



Project

Cloud Computing

POST-SECONDARY

1 INTRODUCTION

Cloud adoption is now critical for businesses of all sizes. To stay ahead, companies leverage the cloud's agility to build solutions that scale seamlessly, ensuring a positive customer experience even under peak loads or outages.

These Test Projects evaluate your ability to design, deploy, manage, and secure cloud-native applications effectively, along with your troubleshooting skills and composure under pressure.

2 DESCRIPTION OF PROJECT AND TASKS

Participants will take on the role of AWS Cloud Engineers tasked with solving a series of practical, industry-based challenges that reflect real-world cloud computing environments. Over multiple modules, competitors will design, implement, and troubleshoot AWS solutions that test their ability to think critically, work efficiently, and apply best practices under pressure.

Each 3-hour module presents a different scenario drawn from realistic business cases—ranging from data ingestion and analytics pipelines to troubleshooting live environments and optimizing cloud architectures. Participants will need to demonstrate strong technical judgment across the full AWS ecosystem, including compute, storage, networking, database, DevOps, and monitoring services.

Throughout the competition, emphasis is placed on secure design, cost-effective resource management, and adherence to the AWS Well-Architected Framework.

Competitors must consider scalability, reliability, and operational excellence in every solution they build.

Using AWS services such as, but not limited to Lambda, DynamoDB, RDS, Kinesis, CodePipeline, ECS, and CloudWatch, participants will implement architectures that process real-time and batch data, deliver APIs and web services, and recover from system disruptions.

Beyond simply getting systems to work, participants are evaluated on their ability to create solutions that are efficient, well-structured, and production ready. They must automate deployments, monitor performance, and troubleshoot issues in live systems; all while controlling costs and maintaining strict security boundaries.

By the end of the event, competitors will have demonstrated the full skillset expected of professional AWS Cloud Engineers: designing and securing architectures, integrating



multiple services, automating pipelines, monitoring and optimizing operations, and solving complex challenges through innovative cloud-based solutions.

Day 1 – Well Architecting

Each day begins with developing solutions that meet the specified requirements.

Infrastructure Cost

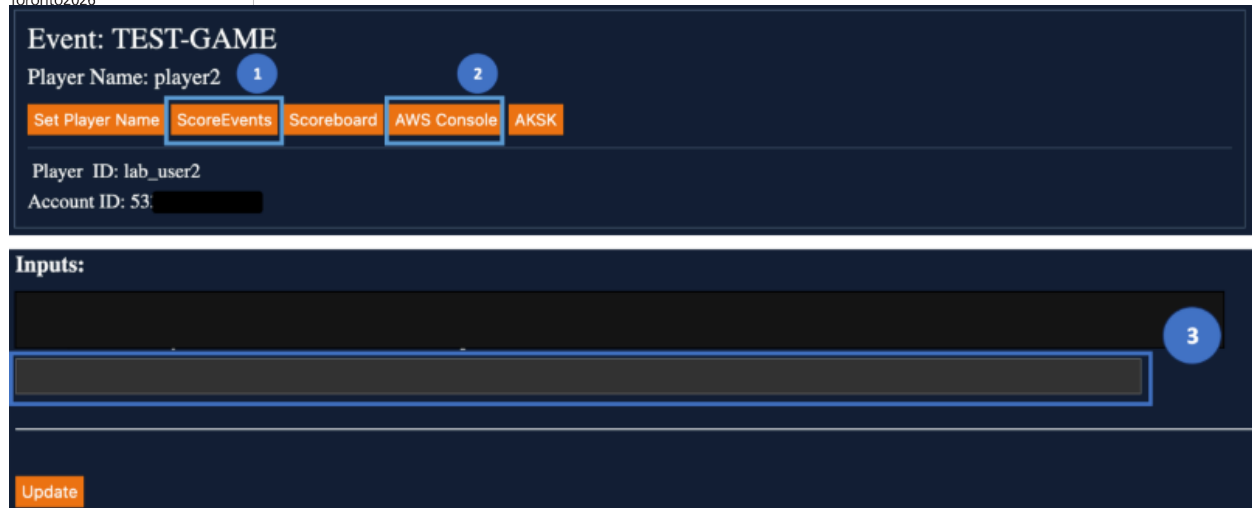
To optimize resource usage, deploy only the resources required to handle the current load. Deploying excess instances will result in penalties.

Personal Event Dashboard

Log in to the Cloud Raiser Platform using the provided credentials to access your personal event dashboard. Your event dashboard provides real-time insights into your solution's performance against evaluation criteria such as scalability, performance, resource optimization, etc. Marks awarded to each criterion contribute to your overall score.

Please note: The personal dashboard is designed to help competitors track their own progress and performance against the defined evaluation criteria. It is **not** intended to serve as a final ranking or comparison between competitors.

The Cloud Raiser scoreboard reflects only a portion of the assessment — results will be based on a comprehensive scoring system that includes additional evaluation components not captured in the scoreboard data.



The competition dashboard provides a central hub for managing your participation. Here's a breakdown of the key components:

- **Score Events and Scoreboard:** This section provides access to individual activities that contribute to your overall score. Think of these events as milestones you need to achieve for a functioning application.
- **AWS Console:** Click this button to access a temporary AWS account provided specifically for this competition. This account will be closed and inaccessible after each day.
- **Inputs:** This section allows you to submit your answers according to the event requirements. These answers might include public IP addresses, ALB DNS names, S3 URLs, API endpoints, or other relevant details.



Score Events and Scoreboard

For a deeper dive into your performance, click the "Score Events" button on the player dashboard. This will show you a point-by-point breakdown of your score.

Score Events			
Time	Score	Source	Reason
2024-06-27 04:42:47	20	EC2 Module	You served a unicorn in 4.020618 seconds
2024-06-27 04:42:35	20	EC2 Module	You served a unicorn in 4.021239 seconds
2024-06-27 04:42:23	20	EC2 Module	You served a unicorn in 4.021392 seconds
2024-06-27 04:42:07	30	EC2 Module	You served a unicorn in 0.508333 seconds
2024-06-27 04:41:58	20	EC2 Module	You served a unicorn in 4.020203 seconds

This page provides a detailed breakdown of your score, divided into two sections:

- **Event List:** Each row represents a score event, including its source (where the points came from), the points awarded/deducted, and the reason.
- **Reason for Point Changes:** Pay close attention to the reason column, especially for point deductions. This will help you identify and fix any issues impacting your score. AWS Services Even though you have access to most services and your IAM role grants permissions for this competition, encountering "Permission Denied" errors is still a possibility. Remember, permissions can vary across regions, so double-check you're working in the designated us-east-1 region for the competition. Additionally, exceeding resource limits associated with your permissions can also trigger errors.



AWS Services

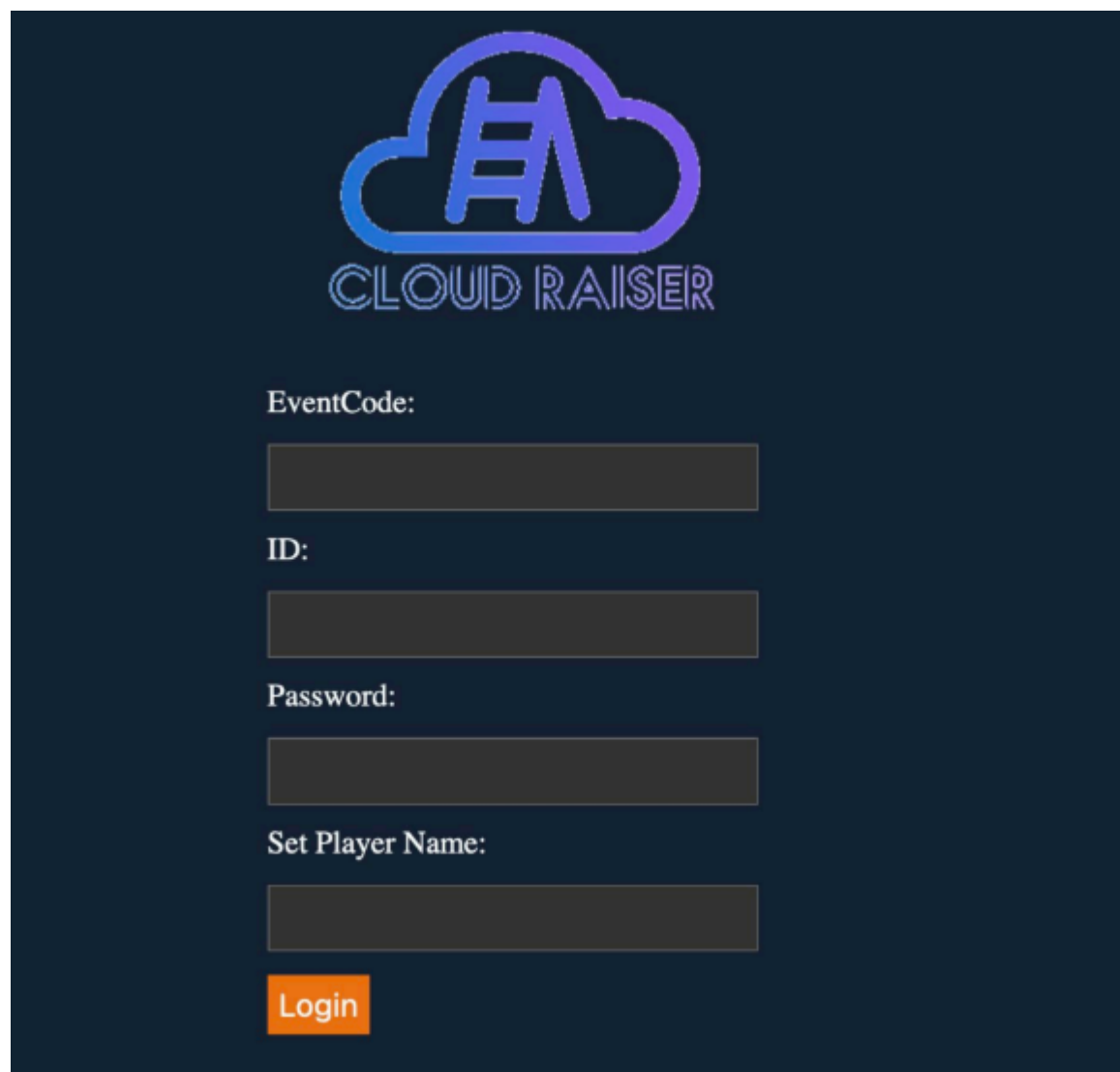
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Day 2 – Troubleshooting and QUEST

The competition goes beyond testing your architectural prowess. We'll also assess your proficiency in crucial cloud computing skills through targeted challenges within Cloud Raiser during C3. Get ready to showcase your technical depth alongside your creative problem-solving abilities!



Login to Cloud Raiser We will provide you with login credentials.

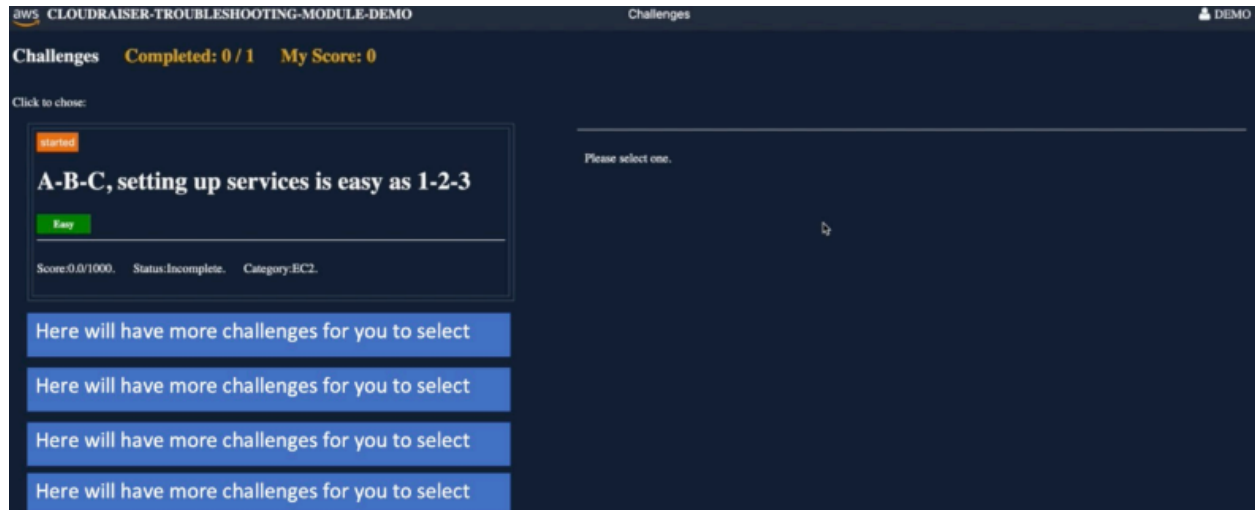


The login interface features a dark blue background. At the top center is a logo consisting of a blue cloud outline with a stylized 'dh' inside, and the text 'CLOUD RAISER' in a light blue, outlined font below it. Below the logo are four input fields, each preceded by a label: 'EventCode:', 'ID:', 'Password:', and 'Set Player Name:'. Each label is in a light blue font. The input fields are dark grey rectangles. At the bottom left of the form is an orange button with the word 'Login' in white text.



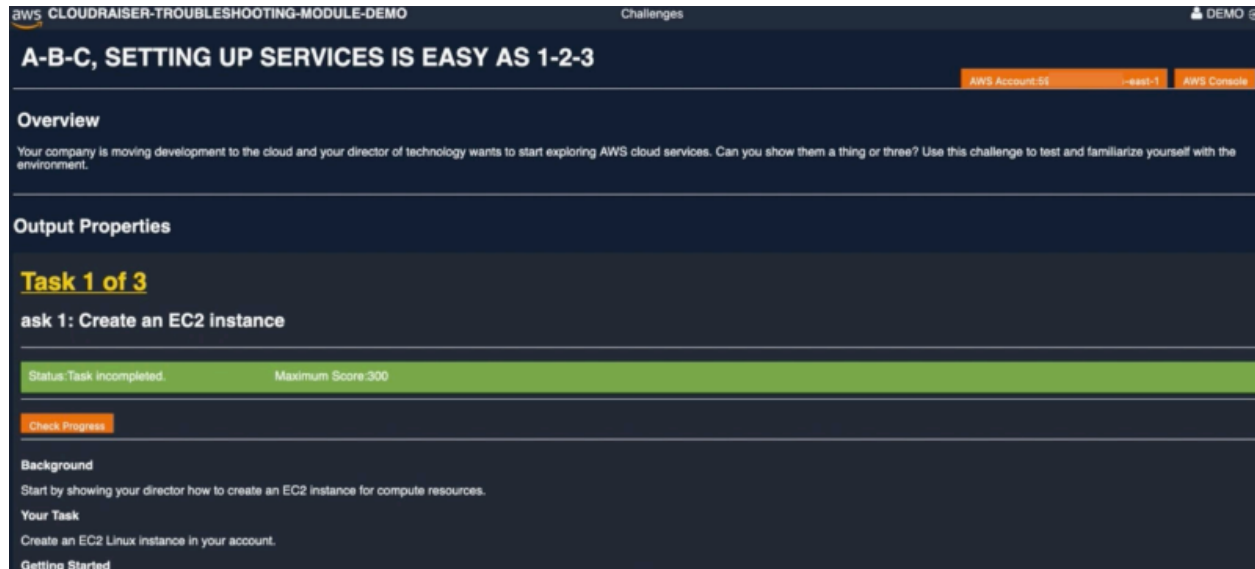
TOUBLESHOOTING MODULE

Once logged in, you'll have the flexibility to tackle the challenges in any order that suits your approach!





Once you choose a challenge, a dedicated screen will appear. Here, you'll find detailed task instructions alongside a convenient button to access your AWS account through the AWS Console.



Clues

Each challenge provides detailed instructions to equip you for success. Remember, while helpful clues are available, using them will deduct points. Craft your approach strategically! Consider if the potential point reduction outweighs the time saved by using a clue. This competition rewards both problem-solving skills and

Once you finish a prerequisite task, the next steps will unlock, guiding you towards completion. Remember, you'll need to complete all tasks to mark the challenge as finished.



AWS CLOUDRAISER-TROUBLESHOOTING-MODULE-DEMO
Challenges
DEMO

A-B-C, SETTING UP SERVICES IS EASY AS 1-2-3

AWS Account ID
east-1
AWS Console

Overview

Your company is moving development to the cloud and your director of technology wants to start exploring AWS cloud services. Can you show them a thing or three? Use this challenge to test and familiarize yourself with the environment.

Output Properties

Task 1 of 3

ask 1: Create an EC2 Instance

Status: Task completed
Maximum Score: 300

Check Progress

Task 2 of 3

Task 2: Create a S3 Bucket

Status: Task Incompleted
Maximum Score: 300

QUEST MODULE

This challenge combines Well-Architecting and Troubleshooting. You'll see all tasks at once, and you are free to complete them in any sequence. Analyze your performance with ScoreEvents. QUEST tests your ability to strategize using both architectural knowledge and troubleshooting skills.



Questing

Information:

Overview

xxx yyy zzz

Task 1: Restore API service!!!

Task description ...

Task 2: Take action to resolve the security issue!

Task description ...

Task 3: Please restore CICD Pipeline!

Task description ...



DIGITAL



PROBLEM SOLVING



CREATIVITY & INNOVATION