

# Robert A. B. Longstaff II

60 Strawberry Hill Ave, Apt 514 – Stamford, CT 06902

☎ 203-989-0903 • ✉ resume@longstaff.us • 🌐 longstaff.us

## Summary of Qualifications

- High-level support of global systems at the largest scale on the planet
- Design and development of highly scalable and flexible systems
- Extensive experience with Linux/Unix Familiar with all aspects of the system from kernel and device driver code, user and network management, to desktop environments and applications
- Broad background in many types of server and workstation hardware installation, configuration and troubleshooting
- Comprehensive experience with multiple development platforms, languages, and frameworks

## Professional Experience

---

### Workframe / Newmark Group Inc

#### Workframe / Newmark

*Director of DevOps*

*November, 2018 – February, 2023*

- Migrated from ad-hoc cloud-based infrastructure to IaaS using Terraform. Included a structure for multi-cloud and hybrid on/off-prem
- Streamlined existing Elastic Beanstalk deployment pipeline using pre-baked VMs to containerized Kubernetes artifacts; reduced deployment times from 20-40 minutes down to single-digit seconds
- Worked with developers to improve architecture, including instrumentation to instruct decision making based on quantitative analysis
- Leveraged Prometheus to provide real-time data across thousands of metrics of individual application instances with full auto-discovery
- Employed Grafana to give developers access to standard application dashboards while also allowing them to craft bespoke dashboards
- Conducted team building activities across departments, including a “war stories” session to discuss experience is exceptional failures, mitigations, and lessons learned

#### Workframe

*Chief Privacy Officer*

*November, 2018 – October, 2019*

- Primary point of contact for all privacy concerns. Advised management, development, and QA about proper handling of PII
- Advised all parties regarding the technology stack and GDPR compliance

### Tapad, Inc

*Senior Infrastructure Engineer*

*February, 2016 – July, 2018*

- Responsible for supporting a global, high-volume, latency-sensitive infrastructure that blended large on-premises data centers, Amazon Web Services, and Google Cloud Platform
- Leveraged Infrastructure as Code (IaC) to manage changes to all environments; Puppet for on-premises resources and Ansible/Terraform for cloud resources
- Migrated legacy services from virtual machines to Docker containers managed by Mesos/Marathon clusters; later migrating all services to Kubernetes
- Migrated services and workflows from existing on-premises and AWS to GCP, utilizing Kubernetes Engine, BigTable, Cloud Composer, GCS
- Designed and implemented a flexible service discovery platform, Leif, to connect modern, containerized applications to legacy infrastructure
- Provided developer support for multiple, petabyte-scale Hadoop/HDFS clusters located in the US, Europe, and Asia
- Performed full-stack performance analysis and tuning for the JVM, Linux kernel, hardware, and cloud platforms

- Identified and provided solutions for several bottlenecks in Nginx+ load balancing algorithms, allowing for 1M QPS scalability with minimal, cost-effective hardware
- Built a Ceph Object Store with 900 erasure-coded OSDs
- Advised cross-silo compliance regarding PII and GDPR

## **Google, Inc**

*Site Reliability Engineer, Technical Infrastructure*

*May, 2013 – February, 2016*

- Responsible for a blend of planning, administration, and development across seven highly scalable, global backend services – two of which are required in every data center, worldwide
- Provided development support, capacity planning, monitoring and automation for Cloud PubSub and the underlying global message queue
- Performed development in Python, Java, and C++
- *Significant work still covered under NDA*

## **The New York Times Company**

*Senior UNIX Engineer, Core Infrastructure*

*September, 2011 – May, 2013*

- Responsible for the storage, physical servers, virtualization, orchestration, and operating system maintenance of the New York Times online sites, including [www.nytimes.com](http://www.nytimes.com)
- Received the New York Times Publisher's Award for completion of the Data Center initiative
- Worked closely with development teams to provide them with performance analysis and troubleshooting, architectural recommendations and workflow optimization
- Deployed Puppet throughout all environments for configuration management and server orchestration
- Data Center Initiative: Large project to migrate the primary data center to a new location with a freshly built modern infrastructure, refresh the infrastructure in the secondary data center, migrate several projects from Amazon EC2 and replatform projects with legacy operating systems / hardware
- Infrastructure Technical Lead for the WWW and Ad projects
- Configured 3 EMC VNX5500's for SAN with attached Data Movers for NAS
- Utilized VSphere 5 for virtualization with Juniper VGW virtual firewalls for internal network protection
- Replatformed various components of the WWW and Ad applications from a mix of Solaris/SPARC, Solaris/e86, CentOS 4 and 5 running in Solaris zones and Xen domains to a standard CentOS 5 image running on VMware
- Optimized template/system provisioning by moving from an unreliable and labor intensive set of shell scripts to a fully Puppetized model leveraging internal software packaged in RPMs managed by Spacewalk

## **Exeperian PLC / CheetahMail**

*Software Development Expert / Team Lead*

*July, 2010 – September, 2011*

- Lead team tasked with upgrading several sections of infrastructure and application from Debian Sarge, Apache 1f3 and Perl 5f6 to Debian Lenny, Apache 2f2 and Perl 5f10f
- Team Lead for the core product: a custom, high-performance SMTP engine written in Perl and C
- Performed maintenance and enhancements on the Perl codebase
- Performed analysis and triage for production performance issues
- Re-architected existing development environment, including VMware Infrastructure, Dell PowerConnect switches and Hitachi SAN, to employ best practices in regard to high availability, performance and long-term support
- Designed technical solution and workflow for provisioning and management of development environments using VMware Lab Manager

## **Playboy Enterprises International, Inc**

*Senior Systems Architect, Online Operations*

*July, 2007 – July 2010*

- Responsible for designing and maintaining all aspects of PEI's online infrastructure, where flash traffic of more than ten times normal peak could appear at any moment

- Interfaced with various business groups, meshing disparate goals with a standard technology stack to minimize technical debt
- Led virtualization initiative, migrating 95% of existing systems to VMware ESXi Realized massive cost, space and power savings in the process
- Established Best Practice guidelines for systems management, application deployment and general workflow
- Managed enterprise Equallogic (SAN) and Isilon (NAS) storage systems in addition to standard DAS systems
- Installed and customized RT for issue tracking and workflow
- Converted all Linux systems and internal applications to utilize a central LDAP (FedoraDS / 389) authentication/authorization store
- Installed, configured and tuned Nagios for 24x7 availability monitoring
- Developed an escalation daemon in Perl to alert on-call engineers to problems via standard phone calls
- Developed a modular replacement for the standard NRPE client/agent with a focus on security and extensibility GPL release pending
- Managed multiple in-house Java applications running on JBoss and Tomcat
- Installed and supported the FatWire Content Management System on Tomcat/Oracle
- Manage and tune F5 BigIP load balancers
- Assisted the Senior Network Administrator with topology decisions and configuration details
- Ensured Payment Card Industry (PCI) compliance for all relevant systems
- Leveraged RedHat Satellite server for errata/patch management
- Enforced strict version control for all configuration files using Subversion
- Assisted developers in debugging and diagnosing production problems with internal applications

## **IPsoft, Inc**

*Systems Engineer*

*May, 2003 – July, 2007*

- Maintained Linux and Solaris hosts in multiple 24x7 production environments
- Built RPM packages of custom software for distribution to Linux and Solaris hosts
- Installed, configured and managed Apache web servers and related modules such as mod\_rewrite, mod\_perl, and mod\_gzip
- Installed, configured and managed Alteon AceDirector, BigIP F5 and Cisco LocalDirector load balancers
- Utilized Kickstart and Jumpstart for automated system builds
- Managed various firewalls, including Cisco Pix and Linux iptables / ipchains
- Maintained Java application servers such as Tomcat, Jboss, WebLogic and Cold Fusion
- Responsible for interviewing and providing final input on new hires Research and Development:
- Developed robust, modular monitoring architecture initially based on NetSaint/Nagios
- Developed a modular replacement for the standard NRPE client/agent with a focus on security and extensibility
- Developed various plugins to monitor objects remotely via standard network protocols or locally via custom agent
- Built a comprehensive web application monitor that utilized standard XML to define complex synthetic transitions
- Ported the standard Crypt::TripleDES pure perl module to C/XS, resulting in a module that is byte-for-byte compatible and 50+ times faster
- Designed extensible discovery architecture to automate maintenance of monitoring configuration
- Developed an adaptive system to create and manage finite state automata for automated problem response and remediation Automata were trained simply by watching interactions between engineers and systems
- Optimized Request Tracker (RT) code and database to facilitate the high volume of requests from various clients

- Managed all code in a revision control system
- Reviewed and approved all code for production monitoring systems

### **Technical Lead**

*Playboy Enterprises, Cadmus Communications, VNU Media*

- Managed client relationship at the technical level
- Planned and led regular conference calls and meetings
- Led teams of systems engineers, network engineers, DBAs and developers on cooperative projects
- Diagnosed and resolved issues on the application, network, system and database layers, engaging specific expert resources when necessary

### **Ibrix, Inc**

*QA Systems Integrator / Administrator*

*June, 2002 – December, 2002*

- Designed a customized Linux distribution to meet our needs of an enterprise class server with an embedded footprint
- Managed all hardware for the internal test lab, including ethernet switches (HP, Cisco), fiber-channel SAN switches (Brocade, Mcdata) and various servers and disk arrays
- Executed stability and performance tests on Ibrix codebase, filing progress reports and maintenance requests as needed
- Analyzed and resolved any maintenance requests assigned to me; Coding was performed in C and centered around the Linux kernel's VFS layer
- Troubleshoot and resolved performance and stability problems related to specific platforms This included everything from physical systems and network cabling, through the standard Linux userspace and down to analyzing and creating custom patches for specific Linux kernel SCSI and network drivers
- Used RPM to package and deploy our binary releases
- Streamlined test environment build-out using RedHat kickstart, reducing total downtime due to catastrophic filesystem damage to under two minutes
- Employed VMware virtualization tools to rapidly facilitate low-level system/distribution testing and design while keeping costs down

### **Katrillion Media**

*Senior Network Administrator / Programmer*

*January, 2000 – June, 2002*

- Designed and deployed a Linux based web / database cluster able to serve millions of dynamic page views per day
- Installed and administered development and production SQL (MySQL), NFS, NIS, SMB (Samba), AppleTalk, SMTP (qmail), POP3, JSP (JRun) and PHP servers
- Migrated existing Windows NT servers to Linux, providing improved availability and TCO
- Developed and implemented initial backup strategy, data hierarchy and IT workflow
- Performed all design, maintenance and optimization database admin duties for the MySQL backend
- Security administration and monitoring for all servers using tools such as SNORT, SAINT, nmap and iptables/ipchains
- Installed, configured and managed Alteon AceDirector load balancers
- Developed a foundation of Java objects to simplify existing codebase
- Designed numerous new applications and implemented additional features for existing Java applications
- Created a fast log analyzer in Perl Included an accompanying report API, as well as designing the reports
- Developed several distributed client / server applications to handle various site functions such as newsletter delivery
- Developed generic caching daemon/API to improve site performance for both Java and PHP modules
- Managed helpdesk resources

### **LeBlanc Communications Group, Inc**

*Senior Consultant*

*March, 1999 – January, 2000*

- Provided phone and on-site support for over 200 clients
- Designed network architecture for new installations
- Installed new PC's, networks, phone systems, voice mail and integrated telephony products
- Planned and implemented network and PC system upgrades with emphasis on time and budget constraints
- Used VMware Workstation on a Linux host to sandbox various Windows installations for safe problem replication

## **Brooks Community Newspapers, Inc**

*Systems Administrator / Webmaster*

*February, 1996 – March, 1999*

- Managed day to day operation of 200+ PC workstations, 20 Macintosh stations, 10 Novell NetWare 1 / print servers, 6 Windows NT file / print / Web servers, 2 Linux file servers and 1 FreeBSD E-mail server across 4 physical sites
- Created comprehensive Internet presence for the company focused on budget Included building a Web server from spare parts, designing the Web site, developing a workflow for internal content updates, creating an FTP server for off-site updates of hosted sites and an E-mail server for corporate communications
- Developed several utilities to smooth various workflows, including a graphical HTML editor focused on usability for non-technical users
- New England Press Association Site Design award - 3rd place in class for Web site design of [www.bcnnews.com](http://www.bcnnews.com) (design no longer present)

## **Technical Skills:**

- Amazon Web Services: IAM, EC2, S3, Route 53, VPC
- Google Cloud Services: IAM, GCE, GKE, GCS, PubSub, StackDriver, Cloud Build, Container Registry, BigQuery
- Various Linux/UNIX distributions and kernels: RedHat / RHEL, CentOS, Fedora, SUSE, Debian, Ubuntu, Gentoo, DSL, LFS, UnieWare, SunOS, Solaris, FreeBSD, OpenBSD
- Mac OS / OS X, Windows 3fe – 10 Desktop / NT 3f5-2008 Server, Novell Netware, Cisco, iOS
- Containerization: Docker, Kubernetes, GKE, Mesos, Marathon
- Virtualization: VMware Workstation, VMware Server 1fe-2fe, VMware ESX/ESXi 2.x – VSphere 5, VMware Virtual Center, Vmware Lab Manager 3fe, Xen, KVM
- Programming languages: C, C++, Java, Perl, PHP, Python, Ruby, Bourne / BASH / tcsh / ksh, Assembly, Visual BASIC, JavaScript, Pascal, SQL
- Markup languages: HTML, XML, YAML, JSON, TOM
- Web Servers: Apache, Nginx, lighttpd, IIS
- Application Servers: Tomcat, JBoss, JRun, WebLogic
- Databases: BigQuery, MySQL, Oracle, DB2, SQL Server, PostgreSQL, SQLite
- Miscellaneous Network Services: bind, djbdns, sendmail, eeim, postfe, qmail, courier, SSH, LDAP (FedoraDS/389/ADS), PXE
- Network Protocols: DHCP, IP, TCP, UDP, T/FTP, NTP, SMTP, POP, IMAP, DNS, HTTP, NFS, SMB/CIFS, iSCSI, WEP, WPA
- Security: SSL/TLS, ef509, AES, 3/DES, general symmetric/asymmetric cryptography
- Load Balancers: Nginx, Juniper, F5 BigIP CoyotePoint, Alteon, Cisco Local Director

---

Version: 138

The latest version of this document can be found at <https://longstaff.us/resume/>