

<b>Jesse Hitch</b>	Principal Freelance DevOps and Reliability Engineer with <b>14 years</b> of experience, based in <b>Amsterdam</b> , specialized in automation using <b>IaC</b> , <b>CI/CD</b> , and <b>Python/Go</b> . Passionate about highly available, scalable, and fault tolerant microservice architecture via <b>Kubernetes</b> in local/hybrid environments.
<a href="mailto:jessebot@linux.com">jessebot@linux.com</a> <a href="https://jessebot.work">jessebot.work</a> <a href="https://github.com/jessebot">github.com/jessebot</a> <a href="https://codeberg.org/jessebot">codeberg.org/jessebot</a>	

### Keyword Optimized Skill Set

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Containerization	<b>Docker, Kubernetes (K3s, Rancher, EKS, GKE)</b>
<b>Kubernetes</b> Apps/Tools	<b>Helm, Argo CD, Argo Workflows, Prometheus, Thanos, Alloy, Grafana, Loki, Mimir, Ingress Nginx Controller, cert-manager, metallb, K8up, KIND, OpenBao, External Secrets Operator</b>
Operating Systems	<b>Debian, Ubuntu, Alpine, MacOS, CentOS, Amazon Linux, RHEL 7</b>
CI/CD	<b>GitHub Actions, Forgejo/Gitea Actions, Gitlab CI, CircleCI, Jenkins</b>
Languages	<b>Python, BASH, Go, JS (Node), C# (Unity 2020)</b> <b>English</b> (native speaker), Dutch (A1, A2 on a good day)
Notable Python Libraries (and tools)	poetry, flask, pandas, geopandas, matplotlib, rich, textual, github, kubernetes
IaC, Config Management	Terraform, OpenTofu, Serverless, Puppet, Ansible
Databases	<b>PostgreSQL, MySQL/MariaDB, AWS DynamoDB, MongoDB, Google Cloud SQL</b>
Cloud Providers	AWS, GCP, <i>some</i> Azure, Also passionate about hosting on-prem!

### Notable Open Source Projects

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<a href="#">smol-k8s-lab</a>	Quickly installs a slim distro of Kubernetes on metal (or VMs), with apps using Argo CD via a CLI, TUI, or with an easy YAML file.
<a href="#">small-hack/argocd-apps</a>	Collection of Argo CD templates for deploying helm charts and Kubernetes manifests as Argo CD apps.
<a href="#">onboardme</a>	Onboards you to macOS or Debian by installing packages from an easy to setup YAML file, plus useful docs for personal computing.

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## Notable Contributions to Open Source Projects

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<a href="#">nextcloud/helm</a>	A community-maintained helm chart for deploying Nextcloud on Kubernetes.
<a href="#">openbao-helm</a>	A helm chart to install OpenBao, a fork of FOSS Vault, and other associated components.
<a href="#">seaweedfs</a>	SeaweedFS is a fast distributed storage system for blobs, objects, files, and data lake, for billions of files! Blob store has O(1) disk seek, cloud tiering. Filer supports Cloud Drive, cross-DC active-active replication, Kubernetes, POSIX FUSE mount, S3 API, S3 Gateway, Hadoop, WebDAV, encryption, Erasure Coding.

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## Experience

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### Senior Reliability Engineer

Guerrilla Games

*Amsterdam, Netherlands*

November 2024 - Present

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I work heavily with Argo CD to deploy Applications (a ton of helm charts) on Kubernetes for an online game. In particular, I specialize in maintaining the observability and monitoring stacks for the game using open source tech such as Prometheus, Alloy, Thanos, Loki, and Grafana. I can be found doing all sorts of random platform engineering and devops tasks though: GHA Workflows, Kargo, Python and Golang CLI tools, some Terraform.

### Founder

Open Engineering

*Amsterdam, Netherlands*

July 2022 - Present

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Open Engineering is dedicated to supporting individuals and small-medium sized businesses with their open source containerization and cloud computing needs, with a specialty in helping with Kubernetes architecture and education for highly available web apps. I also work on:

- CI/CD pipelines and infrastructure from GitHub Actions to Argo CD

- Onboarding your engineering department to their new macOS or Linux laptops
- Open source project contributions on your behalf

## Senior DevOps Engineer

Geoanalytics Startup

*Amsterdam, Netherlands*

January 2023 - December 2023

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- Supported the geospatial focused machine learning and big data infrastructure needs of the engineering department including our data science/data platform/geoanalytics teams on GCP. Used primarily Kubernetes native architecture, and terraform using the Google and GitHub providers, biasing towards Google's own modules and writing new reusable modules when unique flows were to be repeated.
  - Also migrated all terraform states from Terraform Cloud to GCS backends.
  - In charge of upgrade plans/execution for all GKE clusters and apps running on them, including Dagster, JupyterHub, our monitoring stack (prometheus, alertmanager, grafana, loki, promtail), and upgrades of NVIDIA drivers for nodes and Docker images running in HPC clusters utilizing GPUs.
- Ensured SOC2 compliance for all engineering department infrastructure, as well as helped developers to put in place automatic security scanning of Python libraries, including automated pull requests for security patches to all used python libraries.
- Created complex GitHub Action workflows for terraform, helm releases, docker builds/pushes (including nightly rebuilds for security patches), and testing Dagster images.
- Created proof of concept for Nextcloud on Kubernetes as well as Argo CD on a management k8s cluster to deploy other clusters.
- Helped with Python dependency issues with system Python, conda, and poetry both on local machines (Ubuntu, macOS) and via Docker (Debian) on k8s, with a particular focus on ensuring stability of environments using OSGEO's GDAL.

- Worked with a working group across teams to develop a definitive supported dockerized development environment to ensure sameness of all local dev environments
- Helped support migration from Google Container Registry (GCR) to Google Artifact Registry.
- Identified cost saving measures after full inventory of infrastructure and helped clean up terabytes of unused data resulting in savings of tens of thousands of dollars. Gave guidance on alternatives to GCS such as Wasabi, including cost estimations.

### **Freelance Platform Engineer**

Abcam

*Amsterdam, Netherlands*

May 2022 - June 2022

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Helped with tech debt Devops tasks, including ArgoCD, setting up Kafka on k8s, Prometheus metrics and alerting, and Gitlab CI pipelines optimization and troubleshooting, and docker/k8s training.

### **Senior DevOps Engineer**

ReaQta, An IBM Company

*Amsterdam, Netherlands*

December 2021 - April 2022

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- Helped integrate ReaQta's AWS infra into IBM while helping to train an additional team mate, and move forward the hiring of additional team members/determine future ways of working
- Helped design and implement ansible deployment/upgrade pipelines with GitLab Runners for remote customer deployments both bare metal and AWS EC2 instances.
- Imported core bespoke customer infra from AWS into terraform in revision control.
- Updated product InfoSec standards, especially around logging from EC2 instances, docker, and VPC flow logs and long term log storage solutions using Glacier, and deployed various tooling for monitoring and alerting of their docker/EC2 infrastructure via AWS cloudwatch and datadog's Vector
- Benchmarked (for wall/CPU time + mem per millions of requests) and deployed Nginx WAF (web app firewall) with OWASP CRS (core rule set) docker image across multiple sites in Singapore and the EU

## Senior DevOps Engineer

Paladin Studios

Den Haag, Netherlands - remote

July 2021 - December 2021

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- Upgraded CI/CD workflows; laid out framework for migrating from locally hosted Jenkins to GitHub Actions hybrid self hosted runners/GHA runners
- Solved Unity (2019-2020.3) broken build automation job errors, requiring deep dives into C# game code, as well as set up new build automation jobs for new games
- Reduced automated Unity Android/iOS build target times by about 30% with multiple dockerized setups of Unity Accelerator
- Diagnosed infosec hygiene issues, and created a roadmap for future policies, alongside a comprehensive DevOps roadmap to be completely cloud native by 2022
- Created DEI (Diversity, Equity, Inclusion) training on LGBTQIA+ Allyship

## Cloud Platform Engineer

DAZN

Amsterdam, Netherlands - remote

Dec 2020 - June 2021

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- Worked to help the cloud platform team standardize their user management in Azure, GCP, and AWS environments for DAZN's product engineering department
- Designed/implemented architecture, written in Go, for hourly automated AWS IAM credential refreshes to assist in moving to GitHub Actions from Drone CI, via AWS Lambdas and DynamoDB
- Managed deployments and helped coordinate engineering teams to troubleshoot issues, especially with internal tooling and Hashicorp Vault

## Senior DevOps Engineer

VIZIO

Seattle, WA, USA - remote

August 2019 - August 2020

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- Designed and built out IaC (Terraform/Serverless) for monitoring VIZIO's AWS infrastructure, including ECS, RDS, Redis, ELB, and Lambda via Cloudwatch. Set up PagerDuty as well as had Cloudwatch send alerting via SNS to PagerDuty, which also alerted Slack/emailed core stakeholders when

anomalies were detected in a service's baseline expected thresholds. Also, Generated Datadog/Cloudwatch dashboards

- Revamped VIZIO's CI/CD process for deploying firmware/asset bundles to TVs. Switched them from three 24/7 running EC2 instances, to a Dockerized Python3 environment that spun up via CircleCI to process build configs, and generate appropriate software bundles for specific models of TVs

## Senior DevOps Engineer

ReachNow / ShareNow / BMW

Seattle, WA, USA

August 2018 - July 2019

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- Developed a new pipeline and project creation script for the app and website using Python, Jenkins, and Kubernetes on AWS EC2 instances (With kops). Moved everything from ECS/docker on EC2 to Kubernetes.
- Other CI/CD related tech: bitbucket, codeship, AWS ECS/Fargate
- Responsible for upgrades to infrastructure such as PostgreSQL, MongoDB, and adjustments to ECS/Fargate
- Responsible for responding to technical alerts for my services and an on call rotation for general outages

## DevOps Engineer

Analog Devices

Seattle, WA, USA - Remote

March 2018 - Aug 2018

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- Full stack dev work for ADI project management webapp using Perl on the backend
- Configured and wrote integrations between Perforce and Atlassian in Perl/Python (P4DTG, Jira/Confluence/Swarm REST APIs). Also did PoC for Fisheye/Crucible
- Wrote python handling app to process files ClamAV deemed suspicious

## Senior Software Engineer

MinOps Inc.

CA, USA - Remote

July 2017 - March 2018

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- Primary engineer on product to index AWS infrastructure and make it queryable via SQL
- Feature/bug work to the primary product, which required working with Lambda, EC2, SNS, Route53, CloudWatch, CloudFront, CloudFormation, S3, IAM
- Responsible for website (wrote front/backend, development pipeline)

## Software Engineer

Cloudian

San Mateo, CA, USA

April 2016 - July 2017

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- Maintained existing code, in both BASH and Python for the Hyperstore installer (Object storage/searching, in your local datacenter with an AWS S3 like API for hybrid clouds)
  - Tasked with leading project to rewrite roughly 20,000 lines of BASH into Python, while also mentoring a junior SWE in Python
- Provided Linux and web expertise, e.g. snapshots, DNS, SSL, and InfoSec matters

## DevOps Engineer

Analog Devices Inc.

San Jose, CA, USA

Nov 2013 - April 2016

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- Wrote automation scripts/webapps to cut down on direct admin to user interactions. Designed/Wrote AutoVM in Python: supported creation/management of VMs via a web app, RESTful API, or CLI. Capable of mass rebuilds. Utilized VMware vSphere (Pyvmomi)
- Supported internal research and development for RHEL/Solaris infrastructure, and managed a number of services, including Puppet, Nagios, LDAP, Perforce, HAProxy, and bare metal hardware for several large compute farms

## **InfoSec Analyst**

Apple

*Sunnyvale, CA, USA*

Aug 2013 - Nov 2013

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- Brought on for a short term contract and tracked suspicious users across 17.0.0.0/8 during an important product launch and analyzed payloads of any packets. Helped create use cases for alerting using various logging sources including netflow anomalies via Lancope StealthWatch and Arbor's NSI/TMS

## **Site Reliability Operations Analyst**

Apigee

*Palo Alto, CA, USA*

June 2013 - July 2013

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- Identified issues that arose with scale in Apigee's LAMP stacks on AWS, as well as managed networking, DNS, apache configs, ELBs, memory leaks, and provided consultation on automation of dev hassles

## **Unix/Linux Support Engineer**

Centrify Corp.

*Sunnyvale, CA, USA*

Oct 2012 - May 2013

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- Troubleshoot Centrify products dealing with Kerberos across AD/LDAP and role based management, including ACLs. Also, Did deep dives into SSH, PAM/LAM stacks across multiple distros of Unix/Linux

## **Linux Sysadmin**

Nexcess.net LLC

*Dearborn, MI, USA*

Jan 2012 - Oct 2012

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- LAMP stack admin for web hosting clients. Supported PHP based websites, especially CMS like Wordpress and Magento. Resolved SSL issues, and managed DNS for clients.