



# Justin Hearn

**SysAdmin – DevOps – FLOSS mercenary – Data Scientist-in-Training**

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## Overview

I am a dedicated, dependable Linux Systems Administrator and FLOSS-oriented general technologist, skilled at managing diverse needs in challenging, fast-paced environments. I advocate for the use of free/libre and open-source software (FLOSS) as my "tools of choice," though I have been known to use proprietary products in certain specific cases (most often Microsoft Windows & Office and Atlassian JIRA, Confluence, *et. al.*) I am incredibly driven to solve problems through regular, iterative improvements with measurable/observable positive impact for the end-user.

Peers and other co-workers often describe me as "friendly and energetic," with "top-notch" communication and customer service skills, as well as a proven ability to mentor peers and clients while ensuring systems' security, performance, and availability through "meticulous" and "methodical" practice. Personally, ever since working in a movie theater in high school, I feel that I am always able to maintain a professional decorum, even in periods of intense pressure or stress. (Communication, in my experience, is much easier and more effective when all parties are calm and clear-headed.)

I have always had a genuine passion for learning and trying new things, particularly those of a technical nature (at this time, I am pursuing a certificate from IBM via edX for Python/Data Science, and I am especially intrigued by Bitcoin and cryptocurrencies/utility tokens as well as blockchain technology in general—I am even learning about dApps on platforms such as Ethereum, EOS, and NEO), as well as a love of comedy and virtually all genres of music—live or recorded (or recorded live!) In fact, one of my only major non-technology possessions (and one of which I am very proud, personally) is my hand-built collection of >500 vinyl albums.

In summary, if you are looking for someone to help solve problems through the use of (mostly free—as in both "freedom" and "beer") technology, improve employees' day-to-day work experience, ensure customers that interact with your company come away with a positive view of your technological "wizardry," and help delight customers and end-users alike by always minding the dual philosophies of "never make promises you aren't absolutely positive you can keep" and "always under-promise and over-deliver," please reach out to me; I think we will work well together!

## Summary

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- Savvy and motivated Linux technician, offering hands-on experience administering complex server environments with a 24x7x365 service availability mindset
- Rock-solid problem-solving skills, including familiarity with issues and challenges that arise at scale
- Excellent communication; able to adjust language and jargon on-the-fly to match the intended audience and explain complex technical concepts in a relatively non-technical way
- Affinity for learning and applying new information, outside-the-box ideas, and unfamiliar technology. Able to get up-to-speed quickly and tackle projects with minimal rampup time, hand-holding, or oversight.
- Early explorer of blockchain technologies; currently learning about how to build custom dApps and potential business applications for "distributed ledger" (blockchain) databases
- Data Scientist-in-Training: enrolled in and currently working on completing a five-class certification from edX with a focus on using Python for Data Science, Machine Learning, *etc.*

## Career experience

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### All Star Directories

2018-07 - 2018-11

#### Systems Engineer

- research Barracuda Essentials for Office 365 to learn how to implement the suite of products
- develop deployment plans for BESS, BCAS, and BCCB including all implementation & documentation steps
  - execute BESS email cutover plan at agreed-upon time/date:
    - coordinate email "cutover" with Sr. Staff – once for "inbound" email, and once again for "outbound" email
    - write end user documentation to provide step-by-step, non-technical guides for common product use-cases
    - automate installation of Barracuda Outlook plugin via O365 Exchange administration settings
  - implement Exchange mail connector to forward all incoming mail to Barracuda archival mailbox
    - retain messages indefinitely in their original, unaltered state
    - users have access to restore mail from their archives, but not change or delete anything
- troubleshoot Azure AD account "corruption"
  - determined root-cause, but the solution was potentially more destructive than the problem (at the time); months later, this solution ended up solving the problem
- Atlassian JIRA rebuild/migration/upgrade (7.2 -> 7.12)
  - planned maintenance steps written up in detail and reviewed/signed-off by team/peers
  - Nagios monitoring/alerting improvements added as a result of the productivity lost throughout the company during JIRA outages
    - event handler with "automatic" process restart script acting as a "watchdog" substantially improved uptime immediately as we decided what to do longer-term
  - After JIRA upgrade/server & database migration, the crashes stopped, we were able to enjoy new features introduced since JIRA 7.2
    - a common problem caused by the use of MariaDB in the old JIRA system was solved by moving to PostgreSQL in the new system
- develop migration plans for moving the "PERF" environment out of the office data closet to AWS with a re-tooled build process based around GitLab and Kubernetes

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### All Star Directories

2016-10 - 2018-07

#### Systems Administrator

- provide assistance engineering, implementing, and maintaining our technical infrastructure (the majority of which is hosted using AWS cloud products)
- maximize service availability and end-user experience
  - monitor application/API response times
    - Apache Tomcat/httpd response times for requests received
    - overall time for infrastructure to return data to user's browser
  - ensure timely renewal of verified HTTPS certificates
  - automatically alert on application server [5XX] errors
- secure infrastructure to protect against potentially malicious actors
- configure automated monitoring/alerting
  - develop scripts to "auto-heal" problems, where possible
- develop and maintain scripts to automatically deploy software to the production environment
- plan and execute production software deployments with no service interruption
- record and analyze server metrics and log data to proactively plan for future system maintenance/potential scale issues
- research new technologies and evaluate pros/cons regarding implementation into our systems
  - build quick "proof-of-concept" deployments to test viability/provide ROI estimates for implementing new tools/processes
- collaborate with developers to identify and eliminate problems in our CI pipeline, general process bottlenecks, and "knowledge silos"
  - replace our current CI tools and implement more cohesive CI, including CD

**Technology Consultant**

- design, build, and maintain the systems that run our website
- ensure around-the-clock availability and a user experience that is fast, stable, and secure
- provide robust systems that scale on-demand to handle periods of high traffic while minimizing day-to-day operating costs
- collect and analyze production data and make it available to teams within the company, while monitoring for real-time problems and alerting stakeholders about any issues
- improve internal processes to reduce friction among teams, reduce the time between "conception" and "release," and help maintain a sustainable and bug-free product
- take ownership of software development lifecycle:
  - prioritize and manage development tasks
  - review code changes
  - develop and maintain tools to assist with testing and code rolls

In late April, 2016, I moved from full-time contract work with Sondry to an "as-needed" consultant position due to the company's difficulty in securing necessary additional startup capital. Although I maintained full administrative access to the company's infrastructure, I was no longer involved in day-to-day operations; I simply made myself available as a resource to keep the site online and provide advice when requested.

In November, 2017, Sondry decided to cancel its contract with its hosting provider, and (since the infrastructure I had built was no longer around) we decided it was a good time to end my "as-needed" consultant/support role.

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**Accretive Technology Group**

2013-04 - 2014-03

**Linux Systems Administrator**

- administer over 1200 (physical) servers running Debian GNU/Linux and FreeBSD
- ensure completion of routine tasks
  - review system logs
  - confirm that backups run correctly
  - grant/revoke employee access
  - apply system updates
- document internal processes and provide training for other team members
- identify bottlenecks or potential vulnerabilities and offer possible solutions or improvements
- act as the "front line" of defense for production systems
  - respond to live issues
  - resolve immediate problems, immediately
    - work towards identifying root-causes to prevent issues from reappearing
- effectively use tools such as Nagios, SEC, logwatch, munin, and others to form a real-time understanding of what is happening in a highly complex and ever-changing environment
- assist Sr.-level administrators with various projects
  - rebuild a large number of bare-metal hosts (40+) as VMs
  - build/test new Redis hosts and deploy to production without affecting live traffic
  - migrate guests in a Ganeti cluster away from one node for hardware replacement
  - build Puppet modules to automate deployment of new development team server instances

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**Rackspace**

2012-12 - 2013-03

**Linux Administrator, Cloud Support**

- develop documentation and provide support for constantly changing, bleeding-edge technology in the cloud computing space
- install, configure, update, and troubleshoot services for customers
- proactively reduce the number of incoming support calls by teaching customers "how to fish"
- explain complex technologies to customers of virtually every technical skill level
  - gauge customers' current technical knowledge/experience and adapt my language and use of jargon on-the-fly to ensure clear communication without potentially sounding insulting/condescending
- collaborate with fellow system administrators and support team members to ensure that all customers have a positive support experience
- recommend products that would be beneficial to the customer and notify the sales team regarding any potential leads

**Systems Administrator and Support Team Lead**

- design, build, deploy, and maintain servers for running both client-facing products and internal productivity tools
- work with developers to design system architecture changes, investigate potential ROI, and develop an execution plan for changes we decide to implement
- provide internal Help Desk support for employee PCs and VOIP phones
- develop automated tools to assist the Customer Support team, saving man-hours and preventing human error
- manage Support Team to provide a structured environment and consistent customer experience, as well as provide internal assistance so that all client-facing tasks are completed successfully and on-time
  - ensure all customer issues, bugs, tasks, Sales leads, etc. are documented in internal request tracking system
  - work directly with clients and vendors to bring sites live and define requirements for website updates and maintenance
  - design/implement new site content
  - optimize websites and Google Local/Google+ profiles to increase local search rankings

**MyBuys (now Magnetic)**

2009-08 - 2010-07

**Linux Systems Administrator**

- work with managed hosting provider to ensure efficient operation of production systems
  - perform basic system administration
  - configure monitoring and automated scheduling
  - analyze available data to assist in capacity planning
  - end-user troubleshooting, support, and emergency response
  - serve as an escalation path for data center issues and emergencies
- create, document, and follow operational policies to mitigate risk
  - recommend improvements for processes and standard procedures
- identify root causes for problems and develop solutions
- work with QA, Product Development, and Professional Services teams to maintain timely and high-quality email message deliveries, web recommendations, and client deployment/upkeep
- design, build, and maintain all local technical infrastructure for Ann Arbor office
  - ensure smooth network communication between offices in Ann Arbor, MI and Redwood City, CA

**ePrize (now HelloWorld)**

2005-10 - 2009-04

**Associate Systems Administrator**

- apply communication, analytic, and problem-solving skills to maximize the benefit of IT system investments, including over 300 Linux servers
- design and deploy new applications and enhancements to existing applications, software, and operating systems
- gauge the effectiveness and efficiency of existing systems
  - develop and implement strategies for improving or further leveraging these systems
  - monitor and test server and network performance
  - prepare and deliver system performance statistics and reports
- collaborate with network staff, Windows Server administrators, and software engineers to ensure smooth and reliable operation of software and systems
- design, develop, document, and maintain Perl modules/programs/scripts and bash scripts to both save man-hours and minimize the possibility of human error by automating routine processes
  - lead the creation of the "Code Services" group, working closely with Project Managers and Account Executives to provide end-user-friendly tools/processes and documentation, facilitating truly secure file transfer to all clients/third-party partners regardless of media/transmission requirements, logistics regarding file size, or the technical aptitude of the file's recipient
- create and maintain documentation for internal systems and tools

## Certifications / Education

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### IBM via edX

05/2019 - 06/2019

Python 101 for Data Science

PY0101EN

Final Grade: 100%

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### The Linux Foundation via edX

2018-09 - 2018-09

Introduction to Kubernetes

LFS158x

Final Grade: 94%

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### University of California, Berkeley via edX

2018-07 - 2018-11

Blockchain Fundamentals Professional Certificate

Program record: <https://credentials.edx.org/records/programs/16629128dd9e4e68b00b279c6b75166f/#>

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### University of California, Berkeley via edX

2018-07 - 2018-08

Bitcoin and Cryptocurrencies

CS198.1x

Final Grade: 88%

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### University of California, Berkeley via edX

2018-09 - 2018-11

Blockchain Technology

CS198.2x

Final Grade: 90%

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### The Linux Foundation via edX

10/2018 - 04/16/2019

Blockchain for Business – An Introduction to Hyperledger Technologies

LFS171x

Final Grade: 99%

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### Kettering University

2005-07 - 2008-03

B.Sc (partial)

Program: Computer Science, with a focus (aka, "minor") in International Relations

Left school voluntarily as a Junior (based on credits earned) to accept a full-time position with the company at which I was interning (ePrize).

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### Oakland University

2008 - 2009

B.Sc (partial)

Major: Information Technology

Minor: Music

Upon leaving KU, my original plan was to complete my B.Sc. at Oakland. I later learned that, although virtually all of my credits from KU would transfer, they didn't directly correlate with the requirements of OU's program. For example, CS-101 at Kettering translated to something like IT-302 at Oakland; as a result, the completion of my degree would require time/money spent attending classes that were literally designed as precursors to many of the classes I had already passed (and for which Oakland had decided to give me credit).

I decided this was not a good use of time or money and left OU to pursue my career full-time. I believe I have earned enough credits to technically qualify as a Bachelor of Science, but the classes to which those credits applied didn't add up to a "full degree," by Oakland's standards.

## Skills

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### Linux OS Administration

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RHEL; CentOS; Arch; Debian; Ubuntu; Fedora; Gentoo/Funtoo

### Virtualization/Cloud

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Amazon Web Services (AWS) and Rackspace Cloud; Vagrant; VirtualBox; Proxmox CE; Ganeti; Docker; LXC (OpenVZ); QEMU/KVM; VMWare vSphere vCenter/ESXi

### Server Administration

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Apache httpd, Apache Tomcat, nginx, Nagios, GitLab, Rsyslog, Elastic ELK stack (Elasticsearch, Logstash, Kibana) & Beats, Graylog, Atlassian products (primarily JIRA, Confluence, Bitbucket), email

### Concepts

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"Agile" methodologies ("DevOps," CI/CD, etc.); Infrastructure-as-Code; Just Enough Documentation/"self-documenting" code; High Availability/no single-points-of-failure; A/B infrastructure; actionable alerts & automated recovery; file versioning; configuration management & server orchestration

### Scripting/Automation

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Bash and shell; Chef; Python; Puppet; Perl

### Databases/Data Warehousing

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MySQL/MariaDB and PostgreSQL (both self-hosted & Amazon RDS); MongoDB; ElasticSearch; Redis; Redshift; Aurora

### Networking

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TCP/IP (IPv4); VPN (OpenVPN, PPTP, IPSec); NAT; routing; load balancers; subnets; virtual private cloud networks; extremely basic IPv6; AWS VPCs, ELBs, Security Groups, general cloud network security

### Data Science/Visualization

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Python (Pandas, NumPy, SciPy, matplotlib), Machine Learning

## Volunteering / Organizations

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### Libertarian Party of Washington State (Snohomish County chapter)

2016-09 - 2017-03

Precinct Committee Officer (PCO) - Johnson for President

- participate in strategy meetings and sign-waving events
- place road signs in as many places as legally possible
- distribute door-hanger literature; knock on doors to talk to people about the candidates and issues (if they are willing)
- hand out flyers, cards, stickers, and other marketing paraphernalia to people on the street; attempt to engage in conversation whenever possible
- participate in live phone-banking, calling as many constituents as possible to inform those that care to listen about the Johnson/Weld ticket and platform, as well as answer any questions or discuss any concerns they may have

### Phi Delta Theta fraternity (Michigan Delta Chapter House)

2006 - 2009

Brother/Member and Alumnus

- acting Technology Secretary from 2006-2009
- acting Philanthropy Chair from 2007-2008

## REFERENCES

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References are available upon request.