

Professional History of Joshua "jag" Ginsberg



« Software Engineering Successes »

At FlowTheory Networks:

- ◆ Optimized, extended, and refactored a marketing automation system product written in Django, including auditing the codebase for best-practices compliance, providing Django training for the development team, and optimizing maintenance tasks by migrating them to a Celery/Carrot/AMQP solution.
- ◆ Designed, developed, and supported Python-based automated build system that monitored Hg repository for changes, constructed new Debian packages, and released them to the appropriate apt repository.
- ◆ Developed a content management system, including a Mediawiki-style markup parser, live preview, image and file storage, and revision control using Django and Google's diff_match_patch
- ◆ Developed a component architecture strapped onto the Django signaling framework for definition of interfaces and registry of components implementing those interfaces
- ◆ Abstracted the Satchmo eCommerce system for Django to create a generic payment transaction API, used to create a donation gateway and a ticket sales system

At the Hive:

- ◆ Designed, implemented, and supported Kerrigan, a Django-based network resource allocation manager for asset tracking, host configuration management, switch port and PDU port allocation, and IP address assignment
- ◆ Designed, implemented, and supported LDAP membership adaptor for GNU/Mailman mailing lists in Python

At the Free Software Foundation:

- ◆ Designed, implemented, and supported Quagga, a Django-driven database application for the FSF/UNESCO free software directory at directory.fsf.org, cataloging thousands of free software projects and averaging 50,000 page views per day; migrated legacy data from version-controlled flat-text file storage system to PostgreSQL RDBMS
- ◆ Designed, implemented, and supported First Amendment, a Django driven community-building application for open letters and other activism campaigns
- ◆ Designed, implemented, and supported Iskenderon, a Subversion-driven Django template loader for content management and publishing used in every Django project in the Free Software Foundation
- ◆ Designed, implemented, and supported Monkeywrench, a Django-based software project management application leveraging Apache, Subversion, and Trac offering role-based permission management and automated project creation
- ◆ Designed, implemented, and supported a GNU/Mailman extension in Python to securely expose major elements of the Mailman API using XML-RPC
- ◆ Extended, maintained, and refactored legacy Zope/Plone applications which run the FSF's Associate Membership program and www.fsf.org

At Brainstorm Internet:

- ◆ Designed, coded, and supported software for customer support and DSL service sales that automated workflow, integrated operational software components, and improved quality of customer support provided. Software solutions included a DSL prequalification tool, a DSL qualification and ordering system, and a reporting system for customer and sales trends, all using Apache+mod_python



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« Systems and Network Administration Successes »

At FlowTheory Networks:

- ◆ Deployed ReductiveLabs' Puppet to manage deployment of marketing automation product across multiple VM slices, permitting the instantiation of a new development, staging, or production node in seconds versus hours, including automated Nagios configuration generation
- ◆ Deployed cryptographically assured, internal Debian apt repository for custom packaging requirements.

At the Hive:

- ◆ Planned, tested, and executed migration of datacenter presence for both corporate and public-facing services
 - ◆ Before: single-carrier datacenter on 110V single-phase power on unmanaged network without routing protocols grown organically from meshed layer-2 domains with overlapping security zones
 - ◆ After: multi-carrier hotel on 208V three-phase power with redundant upstream, core routing, management, and switching infrastructure divided into three distinct security zones; OSPF routing; fully managed power, network, and environmental systems
- ◆ Designed and deployed mirrored HA OpenLDAP pairs for corporate identity and authentication systems, and implemented SSO for authentication to all corporate and management VPN, web, and shell systems
- ◆ Designed and implemented DRBD-backed HA mail infrastructure for all corporate mail and mailing lists
- ◆ Deployed Nagios3 monitoring solution with auto-generated host configuration, multiple escalation strategies, full dependency mapping, and template inheritance
- ◆ Deployed syslog aggregation from hosts via store-and-forward nodes to central SQL-based log aggregator

At the Free Software Foundation:

- ◆ Maintained server environments at two data centers hosting 30+ systems running Debian-based GNU/Linux, including the GNU project web, ftp, and list servers. Administered and configured services including Apache, Exim, Zope, Mailman, PostgreSQL, MySQL, Squid, and Subversion.
- ◆ Deployed incremental upgrade of massively antiquated and failure prone legacy infrastructure consisting of desktop-grade Athlon class machines and multi-processor Pentium 3 class servers to server-class Xen-based multicore Opteron machines running LinuxBIOS/CoreBoot.
- ◆ Began upgrade of Foundation network connectivity from sub-delegated single-homed system to multi-homed autonomous system connected to gigabit ethernet upstream and local exchange point (the Boston MXP). Assembled and deployed a solid-state BGP router using Quagga using commodity AMD Opteron hardware.
- ◆ Deployed Satchmo, a Django eCommerce product, for shop.fsf.org with custom shipping/fulfillment workflow and integration with TrustCommerce payment gateway and legacy Plone identity database
- ◆ Deployed Nagios3-based host and service monitoring system to monitor FSF and GNU hosts and services with full system map and service dependencies.



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« Specific Positions Held »

*Principal/Web Systems Consultant » FlowTheory Networks, LLC
Brookline, Massachusetts and Arlington, Virginia » August 2008 to present*

- ◆ Provided contract-based software engineering and systems administration services specializing in Django/Python and Debian/Ubuntu systems.
- ◆ Designed, implemented, and supported custom web and data solutions for small business and non-profit clients primarily based on the Django web applications platform
- ◆ Provided technology selection insight to cost-conscious clientele focusing on free software solutions and free web applications platforms for productivity, financial management, groupware, and customer relations

*Senior Systems Administrator » The Hive, LLC
Somerville, Massachusetts » September 2008 to November 2009*

- ◆ Maintained, grew, and upgraded 400+ server infrastructure in operation of `singlesnet.com`, `usearchlocal.com`, and other company properties

*Senior Systems Administrator » Free Software Foundation
Boston, Massachusetts » September 2005 to August 2008*

- ◆ Served in a triumvirate of systems administrators to provide software development, systems administration, technology strategic planning, and technical support to the Foundation, its campaigns, and the GNU Project
- ◆ Provided customer support and technology solutions for the needs of GNU project members, Foundation staff, and Richard Stallman

*Network Systems Administrator » Brainstorm Internet
Durango, Colorado » October 2003 to August 2005*

- ◆ Planned, configured, and supported ISP LAN and WAN services on GNU/Linux and FreeBSD server platforms, Cisco network infrastructure, and Lucent/CopperEdge DSL network

« Education »

Rice University » Houston, Texas

- ◆ Bachelor of Arts in Philosophy, May 2002
- ◆ Honored with the Sallyport Award for service to the University and a Wiess College Award for service to Wiess College at Rice University



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« Skills »

(skills rated on a scaled of 1 to 5 – 1 being minimal exposure and 5 being fluency)

Operating Systems

- ◆ Ubuntu/Debian GNU/Linux (5); Fedora Core (3); FreeBSD (2); Cisco IOS (2); Juniper JUNOS (2)

Languages

- ◆ Python (5); SQL (5); Perl (2); PHP (1); Bash (2); TCL (3)

Server Applications

- ◆ Django (5); Apache (4); MySQL (4); PostgreSQL (4); Postfix (4); Exim (2); GNU/Mailman (4); Bind9 (3); Linux HA (3); Nagios (4); Puppet(3); Asterisk (1); Samba (3); OpenLDAP (4); OpenSSH (4); iptables (4); Xen (2)

