

CDS Technical Challenge - Devops

# THE BERKELEY PROJECT

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**Citizen Disbursement System (CDS) Team**

## BACKGROUND

In the year 1972, the City of Carson is a growing city that houses close to millions of working class heroes. To support the growing city population, a bill was passed that:

*'each working class hero is to contribute a fraction of their yearly income towards city building'*

This year, as part of the governor's initiative to pony up surplus cash in the vault, each working class hero is gifted with taxation relief as recognition to their voluntary contribution to city building efforts.

The governor wishes to deploy this initiative as fast as possible. Also, he wishes to aim for the cloud - AWS, specifically.

To facilitate this, the governor has drafted out the Berkeley Project. This project aims to create a CI/CD pipeline to deploy the application to the cloud.

The governor wishes the following deliverables:

- A dockerize application
- A ci/cd pipeline solution
- A cloud infrastructure diagram

<sup>^</sup>: also known as employees

## TASK

Your task is to come up with the deliverables, using any tools you are comfortable with.

### 1. [Application]

Please create an application with a page saying. ‘This is the <x> visitor’, where x is a counter that is fetched from Redis, and gets incremented on every visit on the index page.

**Deliverables:**

Implement the application, dockerise it and provide the link in github.

### 2. [CI/CD Pipeline]

Create a plan to deploy the above application to production in an automated way. Choose a tool of your choice and the reasons for choosing it.

**Deliverables:**

A diagram of the plan and the description of each stage.

### 3. [Cloud infrastructure diagram]

Sketched out the cloud infrastructure to deploy the application in the cloud.

The requirements are:

- Public users should be able to access the application from a public url.
- Should be able to scale well

**Deliverables:**

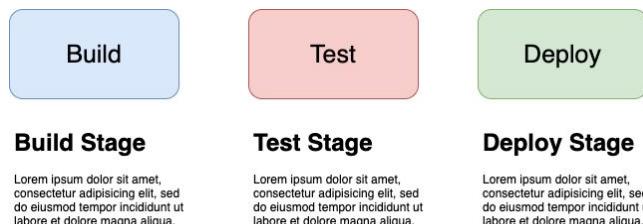
Cloud infrastructure diagram

## Sample deliverable format (This is just an example)

1. A link to the source code in github

<https://github.com/react-boilerplate/react-boilerplate>

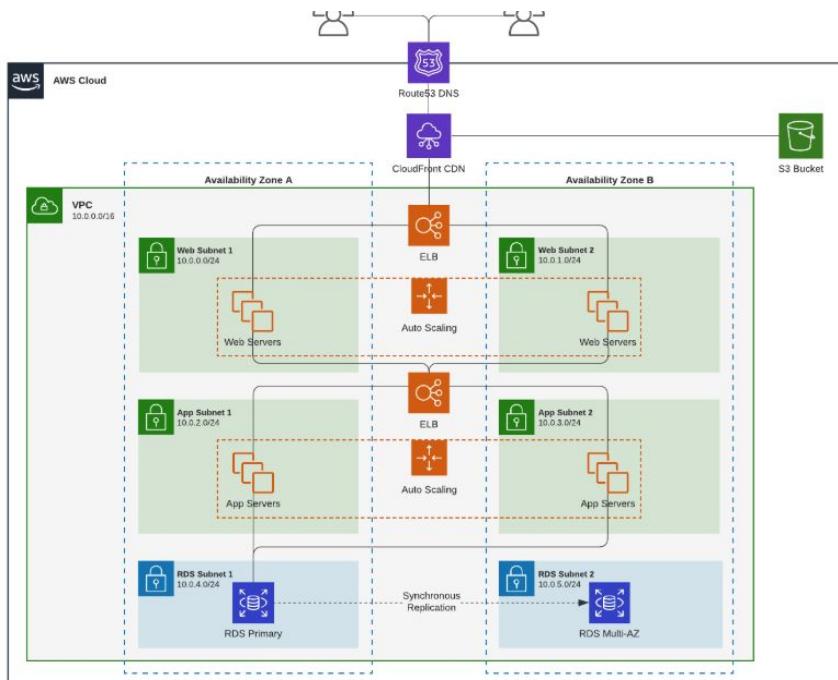
2. CI/CD Pipeline plan



Choice of ci/cd tools: Gitlab

Reason: "Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua"

3. Cloud infrastructure diagram



Looking forward to your solutions.

Good luck and enjoy!

## TIPS

- A few online tools that could help :  
<https://cloudcraft.co/>, <https://www.draw.io/>
- We like kubernetes :)