Michael Arnold

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Summary

Talented Unix System Administrator with nineteen years of experience diagnosing and resolving technical problems with multiple operating systems. Proven ability to troubleshoot and solve complex problems, lead small project groups, and (re)design and implement intricate computing environments. Demonstrated initiative to learn new environments. Strong sense of "do it right the first time", meticulous attention to detail, and ability to communicate technical knowledge to peers and support personnel.

Objective

A position as a Senior UNIX/Linux Systems Administrator (SAGE Level IV) that lets me utilize my years of experience designing and operating a highly automated Hadoop infrastructure.

Technical Skills

Operating Environments	CentOS/Red Hat Enterprise Linux/Oracle Linux 2.1, 3, 4, 5, 6, 7; IBM AIX 4.3.3, 5.1, 5.2, 5.3; Sun Solaris 2.6, 7, 8, 9, 10; Hewlett-Packard HP-UX 10.20, 11.00, 11.20; VMware ESX 2.5, 3.5; Network Appliance Data ONTAP 6.5, 7.0; Cisco SAN-OS 1.3, 2.1
Languages	Puppet DSL, Korn Shell (ksh), Bourne Shell (sh), sed, awk
Software	Cloudera's Distribution including Apache Hadoop (CDH), Kerberos, OpenLDAP, x509/SSL/TLS certificates, Cloudera Navigator Encrypt, Puppet, Ganglia, Nagios, Red Hat Kickstart, Cobbler, MCollective, subversion, git, Vintela/Quest Authentication Services, NTP, IBM HACMP, HP MC/Service Guard, Veritas Cluster Server, Sun Jumpstart, IBM NIM

Code

GitHub:	https://github.com/razorsedge
Puppet Forge:	https://forge.puppetlabs.com/razorsedge
Conference Presentations:	http://www.slideshare.net/razorsedgeorg
RPM Packaging:	http://rpm.razorsedge.org/

Certifications

- Red Hat Certified Engineer, License 140-059-304
- Puppet Certified Professional 2014, License PCP0000076
- Cloudera Certified Hadoop Administrator (CCAH), License 100-004-266
- IBM eServer Certified Specialist - pSeries Administration and Support for AIX 5L v5.2
- Sun Certified System Administrator for Solaris 8

Technical Training

- Cloudera Partner Services Enablement BootCamp - 32 hours
- MCollective Training - 16 hours
- Cloudera HBase Training - 24 hours
- Puppet Master Training - 24 hours
- Cloudera Hadoop Systems Administration - 8 hours
- VMware Infrastructure 3: Install and Configure V3.5 - 30 hours
- HACMP System Administration II: Administration and Problem Determination - 40 hours
- HACMP System Administration I: Planning and Implementation - 40 hours
- AIX 5L Jumpstart for UNIX Professionals - Certification Class - 32 hours
- Cisco Storage Networking Fundamentals - End User - 24 hours

Various

- Eagle Scout

Professional Experience

Principal Systems Engineer   2015 to present
Clairvoyant, LLC

 Design and implementation consultant for client Hadoop infrastructures.
- Designed and implemented Hadoop clusters for various clients in both on premises physical or virtual platforms as well as cloud deployments.
- Experience with securing Hadoop clusters including Kerberos KDC installation, OpenLDAP installation, private x509 certificate authority creation, data transport encryption with TLS, and data-at-rest encryption with Cloudera Navigator Encrypt.

Principal Systems Engineer   2011 to 2015
Apollo Education Group, Inc.

Technical lead involving design and ongoing operation of several Hadoop clusters.
- Designed, implemented, and operated second generation on-premises Hadoop clusters from the hardware to the application layer including compute, storage, and network. The largest cluster being 44 nodes, storing 1.8PB, and connecting via 2Gb Ethernet.
- Collaborated with application development teams to define the road map for Hadoop Infrastructure including migration to Cloudera Manager and CDH4, implementation of Hadoop security (Kerberos, Sentry, and Hbase ACLs), implementation of High Availability services, and upgrade to CDH5.
- Performed Hadoop application tuning and troubleshooting.
- Defined and managed the $800,000 Hadoop infrastructure budget.
- Developed cost models showing TCO of the Hadoop infrastructure broken down into $/GB/month and $/compute slot/hour. These models resulted in confirmation of the lowest TCO for our environment.
- Utilized Kanban techniques to visualize work status and priority and to limit work-in-progress.

Senior Systems Engineer   2008 to 2011
Apollo Education Group, Inc.

Technical lead involving design and ongoing operation of several Hadoop clusters.
- Implemented and operated on-premises Hadoop clusters from the hardware to the application layer including compute and storage.
- Designed custom deployment and configuration automation systems to allow for hands-off management of clusters via Cobbler, FUNC, and Puppet. Fully automated the configuration of firmware, the deployment of the operating system, and the configuration of the OS and applications resulting in a less than twenty minute server deployment time.
- Deployed the company's first Hadoop cluster running Cloudera's CDH2 to a 44 node cluster storing 160TB and connecting via 1Gb Ethernet.
- Collaborated with application development teams to provide operational support, platform expansion, and upgrades for Hadoop Infrastructure including upgrades to CDH3.
- Participated in Hadoop development Scrum.
- Member of internal standards bodies addressing network and server strategic direction and architecture.
- Responsible for maintaining Linux platform build standards including all aspects of OS configuration and deployment. Submitted improvements to the Solaris standard builds.
- Wrote documentation and mentored other System Administrators.

Unix Systems Administrator II   2007 to 2008
Apollo Education Group, Inc.

Unix systems design and implementation specialist for all educational subsidiaries including the University of Phoenix.
- Responsible for the technical design, implementation, and coordination of multiple projects directed toward strategic information technology objectives.
- Worked with various IT business units and vendors to define, document, procure, and install new technologies. Planned, documented, and executed change control procedures to accomplish project goals.

Unix Administrator
Green Tree Servicing

2004 to 2007

System Administrator for all AIX, HP-UX, Red Hat Enterprise Linux, Network Appliance SAN, and Spectra Logic tape systems. On call responding to major customer affecting outages.
- Designed and implemented IBM HACMP 5.3 clusters on AIX running Oracle applications. Utilized IBM pSeries microLPARs, Virtual IO Servers, and Network Installation Manager for automated network-based deployments.
- Designed and implemented custom monitoring and trending with Hobbit Monitor.
- Wrote various platform Standard Build documents as well as created install scripts to automate conformance of new builds.

Contractor
IBM Global Services

2003 to 2004

Level 2 Unix System Administrator for IBM Web Hosting at American Express administering Solaris, AIX, and Red Hat Enterprise Linux.
- Responsible for production break/fix troubleshooting during the overnight shift and for successful implementation of changes to the various AMEX system environments.
- Wrote a custom PHP/MySQL application to track the large number of web server SSL certificates and their expiration dates. Features included: automated email notifications, custom report generation, group and SysAdmin server assignments, and user authentication.

Contractor
AT&T

2002 to 2003

Tier II application support for BILLDATS/Lucent Data Manager/CSG Data Mediation platform on Solaris. On call responding to major customer affecting outages.
- Provided System Administration expertise for hardware, OS, and application upgrades.
- Involved with platform disaster recovery (DR) planning, updating, and testing.

Unix Administrator
Adelphia Communications

2000 to 2002

Level 3 support for all Sun Solaris servers and workstations. On call responding to major customer affecting outages.
- Maintained a large ISP network of 275+ Solaris hosts distributed throughout the continental United States, managing the primary applications on most servers.
- Designed and implemented a caching and content DNS infrastructure utilizing dnscache and BIND on SPARC Solaris for over 300,000 clients.
- Implemented hardware and software upgrades to the Usenet NNTP server network in order to improve performance and scalability.
- Designed, wrote, and tested Standard Operating Procedures for OS patch and site software updates. Authored various other internal SOP documents.
- Compiled and packaged custom Open Source software in Solaris, Irix, and Linux native package format (pkgadd, inst, and rpm).
- Coordinated responsibilities among various departments related to DHCP server field deployments and the conversion from one hardware platform to another.
- Reported system performance metrics to management and recommended enhancements and other changes to scale various systems in order to keep up with customer demand.

Data Control Center Technician
Adelphia Communications

1999 to 2000

- Monitored and troubleshot problems with Cisco, 3COM, Fore, Cabletron, and Nortel routers, switches, dialup chassis, and Cable Modem Termination Systems.
- Monitored and troubleshot DS1 and DS3 circuits.

Network Switching Systems Operator / Maintainer (31F)
U.S. Army

1996 to 1999

- Managed switching systems of an AN/TTC-39D(v)2 tactical telephone node.
- Supervised, trained, and evaluated personnel on switch programming and node setup logistics. Restored circuits and repaired equipment.
- Installed, operated, and performed scheduled maintenance on switching systems, analog and digital multiplexing equipment, telephone switching and conversion systems, patching, and

circuit control equipment.
- Administered the unit's computer resources.

Assistant Network Manager   1994 to 1996
Engineering Computer Services - Syracuse University
- Maintained a central computer lab of 25 workstations and two Novel 3.11 servers.
- Upgraded PC hardware and software.
- Instructed students, faculty, and staff on ways to improve their computer use habits.
- Wrote programs to automate in-house administration tasks.