit, Ansible, Cobbler, Netbox, and OpenNMS. Responsible for high-level design, architecture, risk profiling, and lifecycle management.
- Engages with business application development and production management teams to ensure infrastructure platform needs are met, and to provide technical guidance for the planning of next-generation deployments.
- Chief Architect for the design, development, and deployment of a new Chef-based build and configuration management platform, which brought end-to-end data-driven config-as-code to the global Electronic Trading estate, meeting business needs for guaranteed consistency and rapid, predictable server repave.
- Redesigned the existing Chef Server infrastructure, prioritizing redundancy and a rapid, easy to implement, disaster recovery plan that is not self-reliant on the functioning Chef Server.
- Lead project maintainer for the RHEL build platform, including release lifecycle management, build design and automation, cookbook development, and standards enforcement, with a key focus on metadata-driven automation capable of cleanly managing application-specific tuning across different hardware platforms and major operating system versions.
- Go-to subject matter expert (SME) for performance tuning hardware and operating system stacks for low-latency/high-throughput electronic trading applications, leveraging strong vendor relationships to establish blueprints and tuning standards for Intel-based HPE and Lenovo servers running RHEL 6 through RHEL 9.
- Responsible for the component selection and testing for the server hardware platforms used by the Electronic Trading businesses. Advocated a standards redesign that reduced per-host PCI slot usage by half while maintaining the same functional connectivity, redundancy, and NUMA-localities, and introducing the support for 25Gbps and 100Gbps link connectivity.
- Mentors SRE team members and engineering peers on automation best practices, technical thought process, and modern infrastructure management through configuration-as-code.

Head of Server Platform, Vice President – *December 2016 to May 2018*

Head of Unix, Assistant Vice President – *March 2016 to December 2016*

Specialized Infrastructure, Barclays

- Provided direction and management of Unix, Windows, and Database teams globally.
- Responsible for strategic team direction, planning, and individual project oversight.
- Engaged with clients to understand and ensure teams are meeting service level agreements, project deliveries, and business objectives.
- Managed risk and ensured the success of teams' projects, while fostering and encouraging team learning, knowledge sharing, and skill-set development.

Systems Administrator, Assistant Vice President – *August 2013 to March 2016*

Specialized Infrastructure, Barclays

- Responsible for the development, support, and monitoring of all co-located electronic trading infrastructure and select campus server and Netapp storage infrastructure.
- Maintained server configuration management using Chef.
- Planned and executed the complete infrastructure separation of a business unit that spun off from the bank, without incident to either firm.
- Deployed OpenNMS to monitor all infrastructure and select Market Data log flows.
- Subject matter expert for Linux server performance tuning.

Systems Administrator, Associate – *February 2012 to August 2013*

Unix and Storage Group, Highbridge Capital Management

- Responsible for the development and support of the Linux and storage infrastructure, as well as application support for trading software, HTCondor, data warehouse services, and Oracle clusters.
- Management of core services including DHCP, DNS, mail, Autosys.
- Storage management of VMAX LUNs, EqualLogic volumes, NFS/SMB over Isilon, and NFS over Netapp.
- Configuration and build management using Cobbler + Kickstart and an in-house template system.
- Developed an in-house performance/process data collection agent called "procwatch".

Systems Support Technician, Associate – *June 2011 to February 2012*

Network Operations Center, Highbridge Capital Management

- First response to all production systems alerts including support for off-site data centers, FIX connections, Windows and Linux servers and services, network infrastructure, databases, core applications, development teams, and automated job services.
- Completed self-driven projects aimed at the improvement of the monitoring infrastructure.

Graduate Teaching Assistant – *August 2009 to May 2011*

Department of Computer Science, University of Maryland

- Responsible for designing, preparing, and leading biweekly teaching and review sessions on computer systems programming in C, introductory programming in C, and object-oriented programming in Java.
- Helped students on a one-to-one basis in office hours.
- Administered and graded projects and exams.
- Permitted to lead full lectures in the absence of the professor.

Education

Doctor of Philosophy (PhD) in Computer Science, drop-out – *August 2009 to May 2011*

University of Maryland

Completed four semesters of coursework in networks, database management systems, software testing, cryptography, and computer vision. Dropped out to pursue a career in Systems Administration.

Bachelor of Science in Computer Science with a minor in **Physics**, graduate – *August 2005 to May 2009*

The College of New Jersey

Graduated with Departmental Honors and the Charles H. Goldberg Prize in Computer Science. Received Phi Kappa Phi Student-Faculty Research Award. Earned Freshman Computer Science Award as top student.