

Skills

My many years as a Unix System Administrator and infrastructure designer enable me to identify and solve issues before they become problems. I recognize that computer and network implementations are driven by business requirements, and design systems accordingly. I prefer strategic solutions to short term fixes when possible.

I am expert in UNIX systems administration and UNIX infrastructure. I have system administration experience on a variety of platforms, with particular emphasis on high availability Linux, Sun Solaris, and BSD derived systems. My programming experience extends back over 25 years in a variety of languages; with a current emphasis on Perl and C. My Web-related skills include Web server configuration, HTML, and CGI programming.

I enjoy working with people. I am a good listener, and believe in sharing information. I place great importance on mentoring junior system administrators. I like to read, and continue hone my skills by reading books on topics related to my work.

During my career with Unix System Administration, I have used, configured and maintained many different types of UNIX hardware and software including the following:

Software

- Apache
- BIND/DNS
- Big Brother
- Bud Tools
- CVS
- DHCP
- FTP
- IMAP
- ISS Scanner
- LDAP
- Legato Networker
- MRTG
- MS Project
- Mod-Perl
- MySQL
- Nagios & NetSaint
- NFS
- NIS
- OpenSSH
- OpenSSL
- PGP
- POP
- Perforce
- Postfix
- RAID
- rdist
- RCS
- rsync
- SMTP
- SNMP
- Samba
- Satan
- Sendmail
- Snort IDS
- Squid
- TCP/IP
- TCP-wrappers
- Tripwire
- UUCP & Usenet
- Veritas File System (VxFS)
- Visio

Operating Systems

In recent years, I mostly worked with linux and Solaris. However, during my career, I have managed many other types of operating systems:

- AIX
- BSD (BSDI, FreeBSD, NetBSD, & OpenBSD)
- DEC-UNIX
- HP-UX
- IRIX
- Linux (RedHat, Suze & Debian)
- Pyramid-OS
- SCO Unix
- Solaris 4 through 9
- SunOS 3.5 & 4.x
- Unix version 6 & 7
- System III
- System V rel 3.2
- System V rel 4

Programming

In recent years, I have mostly programmed in Perl. However, during my career, I have used many other programming languages:

- Algol
- Assembler (PDP11, Motorola 68k, Intel 8080, Z80)
- C
- Cobol
- Expect
- Lex & Yacc
- Lisp
- PHP
- Pascal
- Perl
- PL1
- SQL
- Shell
- Sed & Awk

Firewalls and Security

In recent years, I have mostly managed iptables and Netscreen firewalls. However, during my career, I have managed many other kinds of firewalls:

- Checkpoint
- FTK & Gauntlet
- ISS
- Ipchains & Iptables
- NetScreen
- Cisco PIX
- Raptor Eagle
- SunScreen

Computer hardware

- Auspex
- Cisco
- Dell 1550, 1650, 1750
- HP 9000
- HP DL360
- IBM RS 6000
- Mips
- Netscreen
- Network Appliance
- Pyramid
- SGI Indigo
- Sun Sparc 1 2 5 10 & 20
- E250/E450
- E3500, E4500, E220R
- Netra T1
- Ultra 1, 2, 5, 10, 60 & 80
- A1000, A5000

Education

- Exam Scient in Computer Science, University of Copenhagen, 1980.
- Electronic Engineering Degree, Frederiksberg Institute of Technology, 1972.
- Various conferences, starting with LISA II and progressing through SANS, USENIX, most LISA conference.

Accomplishments

- Designed, built and managed high availability Linux and UNIX server farms providing Internet services from remote and local data centers. Designed and built an expandable and automated server infrastructure for automated installation, configuration and management of the servers, using tools such as Big Brother, FTP, Jumpstart KickStart, Perl, rdist, rsync and ssh.
- Managed small and large heterogeneous networks of Linux/RedHat/Debian, Solaris and BSD, that included other less used platforms, such as HP-UX, DEC-UNIX, AIX, SCO, etc.
- Configured and troubleshoot DNS/Bind, SMTP/Sendmail/Postfix, NFS/NIS, Firewalls, and NTP in small and large installations. Automated system administration tasks.
- Installed, configured and managed Apache web servers in small and large installation.
- Installed UNIX firewalls and consulted on UNIX/Network security issues.
- Built large and small system administration related utilities in Perl and Shell. Ported open source programs in Perl and C to new environments. Maintained a make library providing a systematic approach to publicly available software packages for multiple architectures from a single shared source tree.
- Acted as manager, mentor teacher and technical lead for system administration teams.
- Published papers at national conferences as well as numerous magazine and journal articles on topics in system administration and security, including an ongoing UNIX system administration question and answers column in SysAdmin Magazine for 11 years.
- Founder of Bay-LISA, the San Francisco Bay Area Large Installation System Administration User Group. Founding Board Member of USENIX/SAGE Special Interest Group.

Work History

Got Linux, Inc. Livermore, California; July 2006 to present

Senior System Administration Consultant
High Availability Linux Servers

- Provided high availability solutions for Linux environments using open source software (e.g. Linux Heartbeat & Linux Virtual Server).
- Configure monitoring for data center.

2Wire, San Jose, California; August 2001 to current

Senior Operations Engineer

Linux servers with Apache, Resin and Postgres, Oracle & MS-SQL Database.

Accomplishments include:

- Designed and built production and internal corporate server infrastructure on Linux, including necessary infrastructure for remote high availability production site, out-of-state fail-over site and several internal test clusters. All servers are maintained remotely.
- Successfully completed scheduled and unscheduled fail-over from primary to secondary production site.
- Designed and implemented all software necessary to maintain the above sites, including automated code push, monitoring and remote re-installation of systems.
- Wrote complete documentation for above infrastructure for business partners wanting to implement similar infrastructure.
- Designed and built global load balancer, balancing traffic between sites.
- Created necessary procedures for the junior IT staff for the day-to-day support of the UNIX infrastructure.
- Wrote Administration, Reference, and Operations guides for above infrastructure for use at third-party sites.
- Taught classes for above infrastructure to system administrators from third-party sites.
- Successfully grew the above infrastructure to handle an increase of traffic to 1000 times the original load.
- Taught the IT staff in topics such as Linux System Administration, Network Troubleshooting, DNS maintenance & troubleshooting, and Perl programming.

RightOrder, San Jose, California; June 2000 to April 2001

Senior System Administration

Solaris on i86pc & Sparc, Linux server with Apache, WebLogic and Oracle Database.

Accomplishments include:

- Designed and built internal Corporate UNIX server infrastructure on Solaris & Linux with centralized support (NFS, NIS, Sendmail 8.x, DNS 9.x, NTP, Apache, Firewall, etc).

- Responsible for UNIX and network security of Corporate and Production Infrastructure.
- Created necessary procedures for the junior IT staff for the day-to-day support of the UNIX infrastructure.
- Collaborated with the VP of Production and the Director of Systems and Technology on budget and business strategy for the design and implementation of the Production ASP style Infrastructure.
- Designed and managed implementation of a Sustainable, Scaleable Web Server Infrastructure for the RightOrder ASP Production with Perl, jumpstart, ssh, rdist, rsync, cfengine, DNS, Sendmail and Big Brother, automating system and installation and configuration including Apache and WebLogic, etc.
- Provided ongoing support of the production and corporate servers.
- Taught the IT staff in topics such as Network Troubleshooting, DNS maintenance and troubleshooting, Sendmail, and Production Infrastructure.

Why Not Creations, Milpitas, California; June 1999 to June 2000

System Administration Manager

Solaris, Linux & BSD 4.4 servers with Apache, NetDynamics and Oracle Database.

Accomplishments include:

- Promoted from Senior UNIX System Administrator to System Administration Manager in January 2000, responsible for the production server infrastructure.
- Build UNIX based infrastructures (Apache, NetDynamics and Oracle) for productions and development servers (Solaris and Linux) in a 13 rack co-hosted environment.
- Configured Sendmail 8.x and Bind 8.x.
- Built a centralized support model for UNIX servers, simplifying the day-to-day management.
- Ongoing support of the production and development servers.
- Teaching 14 2-hour mini courses to the entire IT staff in topics such as Network Troubleshooting, DNS maintenance and troubleshooting, Sendmail, and Production Infrastructure.

Auspex Systems, Santa Clara, California; August 1998 to June 1999

Senior UNIX System Administrator

Auspex NFS Servers and Sun servers with Clarify on top of Oracle Database, Veritas Volume Manager.

Accomplishments included:

- Promoted to Technical Lead for the UNIX server group in November 1998.
- Configured Bind 8 and NIS.
- Configured Sendmail for Auspex worldwide and Auspex postmaster for Santa Clara, United Kingdom and Japan.
- Responsible for Y2K compliance of Sun Servers and development of Y2K upgrade strategies and monitoring software. Built automated patch management software in Perl.
- Supported the Business System Group's servers, including their Clarify and Oracle development, test and production servers.
- Ongoing education of users, helpdesk and UNIX system administration staff.
- Coordinated the UNIX group in the three months Tech Services were without a Manager.

/sys/admin, inc., San Jose, California; October 1987 to August 1998

Independent UNIX System Administration Consultant

Worked with a large number of clients over an eleven-year period. The environments were mostly Sun and BSD 4.x networked environment, but included many other platforms, such as HP-UX, Pyramid-OS, SCO UNIX, AIX, etc.

Accomplishments included:

- Investigated and analyzed problems in the UNIX system administration support structure, and provided written reports and recommendations to system administration staff and senior management.
- Recommended and documented new and existing procedures and policies, and wrote software and documentation for the day-to-day operations.
- Reviewed existing hardware, and provided recommendations on hardware selection and procedures for hardware replacement.
- Automated system administration tasks across the network writing tools in Perl and C.
- Made necessary changes in the system configuration to simplify and automate administrative tasks, disk management, mail configurations, printers, and administration of system and network configuration files across all machines.
- Designed a commercial firewall, PrivateNet, for NEC. Reviewed Public Socks Package as a possible product and Redesigned Socks (SocksPlus) for better security and easier configuration. Designed proxies for SMTP, FTP, HTTP and Telnet. Repackaged BSD/OS (BSD 4.4) for the firewall platform, including implementing a bootable CD-ROM root file system. Designed a menu driven configuration program that simplified configuration of SocksPlus, all proxies, DNS and Sendmail.

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- Installed and maintained Firewalls (mainly based on TIS Firewall Tool Kit, NEC PrivateNet Firewall and Firewall-1 products) and performed security audit of firewalls and internal networks.
- Designed, configured, and troubleshot e-mail systems for small and large organizations, using Sendmail and DNS.
- Configured and troubleshot NFS and NIS.
- Planned and supervised a move of UNIX machines to computing center on a new campus.
- Evaluated, recommended, and installed systems for automatic site-wide backup (Amanda, Legato and Bud Tools).
- Wrote White Papers and positioning papers on various system administration and security topics.