

Mike Shade

DevOps Engineer



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About

Experienced DevOps Engineer who excels at finding the right solutions to hard problems and automating the toil away. Takes pride in communicating effectively to stakeholders of all types, distilling complex ideas down to their essence to guide decisions and collaborate across teams. With a particular acumen for containers and Kubernetes, I build platforms that are usable, intuitive, and effective. I have more than 15 years of experience successfully designing, implementing, and improving many kinds of production workloads and technologies, from on-premises to the cloud and from edge to origin.

Work Experience

The Motley Fool

Devops Engineer

June 2018 - Present

<https://fool.com> (https://fool.com)

Helping make the world smarter, happier, and richer

- Platform Engineering for a team of 50+ developers supporting dozens of deployments per day to a site with millions of daily page views
- Consult with development teams to design cloud/container architecture for fault tolerance, scalability, and efficiency

- Design and implement Kubernetes-based microservice hosting platform, on-premise with Rancher and in AWS EKS
 - Develop a library of common Helm charts for services deployed to Kubernetes
 - Implement Kubernetes-based ephemeral environments for full-stack build/deploy testing
 - Improve monitoring and logging observability via integrations with AWS, Datadog, Kubernetes, Splunk, and internal tooling
 - Direct entire lifecycle of multiple production Kubernetes clusters and supporting services
 - Design efficient, intuitive CI/CD processes for build/deploy and Infrastructure as Code with Jenkins (Groovy), Github Actions, GitlabCI and Terraform
 - Build Python-based platform management tools to solve application and infrastructure problems
 - Evangelize configuration and infrastructure as code for containerized and cloud-based workloads
 - Containerize legacy applications
 - Create automated tooling for fast startup of new projects
 - Design and maintain our customer facing web infrastructure from edge to origin to reliably provide content to millions of members all over the world
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Forum One

Sr. System Administrator

April 2011 - June 2018

<https://forumone.com> (<https://forumone.com>)

A full-service web design and technology consulting firm

- Designed highly available, scalable infrastructure for PHP / Python / Django / Node / Docker-based applications on AWS
 - Decreased time required to manage, deploy, and maintain infrastructure with CloudFormation, SaltStack, and Puppet
 - Developed and support workflow with Docker and Vagrant for continuous delivery pipeline via Jenkins
 - Participated in agile Scrum development methodology
 - Provided consulting to clients to effectively manage infrastructure, scaling, and site availability
 - Guided business development team in proposals for effective, resilient, cost-conscious hosting solutions
 - Client-facing support, consulting, and incident response
 - Directed internal IT staff, provided career development mentorship, and technical guidance
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Forum One

System Administrator

April 2007 - April 2011

- Designed and supported cloud and dedicated infrastructure for hosting of Drupal / Wordpress / PHP sites
 - Incident response and remediation as part of on-call rotation
 - Managed dedicated and cloud servers
 - Vendor and service procurement oversight
 - Directed internal IT operations
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Omniplex World Services Corporation

Technical Support Specialist

March 2006 - April 2007

<http://www.omniplex.com/> (<http://www.omniplex.com/>)

Provider of investigative services to public and private sector agencies nationwide

- Supported secure operations of country-wide fleet of IT systems
 - Help Desk support
 - IT lifecycle support and management
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Skills

Platforms

- Kubernetes: EKS / Rancher / k3s
- Docker
- Linux of all breeds
- AWS / GCP / vSphere
- Serverless

Kubernetes

- Helm / Kustomize packaging/templating
- Continuous Delivery
- Blue/Green Deployments
- Kong / Nginx Ingresses
- External Secrets Operator with Vault / AWS Secrets Manager
- Cluster Autoscaling / HPA
- Nexus container registry

Automation / Observability

- Ansible / SaltStack / Puppet
- Terraform / CloudFormation / Salt Cloud
- Datadog / Splunk / Loki / Prometheus

Databases

- PostgreSQL / MySQL / MariaDB
- Redis
- ElasticSearch
- Apache Solr

Caching / HA / Delivery

- Nginx / Varnish / Apache
- Kong API gateway
- Redis / Memcached / ElastiCache
- HAProxy / ELB / ALB
- CDNs: CloudFlare / Fastly / CloudFront

Programming / Tools

- Python / Bash / Perl / PHP
- Git / Source Control

Foundational

- DNS / Route53
 - SMTP / SES
 - LAN / WAN Networking / VPC
 - Firewall / Security Policy
 - Hashicorp Vault / AWS Secrets Manager
 - Infrastructure as Code / IaC
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Notable Projects

Peace Corps

Infrastructure Design, Administration

2016 - 2018

<https://www.peacecorps.gov/> (<https://www.peacecorps.gov/>)

Django / Wagtail CMS application hosting

- Design and implementation of auto-scaling and highly available infrastructure to host high profile Python application
 - Support ongoing operations
 - Ensure FISMA compliance of hosting environment
 - Support continuous integration and deployment pipeline
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County Health Rankings and Roadmaps

Infrastructure Design, Application Support

2008 - 2018

<http://www.countyhealthrankings.org/> (<http://www.countyhealthrankings.org/>)

Multi-technology application presenting impactful and highly publicized public health data

- Multiple iterations of infrastructure, from single and multi-instance, to auto-scaling AWS platform to handle yearly spikes
 - MapBox / TileMill stack for map production
 - PHP (Laravel) API backend
 - Drupal frontend
 - Multiple layers of caching for each app component, including edge CDN, Memcached, and Database layers
 - Support continuous integration and deployment
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EPA

Infrastructure Consultant

2014 - 2018

<https://www.epa.gov/> (<https://www.epa.gov/>)

Provide expert guidance on infrastructure development and ongoing improvements to support large-scale Drupal application

- MySQL database replication support, optimization, tuning
 - Caching strategies with CDN to improve application performance
 - Incident log and metric analysis to determine causes of and remedies to performance issues
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Center for Strategic and International Studies

Infrastructure Design, Administration

2010 - 2018

<https://www.csis.org/> (<https://www.csis.org/>)

Drupal Application hosting for client with large volumes of high profile content and media

- Design and implementation of auto-scaling and highly available infrastructure to host Drupal application.
 - Support growing patterns of international traffic
 - Tiered caching strategy comprised of edge CDN, Memcached, and Database layers
 - Support continuous integration and deployment
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Education

Terraform training

2022

Advanced Hashicorp Terraform training, module design and reuse, and CICD patterns

AWS Training, Advanced Architecting

2021

Advanced Architecting on AWS training, covering best practices, security, VPC networking, hybrid infrastructure

AWS Training, Containers on EKS

2021

Best practices and usage of Elastic Kubernetes Service for deploying containerized workloads

Python and Django

2018

Training on development with Python and Django framework to further understanding for infrastructure support

SaltStack Certified Engineer

2014

Certification 0x0414F5F9

Red Hat Certified Engineer, RHEL5

2008

Certification 805008376234889

Interests

- Music - I'm a member of several bands, ask!
- Open Source technology, philosophy
- Personal Finance / Investing
- Photography
- Hiking / Travel