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## OBJECTIVE

A generalist with over 2 decades of experience, I seek a combined system administration and network engineering position in a small organization with Linux-based infrastructure primarily on or looking to migrate to physical hardware, where my contribution will both challenge me and significantly benefit my team. I'm not open to permanent relocation.

## EXPERIENCE

- Jul 2014–Jan 2017**                      **System Administrator**                      Skyhigh Networks, Campbell CA  
Most senior member of production operations team.  
Responsibilities included bare-metal SuperMicro servers, Cisco switches, ASA and Fortigate firewalls, OpenBSD routers and (pf) firewalls, Netapp filers, XenServer virtualization, Ubuntu, CentOS, AWS (including DirectConnect and VPN), secondary support to corporate IT, including Atlassian Jira/Confluence, and managing colocation/datacenter, ISP, and hardware vendor relationships.  
Provided OS, hardware, and performance tuning support for Hadoop ecosystem and related tools such as Zookeeper, RabbitMQ, Kafka, Storm, and MySQL.  
Automated using Bash and SaltStack and creating custom DEB packages.  
Fully documented local and remote datacenter inventories in RackTables. Refurbished aging servers, including upgrading memory, replacing disks and fans, and upgrading IPMI and BIOS firmware. Installed, configured/tuned (BIOS and OS) new servers. Wrote custom monitoring for LSI MegaRAID and SMARTmontools.  
Provided detailed cost analyses, including TCO comparison between new and refurbished servers and between hardware-based "private" cloud and AWS. Wrote aws-cli scripts to harmonize tags between EC2, EBS volumes, and EBS snapshots to facilitate more accurate billing reports.
- Dec 2011–Jul 2014**                      **System Administrator**                      Counsyl, South San Francisco CA  
System Administrator for genomics laboratory, with a significant Python/Django software component to technical operations.  
Install new servers. Upgrade OS on existing servers. Environment primarily running on Ubuntu LTS. Create custom DEB packages. Create and maintain local package mirror.  
Administer LDAP. Set up replication.  
Administer PostgreSQL. Maintain database copy system for engineers based on PITR. Set up streaming replication. Upgrade to 9.2.  
Install Cisco router and configure redundant Internet connections. Maintain Cisco ASA-based IPsec VPNs, both static and "dialup".  
User administration.  
IT helpdesk function for an all-Mac environment.
- Jun 2011–Dec 2011**                      **System Administrator**                      Kno, Inc., Santa Clara CA  
Managed physical and virtual servers for production and development environments at e-textbook startup. Automated production deployment process. Moved DNS from dnsmasq and AD to BIND on Linux. Managed LDAP both for internal and production authentication. Managed production MySQL 5.1 databases, including replication.
- May 2011–Jun 2011**                      **System Administrator**                      Playdom (via Taos), Palo Alto CA  
Contract role through Taos for Playdom subsidiary of Disney Media Entertainment Group. Assisted in administration of server infrastructure using Puppet. Configured rsyslog to ingest existing Tomcat log files for centralization.
- May 2011–Jun 2011**                      **Consultant**                      Taos, San Jose CA  
Consulting/Contracting role for various clients of Taos

Aug 2010–May 2011                      **System Administrator**                      Milo.com (acquired by eBay), San Jose CA

Sole system administrator for web-base local shopping site. Administered Ubuntu servers at remote hosting provider. Planned capacity and produced specifications and forecast for future purchase.

Administered, tuned PostgreSQL database. Added pgbouncer connection pooling. Set up replication for Lucene/Solr.

Packaged Python-base apps, custom Python modules, and scripts. Seamlessly integrated as native APT/dpkg.

Installed HAproxy load balancing and squid-cache proxy as replacements for nginx. Implemented Linux-HA's Heartbeat for automated failover of load balancers.

Upgraded Nagios monitoring, including non-standard plugins and service-dependency configuration. Maintained Munin (RRDTool-based) trend graphing.

Move FTP/SFTP service to dedicated server and added support for restricted SCP and RSYNC.

Set up office router running pfSense. Set up local Debian and Ubuntu mirrors, and DHCP server for local OS install.

Assessed overall environment and generated suggested changes which would improve performance and/or reliability.

Apr 2010–Jul 2010                      **System Administrator**                      Cellfire, San Jose CA

Contract role as sole system administrator at mobile and web retail coupon provider.

Upgraded and documented production environment, including LVS/keepalived load balancers, Cisco ASA firewall, routers, switches, CentOS Linux, Apache Tomcat, MySQL with replication, and Jasper reports.

Simplified, automated, and documented deployment process and data warehouse ETL process.

Converted monitoring from a mix of Big Sister and standalone scripts to Nagios. Installed Ganglia for trending visualization.

Jul 2009–Apr 2010                      **Systems Engineer**                      Big Head Labs (disqus.com), San Francisco CA

Principal system administrator for web commenting system. Administered Ubuntu servers at remote hosting provider. Planned capacity and produced specifications and forecast for hardware, space, and network connectivity for a move to a dedicated colocation facility.

Administered, tuned PostgreSQL database. Migrated to new master and read slave with Slony-I. Added pgbouncer connection pooling.

Packaged primary Django application, custom Python modules, and scripts. Seamlessly integrated as native APT/dpkg.

Installed HAproxy load balancing as an improvement to nginx's functionality. Implemented Linux-HA's Heartbeat for automated failover of front-end load balancers. Squid proxy as reverse-cache for static media served by nginx, subsequently served to a CDN.

Brought DNS in-house, with external, redundant, high-performance, low-cost secondary servers.

Moved inbound and outbound mail to separate, dedicated server, running postfix. Improved mail deliverability, including implementing reverse DNS, SPF and DKIM.

Provided documentation of changes and "state" of servers using Trac-based wiki and ticket system. Added minor plugins and customizations to Trac system.

Centralized logging, including web server logs, using syslog-ng

Set up Nagios monitoring, including non-standard plugins. Maintained Munin (RRDTool-based) trending graphing.

June 2009                                      **Consultant**                                      Taos, Redwood City CA

Consulting/Contracting system administration role.

Feb 2009–Apr 2009

**Systems & Build Administrator**

Nixle, San Francisco CA

Sole system administrator for Internet-based government relations startup company.

Racked, cabled, configured new servers at out-of-town datacenter facility. Installed console server, configured servers for serial console, IPMI-over-LAN, allowing full remote control. Automated network boot/install, with local software mirror, using kickstart management tool "cobbler," resulting in 8 minutes from "bare metal" to an operational CentOS 5.2 server.

Built custom RPM packages for Django environment, including python 2.5, libraries, mod\_python. Automated deployment, including database (MySQL) schema upgrades and JBoss installation.

Leveraged F5 Big-IP LTM 9.5 failover pair to provide SSL offload, for both inbound and outbound traffic. Installed BIND DNS servers. Managed ASA firewall failover pair, including IPsec VPN, Cisco stacked switch infrastructure.

Dec 2007–Dec 2008

**Systems/Network Architect**

Anchor Intelligence, Mountain View CA

Started as sole system administrator, performing all SA tasks from handling hardware to architecture and design.

Moved research infrastructure to new office space, including setup of physical infrastructure and redundant Internet.

Maintained all server infrastructure on Ubuntu and CentOS Linux, including upgrades. Maintained development servers, including storage attached to PERC 5 (LSI MegaSAS) for RAID. Maintained CentOS 5.2, database servers, Veritas, MySQL, MySQL-enterprise, primarily using MyISAM storage engine for production and research databases.

Added DNS, DHCP, Ganglia, central NFS, software mirrors for Ubuntu, CentOS, MySQL, and other open source software. Upgraded and maintained Subversion/SVN, Bugzilla, MediaWiki, and Nagios. Added dependencies to Nagios.

Installed high-performance (1GiB/s), reliable (RAID5), low-cost (\$5k/21TiB usable space) storage. Grew to 100+TB.

Performed hardware and performance tuning, including kernel/sysfs, MySQL, and disk settings. Evaluated server and storage hardware options for performance and price, including power utilization, extrapolating empirical measurements on existing hardware. Planned future capacity and scalability. Documented process, decisions, and install procedure and progress using Bugzilla and MediaWiki.

Provisioned new production infrastructure in new datacenter colocation cabinets.

Automated installation of servers, using Kickstart for CentOS, and Debian-installer "preseed" mechanism for Ubuntu. Compiled and customized local and open-source software, repackaging into RPM and Debian packages.

Played active role in hiring, and mentoring junior and intermediate members of operations team, using structured lessons, internal documentation, and informal guidance.

Jun 2007–Dec 2007

**Sr Systems Administrator**

adap.tv, San Mateo CA

Sole system administrator and network engineer for online video advertising startup. Supported live revenue-generating production site as well as back-end software development environment.

Supported environments based on servers running CentOS and Ubuntu. Configured network based on Cisco switches and router, and Netscreen security appliance.

Automated Java based and Mongrel (Rails) based application deployment.

Analyzed performance of software components and database, observationally and experimentally.

Designed and specified commodity hardware to meet several growth curve scenarios. Sized, priced, ordered datacenter services for planned growth.

DBA of production MySQL with MyISAM, InnoDB, replication. Evaluation of PostgreSQL.

Moved office server/network infrastructure to new space.

Sep 2006–Mar 2007

**Networks Architect**

Navio Systems, Cupertino CA

Lead Linux system administrator and network engineer.

Install, configure, maintain F5 BigIP (version 9), including iRules (Tcl variant), Netscreen ScreenOS, with IPsec VPN, RedHat Enterprise Linux (RHEL, version 4.4), CentOS on Dell PowerEdge, IBM X-series, Cisco IOS 12 and CatOS 8, with link aggregation, VLAN trunking with and w/o VTP, Avocent Cyclades AlterPath ACS and PM appliances.

Install, configure KickStart services, including DHCP, NFS, TFTP, PXE, DNS. Automate install of internal product, primarily tomcat5.5-based Java WebApps. Modify open-source DNS/DHCP/VMPS management package (Sauron) to more fully utilize database features of PostgreSQL 8.2, lessening reliance on Web/CGI frontend and Perl 5.8 backends.

Configured squid 2.6 for use as reverse-proxy and cache, including ACLs, and connection to Java-based rewrite back end and ACLs. Configured Apache web server, including URL rewriting support.

Specified, ordered, installed, and configured low-cost FibreChannel/SATA disk arrays using Veritas Volume Manager (VxVM) and Veritas Filesystem (VxFS), a.k.a. Veritas Storage Foundation.

Interfaced log4j to syslog-ng for reliable, centralized logging of both application and system messages.

Assist IT, including administration of 3com IP telephony system and AlarmLock (HID-based) card key door locks. Mentored junior staff, including junior DBA, network engineers, and system administrators.

Apr 2006–Sep 2006

**Sr Network Engineer**

Casabi, Campbell CA

Sole Linux system administration, network engineering for VoIP-related ASP start-up. Supported production operations, SW development, including repackaging in RPM, Apache/Jakarta Tomcat and related webapps deployment. Platforms were Dell PowerEdge servers running SuSE, RedHat enterprise Linux. Assist QA and troubleshooting of ASP product, embedded SW in 3rd-party handset, with packet traces, protocol analyses, primarily of SIP traffic, with tcpdump and Ethereal. Set up IPsec VPN from Fortigate firewall at corporate office to Cyclades ACS console server at datacenter.

1998–2005

Available upon request

**HARDWARE PLATFORMS**

cisco routers and switches (Catalyst 6500/65xx/4500/4xxx, cisco 26xx/28xx), PIX/ASA firewalls, F5 load balancer, Avocent Cyclades ACS serial console & PM remote power, HP Proliant, Dell PowerEdge, IBM x-series servers

**SOFTWARE TECHNOLOGIES**

cisco IOS and CatOS, OSF/Linux LVM, MRTG, sendmail, postfix, OpenLDAP, PostgreSQL, MySQL, C-shell (csh/tcsh), Bourne Shell (sh, bash, dash), Perl, Tcl, expect, SuSE Linux, Ubuntu Linux, RedHat/RHEL/CentOS Linux, Apache HTTPd web server, HAproxy load balancer, Apache/Jakarta Tomcat, Squid cache, sysstat/sar, Subversion (SVN), (RedHat) KickStart, (Ubuntu) Debian-installer and packaging (dpkg, deb, debhelper, apt), OpenVPN, JBoss

**PROTOCOLS**

Gigabit Ethernet, IP, bridging/switching, SNMP, POP, IMAP, DNS/BIND, SSH, DHCP, SMTP, LPD/LPR, IPsec, SIP, VMPS, LDAP, NFS

**REFERENCES**

Available upon contingent offer

**WORK AUTHORIZATION & TRAVEL**

**Passport**  
**Trusted Traveler**

United States of America  
NEXUS