

Professional Summary

An experienced leader, architect, and engineer with hands-on expertise in requirements gathering, specification development, solution design, documentation, detailed implementation, maintenance, and decommissioning activities for enterprise-scale systems in the cloud or on premises. Responsible for departmental strategic direction; budgeting; staff development, evaluation, and retention; operational readiness, business continuity, and disaster recoverability.

Currently: leading a team of engineers delivering IT infrastructure architecture, engineering, and operations at a global social media, marketing, and development company. Strategic planning, budgeting, incident and problem management. Network and system infrastructure architecture, engineering, and administration on premises, co-located, and in the cloud. Supporting multiple public-facing mobile apps, websites, and other applications with millions of users generating \$100+ million in revenue.

Career highlights: Linux and Windows system architecture and engineering for a Fortune 300 hospitality firm; daily liaison with executive leadership; solutions design; detailed implementation of new systems. DevOps supporting reservation and flight operations for a national airline. Full-stack infrastructure for an Alaska-wide WiFi network. At a global financial news organization, full-stack DevOps support of multiple public-facing brokerage applications. For a major brokerage house, centralized data distribution capabilities across the data management enterprise. For a regional medical center, datacenter management and engineering of multiple new application platforms. For a global payments processor, developed physical and virtual infrastructure orchestration tools. For multiple non-profits: web-slinging, public and media relations, writing, editing, training, and fund raising.

Specialties: strategic technical leadership; cloud architecture; enterprise system architecture and implementation; platform-agnostic web development; monitoring solutions; business continuity/disaster recovery planning, testing; system automation; Unix/Linux system architecture, administration & engineering; SAN configuration & management; storage configuration, virtualization & management.

Related Skills

- 25+ years leading *ad hoc* and permanent project teams
- 20+ years experience managing and implementing software, network, and infrastructure development projects
- 15+ years experience with structured project, architecture, development, and operations management methodologies and tools (agile, waterfall, ITSM, ITIL, SOC, TOGAF, etc.)
- 20+ years experience with Unix, Linux, and Windows engineering and administration on IBM Power, Sun Sparc, ARM, and x86/AMD64
- 20+ years experience in web site and application design and development with Linux, Apache, Nginx, MySQL, PostgreSQL, Perl, PHP, and Python.

Supported Infrastructure

- AIX and RHEL on IBM pSeries
- AWS Cloud Services
- BSD
- Cisco UCS, Dell PowerEdge, HP ProLiant, Lenovo, Supermicro, White box x86/AMD64 infrastructure
- Dell, EMC, IBM, NetApp storage platforms
- Oracle/Sun Sparc and x86/AMD64 servers/Exadata/ZFS storage
- Ubiquiti/UniFi network infrastructure
- Asterisk VOIP/SIP telephony infrastructure
- Proxmox/KVM/Qemu
- Red Hat Enterprise Linux/Debian GNU/Linux/Devuan Linux/Ubuntu Linux
- Solaris
- VMware/VSphere/Horizon
- Windows Server 2003, 2008, 2012, 2016, 2020

Summary of Experience

March 2020 - Present, *Head of IT Architecture, Engineering, and Operations* and *Acting Director of Information Security* **Reflex Media**, Las Vegas, Nevada. (Direct Hire)

Reporting to the CEO/CTO, lead a global team of engineers responsible for IT infrastructure architecture and operations, and information security at a development, social media, e-commerce, and g-commerce company:

- More than 150 employees and contractors in nine time zones,
- millions of users in three dozen countries, and
- \$100+ million in annual revenue.

Responsibilities include:

- Annual budgeting, strategic planning, and execution with quarterly objective and key result checkpoints
- Vendor and contract management for IT infrastructure and software licensing
- Change management, architecture review board, and DevOps release leadership
- Supervise technical team of eight engineers and administrators, five of them direct reports
- Network and system infrastructure architecture, engineering, and administration on premises, co-located, and in the cloud.
- Support multiple public-facing mobile applications, websites, and other applications as well as switching, routing, DNS, and related network infrastructure.
- Conduct security audits, identify weaknesses, and keep network and infrastructure secure.
- Monitor all systems and maintain the services used to monitor systems for internal performance monitoring and alerts.
- Storage management.
- Environment building and deployment management.
- Server setup, physical setup in the data center, virtualization, cloud infrastructure management, automated jobs and tasks, and diagramming and documenting each of these components.
- Desktop and mobile device support.

Major Accomplishments:

- Migration of primary brand platforms from co-located infrastructure to AWS, resulting in scalability, feature, and stability improvements as well as risk reduction.
- Implemented IT asset management system.

- Implemented identity and access management (IAM) platform across the enterprise
- Deployed distributed workforce solutions.
- Standardized infrastructure across the enterprise.

Technologies:

- AWS,
- Google Cloud Platform,
- Apache HTTPD,
- Nginx,
- PHP (Laravel, WordPress),
- Memcached,
- MySQL/MariaDB/Percona,
- Aurora,
- PostgreSQL,
- RedShift, and
- Redis, OpenSearch, ElasticSearch

Internal tools:

- Nagios, Prometheus, and Grafana
- Ansible, Terraform, and Jenkins
- Proxmox virtualization
- Atlassian Jira, Confluence, Bitbucket
- Ubiquiti/UniFi networking infrastructure
- PFSense firewall

Running on Linux, BSD, and MacOS platforms.

April 2014-March 2020, Senior Systems Design Architect MGM Resorts International, Las Vegas, Nevada. (Direct Hire)

Designed, built, and documented best-of-breed information systems supporting 24x7 global hospitality and gaming operations in a Fortune 300 environment. Increased cooperation among cross-functional teams. Drove peer review. Provided third-tier support for end users.

- Engaged with senior technical leadership on strategic information technology initiatives
 - Budget and schedule considerations
 - Project prioritization
 - Feasibility analysis
- Developed and clarified system requirements
- Architected and implemented software and hardware infrastructure solutions
- New system build-out
- Created, reviewed, and contributed to design documents
- System design and serviceability decision-making
- Assured compatibility of components and operating characteristics of subsystems in multi-vendor environment
- Recommended technology optimizations, performance tuning, and process improvements
- Mentored systems engineers and help raise the technical knowledge in the team
- Leveraged systems management tools to develop and deploy software builds, implemented server monitoring and management applications, managed capacity, etc.
- Led ITIL processes -- incident/problem, change, and release management, etc.
- Supported PCI, SOX, NGCB, and other regulatory requirements

Principal Technologies:

- Red Hat Enterprise Linux on Dell and Cisco blade servers
- Oracle Linux on Exadata and ZFS
- VMware vSphere and ESXi on Dell and Cisco blade servers
- IBM AIX and VIOS on IBM P-series platforms
- Microsoft Windows 2008, 2012, and 2016
- Server on Dell and Cisco blades and Dell servers
- Cisco switching and routing
- Citrix NetScaler load-balancing
- Apache-SSL
- Oracle and MySQL
- CA Service Desk/CA UIM
- Oracle/Micros Opera
- IGT Patron Management/Advantage
- Microsoft SCOM and SCCM
- Secure Shell (SSH)
- Infoblox DNS
- AWS and Azure clouds

In a mixed Windows, AIX, and Linux environment.

June 2012-January 2014, Systems Engineer Allegiant Travel, Las Vegas, Nevada. (Direct Hire)

Designed, built, supported, and documented best-of-breed information systems supporting 24x7 safety-critical flight operations and general business requirements for a national airline. Increased cooperation among cross-functional teams. Provided third-tier support for end users.

- New system build-out
- Architected and implemented software and hardware infrastructure solutions for business critical projects
- Reviewed, created, and contributed to design documents
- System design and serviceability decision-making
- Assured compatibility of components and operating characteristics of subsystems in multi-vendor environment
- Recommended technology optimizations, performance tuning, and process improvements
- Mentored systems engineers and help raise the technical knowledge in the team
- Leveraged systems management tools to develop and deploy software builds, implemented server monitoring and management applications, managed capacity, etc.
- Created, scheduled, and implemented production changes such as applications, software upgrades, roll out of security and system patches, bug fixes, etc.
- Participated in ITIL processes -- incident/problem, change, and release management, etc.

Principal Technologies:

- Red Hat Enterprise Linux and SLES on Dell and Cisco blade servers
- VMware vSphere and ESX on Dell and Cisco blade servers
- RHEL 6 and AIX 6.1 on IBM Power7 p550, p740, and p750 platforms
- Cisco switching and routing
- F5 Big IP load-balancing
- Apache-SSL
- Drupal content management
- Tomcat and JBoss Java application server platforms
- MySQL and DB2
- Subversion, Git, and Atlassian Stash source control and configuration management tools
- Atlassian JIRA and Confluence incident- and bug-tracking
- Nagios system monitoring platform
- Secure Shell (SSH)
- Memcache and Varnish
- Red Hat Satellite and Identity Management (IPA)

In a mixed Windows, AIX, and Linux environment.

February 2012-May 2012, Senior Systems Engineering Consultant GCI, Anchorage, Alaska. (Contract)

Systems architecture, development, and implementation of a statewide WiFi network authentication and authorization mechanism for Apple Iphone using Radius, Perl, Mojolicious, and PostgreSQL, running on Debian on Cisco UCS and supporting 200,000 customers.

- Lead technical role for new system build-out capabilities
- Architected and implemented software and hardware infrastructure solutions for business critical projects
- Reviewed, created, and contributed to design documents
- Collaborated with engineering, development, and operations teams on system design and serviceability
- Assured compatibility of components and operating characteristics of subsystems in multi-product environment
- Recommended technology optimizations, performance tuning, and process improvements
- Mentored systems engineers and helped raise the technical knowledge in the team
- Leveraged systems management tools to develop and deploy software builds, implement server monitoring and management applications, manage capacity, etc.
- Created, scheduled, and implemented production changes such as applications, software upgrades, roll out of security and system patches, bug fixes, etc.
- Ensured that appropriate documentation and training (RunBook and Work Instructions) was delivered to First Level support team
- Participated in ITIL processes -- incident/problem management, change management, release management, etc.

Principal Technologies:

- Debian GNU/Linux
- Perl
- Mojolicious framework
- Apache-SSL
- ISC DHCPD
- FreeRADIUS
- AMD- and Intel-based Dell and white-box servers
- Cisco switching and routing
- Mercurial source control and configuration management
- Database Interface (DBI/DBD)
- HTML with Cascading Style Sheets (CSS),
- JavaScript
- ModPerl/mod_perl
- MySQL
- PostgreSQL

July 2011-January 2012 Senior Systems Engineer Thomson Reuters, Creve Coeur, MO (Contract)

Operational full-platform support of multiple n-tier applications in a Web-centric framework. Provided technical expertise within a team focused on the implementation and service delivery of products, systems & networks in an investment & advisory delivery team. Ensured successful implementation of new functionality while maintaining or improving existing service levels. Ensured compliance to operational standards, procedures and best practices. Close liaison with various operational, project, development, and product teams as well the service organization.

- Lead technical role for the implementation of new products and capabilities
- Architected and implemented infrastructure solutions for business critical projects
- Reviewed, created and contributed to design documents
- Collaborated with development teams on system design and serviceability
- Assured compatibility of components and operating characteristics of subsystems in multi-product environments
- Recommended technology optimizations, performance tuning and process improvements
- Mentored system engineers and helped raise the technical knowledge in the team
- Leveraged systems management tools to automate server builds, deploy software packages, monitor servers, manage capacity, etc.
- Scheduled and implemented production changes such as applications, software upgrades, roll out of security and system patches, bug fixes, etc.
- Ensured that appropriate documentation and training (RunBook and Work Instructions) was delivered to First Level support team
- Participated in ITIL processes -- incident/problem management, change management, release management, etc.

Principal Technologies:

- Solaris
- Red Hat Enterprise Linux (RHEL)
- Eikon for Wealth Management
- Thomson Reuters Knowledge Direct API
- Sun/Oracle Webservd
- Bourne, Korn, and Bash Shells
- HP Service Manager
- cron
- Perl
- HP Service Manager 7

In a mixed Windows, Solaris, and Linux environment.

June 2010-July 2011 Senior Unix Architect Wells Fargo Advisors, St. Louis, MO (Contract)

For a top-ten brokerage, performed system programming, technical oversight, architecture, and quality control of data management projects in multi-terabyte relational database environments using operational data store, data warehouse, and data mart architectures. Detailed implementation of Unix shell scripting and file transfer technologies and techniques. Developed technical approaches to ensure that proper data management guidelines and standards are followed. Project leadership, planning, and organization. Resource management within the context of assigned projects.

Principal Technologies:

- Unix
- AIX
- Solaris
- Linux
- File transfer technologies:
- Connect:Direct/NDM
- FTP
- SFTP
- Relational database design and development

- Oracle
- DB2
- ETL design and development
- Batch systems and processing
- Korn Shell
- Autosys
- cron
- Perl

In a mixed Windows, AIX, Linux, and Solaris environment.

February 2008-February 2010 *Unix Administrator Lead* **St. Anthony's Medical Center**, St. Louis, MO (Direct Hire)

Total responsibility for administration of all Unix systems and storage area network (SAN) devices in the clinical environment, including:

- System implementation, patching, and monitoring (AIX, Red Hat Linux, CentOS, Debian, Solaris)
- High Availability Clustering (HACMP/PowerHA)
- System logical partitioning and virtualization (LPAR/VIOS, VMWare)
- VSphere and ESX
- System backup (Tivoli Storage Manager/TSM)
- System security
- Disaster recovery planning

Project management and implementation:

- Doubled primary datacenter cooling and trebled electrical capacity
- Responsible for specification and implementation of new Epic hardware infrastructure, OS selection, installation, and configuration
- Migrated tape backup infrastructure from IBM 3494/3590 to IBM TS3310/LTO4
- Migrated storage infrastructure from IBM 2105/ESS 800 to IBM DS5300 fronted by IBM SVC. All Unix systems migrated with zero downtime. Windows and VMWare systems migrated with zero unscheduled downtime.
- Migrating SAN from McData 6064 directors to Cisco 9506 directors

Systems analysis and architecture:

- Liaison with internal and external clinical and support workgroups to determine and document infrastructure requirements, specified required hardware and software, designed appropriate solutions, implemented the design, and assured ongoing solution support

Leadership:

- Supervised one technician and oversaw multiple outside consultants
- Mentored technical staff
- Managed vendor relationships
- Developed and implemented process improvement plans
- Specified and justified capital and operational budget hardware and software expenditures totaling more than \$2 million annually

Principal Technologies:

- AIX on IBM Power5 and Power6 H70, H80, p520, p55A, p550 and p570 platforms
- IBM PowerHA/HACMP Clustering
- IBM Tivoli Storage Manager (TSM)
- IBM 2105/ESS 800 "Shark" and IBM DS5300 Storage
- McData 6064 and Cisco 9506 SAN Fabrics
- IBM DS4000, 4100, 4700 "FASTT" Storage
- IBM TS3310 Tape Storage
- GE Healthcare Centricity Pharmacy
- McKesson Star Clinicals and Star Financials
- MedPlus ChartMaxx
- Oracle, MySQL, and MSSQL
- Microsoft Windows XP, Server 2003, Server 2008 on IBM X-series

March 2005-February 2008, *Engineer, Software Engineering; Senior Engineer, Software Engineering* **MasterCard Worldwide** St. Louis Global Technology and Operations Headquarters, O'Fallon, MO (Initially Contract, then Direct Hire)

At a global consumer finance powerhouse, built enterprise-scale web-based system monitoring and configuration solutions ("orchestration tools") over Tivoli Management Framework using Apache, Perl, Oracle, and the Korn Shell on Solaris, AIX, Windows 2000, and Windows 2003 platforms, including:

- Requirements gathering and specification documentation
- Project planning
- Program design and implementation
- Unit, integration, and user acceptance testing
- Ongoing project maintenance

Liaison with all other internal workgroups for global, multi-site business continuity plan development and testing.

Development of a Service Catalog as part of a move to Service-Oriented Architecture under an ITIL implementation.

Implementation of a service desk infrastructure with IBM's ITSM tools.

Configuration and administration of Tivoli Workload Scheduler, TelAlert, and supporting technologies (Tomcat, Oracle, Apache, WebSphere)

Training and mentoring junior technical staff.

November 2004-March 2005, *Software Engineer* **Mark Monitor**, San Francisco, CA (Contract)

Built enterprise-scale web-based solutions using PHP, MySQL, Apache, Perl, and BASH on Linux platforms, including:

- Requirements gathering and specification documentation
- Project planning
- Database design and implementation
- Program design and implementation
- Testing
- Ongoing project maintenance

December 2003-November 2004, *Information Specialist II* C/Net Solutions, Sacramento, CA (Direct Hire)

- Performed telephone-based and in-person application support responsibilities for Windows-based, database-enabled, network-aware desktop applications in a healthcare research environment..

October 2003-December 2003, *Programmer Consultant/Director of information Technology* nerdbooks.com, Roseville, CA (Contract)

- Directed all aspects of a web-based bookseller's Internet and internal network operations. Managed staff of three full-time-equivalent developers. Analyzed business processes and systems to determine appropriate maintenance schedule, assign duties, manage projects in progress, and strategize growth. Developed scripts and programs to automate, streamline, and upgrade data transfers to and from suppliers and customers.

- Built ecommerce solutions using PHP, PostgreSQL, MySQL, Apache, Perl, and BASH on Linux platforms, including:

- Requirements gathering and specification documentation
- Project planning
- Database design and implementation

- Program design and implementation
- Testing
- Ongoing project maintenance

August 2000-February 2003, *Senior Programmer II WorldCom*, Sacramento, CA (Contract)

Administered intranet and designed, coded, optimized, and maintained WorldCom customer Web applications. Administered multiple servers on multiple platforms (Linux, Solaris, Windows 2000, Windows NT). Worked on all phases of the system development life cycle (SDLC) to develop web-available, real-time database-generated reports; responsibilities included determining customer requirements through specification and design, implementing, testing, documenting, and maintaining finished software. Helped develop a web-enabled database-driven reporting system (using the Actuate e.Reporting Suite) deployed throughout the government of the State of New Jersey. Major contributor on two other web-based ecommerce systems (using Apache, Perl, Oracle, BASH, and LaTeX) deployed throughout the States of Maine and Washington for use by state agencies and the general public. Administered additional supporting technologies (Tomcat, WebLogic, WebSphere).

September 1997-August 2000, *Webmaster Association of California School Administrators*, Sacramento, CA (Direct Hire)

Designed, coded, programmed, edited, optimized, maintained, and updated cross-browser Web site for 15,500-member association using HTML, DHTML, CSS, JavaScript, and Perl with CGI on MacOS desktop and FreeBSD server. Created and edited graphical and editorial content. Managed passwords and site security. Mediated site forums and chat rooms. Managed interactive online calendar. Designed and implemented e-commerce solutions. Created, maintained, and integrated databases. Determined site needs and design specs. Achieved consensus with association leadership and executive staff on editorial focus and member services. Wrote articles and a regular column about technology in education for *EDCAL* bi-weekly newspaper and *Educational Leadership* bi-monthly magazine, each with a circulation of more than 16,000. Presented complex, highly sensitive election law materials to school district employee groups, including superintendents, department heads, and rank-and-file employees. Delivered technical training to other school district staff.

October 1996-present, *Owner/Creative Director El Dorado Technologies, LLC* (Principal)

Prepare and implement business plan for development and expansion of information technology consulting and training firm. Full profit and loss responsibility and budgetary authority. Develop and implement marketing and sales strategies for business growth.

Provide system architecture, design, programming, consulting, implementation, and training services to various clients, including: Wellmont Health System, the Association of California School Administrators, nerdbooks.com, the Association of California Community College Administrators, California Highway Patrol Network Planning Division, Management Analysis & Planning, Community College Facility Coalition, and others.

Write syllabi, training manuals, and tutorials for print and online delivery.

January 1993-September 1997, *Webmaster/Editor/Legislative Assistant, Murdoch, Walrath & Holmes*, Sacramento, CA (Initially Contract, then Direct Hire)

Managed and implemented World Wide Web site for the Coalition for Adequate School Housing (C.A.S.H.); coordinated with Internet service provider, supervised consultants, and advised board of directors; tracked expenses and managed budget; designed and managed World Wide Web site for Murdoch, Walrath & Holmes.

Wrote, acquired, edited & formatted articles, graphics & advertisements for 24-28 page, two-color monthly association newsletter, the *CASH Register* (circulation: 1500); coordinated with editorial committee, printer and typesetter; tracked expenses and managed budget; assembled other publications as necessary.

Engaged media in school facility issues; promoted public involvement in school facility funding issues; produced op-ed material for news outlets.

Answered media inquiries. Organized policy/strategy planning meetings and coordinated with campaign, legal and accounting staff through five Statewide ballot measures. Facilitated fund-raising efforts (more than \$500,000 directly attributable to me) and FPPC reporting.

Assisted in planning conferences and workshops.

Relevant Volunteer Experience

March 2011-February 2012, *Coach and Mentor; FIRST Lego League*, Team Motherboard Mayhem, sponsored by FIRST Team 1094, the River City Robots Channel Cats

October 1999-September 2000 *Vice President; Buckeye Elementary School Site Council*, elected position.

September 1998-October 1999 *Councilmember; Buckeye Elementary School Site Council*, elected position.

1997-1998 *Administrative Councilmember, Webmaster; Sacramento Chapter; Society for Technical Communication*, appointed position.

Education

Baccalaureate/Bachelors degree (BS) in information technology (IT) University of Phoenix; diploma awarded July 2003. Upper division GPA: 3.84. Pursued MBA studies at Webster University (one-third completed as of spring 2015).

References

Available upon request.