

Westminster, CO

## Skill Summary

- Full Stack Engineer with expertise in cloud engineering, serverless, development, devops, continuous integration, automation, process improvement and technical team leadership
- AWS Serverless application development
- AWS Automation with Terraform, Cloud Formation and Python
- Developed applications in C#, Node.js, and Python
- Release engineering and CICD experience in C#, Java, Node.js and C++
- Expert in automation to include infrastructure as code, build automation, and CICD
- Extensive expertise in implementing best practice agile development methodologies
- Successful in implementing repeatable, cost effective solutions that immediately increase the efficiency of the project team and help to ensure the release of high-quality software

## Key Expertise

DevOps Architecture Design	Serverless Development	Continuous Integration Implementation	Technical Team Leadership	Agile Process Improvement
AWS Lambda	Docker	AWS	DevOps	Infrastructure as Code

## Technical and Management Skills

- 19 years Software Development Experience
- 5 years Management Experience
- **Programming Languages/Frameworks:** C#, .Net 3.0-4.5, .Net Core, SQL, C++, Java, Shell, Perl, Python, Node.js
- **Cloud Technologies:** AWS, Python Boto2-3, Terraform, Cloud Formation, Serverless Framework
- **Containerization:** Docker, Kubernetes, Rancher
- **Operating Systems:** Linux (Ubuntu, CentOS, Debian) Windows (up to Windows 10) Mac (OSX)
- **Continuous Integration/Release Engineering:** Jenkins, Maven, GitHub, BitBucket, Git, GitLabs, AWS CodeBuild, AWS CodeDeploy
- **Configuration Management:** Ansible, Packer
- **Database Platforms:** Oracle 8i-11g, MS SQL Server 2000-2008, MySQL, DB2, Teradata, PostgreSQL, Cassandra, DynamoDB, AWS RDS (Aurora Postgres/MySQL)

## Project Experience

### *DevOps Consultant/AWS Solutions Architect, Equity Staffing 10/2018-2/2019*

#### *Infrastructure as Code*

- Developed Terraform modules for several AWS assets to include EKS, ElastiCache, Redis, Aurora, DynamoDB, S3, Route 53, Subnets, ALB, Security Groups, Route Tables, VPC Endpoints, Internet Gateway and Nat Gateway
- Implemented full environments (test and dev) via Terraform leveraging developed modules and using S3 remote state to allow resources to be managed by a team
- Implemented and Managed EKS Nodes via Cloud Formation

#### *Serverless*

- Developed and implemented secure AWS Lambda serverless functions in Python and Node.js
- Leveraging AWS APIs, IAM and Node.js, developed a Lambda function triggered on put object to S3 that converted a html file to a PDF file for customer delivery
- Leveraging Python and boto3, developed a secure VPC enabled Lambda function allowing for KMS decryption of Vault unseal tokens and unsealing of a target Vault implementation
- Developed and implemented a Python boto3 Lambda function that acted as a Login service taking encrypted user credentials and providing back AWS Cognito tokens (Access, Refresh and Identity)
- Managed all Serverless functions with the Serverless Framework allowing for ease of management and cloud provider flexibility
- Provided training and guidance on effective Serverless implementation

#### *DevOps and Cloud Engineering*

- Implemented Cloud Watch events to keep Lambda functions warm ensuring quick response time
- Configured Nginx servers with 301 http to https redirects
- Configuration management with Ansible, Terraform, Python and Cloud Formation
- Leveraging Cloud Watch Agent, implemented memory based Autoscaling on EKS Node resources via Cloud Formation
- Implemented resource tagging strategy to manage resources via tag-based AWS Resource Groups
- Implemented AWS Config for continuous monitoring of resources (SNS Subscription based)
- Leveraging AWS Trusted Advisor, monitored resource security to ensure security compliance

#### *Solutions Architecture*

- Recommended secrets mgmt via AWS Secrets Manager, KMS and Systems Manager Parameters
- Designed Kubernetes/AWS secrets mgmt approach that automated the creation and management of secrets and ensured secrets were never stored in memory
- Recommended extending spring cloud config manager to include AWS Secrets Manager
- Recommended interservice TLS microservice communication be enforced via the use of itsio sidecar containers
- Designed serverless approach for customer specific html to pdf conversion
- Implemented IAM Role/Group security for AWS assets and Kubernetes
- Developed and implemented a Kubernetes Namespace environment approach that allowed development teams to work in isolation and streamlined microservice project development

#### *Kubernetes*

- Implemented and Managed Kubernetes via EKS
- Implemented and managed EKS Nodes via Cloud Formation
- Implemented role-based security using role bindings, config-map, IAM Authenticator and AWS Roles, Groups and Policies
- Developed utilities for managing deployments, services, pods and other assets
- Managed multiple microservices environments and namespaces across multiple EKS clusters.
- Provided guidance to dev, test and devops teams on effective Kubernetes management

#### *Python*

- Developed AWS Automation libraries leveraging boto2-3

- Developed AWS asset automation scripts for various assets such as Cognito User Mgmt, KMS encrypt/decrypt, and Add Target Groups to ASG
- Developed automation that will generate Terraform projects (hcl main, vars, outputs etc.) based only on AWS resource tags
- Developed database management scripts for environment automation

### ***Independent Consultant/AWS Solutions Architect/DevOps Architect***

Independent consultant specializing in DevOps and AWS Solutions Architecture

*Drupal, Docker, Rancher/Kubernetes and GitLab CICD Solution Migration to Client AWS Infrastructure*

- Identified and updated internal and external dependencies (Drupal Modules, Compose, Docker, and Infrastructure) to allow for complete decoupling from existing host architecture
- Configured and migrated GitLabs repositories and docker registries
- Configured GitLab Runner with docker executor and custom build container within AWS
- Developed CloudFormation templates for AWS environment management
- Developed Ansible playbooks to manage GitLab GitRunner and additional infrastructure
- Provided AWS services cost estimates for a Rancher/Kubernetes GitLab environment to include multiple options based on budget, HA and security requirements
- Leveraging AWS CloudFormation and Ansible delivered a secure Rancher Cattle infrastructure orchestration within AWS.
- Configured AWS deliverables to allow for push button spin up/down
- Provided architectural recommendations for migration of existing infrastructure to AWS
- Provided infrastructure architecture, build flow and development documentation and guidance to management and development teams on a complex system inherited from a previous vendor

### ***AWS Solutions Architect/CICD Architect Sr. Consultant, Cable Labs/Kyrio 08/2017***

*Revisited Kyrio to provide refresher training and Microservices/CICD system updates*

- Upgraded CICD systems to .Net Core 2.0 and Docker 17.06 and provided corresponding Ansible Playbooks
- Developed and implemented multi-stage Dockerfile for Aspnet and .Net Core microservices
- Upgraded Jenkins to 2.0
- Updated Microservice CICD Pipeline to include dynamic test execution
- Provided training and guidance on Kubernetes, AWS, Jenkins, Docker and .Net Core 2.0
- Provided training on the full spectrum CICD solution ensuring development and operations staff could spin up and maintain the environment as well as efficiently onboard new Microservices

### ***DevOps/Solutions Architect Sr. Consultant, Cable Labs/Kyrio 10/2016 – 02/2017***

- Designed and Implemented a Microservices container CICD solution within AWS leveraging Jenkins, GitLabs, Docker, Ansible and Kubernetes
- Implemented a production ready, load balanced, highly available, fault tolerant, auto scaling Kubernetes AWS infrastructure and microservice container orchestration
- Implemented CICD allowing for deploy to multiple client Kubernetes/AWS environments

- Leveraging Ansible and Packer implemented a streamlined Jenkins solution allowing for initial environment spin up and or recovery in minutes
- Developed Ansible playbooks to manage development and build servers
- Leveraging kops implemented a Kubernetes Container Orchestration solution within AWS allowing for easy management, creation and recovery of AWS assets
- Managed AWS assets and architecture to include VPC, Subnets, Routing Tables, Security Groups, EC2 and Route 53
- Developed and maintained Dockerfiles for Debian .Net Core microservices
- Developed microservice onboarding tools leveraging Python and Jenkins allowing for easy creation and maintenance of build jobs and Kubernetes deploy and services
- Leveraging Jenkins and Groovy provided a fully recoverable microservices build solution
- Performed administration on AWS Assets, Jenkins, GitLabs and Kubernetes
- Implemented Jenkins and Slack integration
- Trained staff on effective use of Jenkins, Docker, GitLabs and Kubernetes
- Trained staff on Kubernetes administration
- Provided guidance to development regarding effective microservice architectures

### ***Sr. Build Engineer/DevOps Consultant, Charter Communications 03/2015 – 02/2016***

- Implemented Continuous Integration (CI) for Java REST API micro services (Maven), Node.js applications (Grunt, Gulp), leveraging Nexus, Git Stash, Jenkins, AWS, Docker and Ansible
- Implemented a Docker delivery pipeline allowing for CICD of tomcat web service containers
- Managed Jira Agile Scrum/Kanban boards and developed queries for project management teams
- Implemented AWS asset management leveraging Python ec2-boto2 and ec2-boto3 to control AWS costs and to ensure uninterrupted development
- Managed a PAAS system leveraging Jenkins, Nexus, Ansible, Packer and AWS
- Implemented Netflix OSS components Zuul and Ribbon client in support of a CI environment
- Configuration management leveraging Ansible and Packer
- Developed Python class libraries for AWS Automation leveraging Python boto
- Managed Jenkins in a multiple VPC AWS environment
- Provided guidance regarding effective infrastructure automation, test automation and integration
- Automated the configuration of AWS assets such as ASGs, ELBs, AMI's, and Ec2 Instances
- Developed and implemented automated builds leveraging Maven, NPM, Grunt, and Gulp
- Performed administration on AWS Assets, Jenkins, Stash, Nexus (CICD Environment)

### ***Staff Software Configuration Engineer, Digital Globe 06/2014 - 02/2015***

- Led the version control migration effort to migrate all repos from SVN to Git
- Automated the migration of 150+ repos from SVN to Github
- Developed Python build utilities which greatly increased the efficiency of the build automation
- Developed automated builds leveraging Jenkins, CMake, Make, Ant, and Maven
- Implemented CI across several development teams allowing for a continuous feedback loop
- Developed a phased approach to CI implementation that facilitated and eased the adoption of CI
- Managed a CI environment leveraging Jenkins, Ansible, Linux, Windows and AWS
- Trained staff on Git and GitHub API usage

- Installed, configured and performed full spectrum administration on Jenkins, Jira and Confluence
- Configured tools for max performance and max uptime in support of 100+ users

### ***Independent Consultant/Automation Architect 05/2013 – 06/2014***

As an independent software consultant specialized in developing and implementing automation architecture and frameworks, refactoring existing automation for maximum efficiency, implementing and maintaining continuous integration and custom C# development.

## **Summary of Previous Employment (1993 – 2012)**

*Automation Architect, Louisville, CO*  
*CICD Engineer, Broomfield, CO*  
*Automation Architect Consultant, Boulder, CO*  
*Jira Consultant/Developer Centennial, CO*  
*Automation Architect/Jira Admin, Vergennes, VT*  
*Automation Architect, Robert Half Technology, Loveland, CO*  
*Automation Engineer Lead and Process Consultant, Anteo Group, ADP, Fort Collins, CO*  
*Automation Engineer Team Lead, Vega Consulting, NYS Dept of Labor, Albany, NY*  
*Lead Engineer, Linius Consulting, NYS Dept of Health, Albany, NY*  
*Lead Automation Engineer Consultant, IP Logic/ IA System, Albany, NY*  
*Lead Automation Engineer, Experian, Albany NY*  
*QA Automation Lead Consultant, Keene Consulting NYS DTF, Albany NY*  
*Tech Lead, Solutions Point/Sprint PCS, Overland Park KS*  
*Oracle Developer CSC/DOD, Kansas City, MO*  
*USMC 1993-1999 E-5 Platoon Sergeant*

## **Education**

**Bachelor of Science: Management Computer Information Systems Park University, Parkville, Mo.**

## **Certifications**

**AWS Certified Solutions Architect – Associate 2017**

**AWS Certified Developer – Associate 2017**

**AWS Certified SysOps Administrator – Associate 2017**