

Pete Emerson

Vergennes, Vermont, United States



pete@theemersons.org



[linkedin.com/in/peteremerson](https://www.linkedin.com/in/peteremerson)

Summary

Experienced DevOps Engineer with a demonstrated history of working in the internet industry. Strong engineering professional skilled in Go, Python, Perl, Terraform, Ansible, CI/CD processes, Agile Methodologies, Monitoring and Metrics, Incident Management, Consul, Vault, Prometheus, and more.

Experience



Founder

Fulcrum Ops

Jul 2023 - Present (2 months)



Principal Engineer

Gruntwork

Jan 2021 - Jul 2023 (2 years 7 months)

- * Responsible for onboarding all new customers, providing them with an overview of the product, quirks, and best practices
- * Automated communication between Slack, Github Discussions, and Zendesk
- * Wrote a command line tool (a plugin to gh) to aggregate issues and PRs across many repositories
- * Improved, maintained, and implemented AWS Reference Architectures for customers, consisting of our custom Landing Zone solution, a Sample Application, and our custom CI/CD Infrastructure Pipelines product



Infrastructure Engineer

Standard AI

Jan 2019 - Jan 2021 (2 years 1 month)

- * Terraforming of GCP infrastructure
- * Infrastructure as Code server provisioning (Ansible)
- * Mentoring of junior SRE
- * Wrote a tool to make signing of SSH certificates via Hashicorp Vault easy: <https://standard.ai/blog/improving-ssh-communication-with-cog/>



Infrastructure Engineer

Twine

Oct 2017 - Jan 2019 (1 year 4 months)

- * In charge of migration from Heroku to AWS
- * Implemented all AWS infrastructure using Terraform / Ansible / Hashicorp *



Principal Site Operations Engineer

Juvo

Jun 2016 - Oct 2017 (1 year 5 months)

- * Planned and executed migration of infrastructure from OpsWorks to Terraform / Ansible / Rundeck
- * Planned and implemented internal monitoring system with Prometheus
- * Planned and implemented HA secret management with Consul / Vault / Tendril
- * Wrote and open sourced Tendril, which versions secrets and exposes them to applications
- * Wrote Slack bot integrations, including one that allows a carrier to put our software into maintenance mode safely without Juvo assistance
- * Worked on next phase of infrastructure using Kubernetes, Docker, Helm

I drove the first phase of moving Juvo from their initial stack to Terraform / Ansible / Prometheus with Slack bot integration.

After writing this tool from scratch a few times at a few companies, I've finally been able to open source Tendril (<https://github.com/juvoinc/vault-tendril>), a tool to help manipulate and version configuration for applications.

Now I'm deep in the second big change to our infrastructure, which involves containers and Kubernetes. Containers bring a whole new set of challenges and possibilities.

Keywords for Juvo: Terraform, Ansible, Prometheus, AWS, bare metal, Kubernetes, Helm, Packer, Consul, Vault, Tendril

SaaS: New Relic, Pager Duty, Sentry



Principal Site Operations Engineer

Aug 2014 - May 2016 (1 year 10 months)

- * Migrated stack from Heroku to AWS
- * Implemented Ansible and Rundeck for infrastructure management
- * Implemented Prometheus for all internal monitoring
- * Managed Jenkins infrastructure pipeline to local package repository via fpm and prm
- * Wrote Slack bot integrations to bring powerful tools to the team
- * Managed SaaS integrations and configuration: New Relic, Pingdom, Pager Duty, Librato, Paper Trail, Sentry

I've come to really admire the Hashicorp suite of products. Terraform is an amazing tool to manage infrastructure via code. Managing AWS VPCs and associated networking by hand is not my cup of tea, and Terraform lets me do it once and then lets me clone it for other projects.

Another tool I started using at Automatic is Prometheus. Goodbye, Nagios. Goodbye, Graphite. Prometheus is a great tool, and I appreciate their monitoring philosophies (<https://prometheus.io/docs/practices/alerting/>).

What do these tools have in common? They're both written in Go. Guess which language is next on my list? I'd love to be able to contribute back to projects like these.

Keywords for this company: Linux, Ubuntu, Python, AWS, Ansible, Rundeck, Prometheus, Consul, Terraform, Packer, fpm, prm, Slack bots, Jenkins



Principal Operations Engineer

Fitbit (now part of Google)

Oct 2013 - Aug 2014 (11 months)

- * Planned and coordinated complete datacenter move of all baremetal servers
- * Designed and implemented more formal processes around production changes that may have uptime implications
- * Designed and implemented better processes (e.g. post mortems) wrapped around incidents (site outages or site degradations)
- * Wrote the beginnings of ChatOps leveraging HipChat to open JIRA incident tickets and add pertinent data to those tickets
- * Architected a CMDB (similar to Airbnb's optica, but in Python and leveraging redis for data storage and queues)
- * Managed team workflow via scrum and sprint cycles
- * Managed vendor and consultant relationships



Senior Director of Technical Operations

AppNexus

Aug 2008 - Oct 2013 (5 years 3 months)

- * Monitoring via Nagios
- * over 40,000 systems and application checks spread across almost 4,000 servers
- * automatic configuration when a new server comes online
- * wrote a custom MySQL backend that is the source of truth for the nagios config files (configuration can be done via custom GUI)
- * Metrics via Graphite
- * Collected approximately 5,000,000 metrics from all of our servers every 60 seconds
- * Custom metrics collection script written in perl ran on every server collecting metrics and passed them to our data pipeline
- * Coordinated with the Graphite author to provide additional capabilities
- * Code deployment
- * Leveraged Puppet to manage state on servers (running 0.25; new version of puppet has deterministic ordering, would love to migrate)
- * Used MySQL backend as source of truth
- * Deployments are rolled out in stages, fully automatically
- * Deployment consisted of changing MySQL columns to reflect new code version, then running Puppet
- * Writing one-off scripts
- * Helped the CTO rip out hardware based load balancers in favor of DNS round robin with failover via a custom DNS solution.
- * Wrote and maintained the dataloaders that take massive quantities of data and load them into our Netezza data stores (adding hadoop and vertica as well)
- * Wrote productivity tools such as a tagger script to manage Subversion and git tagging
- * Wrote mfind / mcurl / mexec scripts to run arbitrary commands in parallel on the AppNexus cloud
- * Wrote tools to query data out of various databases, generate files, and then parallel rsync them to various repositories in each datacenter
- * Whenever there's an "Oh, we need this out the door yesterday, and we forgot about this piece" moment, I've often been the guy to hack something functional together in Perl

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Consultant

Private Consulting

2010 - 2011 (1 year)



Vice President of Technical Operations

GarageGames

Oct 2007 - Aug 2008 (11 months)



Manager

Yahoo

Jun 2007 - Oct 2007 (5 months)



Director of Operations

Jan 2004 - Oct 2007 (3 years 10 months)



Senior Systems Administrator

Jan 2004 - Jan 2005 (1 year 1 month)



Senior Systems Administrator

Yale University

Jun 2000 - Dec 2003 (3 years 7 months)



Mathematics and Computer Science teacher

Choate Rosemary Hall

Jun 1998 - Jun 2000 (2 years 1 month)

Education



Middlebury College

BA, Computer Science

1994 - 1998

Skills

Heroku • Google Cloud Platform (GCP) • HashiCorp Vault • Terraform • Customer Onboarding • Go (Programming Language) • Amazon Web Services (AWS) • Linux • Apache • MySQL