

CloudFormation: Spin up a fault-tolerant web server

Front End Code:

Created using Angular 8 and Uploaded on GitHub.

Version 1: <https://github.com/pandyabhavik2494/helloVersion1>

Version 2: <https://github.com/pandyabhavik2494/helloVersion2>

(Could have created 2 branches instead of 2 separate repos.)

The code gets on the EC2 instances via a custom-made user script.

AWS Resources User: Region- Ohio

Route53- Hosted Zones

Route53- Health Checks

EC2-Auto Scaling Groups

EC2-Load Balancer

EC2-Security Groups

CloudFormation

Summary:

- I created 2 Autoscaling groups. Each will give rise to EC2 instances with the 2 different versions of the application each.
- Both the Autoscaling groups are attached to their respective Application Load Balancers. If ever were the Auto Scaling create multiple instances the load balancer would distribute the load.
- I have also created a Route53 Health Check which hits <https://date.nager.at/> and checks the respective API which I have user whether its live.
- I have a registered domain which I have mapped to the two different load balancer urls using DNS Failover Routing.
- Here if the Health-Check passes we would redirect user http requests to the load balancer attached to the Ec2 instances which host Version 2 of the Application.
- If the Health-Check fails we would redirect user http requests to the load balancer attached to the Ec2 instances which host Version 1 of the Application.

Note:

- One will need to turn off CORS check on their browser in order to see the version 2 off the app in action since the 3rd party domain gives a CORS error in the browser. There's nothing much that I could do on my end to remediate that in production since it's a third party API.
Here's how CORS can be turned off :
Safari: <https://stackoverflow.com/questions/4556429/disabling-same-origin-policy-in-safari>
Chrome: <https://alfilatov.com/posts/run-chrome-without-cors/>
- I already have a domain registered in my AWS Account, so Route52 has created a Hosted Zone by default hence the cloud formation template that I have written does not generate another Hosted Zone but uses the same.

Code:

BitBucket URL for Cloud formation Template:

<https://bitbucket.org/pandyabhavik2494/cloudformationwebserver/src/master/>

Prod App Version 1: <https://github.com/pandyabhavik2494/helloVersion1>

Prod App Version 2: <https://github.com/pandyabhavik2494/helloVersion2>

UI App URL: <https://github.com/pandyabhavik2494/helloWorld>

Diagram:

