AWS re:Invent

NOV. 29 – DEC. 3, 2021 | LAS VEGAS, NV

DOP207

Improving development ergonomics for developers

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Agenda

- Workshop logistics
- Sample application architecture and source code
- Lab 1 – Build the application
- Lab 2 – Test the application locally
- Lab 3 – Code review of the application
- Lab 4 – Deploy the application
- Lab 5 – Optimize the application
- Summary

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Workshop logistics

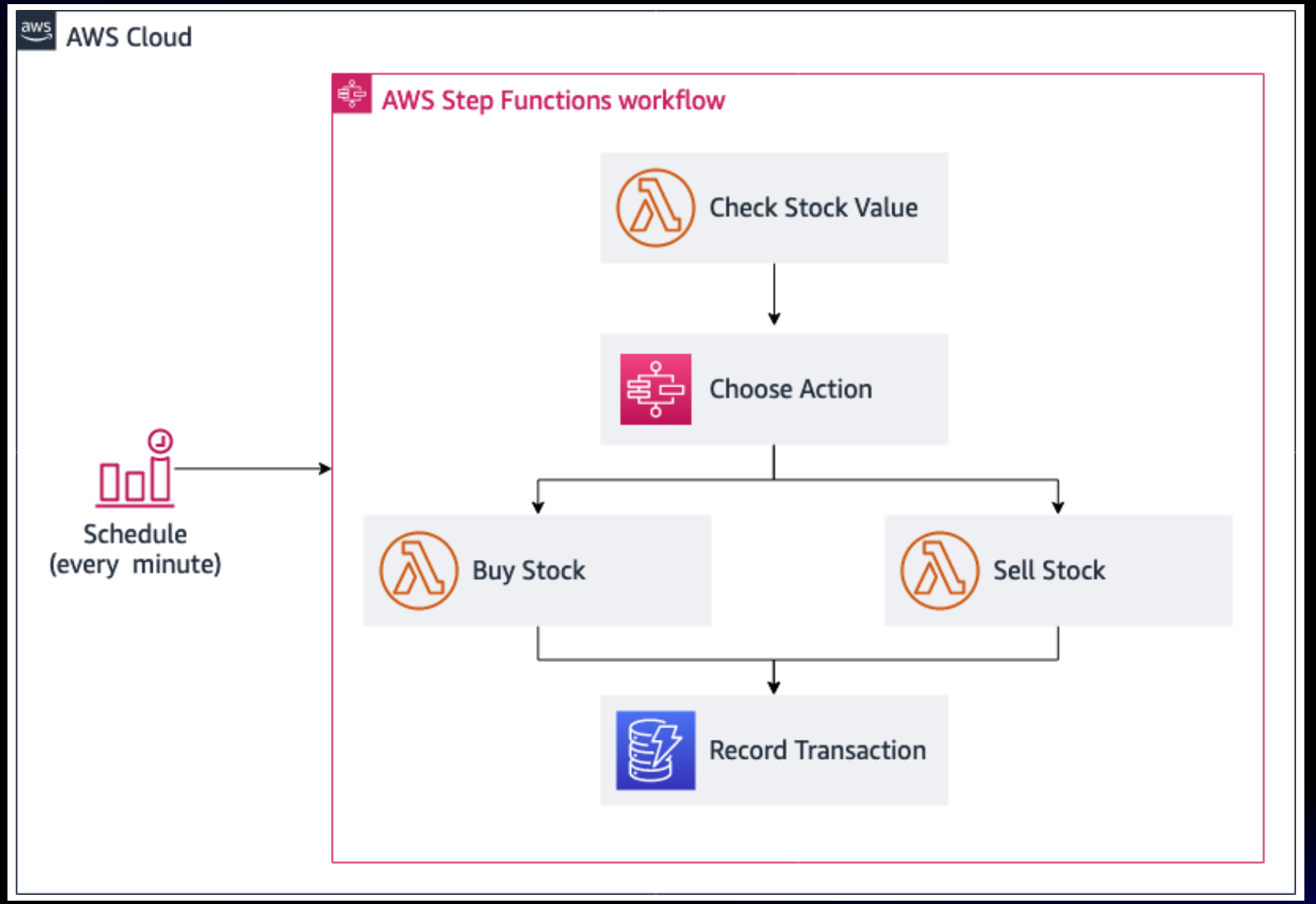
Labs – Five labs in today's workshop

Event Engine – Accounts will be provisioned for you to run today's labs

Workshop moderators – Workshop moderators will walk around the room to help you

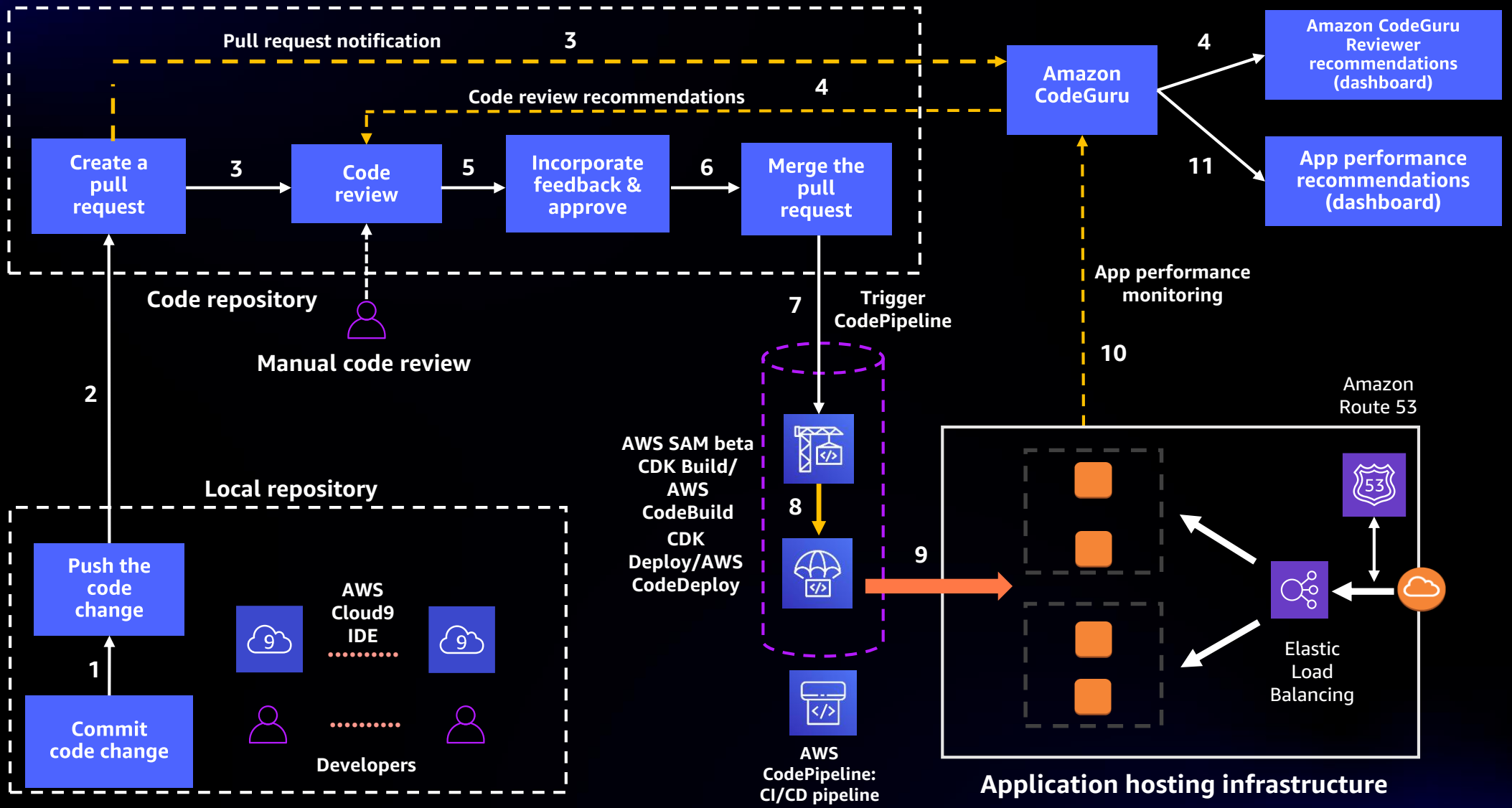
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Sample application architecture



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Big picture: Developer workflow

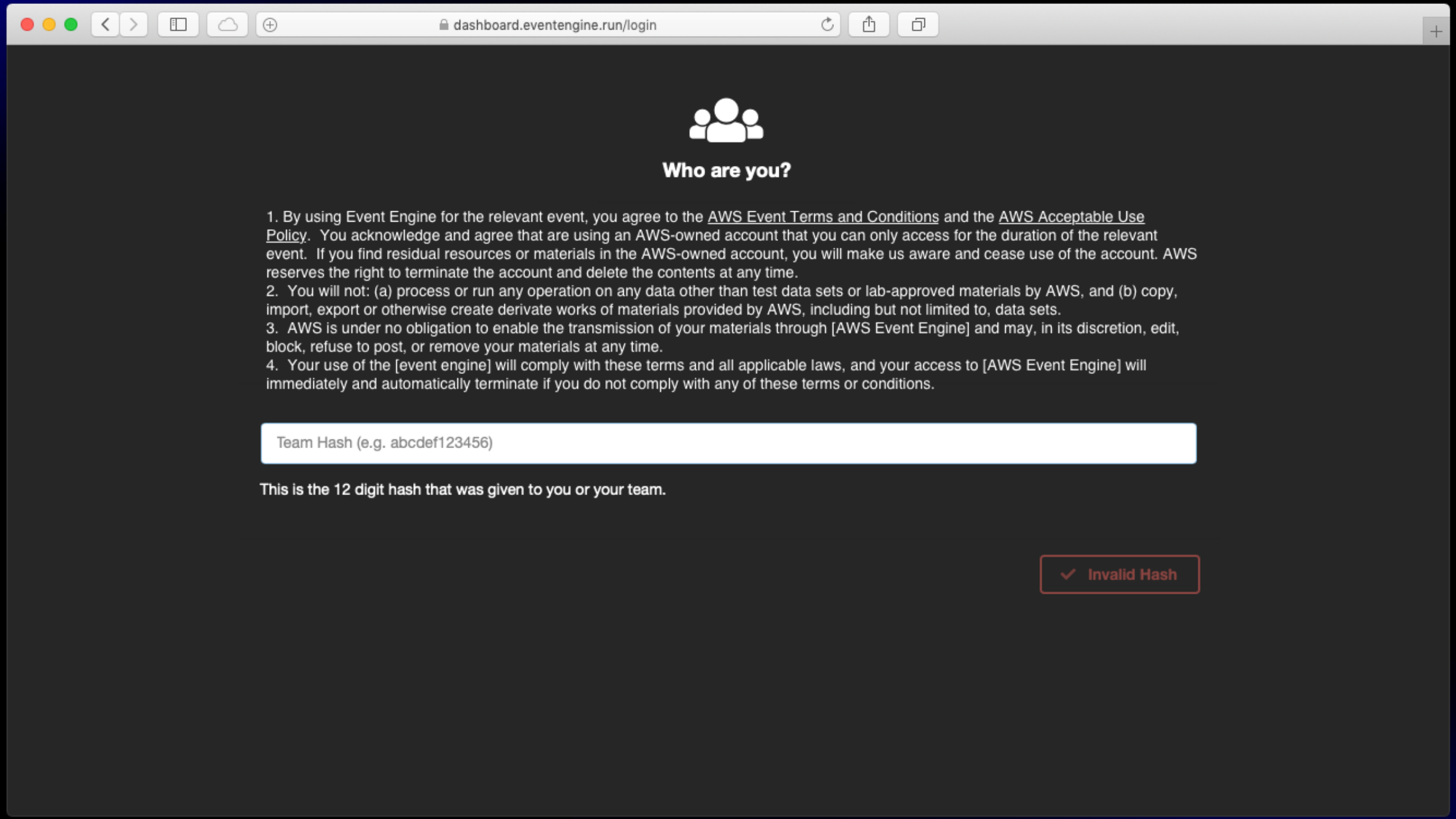


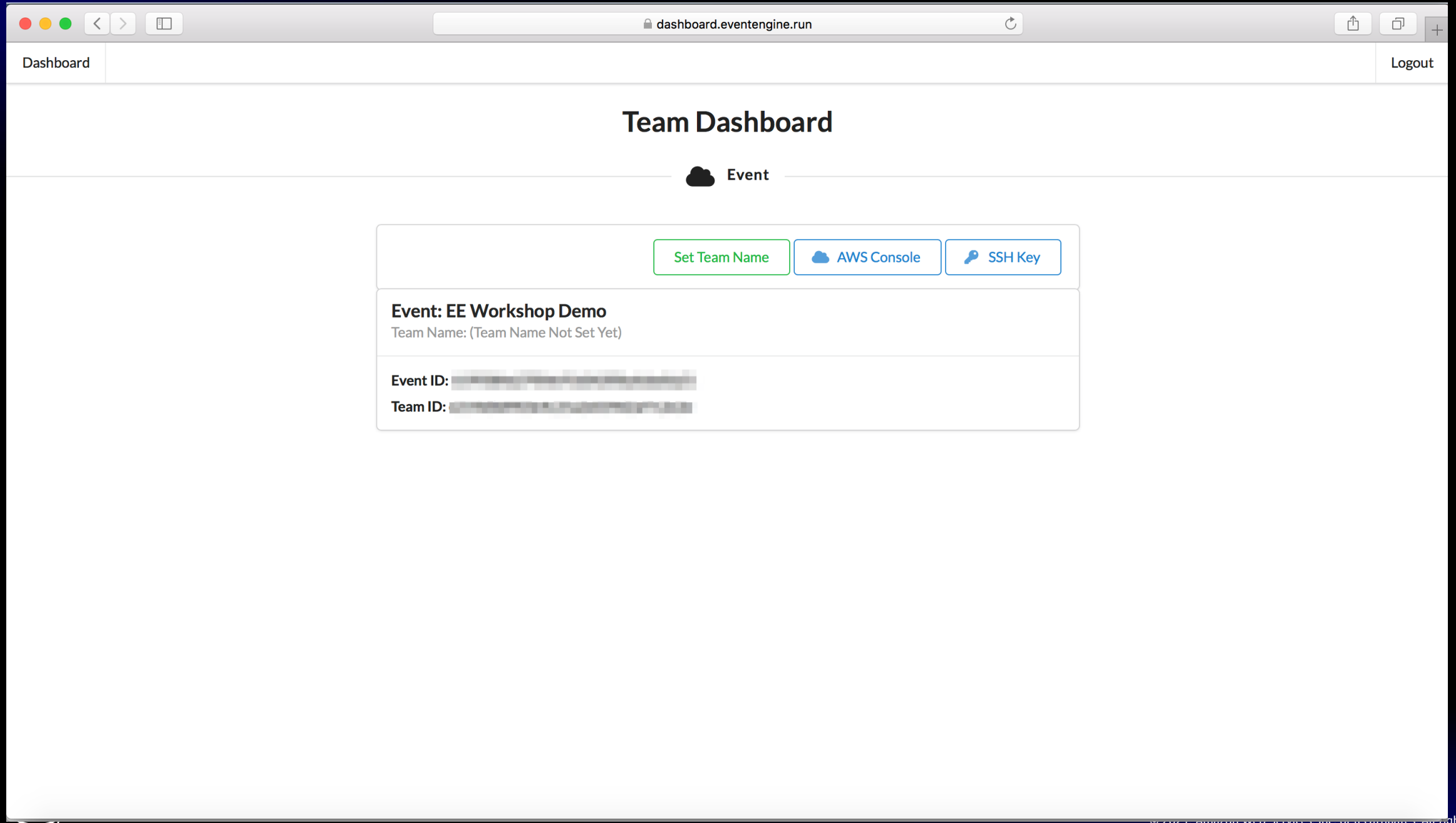
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Workshop access

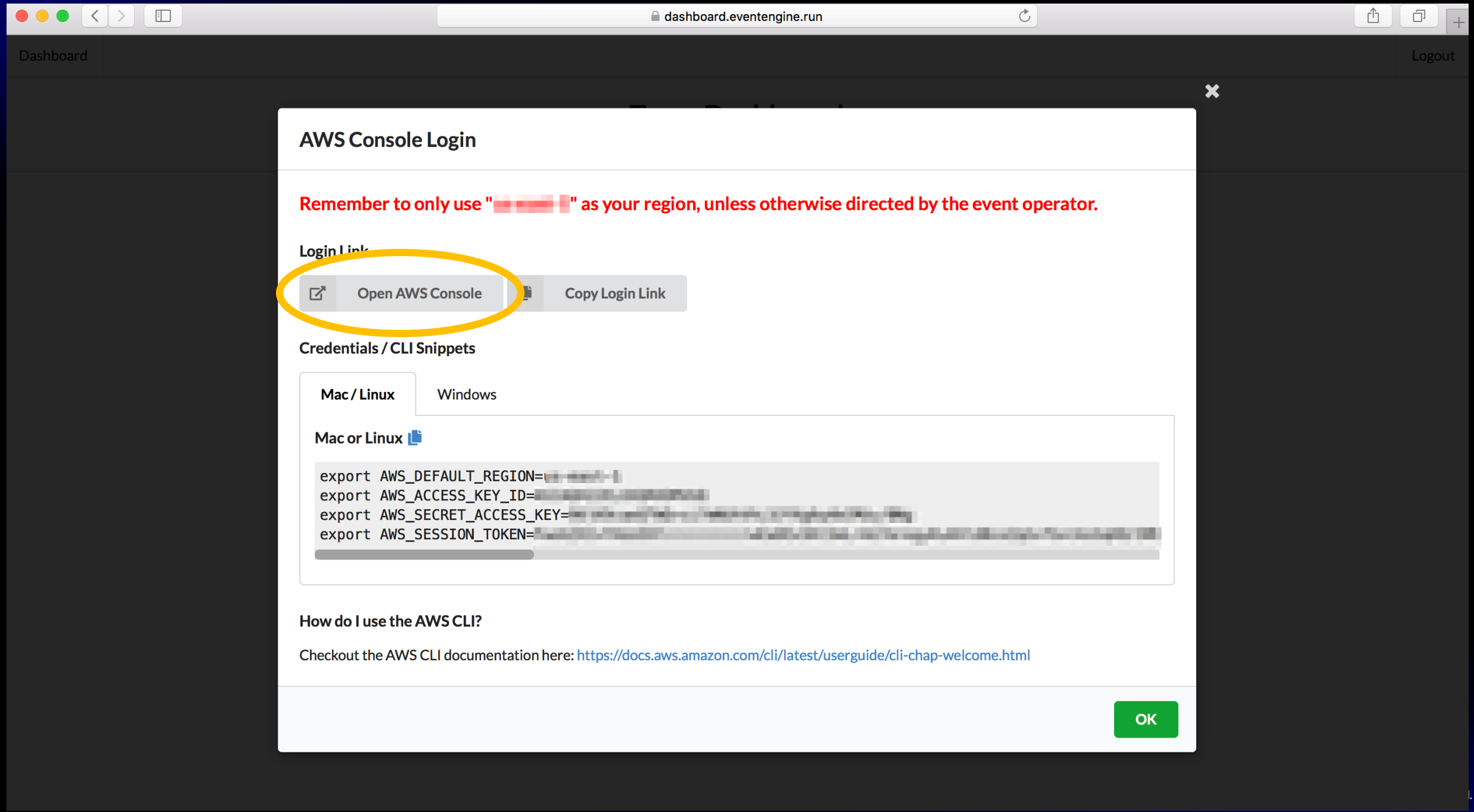
https://dashboard.eventengine.run

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dashboard.eventengine.run/login
Who are you?
1. By using Event Engine for the relevant event, you agree to the AWS Event Terms and Conditions and the AWS Acceptable Use Policy. You acknowledge and agree that are using an AWS-owned account that you can only access for the duration of the relevant event. If you find residual resources or materials in the AWS-owned account, you will make us aware and cease use of the account. AWS reserves the right to terminate the account and delete the contents at any time.
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4. Your use of the [event engine] will comply with these terms and all applicable laws, and your access to [AWS Event Engine] will immediately and automatically terminate if you do not comply with any of these terms or conditions.
Team Hash (e.g. abcdef123456)
This is the 12 digit hash that was given to you or your team.
Invalid Hash



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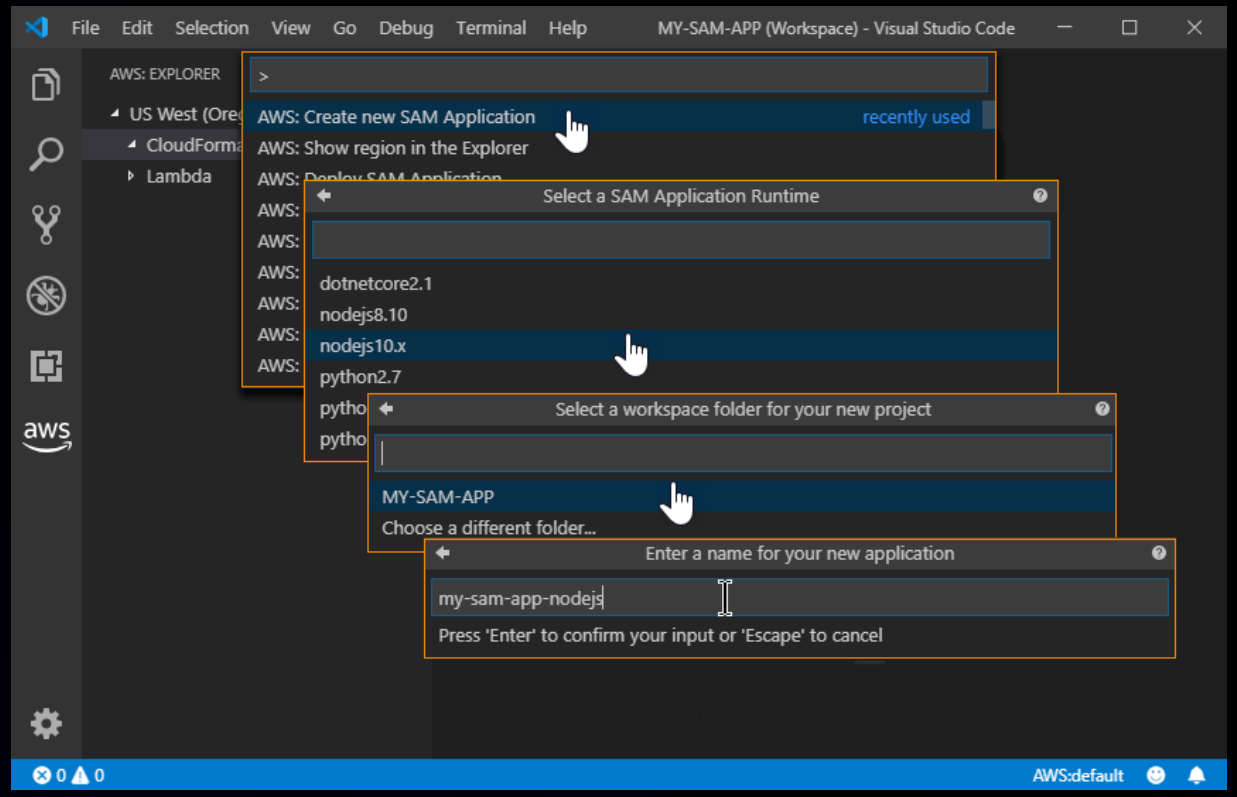

dashboard.eventengine.run
Dashboard
Logout
AWS Console Login
Remember to only use "[redacted]" as your region, unless otherwise directed by the event operator.
Login Link
Open AWS Console
Copy Login Link
Credentials / CLI Snippets
Mac / Linux
Windows
Mac or Linux
export AWS_DEFAULT_REGION=[redacted]
export AWS_ACCESS_KEY_ID=[redacted]
export AWS_SECRET_ACCESS_KEY=[redacted]
export AWS_SESSION_TOKEN=[redacted]
How do I use the AWS CLI?
Checkout the AWS CLI documentation here: https://docs.aws.amazon.com/cli/latest/userguide/cli-chap-welcome.html
OK

Let’s build

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Lab – Build the application





aws

Cloud Development Kit

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Lab – Test the application locally

```
# sam local invoke

$ sam local invoke stock-trader-app/StockCheckerFunction

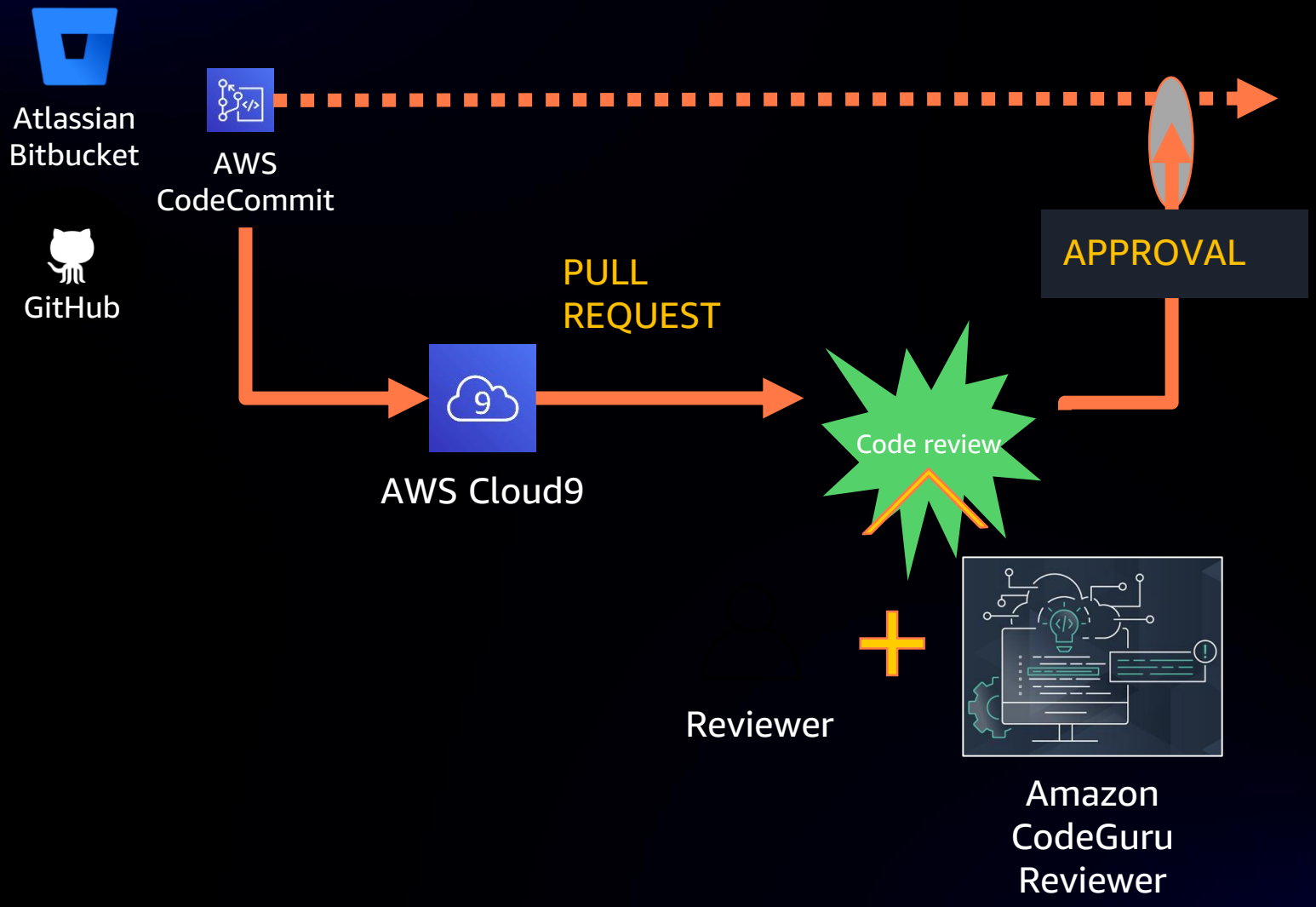

# sam local start-lambda

$ sam local start-lambda

$ aws lambda invoke --function-name StockCheckerFunction --endpoint-url
http://127.0.0.1:3001/ response.json
```

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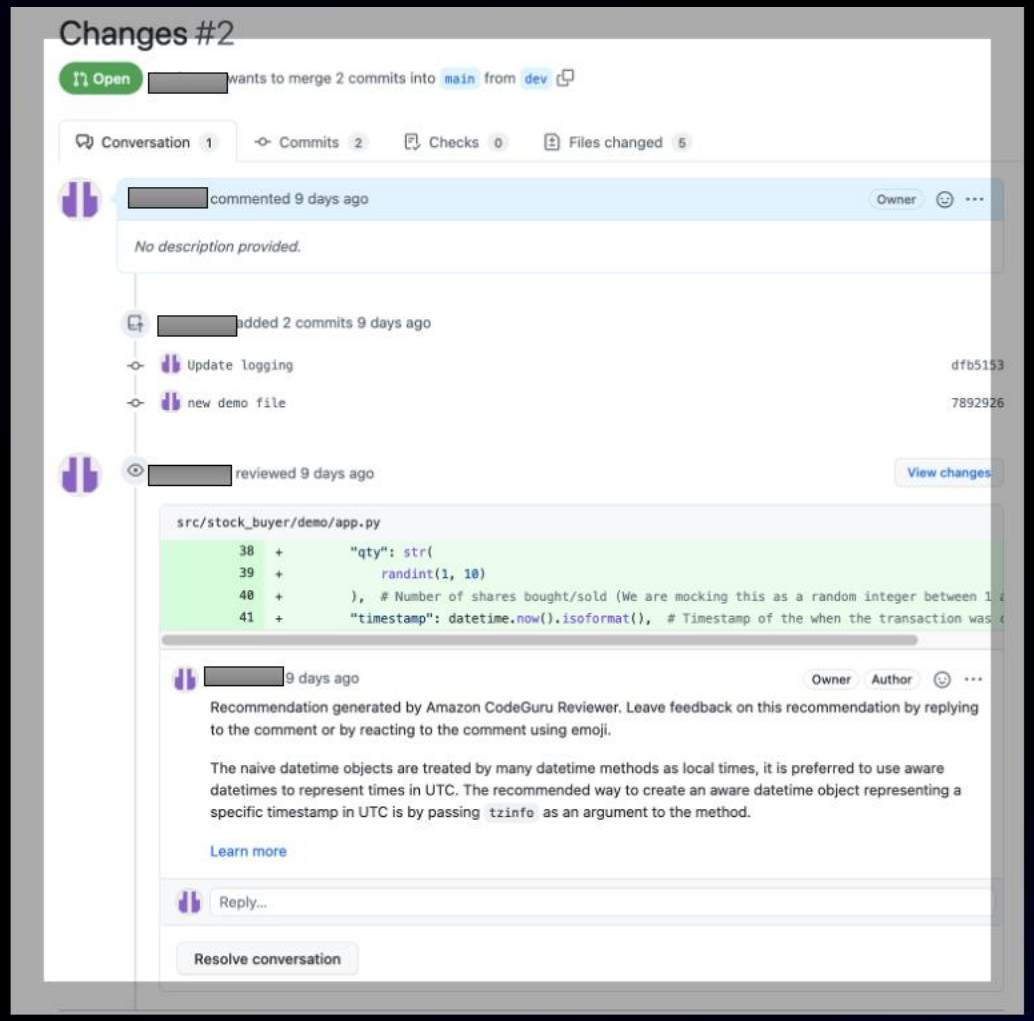
Lab – Review the application code



Build in code reviews with actionable recommendations

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CodeGuru Reviewer – Recommendations

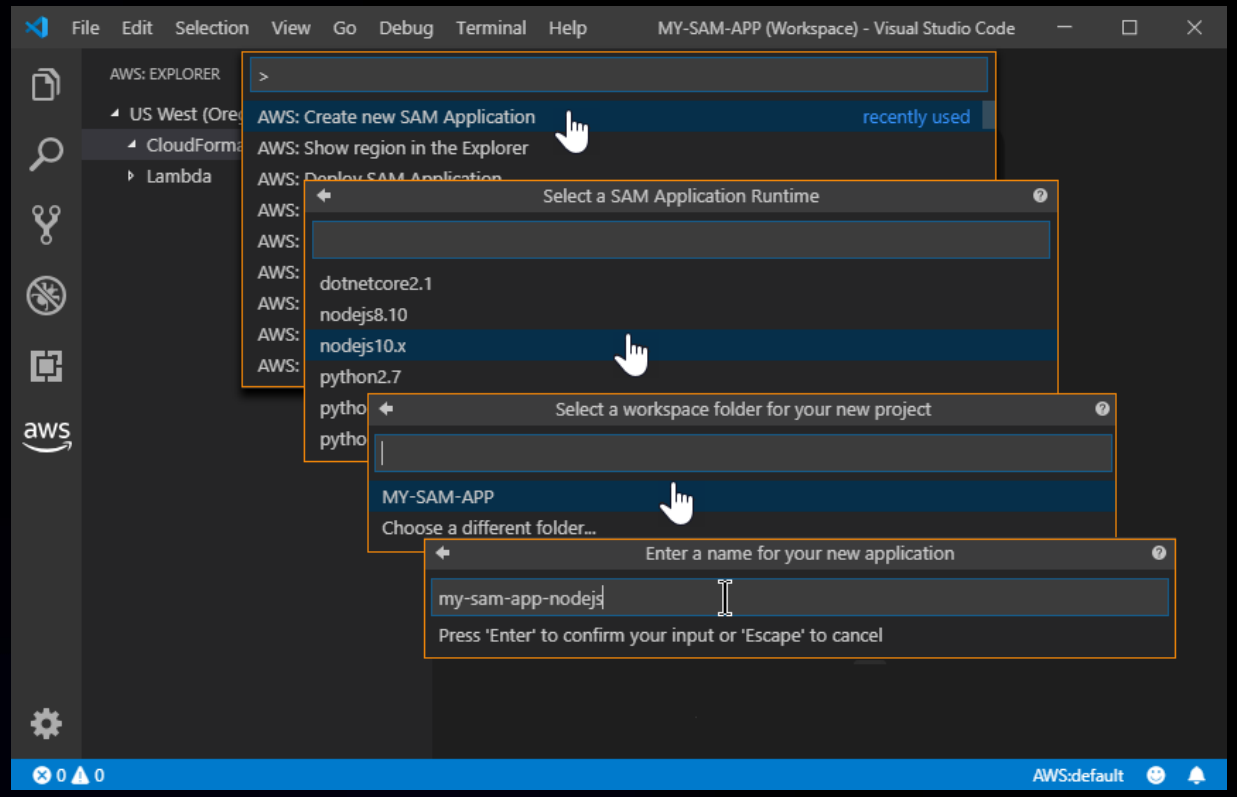


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Lab – Deploy the application

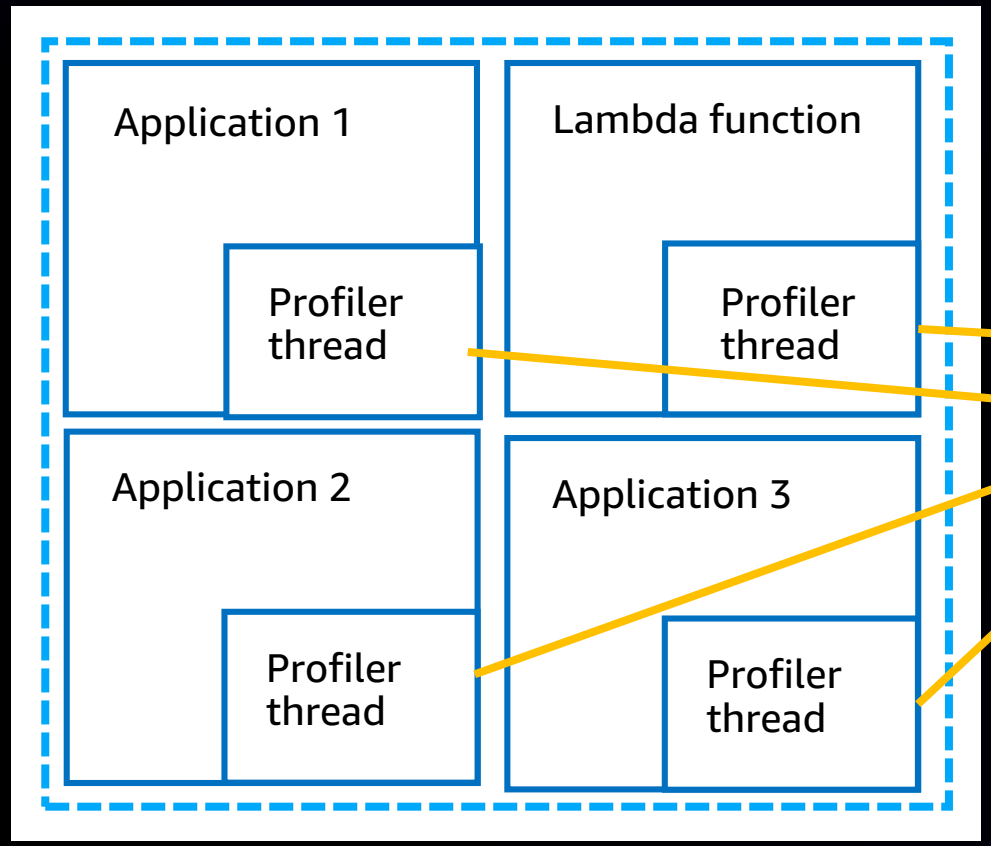
aws

Cloud Development Kit

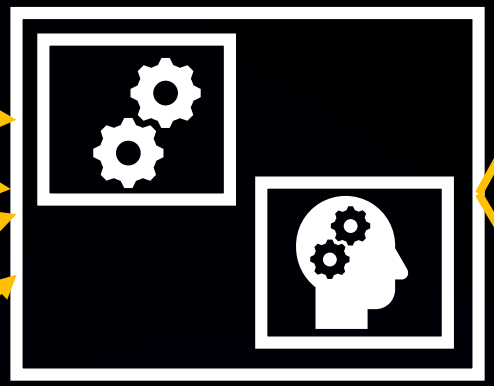


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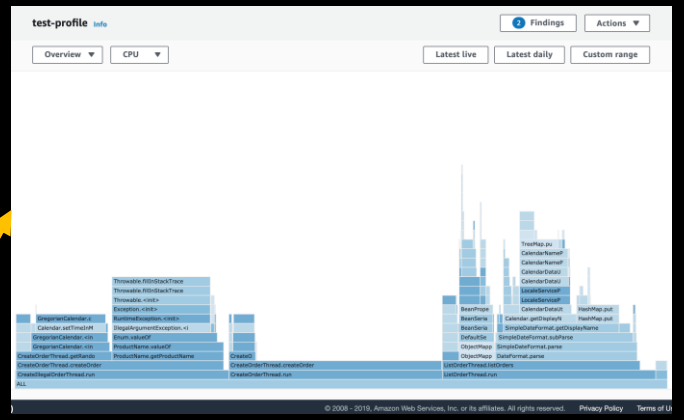
Lab – Optimize the application



Customer application



Amazon CodeGuru Profiler backend



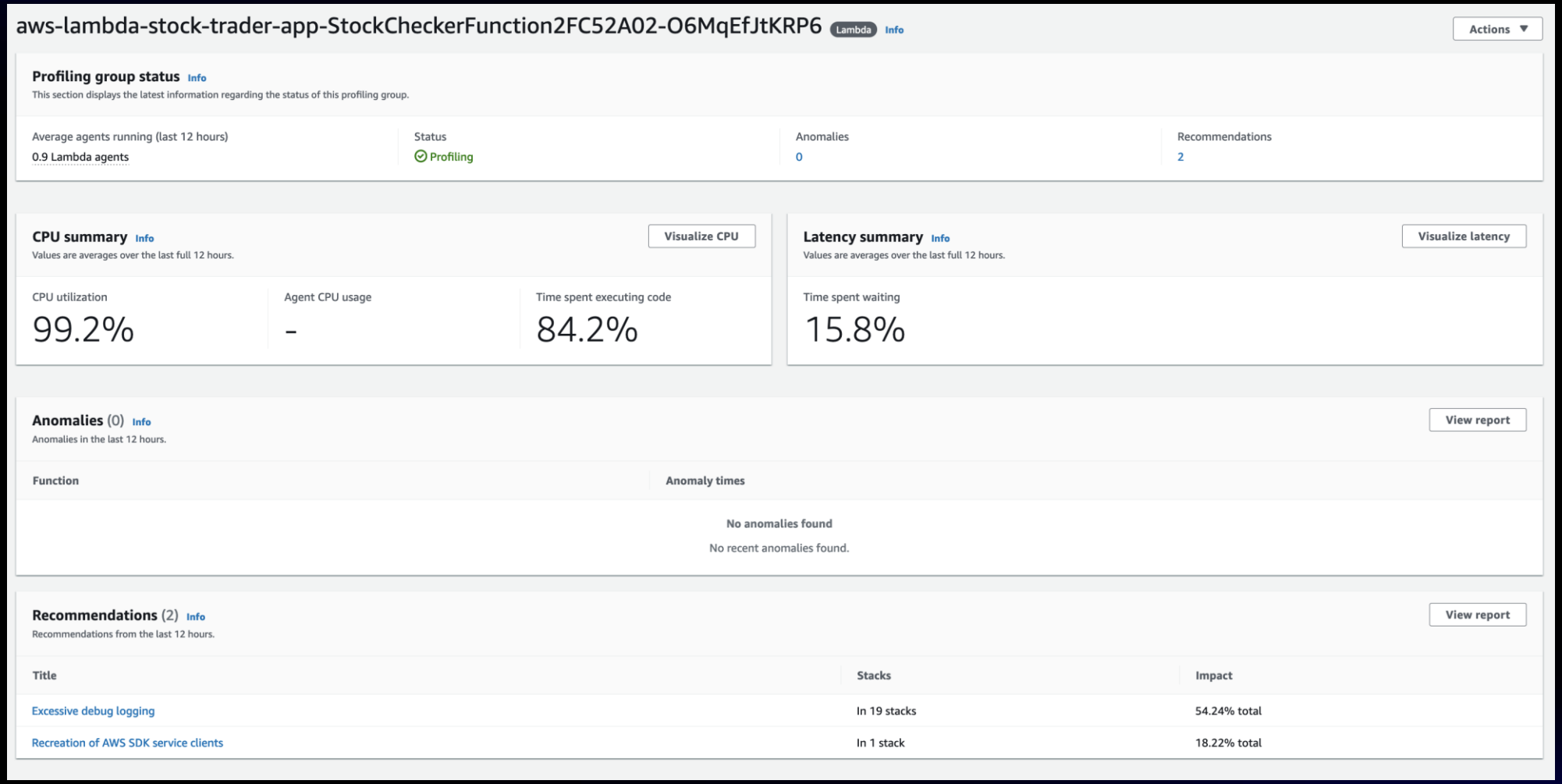
Console – visualizations

Actionable recommendations

Console – recommendation reports

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CodeGuru Profiler recommendations



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Summary

- How to easily build, test, and deploy a serverless application using the AWS Cloud Development Kit (AWS CDK), the AWS Serverless Application Model (AWS SAM), and the AWS IDE Toolkit

- How to use CodeGuru to review and optimize application code

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Resources

- AWS Serverless Application Model: https://aws.amazon.com/serverless/sam/

- Better together: AWS SAM and AWS CDK
  - https://go.aws/3mPEm3b

- Amazon CodeGuru
  - Sample application code – https://github.com/aws-samples/amazon-codeguru-reviewer-sample-app
  - Get started at https://aws.amazon.com/codeguru/

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Thank you!

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