2021-04 AWS Security Immersion Days

ⓘ   Quick link to this page: https://bit.ly/cornell-aws-security

ⓘ   See "Resources" sections below for links to workshop and exercise materials.

Summary

This AWS training will cover many aspects of security in AWS, mostly focused on Identity and Access Management (IAM). The first session provides a basic introduction to IAM concepts and best practices. The second session covers intermediate and advanced IAM topics. Both sessions include hands-on exercises and coverage of Cornell-specific security configurations and tools. Both sessions are jointly presented by AWS and Cornell staff. Sessions are remotely presented over about 4 hours, including breaks and hands-on exercises.

Session 1 – AWS Security - Introduction & Basic Topics

Details

- Topic: AWS Security - Introduction & Basic Topics
- Date: Tuesday April 6, 2021
- Time: 9am - 1pm ET
  - Optional Q&A: 1pm-1:30pm
- Location: Zoom. Link provided at registration.
- Cost: $0
- Registration via CULearn required.
  - Registration form: https://cornell.sabacloud.com/Saba/Web_spf/NA1PRD0089/common/ledetail/cours000000000026500
  - Registration deadline: March 30

Agenda

Time	Topic	Details
9:00-9:10	Welcome & Introduction	
9:10-9:40	Shared Responsibility Model	
9:40-11:00	Identity best practices on AWS	- IAM concepts - How to use IAM properly, best practices, and guidance - Resource policies versus IAM policies - Using roles
11:00-11:15	Break	
11:15-11:30	Using CloudShell	

11:30-1:00	Practical AWS Security Basics	- Cornell-specific account access - Trusted Advisor - S3 public access - Network security - CloudCheckr Best Practices reporting
(Optional) 1:00-1:30	Optional Q&A	

Resources

- Presentation: Presentations from 2021-04 AWS Security Immersion Days
- Materials
  - Lab: https://bit.ly/3upu3nd (LEVEL 300: IAM TAG BASED ACCESS CONTROL FOR EC2)
  - Access to Event Engine: https://dashboard.eventengine.run/login
  - Cornell AWS Account Access - Hands-on Exercise
  - S3 Public Access - Hands-on Exercise
  - CloudCheckr CMX SSO Login
  - Access to Survey: https://survey.immersionday.com/hoFPisUMg
- References
  - Free or Open Source Resources to Help with AWS Security
  - Baseline AWS Network ACL
  - Access Keys for AWS CLI Using Cornell Two-Step Login - Shibboleth
  - Interpreting CloudCheckr Best Practice Reports

Session 2 – AWS Security - Intermediate & Advanced Topics

Details

- Topic: AWS Security - Intermediate & Advanced Topics
- Date: Wednesday April 14, 2021
- Time: 9am - 1pm ET
  - Optional Q&A: 1pm-1:30pm
- Location: Zoom. Link provided at registration.
- Cost: $0
- Registration via CULearn required.
  - Registration form: https://cornell.sabacloud.com/Saba/Web_spf/NA1PRD0089/common/ledetail/cours000000000026501
  - Registration deadline: April 7

Agenda

Time	Topic	Details
9:00	Welcome & Introduction	
9:00-9:30	IAM and Identity best practices on AWS	
9:30-9:40	IAM permission boundary demo	
9:40-10:00	IAM permissions boundary lab	https://d29727063o6tf9.cloudfront.net/permissionboundary.html
10:00-10:25	CloudTrail	
10:25-10:30	CloudTrail demo	
10:30-10:45	CloudTrail at Cornell	
10:45-11:00	CloudTrail lab	- https://workshop.aws-management.tools/cloudtrail/setup/ - https://workshop.aws-management.tools/cloudtrail/athena/
11:00-11:15	Break	
11:15-11:45	Config Service	
11:45-12:05	Cornell Config Service lab	AWS Config - Hands-on Exercise

12:05-12:35	IAM Access Analyzer	
12:35-1:00	Cornell Access Analyzer lab	AWS Access Analyzer - Hands-on Exercise
(Optional) 1:00-1:30	Optional Q&A	

Resources

- Presentation: Presentations from 2021-04 AWS Security Immersion Days
- Materials
  - Permissions Boundaries: https://d29727063o6tf9.cloudfront.net/permissionboundary.html
  - CloudTrail Lab: https://workshop.aws-management.tools/cloudtrail/athena/
  - Config hands-on: AWS Config - Hands-on Exercise
  - Access Analyzer hands-on: AWS Access Analyzer - Hands-on Exercise
- References
  - Cornell Standard AWS CloudTrail Configuration
  - AWS Config Rules
  - Cornell Standard Configuration for AWS IAM Access Analyzer
  - Free or Open Source Resources to Help with AWS Security
- References from presentation chat
  - https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_policies_condition-keys.html#condition-keys-calledvia
  - https://docs.aws.amazon.com/service-authorization/latest/reference/reference_policies_actions-resources-contextkeys.html#context_keys_table