

Proficiencies

Software Development

I have a wide variety of experience with software development. Recent focus has been mostly in Python:

- Languages
 - C, C++, Perl, Python, Java, JavaScript
- Recent Frameworks
 - Django, Flask, Zope
- Other Architectures
 - prior hardware and firmware development for the TI MSP430 and RCA 1802 architectures.

Systems Administration

I have extensive experience with Linux Systems Administration. Proficiencies include:

- Service configuration and troubleshooting (Apache, Nginx, MySQL / MariaDB, etc.)
- Horizontal scaling of compute and storage resources on private and public clouds (DigitalOcean, Rackspace, AWS) as well as experience on UT / TACC's Stampede supercomputer.
- Configuration Management (primarily SaltStack) and Orchestration (Kubernetes)
- Virtualization and Containerization (VirtualBox, KVM, VMWare, Docker)

Electronics Design

I also have experience in Analog and Digital design, through product conception, design, part selection, prototyping, and manufacturing, including:

- TI MSP430 platform
- low noise, high efficiency power supplies
- Interfacing various serial buses (USB, RS-485, RS-232)
- Various non-volatile storage including SD cards, Atmel Flash, FRAM
- Schematic Capture and PCB layout with National Instruments' Circuit Design Suite

In the RF domain, I have professional experience at VHF and UHF with high speed antenna switches, low noise preamps, filter, mixers, and detectors. In addition, as a hobby, I have designed and built HF transmitters and amplifiers (both Solid State and Vacuum Tube) for ham radio use.

Tony Borries

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Relevant work

ARLO Project

<http://www.arloproject.com/>

I am currently the lead developer and maintainer for the ARLO Project, an open source framework providing analysis of large media collections namely targeted to academic researchers. Along with writing code, I mentor and review contributions from other members of the team, including CS students and non-CS background contributors. In addition to development, I manage the computing resources that power the project (notably interfacing with TACC's Stampede supercomputer).

Along with a team of researchers from the Illinois Natural History Survey and the National Center for Supercomputing Applications, the ARLO software was developed using machine learning to identify and classify bird calls and perform 3-D location analysis. This has since expanded to include additional forms of media, including voice and image analysis, and is presently being applied to poetry readings and radio broadcast recordings for analysis of large libraries of data within the Digital Humanities fields.

InvisionApp.com (January 2018 – April 2018)

Sr. Site Reliability Engineer

Deployment and monitoring of microservices in a SaaS stack built on Docker, Kubernetes, and AWS.

Zenoss (August 2015 – December 2017)

Software Engineer / Client Services

Custom development of “ZenPacks” to extend the Zenoss network monitoring products for client customization. Extensive use of SNMP for network monitoring as well as various APIs to collect data from devices (e.g., REST APIs, database queries, remote SSH commands). Focus on performance, scalability, and asynchronous processing.

In addition to development, this role involved extensive communication with our clients to collect requirements, support the deployment, and provide ongoing maintenance and troubleshooting of solutions.

DigitalOcean.com (November 2013 – August 2015)

Linux Systems Administrator / Tier2 (TechOps)

(Remote / WFH)

Provided customer support and investigated infrastructure issues for unmanaged Linux / Unix virtualized servers within DigitalOcean's public cloud. Customer support activities include advising customers on technical problems, investigating issues within our internal infrastructure or hypervisors, and identifying and resolving abuse issues. I handled both individual escalations and large scale incident management within the infrastructure, investigating, resolving, or escalating to Engineering if necessary.

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Rackspace (December 2011 – November 2013)
Linux Systems Administrator / Managed Cloud

Provided customer support for Rackspace's Managed Cloud team. In addition to supporting Cloud Infrastructure, I also provide direct support to customer's servers, namely the LAMP stack. Tasks include configuring initial build-out, from configuring Vhosts on an individual server to building out a large cluster with multiple web-heads and DB servers. Further work included system software installation, mitigating downed sites or servers, and discussing architectures with customers during their initial design phase.

Hostgator.com (March 2011 – December 2011)
Linux Systems Administrator

Provided direct support for shared, VPS, and dedicated server hosting customers, most of whom utilized cPanel/WHM or Plesk control panels. Most of my work was done through a ticket based support system, but also provided spill-over coverage for chat and phone support and a special queue dedicated to working 1-on-1 with customers on escalated long running issues.

Wildlife Tracking

Prior to switching to Linux SysAdmin work, I had an extensive career working with Wildlife Tracking technologies. I designed, built, and helped implement various tracking systems, both from a technological and biological perspective. An account of this experience is available on my website, at <http://hiretonyb.com/experience.html>

Publication Credits

- Radzio, T, J. Hackler, D. Delaney, M. Hinderliter, T. Borries, J. Smolinsky, N. VandenBroek, and A. Walde. 2007. Use of an automated telemetry, video, body temperature, and light intensity data to determine gopher tortoise activity, behavior, and disturbance response patterns. 5th Annual Symposium on Conservation and Biology of Freshwater Turtles and Tortoises. Atlanta, GA. Poster Presentation.
- Clement, T., Tcheng, D., Auvil, L., and Borries, T. "Introducing High Performance Sound Technologies for Access and Scholarship." The International Association of Sound and Audiovisual Archives Journal (September 2013) 41: 21-28.
- Clement, T., Tcheng, D., Auvil, L., and Borries, T. "High Performance Sound Technologies for Access and Scholarship (HiPSTAS) in the Digital Humanities" Proceedings of the 77th Annual ASIST Conference, Seattle, WA, 31 October – 5 November, 2014.

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