

Daniel Herrera

Engineer with over 9 years of experience leveraging software and automation skills to do what I love:
solve problems and remove toil

All underlined headings are links to their corresponding entry in my full work history page.

Senior Software Engineer @ Lambda (Sep '24 - Present)

Consolidate usage of Artifactory behind a bespoke self-service interface

Related Tech: Terraform, Artifactory, GitHub Actions

By extensively reviewing deployment code and conducting user surveys, I was able to take inventory of current usage patterns and requirements. I then coordinated and began executing on a plan while handling a two transitions in ownerships and accommodating constantly changing company priorities. This plan involved both consolidated use cases behind a bespoke self-service interface and migrated those use cases onto a production-grade SaaS deployment. Currently, I am working with my team to steadily steward migrating users, while simultaneously developing exhaustive documentation and integrations with other Platform services to iteratively ease the migration.

Software Engineer @ HPE (June '22 - Sep '24)

Operationalize bare-metal K8s cluster for internal development

Related Tech: Ansible, Bare-metal K8s, HPCM, Go, GitHub Actions

To ensure availability requirements, reproducibility, and general operability, I transitioned ownership of a hand-deployed bare-metal K8s cluster running on HPCM-managed servers to my team. I took inventory of all current operations and users and began by automating both documented and undocumented configuration into fully-reproducible baked images. After recreating all the current deployment code, I configured GitOps deployment of K8s services using ArgoCD, including the deployment of operators for GPU and network drivers, monitoring agents, and secrets injection. This effectively brought this critical yet abandoned resource under sustainable management.

Automating user onboarding and cloud service configuration

Related Tech: Ansible, GitHub Actions, Python

Software Engineer II @ Digital Ocean (June '20 - May '22)

Implement feature requests for internal K8s-native app platform

Related Tech: Go, client-go, K8s mutating and admission webhooks, controllers

As part of the Platform team, I was responsible for bug fixes and new features for our deployment tooling and K8s services. The projects I took on included enabling log scrapping for pods by using mutating webhooks to update resource definitions with necessary sidecars and annotations, extending our controller to include reconciliation of managed Job resources, and modifying our custom resources and resource generation code to include versioning annotations to enable rollbacks for apps and job definitions through our CLI. Aside from leading projects, I also collaborated daily with other engineers on PR reviews, RFC discussions, and fielding help-channel requests.

Automate dependency vendoring and version bumps

Related Tech: Concourse, Bash

Migrate legacy deployment code for bare-metal K8s clusters

Related Tech: Bare-metal K8s, Chef, Ansible, Python

Cloud Engineer @ Ultimate Software (Jan '16 - June '20)

Develop new deployment tooling for a legacy, in-house deployment service

Related Tech: OpenStack, Python, GitLab CI, Terraform, Chef

To address recent on-call incidents and instability in our legacy OpenStack deployment API, I onboarded to the service's Python server and the deployment automation. By improving logging within the server and replacing the deployment process to one leveraging container images to package server code running on persistent nodes, we were able to establish a reproducible release process. This updated process improved our confidence on further rollouts and allowed us to iterate on system stability.

Develop an internal, cloud-agnostic Kubernetes offering

Related Tech: OpenStack, K8s, Rancher, Terraform, Packer, Ansible

Education

B.S. Computer Science from Florida International University (Fall 2018)
