

Benjamin Toll

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<https://github.com/btoll>

I am a lifelong learner who is not afraid to dig in and understand the foundational technology underpinning a tool, an operating system or a packet-switched network.

I started in hardware and computer repair, spent more than a decade in software development and then several years doing DevOps. A developer at heart, I gravitate towards roles where I can do a lot of coding.

I have years experience in both compiled (Go, C) and interpreted languages (Python, JavaScript, Ruby, PHP), tending to favor the former.

Because of my experience with systems and software engineering, I have been able to quickly learn and become productive in Cloud Native technologies and cloud services in which I may be unfamiliar. Containers, container orchestration and container security are the most interesting areas to me.

I've always used Linux and am passionate about continuing to deepen my understanding of it.

In my free time I play guitar and ride my farm around my tractor. And dogs.

EXPERIENCE

Veriforce

Principal DevOps Engineer

Princeton, MA

December 2023 – present

Leading transition to GitOps for all Kubernetes clusters across the organization.

Improving security posture using Kyverno, eBPF, Tetragon and IRSA.

Automated upgrades of EKS clusters using eksctl and custom tooling.

Regularly reasearch and demo new technology and seek ways to improve existing infrastructure.

Career Break

October 2022 – November 2023

Taos/IBM

Senior Software and DevOps Engineer

Princeton, MA

June 2021 – October 2022

Collaborated with several clients including GitHub, PagerDuty, etc. where I performed tasks relating to both software engineering and DevOps. If there was a need, I filled it.

Development:

- Mostly focused on tooling, including new features, using Go, Python and Ruby.
- Testing, both functional and unit, in both Go and Python.
- Participated in code reviews.

Operations and Security:

- Mostly focused on container security, including code and image vulnerability scanning.
- Enforced access controls and other security best practices in Kubernetes.
- Enforced Dockerfile best practices, rootless containers, multi-stage builds and limiting resources and capabilities.
- Regular use of AWS cloud services such as S3, EC2, EKS, IAM, et al.
- Regular use of IaC tools such as Ansible, Terraform, Chef, et al.

Algorand

Senior DevOps Engineer

Boston, MA

November 2019 – February 2021

Responsible for package builds as well as maintaining in-house tools and Kubernetes build cluster, including implementing best-practice security methods.

- Built a fully-automated package build pipeline using Jenkins in a Kubernetes cluster. Included creation of deb and rpm packages, testing, signing and deploying to hosted mirrors.
- Maintained and improved in-house IaC tool written in Python. Added plugin support and other enhancements which further helped to automate and streamline build pipeline.
- Engaged in code reviews (Go, Python, Bash scripts)
- Wrote tests and documentation.

Consultant

Software Engineer and DevOps **Princeton, MA**

January 2016 – October 2022

Work with several clients to develop full-stack applications written in JavaScript/React, Elm and Go with infrastructure in AWS and GCP. In addition, maintained Linux systems on-premise.

Improved performance with Redis and Memcached.

Hardened Linux servers and tested web pages and APIs using security tools such as Burp and ZAP.

Sencha Inc

Frameworks Engineer**Redwood City, CA**

May 2013 - December 2015

Worked on the Ext framework as part of a remote team. My primary role was that of enhanced engineering.

- Fixed bugs that had been escalated by the Support team and/or by customer request.
- Patches (and tests) would then be merged into core.
- As the last stop in the escalation chain, worked on bugs that were very difficult and esoteric.
- Selected by manager to maintain viability of older product releases.
- One of the top framework contributors in the history of the company.

In addition, worked on new framework features and other projects within the company.

- Primary developer on the improved gridfilters API that shipped starting with Sencha 5.
- Resurrected the Sencha Fiddle project with my manager and developed several iterations of a working prototype before handing it off to its current maintainer.

Volunteered personal time to assist and mentor.

Sencha Inc**Senior Support Engineer****Redwood City, CA**

June 2011 - April 2013

Hired when the department was first created and was the second support engineer added to the team. This was an engineering job and within the purview of the engineering department. All solutions were provided in code and patches to the framework were encouraged.

- Process support tickets generated by customers. This meant everything from answering general questions about the framework and web development to (more usually) providing patches to fix a specific problem.
- As a senior member of the team was one of three team members that would be assigned the difficult escalated tickets to resolve.
- Promoted to the Ext frameworks team.

In addition, did a lot of work that was not part of my role or expected of me as a support engineer to help the team and the company. Examples include writing and maintaining tools that were used not only by the team but across the company. These included git extensions and bash tools.

Volunteered personal time to assist and mentor.

Yahoo!**Senior Javascript Engineer****Sunnyvale, CA**

November 2009 - May 2011

Worked on the Connected TV team. JavaScript running on TVs.

- Developed new applications to run on networked TVs.
- Contributed to the KONtx framework.
- Principal maintainer of several high profile applications (eBay, NFL, Y! TV).

- Very active in user forums answering questions and providing solutions in code. Because there were no GUI devtools like that in the browser to help debug a program, became very good at thinking through problems and all iterations of them to try and anticipate bugs, which has helped tremendously in every role since.

GoDaddy

Web Developer

Phoenix, AZ

January 2009 - November 2009

Worked on the ecommerce team as the sole frontend developer.

EDUCATION

University of New Mexico, BA, History, 1996 - 1999

- 3.92 / 4.00
- summa cum laude
- Phi Beta Kappa
- Phi Alpha Theta

LANGUAGES

Speak and read Italian at a conversational level. See my [Italian-English dictionary website](#).

CERTIFICATIONS

Linux Professional Institute

[LE-1: Linux Essentials](#)

The Linux Foundation

[Kubernetes and Cloud Native Associate](#)

ARTICLES

Kubernetes

- [On Getting Started With Kubernetes](#)
- [On Kubernetes Services](#)

Containers and Container Technologies

- [On Unsharing Namespaces, Part One](#)

- [On Unsharing Namespaces, Part Two](#)
- [On runc](#)
- [On Managing Docker Build-Time Secrets](#)
- [On Dockerfile Best Practices](#)
- [On Onionizing with Docker Compose](#)
- [On systemd-nspawn](#)
- [On Running systemd-nspawn Containers](#)
- [On Running a Tor Onion Service in a Chroot](#)
- [On Escaping a Chroot](#)

Container-Related and Virtualization

- [On eBPF](#)
- [On Getting Started with Kubernetes](#)
- [On Kubernetes Services](#)
- [On Virtual Machines](#)
- [On VboxManage](#)

Packaging and Signing

- [On Creating an APT Repository](#)
- [On Creating deb Packages](#)
- [On debsigs](#)
- [On Inspecting deb Packages](#)
- [On Inspecting RPM Packages](#)
- [On gpg-agent Forwarding](#)

Hacking

- [On the picoCTF Transformation Challenge](#)
- [On memfd_create](#)
- [On Fork Bombs](#)
- [On Escaping a Chroot](#)
- [On Stack Smashing, Part One](#)
- [On Stack Smashing, Part Two](#)