

DevOps for Defense

What's new in AWS for Developers and DevOps

Katreena Mullican



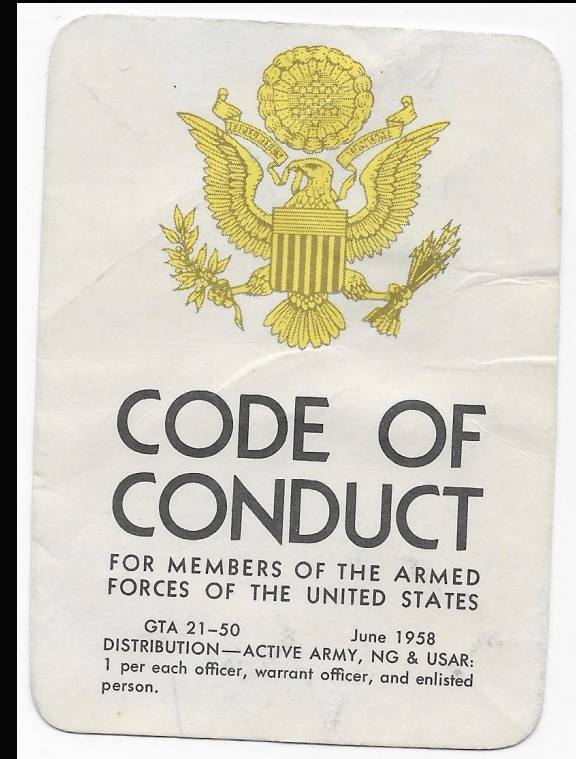
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<https://devopsfordefense.org>
<https://www.meetup.com/DevOps-for-Defense/>
<https://github.com/jondavid-black/DevOpsForDefense>
devopsfordefense@gmail.com
<https://twitter.com/devops4defense>

DevOps for Defense Meetup: Code of Conduct

- UNCLASSIFIED ONLY!!!!
- Treat each other with respect and professionalism.
- Do not talk about private, sensitive, or proprietary work.
- Do talk about your experiences, needs, desires to improve work in our domain.
- Do share your thoughts.
- Do learn from others.
- Do respect & tip your bartenders!



AWS RE:INVENT

RE:CAP

For Developers & DevOps



Speaker



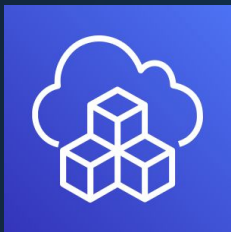
Katreena Mullican
Sr Solutions Architect

Developers & DevOps



AWS Cloud Development Kit (CDK) v2

FOR JAVASCRIPT, TYPESCRIPT, JAVA, PYTHON, .NET AND GO



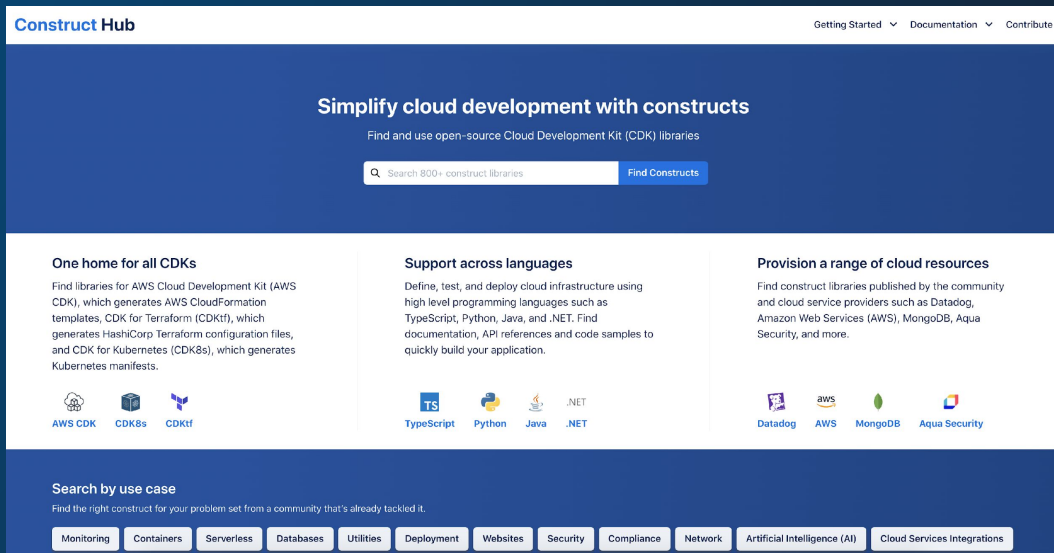
AWS Cloud Development Kit

- Consolidated construct library (aws-cdk-lib)
- Experimental modules distributed separately
- Improved CDK API reference
- New CDK Watch functionality
- New assertions library for automated unit tests



AWS CDK Construct Hub

Share open-source construct libraries with the wider cloud development community.



The screenshot shows the Construct Hub website. At the top, the 'Construct Hub' logo is on the left, and navigation links for 'Getting Started', 'Documentation', and 'Contribute' are on the right. The main header area has the title 'Simplify cloud development with constructs' and a subtitle 'Find and use open-source Cloud Development Kit (CDK) libraries'. Below this is a search bar with the text 'Search 800+ construct libraries' and a 'Find Constructs' button. The main content area is divided into three columns. The first column, 'One home for all CDKs', describes finding libraries for AWS Cloud Development Kit (AWS CDK), CDK for Terraform (CDKTF), and CDK for Kubernetes (CDK8s). The second column, 'Support across languages', describes defining, testing, and deploying cloud infrastructure using high-level programming languages like TypeScript, Python, Java, and .NET. The third column, 'Provision a range of cloud resources', describes finding construct libraries published by the community and cloud service providers like Datadog, AWS, MongoDB, and Aqua Security. Each column has icons for the respective technologies. At the bottom, there is a 'Search by use case' section with a subtitle 'Find the right construct for your problem set from a community that's already tackled it.' and a row of buttons for various use cases: Monitoring, Containers, Serverless, Databases, Utilities, Deployment, Websites, Security, Compliance, Network, Artificial Intelligence (AI), and Cloud Services Integrations.

<https://constructs.dev>



GA

Amazon CodeGuru Reviewer

NOW DETECTS HARDCODED SECRETS IN JAVA AND PYTHON



Amazon CodeGuru

Recommendations (43)

Found 1 match

Type = Secrets X

Clear filters

`.travis.yml` Line: 18 Security Secrets

It appears your code contains a hardcoded AWS Access Key ID. Hardcoded secrets or credentials can allow attackers to bypass authentication methods and perform malicious actions. We recommend revoking access to resources using this credential and storing future credentials in a management service such as [AWS Secrets Manager](#).

[Learn more about the use of hardcoded credentials](#)

Hardcoded credentials can be intercepted by malicious actors. Even after removing them from the code they may still pose a risk because an attacker might have recorded them to use them at a later point in time.

Protect your credential

Source
CodeGuru

Was this helpful?

👍

👎

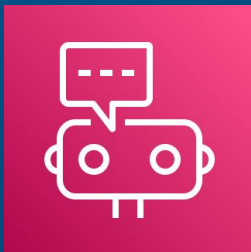
Terraform Support for AWS Control Tower



AWS Control Tower

- AWS Control Tower Account Factory for Terraform (AFT)
- AWS Control Tower governance benefits with Terraform-based account provisioning pipeline
- Supports Terraform Cloud, Terraform Enterprise, and Terraform Open Source
- Account creation and customization of new or existing accounts
- Customization to meet your procedures

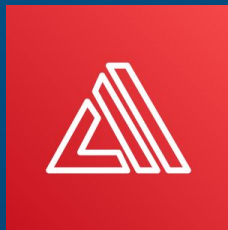
Manage AWS Resources from Slack



AWS Chatbot

Use AWS Chatbot to run AWS CLI commands from Slack to scale EC2 instances, run AWS Systems Manager runbooks, and change AWS Lambda concurrency limits.

AWS Amplify Studio



AWS Amplify

- Built on the AWS Amplify CLI
- Customize and integrate with your existing CI/CD using the AWS CDK
- Visually build a frontend UI with dozens of prebuilt components (such as buttons, forms, lists, and login)
- Import designs from Figma as React code

New AWS SDKs



Kotlin



Swift

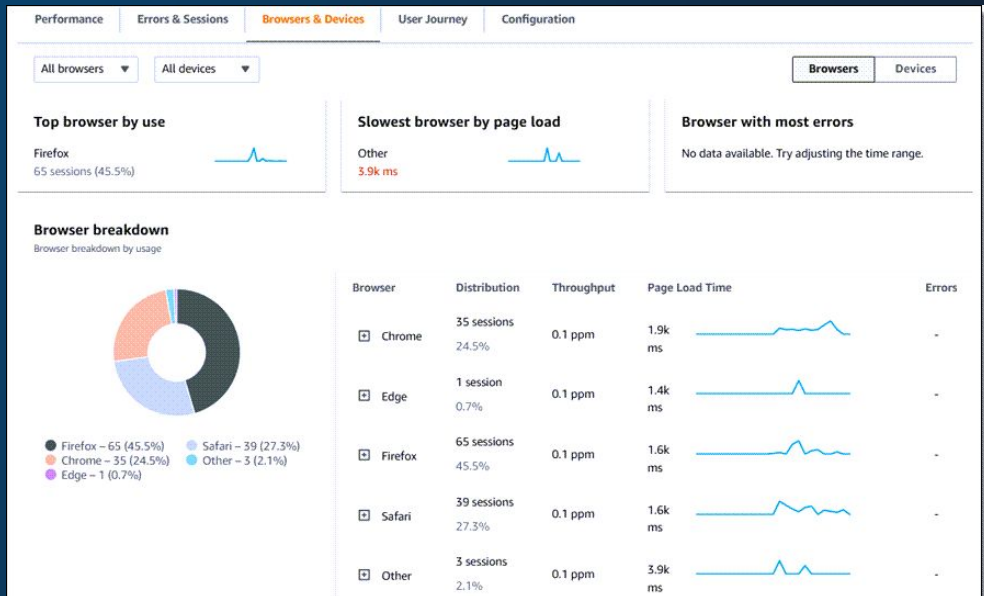


Rust

CloudWatch Real User Monitoring (RUM)

Perform real user monitoring to collect and view client-side data about your web application performance from actual user sessions in near real time.

Register your application by adding a code snippet of JavaScript to the header of each page.



Amazon ECR – Pull Through Cache Repositories

ACCESS PUBLIC CONTAINER REGISTRIES THROUGH ECR



Amazon Elastic Container
Registry (Amazon ECR)







Same download performance, security,
and availability that ECR provides, but
for public repositories.

AWS Marketplace for Containers Anywhere

FIND, SUBSCRIBE TO, AND DEPLOY THIRD-PARTY KUBERNETES APPLICATIONS FROM AWS MARKETPLACE

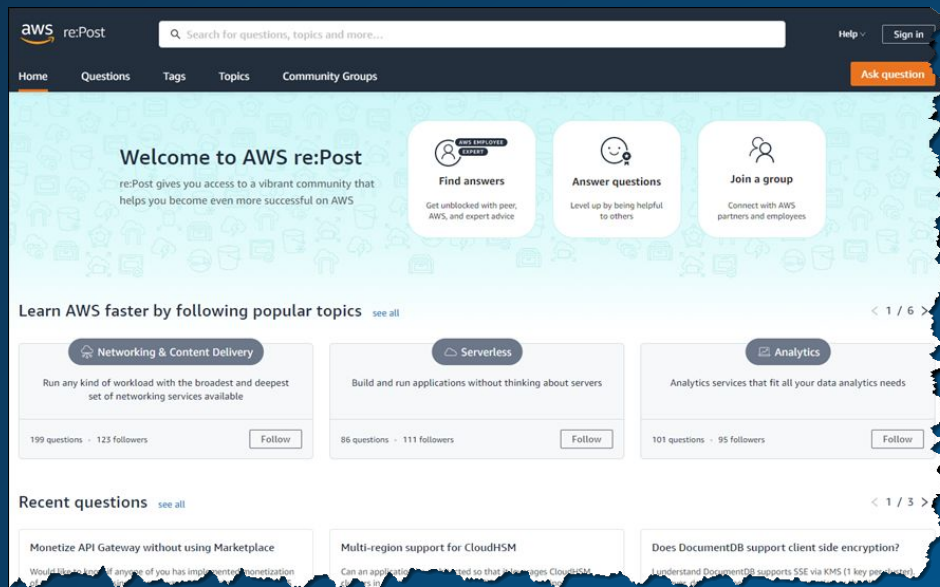
Find, subscribe to, and deploy third-party Kubernetes applications from AWS Marketplace on any Kubernetes cluster in any environment.



	Amazon EKS
	Amazon EKS Anywhere
	Amazon ECS
	Amazon ECS Anywhere
	Self-managed Kubernetes cluster on EC2
	Self-managed Kubernetes cluster on premises

AWS re:Post

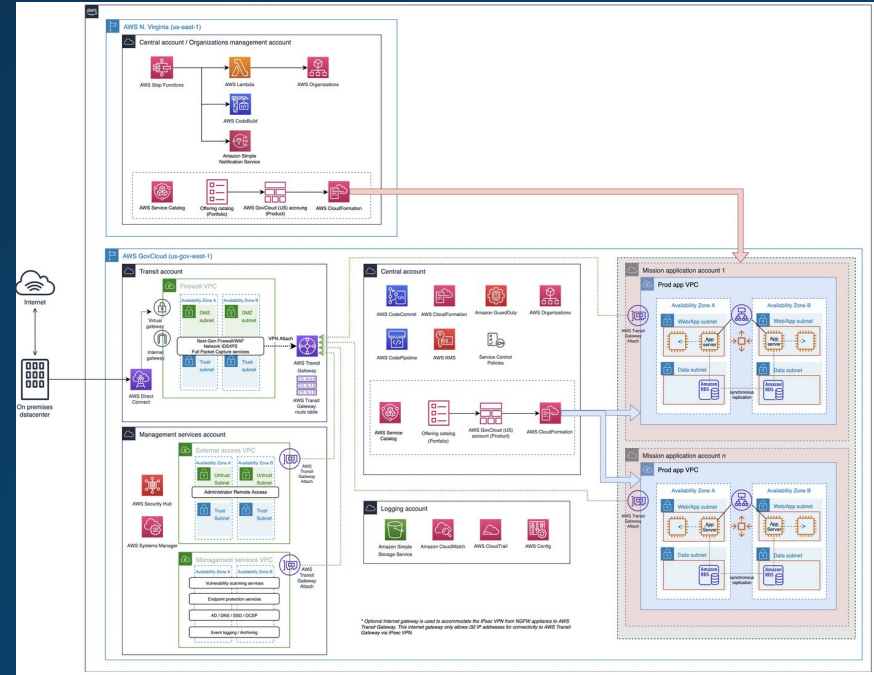
- Reimagined Q&A Experience for the AWS Community
- Answers from AWS and customers
- Expert reviewed
- Free!



<https://repost.aws/>

DoD workloads in AWS GovCloud

- Quickly deploy a secure, scalable, multi-account environment in AWS GovCloud (US) based on AWS best practices.
- Architected to follow the Defense Information Systems Agency (DISA) Cloud Computing Security Requirements Guide (CC SRG) for hosting Impact Level (IL) 4 and 5 workloads in the cloud.
- Architecture baseline accommodates U.S. federal and Department of Defense (DoD) requirements to rapidly achieve Authority to Operate (ATO).



<https://aws.amazon.com/solutions/implementations/compliant-framework-for-federal-and-dod-workloads-in-aws-govcloud-us/>

Resources

Tooling and infrastructure resources for DevOps practitioners:

<https://aws.amazon.com/devops/>

Watch re:Invent 2021 keynotes and various recorded sessions:

<https://virtual.reinvent.aws.events.com>

Read more about the top re:Invent 2021 announcements:

<https://aws.amazon.com/blogs/aws/top-announcements-of-aws-reinvent-2021/>

Learn about AWS GovCloud:

<https://aws.amazon.com/govcloud-us>

<https://aws.amazon.com/govcloud-us/whats-new>

Local & Regional AWS Happenings

- <https://www.meetup.com/huntsvilleaws/>
- <https://www.meetup.com/BirminghamAWS/>
- <https://www.cybernowsummit.com/2022/>

Thank you!

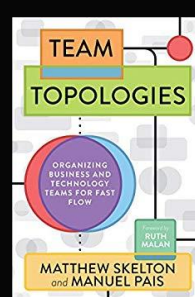
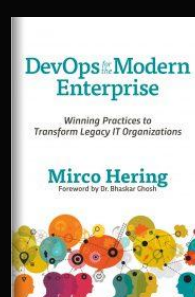
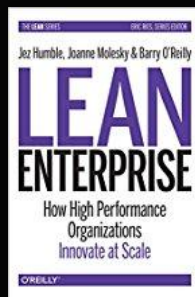
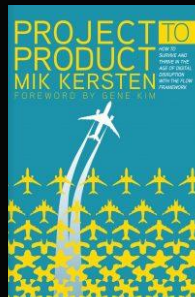
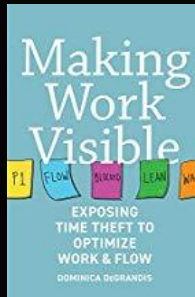
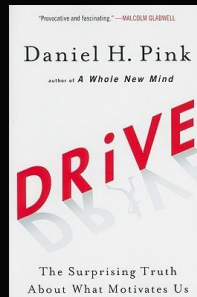
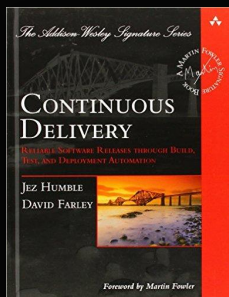
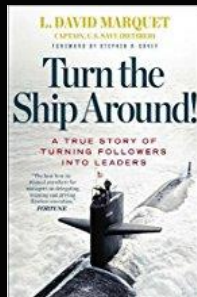
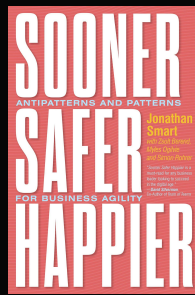
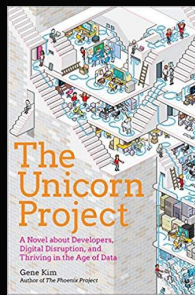
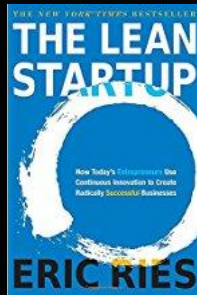
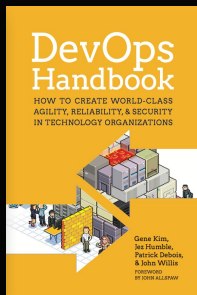
mullicak@amazon.com



DevOps Resources

<https://devopsfordefense.org/resources/>

Books / Publications:



<https://www.meetup.com/DevOps-for-Defense/>
<https://github.com/jondavid-black/DevOpsForDefense>
devopsfordefense@gmail.com

Conference Presentations (YouTube):

- DevOps Enterprise Summit (DOES)
- IT Revolution
- Velocity
- GoTo

