

# JIMMY RAY

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📍 Powhatan, VA

## SKILLS

### Cloud Architecture

Migration · PCI DSS · High Availability ·  
Resiliency · Compliance and Governance

### Infrastructure-as-Code

CloudFormation · Terraform · AWS CDK

### Security and Access Management

IAM · JWT · RBAC · ABAC · PARC · OIDC ·  
TLS · Amazon Verified Permissions

### Containers/DevOps

Docker · Kubernetes ·  
Amazon EKS/Fargate · GCP Cloud Run ·  
AWS CDK · AWS SDK · GitOps · ArgoCD ·  
CDK8s · Jenkins · Helm

### Policy-as-Code

Open Policy Agent · OPA/Gatekeeper ·  
Kyverno · MagTape · k-rail ·  
Cloud Custodian · KubeWarden · jsPolicy ·  
Datree

### Languages/Script/Shells

Go · Rego · Java · JavaScript · Groovy ·  
Bash · Python

## TALKS

### GitHub Profile - Talks

<https://github.com/jimmyraywv/jimmyraywv/blob/main/TALKS.md>

## PUBLICATIONS

### GitHub Profile - Pubs

<https://github.com/jimmyraywv/jimmyraywv/blob/main/PUBS.md>

## OPEN SOURCE

[aws-samples/k8s-notary-admission](#)

[aws-samples/k8s-psa-pss-testing](#)

## EXPERIENCE

**Chief Cybersecurity Architect** 11/2023 - Present  
**Boeing Global Services, Digital Aviation Solutions** Powhatan, VA

- Increased security posture in cloud environments and on-premise
- Defined Policy-as-Code Defense-in-Depth strategy for software supply chain
- Built Security Guardians team
- Led Architects Guild

**Chief Cloud Architect** 06/2023 - 11/2023  
**Boeing Global Services, Digital Aviation Solutions** Powhatan, VA

- Led adoption of cloud Defense-in-Depth strategy
- Provided cloud architecture guidance across multiple portfolios

**Sr. Developer Advocate, AWS Kubernetes** 01/2022 - 06/2023  
**Amazon Web Services** Powhatan, VA

- Delivered container image signing solution
- Led security module for EKS Workshop v2 release
- Led Pod security content for EKS Security Immersion
- Prototyped solutions for internal and external stakeholders, using Golang, Java, Python, and the container and Kubernetes ecosystem
- Produced and delivered technical content (blogs, docs, videos)
- Led container image signing efforts for AWS Kubernetes group
- Member of internal Software Supply Chain Security Steering Committee
- Policy-as-Code (PaC) and Cybersecurity/IAM SME

**Sr. Specialist Solutions Architect, Containers** 09/2020 - 01/2022  
**Amazon Web Services** Powhatan, VA

- Helped customers build secure container solutions
- Community thought leader for Policy-as-Code (PaC) solutions
- Subject-matter expert in Container Supply Chain and Container Security

**Sr. DevOps Architect** 06/2020 - 09/2020  
**Amazon Web Services** Powhatan, VA

- Engaged in DevOps consulting activities
- Delivered self-service least-privileged Service Catalog architecture

**Distinguished Engineer** 07/2019 - 06/2020  
**Capital One** Richmond, VA

- Led technical efforts of four teams building enterprise Kubernetes platform
- Containerization SME, responsible for enterprise vision and strategy
- Represented Capital One in the Cloud Native Computing Foundation (CNCF) Financial Services Users Group
- Venture Investment Technology Advisor
- Developed Policy-as-Code and security architectures

**Cloud Engineering Containerization Lead** 03/2018 - 07/2019  
**Capital One** Richmond, VA

- Led successful Kubernetes "Inner-Sourcing" effort, resulting in 120 forks, and adoption across the enterprise
- Architected and developed Kubernetes workload security and compliance layer with Open Policy Agent
- Contributed "voice-of-customer" to OPA/Gatekeeper OSS project
- Developed container workshop to boost container adoption
- Developed template-driven Golang command-line interfaces

**Cloud Solutions Architect** 09/2016 - 03/2018  
**Capital One** Richmond, VA

- Led cloud migration for large line-of-business
- Developed compute guidelines that reduced cloud compute footprints and overall compute costs by 31%
- Developed secure containerization strategy
- Developed CI/CD server architecture for large line-of-business
- Developed compute and compliance strategies for Kubernetes migration
- Built AWS compliance tools with AWS SDK for Java and Cloud Custodian
- SME and instructor on award-winning (Circle of Excellence) SEED (Software Engineering Education Development) program

## OPEN SOURCE

deislabs/ratify (maintainer)

aws-samples/eks-security-compromised-cluster-remediation

aws-samples/kubernetes-log4j-cve-2021-44228-node-agent

Amazon Elastic Kubernetes Service (Amazon EKS) Best Practices Guide

jimmyraywv/aws-cdk-eks

jimmyraywv/cdk8s-Java

aws-samples/ssm-agent-daemonset-installer

## CERTIFICATIONS

Can be seen here:

<https://www.linkedin.com/in/iamjimmyray/details/certifications/>

## VOLUNTEERING

### Coding Instructor

Capital One Coders

<http://coders.capitalone.com/>

### Technical Industry Advisor

Career & Technical Education Advisory Council

Powhatan Public Schools

## EDUCATION

### M.S. Management of IT

University of Virginia

### B.S. CIS

Strayer University

## MILITARY

### United States Army

Combat Veteran  
Blackhawk Helicopter Crew-Chief and Gunner  
Awarded Air Medal and Congressional Veteran Commendation

## EXPERIENCE

### DevOps and Cloud Architect

03/2016 - 09/2016

#### nextSource at Capital One

Richmond, VA

- Increased security posture by developing security policies with Cloud Custodian and IAM
- Authored Jenkins Java plugin for HashiCorp Consul
- Built Groovy tools for Jenkins and AWS reporting

### Director/Cloud Architect

05/2014 - 02/2016

#### AuthX Consulting

Richmond, VA

(startup)

- Architected IAM models for secure client accounts and services
- Reduced client costs by 27% via managed cloud solutions
- Reduced integration time by 32% by implementing DevOps solutions
- Architected Java RESTful API solutions and patterns

### Solutions Architect

11/2013 - 05/2014

#### CloudBees

Richmond, VA

(startup)

- Increased brand visibility by speaking at OpenStack 2014 on Cloud-Bursting into RackSpace with Jenkins and JClouds
- Increased knowledge and effectiveness of sales team by mentoring, and sharing product knowledge
- Served as SME for Cloud, Containers, Java, Jenkins, and DevOps

### Solutions Architect

06/2011 - 11/2013

#### ICF Ironworks

Richmond, VA

- Introduced Cloud architecture to decrease delivery times by 23%
- Delivered JEE/Spring Veteran Relationship Management Web Self-Service projects
- Introduced Behavioral Driven Development (BDD)
- Took over architectural lead of failing project and delivered 1.0, 1.1, and 1.2 product increments
- Developed target NoSQL data architecture with Spring Data and MongoDB

### See LinkedIn Profile

1997 - 2011

#### Various

Various

[LinkedIn Profile](#)

- <https://www.linkedin.com/in/iamjimmyray/details/experience/>

## RECENT PROJECTS

### Policy-as-Code - book for O'Reilly

Currently writing - due in 11/2023

### Kubernetes Dynamic Admission for Image Signature Verification

Go-based controller that uses Notary v2

### Kubernetes Pod Security Testing

<https://github.com/aws-samples/k8s-psa-pss-testing>  
- Wrote testing scenarios for Amazon EKS 1.23 release

### Open Policy Agent Bundle Server

<https://github.com/jimmyraywv/opa-golang-bundle-server>

### Ratify - verification of reference artifacts

<https://github.com/deislabs/ratify>  
- Wrote AWS ECR basic auth provider and AWS custom endpoint resolver

### Kubernetes Workload Identity with AWS SDK for Go v2

<https://github.com/jimmyraywv/aws-sdk-go-v2-irsa-ecr>

### Boto3 with Jupyter Notebook

<https://github.com/jimmyraywv/jupyter>

### AWS CDK for EKS with Go

<https://github.com/jimmyraywv/aws-cdk-eks-go>

## RECENT PROJECTS

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### AWS CDK for EKS with Java

<https://github.com/jimmyraywv/aws-cdk-eks>