


# 2021-04 AWS Security Immersion Days

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 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](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	<ul style="list-style-type: none"><li>• IAM concepts</li><li>• How to use IAM properly, best practices, and guidance</li><li>• Resource policies versus IAM policies</li><li>• Using roles</li></ul>
11:00-11:15	Break	
11:15-11:30	Using CloudShell	

11:30-1:00	Practical AWS Security Basics	<ul style="list-style-type: none"> <li>• Cornell-specific account access</li> <li>• Trusted Advisor</li> <li>• S3 public access</li> <li>• Network security</li> <li>• CloudCheckr Best Practices reporting</li> </ul>
(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](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	<a href="https://d2972706306tf9.cloudfront.net/permissionboundary.html">https://d2972706306tf9.cloudfront.net/permissionboundary.html</a>
10:00-10:25	CloudTrail	
10:25-10:30	CloudTrail demo	
10:30-10:45	CloudTrail at Cornell	
10:45-11:00	CloudTrail lab	<ul style="list-style-type: none"> <li>• <a href="https://workshop.aws-management.tools/cloudtrail/setup/">https://workshop.aws-management.tools/cloudtrail/setup/</a></li> <li>• <a href="https://workshop.aws-management.tools/cloudtrail/athena/">https://workshop.aws-management.tools/cloudtrail/athena/</a></li> </ul>
11:00-11:15	Break	
11:15-11:45	Config Service	
11:45-12:05	Cornell Config Service lab	<a href="#">AWS Config - Hands-on Exercise</a>

12:05-12:35	IAM Access Analyzer	
12:35-1:00	Cornell Access Analyzer lab	<a href="#">AWS Access Analyzer - Hands-on Exercise</a>
(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/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](https://docs.aws.amazon.com/service-authorization/latest/reference/reference_policies_actions-resources-contextkeys.html#context_keys_table)