

Jonathan Dieter

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Profile

Experienced developer with a proven record in using the latest in open source technology to automate IT infrastructure administration

Professional Experience

Lebanon Evangelical School
Senior Systems Administrator

Loueizeh, Beirut, Lebanon
Sept 2006 - July 2018

- Led a small team of two other system administrators, eventually training one to be my replacement.
- Set up a LizardFS distributed filesystem to store all school information including 2000+ home directories. The filesystem was configured with:
 - Three-way replication which almost eliminated downtime, even during upgrades
 - Daily snapshots, allowing us to recover files that users had accidentally deleted
- Composed an enterprise wireless network:
 - Created a custom OpenWRT firmware for our consumer-grade wireless access points that configured the access point and gracefully handled network disconnections
 - Divided the network into several VLANs with different internet speeds where users were automatically put into the appropriate VLAN when they connected to the network
- Set up a three-way cluster of FreeIPA (community edition of RH IdM) to store accounts of around 2000 students and staff, along with DNS configuration and DHCP IP mappings
- Configured an iPXE boot environment to facilitate installation and configuration of our workstations
- Automated configuration of our desktops using Ansible
- Set up an oVirt cluster (community edition of RHV) and virtualized most of our physical servers
- Created and maintained a web-based grading system accessible by students, staff and parents, complete with an internal mirror kept up-to-date using MySQL replication
- Automated notifications of outages and sub-normal service performance using Nagios
- Documented successes and failures on a blog that can be found at <https://www.jdieter.net>

Systems Administrator

Sept 1999 - June 2001, Sept 2004 - Sept 2006

- **Migrated servers from Windows to Linux (CentOS and Fedora)**, increasing uptime and reliability

Teacher

Sept 1999 - June 2001, Sept 2004 - July 2018

- **Created and maintained an engaging six-year IT curriculum** that uses open source software
- **Designed and taught an after-school robotics course** using Python, Legos and Nintendo Wiimotes to create self-steering cars, robots that played tag, and robot sumo wrestling

Other Experience

Fedora Project

Packager (Volunteer)

April 2007 - Present

- **Created and packaged zchunk**, a compression format designed to have highly efficient deltas. Fedora is looking to use zchunk for its metadata to reduce the amount that users download when checking for package updates.
- **Created, packaged, and maintained a yum plugin called yum-presto** that allowed users to download deltarpms rather than full rpms when updating their systems. The plugin was eventually included by default in Fedora releases and was subsequently merged into Red Hat Enterprise Linux and is still available in RHEL 6. Newer Fedora and RHEL releases have merged yum-presto's functionality directly into yum and dnf.
- **Maintain the deltarpm package** in Fedora and contribute upstream
- **Maintain the LizardFS distributed filesystem** in Fedora and EPEL (extra packages for RHEL)

Programming languages

I am proficient in the following programming and scripting languages

- Python
- C
- PHP
- Bash

Upstream work

Submitted bugfix patches and had them approved in the following upstream projects:

- Linux kernel (USB/IP userspace)
- oVirt
- Ceph
- LizardFS
- iPXE
- rpm-ostree

GitHub profile

- <https://github.com/jdieter>

Education

Washington State University, Vancouver, Washington, USA
BA in Computer Science - *May, 2004*