Athira Sudhakaran Pillai
C0696574

PROGRESS REPORT (PART 1)
Project Title: One Touch:Infrastructure –as – Code(IaC)

As per the timeline submitted along with the project proposal, I started with an extensive literature survey from various sources such as IEEE, e-books, websites and video tutorials from Coursera and Udemy. Also, I contacted the experts who work in the AWS cloud environment to gather additional information and get a real world perspective.

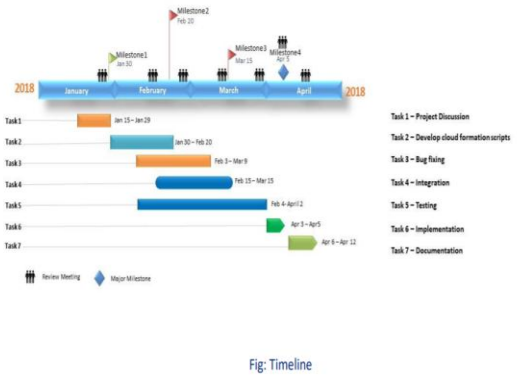


Fig: Timeline

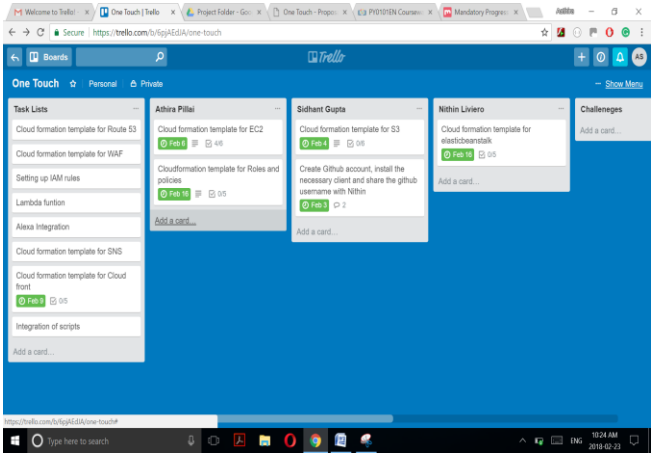


Fig: Trello Dash Board showing tasks assigned to each member

We made a Trello Dashboard to allocate individual task to team members and continuously monitor the progress over the time. Nithin, being our Scrum Master and an experienced AWS professional has decided to give constructive feedback on weekly basis. We have created a github account and repository and added team members with admin access. I have created a repository named athira-OneTouch to push my tested code. As a part of our Milestone 2; Development of cloud formation, I have started coding for an EC2 instance deployment using CloudFormation in YAML and placing it inside an S3 bucket and trigger the CloudFormation using Lambda function which is written in python to spin the EC2.

TASK ACHIEVED: February 6th to February 16th

The tasks I was assigned to in Trello board for this period include;

a) Create the cloud formation script for spinning an EC2 instance
b) Create the cloud formation stack with that template.
c) Add the template to an S3 bucket.
d) Lambda script to trigger it.
e) Trigger the cloud formation from Lambda. Make sure trigger works fine.
f) Add the completed script to github

I have successfully completed all tasks and deployed an EC2 instance to AWS and the tested code was pushed to github.

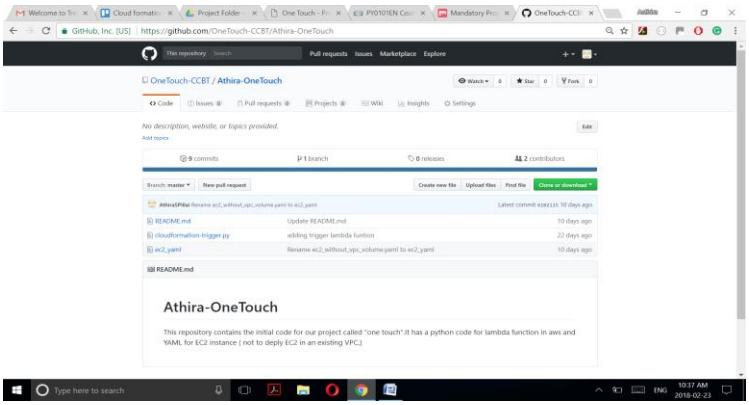


Fig: Project Git repository

Results

Created S3 bucket and uploaded CloudFormation YAML Script inside S3 in AWS

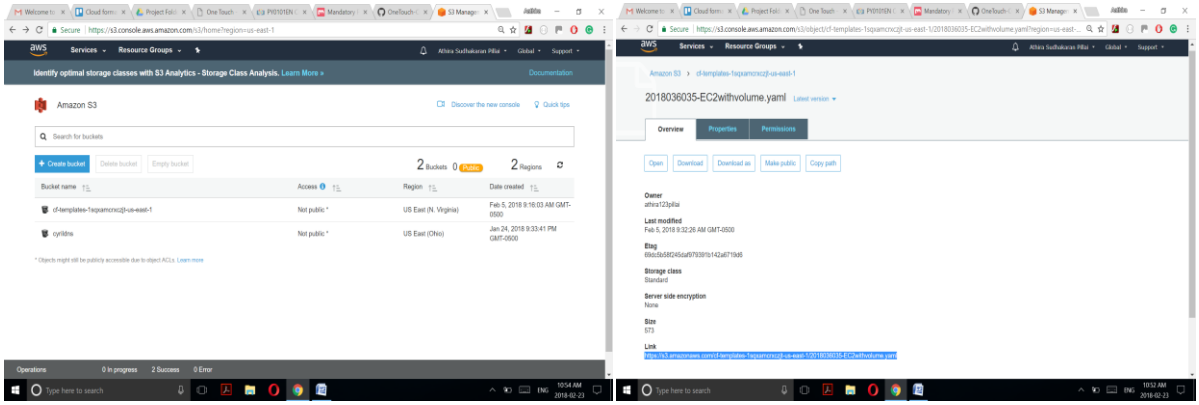


Fig: AWS console showing created S3 bucket with yaml code

Triggered CloudFormation using Lambda function and spin an EC2 instant. I have selected policies that allows EC2 creation and attached these polices to a custom role which is created using AWS Identity Access Management for accessing various resources. I have integrated the EC2 instance within the existing VPC which is created by Nithin with necessary subnets, internet gateways and security groups.

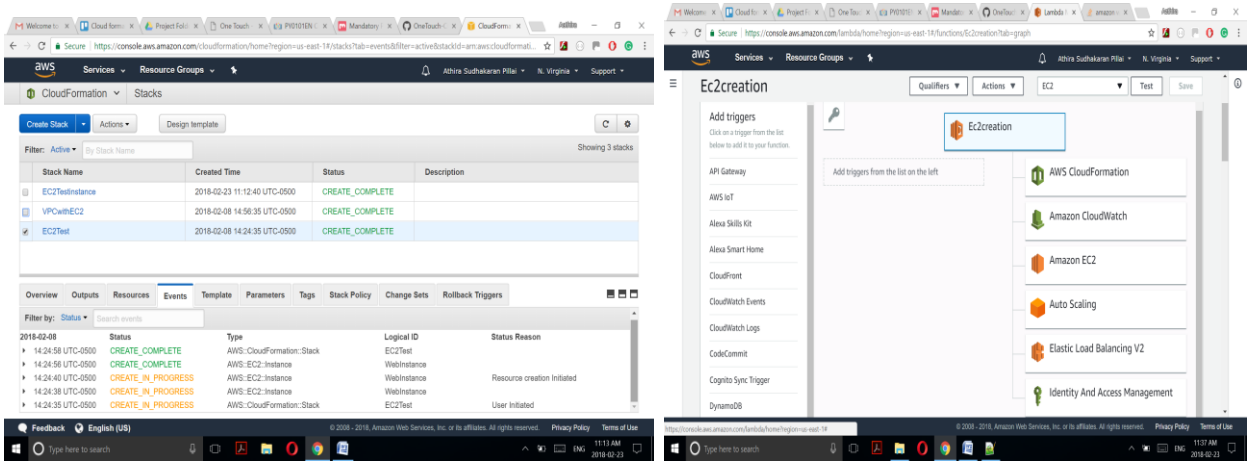
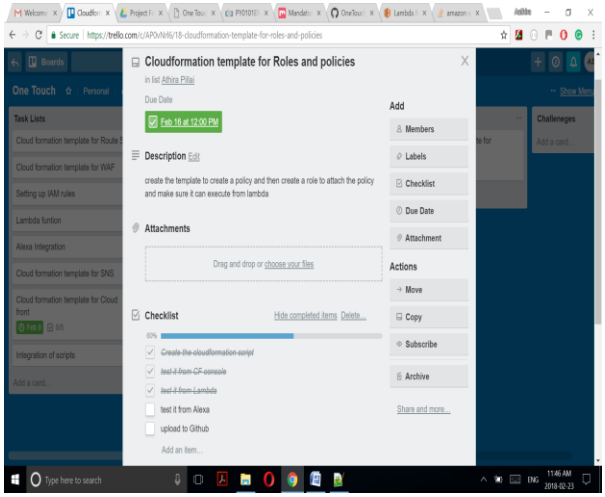
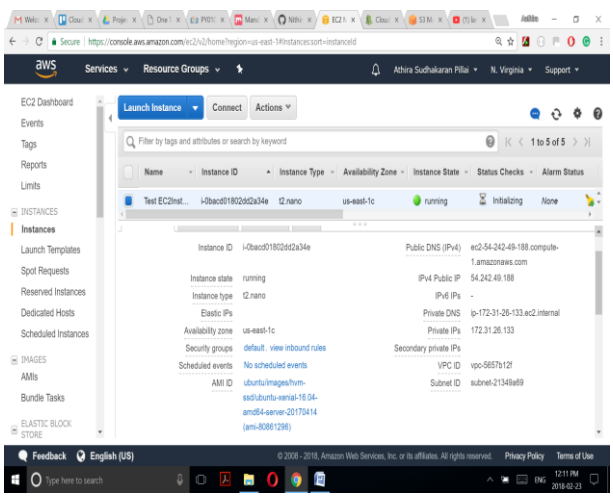


Fig: AWS console showing CloudFormation and Lambda for created EC2 instance

TASK PROGRESSING: February 16th To February 26th





I have created a template to create policies and security groups using AWS Identity Access Management (IAM) and tested the same in CloudFormation Console. I am currently working on Alexa skill development so that I can trigger the same using Alexa. I will be completing Alexa integration in another two days and planning to integrate the same with existing environment.