

Elizabeth Chaos Golubitsky

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Objective

System or network administration position which will enable me to use and expand my experience with configuration management, monitoring, and automation.

Experience

BBN Technologies, Cambridge, MA

Network Engineer, March 2008 - present

- Administered and troubleshot routers, switches, and firewalls in a multi-site network with approximately 150 Cisco and Juniper devices.
- Designed and implemented improvements to traffic monitoring infrastructure.
- Investigated the use of Puppet for host configuration management.

Staff Scientist, September 2007 - March 2008

- Performed survey, original research, and system administration tasks in support of contract projects.
- Implemented and maintained a complex Trac wiki environment using Puppet.
- Implemented and maintained a scalable network testbed using FreeBSD jails.

Information Assurance Directorate, National Security Agency, Fort Meade, MD

Unix Operating Systems Analyst, July 2005 - August 2007

- Administered network of Fedora Linux workstations and servers. Used Cfengine-based infrastructure to upgrade from FC3 through FC6 without downtime.
- Provided Solaris and Linux security configuration guidance to DoD customers.
- Performed analysis of the OpenSolaris kernel, particularly the IPv6 network stack implementation, and of other source code written in C.

Unix System Administrator, July 2000 - July 2003

Harvard-Smithsonian Center for Astrophysics, Cambridge, MA

- Administered and troubleshot machines at research institution with several hundred active users on mostly Solaris servers and clients.
- Orchestrated transition from telnet to SSH for remote access, including system configuration, group and individual user education, and troubleshooting.
- Implemented spam and virus filtering based on procmail and SpamAssassin.
- Designed central log monitoring infrastructure using syslog and Perl.

Skills

Operating Systems:

- Unix: 12 years user and administrator experience, including: Solaris (2.5.1-10, Trusted Solaris 8), Linux (Red Hat/CentOS/Fedora, Debian), FreeBSD, NetBSD
- Macintosh operating systems (7.5-9, Mac OS X)
- Cisco IOS (12.0-12.4)
- Juniper NetScreen (4.0,6.0)

Programming languages:

- Proficient in: C, Perl, Python, sh
- Familiar with: PHP, awk, sed, Expect

Software and General Skills:

- Configuration management and version control: Cfengine, Puppet, CVS, SVN
- Package management: RPM, yum, FreeBSD ports
- Testing and debugging: snoop, truss, tcpdump, strace, DTrace, MDB/GDB
- Virtualization: Qemu, Xen, Solaris zones, FreeBSD jails
- Code visualization: Grammatech CodeSurfer, LXR, Imagix 4D
- Other software administered: Bacula, Bind, LVM, OpenLDAP, Postfix, Sendmail, OpenSSH, Apache, Vsftpd, Trac

Networking and Security:

- Firewalls: IPTables, NetScreen, Fortinet, Cisco ACLs
- Monitoring: Nagios, RRDtool, SNMP, MRTG, BPF
- Protocols: STP
- Host security: SELinux

Education

Carnegie Mellon University, Pittsburgh, PA: M.S. May 2005

Information Networking Institute: major in Information Security

- Classes: operating systems, broadband networks, computer and network security, cryptography, risk management, network security management (student-run class)
- Masters thesis: comparative vulnerability analysis of open source IMAP servers

Swarthmore College, Swarthmore, PA: B.A. May 2000

Double major in Computer Science and Mathematics

- Senior mathematics thesis: error-correcting codes

Publications

Guide to the Secure Configuration of Red Hat Enterprise Linux 5

Operating Systems Division Unix Team of the Systems and Network Analysis Center, NSA, 2007

“Simple Software Flow Analysis Using GNU Cflow”

Article in login: magazine, April 2006

“Toward an Automated Vulnerability Comparison of Open Source IMAP Servers”

Refereed paper, LISA 2005

Solutions Manual for: Linear Algebra and Differential Equations Using Matlab

M. Golubitsky and M. Dellnitz, Brooks Cole Publishers, 1999

Awards

Heinrich W. Brinkmann Mathematics Prize, Swarthmore College, 2000

Clearances

Top Secret/SCI, July 2005 - August 2007

National Security Agency

Activities

Swarpa.net

System Administrator, May 2005 - present

- Administer primarily e-mail and web-based services, including wikis (MediaWiki, Dokuwiki) and virtual domain hosting, for approximately 45 users.
- Performed zero-downtime migration of active mailing lists for two domains from Majordomo to Mailman.

I Do Foundation, Washington DC

System Administrator, December 2002 - September 2005

- Administered web, e-mail, backups, and other services for nonprofit organization on a volunteer basis.