

Jeremy M. Sermersheim

4316 N Tripp Ave • Chicago, IL 60641 • 847.530.7376 • jsermer@gmail.com

OBJECTIVE

Highly adaptable, self motivated DevOps engineer with over 20 years of industry experience. Possessing strong technical skills in distributed systems, platform engineering, infrastructure engineering, enterprise level systems administration, network administration, and systems integration. Seeking a fun and challenging position with potential for continued growth.

PROFESSIONAL EXPERIENCE

04/17 – Present **Groupon**, Chicago, IL.

Senior Software Engineer – Observability

- Designed, built, owned and operated a highly scalable logging platform across multiple data centers and cloud providers (AWS and GCP) using open source software (Filebeat, Kafka, Logstash, Elasticsearch and Kibana) to provide our users with valuable insights into the operation of their services. This included over 700 discrete pipelines producing over 2 million events/sec at peak resulting in hundreds of terabytes of data spread across multiple clusters. Leveraged Git and CI/CD (Jenkins) practices along with automation tooling (Scripting, Ansible, Terraform, Docker) to ease the administration burden on our very small team. Worked closely with end users to extract useful information in the form of metrics which were submitted into the metrics pipeline for alerting and visualization purposes. Also built logging pipelines to consume 3rd party logging data using FAAS (AWS Lambda) and Kubernetes.
- Stabilized, standardized and right-sized a large Splunk Enterprise environment (100TB/day) which would eventually be migrated to the above referenced ELK platform

11/14 – 04/17 **Groupon**, Chicago, IL.

Senior Systems Engineer – Corporate IT

- Managed corporate back office and remote locations to provide a consistent end user computing experience in a heterogeneous client workstation environment (Mac and Windows)
- Implemented clustered VMware environments to provide a consistent and solid base to provide Active Directory, DNS, DHCP, File Server, and Telephony needs

11/11 – 10/14 **WMS Gaming**, Chicago, IL.

Principal Storage Engineer – Network Architecture

- Managed 16 Dell EqualLogic iSCSI (10G and 1G) storage arrays globally totaling 1.3PB of storage
- Managed 2 Dell Compellent (SC80) iSCSI (10G) storage arrays comprising of multiple tiers of disk backing multiple application environments (Oracle/VMware)
- Maintained/standardized the Cisco wireless infrastructure using Cisco Prime consisting of 20 controllers (5508, 4400, 2106) in a redundant fashion, 4 guest controllers, 278 wireless access points (3502, 1142, 1252, 1242) and over 1400 daily wireless users (Linux, Mac, Windows, iPhone, Android, BYOD)
- Maintained Websense environment consisting of a mix of seven V10000 and V5000 web filtering appliances, the main Triton interface with a 5000 seat license
- Responsible for the install/configure/standardization of the RedHat Linux environment supporting Oracle R12 (including Oracle RAC)
- Responsible for general Linux builds (RedHat, CentOS, Ubuntu) to support different business needs
- Maintained global IPAM solution (Bluecat) consisting of 9 remote DNS/DHCP appliances
- Maintained enterprise monitoring solution (Solarwinds Orion, APM, NPM, and NCM) with over 1000 different monitored nodes
- Maintained/configured F5 load balancers (3600)
- Maintained/configured LAN switching technologies (Force10 and Cisco)
- Managed 10+ Datacenters with multiple clusters using VMware ESXi 4.1/5.1
- Managed/Configured Cisco ACS environment (virtual appliances in a redundant configuration)
- Managed/Configured Cisco ASA firewalls (5505, 5510, 5520, and 5540) in 10+ locations globally
- Used Splunk to collect syslog data from various sources (routers, switches, Linux servers, etc)
- Used Cacti to graph important network link utilization
- Used Riverbed Cascade Profiler to troubleshoot link utilization/saturation

- Used Nessus to scan the external network presence to ensure security
 - Used Intermapper to graphically depict the status of important MPLS routers and VPN connections
- 07/09 – 11/11 **Laurus Technologies**, Itasca, IL.
Systems Integration Post-Sales Consultant
- 06/06 – 02/09 **TransUnion LLC**, Chicago, IL.
Senior Open Systems Engineer/Storage Engineer – Open Systems
- Engineered and maintained five 3Par storage arrays totaling approximately 1PB of raw storage space while performing all zoning activities surrounding two IBM Director 140 port SAN switches
 - Engineered and managed over 600 Linux Servers (RHEL/SLES) on various hardware platforms (Egenera/HP Blades/IBM Blades)
 - Setup/configured/maintained nearly automated installation methods for both SLES and RedHat (AutoYast and Kickstart) to standardize the Linux install image/configuration
 - Successfully implemented boot from SAN capability with RedHat Linux 5.1 (first officially supported boot from SAN version of RedHat)
 - Utilized the native Linux ‘in-kernel’ multipath implementation for redundancy with SAN disks to save on complexity, vendor support issues, and cost
 - Installed multiple Linux based Nagios servers to assist the team in triangulating the exact point of failure with respect to network outages
 - Setup a LAMP (Linux, Apache, MySQL, and PHP) stack to deploy MediaWiki for technical documentation amongst the team
 - Maintained multiple Sendmail and Postfix servers to provide relay capability for corporate email
 - Hardened and standardized Linux NTP, SSH, SNMP, LDAP and Squid configurations
 - Successfully expanded and shrunk ext3, reiserfs, and GPFS filesystems (expanded online when possible, shrinking is an offline operation) multiple times without issue
 - Utilized Linux LVM for flexibility with respect to filesystem and storage management
 - Implemented Linux bonding for hardware redundancy and increased throughput along with trunking (aka 802.1Q) to allow a server to reside on multiple different networks without requiring many separate physical network interfaces
 - Created multiple RPMs when necessary (mainly in support for 3rd party applications)
 - Performed Qualys security scans against newly provisioned Linux servers for auditing purposes
 - Configured Linux raw volume management for use with Oracle and Sybase database systems
 - Managed 100 AIX servers (AIX 4.3.3, AIX 5.1, AIX 5.2, and AIX 5.3)
 - Tivoli Storage Manager administrator
 - Setup and managed a 134 node GPFS cluster in a mixed AIX/Linux environment with 13 clustered filesystems totaling ~300TB of shared SAN disk storage
 - Mentored and trained other junior members of the team in various technologies
 - Defined standards for the engineering team to follow while designing new solutions for easier support by the operations team
- 08/05 – 06/06 **Computer Sciences Corporation**, North Chicago, IL.
Systems Engineering – United States Military Entrance Processing Command (USMEPCOM)
- Maintained IBM Shark and McData SAN switch
 - Managed over 100 AIX pSeries servers all at remote locations across the country (AIX 5.2 and AIX 5.3)
 - Tivoli Storage Manager administrator
 - Setup OPL ILOG Development Studio application(optimization model tool)
 - Integrated MKS Integrity Server into existing Active Directory implementation.
 - Provided training to Help Desk personnel
 - Rolled out Neoware Linux thin-clients to all 65 sites and setup XDMCP
 - AIX 5.2 to 5.3 upgrade
 - Microcode updates
 - Secured servers according to Department of Defense security guidelines
 - Assisted Oracle DBA in Oracle 9i to 10g upgrade
 - NIM
 - SUSE Linux
- 10/03 – 08/05 **IBM**, *Global Services/Strategic Outsourcing*, Reston, VA.
Systems Engineering/AIX Infrastructure – eCustoms Partnership (ACE)

- Managed enterprise-class AIX 5L servers for the US Customs and Border Protection (over 40 IBM pSeries frames, one of the largest p690 farms in the United States)
 - Administered and secured ten separate environments consisting of over 600 AIX partitioned servers on pSeries platforms
 - Worked closely with development for WebSphere, Tivoli, DB2, and Oracle applications
 - Assisted in network design and troubleshooting of a highly available network with etherchannel and redundant CISCO 6509 switches
 - Created custom Installp/BFF packages to easily track and update important scripts/configuration files
 - Implemented Hitachi SAN connections with multiple paths utilizing VxDMP and Brocade 12000 enterprise SAN switches
 - Provided 24x7 level 3 support to network operations center
 - Managed Highly available AIX systems using Veritas Cluster Server and Foundation Suite
 - Assisted in developing a system to automatically build an environment with virtually no human intervention (AIX 5.1, AIX 5.2)
 - Subject Matter Expert on AIX's Network Installation Manager (NIM)
 - Maintained and updated microcode/firmware for various ethernet and HBA adapters
 - Developed and maintained set of automated scripts to secure servers for compliance against security policies
 - Administered 30 plus Linux Hardware Management Consoles based on the RedHat distribution
 - Provided training on processes and technology to enhance co-workers knowledge
 - Applied AIX maintenance level upgrades and various security patches and emergency fixes
 - Developed alternate disk migration procedure to upgrade a server from AIX 5.1 to AIX 5.2
 - Managed JFS, JFS2, and Veritas filesystems in conjunction with mirroring and RAID technologies to provide optimal redundancy
 - Utilized PVCS Dimensions for version control of various scripts, packages, and documentation
- 6/03 – 10/03 **IBM, Global Services/Strategic Outsourcing**, Fishkill, NY.
Systems Management Professional - Information Exchange and Messaging Services
- Fulfilled commercial account service level agreements by performing system administration tasks on AIX servers and maintaining 99.9% uptime
 - Maintained team lab staging server running on RedHat Enterprise Linux
 - Performed packet level IP analysis to troubleshoot network problems
 - Provided 24x7 support for the level one support center
 - Performed AIX installations and upgrades (AIX 4.3, AIX 5.1)
 - Installed, configured, and maintained additional critical AIX software used by customers
 - Secured AIX servers in accordance with IBM security policies
 - Automated administrative tasks by developing Perl and Korn Shell scripts
 - Applied troubleshooting skills to resolve clients' AIX problems
 - Performed IBM HACMP v4.4 management tasks to ensure a highly available customer environment during on-call pager rotation weeks
- 5/02 – 8/02 **Teradyne, Inc., Broadband Test Division**, Bracknell, UK.
System Verification Test Engineer/Network Administrator
- Designed and constructed a laboratory WAN environment for testing new versions of software
 - Provided ISP services for the laboratory WAN including DNS, DHCP, and Sendmail using RedHat Linux
 - Developed and executed training objectives for the SVT department
 - Provided technical and field support to field trial teams
 - Performed live customer demos
 - Deployed hardware and software into an ISP central office
- 5/01 – 12/01 **Teradyne, Inc., Broadband Test Division**, Deerfield, IL.
System Verification Test Engineer/Network Administrator
- Created and executed test matrices for testing new versions of software
 - Tested new developments of code and submitted bug reports
 - Performed WAN/LAN lab and server administration
 - Wrote and updated several technical documents including how-to's and analysis reports
 - Assisted development team by seeking out sources of error in newly discovered bugs

EDUCATION/TRAINING

Purdue University, West Lafayette, IN

August 1998 - May 2003

BS Electrical/Computer Engineering Technology
Networking

Concentration: Telecommunications and

AIX 5L System Administration II: Problem Determination - 2003

Red Hat Certified Engineer - 2009

Hitachi Data Systems Certified Professional - Modular - 2009

Red Hat Partner Platform Certified Salesperson - 2009

EMC Proven Professional - Information Storage Associate - 2010

Red Hat Partner Virtualization Certified Salesperson - 2010

Red Hat Certified Virtualization Administrator - 2010

SKILLS

Computer/Networking Technologies

- Linux (RHEL, CentOS, Fedora, Ubuntu, Arch, Gentoo, Suse)
 - Git
 - Elasticsearch
 - Logstash
 - Kafka
 - Kibana
 - Jenkins
 - CI/CD
 - Apache Web Server
 - SSH
 - Samba
 - FTP
 - Sendmail
 - Postfix
 - Pop3
 - Multipath
 - SNMP
 - Ethernet Bonding
 - MySQL
 - DHCP
 - Bind DNS
 - OpenLDAP
 - NFS
 - NTP Server
 - Squid Proxy Server
 - Rsync Server
 - Cups Print Server
 - Shell Script
 - IP Tables Firewall
 - Logical Volume Manager (LVM)
 - OpenSwan IPsec
 - RPM package creation
 - Raw disk management
 - Nagios
 - PXE
 - Kickstart/AutoYaST
 - Trunking (802.1Q)
- Programming
 - Shell Scripting (Bash, Korn and Zsh)
 - Python
 - Ruby
 - Perl
 - Awk
 - Sed
 - C/C++
 - Visual Basic
- TCP/IP/LAN Integration
 - Routing Protocols
 - Wide Area Network Services
 - IP addressing & sub networks
- Windows
- Solaris
- Firewalls
- HP C-class hardware
- Sun N1 Grid Engine
- 3Par Storage
- CISCO Router Configuration
- Veritas Cluster Server 3.5
- Cable Modem Termination System
- HP Virtual Connect
- Egenera Blade Frame
- 3Par System Reporter
- Remote Access Servers (Dial-up and ISDN)
- Virtual Private Networking (VPN)
- BladeLogic
- GPFS Cluster Filesystem
- VMware ESX

PUBLICATIONS /ADDITIONAL QUALIFICATIONS

Coauthored Instructor's Manual (Spring 2002)

- ***Wireless Networking* – Pearson Education: Prentice Hall (ISBN: 0130883662)**

ACTIVITIES

Lambda Chi Alpha Fraternity

- Secretary (November 2000 – November 2001)
- Alumni Relations Chairman (February 2000 – November 2000)

Independent Study – EM Simulation Software Design Team (Spring 2003)

Purdue University Co-op Program

References available upon request.