JACOB COLVIN

Site Reliability & Platform Engineer

Cincinnati, Ohio | me@jacobcolvin.com | jacobcolvin.com | @0xMacro | colvinjm | MacroPower

EXPERIENCE

Senior Site Reliability Engineer

84.51° / Kroger

Remote / Cincinnati, Ohio — April 2021 – Current

- Led development of multiple Go metric exposition services.
- Developed Python monitoring library for the FastAPI framework.
- Deployed and supported enterprise observability services/tooling, both on-premises and in Azure Kubernetes, including Grafana, Datadog, Prometheus, Thanos, and Jaeger.
- Contributed fixes to Grafana, Thanos, and other upstream repos.

Versatilist / Site Reliability Engineer

84.51° / Kroger

Cincinnati, Ohio — December 2019 – April 2021

- Assisted a multitude of development/data teams with observability, cloud, CI/CD, and fulfilled other ad-hoc requests as needed.
- Enhanced our Prometheus ecosystem, by adding high-availability and long-term storage via Thanos.
- Created and administered multiple Azure environments using Terraform.

IT Intern / Co-op

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Cincinnati, Ohio — May 2016 – December 2019

Product Support Co-op — April 2019 – December 2019

- Designed a C# API layer over several legacy systems, and a SPA using TypeScript with React, to assist with support, data automation, and tech deprecation.

Service Management Co-op — Jan 2019 – May 2019

- Automated Red Hat Linux VM deployment through ServiceNow, via interactions with Satellite, vCenter, SolarWinds and Ansible.

Linux and Storage Co-op — May 2018 – Dec 2018

- Automated monitoring of eight distinct products.
- Designed custom web application to view events and metrics.

Data Operations Co-op — Aug 2017 – May 2018

- Automated tasks using PowerShell, VBA, Bash and PL/SQL in Bash.
- Created and documented Automic workflows with Bash and SAS ODS.

Windows and Virtualization Co-op — Jan 2017 – Aug 2017

- Created and documented PowerShell tools to automate admin tasks.

Platforms Co-op — May 2016 – Aug 2016

- Interfaced with BOSH and Hadoop to design custom PCF solutions.
- Designed and documented optimal setup for PCF environments.

ABOUT

I am passionate about open source, and thrive most when designing solutions for difficult problems. I am an avid homelabber, gamer, audiophile, and mechanical keyboard collector.

EDUCATION

B.S. Information Technology

University of Cincinnati - CECH

Aug 2015 – April 2020

- Cybersecurity specialization
- Summa Cum Laude

SKILLS

Development:

Go / Golang | Python | FastAPI | TypeScript / JavaScript | React | Vue | Jsonnet

Databases:

Postgres | Timescale

Observability:

Prometheus | Thanos | Grafana | Jaeger | Code Profiling | Fluent | Datadog | Telegraf

Operations:

Kubernetes - AKS, k3s | Helm | Azure | Docker | Crossplane | FluxCD | ArgoCD | GitHub Actions | Cloud Foundry | Databricks

Automation/Scripting:

Terraform | Ansible | PowerShell | Bash | Make

KEY PROJECTS

OmegaGraf

jacobcolvin.com/OmegaGraf

- An open-source project that seeks to completely automate vCenter monitoring, by orchestrating a small ecosystem of containers, including Telegraf, Prometheus, and Grafana.
- Paper: https://scholar.uc.edu/concern/student_works/jw827c971
- Technologies: Docker, C# / .NET Core, TypeScript, React

Prometheus Video Renderer

MacroPower/prometheus_video_renderer

- Just for fun, completely impractical tool that allows you to encode media as Prometheus metrics.
- Featured on the Grafana blog: https://grafana.com/blog/2021/07/30/how-to-use-grafana-and-prometheus-to-rickroll-your-friends-or-enemies
- Technologies: Go, Jsonnet

Analytics Panel Plugin

MacroPower/macropower-analytics-panel

- Grafana panel that injects JavaScript which reports user session information to a backend Go server, which exposes Prometheus metrics.
- Over 800k downloads, featured by Giant Swarm: https://www.giantswarm.io/blog/grafana-ception-or-how-we-do-grafana-analytics-giant-swarm
- Technologies: TypeScript, React, Go

Wakatime Exporter

MacroPower/wakatime_exporter

- Prometheus exporter and Grafana dashboards for Wakatime coding statistics.
- Over 100k downloads
- Technologies: Go

Homelab

MacroPower/homelab

- Infrastructure-as-code for my homelab / personal cloud. Defines multi-cluster k3s-on-MicroOS, spanning across bare metal and multiple Hetzner cloud environments.
- Technologies: k3s, Linkerd, ArgoCD, Helm, Jsonnet, Terraform

CODING TIME

Past Year