

John M. Fulton
338 Porter St.
Easton, PA 18042

610-330-5650
fultonj@lafayette.edu

Skills

Languages: Python, Perl, Puppet, Bash, Sed, Awk, Java, C, PHP, CSS, HTML, L^AT_EX, SQL, Emacs Lisp

Operating Systems: Red Hat Enterprise Linux 3-6, Fedora 12-19, Ubuntu 6-7, Debian 2.2-3.1, FreeBSD6

Servers/Applications: Apache 1.3x & 2.x, MySQL 3-5.5, Zimbra 5-8, OpenLDAP 2.3, BIND 9, ISC DHCP 4.1, OpenSSH 2.0, GPG, git, Subversion, CVS, vim, GNU Emacs 19-24, Satellite 5.5

Hardware: Dell m7xx Blade Servers, IBM XIV, EMC Clariion CX320, Qlogic HBAs, Cisco MDS-9124

Other: Strong written/verbal communication skills and troubleshooting/debugging skills

Professional Experience

- **Lafayette College, Information Technology Services**

Easton, PA

Director of Network and Systems

February 2012 - Present

- Lead team of eight who run the college's Network, Server, Storage, and Identity Infrastructure
- Key Projects
 - * Migration of Novell/eDirectory to Samba/OpenLDAP
 - Used Python and JRButils to extract Novell Permissions into MySQL database
 - Wrote Python scripts to rsync data and translate permissions to POSIX+ACL
 - Wrote Web Interface in web.py for support staff to view permissions database
 - Saved \$21k annually and File Services no longer require weekly reboot
 - * Migration of Avaya Definity G3 PBX to eZuce OpenUC
 - Wrote RFP, evaluated vendors, and presented recommendation to Board for OpenUC
 - Mentored student programmer who contributed open source code upstream
 - Saved \$10k annually on power alone
- Research new technologies: Puppet, Foreman, Gluster

Senior Systems Programmer / Associate Director

November 2008 - February 2012

- Lead team of four who run the college's Server, Storage, and Identity Infrastructure
- Key Projects
 - * Designed and Deployed 4-node Red Hat Virtualizaion Cluster:
 - Virtual machines (VMs) live migrate or failover between servers
 - Two implementations of system (one Xen, one KVM) hosted 90 VMs
 - Uses GFS2, CLVM, Dell CMC Fencing, Red Hat Cluster Services Manager
 - * XIV SAN Upgrade
 - Evaluated vendors and choose IBM XIV to replace EMC Clarrion
 - Migrated 50 TB with less than one hour downtime per server (for rezone)
 - Tested resilience with device-mapper-multipath and tuned settings for IOPs
 - Migration reduced costs, simplified management/planning, gave us analytics
 - * Designed and Deployed 10-node Zimbra email / collaboration system
 - Wrote Python script to automate migration (<http://fultonj.xen.prgmr.com/cgp2zim>)
 - imapsync'd 4,500 email accounts to Zimbra (six-week 24/7 job on 8 servers)
 - Migrated mail, contacts, calendars, tasks, and mail-filter rules

- System Administration of approximately 100 Red Hat Enterprise Linux servers including:
 - * Mail: 4,500 users of SMTP, IMAP, MAPI, POP3, WebMail
 - * ERP (Banner/Oracle): College’s business database
 - * Web: College’s main website and several web-based services
 - * DNS: Act as hostmaster for inward and outward name servers
- Made proactive system improvements to reduce support overhead:
 - * Automation: Introduced Kickstart and scripted account creation and supplemental backups
 - * Security: Disabled unnecessary accounts/services, required SSH keys, used iptables
 - * Reliability: Put redundant/replicated servers in second data center with DNS load balancing
 - * Tuning: Analyze performance (iostat, dd, time, top) and make strategic hardware upgrades

• **Rutgers University, Office of Information Technology** Piscataway, NJ
Senior Web Developer *May 2005 - November 2006*

- Met with clients to develop Use Cases and designed entire solution from server to web interface
- Set development and revision control standards for seven programmers
- Continued development in Java, PHP, and MySQL from previous position

Web Developer *January 2001 - May 2005*

- Developed many PHP/MySQL projects including:
 - * ruQueue, Help Desk ticket system released under GPL
 - * Online Applications used by nearly all University students
 - * Content Management Systems and E-Commerce Sites
- Wrote kiosk client/server in Java to collect learning center facility usage data

• **Rutgers University, School of Information and Library Studies** New Brunswick, NJ
Coadjunct Faculty *March 2005 - May 2005*

- Taught 3-credit Intro to Programming course in Python to approximately 40 undergraduates
- Lectured, held office hours, and wrote programming assignments and final exam
- Material: programming idioms, object orientation, algorithms, recursion

Education

- Rutgers University, Rutgers College** New Brunswick, NJ
- *B.S. Computer Science / Philosophy (Double Major)* *January 2001*
Minor in Cognitive Science (GPA 3.3)

Certification/Training

- Red Hat Certified Engineer (#100-054-782)
- IBM XIV Storage System Technical Training SSA00
- Zimbra ZCS Network Edition System Administrator Training, Yahoo, Inc.
- “Discovering and Documenting Use Cases” and “Project Management”, Fisher Associates, Inc.

Presentations/Publications

- Ed Tech Digest Guest Column: Is open source virtualization right for you? - October 21, 2013
- Zimbra Big Social: Co-Presented with Jerry Stabile eZuce Founder/COO - September 25, 2013
- Red Hat Summit RHEV Panel: Competitive Advantages with Red Hat Solutions - June 13, 2013
- Red Hat Case Study: Lafayette College improves productivity, flexibility with RHEV - June 3, 2013