

Josh Gadeken

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SKILLS

Linux: Debian (server and desktop), Debian ISO/Installer, Debian repositories, Debian packaging, System Administration, Ansible, Untangle NG Firewall, Software RAID (mdadm), Raspbian, QEMU, LXC, libvirt
Programming: Python, Bash, C, GNU Make, Git, GitHub, Markdown, YAML, JSON, \LaTeX , HTML, CSS
Electronics: Arduino, Raspberry Pi, EAGLE, Circuit and PCB design and construction

EXPERIENCE

Aleph Objects, Inc. (Loveland, Colorado)

July 2017 - Present

Junior System Administrator

- Maintained existing Debian workstations which involved diagnosing and correcting OS and application problems, replacing faulty hardware, and applying updates. OS installation for new workstations was automated with Debian preseed and postinstall scripts.
- Installed and configured an OpenNebula virtualization server to host several internal services. This new server was needed to speed up internal services as well as reduce cost from hosting some of these internal services with cloud providers.
- Added a secondary Internet connection to a building's PfSense firewall. This secondary Internet connection was added to eliminate downtime caused by a failure on either connection.
- Set up OpenVPN on company workstations, laptops, and cell phones. This is used to allow employees to work and access internal services remotely.
- Set up and maintained company cell phones, which involved replacing the stock Android OS with LineageOS, and VoIP phones, which included configuring an Asterisk server.

Hewlett-Packard / Hewlett Packard Enterprise (Fort Collins, Colorado)

April 2015 - October 2016

Systems Software Engineer

- Worked on HPE's Debian derivative Linux distribution (HPE Linux), which is used as the base for several products, including HPE Helion and The Machine.
- As lead developer for the HPE Linux ISOs/installers, I maintained and added new features to the installer creation tools as well as building and testing new ISOs/installers. I also transitioned the proprietary installer creation source code to Debian's open source tools (simple-cdd) and automated the ISO/installer generation process.
- Contributed to Debian quality by submitting several bug reports with patches upstream to Debian. I tested my patches for these bugs on local QEMU virtual machines where I reproduced the issue, applied my patch, built the package, and then verified my solution to the bug.
- Developed Python and Bash tools for HPE Linux Debian repository creation and maintenance. These tools enabled automatic repository creation, and provided human and machine readable insights into the repositories.
- Developed automated tasks for CI/CD pipeline to build and validate packages, installers, and repositories. This pipeline is built with a proprietary HPE framework, Jenkins, and GitHub Enterprise. This pipeline enabled automatic scheduled repository and installer builds, as well as automatic package building and testing triggered by Git commits.
- Wrote and maintained documentation for tools, tests, and processes using DokuWiki. This enabled other coworkers and teams to find, use, and build on existing solutions, instead of having to create their own.

Active Website / Booj (Lakewood, Colorado)

September 2010 - October 2013

- Started as an intern, then promoted to Web Developer, and again promoted to Data Specialist.
- Wrote a multi-threaded Python framework to automatically download data in various formats from multiple clients and organize it into MySQL database for use on client websites.
- Improved media server performance by optimizing and upgrading media storage methods and by using Nagios to find and eliminate bottlenecks in media server Python code base. Amazon CloudFront CDN was later implemented as client site traffic increased.
- Set up new CentOS based Web and Media Server clusters to support increased traffic and additional client sites.
- Created and maintained features for front-end and back-end website functionality using PHP and Smarty Templates.

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EDUCATION

- Debian Packaging class by Tim Potter at HPE
 - In this class I learned how Debian packages are structured and how to create them both manually and automatically using standard open source Debian tools. This also included best practices for Debian packaging and how to work with the Debian community.
- Practical Python Programming class by David M. Beazley
 - This course covered several Python concepts such as working with various types of data, modules, libraries, object oriented programming and classes, debugging, lambdas, and decorators.
- Graduated with High School Diploma from Resurrection Christian School in 2009

PERSONAL PROJECTS

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| Servers | My home server rack is comprised of several custom built Linux systems. Among them is a firewall/router/UTM that runs Untangle NG and manages several home LAN's, a QEMU Virtualization server, and a Folding@Home rig. Some of the virtual machines hosted on the QEMU Virtualization server include a NAS, a VPN, and a Debian APT mirror. This system also utilizes Linux software RAID (mdadm) for the NAS and Debian APT mirror. |
| NES USB Adapter | I built a USB adapter for the original NES controller using a Teensy microcontroller that allows it to be used with PC emulators. |
| Robotics | I am building an Actobotics based robot to use for self-driving experimentation and research. This robot is a roughly 1/10th scale four wheel car with two drive motors and full suspension. The goal for this work in progress robot is to be able to autonomously navigate around an obstacle filled track. |