

CLOUD EXCELLENCE PRESENTATION

TEAM AMIE

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Our Official Project for the Booze Allen Cloud Excellence Program



INTRODUCTIONS



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WEBSITE DEPLOYMENT

Introductions

Project Overview

Architecture/Design diagram

Tools/Software Environment used

Demo

Challenges Encountered

What we Learned

Future Plans and Design Implementation

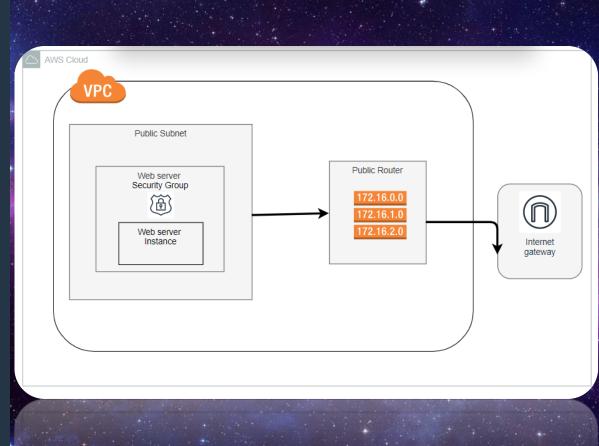
Questions and Answers

PROJECT OVERVIEW

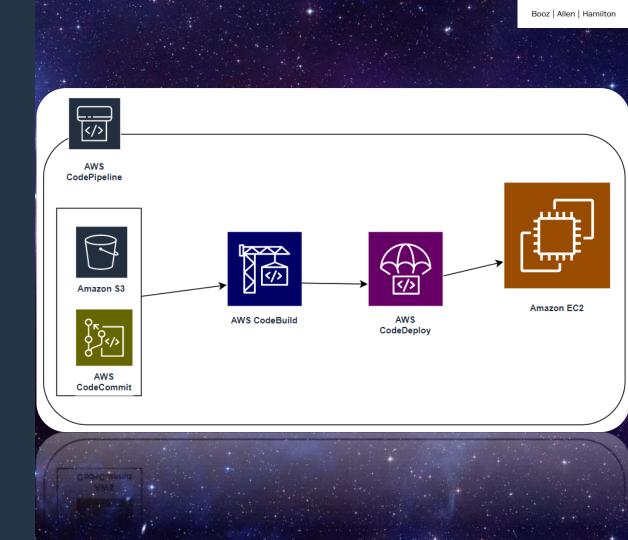
A simple website application for people to look up their favorite marvel characters



ARCHITECTURE AND DESIGN



CODE PIPELINE



TECHNOLOGIES AND ENVIRONMENT USED

CLOUD

- AWS EC2
- AWS S3
- AWS Cloudformation
- Github

CI/CD PIPELINE

- AWS CodePipeline
- AWS CodeCommit
- AWS CodeDeploy
- AWS CodeBuild



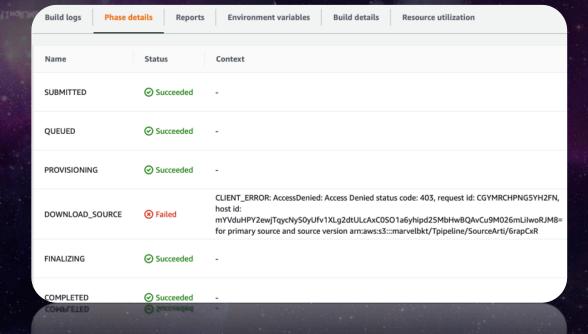
Showing the last 4 lines of the build log. View entire log

Tail logs

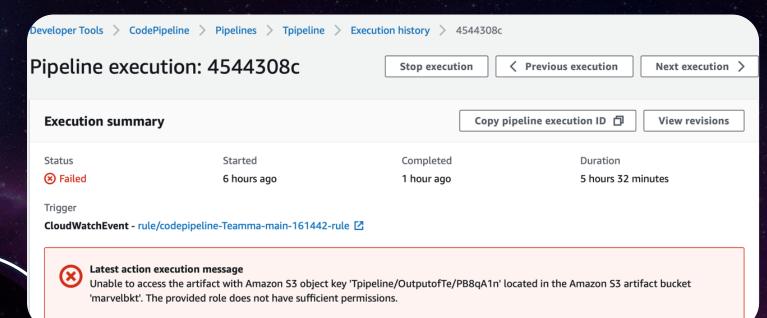
∧ Show previous logs

- 1 [Container] 2021/10/29 21:14:43 Waiting for agent ping
- 2 [Container] 2021/10/29 21:14:44 Waiting for DOWNLOAD_SOURCE
- 3 AccessDenied: Access Denied
- status code: 403, request id: CGYMRCHPNG5YH2FN, host id: mYVduHPY2ewjTqycNyS0yUfv1XLg2dtULcAxC0S01a6yhipd25MbHwBQAvCu9M026mLiIwoRJM8= for primary source and source version arn:aws:s3:::marvelbkt/Tpipeline/SourceArti/6rapCxR





Adjust the IAM role to have access to S3 so it could pick up the artifacts.



CHALLENGES

Unable to access the artifact with Amazon S3 object key 'Tpipeline/GutputofTe/PB8qA1n' located in the Amazon S3 artifact market. The provided role does not have sufficient permissions.

Spacing for artifacts in buildspec.yml was incorrect. There should not be any empty space in the buildspace phase name. Once the space was removed it was able to run

Build logs Environment variables Resource utilization Phase details Reports **Build details** Showing the last 7 lines of the build log. View entire log Tail logs ∧ Show previous logs [Container] 2021/10/30 03:50:00 Waiting for agent ping [Container] 2021/10/30 03:50:01 Waiting for DOWNLOAD_SOURCE [Container] 2021/10/30 03:50:01 Phase is DOWNLOAD_SOURCE [Container] 2021/10/30 03:50:01 CODEBUILD_SRC_DIR=/codebuild/output/src862865214/src [Container] 2021/10/30 03:50:01 YAML location is /codebuild/output/src862865214/src/buildspec.yml [Container] 2021/10/30 03:50:03 Phase complete: DOWNLOAD_SOURCE State: FAILED [Container] 2021/10/30 03:50:03 Phase context status code: YAML_FILE_ERROR Message: Invalid buildspec phase name: artifacts. Expecting: build,install,post_build,pre_build **CHALLENGES**



- Being able to successfully deploy website to AWS
 - Check the configuration of Security Groups for any connectivity issues
- Using Code Build, Code Commit, Code Pipeline, Code Deploy
- Use IAM Roles with minimum privileges
- Continuous Testing and Integration



- Auto Scaling Mitigate fluctuation in website traffic
 - Build AMI for Autoscaling
- Disaster Recovery
 - Blue/Green Environments
 - Separate Availability Zones
- Maintenance
 - Utilize System Manager
 - Utilize Personal Health Dashboard
- Security
 - Implement Encryption Utilize KMS
 - EBS Volumes
 - S3 Buckets
 - Implement Cloud Watch
 - Collect logs from EC2
 - Cloud Trail
 - SNS Notifications
 - Restrict Security Group
 - Apply IAM Role to EC2 Instance
- Optimize Cost
 - Review Trusted Advisor



