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How Generative DevOps, Kubernetes, and Containers can Elevate Environments, from Local to Production.

Generative DevOps calls on us to embrace the paradigm shift brought about by advanced tools like ChatGPT and Co-Pilot.

The disruption to traditional DevOps and Infrastructure as Code (IaC) are game changing, offering a trebling to our output.

New tools, combined with over a decade of GitOps and CI/CD, allow me to identify and implement best practices with an unprecedented efficiency.

Acutely aware that all technology decisions will eventually require revision, my strength lies in accurately predicting those moments of change.

In this rapidly evolving landscape, my ultimate goal is to create an environment where developers can interact with computing resources as seamlessly as they would with any other commodity, harnessing the full potential of this technological revolution.

Professional Experience

2022-2023 Principal DevOps; OneSpan

Kubernetes (EKS) / Gitlab (self-hosted) infrastructure and developer support.

- Provided Gitlab-ci pipeline implementation and support on Kubernetes and shared runners for multiple teams
- Technical developer support for Java: Gradle/Springboot (backend) and typescript: Yarn/Node (frontend)
- Implemented semantic release, renovate bot, containerized developer build environment.
- Deployed and contributed to in house terraform to create AWS kubernetes deployments
- General gradle build support, dependency resolution for internal gitlab package repository
- AWS, AKS - full kubernetes stack, including SQS, RDS, ElastiCache.
- Kubernetes autoscaling - horizontal and vertical.
- Microsoft playwright - Implemented gradle builds and gitlab-ci w headless browser
- Implemented modern CI/CD and containerization of legacy in house Ruby application

- Android/iOS - Supported and improved in house build environments for mobile applications.

2014-2021 DevOps/Continuous Integration; The Linux Foundation

Developed automations to deliver self-service to the developers of large software collaborations (OpenDaylight, ONAP, OPNFV)

- Provided release engineering and system administration for collaborative Projects
- Supported Developers around the globe with jobs, docs and artifacts
- Deployed scaffolding for developer driven test with Jenkins job builder
- Migrated from static baremetal to dynamic provisioning of build nodes
- Contributed in-house code:
 - puppet, ansible, jenkins-job-builder, lftools, global-jjb
- Wrote api interfaces for Gerrit and Github
- Custom, YAML driven, in repo, automation for:
 - Committer rights
 - Artifact release/promotion
 - Project creation (Gerrit, Github, Jenkins)
- Jenkins Configuration automation in repo via JcasC
- Documentation automation from .rst to readthedocs in jenkins
- Authored Kubernetes helm packages for Matrix chat and Jitsi Meet
- Worked with in house Terraform

2013-2014 Systems Administrator; eNovance

- Created a CI service for changes to our puppet manifest with Jenkins
- Upgraded production OpenVZ hypervisors, leveraging DRBD and LVM
- Deployed and configured hypervisors from PXE to Production
- H/A migration of Apache, Nginx, Mysql, MongoDB, Redis, Shoutcast services
- Deployed OpenVZ clusters with DRBD
- Managed AWS servers and created backup solutions for all clients
- Created and recovered Mysql and PostgreSQL replica sets
- Contributed bug fixes for and extended functionality of in house puppet modules.
- Scripted daily tasks, contributing to the overall automation of eNovance's workflow.
- Created and improved Nagios checks for various services

2011-2013 Systems Administrator; Manwin Canada

- Wrote puppet infrastructure for in house software to streamline developer deployment
- Researched and implemented high availability solutions for both db and app servers

- Profiled, optimized and migrated MySQL and PostgreSQL databases
- Deployed production matching VM environments for developers
- Deployed upgraded latest technology stacks for high traffic websites:
 - redis, sphinx, postgresql, nginx, rabbitmq, haproxy
- Wrote automation scripts for my and other departments

2008-2011 Systems Administrator; StatusNet

- Deployed and managed infrastructure for StatusNet's cloud service
- Performed rolling upgrades of MySQL database clusters, leveraging replication
- Migrated high traffic websites across hosting environments with minimal downtime
- Capacity planning
- Documented deployment and recovery procedures
- Trained new employees
- Cross platform testing of the StatusNet software with virtual machines
- Deployed the StatusNet software for clients behind their corporate firewalls
- Responded to support requests on the phone, IRC, e-mail and forums
- Deployed fault tolerant load balanced applications:
 - ActiveMQ, Meteor, Prosody
- Set up and maintained developer environments which matched production
- Set up and maintained the company mail server, mailing lists and CMS
- Monitored services and kept metrics
- Implemented nagios for monitoring and wrote custom nagios checks