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

- 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 ramp-up 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 IBM via edX with a focus on using Python for Data Science, Machine Learning, *etc.*

Career experience

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

Sondry

2015-10 - 2017-11

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.

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

Online-Access **2012-01 - 2012-12**

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

IBM via edX — 2019-06 - 2019-07

Machine Learning with Python: A Practical Introduction

ML0101EN
Final Grade: 85%

IBM via edX — 2019-05 - 2019-06

Python 101 for Data Science

PY0101EN
Final Grade: 100%

The Linux Foundation via edX — 2018-09 - 2018-09

Introduction to Kubernetes

LFS158x
Final Grade: 94%

University of California, Berkeley via edX — 2018-07 - 2018-11

Blockchain Fundamentals Professional Certificate

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

University of California, Berkeley via edX — 2018-07 - 2018-08

Bitcoin and Cryptocurrencies

CS198.1x
Final Grade: 88%

University of California, Berkeley via edX — 2018-09 - 2018-11

Blockchain Technology

CS198.2x
Final Grade: 90%

The Linux Foundation via edX — 2018-10 - 2019-04-16

Blockchain for Business – An Introduction to Hyperledger Technologies

LFS171x
Final Grade: 99%

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).

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

Linux OS Administration

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

Scripting/Automation

Bash and shell; Chef; Python; Puppet; Perl

Virtualization/Cloud

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

Databases/Data Warehousing

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

Server Administration

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

Networking

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

Concepts

"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

Data Science/Visualization

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

Volunteering / Organizations

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

References are available upon request.